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CONSTRUCTION

of the

DANVILLE, URBANA, AND CHAMPAIGN

INTERURBAN RAILWAY

BY

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THESIS

FOR THE

DEGREE OF BACHELOR OF SCIENCE

IN

CIVIL ENGINEERING

COLLEGE OF ENGINEERING

UNIVERSITY OF ILLINOIS

PRESENTED JUNE, 1905

UNIVERSITY OF ILLINOIS

May 22, 1905

THIS IS TO CERTIFY THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

FRED SCOTT SAWYER

ENTITLED CONSTRUCTION OF THE DANVILLE, URBANA, AND CHAMPAIGN

INTERURBAN RAILROAD

IS APPROVED BY ME AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE DEGREE

OF Bachelor of Science in Civil Engineering

Ira O. Baker

Head of Department of CIVIL ENGINEERING

75317

CONSTRUCTION
OF THE
DANVILLE, URBANA AND CHAMPAIGN
INTERURBAN

The Danville, Urbana and Champaign Interurban is an electric line connecting Danville, Illinois, with the twin cities of Champaign and Urbana and comprises a portion of the Illinois Traction System which is under the control of the Mc Kinley syndicate.

When the road was first projected it was thought by many that any such road between Danville and Champaign would not pay as there was not a large enough volume of business carried on between the two cities and the intermediate towns along the ~~propdsed~~ PROPOSED route. Between Danville and Urbana there are nine small towns whose population varies from fifty to seven hundred. St. Joseph, the largest, being about eleven miles east of Urbana. Champaign and Urbana combined have a population of about seventeen thousand and Danville about twenty-four ~~ntousand~~ THOUSAND. It seemed reasonable to believe that a road could not operate on a paying basis having only towns of the above mentioned size to draw from; but the road has proved even more of a paying investment than its promotors had hoped.

In order to keep the expenses low the character of the constuction, while solid, was of such a nature as to decrease the cost as much as possible, which was accomplished by making the profile correspond closely to that of the country.

Work was ~~cdenced~~ COMMENCED on the road in August, 1902, and was carried on rapidly, cars making the run from Danville to Champaign by the first of September, 1903. The length of the line is thirty-three and six tenth miles of which about two miles were already constructed and in operation by the city lines. The road is a single track line having frequent turn-outs for meeting points. The old city line in Danville

is doule-tracked, as also most of the line in Champaign and Urbana.

The engineering party consisted of the city engineer of Champaign, who acted as chief of party and instrument man, two chainmen an axe-man, and a rodman. The only complete survey made was a locating line,, that being all that was necessary as there were few difficulties encountered in following the right-of-way of the Cleveland, cincinnati, Chicago and St. Louis Railroad. Several lines were run and a different location plotted at the Middle Fork valley, which is located about three and a half miles west of Danville, before a desirable line was established. The only way in which to build the road at this point so that the highwater would certainly not cause trouble was to construct a high steel trestle at the level of the top of the side hills; but this plan was ~~out~~ of the question on account of its expense. Afew hundred feet south of the present line the valley is narrowed down by two high knolls, which project out, both being at the same level practically as the surrounding country. It would seem as though just as good a line, if not a better and safer one, could have been run so as to have taken advantage of these projections, and then have used a high steel bridge or a concrete arch with perhaps some earth fill. The amount of cut and fill would have been greatly reduced over the large amount used in the present line: but the cost of a high bridge was estimated to be too great for a new road of uncertain money making powers. This plan would have cut out four sharp curves around a mine shaft which is situated directly on the line of the present road.

Since the completion of the road the work of the locating engineer has been subject to much adverse and seemingly well deserved criticism, and it seems safe to say that the location was not first class. Doubtless the engineer had reasonable excuses at the time for his work OF location, though the only one apparent at present is that time was an important factor as the road had to be put in to operation so as to

hasten an income. For example, about one mile and a half west of the Middle Fork the road crosses two coal tracks leading to some coal mines in the Mission Field coal district, one track belongs to the Chicago and Eastern Illinois Railroad and the other to the Big Four. The lacation of these tracks together with the interurban proposed and as it is, are shown in figure 1.

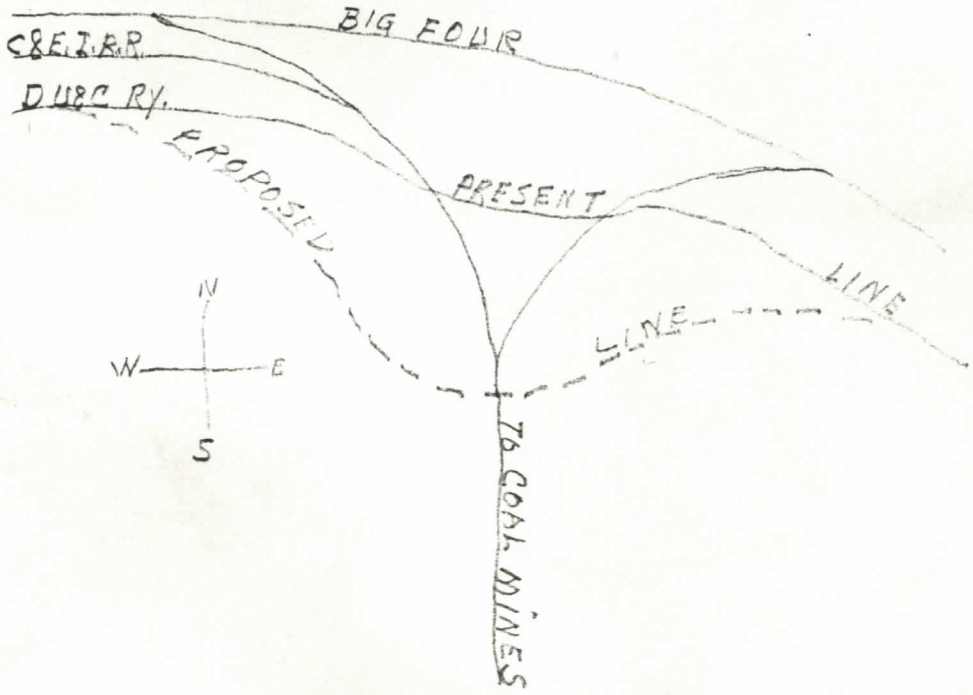

Figure 1.

As originally located the line was to the position of the dotted line in the sketch. This line is not as satisfactory as the present location, since the curvature in the original line is both sharper and greater, and besides it would have been in a deep cut, which would obscure the view of the motorman. The locating engineer thought that the elimination of one crossing and the consequent decrease of cost of special work would more than compensate for the easier curves of the present line; but in this he overlooked the increased danger due to the curved line and the deep cut.

Again, in several places the engineer seems to have been satisfied with the first line run, when a little study and investigation would

have shown that a better line could have been had cheaper. For example, he could in a number of places have had long streches of tangent, where he introduced curves for no apparent reason. In a few places jogs in the line were necessary because of a difference in width of right-of way of the Big Four Railroad, which this line closely parallels. From Danville to the eastern limits of Urbana there are sixty-one curves varying from thirty minutes to one hundred and eight degrees, the total length of curved track being two and three tenths miles, Since the road was finished, it has been the work of the engineer of maintenance of way to eliminate the sharper and to take out unsightly kinks as far as the earnings of the road would justify; but as this work was carried on under traffic, it has been exceedingly expensive, Also on account of the inability to secure right-of-way on terms as favorable as those obtained in the original construction. The expense of these changes illustrates the folly of a hasty location. It is the purpose of the management to make changes in the alignment and the profile as fast as the earnings justify, with the expectation of securing a very satisfactory line, which shall corespond closely to that of the Big Four.

The right-of-way was aquired by purchase or gift. Many farmers and property owners along the line were far-seeing enough to know that they would not be the losers if they gave the interurban company a strip of land, As before stated, the line paralells the Big Four Railroad, for practically the entire distance the two rights of way being adjacent. and therefore the farmers were more likely to give a piece of land than if the electric line cut through the middle of their property. On the other hand, many wanted the highest price obtainable and got it, the maximum price paid being about one hundred and fifty dollars an acre. Since the road was finished and in operation, several changes in location have neccessitated the purchase of additional land and in

some instances the price went far above one hundred and fifty dollars an acre, though in some cases only a small fraction of an acre was bought.

The width of the right-of-way varies from two to four rods, though in one place, for a distance of two hundred feet, the width is only twelve feet owing to a property owner refusing to sell more than the company absolutely needed. The right-of-way at the Middle Fork cut is about one hundred feet in width in order to keep the sides of the cut, when softened by rain , from sliding down on the track; but even with the width of one hundred feet, on account of the great depth of the cut and the nature of the soil, it is found that the side slope is still too great, as it takes only a very light fall of rain to bring down large quantities of gravel and shale. Most of the variation in the width of the right-of-way along the line is due to the fact that the Big Four's right-of-way varies from fifty to one hundred feet.

After the survey was completed construction was commenced. Work began at the Champaign end several months ahead of the beginning at the Danville end, as it was the intention to have the two construction gangs meet at the Middle Fork Valley. The tracks of the Champaign and Urbana Electric Railway were already in operation as far as the court house in Urbana, thus cutting off almost two of the thirty four miles to be constructed; and at the Danville end, the city lines were in operation for a distance of a quarter of a mile west of the public square, the proposed terminus of the interurban line, thus the total length actually to be constructed was practically thirty-two miles.

The construction work from Danville west began in February, 1903. The method of construction was identical on both divisions, the entire work being under control of one superintendent and his assistants.

The first work to be undertaken was that of clearing the right-of-way and making the sub-grade. This was carried on both by contract and

by laborers of the company, about two-thirds of the work being carried on by contract. The work of clearing the right-of-way was quite an item owing to the fact that for about eleven miles the right-of-way was in the former public highway, therefore the hedges and trees bordering the wagon road had tobe pulled or blasted out and a new highway laid out and graded, just south of the right-of-way. In all towns except Ogden the line was located ~~in~~ ON the highway or adjacent to it, but at Ogden the line ran across private property and several buildings including an elevator, also a lumber yard had to be moved to make room for the track. The entire amount of grading and clearing was let to one contractor. He was paid each month the amount of the monthly estimate handed in by him and checked by the superintendent.

Work on the track followed the completion of the sub-grade. The steel and ties were shipped to towns along the interurban over the Big Four, and from those places were hauled along the the right-of-way. One gang placed the ties and laid the rails, and a second gang followed immediately after spiking the rails. The ties used were with the exception of three or four thousand,No.1 white oak purchased in northern Wisconsin and Michigan, the contract price being fifty eight cents per tie , the freight charges being deducted from the bill. The three or four thousand ties mentioned above were an inferior grade of white oak known as No.2 or seconds. These were bought in Illinois and Indiana at thirty-five cents, freight charges being deducted from the bill. Before any shipments were made an inspector was sent to the yards where the ties were stored and checked them over, the ties were again inspected and counted on being taken from the cars along the right-of-way.

Thirty foot, sixty and seventy pound rails were used; the track from St. Joseph to Urbana being of sixty-pound rails and from St. Joseph east

seventy-pound. The rails were the American Society of Civil Engineers standard, and the total order was divided about evenly between the Cambria Steel Company and the Carnegie Steel company, the average price being $3120 per ton. The rail joints used at first consisted of simple twenty-four and thirty-inch angle bars, having two bolts to the rail on tangents and three bolts on curves. The price of the splice bars per hundred pounds was $2.10. During the latter part of the construction the use of this style of rail joints was abandoned, and the Weber rail joint substituted on account of its superiority. This joint consists of two seasoned blocks of wood twenty-two inches long, one placed on each side of the rail at the joint and metal plates on the outside of each block, the whole thing held in place by two bolts to each rail. The advantage of this joint is that the seasoned wood, of which the blocks are made, swells on account of the moisture, thus making an extremely tight fit and holding the two rails firmly in place. Twenty-two inch Weber joints to fit an American Society of Civil Engineers standard rail, complete with bolts and nuts cost $1.34 per joint. The rail spikes used were the ordinary five and a half inch by nine-sixteenths rail road spikes and were bought by the car load at $2.05 per hundred pounds.

The cost of rail per mile was $4,900, this amount including the cost of rail joint and bonding wire. The cost of ties, spaced twenty-six hundred to the mile was $1,700 per mile.

The poles carrying the over-head work were placed in span, that is, a pole on each side of the track at the extreme edge of the right-of-way, spaced ninety feet apart. Thepoleswere of cedar, purchased in northern Wisconsin and Michigan, thirty and thirty-five feetlong, the upper end having a diamiterof seven inches. The contract price for pole s was $3.50 for thirty foot lengths and $4.75 for thirty-five foot lengths freight chages being deducted from the bill. The poles were placed seven

feet in the ground, the portion of the pole to to be below the surface being treated with a heavy coat of tar to prevent rotting.

The overhead work consisted of : the span wire, trolley wire, three high tension wires, afeed wire and four telephone wires. Two of the high tension wires were placed on a cross arm and a third carried by an insulator at the apex of the pole. The feed wire is placed three feet from the top. and is carried by a side bracket and insulator The telephone wires are carried on the opposite line of poles on a single cross arm. The trolley wireis the figure-eight pattern, made of hard-drawn copper wire, No.4 Brown and Sharpe gauge, and cost $14.15 per hundred pounds. The feed wire was No.12 Brown and Sharpe gauge, low Okonite and cost $21.00 per hundred pounds. The telephone wire was No. 12 galvanized iron wire and cost five and three-eights cents per hundred pounds. Seven and a half inch glass insulators, type M.G, were used, costing sixteen cents apiece. The cost of overhead material was $1400 per mile./

The right-of-way was fenced only on part of the line during construction, the work not being finished till the spring of 1905, on account of disputes with farmers as to the boundary line. The material for fencing consisted of wire, posts, fence stretchers and tools, all of which was furnished by the company, while the work of erecting was done by contract, the price paid being seven cents per rod. The posts used were of cedar, halved, eight feet long, seven inches in diamiter and cost sixteen and a half cents apiece. The lower two and a half feet of the posts were tcoated with tar, imbedded two feet in the ground, and were spaced one rod apart.
The fencing used was the American fence with a twelve inch mesh, four feet high, costing eighteen cents per rod.

Culverts were of four different styles, pile, wooden box, vitrified pipe and galvanized iron. There were six pile culverts varying in length from nine to twenty feet and made of eight by twelve inch stringers upon which the ties rested. Wood box drains were used where the drainage

area was very small, the cross section of the box as a rule being about one square foot. Vitrified pipe were used most extensively as culverts and varied in size from eight to twenty-four inches. A very few galvenized iron pipe were used, the barrel of the culvert being made of sheets of iron rolled into twenty-four inch cylinders and fastened by rivets. It is the intention of the company as soon as the earnings permit, to replace the large culverts and the wooden trestles at the Middle Fork with concrete arches. The bridge and pile culverts were all built by contract, the price being $5.50 per linear foot.

No attempt was made at ballasting until the spring of 1903, owing to the fact that practically all of the ballast came either from gravel pits at the Middle Fork or from Danville and consisted of either cinders or gravel. A small quantity of cinders and a very poor grade of gravel came from the Champaign power plant and Urbana gravel pits respectively. As gravel trains were run mainly at night and as there was a scarcity of ballast cars the work of ballasting proceeded very slowly in fact the work is not yet finished and at the time of the writing of this thesis (May 1905) gravel and cinders are being hauled every night. One of the draw-backs to the road is the fact that the ballast is very unsatisfactory, being a poor grade of gravel, composed mostly of clay, sand and a comparatively small percentage of stone. When placed in the road bed the first good rain washes out the sand and except for a few pebbles there is no evidence that the track had been ballasted. What gravel was purchased before the line reached the Middle Fork came from the gravel pits at Urbana and cost seventy cents per cubic yard.

A large item of expense was the cost of special work, including crossings, switches, frogs and Ys. The original number of switches put in was eighteen, some having only a stub track and others two ends. In the last two years there have been changes and additions in the switches owing to the changes of schedules thus necessitating new

meeting points,also on account of increased express and frieght traffic demanding more sidings. One simple end switch cost $72.50. The cost of crossings varied, depending on the angle and alignment- that is whether the crossing was on a curve or stretch of tangent. The average cost of a crossing was $325. One Y was used costing $700. The approximate cost for one mile of the road is given in Table 1. This table has to do with the cost of the line and therefore does not include the cost of rolling stock. The cars used at the beginning were small forty foot cars, capable of a speed of about forty miles per hour and costing #3700. The cost of power is low, as only slight additions had to be made to the power plants in addition to a battery house at St. Joseph and a tranformer station at ~~St. Joseph~~ Fithiab. At St. Joseph an old house was repaired to contain the batteries, but at Fithian a large brick building was erected having two rooms, one for the transformers and the other large enough to hold two interurban cars. The cost of car barns is not included in the following table as that item is not classified under the head of track. Besides the barn just mentioned at Fithian, the city barns at Danville and Champaign had small additions, but the total cost of car barns was very low, being about two hundred dollars per mile of track.

Table 1.

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Table 1.

Cost per mile of Danville, Urbana and Champaign Interurban Railway.

Power	$1,500
Rails	4,900
Ties	1,700
Spikes	170
Engineering, Superintedence, instruments, car fare, rents Law fees, etc.	500
Right of Way and Fence	300
Overhead Material, poles, wire,etc.	1,400
Culverts and Bridges	350
Grading (by contract)	1,500
(by employees)	600
Labor on Overhead work, bonding gang	800
Steel and tie gang, spiking gang	1,000
Clearing- right- of-way,surfacing, etc.	500
Total cost per mile	$15,220

This gives about $517,500 as the total cost of the line, exclusive of the items mentioned above.

The power for the line is direct current fed into the trolley line from both the Danville and Champaign power plants. The machine at Danville is a direct current 150 KW generator belt driven and the one at Champaign is a 500 KW double-current generator direct connected to a Russell engine. The alternating current side of this generator feeds current into the three phase-high tension transmission line which extends the whole length of the road. The current is stepped up from about three hundred and fifty to fifteen thousand volts. Under ordinary conditions, however, the high tension lines are used only from Champaign to Fithian. At Fithian there is a rotary-converter sub-station containing a 150 KW converter and three

transformers. At this place the direct current is fed into the trolley wire at six hundred and fifty volts. The voltage at the Danville and Champaign plants being only six hundred volts.

The feed wires extend only from Danville to the Middle Fork as they are not needed any further since the rotary-converter at Fithian raises the voltage sufficiently over the rest of the road.

At St. Joseph there is a storage battery sub-station which simply floats on the line and takes care of the peaks of the loads due to the starting of cars, particularly when these peaks are close together. When necessary as in case of breakdowns, either power station, can furnish current for the high-tension line and feed the sub-station at Fithian: This gives great security against a shutdown due to a short circut or a break down at either plant.

Thus far the income of the road has been about $120,000 per year but the earnings are increasing as the freight and express business is developed. The income is about $3,500 per mile per year.

The total population affected by the interurban, that is, as patrons of the road, is about 51,000, distributed as follows:

Towns and villages listed on thenext page 13.

Champaign and Urbana----------17,000

St. Joseph---------- 700

Ogden---------- 250

Fithian----------300

Muncie---------- 200

Oakwood---------- 400

Bronson---------- 50

Batestown---------- 200

Hillery---------- 50

Vermilion Heights----------3,000

Danville----------24,000

Farmers within a strip three miles wide on each side of the road, 25 persons per square mile---------- 4,900

Total----------50,900

Dividing the total increase per year by the above population gives $2.35 the amount contributed by each person per year toward the support of the road.

The rolling stock consists of six passenger cars, including two forty foot cars, two forty eight foot and two fifty six foot cars: twenty-three coal cars, of which nineteen are standard railroad size; two express cars, an electric locomotive for hauling gravel and coal, and several work and construction cars. Only four cars make regular runs, leaving each terminal every hour, the other cars the other cars being held in reserve in case of accident or a breakdown. The coal and express cars are kept busy all the time, and it is in this kind of traffic that the road expects to make a large part of its ~~traffic~~ profits.

The road has two branch lines: one a coal track about half a mile long running south on a point on the main line seven miles west of Danville, the other a passenger and fright line to Homer, a town five miles south of Ogden. This line though only in operation since May 1904,

has been doing a large freight and express business consisting mostly of coal and groceries. On account of the low express charges almost all of the Homer grocers ship their supplies from Danville over the interurban.

At Danville the Illinois Traction System, has two other interurban lines, one running due south twelve miles to Georgetown, and the other southwest six miles to Catlin. Considering their length and territory reached they are even more of a paying proposition than the Danville, Champaign line.

It is very probable that the construction of the Danville, Urbana and Champaign line will add impetus to the projection of other roads in this part of the state, since the public has had an example of a line connecting two average terminals at a comparatively low cost of construction, and since construction is attended with such few difficulties. There is no reason why cities such as Danville and Champaign should not be important interurban centers for the east central part of Illinois. In every direction within distances varying from twenty to forty miles there are many prosperous towns having populations varying in size from three to ten thousand.

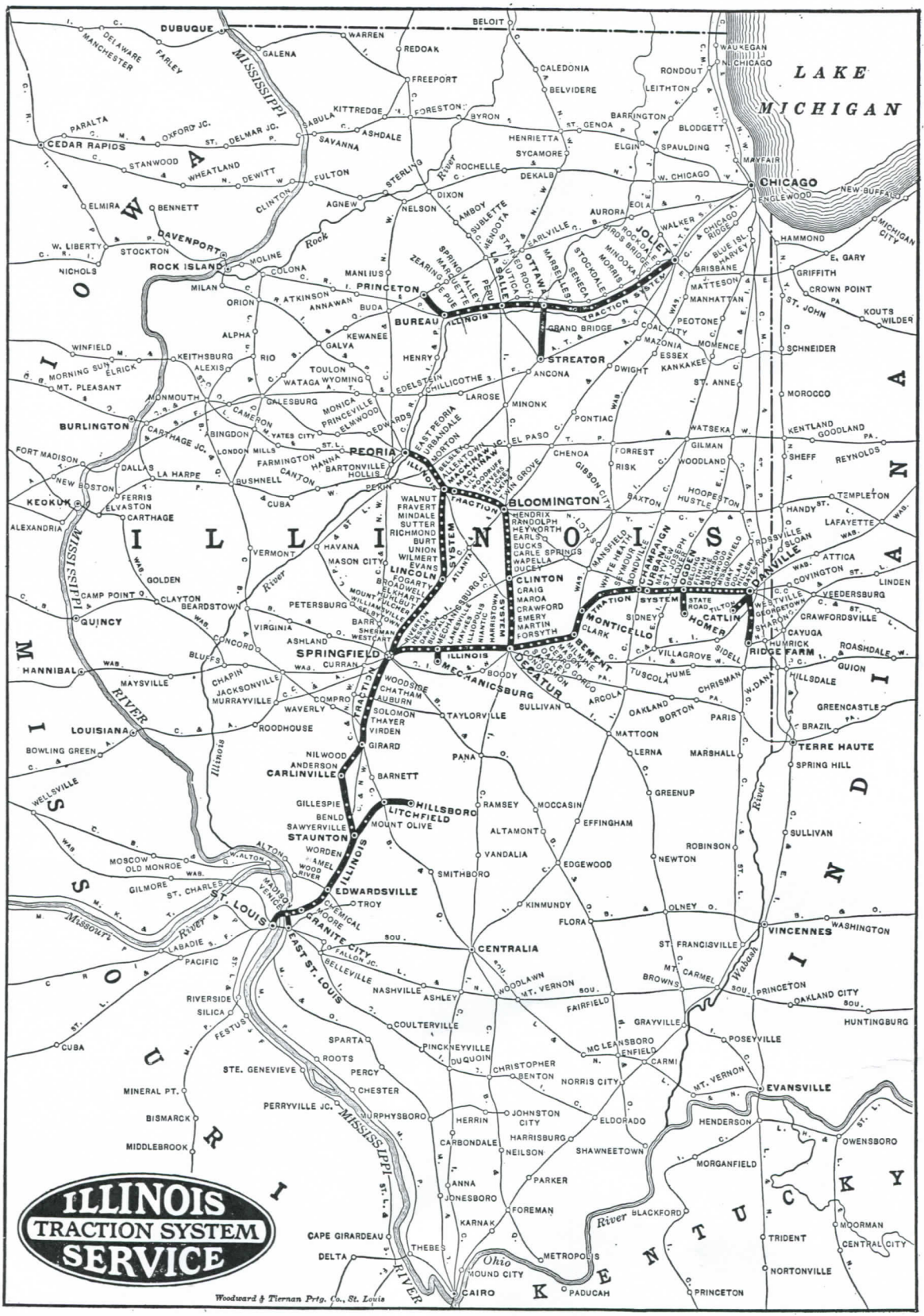
A Report On

OPERATING CONDITIONS ON ILLINOIS TRACTION SYSTEM

With Particular Reference To Improvement of Earnings Through Rehabilitation and Extensions

September 1, 1927

JAMES WALKER
Consulting Engineer
CHICAGO


ILLINOIS
TRACTION SYSTEM
SERVICE
LAKE MICHIGAN
CHICAGO
DUBUQUE
ROCK ISLAND
DAVENPORT
CEDAR RAPIDS
PRINCETON
BUREAU
STREATOR
JOLIET
BLOOMINGTON
PEORIA
SPRINGFIELD
DECATUR
CHAMPAIGN
URBANA
DANVILLE
CLINTON
LINCOLN
MONTICELLO
CATLIN
HOMER
RIDGE FARM
VERMILION
MECHANICSBURG
CARLINVILLE
HILLSBORO
LITCHFIELD
STAUNTON
EDWARDSVILLE
ALTON
GRANITE CITY
EAST ST. LOUIS
CENTRALIA
CARBONDALE
MURPHYSBORO
HERRIN
JOHNSTON CITY
ELDORADO
HARRISBURG
SHAWNEETOWN
METROPOLIS
CAIRO
MOUND CITY
PADUCAH
CAPE GIRARDEAU
DELTA
THEBES
JONESBORO
ANNA
CHESTER
PERRYVILLE JC.
MISSISSIPPI RIVER
Missouri River
Illinois River
Ohio River
Wabash River
Woodward & Tiernan Prtg. Co., St. Louis

A Report On

OPERATING CONDITIONS ON ILLINOIS TRACTION SYSTEM

With Particular Reference To Improvement of Earnings Through Rehabilitation and Extensions

September 1, 1927

JAMES WALKER
Consulting Engineer
CHICAGO

APPRAISALS
REPORTS
INVESTIGATIONS

JAMES WALKER
CONSULTING ENGINEER
35TH FLOOR BANKERS BUILDING
105 WEST ADAMS STREET
CHICAGO

RAILROADS
PUBLIC UTILITIES
INDUSTRIES

Chicago, September 1, 1927

Mr. L. E. Fischer,
Vice President in Charge of Operation,
Illinois Power & Light Corporation,
230 South LaSalle Street,
Chicago, Illinois.

Dear Sir:

In compliance with your request, we have prepared the within report dealing with the past results of operation of the Illinois Traction System and suggesting means by which we believe the future net earnings of the road can be improved. The subjects discussed are too many to even enumerate here, but they are given in the index on the next page and epitomized on the pages immediately following.

As a result of our investigations, it seems fitting at this place to express the opinion that the road is very capably managed at the present time and that future increases in the earnings must come from additional facilities, such as the extension of the road to Chicago, the construction of the Ottawa and East St. Louis belt lines, and a number of changes of like character which are detailed on subsequent pages.

Trusting the report may be of service to you and thanking you for the opportunity of preparing it, we remain

Very truly yours,

James Walker

Consulting Engineer

JW-BM

I-N-D-E-X

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SUMMARY

1. Histories and Descriptions: On pages 1 to 38, inclusive, there are presented histories and descriptions of the properties with which this report is concerned. These give the principal physical characteristics, such as territory served, mileage, ballast, rail, grades, substations, and other data upon which are based the various conclusions set forth in the report. The descriptions are purposely made in some detail because it is understood the report will be read by some who are not well acquainted with the property.

2. Analysis of Past Operating Expenses: On pages 39 to 48 there is presented an analysis of operating expenses during the last five years, closing with the statement that we believe no retrenchments should be made in operating expenses unless unavoidable. On page 43 it is recommended the management consider the possibility of reducing power costs.

3. Analysis of Revenues: On pages 48 to 63 there is presented an analysis of revenues from each of the various sources during the last five years, and the general conclusion is reached that the Company has used all practical means at its command to maintain its revenues so far as present facilities are concerned.

4. St. Louis-Chicago Line: On pages 64 to 94 there is presented a detailed discussion of the advisability of procuring an entrance to Chicago for the Traction line, thus affording a direct route between St. Louis and Chicago. It is suggested this be done (page 66) by (1) utilizing the present line of the Company from St. Louis to Morton, near Peoria; (2) securing trackage rights over the Pekin branch of the Santa Fe from Morton to Ancona, near Streator; (3) utilizing the Illinois Valley division from Streator to near Joliet; (4) securing trackage rights over proposed and present line of Chicago and Illinois Western railroad from near Streator to Harvester Junction, a point near 27th street and Western avenue, in the city of Chicago; (5) handling passenger traffic from Harvester Junction to the Union Loop over the elevated lines of the Chicago Rapid Transit Company, and routing freight traffic over the Baltimore & Ohio Chicago Terminal railroad tracks to some point near the Soo line terminal at Roosevelt road and Canal street. Such a project ultimately would cost probably (page 83) about $13,000,000, would have many advantages, and it is recommended (page 67) that it be constructed.

5. Ottawa Belt Line: It is recommended (page 92) that a belt line be constructed through Ottawa, Illinois, in order to permit the handling of freight through that city. The proposed line would be located along the old Illinois & Michigan canal, would be 3.26 miles long, and would cost about $200,000.

6. East St. Louis Belt Line: On pages 93 to 96 there is presented a discussion of the advisability of constructing a belt line around the East St. Louis industrial district. It is recommended this be done, the line to include the present Illinois Terminal from Alton to LeClaire; the St. Louis & Illinois Belt Railway from LeClaire to O'Fallon, part of which is now built, and the remainder under construction; construct new line or acquire branch of Louisville & Nashville from O'Fallon to Belleville; acquire East Carondelet branch of Illinois Central railroad from Belleville to East Carondelet. This belt would entirely encircle the East St. Louis industrial district, and, in our opinion, be of great value to the road.

7. Relocation from Split Rock to LaSalle: It is recommended (page 96) that the construction of a relocated line from Split Rock to LaSalle, about two miles long, be deferred until more pressing matters are cared for.

8. Chicago, Attica & Southern Railroad: On pages 99 to 106 there is presented a discussion of the possible use of the Chicago, Attica & Southern Railroad as part of a link that could be used by the Traction company in reaching the Chicago market. A brief description of the road is given and several reasons are presented for believing that it would be impractical for this purpose, concluding with the recommendation (page 106) that this road is not adapted to such use by the Traction lines.

9. Abandonment of System: On page 107 is discussed the abandonment of the entire system, with the conclusion (page 109) that such a program is decidedly unwise.

10. Abandonment of Valley Division: On pages 109 to 116, inclusive, is presented a discussion of the question of whether the Illinois Valley division should be abandoned or not, concluding with the opinion (page 116) that there is no basis for recommending such action.

11. Abandonment of Route to Princeton: On pages 116 to 119 is presented a discussion of the advisability of abandoning the portion of the Illinois Valley division west of Peru, concluding with the recommendation that this part of the line should be studied with a view of ascertaining the exact results of operation, after which appropriate action should be taken.

12. Abandonment of Homer Branch: On page 119 is presented a discussion of the advisability of abandoning part of the Homer branch, concluding with the recommendation that operation of this line be discontinued from the state road to Homer, a distance of 3.0 miles.

13. Abandonment of Ridge Farm Branch: On pages 120 to 122 is presented a discussion of the advisability of abandoning the Ridge Farm branch, concluding with the recommendation that operation on the portion south of Westville, 5.5 miles, be discontinued.

14. Abandonment of Catlin Branch: On pages 122 and 123 is presented a discussion of the advisability of abandoning the Catlin branch, concluding with the recommendation that operation be discontinued on the portion of this line west of the County Farm, a distance of about two miles.

15. Decatur to Danville: On pages 124 to 127 is presented a discussion of the probable value of the line from Decatur to Danville, concluding with the suggestion that records be kept to determine the results of operation thereon.

16. Proposed Plan of Operation: On page 127 is presented an outline of the proposed method of operating the system in case the Chicago link is constructed.

17. Money for Improvements: On page 128 is presented a discussion of the question as to whether it is advisable to raise all money needed for improvements at one time or in smaller amounts as needed, concluding with the recommendation (page 129) that the latter course be adopted.

18. Quality of Service: On page 129 is presented a discussion of the quality of service that the road can offer, concluding with the suggestion that if the service is improved there will be no difficulty in securing patronage.

19. Traffic Surveys: On page 130 is presented a discussion of the advisability of keeping up to date surveys of traffic possibilities in the territory served by the Company.

20. Classes of Traffic: On page 131 is presented a discussion of the reasons why the road does not seek to handle live stock, drain tile, and other undesirable classes of freight.

21. Differential Rates: On page 133 is presented a brief discussion of the matter of differences in rates between the electric line and certain steam railroads, particularly in the coal rates between Champaign and Danville and Springfield and Decatur, ending with the conclusion that this matter is being properly cared for by the management.

22. Equipment: On page 134 is presented a discussion of the matter of present equipment owned by the Company, ending with the conclusion (page 136) that equipment is greatly insufficient and the suggestion that the management give consideration to the possibility of increasing the number of passenger and freight cars.

23. Increased Rates: On pages 136 to 139 is presented a discussion of the possibility of increasing the rates from 3 cents to 3.6 cents a mile, ending with the conclusion that under present conditions it probably is preferable for the road to remain upon the 3 cent basis.

24. Traffic Department: On page 139 is presented a discussion of the activities of the traffic department in securing business, ending (page 141) with the suggestion that it should be given more and better help as fast as possible.

25. Accounting Records: On page 141 is presented a discussion of the present system of accounting in use by the Company, ending with the suggestion (page 144) that the present methods be changed so as to afford the management accurate information as to the results of operations upon various portions of the line.

26. General Offices: On page 144 is presented a brief discussion of the location of the general offices of the Company, terminating with the suggestion that they be consolidated either at St. Louis or Chicago, preferably the former place, at least for the next few years.

27. Future Financial Structure: On pages 145 and 146 is presented a brief discussion of what the changes herein advocated might mean in the way of changes in the financial structure of the Company.

28. Management: On page 146 is presented a brief discussion of the present management of the Company, ending with the conclusion that the road is now very capably handled.

29. Conclusion: On page 147 is presented the general conclusion of the report.

General The within report was prepared at the request of Mr. L. E. Fischer, vice president in charge of operations of the Illinois Power & Light Corporation, which controls the railroad lines commonly known as the Illinois Traction System, for the purpose of discussing operating conditions on them, especially with reference to the possibilities of increasing their revenues through general improvement in the physical condition of certain parts of the properties and of extensions which would be designed so as to afford a direct line between Chicago and St. Louis.

The properties included in this report, which are shown by the map on the front cover and described in somewhat greater detail on page 5, are as follows:

1. Illinois Traction, Incorporated, comprising 514 route miles of owned electric railroad in Illinois between: Granite City and Peoria, 160 miles; Springfield and Danville, 117 miles; Decatur and Mackinaw, 65 miles; Joliet and Princeton, 85 miles; with branches from Ottawa to Streator, 16 miles; Staunton to Hillsboro, 23 miles; Mechanicsburg Junction to Mechanicsburg, 4 miles; Ogden to Homer, 5 miles; Danville to Ridge Farm, 17.0 miles; Danville to Catlin, 5 miles; and four belt lines aggregating 17 miles.

2. St. Louis Electric Terminal Railway Company, comprising lines from Granite City, Illinois to terminal at Twelfth street and Lucas avenue, St. Louis, a distance of about 9 miles, with the exception of the tracks on the McKinley bridge.

3. St. Louis Electric Bridge Company, comprising the bridge and tracks used by the Company to cross the Mississippi river at St. Louis.

4. St. Louis, Troy & Eastern Railway Company, comprising a steam operated road for freight only between East St. Louis and Troy, Illinois, a distance of 19 miles.

5. St. Louis & Illinois Belt Railway, comprising a steam operated freight line extending from LeClaire, near Edwardsville, to Formosa Junction, a distance of 7 miles.

ILLINOIS TRACTION SYSTEM - General

6. Illinois Terminal Company, comprising a steam operated line from Alton to Formosa Junction, a distance of about 21 miles, of which the portion from LeClaire to Troy Junction, 4.84 miles, is owned jointly with St. Louis & Illinois Belt Railway.

The data and conclusions hereinafter presented are the results of a careful inspection of the physical properties and an examination of the Company records made between May 16, 1927 and July 2, 1927 by various of our representatives, including H. E. Bartlett, member A.S.C.E., chief engineer; C. H. Bartlett, associate member A.S.C.E., principal assistant engineer; R. R. Dunn, associate member A.I.E.E., and P. A. Shields, accountant. The utmost in the way of cooperation has been given by Company officials, especially Mr. L. E. Fischer, vice president; Mr. E. W. Fowler, assistant vice president; Mr. D. W. Snyder, Jr., vice president; Mr. L. B. Martin, general superintendent; Mr. W. H. Wylie, traffic manager; Mr. H. A. Tuohy, assistant traffic manager; Mr. J. M. Bosenbury, superintendent of motive power; Mr. J. E. Catherman, engineer maintenance of way; Mr. B. E. Bramble, comptroller; Mr. J. Leisenring, general electrical superintendent; Mr. F. E. Fisher, superintendent of Illinois Valley division, and many others. In addition, our representatives talked with the agents at all principal stations with the object of securing an insight into local problems as viewed by those residing in the communities.

The report will consider the problems under two general subdivisions. PART I will deal with the property as it now is, including a brief history thereof, a description of its physical characteris-

tics, and what has been accomplished in the way of earnings and progress. PART II will consider the changes which, in our opinion, should be made in order to promote the future well-being of the property and increase its earnings. These changes include certain improvements in the physical condition of the system; extensions that will enlarge its field of usefulness, particularly those that will give a reasonably adequate entrance to Chicago for freight and passengers; abandonment of portions of certain branch lines; modifications of a few operating practices, such as more detail in accounting; and a number of miscellaneous features which have a bearing on the net earning capacity of the system.

P A R T I

History — Those of the railroads involved in this report that are operated electrically comprise those familiarly known as the Illinois Traction System, and are described in greater detail on page 5. All of them formerly were controlled by the old North American Light & Power Company, incorporated under the laws of Maine in 1915, but which has been succeeded by the present company of the same name. The present North American Light & Power Company was incorporated in Delaware in 1924, and controls the entire common stocks of Illinois Power & Light Corporation and Missouri

ILLINOIS TRACTION SYSTEM - History

Power & Light Company, which directly or through subsidiaries serves a population of over 1,350,000 in 520 municipalities in Illinois, Iowa, Missouri, Kansas and Nebraska.

The North American Light & Power Company controls, directly or indirectly, the following subsidiaries:

Illinois Power & Light Corporation	Illinois
Illinois Traction Company	Maine
Illinois Traction, Inc.	Illinois
St. Louis Electric Terminal Railway Corporation	Missouri
St. Louis & Illinois Belt Railway Company . . .	Illinois
St. Louis, Troy & Eastern Railroad Company . .	"
The Kansas Public Service Company	Maine
The Kansas Power & Light Company	Kansas
Union Power Company	"
Topeka Edison Company	"
Topeka Railway Company	"
Des Moines Electric Light Company	Maine
Iowa Power & Light Company	Iowa
Iowa Transmission Line Company	"
Oskaloosa & Buston Electric Railway Company . .	"
Omaha & Lincoln Railway & Light Company	Nebraska
Missouri Power & Light Company	Missouri

The Illinois Power & Light Corporation was incorporated in Illinois May 28, 1923 for the purpose of acquiring and unifying all the properties formerly owned by the Illinois Traction Company and Southern Illinois Light & Power Company. The Illinois Traction Company disposed of all its properties to the Illinois Power & Light Corporation in exchange for the entire common stock of the latter corporation, which, in addition to certain others, controls the six following properties, previously named but here repeated as a matter of convenience, because this report is directly concerned with them, viz:

ILLINOIS TRACTION SYSTEM - History

1. ILLINOIS TRACTION, INC.
2. ST. LOUIS ELECTRIC TERMINAL RAILWAY COMPANY
3. ST. LOUIS ELECTRIC BRIDGE COMPANY
4. ST. LOUIS, TROY & EASTERN RAILWAY COMPANY
5. ST. LOUIS & ILLINOIS BELT RAILWAY COMPANY
6. ILLINOIS TERMINAL COMPANY

These roads will be described briefly in the paragraphs immediately following, while on later pages will be given descriptions of the property that are in considerable detail. The latter are at greater length than may be necessary to officials of the road and others thoroughly familiar with its affairs, but it is quite possible others not so well acquainted with the properties may be interested in this report, and it is for the benefit of the latter that the details are given at such length.

1. Illinois Traction, Incorporated, a subsidiary of the Illinois Power & Light Corporation, was incorporated in Illinois May 23, 1923, as a consolidation of the Bloomington, Decatur & Champaign Railroad, the Danville, Urbana & Champaign Railway Company, the St. Louis, Springfield & Peoria Railway Company, Illinois Central Traction Company, and Chicago, Ottawa & Peoria Railway Company. The Company owns 514.02 miles of line and has operating rights over 28.10 miles belonging to others, or a total of 542.12 miles of route, comprising owned route miles as follows: Granite City to Peoria, 157.66 miles; Mackinaw Junction to Decatur, 64.62 miles; Springfield to Danville, 117.08 miles; Joliet to Princeton, 85.48 miles; 6 branch lines, 71.94 miles; 4 belt lines, 17.24 miles; leased tracks, 28.10 miles.

Briefly, the electric trunk line railroads owned by Illinois Traction, Inc., comprise about 542 miles of modern standard gauge railroad, largely equipped with automatic block signals, and have repair shops, car barns, and 1,354 freight and passenger cars. This system connects the cities of Peoria, Springfield, Bloomington, Danville, Urbana, Champaign, Decatur, Edwardsville, Granite City, Madison, Venice and St. Louis, entering St. Louis over a steel toll bridge and having its own terminal in the business district.

ILLINOIS TRACTION SYSTEM - History

2. St. Louis Electric Terminal Railway Company was incorporated under Missouri laws March 8, 1906, to build terminal stations for freight and passengers in St. Louis for the Illinois Traction Company. Since 1910 the Company has furnished street railway service in Venice, Madison and Granite City. It owns 8.44 miles of line between St. Louis and Granite City, Illinois, has 2.04 miles of trackage rights in Granite City, and owns 30 cars.

3. St. Louis Electric Bridge Company was incorporated January 22, 1907 in Illinois, and on November 10, 1910, completed the McKinley bridge across the Mississippi river from Salisbury street, St. Louis to Venice, Illinois, 1.23 miles in length, thus providing entrance into St. Louis for cars of the Illinois Traction System. The bridge is double tracked and the center roadway is also used for pleasure automobiles, while the side roadways are used for motor trucks and other heavy vehicles.

4. St. Louis Troy & Eastern Railway Company: Incorporated under the laws of Illinois August 16, 1899, and handles freight only. The road extends from East St. Louis to Troy, Illinois, 18.91 miles, with one-half interest in branch from LeClaire, near Edwardsville, to Troy Junction, Illinois, 4.84 miles, or a total of 23.71 miles of main line and 19.03 miles of sidings. The road is of standard gauge, with rail mostly 80 pounds. Equipment consists of 6 locomotives and 1,180 cars. At the time of this report the road is constructing an elevated connection with the east (Illinois) end of the McKinley bridge which will afford one of the best entrances to St. Louis owing to freedom from grade crossings with other carriers. This work will cost about $1,000,000 and is expected to be completed late in 1927, and fast trains of the Traction company will enter St. Louis over it. (See map in back)

5. St. Louis & Illinois Belt Railway: Incorporated under Illinois laws October 1, 1905, and handles freight service only. The road extends from LeClaire, near Edwardsville, south to Formosa Junction, Illinois, a distance of 6.97 miles. Sidings, 2.92 miles. An extension to O'Fallon, about 6 miles long, is now under construction. The road was acquired by Illinois Power & Light Corporation in March, 1925.

6. Illinois Terminal Company: Incorporated under the laws of Illinois July 6, 1895 and opened February 22, 1896 as Illinois Terminal Railroad Company. The name was changed to present one in 1923. The road was built to supply terminal facilities to the railroads entering the city of Alton and to develop the manufacturing interests of the Alton industrial district. On July 1, 1925 it purchased a one-half interest in St. Louis and Illinois Belt Railroad from LeClaire to Troy Junction, 4.84 miles, and all of that road from Troy Junction to Formosa Junction, 2.13 miles, and assumed its entire operation, which previously

had been covered by trackage agreement with the St. Louis and Illinois Belt. Operates 22.74 miles of railway from Alton to Formosa Junction, and 3.29 miles leased from the Wabash Railway used as second track; sidings, 26.03 miles. Standard gauge; rails 80 and 90 pound; 10 locomotives and 86 cars. (See map in back)

7. Street Railways: It also may be mentioned that Illinois Power & Light Corporation operates city railway properties comprising over 235 miles of track and directly serving Danville, Decatur, Champaign, Urbana, Cairo, Peoria, Quincy, Bloomington, Galesburg and Ottawa, Illinois. However, this report is concerned with none of these.

Description of the Property

As above stated, Illinois Traction, Inc., is a consolidation of six original companies which operated electric interurban railways in central Illinois. The system (see map on front cover) comprises 542 route miles of standard gauge electric railroad, nearly all of which is single track, and furnishes passenger, freight, express and miscellaneous services comparable to those given by standard steam railroads in the territory. It supplies street railway service between St. Louis, Missouri and the adjacent communities of Venice, Madison and Granite City, and local service in the latter place and in LaSalle and Peru, Illinois, the local service in the three last-named places being supplemented by bus service. Of the 542 miles of line, 441 miles are in what is known as the Main Division, comprising all lines south of Peoria. The remaining 101 miles are in the Illinois Valley Division, extending along the Illinois river from Joliet to Princeton, 85 miles, and the branch from Ottawa to Streator, 16 miles.

Character of Territory Served: The territory served by the Illinois Traction Company varies considerably in character, but is largely

agricultural, most of it among the best farming land in the United States. Probably two-thirds of the road lies in the world-famous corn belt of Illinois. In the vicinity of Peoria, Springfield, Edwardsville and Danville, and in smaller places in the vicinity, there are rich deposits of bituminous coal, many of the veins averaging more than six feet in thickness. Along the Illinois Valley line are large deposits of sand and gravel and silica sand for glass making. These products and those arising from agriculture form the principal sources of the freight traffic originating along the lines, but, in addition, large amounts of freight received from connecting railroads are handled.

All places served by the Company and having a population of 1,000 or more in 1920 are shown in the following tabulation:

	Population In 1920
Alton	24,682
Auburn	2,660
Benld	3,316
Bloomington	28,725
Carlinville	5,212
Cerro Gordo	1,003
Champaign	15,873
Clinton	5,898
Danville	33,776
Decatur	43,818
Edwardsville	5,336
Gillespie	4,063
Girard	2,387
Granite City	14,757
Joliet	38,442
LaSalle	13,050
Madison	4,996
Maroa	1,193
Marseilles	3,391
Monticello	2,280

ILLINOIS TRACTION SYSTEM - Description of Property

Morris	4,505
Morton	1,179
Ottawa	10,816
Peoria	76,121
Peru	8,869
Princeton	4,126
Riverton	1,916
Rockdale	1,478
St. Louis	772,897
Springfield	59,183
Spring Valley	6,493
Staunton	6,027
Streator	14,779
Thayer	1,254
Urbana	10,244
Venice	3,895
Virden	4,682
Worden	1,252
Total	1,244,574

General Traffic: Through service is afforded between St. Louis and Peoria via Springfield, a distance of 172 miles, and between Springfield and Danville, a distance of 123 miles. The road is classed as an interstate carrier and is therefore under the jurisdiction of the Interstate Commerce Commission. Much of its equipment is M.C.B. standard and therefore interchangeable with that of steam railroads. All freight cars owned by the Company are equipped with A.R.A. and United States safety appliance standards for such interchange, and in addition, are so constructed as to go around curves with a radius of 47 feet.

Passenger Traffic: The passenger business of the Company is still profitable, although there are only about 19 miles that are not paralleled by hard roads. The officials of the road believe, however, that the limit has been nearly reached so far as automobile competition is con-

cerned, and that the trend is for the better. There is no organized intrastate bus business in the territory. Considerable money has been spent fighting bus lines, but the management has refused to buy out any of them. There are several bus lines between St. Louis and Chicago which do a little business in the territory, and therefore are competitors in a small way. Their rates run as low as $4.00 between St. Louis and Chicago, which is less than one-half the regular train fare. These lines have been enjoined from handling intra-state passengers, and hence affect the revenues of the traction company to a limited extent only.

An idea of the amount and speed of the passenger service afforded may be obtained from the statement that between St. Louis and Peoria six fliers, one of which carries sleeping cars, are operated daily in each direction. The two fastest of these trains, commonly known as "the Tangerines", make the run of 172 miles in five hours and fifteen minutes, or at the rate of about 33 miles an hour. Fliers are generally operated in trains of from one to four cars, and are equipped for multiple unit control. Between St. Louis and Springfield five locals are operated daily in each direction, the fastest of which make the run of 98.3 miles in four hours, or at the rate of 24.5 miles an hour. Fares are based upon 3.0 cents a mile, but certain commutation and mileage tickets may be had at reduced rates.

During the last five years, revenue passengers were carried as follows:

1922	8,335,431
1923	8,064,413
1924	6,749,667
1925	6,573,801
1926	6,292,457

Although the number of passengers carried has decreased, the average haul has increased from 13 to 17 miles, so that the loss in revenues is not in direct proportion to the loss in passengers.

Freight Traffic: The Company has furnished both freight and passenger service from the beginning, but formerly the passenger business strongly predominated. However, during the past five years the freight traffic has received increasing attention with the result that such revenues have greatly increased. On a subsequent page there will be found a statement showing the number of each class of industries served by the road. Freight is handled with electric locomotives, the heaviest of which are of the articulated type with 16 wheels and weighing approximately 160,000 pounds. These locomotives are capable of handling 900 tons over any of the grades between St. Louis and Morton. Most freights are handled as extras, but between Granite City and Peoria one regular freight and one regular merchandise are operated daily in each direction. The merchandise train, which is the faster, makes the run of 165 miles in 8 hours and 50 minutes, or at the rate of about 19 miles an hour. Joint rates are maintained with practically all carriers in the United States and the road is operated as a standard freight carrier, limited, however, in some respects in the handling of standard equipment, as for example at the Springfield freight house, where curves

will not permit such equipment to be operated. However, this applies only to the local situation and does not prevent the road from handling such equipment through Springfield, as this is done over a belt line specially provided for the purpose. Trains handled usually range from 10 to 20 cars.

Probably the best measure of the increase in freight traffic during the last five years is the revenues therefrom, which were as follows:

1922	$ 2,039.390
1923	2,171,644
1924	2,160,636
1925	2,636,179
1926	2,550,584

Express Service: Because of war conditions, the Company was compelled to establish its own express service in July, 1919, prior to which time it had been handled by the Adams Express Company. In January, 1926, collection and delivery service was established, and now is rendered at principal stations by twenty-four specially designed one-ton trucks, with Ford chassis, which are in charge of uniformed drivers. At smaller stations the collection and delivery service is performed by local trucking companies. Rates are the same as those of American Railway Express Company in the same territory.

Light and Power: The Company formerly sold light and power to certain communities and other consumers along its lines to the extent of about $750,000 annually. This business now amounts to only about $150,000, as most of it has been taken over by the Illinois Power &

ILLINOIS TRACTION SYSTEM - Description of Property

Light Corporation.

McKinley Bridge Tolls: A considerable revenue is obtained from vehicles using the McKinley bridge over the Mississippi river at St. Louis, which was completed in 1910 and is the largest electric railway bridge in the world. In 1925 the center pathway was paved for use of passenger automobiles and the side roadways allotted to trucks and other slow moving vehicles. In order to popularize this use the Company has placed 416 signs along paved roads within a radius of 75 miles, giving mileage and directions to reach the bridge.

Industries: The Illinois Traction System, including the Valley Division, has a total of 182 industries served by it, as shown in the following paragraphs:

Coal Mines: One each at Edwardsville, Gillespie, Carlinville, Thayer, Auburn, Dolan and Grays; two at Springfield; none on Valley Division. Four of these mines, those located at Dolan, Grays, Gillespie and Carlinville are exclusive. Fourteen mines in the Springfield district are served jointly with other roads.

Elevators: One each at Hamel, Carlinville, Woodside, Mt. Fulcher, Fogarty, Hurlbut, Evans, Union, Richmond, Sutter, Mindale, Walnut, Belsey, Stuckey, Elkins, Bucks, Ducy, Craig, Martin, Hessar, Homer, Mechanicsburg, Lanesville, Illiopolis, Haynes, Harristown, Clark, Ogden, State Road and Delong; two at Princeton, 1 at Utica, 1 at Morris and 5 at miscellaneous points; total 39.

Retail Coal: One each at Edwardsville, Hillsboro, Litchfield, Nilwood, Girard, Virden, Lincoln, Wilmert, Burt, Fravert, Allentown, Morton, Gardena, Lilly, Danvers, Bloomington, Heyworth, Carle Springs, Earls, Maroa, Crawford, Buffalo, Illiopolis, Mason, Urbana, St. Joseph, Ogden; two each at St. Louis, Madison, Gillespie, Carlinville, Mackinaw, Mechanicsburg and Homer; four at Granite City; seven at Decatur; four at Princeton, two at Bureau; one each at Depue, Marseilles, Seneca and Morris; total 62.

ILLINOIS TRACTION SYSTEM - Description of Property

Bulk Oil: One each at Venice, Auburn, Chatham, Wapella, Clinton, Dawson, Long Point, Niantic, Monticello, St. Joseph, Batestown, Hooton and Danville; two at Decatur; three at Granite City; five at Springfield; one at Morris; total 24.

Miscellaneous: One each at Chemical, Higgins, Staunton, Carlinville, Auburn, Westcart, Cash, Peoria, Mackinaw, Green, Bloomington, Buffalo, Illiopolis, Condit, Bement, Monticello, Bondville, Champaign; two each at Venice, Litchfield, Lincoln, Morton, Clinton, Urbana; three each at Decatur and Danville; four each at St. Louis and Granite City; seven at Springfield; two at Princeton; total 53.

Carrier Relations: Twenty years ago the steam railroads did not recognize the Illinois Traction System as a carrier, but now it has interline rates with about 1,600 carriers. Nearly all of this commendable change has taken place within the last five or six years, and the Company is doing everything possible to maintain the pleasant relations which now exist.

Divisions: The Illinois Traction System is divided into operating divisions as follows:

1. Main System; 441 miles of line in central Illinois
   - Southern Division - Granite City to Springfield
   - Northern " - Springfield to Peoria and Mackinaw Junction to Bloomington
   - Central " - Springfield to Champaign and Decatur to Bloomington
   - Eastern " - Champaign to Danville
2. McKinley Bridge; 1.23 miles of line
3. St. Louis Electric Terminal Railway Company; 8.44 miles
4. Valley Division; Joliet to Princeton and Ottawa to Streator; 102.83 miles of line.

Construction Dates: The various lines comprising the system were constructed as shown in the following tabulation:

ILLINOIS TRACTION SYSTEM - Description of Property

Line		Constructed
Springfield	- Granite City	1905-06
"	- Lincoln	1906
Lincoln	- Mackinaw Junction	1907-08
Bloomington	- Peoria	1906-07
Decatur	- Bloomington	1906
"	- Springfield	1905-06
Champaign	- Decatur	1906
Danville	- Champaign	1902-03
"	- Ridge Farm	1901-02
"	- Catlin	1901-02
Homer Branch		1902-03
Edwardsville Belt		1910
Granite City	"	1910
Springfield	"	1910
Decatur	"	1910
McKinley Bridge		1909-10
Joliet to Princeton		1901

Mileage owned and that operated over under trackage rights on December 31, 1926 is concisely shown in the following tabulation:

Line	First Main	Second Main	Sidings	Total
Main Division	413.01	4.40	.	417.41
St. Louis Electric Terminal Railway.	8.44	5.08	3.35	16.87
McKinley Bridge	1.19	1.19	0.61	2.99
Illinois Valley Division	101.02	0.78	10.77	112.57
	523.66	11.45	14.73	549.84
Lease and Trackage				28.10
TOTAL OPERATED				577.94

Alignment is comparable to that of steam railroads, except in city streets, where there are numerous sharp curves, some having a minimum radius of 47 feet, a fact which necessitates special designs for rolling stock. To remove the most objectionable of these curves the Company has constructed belt lines, the principal ones being at Edwardsville, Springfield and Decatur, while through Champaign and Urbana the difficulty is met by the use of rights over certain tracks of the Illinois Central and

ILLINOIS TRACTION SYSTEM - Description of Property

Wabash railroads. Bad operating conditions at other places arising from this cause will be discussed separately in subsequent paragraphs.

Grades generally are fairly comparable with those of steam railroads in the territory. As is well known, those portions of Illinois served by the Company are generally quite level or only moderately rolling except within about 50 miles of St. Louis and 15 miles of Peoria, where, owing to the nearness to the bluffs of the Mississippi and Illinois rivers, there are a number of grades around 2.0 percent or greater, one more than a mile long, and therefore constituting the ruling gradient for the districts. The heavier grades between St. Louis and Peoria are shown in the following table:

Location	Southbound Length	Southbound % Grade	Northbound Length	Northbound % Grade
Urbandale	1,000	1.60	,	.
Log Cabin	6,000	1.43	,	.
Matheny	1,400	2.55	,	.
Murphy	2,000	2.64	,	.
Herberger	,	.	1,800	2.35
Summit Hill	1,500	1.80	,	.
C&A Viaduct	1,300	2.30	800	2.50
Union Hill	,	.	3,700	1.95
Lee	,	.	1,400	1.70
Wyatt	,	.	1,100	2.43
Selbytown	,	.	1,200	1.40
Peabody	,	.	1,000	2.07
"	,	.	900	1.92
Ridgeley Junction	1,600	1.60	,	.
IC Crossing (Belt)	3,100	1.20	1,400	1.60
" "	2,100	1.37	,	.
C&A Viaduct	1,200	2.20	3,000	1.19
Iles Subway (C&A)	1,500	1.00	,	.
Carlinville	1,100	1.40	1,100	1.00
Davis	1,500	1.10	,	.
Whiteworth	,	.	1,200	1.10
Smutzlar	,	.	1,800	1.70
Cash Siding	,	.	1,000	1.00
Mt. Fulcher	,	.	1,600	1.00

ILLINOIS TRACTION SYSTEM - Description of Property

Location	Southbound Length	Southbound % Grade	Northbound Length	Northbound % Grade
Adlar	,	.	2,100	1.50
Dingerson	3,900	1.92	,	.
Taresvale	2,700	1.50	2,200	1.89
Edwardsville Belt	,	.	2,000	1.32
Nickel Plate	4,700	1.00	1,200	1.00
" "	1,900	1.00	,	.
Center Grove Park	,	.	1,900	1.50
" " "	,	.	4,000	1.39
" " "	,	,	1,600	1.00
McKinley Bridge	1,300	1.20	1,500	1.40
" "	,	.	1,300	1.50
St. Louis	1,100	1.40	,	.
	40,900		40,800	

Railroad Connections: Direct connections with 24 steam railroads at 49 places are had as shown in the following list:

Railroad	Connections
Baltimore & Ohio	Springfield
Chicago, Indianapolis & Western	"
Illinois Central	" , Decatur, Seymour, Staleys, Bloomington, Moore
Wabash	Springfield, Decatur (2), Urbana, Tilton, Riverton, Staunton, Streator
Chicago & Alton	Selbytown, Westcart, Anderson Stop, Venice, Streator
Springfield Terminal Railway	Springfield
Chicago & Eastern Illinois	Bronson, Glover, Westville
Chicago & Illinois Midland	Auburn
Chicago, Burlington & Quincy	Girard
Chicago & Northwestern	Benld, Spring Valley
Litchfield & Madison	Worden, Moore
Illinois Terminal Company	Edwardsville
St. Louis, Troy & Eastern	"
New York, Chicago & St. Louis	Ridge Farm
Big Four	Bloomington, Hillery, Mackinaw Jct.
Atchison, Topeka & Santa Fe	Morton
Peoria & Pekin Union	Peoria
Alton & Southern	Horse Shoe Stop
Merchants Bridge Terminal	Granite City, St. Louis
Elgin, Joliet & Eastern	Rockdale, Minooka
Rock Island	Marseilles, Ottawa, Utica, Depue
Burlington	Ottawa
Santa Fe	Streator

ILLINOIS TRACTION SYSTEM - Description of Property

Sidings: Principal sidings between St. Louis and Peoria, and their capacities in cars, compiled from time cards #22 and #50, are shown in the following tabulation:

Capacity In Cars	Number of Sidings
0 - 10	18
11 - 20	25
21 - 30	33
31 - 40	12
41 - 50	4
51 - 60	1
61 - 70	-
71 - 80	-
81 - 90	-
91 -100	1
Over 100	2
	96

Right of Way: Of the main track mileage comprised in the system, exclusive of the Illinois Valley Division, 85.67% is on private right of way and 14.33% in city streets. Except in city streets, the right of way averages about 75 feet in width. However, as is the case with most railroads, this width varies considerably, ranging from 100 feet to as narrow as 33 feet for comparatively short distances. Between St. Louis and Peoria the average is about 75 feet, while between Springfield and Danville it is almost uniformly 100 feet. There are only a few places where lessened width might constitute a serious obstacle to further improvement of the road. The right of way is generally in good condition, as chemical weed extermination was made standard over all divisions in 1926.

Grading is generally light as the road follows the contour of the

country, which is characteristically level, the average being probably about 2,000 cubic yards to the mile. The roadbed originally was generally built to a width of 12 feet, but this varies somewhat, being as wide as 16 feet in some places.

Ballast in main tracks on December 31, 1926, is concisely shown in the following tabulation:

	Cinders	Gravel	Stone	Cinders On Gravel	Total Miles
Granite City-Springfield	62.53	21.92	4.83	.	89.28
Springfield-Lincoln . .	18.20	7.97	0.28	.	26.45
Lincoln-Mackinaw Jct . .	11.15	17.29	.	.	28.44
Mackinaw Jct-Peoria . .	12.16	2.57	1.26	.	15.99
Bloomington-Mackinaw Jct	13.69	6.46	0.88	.	21.03
Decatur-Bloomington . .	42.02	1.40	0.17	.	43.59
Springfield-Decatur . .	38.51	0.51	.	.	39.02
Mech.Jct-Mechanicsburg .	3.49	.	.	.	3.49
Decatur-Champaign . . .	44.21	4.24	.	.	48.45
Champaign-Danville . . .	29.91	1.60	.	.	31.51
Ogden-Homer	5.09	0.31	.	.	5.40
Danville-Ridge Farm . .	12.35	0.05	4.05	.	16.45
Danville-Catlin	4.20	1.20	.	.	5.40
Ridgely Jct. Line . . .	.	.	.	2.60	2.60
Staunton-Hillsboro . . .	14.99	8.08	.	.	23.07
Granite City Belt . . .	1.54	.	.	1.49	3.03
Edwardsville " . . .	.	.	.	2.90	2.90
Springfield " . . .	.	.	.	5.80	5.80
Decatur "	.	.	.	5.51	5.51
Joliet-Ottawa	.	10.27	21.91	12.89	45.07
Ottawa-Princeton	26.10	.	.	14.31	40.41
" -Streator	.	.	15.54	.	15.54
Total	340.14	83.87	48.92	45.50	518.43
Percent	65.7	16.2	9.4	8.7	100.0

From the above it is seen that practically two-thirds of main track is on cinder ballast and a little more than one-sixth on gravel. The use of the latter is being increased as fast as possible.

Ties are principally creosoted red oak or other hardwood, although

a small percentage of plain white oak is in use for the reason they are purchased locally in small quantities. In general cross ties, which are standard 6"x 8"x 8'-0" are spaced 24 inches on centers. Formerly the standard was 22" and many of the older ties have that spacing, as have all new ones because the present standard is also 22 inches because of the heavier service now required. Since 1909 creosoted ties have been used almost exclusively for main track purposes, and now constitute 90.9 percent of the total in service. Standard ARA 6-pound treatment is used, this being a little less rigid than that used by the Pennsylvania but more so than some other railroads.

Rail in main track on December 31, 1926 is concisely shown in the following tabulation:

	60# ASCE	70# ASCE	90# ASCE	100# ARA-A	Other	Total Miles
Granite City-Springfield	.	51.63	35.08	1.64	0.93	89.28
Springfield-Lincoln . .	.	26.04	0.36	0.05	.	26.45
Lincoln-Mackinaw Jct . .	.	20.57	7.46	0.17	0.24	28.44
Mackinaw Jct-Peoria . .	.	12.15	2.70	1.14	.	15.99
Bloomington-Mackinaw Jct	.	20.09	.	0.90	0.04	21.03
Decatur-Bloomington . .	7.23	34.05	0.84	0.45	1.02	43.59
Decatur-Springfield . .	.	38.97	.	0.05	.	39.02
Mechanicsburg Branch . .	2.60	0.89	.	.	.	3.49
Decatur-Champaign . . .	.	47.27	.	0.33	0.85	48.45
Champaign-Danville . . .	.	29.82	.	1.59	0.10	31.51
Ogden-Homer	.	5.40	.	.	.	5.40
Danville-Ridge Farm . .	10.01	5.46	0.23	0.75	.	16.45
Danville-Catlin	3.59	1.80	.	0.01	.	5.40
Ridgely Jct. Line . . .	.	2.60	.	.	.	2.60
Staunton-Hillsboro . . .	22.76	.	.	0.31	.	23.07
Granite City Belt . . .	.	3.03	.	.	.	3.03
Edwardsville " . . .	.	2.90	.	.	.	2.90
Springfield " . . .	.	5.80	.	.	.	5.80
Decatur . . " . . .	.	5.51	.	.	.	5.51
Joliet-Ottawa	12.89	32.18	.	.	.	45.07
Ottawa-Princeton	40.41	.	.	.	.	40.41
" -Streator	.	15.54	.	.	.	15.54
Total	99.49	361.70	46.67	7.39	3.18	518.43
Percent	19.1	69.9	9.0	1.4	0.6	100.0

ILLINOIS TRACTION SYSTEM - Description of Property

From the above table it will be seen that practically 70% of the rail is 70 pound. As rapidly as possible the road is standardizing on 90-pound rail for its line from St. Louis to Peoria. During the year 1927 about 20 miles of 90-pound rail will be added to the figures given in the table.

Most angle bars are 4-hole, although some 6-hole are in use. Thermit welding is now standard for all joints in paved track.

Paving: Main tracks, including Illinois Valley division, have mileages laid in paving as shown in the following tabulation:

	I.T.Inc.	St. L. E.T.Ry	McKinley Bridge	Total Miles
Brick	25.21	2.48	.	27.69
Macadam	4.23	.	.	4.23
Wood Block	.	4.74	1.84	6.58
Boulevard	1.51	3.22	.	4.73
Asphalt	.	1.92	.	1.92
Total	30.95	12.36	1.84	45.15
Percent	68.5	27.4	4.1	100.0

From the above it will be seen that more than two-thirds of the paving is brick. In general an 8-foot strip is laid and maintained by the Company, principally in connection with ordinance requirements. In a few instances the management has succeeded in having the paving burden removed or lightened.

Bridges: Below will be found information relating to bridges on the system, exclusive of the Illinois Valley Division, which has but few of importance. In general most of the steel bridges appear to have been designed for loadings equivalent to Coopers E-40, and safely carry the heaviest electric locomotives now used by the Company, which weigh 80 tons.

ILLINOIS TRACTION SYSTEM - Description of Property

On System, Exclusive of Illinois Valley Division:

Total number frame bridges	89
" " steel "	54
" " frame and steel bridges	7
Concrete subways, etc.	7
	157

McKinley Bridge:

	Feet
East approach; pile trestle	644
" " ; steel girders and trusses	819
Two main river spans; 521 feet each	1,565
West approach; steel girders and trusses	3,097
	6,125

Location	Type	Feet
Peoria to St. Louis:		
Illinois river, Peoria	Thru truss, thru girders	1,236
Farm creek	Girders	225
Vandalia RR; overhead	Steel	196
Mackinaw Junction	Thru truss and frame	388
Little Mackinaw	Frame	154
C&A overhead; Mindale	"	124
Richmond	"	120
Wilmert	Thru truss and frame	316
Kickapoo	Thru truss	300
Salt Creek	Girders on concrete	300
South of Selbytown	" " "	100
Sangamon river	Thru truss and deck girders	578
C&A viaduct (Springfield Belt)	Deck and thru girders	2,330
Lick creek " "	Thru truss	186
Moody " "	Frame	144
South of Emrick " "	Thru truss	125
North of Anderson " "	Frame	399
Benny Lane " "	"	144
Gillespie " "	"	128
Cahokia creek " "	Thru truss and frame	317
Over ITS (Edwardsville "	Thru truss	125

Signals: The road is well protected with automatic block signals, the main line having them between Granite City and Springfield and on all portions between Springfield and Peoria that require such protection. On the lines between Danville and Springfield and Bloomington and Decatur protection is afforded the more dangerous spots. Signals

are alternating current, supplied from a 2,300-volt line carried on the trolley poles, and originally were of the semaphore type, but recent installations are light signals. Light signals of the flash type are installed at numerous principal highway crossings, and it is our information this road has more of these per mile than any other railroad in the territory.

Telephones: All dispatching and much other Company business is handled over telephone lines owned by it. Dispatchers are located at Ottawa, Decatur, Staunton, and Mackinaw Junction.

Stations: The system is well provided with stations, ranging from pretentious brick structures, as at St. Louis, Springfield, Champaign, Danville, and other important places, to mere shelters or signs indicating stops.

Shops: The principal shops of the Main Division are located in East Decatur, at which place are facilities for handling the heaviest work, including overhauling and rebuilding its own passenger and freight cars and locomotives, the last-named having been constructed here. The buildings include machine, paint and carpenter shops, mill room where lumber is dimensioned, and lumber sheds. The offices of the purchasing agent and general storekeeper are in the new fireproof storehouse, which was built about one year ago and is modern throughout. Many of the forms used by the Company are printed in its own plant in this building. In general, the shops are very modern and are susceptible of enlargement to any reasonable extent.

ILLINOIS TRACTION SYSTEM - Description of Property

The principal shops of the Illinois Valley Division are at Ottawa near the west city limits. The grounds contain 14 acres, and buildings include machine, carpenter, paint and other shops, together with two pits with a total capacity of six cars. Nearby are the substation and dispatcher's offices.

Equipment: Equipment owned and operated by Illinois Traction System on June 30, 1927, is concisely shown in the following tabulation:

Illinois Traction System
SUMMARY OF EQUIPMENT
June 30, 1927

	Division		TOTAL
	Main	Ill. Valley	
Passenger:			
Motor	69	28	97
Sleeping and Parlor	6	-	6
Trailer	38	2	40
Express Motor	51	3	54
" Trailer	91	3	94
Locomotives	30	2	32
Total Passenger	285	38	323
Freight:			
Box	308	-	308
Coal; Flat bottom	253	52	305
" ; Hopper "	257	6	263
Cinder	25	-	25
Flat	28	3	31
Refrigerator	5	-	5
Express "	6	-	6
Auto Scenery	2	-	2
Total Freight	884	61	945
Miscellaneous:			
Caboose	42	-	42
Work and Tool	40	2	42
Wrecker	1	-	1
Clamshell	1	-	1
Total Miscellaneous	84	2	86
GRAND TOTAL	1,253	101	1,354

ILLINOIS TRACTION SYSTEM - Description of Property

Of the 69 motor passenger cars on the Main Division 10 are 52'-9" long over all, 9'-0" wide, weigh 79,500 pounds, seat 49, and have 4 motors with a combined horse power of 440; 10 are 52'-6" long, 9'-1" wide, weigh 85,000 pounds, seat 52, and have four motors aggregating 440 horse power; 2 are 68'-3" long, 8'-11" wide, weigh 105,300 pounds, seat 74, and have 4 motors aggregating 440 horse power; 12 are 57'-0" long, 9'-10" wide, weigh 100,000 pounds, seat 50, and have 4 motors aggregating 560 horse power; 6 are 58'-0" over all, 8'-9" wide, weigh 84,400 pounds, seat 57 and have 4 motors aggregating 560 horse power; the remainder vary in weight from 53,000 pounds each to 95,000 pounds each, seat from 40 to 56 persons, and all have 4 motors aggregating from 200 to 560 horse power. Nearly all are for man operation by 2 men, but those used on the Catlin and Hillery runs are of the one-man type, while those on the Homer branch have been converted to one-man operation. On the Valley Division 17 of the passenger motor cars, constituting those used in interurban service, are 45'-5" over all, 8'-8" wide, weigh 38,000 pounds, seat 52, have 4 motors aggregating 140 horse power, and are for one-man operation. The sleeping cars are not motorized and five of the six weigh 84,300 pounds each. The passenger trailers average 66,000 pounds each. Eighteen of the locomotives on the Main Division weigh 120,000 pounds each, and 12 weigh 160,000 pounds each, the former having 4 motors aggregating 800 horse power and the latter, known as type C, having 8 motors aggregating 1,000 horse power. The Type C articulated electric locomotives were designed by Company engineers and

built in the Decatur shops. They have 16 drive wheels, do not increase track maintenance, practically have eliminated corrugation of rails on heavy grades due to the spinning of the wheels, and effect a saving in time of approximately 35 percent over older types. The two on the Valley Division weigh 85,000 pounds each and have 4 motors aggregating 400 horse power. The 308 box cars are 36'-10" over all and have capacities of 80,000 pounds each; 303 of the flat bottom coal cars have capacities of 80,000 pounds each, and 237 of the hopper bottom cars have capacities of 100,000 pounds each, the remaining 26 being 80,000 pounds each.

Passenger cars are geared for a maximum speed of 65 miles an hour, which is the best free running speed thus far attained by the Company, but it is hoped to increase this to 75. Nearly all cars have General Electric equipment, only nine being equipped with Westinghouse apparatus. Shoe trolleys are used on fast trains and wheel trolleys on local. The Company is much in need of more coal, box, and flat cars, and possibly a few more refrigerator cars, although they have arrangements with the steam roads whereby they secure equipment from them unless there is a scarcity.

The equipment of the Company is kept in good condition although some of it is rather old. As previously stated, the freight cars have M.C.B. standards and they and passenger cars are so constructed as to pass around curves having a minimum radius of 47 feet.

Power: From the time of its construction until the organization of the Illinois Power & Light Company, the Illinois Traction lines were

ILLINOIS TRACTION SYSTEM - Description of Property

supplied electricity from their own power stations, of which there were four, Peoria, Danville, Riverton and Venice, and the Illinois Valley Division (formerly the Chicago, Ottawa and Peoria Railroad) was supplied from its own steam station at LaSalle. Small amounts of power were also obtainable from Bloomington and Decatur, but were seldom needed. Energy from these stations was carried by 33,000 volt, 25 cycle transmission lines located on the railroad right of way, usually on the trolley poles. These transmission lines supplied rotary converter substations located at various intervals along the road, and from which 650 volt direct current was fed into the trolley wires. Steel tower transmission lines carrying 66,000 volts now extend from the Venice power station to Staunton; from Springfield to Decatur; and from Decatur to Bloomington. All others are 33,000 volt, 3 phase, 25 cycle, wood pole lines, except from LaSalle west to Battery House, 22 miles, which is 60 cycles. Since the Illinois Power & Light Corporation was organized it has leased the power stations and pays therefor a rental based upon the portion of the demand the railway load bears to the total. In July, 1927, the Illinois Commerce Commission passed an order granting permission for the Illinois Power & Light Corporation to purchase the transmission lines and substations of the railroad company, but at the time of this report the sale has not become effective, although it is expected to do so within a short time. Because of the large number (about 400) of trains operated daily, the railroad energy has an average load factor of about 80 percent, and is secured at an average

cost of 0.80 cents a kilowatt-hour. This rate is discussed in greater detail on a subsequent page. On the Illinois Valley Division, where the power is furnished by the Illinois Power & Light Corporation, principally from a steam station at LaSalle and a hydro-electric station at Marseilles, the average cost is 1.25 cents a kilowatt-hour.

Substations: On the Main Division the Company has 48 substations, with a total capacity of 34,350 kilowatts, of which 25,750 kilowatts are allocated to the interurban and 8,600 to local street railways. Of this number, 2 are portables and 7 are automatic in operation. On the Illinois Valley Division there are 10 substations with a total capacity of 3,750 kilowatts, of which 3,250 kilowatts are allocated to the interurban and 500 kilowatts to local street railways. One of the substations is an automatic. Hence the System has a total of 58 substations with a combined capacity of 38,100 kilowatts, of which 29,000 are allocated to the interurban and 9,100 to local street railways. Of these substations, 3 are portables and 8 are automatics. These figures include rotaries at Peoria, LaSalle and Venice which also serve the local street railway systems. These substations are as follows:

Peoria to Springfield: 73.8 Miles: The Peoria power station has 5 rotaries with a combined capacity of 8,100 kilowatts which also serve the Peoria street railway system, to which we have allocated 7,600 kilowatts as its proportion. There is one 300 kilowatt rotary each at Morton, Mindale and at two portables; two rotaries, each of 300 kilowatts, at Union, Elkhart and Ridgely; one 400 kilowatt at Lincoln, and one 500 kilowatt at Mackinaw; total 12,000 kilowatts; interurban protion, 4,400 kilowatts.

Springfield to St. Louis: 98.3 Miles: One 500 kilowatt rotary each on Springfield belt line and at Hillsboro; one 300 kilowatt man-

ually operated rotary at Chatham, Anderson and Litchfield; and one 300 kilowatt automatic each at Chicago & Illinois Midland crossing, Moody, and Loveless; two 300 kilowatt rotaries each at Virden and Gillespie; one 1,000 kilowatt rotary each at Staunton and Stallings; one 1,000 kilowatt automatic each at Worden, Cornstalk, Bells, and Sulphur; and two of 1,000 each in Venice power station, which also serve the St. Louis Electric Terminal Railway Company, to which we have allocated 1,000 kilowatts as its proportion; total, 12,000 kilowatts, or interurban portion, 11,000 kilowatts.

Springfield to Danville: 125.1 Miles: One 1,000 kilowatt rotary at Riverton, one 300 kilowatt rotary each at Buffalo, Illiopolis, Harristown, Decatur shops, Oakley, Bement, White Heath and Bondville; one 750 kilowatt rotary each at Decatur power house and Champaign; one 500 kilowatt rotary each at St. Joseph, Fithian and Georgetown (Ridge Farm branch); two of 1,000 kilowatts each at Danville; total 8,400 kilowatts.

Decatur to Mackinaw: 66.5 Miles: One 300 kilowatt rotary each at Emery, Clinton power house, Heyworth and Danvers; one 750 kilowatt rotary at Bloomington; total, 1,950 kilowatts.

Joliet to Princeton: 85 Miles: One 300 kilowatt rotary each at Rockdale, Minooka, Morris, Seneca, Depue, and Grand Ridge (Streator Branch); one 300 kilowatt automatic at battery house, near Princeton; one 500 kilowatt rotary at Ottawa; one 150 kilowatt portable rotary at Marseilles; and two of 500 each at LaSalle, which also serve the local street railway, and to which we have allocated 500 kilowatts; total, 3,750 kilowatts; interurban portion, 3,250 kilowatts.

To provide better and more economical power facilities for handling heavy freight loads, the seven automatic substations were installed on the line between St. Louis and Springfield. Principally because the transmission lines supplied power to a few of the communities along the road, it was decided to change the frequency from 25 to 60 cycles, and this was done without junking any of the 25 cycle equipment, as it was transferred to sections of the line still operating at 25 cycles. Hence the stations from Venice to Staunton receive 60 cycle energy, as also do those west of LaSalle on the Illinois Valley Division. All others

operate at 25 cycles. Most of the substations have equipment with old-fashioned ratings that will stand heavy overloading, and this helps to overcome deficiencies of other kinds. For example, at one time the substation at Bloomington was operated every night for two weeks at an average overload of 78 percent. This could not be done with modern ratings.

Transmission Lines: 66,000 volt, 3 phase, 60 cycle, steel tower transmission lines now extend from the Venice power station to Staunton, a distance of 34 miles; from Springfield to Decatur, 39 miles; and from Decatur to Bloomington, 46 miles. All others are wood pole lines, 3 phase, 25 cycle, except from LaSalle to Battery House substation, 22 miles, which is 33,000 volt, 60 cycle. At Staunton there is a frequency changer so that energy can be fed both ways. Most of the poles are 40-foot northern white cedar, but for the last several years installations have been of butt-treated western red cedar or full creosoted yellow pine, and these poles carry both the transmission and trolley wires. Trolley wire is generally 3/0 and 4/0 grooved copper, and feeders are 4/0 and 6/0 copper. At the time of this report the Company is installing 1,000,000 pounds of new 6/0 copper feeder wire. Both span and bracket construction are used, and catenary trolley suspension is used on about 65 percent of the line between St. Louis and Peoria.

At the time of this report the limiting factor on the road appears to be the power situation. Most of the substations are old and not so efficient as those of more modern type, and on several lines their pres-

ent spacing is poorly adapted to requirements. However, in the line between St. Louis and Springfield the new automatics are of the very latest types and their spacings are substantially correct. The Company is now engaged in plans for mitigating these conditions, which will be discussed in greater detail in subsequent paragraphs. Certainly, in many places, more substations and larger feeder wires are needed before heavy locomotives can be operated to Chicago or even through to Peoria.

Franchises: Some of the franchises contain restrictions of various kinds, but in general the Company gets along well with the administrations of the various cities it serves. On the Peoria-St. Louis line at Lincoln there is a limitation as to the size of freight trains and hours at which they can be operated, but it does not constitute an inconvenience to the Company because it is not enforced. At Springfield the Company has a perpetual agreement with the local traction company for use of the city tracks. This contract calls for payment of 20 cents a car mile for use of tracks, but following the war the charge was raised to 25 cents a car mile. About three miles of line are thus used in Springfield. There are no restrictions whatever in Carlinville and Gillespie. In Granite City the Company has recently rearranged its tracks so as to save $25,000 a year in paving charges during each of the next ten years, and also provides a much better entrance into the city than the old one did. Freight cars cannot be operated over the main street, but the road has unrestricted freight rights in the street

next west.

There are no restrictions against freight handling in Riverton, or at Monticello, and a few years ago St. Joseph granted unrestricted freight rights. At a few places there are some restrictions, but in general they are not such as to inconvenience the Company seriously. Freight operations through Champaign and Urbana are over tracks leased from the Illinois Central and Wabash railroads, while passenger trains run over tracks of the Company and partly over rails of the local street railway company.

The Company has full freight rights through all towns from Joliet to Ottawa, with no restrictions as to time of day. At Ottawa, however, the franchise does not permit the handling of freight through the city streets, and l.c.l. freight is therefore loaded in cars similar to passenger cars. There are no franchise restrictions in Streator as to handling freight.

Yard and Terminal Facilities: The three tracks in the Peoria freight station have a capacity of 16 cars and are arranged in the usual parallel fashion. This station is about the same size as the one at St. Louis, and the two constitute the largest on the system. Peoria team tracks have a capacity of four cars and the road has a track connection for passenger service to the Union station. East Peoria yard tracks have a capacity of 100 cars and there is a connection with Peoria & Pekin Union railroad which affords service to all other carriers in the district.

ILLINOIS TRACTION SYSTEM - Description of Property

There is a connection with the Chicago & Alton near the Sangamon river north of Springfield, at which place the Company has a spur with considerable potential possibilities when there is greater development of industry. The Springfield belt line, which was built in 1910, is used for freight exclusively, and now furnishes several thousand carloads of originating freight annually, with bright prospects for further development. Yards and sidings in the vicinity of Springfield have a capacity of about 600 cars. There are team tracks on the southwest and northwest sides of Springfield, but those downtown will not permit the handling of standard equipment. There are also team tracks at a number of smaller stations, as Auburn, Virden, Girard, Gillespie, and other places. At the Gillespie mine, north of Gillespie, there is a storage yard with a capacity of about 75 cars. At LeClaire are yards with a capacity of 85 cars, connecting with the Troy & Eastern, Nickel Plate, Illinois Terminal, Illinois Belt, Litchfield & Madison, and Illinois Central railroads. The principal yards on the line between Peoria and St. Louis are at Sulphur, in Granite City, with a capacity of about 175 cars and at Salisbury street, St. Louis, on the west bank of the Mississippi river, with a capacity of about 250 cars. West of the Decatur freight house there is a small yard and west of the Decatur shops is a yard with a capacity of about 100 cars. The Illinois Valley Division has no yards of consequence.

Business Characteristics: The Company gets some business from the Holt Manufacturing Company, makers of caterpillar tractors and road

machinery at Peoria, and numerous industries in that place furnish some business, the best of which is the Western Steel & Wire Company, which ships 25 to 30 cars a month. At Mackinaw Junction there is a coal storage pit holding 20,000 tons, and excellent gravel pits are also located at this point. Just south of Mackinaw is the plant of the McGrath Sand & Gravel Company, which originates several thousands of carloads per year, all of which is line haul. Both the Illinois Traction and the Big Four serve this plant, but the former handles about 90 percent of the output. The plant of the Lincoln Sand & Gravel Company at Lincoln is served by three roads, the Illinois Traction System, the Chicago & Alton and Illinois Central, the first-named usually securing from 6 to 8 cars a week, but sometimes as many as 30. A large brick company near Springfield is also a good customer, the Illinois Traction System being exclusive to this concern, and securing an average of about 500 cars a year outbound traffic, while from a nearby shale pit are shipped about 1,000 cars a year to Decatur to make brick. The Moody mine, which is operated by the miners themselves, is located south of Carlinville and originates a few carloads a week. The Gillespie Coal Company, which is exclusive to the lines of the Company, furnishes business amounting to $250,000 annually. There is one stone quarry near Litchfield, but it is not a large one, and the business therefrom does not amount to much. The Illinois Traction System serves exclusively a chemical reduction plant near St. Louis and it also serves jointly the Standard Oil Company and the National Lead Company.

ILLINOIS TRACTION SYSTEM - Description of Property

The Staley Manufacturing Company at Decatur is the only rival of the Corn Products Company, having a plant that probably is worth $8,000,000 to $10,000,000, from which the Illinois Traction System gets 50 to 60 cars a month, the remainder going to other carriers. The Decatur Brick Company gives the Company about 100 cars a year. There is a very important connection at Bloomington with the Big Four and Lake Erie, over which the Company handles about 50,000 tons of coal annually, most of which is gas coal from Kentucky and West Virginia fields.

The Certainteed Products Company at Marseilles, large manufacturers of roofing products, gives the road from 4 to 6 cars a day. The Rock Island now gets about 80 percent of the business of this concern, but if the Traction line had a first-class outlet to Chicago, there is no good reason why it could not handle three or four hundred cars a month from this plant and receive from $18 to $45 a car, instead of the $1.00 charge. The Traction company gets about 20 carloads of sand a day from the Moline Sand & Gravel Company, about five miles west of Ottawa, and also handles about 10 to 15 cars a day from Benson & Richards, another rock silicate company. It also gets from 5 to 8 cars of sand daily from the Ottawa Silica Moulding Sand Company from a pit located about four miles west of Ottawa. If the road could take a line haul on material from these sand pits it would receive $22 per car instead of $6.30. Also, if the road had a Chicago outlet, it would be possible to get a connection with the Alpha Cement Company at LaSalle. Between DePue and Princeton there is a connection with the Rock Island which

gives some outlet, and the Company also handles all the coal for the gas company at Princeton and the old electric light plant and water works at that place; also lumber for one of the large lumber companies and outgoing shipments from Bryant's nursery.

Capacity of Lines: Provided the road could secure traffic exactly when desired, officials estimate it could handle $2,000,000 more freight business without additional facilities. As matters actually are, the road is now operated to capacity for short periods, particularly in the fall, and to handle much increase expenditures for power and facilities would have to be made in proportion to such increase.

Revenues and Expenses: We now have briefly described the principal physical characteristics of the road, and next we shall consider the results of operations during the last five years. A consolidated statement of revenues and expenses during each of the last five years, comprising Illinois Traction, Inc., (including Illinois Valley Division) St. Louis Electric Terminal Railway Company, and St. Louis Electric Bridge Company, is presented in the following tabulation:

ILLINOIS TRACTION SYSTEM - Revenues and Expenses

Illinois Traction System
COMBINED REVENUES AND EXPENSES
Ill.Traction, Inc.; St.L.El.Term.Ry; and St.L.El.Bridge Co.

	1922	1923	1924	1925	1926
REVENUES					
Passenger . . .	$3,246,644	$3,290,089	$2,711,554	$2,576,353	$2,534,078
Baggage	12,563	12,185	10,771	10,375	9,334
Parlo. & Spec'l	40,707	41,543	36,312	30,947	29,310
Mail	12,099	15,353	20,079	16,342	16,839
Express	94,759	102,335	84,170	74,652	128,264
Milk	46,266	34,021	25,770	19,869	17,744
Freight	1,807,641	1,930,763	1,940,672	2,434,801	2,320,523
Switching . . .	78,625	89,172	89,945	90,515	67,214
Rent Tr.&Facil's	62,533	59,093	59,380	40,298	42,436
Rent of Equip't	64,368	87,376	77,351	96,541	114,285
Rent of Bldg's.	117,021	123,158	486,681	637,035	813,017
Power Sales . .	858,341	873,303	480,166	335,486	,
Toll Coll'ns .	276,096	390,139	383,931	382,973	422,018
Buses	,	,	,	7,734	55,024
Miscellaneous .	39,522	60,417	66,825	58,103	218,621
Total	$6,757,185	$7,108,947	$6,473,607	$6,812,024	$6,788,707
EXPENSES*					
Way & Struct's.	$ 782,762	$ 834,684	$ 847,283	$ 763,855	$ 773,542
Equipment . . .	528,059	579,453	594,316	550,065	524,906
Power	541,880	433,330	579,288	608,592	524,193
Transportation.	1,383,060	1,517,899	1,546,060	1,764,786	1,848,609
Traffic	95,090	112,028	150,703	172,440	192,941
Gen'l and Misc.	1,319,039	1,382,125	1,035,550	949,802	839,389
Taxes	287,725	319,873	263,869	318,559	336,336
Buses	,	,	,	14,272	75,833
Total	$4,937,615	$5,179,392	$5,017,069	$5,142,371	$5,115,749
TOTAL REVENUES .	$6,757,185	$7,108,947	$6,473,607	$6,812,024	$6,788,707
" EXPENSES .	4,937,615	5,179,392	5,017,069	5,142,371	5,115,749
NET**	$1,819,570	$1,929,555	$1,456,538	$1,669,653	$1,672,958

* - Exclusive of depreciation
** - Available for depreciation and return on investment

The above results will be commented upon in some detail on subsequent pages, hence will not be discussed at greater length at this place.

ILLINOIS TRACTION SYSTEM - Balance Sheet

The balance sheet as of April 30, 1927, of the Illinois Traction System, including Illinois Traction, Inc., St. Louis Electric Terminal and St. Louis Electric Bridge Company is shown in the following tabulation:

Illinois Traction System
BALANCE SHEET
As of April 30, 1927

ASSETS:		
Plant and Property	$54,487,980	
Paving and Special Assessments	144,262	$54,632,242
Bond Discount and Expense		387,534
Cash		155,685
Accrued Interest, Treasurer's Account		315,790
Sinking Fund		23,480
Bonds in Sinking Fund		1,404,500
Treasury Bonds Pledged		6,666,000
Accounts Receivable		283,562
Depreciation and Amortization Fund		335,442
Materials and Supplies		332,071
Operating Expense and Taxes Paid		1,662,892
		$66,199,198
LIABILITIES:		
Capital Stock - Preferred	$ 1,000,000	
" " - Common	24,921,300	
Underlying Bonds	16,775,000	
First Refunding and Mortgage Bonds	13,156,000	
Bond Account	4,316,000	
Notes Payable	415,000	
Accounts Payable	310,367	
Depreciation Reserve	1,493,370	
Retirement "	356,852	
Miscellaneous Operating Reserves	23,799	
Accrued Bond Interest	315,004	
" Taxes	100,288	
Special Assessments	91,379	
Illinois Power & Light Corporation	602,095	
Security Sales	79,619	
Unredeemed Mileage	13,721	
Unclaimed Wages	2,968	
City of Granite City	5,900	
" " Madison	46,983	
Power House Rentals	256,459	
Gross Earnings	1,915,824	
Miscellaneous Liabilities	1,270	$66,199,198

ILLINOIS TRACTION SYSTEM - Analysis of Past Operating Expenses

PART II - FUTURE OF THE SYSTEM

General In PART I we have given brief descriptions of the physical characteristics of the property and what has been accomplished by its use in the past. That is, PART I has dealt altogether with the past of the road. In the following pages there will be presented somewhat detailed discussions of the vital question as to what the future of the property may be.

As a basis for further discussion we may, for the sake of convenience, again show what the financial result has been of operating the road during the past five years. From the table on page 37 it is seen that revenues and expenses during that period were

	1922	1923	1924	1925	1926
Revenues . . .	$6,757,185	$7,108,947	$6,473,607	$6,812,024	$6,788,707
Expenses . . .	4,937,615	5,179,392	5,017,069	5,142,371	5,115,749
Net* . . .	$1,819,570	$1,929,555	$1,456,538	$1,669,653	$1,672,958

* - Available for depreciation and return on investment.

The foregoing shows that the net earnings of the system have substantially decreased during the last three years from the high point in 1923, the largest during the last five years. And this has occured despite the most strenuous efforts, intelligently applied, on the part of the management. What, then, is the cause, and what is the remedy?

The decrease in the net earnings may be brought about by two principal causes, (1) operating expenses that are beyond the ability

of the Company to reduce, or (2) revenues that are too small. These will be discussed in the foregoing order because of the subsequent treatment of the subject.

In order to discuss operating expenses consistently, we shall consider them by classes corresponding to the accounting system (Interstate Commerce Commission) used by the Company, first of which is

Maintenance of Way and Structures: Expenditures for these purposes during each of the past five years (page 37) were as follows:

1922	$ 782,762
1923	834,684
1924	847,283
1925	763,855
1926	773,542

The table shows this class of expenditures has varied within comparatively narrow limits during the period, justifying the conclusion that a reasonable and consistent program of upkeep is in force. As a preliminary to the preparation of this report, we visited every portion of the property, and have looked it over with skilled and practiced eye for the purpose of forming a judgment as to whether the road has spent undue amounts for permanent improvements. As a result of our investigation, we believe the management has expended very wisely such sums as were available for these purposes. A program of permanent improvements has been inaugurated which calls for 90-pound rail and gravel ballast between St. Louis and Springfield, and a considerable part of such track has already been constructed. We heartily approve this policy, and only have to offer the thought that, in view of the possibility of building

the Chicago link, it may not be going far enough. At the present time we have no doubt that 90-pound rail and gravel ballast are sufficient, but we believe that in view of the possible construction of the Chicago entrance and probable great increase in traffic therefrom, the management should give serious attention to the desirability of standardizing on 100-pound rail and stone ballast, both of which in the long run afford considerably greater economies than do the 90-pound rail and gravel ballast, the latter of which is objectionable to passengers because of the dust and to freight traffic because of the lack of firmness for heavy freight m ements. If the Chicago link is secured it undoubtedly will give the road opportunities to secure stone ballast that now are not open to it, inasmuch as there are many operating or potential quarries in the vicinity of Joliet and such ballast could well form loads for southbound cars that otherwise might go empty.

From our investigations and in view of the foregoing, we are of the opinion the expenditures for maintenance of way and structures have been wisely made and that it would be false economy to reduce them.

Maintenance of Equipment: During the past five years expenditures for maintenance of equipment (page 37) have been as follows:

1922	$528,059
1923	579,453
1924	594,316
1925	550,065
1926	524,906

It will be observed that these charges are very consistent during the period, and our observation leads us to believe that no more than

needed sums have been expended for this purpose. It is of course to be kept in mind that a large part of the equipment is old and that maintenance costs are therefore high. Our inspection showed that unusual efforts are made to keep the equipment in as good condition as possible, repairs and paint and varnish being quite liberally used. It is our understanding that at the present time it is estimated these costs are annually about $75,000 in excess of what they would be were the equipment more modern. However, 200 new freight cars are to be purchased, thus permitting 100 to be scrapped and correspondingly reducing the costs of maintenance. This undoubtedly is a step in the right direction and it is hoped the finances of the Company will permit the extension of the policy.

As an indication of the conservation efforts of the Company, it is worth mentioning that the last 12 of its locomotives were constructed in its Decatur shops from motors removed from passenger cars and from other materials largely obtained from similar sources. It also may be mentioned that our inspection showed only six types of armatures for car motors, a very unusual showing as we have seen more than twice that number on roads a great deal smaller.

In view of the foregoing, we are of the opinion it is impracticable to secure any further economies in these expenses except as old equipment is replaced by new; hence no recommendations relative thereto are made.

ILLINOIS TRACTION SYSTEM - Analysis of Past Operating Expenses

Power: During each of the past five years the expenditures chargeable to power have been as follows:

1922	$ 541,880
1923	433,330
1924	579,288
1925	608,592
1926	524,193

As previously stated, the Company purchases all of its power from the Illinois Power & Light Corporation at an average cost of 0.8 cents per kilowatt-hour on the Main division and 1.25 cents per kilowatt-hour on the Illinois Valley division. The railroad company owns the transmission lines and substations and stands all transformation and other losses. Further, as hereinbefore pointed out, the load factor of the railroad company, due to the large number (about 400) and diversity of hours trains are operated, is in excess of 80%, which is unusually favorable for an electric railway load. It also is our information that the production cost at the Riverton plant is less than 0.6 cents a kilowatt-hour, while at the Venice plant it is less than 0.5 cents.

In view of the above, it seems probable a further saving in power costs might be made, and it is recommended that the management give the matter consideration.

Also, it will be noticed that the rate paid on the Illinois Valley division is more than 50% higher than on the Main division. It may be remarked that the construction of the Chicago link doubtless would reduce the cost, as the transmission lines could be connected to cheaper sources of power than those now on the Valley division.

ILLINOIS TRACTION SYSTEM - Analysis of Past Operating Expenses

Transportation: Transportation expenses during each of the past five years (page 37) have been as follows:

1922	$1,383,060
1923	1,517,899
1924	1,546,060
1925	1,764,786
1926	1,848,609

These costs are largely for trainmen, the present wage scale for which, on the Main division, is as follows:

	Per Hour
Motormen and Conductors:	
Passenger Service; first year	$ 0.65
" " second year	0.675
Freight "	0.70
Brakemen	0.50

It is our information that there is no chance of decreasing this scale, even if such a step were desirable. The wage question was submitted to arbitration in 1926, and the arbitrators found that, while it was somewhat lower than in certain localities, it was higher than in others and, on the whole, was just and reasonable. Hence the advance asked for by the men was not granted.

From such investigation as we have made, we are of the opinion that further economies are not possible in this class of expenses.

Traffic: Expenditures for items coming under the general head of traffic during each of the past five years have been as follows:

1922	$ 95,090
1923	112,028
1924	150,703
1925	172,440
1926	192,941

ILLINOIS TRACTION SYSTEM - Analysis of Past Operating Expenses

The increases shown in the tabulation are due to the addition of a few more solicitors, the institution of off-line agencies, and a general broadening of business-getting activities. The amounts charged to this account are relatively small, and in our opinion are closesly watched by the Company officials. We believe the increases are in line with a sound policy on the part of the management, and therefore make no recommendations as to possible economies that might be made therein.

General and Miscellaneous: Expenditures charged to this account during each of the past five years (page 37) are as follows:

1922	$1,319,039
1923	1,382,125
1924	1,035,550
1925	949,802
1926	839,389

The apparent decrease in these expenses during the last three years is brought about by a change in bookkeeping practice whereby rentals and certain other expenses formerly charged to this account are now charged to other accounts. As a matter of fact, the expenditures have increased somewhat, principally because of mounting per diem charges due to shortages of cars. This will be remedied to some extent when the new cars hereinbefore mentioned are delivered.

Salaries have not been increased to any noticeable extent during the last five years, and it is our conviction that the road generally is getting efficient services for very nominal wages. Hence, in the light of our observations, we believe it would be injustice to attempt any general reductions in this direction, and no recommendations are made by us as to

possible further economies in these expenditures.

Taxes: Expenditures for taxes during each of the past five years have been as follows:

1922	$ 287,725
1923	319,873
1924	263,869
1925	318,559
1926	336,336

In common with the experiences of practically all other companies, the taxes of this Company have constantly increased. However, it is our information that each year the management makes a conscientious presentation of this matter to the state tax commission and thus far has been successful in keeping the increases within bounds. In view of the information we have in this matter, we do not believe further reductions are possible, and hence make no recommendations to that effect.

Buses: Expenses of bus service during the two years buses have been operated were as follows:

1925	$ 14,272
1926	75,833

The Illinois Traction System operates three bus lines, (1) between St. Louis and Edwardsville; (2) in Granite City; and (3) in the adjoining cities of LaSalle and Peru.

1. Two buses are operated on the St. Louis-Edwardsville line at a considerable loss. They were put on as a matter of protecting the passenger business, inasmuch as the Purple Swan and other companies started bus lines to nearly all cities within a radius of 30 or 40 miles of St. Louis, including a line between St. Louis and Edwardsville. In view of the unfavorable experiences of the East St. Louis & Suburban Company with competing buses in that territory, it was deemed advisable for the Traction company to install the line herein involved.

ILLINOIS TRACTION SYSTEM - Analysis of Past Operating Expenses

2. The Granite City buses are operated in a section of that city now without adequate street railway service and also as a protection against an independent operator who had secured a franchise and was operating a competing service. It was necessary to buy the property of that operator in order to protect the Traction service.

3. In LaSalle and Peru the Company operates a fleet of 7 or 8 buses, principally within the limits of the two places, and particularly serving the plant of the Westclox company, makers of Big Ben and other clocks. In this case it was necessary to purchase a bus line which had been started, but we understand it was secured at a favorable figure. These buses also make several trips daily between the nearby communities of Spring Valley and Ladd, between which the Traction company formerly had an electric railway that was abandoned with the approval of the Illinois Commerce Commission. The substitution of this bus service enabled the Company to save about $80,000 in rehabilitation work, and also losses in operation from continuance of the electric service.

Thus the buses appear to be operated largely as a matter of insurance against destructive outside competition. At present the Company is doing only interstate business on the St. Louis-Edwardsville line, but it has filed an application with the Illinois Commerce Commission for permission to handle intrastate traffic. If this is granted, vice president Snyder is of the opinion the line can increase its revenues sufficiently to pay expenses. It also is expected shortly to have the Granite City lines on a basis that will make the losses very small. The losses on the LaSalle-Peru lines are relatively small, and apparently can be kept that way.

In view of the foregoing facts we offer no recommendation except that losing bus operations be kept at a minimum and this is already the policy of the management; hence is not new.

General Conclusion on Operating Expenses: In brief, our investigation convinces us that the management of the Company is very capable

and is doing all it can with the facilities it has to make the road a success. The questions of equipment maintenance and power appear to offer possibilities of economies, but no estimates thereof can be given without additional study of the subject, and this can be done easily by the Company. Hence, no recommendations are made for any retrenchment in expenses unless it should become unavoidable. It is almost axiomatic in railroad practice that it pays to build up and keep up to as high a standard as possible the physical condition of the property, and many examples of the success of that policy on both steam and electric railroad properties could be cited.

2. INCREASED REVENUES: We have just expressed the opinion that the management of the Company is efficient and economical, and it follows that the gross revenues must be increased if the net earnings are to be greater. Hence we shall now turn to the possibilities of increasing the revenues of the Company, for, in our opinion, that is really the solution of the inadequate net. The discussion of the subject naturally will involve two questions, (1) whether revenues from present sources can be increased, and (2) whether sources of additional revenues can be uncovered that are not now available to the road. Hence, in considering the matter, we shall first comment upon the various classes of revenue producing facilities now enjoyed by the Company.

Passenger Revenues: During each of the past five years revenues of the System from this source, including passengers, baggage and parlor and

special cars, have been as follows:

1922	$3,299,914
1923	3,343,817
1924	2,758,637
1925	2,617,675
1926	2,572,722

It will be seen from the above that passenger revenues have been seriously affected, having dropped 23% during the past four years, 1923 having been the highest during the five years under consideration. This decrease might be brought about by (a) causes within the control of the Company, or (b) those which it cannot help.

a. We do not believe the slump is due to causes within the control of the Company. Our inspection of the property brought the conclusion that service is furnished that is adequate in quantity and of reasonable quality; that the roadbed generally is in fair condition; and that courtesy towards the public is a creed of the road.

In commenting upon the opinion just expressed, it must be said that certain limitations are placed upon the statements. For example, we can not get away from the fact that hardly any of the passenger equipment is less than 14 years old and much of it is of considerably greater age. As a result the interiors are not modern and generally are not as comfortas they should be. They have a maximum speed of 65 miles an hour when it should be 75 or 80, and should weigh materially less than the present cars. However, the Company appears to be doing all that paint and varnish can do to keep up appearances, but if new cars could be had it would be a great help in regaining the ground that has been lost. Again, some

stretches of track, particularly on the 90-pound rail south of Springfield, are easy riding at any speed, but a large part of the line is too rough for comfort at high speeds. Certain it is that on the St. Louis-Peoria line, if the Company can improve its rolling stock and roadbed to the point where it can make the run of 172 miles in four or four and one-half hours, it will get practically all the passenger business between the two places, as no other transportation agency, either steam road or bus, would be able to approach it. The present running time of the "hot-shot" trains is five hours and fifteen minutes, and it appears possible to reduce this to four and one-half hours without undue expenditures.

Our observations inclined us to the belief that the trainmen of the Traction company are polite and courteous to patrons, but we formed the opinion that they were not so to quite the same extent as on the Chicago, North Shore & Milwaukee railroad, where the trainmen are almost nationally known for this quality, which costs nothing and buys everything. This is in no sense a criticism of the Traction trainmen, but rather an expression of opinion as to relative degree. Possibly a clearer way to phrase it is to state that on the Traction lines the trainmen generally are polite and courteous, but on the North Shore they go far beyond their mere duty to render services that go to make the trip of the passenger enjoyable.

In order to give its service publicity, the Company advertises quite extensively, getting out a new poster about every 90 days, and these are widely distributed in hotels, schools, and the 90 stations along the lines.

ILLINOIS TRACTION SYSTEM - Analysis of Past Revenues

As examples of the publicity policy it may be mentioned that 25,000 circulars advertising the express service were sent out. During the summer of 1927 the Company placed 199 large posters calling attention to the merits of its service, and books of matches carrying its advertising are now being distributed in the St. Louis territory through one of the large chain cigar stores. Again, during the last week of December, 1926, a parade of Company trucks took a 760-mile trip over the territory. The Company Go-Getter Club includes all employes who secure business. In August, 1927 a new business campaign was inaugurated and vice president Snyder addressed more than 2,000 employes at ten different meetings held in furtherance of the work. Letters are received from many persons praising the service, and these are published from time to time in Current Topics, the Company magazine. During the 1926 Illinois State Fair tickets were sold direct from stations to the fair grounds, and this has become a permanent part of the service given by the road. During the convention of utilities in Springfield in 1926 the Company had on exhibition in one of the principal streets an electric locomotive, passenger car, yellow flyer, coal car, caboose and one yellow express truck, which were visited by about 10,000 persons. As another advertising feature, the color of the St. Louis cars was changed to red with yellow trim and on the Main Line the tangerine flyers were started. Twenty-three of the principal stations have electric signs and the Decatur shops are thus marked by a large one. All principal stations are beautified as much as possible. Highway signs advertise the McKinley bridge for a distance of

60 miles on all main roads. About 15 ot 16 permanent painted billboards are utilized in Peoria, Bloomington and St. Louis in advertising the system, and the copy for these is changed four times a year. The Company was the first electric railroad to advertise in the Traffic World. It may be stated here that we have viewed a number of the posters, signs, and other advertising matter put out by the Company and can testify to its good qualities.

From the foregoing it seems clear that the Company is taking all possible advertising steps within its financial limitations to secure such business as may be obtained with its present facilities.

b. Causes of Decreased Revenues that are beyond Company Control: Next we may discuss causes which do not lie within the power of the Company to control. These are many, but, in our opinion, only one is necessary to consider, and that one is the almost universal use of private and public automobiles.

We do not think that anyone will take serious exception to this conclusion, for it is well known by all transportation lines that such is the case. Empty, or nearly empty, local passenger trains all over the United States bear witness to the destructive effects of the automobile upon common carrier traffic. And when we consider that, with the exception of 19 miles, the entire lines of the Illinois Traction System are paralleled by hard roads constructed during the past five years and maintained at the expense of the state or other public authority, we can easily

visualize the effect upon the electric road. The local traffic naturally has been hardest hit and this formed the major portion of the passenger business of the electric line. The through business always has been largely cared for by the steam roads, although the electric road has some, such as between St. Louis and Peoria, and Springfield and Danville. Because the local traffic was thus handled in large part by the electric line, the automobiles have had their most disastrous effect upon it.

Our conclusion that the automobile is principally to blame for decreasing passenger revenues is substantiated in the present case by the statements of Company officials and by those of a number of agents who were questioned in regard thereto. Among the latter the following statements were made:

Chatham: "I try to sell round trip tickets, but people always say they will ride back with someone else. Unless the automobile industry slackens up, I do not see any chance for things to be different."

Virden: "The passenger business has slumped 50 percent since the hard road was put in, although there are no intercity buses."

Gillespie: "If it were only possible to get the express business that the trucks are handling, it would make a great difference. The Illinois Traction System has a connection at Edwardsville, but it takes longer than to come by truck, and the shippers say that trucks are cheaper. Many trucks haul cattle down to St. Louis, and make special rates on commodities in order to get a load coming back. Buses take quite a lot of the passenger business. Most of the meat for the town is trucked in."

Staunton: "There is no direct bus competition at Staunton, but they are plowing into the freight business right and left. The local people prefer hauling by trucks, as they like to have delivery made right to the door."

Litchfield: "A good deal of the stuff that usually went over the traction now goes by truck. There are so many automobiles now that while

we used to sell from 20 to 40 round trip tickets to Hillsboro daily, only two or three are sold now. People buy tickets only one way, expecting to get a ride back."

St. Louis: "The bus does not furnish the real competition; it is the automobile that does that."

It seems hardly worth our while to state that no solution of this problem is known. Could we point out the remedy we should accomplish that which has puzzled the brains of steam and electric railroad officials during the last twenty years.

In the final analysis we can offer no suggestion other than to make the traction service superior to that of the automobile, and point out its speed, safety, general convenience, and low cost. Make the passenger cars just as comfortable and luxurious as the de luxe buses, and the probabilities are very strong the people will use them. For example, the new type seats used on the cars into Chicago over the Chicago & Joliet Electric line are very attractive. The presentation of the advantages of the Traction service can be made in such a way as not to offend the automobile interests, some of which are large users of the traction lines, as, for example, the Chevrolet company, which shipped 19 carloads of freight thereover during the month of July, 1927. Also, the bulk oil and filling stations along its lines are good customers, the Standard Oil Company alone having shipped more than 100 cars of oil over the traction lines in July, 1927.

While the above recommendation appears easy to make and hard to put in practice, nevertheless it is the only way of which we have knowledge.

ILLINOIS TRACTION SYSTEM - Analysis of Past Revenues

A sage once said in effect that if one makes a better mousetrap than others, the people will make a beaten path to his door. This business principle applies just as well to transportation as to mousetraps, and we believe it would be effective in the case in hand.

Freight Traffic: During the past five years revenues of the system from freight traffic, including also express, mail, milk and switching receipts, have been as follows:

1922	$2,039,390
1923	2,171,644
1924	2,160,636
1925	2,636,179
1926	2,550,584

From the foregoing tabulation it will be seen that freight revenues, have increased about 25% during the last five years, despite hard road building and truck competition, and, in our opinion, much of the future prosperity of the road lies in a continuance of this expansion, for the time has gone by when the road can expect to live upon passenger traffic alone. Hence strenuous efforts should be made to secure increased freight business, a fact to which the Company is fully alive. In order to look after business in general, its traffic department has both off-line and local solicitors, the former now having offices in the following 14 cities

New York	Chicago	Kansas City
Pittsburgh	Detroit	Tulsa
Cleveland	Milwaukee	Shreveport
Birmingham	Cincinnati	Dallas
Memphis		Los Angeles

The off-line agents are on a strictly commission basis of $3.00 a car and nothing on less-carload matter or shipments controlled by associated companies, such as Illinois Power & Light Corporation. These agents

average from 30 to 50 cars each per month, but frequently also represent one or more non-competing roads. They are nearly all men who formerly worked for steam railroad companies and have had thorough experience in solicitation of traffic; in fact the traction company will not employ those who have not. The advantages claimed for them are that, inasmuch as they work on a commission basis, their earnings are strictly proportional to their activities. The use of off-line agents in this way has the sanction of many years' experience by the steam roads, and has given satisfaction to the traction system in the past. We see no reason for changing the plan in any way, hence make no recommendations relative thereto.

There appear some opportunities for the local agents of the Company to increase revenue traffic. In our talks with various persons on the system it seemed to be a somewhat general impression that the local territory was not worked as extensively as it should be, and that many persons never have been solicited for business. Some of the agents state that the reason that they do not attempt to secure local business for the road is the fact that they work 12 hours a day for 365 days in the year, and have no time for outside solicitation. This is particularly true of places where substation attendants also act as agents. Agents now receive the same salary whether they secure any additional business or not, and if some method could be devised for rewarding them for extra work, it might be of aid. It is our understanding that it is difficult to put into effect any plan of financial reward owing to the excessive amount of work

that would be necessary in the bookkeeping department and also some opportunities for misuse of the privilege. The Company now acknowledges efforts of this kind by mention in its employes magainze, personal letters, or similar method, and the management considers this about all that it is practicable to accomplish along this line. However, we suggest that if possible some plan be worked out by which local agents shall be rewarded for new business secured by them. This may take the form of money proportioned to the service, of time off on pay, of possibilities of promotion, or other means, but we believe it would pay.

Securing business is always a matter of hard work and the meeting of sharp competition, for many of the steam roads are very aggressive in the matter. For example, the Wabash probably has 30 solicitors in St. Louis and they try not to miss a single industry in the city, calling on each every two or three weeks. All of them report to their superior officer where and how they spend each day. It is our understanding the traction company has three full-time street men in St. Louis, and one each in Springfield, Danville, Decatur and Peoria, and two who are moved from place to place.

There has been a heavy drop in coal revenues since April 1, 1927 because the strike has practically closed all mines in the territory served by the Company. There also has been a decrease because the electric plants have been shut down entirely at Peoria, Clinton, and Monticello. Decatur now uses one car daily instead of 5, as formerly, and Bloomington one instead of 4. This loss totals approximately $175,000 annually, and

the loss is permanent, as none of the plants probably will be operated at full capacity again. The loss of this local coal business is to be regretted inasmuch as it was profitable, and also helped fill up trains that otherwise would have been run with less than full tonnage.

Certain other methods of increasing the freight traffic will be discussed in some detail on subsequent pages, these consisting mainly of extensions to connect with Chicago, thus increasing the possibilities of long haul business.

We are informed by vice president Snyder that the matter of traffic solicitation is being watched carefully and that additional men are employed as business demands or funds are available. Such being the case, we can make no recommendation of value in the matter, and it therefore seems needless to suggest that close touch be maintained with potential shippers and that untiring efforts be made to secure all business possible, for it is now being done.

Miscellaneous Revenues: Miscellaneous revenues, including those arising from rent of tracks and facilities, equipment, and buildings, other departments, toll collections and other miscellaneous sources during each of the last five years have been as follows:

1922	$1,417,881
1923	1,593,486
1924	1,554,334
1925	1,550,436
1926	1,610,377

The revenues from rents of equipment and track facilities are to a large extent independent of the efforts of the Company to increase them,

hence this report will not concern itself with them. Certain revenues included in the above and designated "from other departments" arise principally from sales of electric energy to consumers along the line. Formerly the Company had revenues exceeding $750,000 annually from this source, through the sale of electricity in Decatur, Clinton, and a number of small towns. This service is now rendered by the Illinois Power and Light Corporation, the railroad confining its operations almost entirely to furnishing transportation service.

The segregating of the electric business from the transportation activities of the road is a question of Company policy, a matter with which this report is not concerned. It has resulted, of course, in the loss of considerable profitable business to the railroad, and whether there are compensating features appears a matter for the management to decide, and this report will merely mention the subject without comment.

Rents of Buildings: The principal part of these amounts shown in the tabulation represents rents received by the Company for its power stations at Venice, Riverton, Peoria, and LaSalle. These stations were leased to the Illinois Power & Light Corporation which paid 1926 rentals as follows:

3	stations on Main division	$614,384.60
1	station on Illinois Valley division .	121,003.50

In July, 1927 the Illinois Commerce Commission issued its order approving the sale by the railroad company to the Illinois Power and Light Corporation of the above four power stations, and all substations, transmission lines, feeders, transformer stations at mines, and all other power

and lighting equipment. It is our understanding the railroad company will receive $12,000,000 for the property, consisting of $10,000,000 of its bonds, now owned by the Illinois Power & Light Corporation and the assumption by the latter company of certain other funded obligations of the railroad company to the amount of $2,000,000. The effect of this transaction will be to reduce the capital account of the railroad company by $12,000,000 and increase that of the Illinois Power & Light Corporation by the same amount. It also will reduce the interest charges against the railroad company by $600,000 annually.

This arrangement is a matter of inter-corporate relations and is not within the province of this report to pass upon. So far as we can learn, it appears to be for the best interests of the railroad company.

Bridge Tolls: Toll collections over the McKinley bridge have increased steadily, largely due to the advertising done by the Company by erecting signs, which already have been described. The road also has pointed out in advertisements the savings that can be effected by persons in Venice, Madison, Granite City, and parts of East St. Louis, by using the McKinley bridge instead of the Municipal free bridge, these economies consisting of less automobile upkeep and time. The tolls are fixed by the federal government and inspection appears to show them as reasonable, the commutation tickets being especially reasonable. A traffic representative is employed in the interests of this work, and all large truck owners in nearby territory have been interviewed with the result that considerable business has been developed.

ILLINOIS TRACTION SYSTEM - Analysis of Past Revenues

In general the bridge situation is in pretty good shape, and no suggestion is offered by us concerning these revenues, as we are of the opinion the Company is already caring for the matter in a satisfactory manner.

Buses: About two years ago the Company inaugurated certain bus lines to supplement or protect its regular passenger service. These have shown revenues as follows:

1925	$ 7,734
1926	55,024

As stated in a previous paragraph, the costs of bus operations are in excess of the revenues therefrom. The reasons for the bus lines have been discussed (page 46) and these are sufficient to justify their use. As a matter of fact, traction revenues do not appear to have been impaired by bus operations, and this cannot be said of similar situations with other companies in nearby territory, such, for example, as the East St. Louis & Suburban Company, whose revenues were almost cut in half from that cause. From our information in this matter, we have come to the conclusion that the Traction management has handled bus competition in a very admirable manner.

In view of the foregoing statements, no recommendations relating to bus operations are made except the general one that losses therefrom be kept as low as possible, and this is already being done by the management.

In connection with this subject, involving, as it does, increased revenues and therefore greater traffic movements, it seems appropriate at

this place to point out that, although the road has been a freight carrier for a number of years, it really did little more than local l.c.l. freight business, supplemented by a large coal tonnage, the latter mainly for use in its own power plants. The loss of this tonnage and the decrease in short haul less-car-load freight occasioned by truck competition has compelled the Company to change its methods of handling freight, and it now must go into long haul traffic, arrange for carloads instead of l.c.l., extend through rate agreements, seek to induce industries to locate on its lines, and otherwise work along the well known methods of the successful steam railroads. Had the Company gone into the territory even as late as ten years ago and induced industrial plants to locate on its lines it would not now be in the position of being unable to reach them except through some switching arrangement and therefore would be in much stronger position in this direction than it now is. As a matter of strict fact, it is only within the last three or four years that industries really had enough confidence in the road and its rate structures to locate their plants along it, for it did not have cars, locomotives, sidings, terminals, joint rates, nor other auxiliaries to good service. Even yet it is lacking in some of these respects, notably equipment, sidings, and terminals, but its position is improving, and now the road is on the alert to secure industrial connections. This certainly is progress, and strongly bears out our contention that the principal method of increasing future net revenues lies in the intensive development of freight traffic. This carries with it the ability to reach important centers of

freight movements, particularly Chicago, the general rehabilitation of the portions of the road upon which these movements take place, and the construction of sidings, yards, and terminals to enable the road to give a service that shall be second to none, particularly in the matter of speed, which is essential to the shipper and more easily within the province of the electric road to furnish than is the case with the steam lines. The solution of these problems is vital to the future of the road, and if this report does nothing more than suggest possibilities in that direction it will have justified itself to the fullest.

Logically, then, we next may consider means of bringing about these desirable conditions, the first of which is the linking of the road to the Chicago markets.

ILLINOIS TRACTION SYSTEM - St. Louis-Chicago Line

General Remarks

We have seen that if the road is to increase its revenues the growth must come principally from freight traffic. It is axiomatic that business flows with the tide of population, and hence, other things being equal, the greatest amount of business will come from the most populous territory. This rule of business is so universally understood that it is unnecessary to argue the premise. Its application to railroads lies in the desirability of terminals in large cities, and to the case in hand, the need for entrance to the city of Chicago. Such an entrance would give the road terminals in two large cities, Chicago and St. Louis, the latter of which it now has.

After carefully considering the matter, we are of the opinion that the securing of an entrance to Chicago and the upbuilding of the road between St. Louis and Chicago to the place where it can successfully compete with the trunk steam roads between those cities will come nearer to solving the big problem of its future than will any other single policy which the management can inaugurate. The territory served by the road is distinctly tributary to Chicago, doing most of its marketing in that city and its influence may be judged from the fact that probably ten Chicago newspapers are sold in it to one from St. Louis or other large city.

The completion of such a project and the necessity for meeting sharp competition from the four principal steam lines between St. Louis and Chicago requires that the electric line must place itself on an approximate parity with those carriers with respect to (1) distance of

haul, and (2) quality of service. Hence it seems appropriate that at this place we present a resume of the possibilities of the electric line in these directions, first setting forth exactly our views as to what will constitute the proposed "Chicago Connection".

1. Proposed Route: By referring to the map on the front cover and also in the back of this report, it will be seen that present lines of Illinois Traction extend from St. Louis to Chicago except for two principal gaps (a) between Mackinaw Junction, near Peoria, and Streator, a distance of about 52 miles, and (b) between Joliet and Chicago, a distance of about 37 miles. In our opinion these gaps can be closed in the manner hereinafter set forth, thus forming an almost direct line between these two important cities. The plan recommended by us consists of

a. Improvements in present line between St. Louis and Morton;
b. Connection with the tracks of the Atchison, Topeka and Santa Fe railroad at or near Morton;
c. Lease or purchase of Pekin branch of the Atchison, Topeka and Santa Fe between Morton and Ancona;
d. Construction of connection between Ancona and North Streator;
e. Improvement of present Illinois Valley track from North Streator to South Ottawa;
f. Construction of Illinois river crossing at Ottawa, or arrangement to use CB&Q bridge;
g. Improvement of existing Illinois Valley division from Ottawa to Rockdale;
h. Connection at Rockdale with proposed extension of Chicago & Illinois Western railroad;
i. Construction of extension of Chicago & Illinois Western railroad from Rockdale to Novak, the present end of the line;
j Improvement of existing Chicago & Illinois Western railroad from Novak to Harvester Junction, Chicago;
k Construction of connection from Harvester Junction to Metropolitan West Side Elevated railroad at or near 21st street and Western avenue;

ILLINOIS TRACTION SYSTEM - St. Louis-Chicago Line

1. Acquisition of trackage rights from last named point to and around Chicago loop. As an alternative to the foregoing, connections may be had with the Illinois Central railroad at the crossing of that line near Central Park avenue, Chicago, thence over the tracks of that road into its terminal at 12th street and Michigan avenue.

The mileage of this route would be approximately as follows:

	Route	Miles
St. Louis to Springfield	ITS	98.3
Springfield to Morton	"	64.1
Morton to Ancona	AT&SF	45.7
Ancona to North Streator	New	7.0
North Streator to South Ottawa	ITS	15.0
South Ottawa to East Ottawa	New	1.0
East Ottawa to Rockdale	ITS	41.3
Rockdale to Novak	New C&IW	21.4
Novak to Harvester Junction	C&IW	10.7
Harvester Junction to "L" at 21st & Western	New	1.0
21st and Western to Loop	Elevated	4.5
		310.0

Comparative Mileage: There are four principal steam roads with direct lines between Chicago and St. Louis, and the distances between the respective terminal stations in the two cities are shown by the following tabulation:

	Miles
Wabash	283.7
Chicago & Alton	283.9
Chicago and Eastern Illinois	290.4
Illinois Central	294.2
ILLINOIS TRACTION SYSTEM (as above)	310.0

From the above table it is readily seen that the construction of the proposed link would enable the electric line to offer a very satisfactory competitive service with the steam roads, so far as distance is concerned. While, at least initially, it could not hope to meet the six and one-half hour schedules of the steam roads, nevertheless the night runs could be carried through quite successfully and passengers could be

offered the attractions of an electric service that would deliver them directly to the downtown district of Chicago in a manner at least equal to the best of the steam roads.

Comparative Service: Having thus seen that the construction of the Chicago link would enable the electric road to compete upon a very favorable basis with the best steam lines, we next may turn our attention to the second important consideration, and that is whether the electric line could furnish service that would be comparable in quantity and quality. So far as quantity is concerned, the electric line could take the lead easily, because it can run trains oftener with profit than its steam competitors, for it can make up in number of trains what it lacks in size, while the reverse is true of the steam roads, which must run fewer and heavier trains.

So far as quality of service is concerned, the advantage now is distinctly with the steam roads. They have good alignment and curves, and the roadbeds of all four are generally in first-class condition so far as riding qualities and equipment are concerned, and these are features that make the strong appeal to the traveler. The electric road is lacking in these essentials, for its alignment, curves, grades, and roadbed are generally considerably poorer than on the steam lines. And each of these has a very decided influence upon the quality of the service that can be rendered, for it bears directly upon the two prime factors of modern travel, comfort and speed.

Fortunately, these lacks of the electric line can be overcome, and

we now can answer the question, What must be done to make the Chicago line successful? That answer is, Make the alignment, grades, and roadbed comparable with those of steam lines. Take out the sharp curves, get off city streets, reduce the heavy grades, improve the roadbed, and provide greater facilities in the way of sidings, yards, and terminals, and industrial connections. Compliance with these requirements will make a real railroad out of the Illinois Traction lines, and when that is done, we are of the opinion the road will have no lack of business.

Having thus laid down the fundamental concept that the St. Louis-Chicago line is a vital need to the future of the system, we may proceed to consider the things that must be done to prepare it for furnishing a service that will win recognition in the way of increased business.

a. Improvements in Present Line: 162.4 Miles: Initial improvements consist in bettering the alignment, which now has many bad spots, particularly in city streets, where sharp street railway curves abound, rendering impossible the attainment of any desirable speed by trains. For example, in St. Louis the traction line is nearly all in streets where progress must be made very slowly to avoid collisions with automobiles, either those crossing streets or those parked along the route. It is our understanding steps are already under consideration to improve this entrance to St. Louis.

Again, compare the progress of a Chicago & Alton train through Springfield with that of a traction car, the former with almost nothing

to impede progress, the latter with bad street car trackage, sharp curves, traffic lights, a maze of automobiles, pedestrians, and railroad crossings, every one of which detracts from the pleasure of the trip for the passenger and renders difficult the successful handling of freight. However, the belt line of the Company offers a solution at this place for many of these troubles, particularly to carload freight and limited passenger trains, and the same is true at Edwardsville. The alignment at Worden, Carlinville, Selbytown, and a number of other places between St. Louis and Peoria is very bad and should be greatly improved. Some of the work is already under way, as at Carlinville where expenditures are now being made for these purposes. Right of way at Worden has also been purchased in order to eliminate the bad curves at that place. In like manner, the use of city streets in St. Louis, Venice, Granite City, Edwardsville, Staunton, Virden, Springfield, Lincoln and nearly every other town between St. Louis and Peoria should be reduced as much as possible because of interference with street traffic and consequent antagonism from the public. In other words, the program should include the elimination of every one of these objectionable conditions, all of which are not named here but are well known to the Company officials.

Consider also the heavy grades. As shown by the table on page 16, the St. Louis-Peoria line has 40,900 feet of southbound and 40,800 feet of northbound grades 1.0% or over, or approximately 5% of its line in each direction. The steam roads do not have a foot of such grades--

probably none in excess of 0.5 of 1.0%. Since it costs practically twice as much for power on a 1.0% grade as on one that is only one-half of 1.0% it is evident the electric line is heavily handicapped in this direction. However, because of certain compensating factors, such as greater mobility of the electric trains, lower wage scales, and lower maintenance costs, these handicaps are not so serious as might seem. Elimination of all bad grades on the St. Louis-Peoria line would cost about $1,000,000, but it is not required until the number of trains and consequent tonnage justify the step, which cannot be done under present conditions. With few exceptions, the grade reduction program should be deferred so as to be the last of the improvements suggested.

Any substantial increase in the business of the Company would also entail major changes in other facilities, particularly in power requirements. All except eight or nine of the substations are old and consequently somewhat inefficient. Further, in case the St. Louis-Chicago line is constructed, a large part of them would be in wrong locations, their present spacing having an average of 8.52 miles, which is excessive for this type of stations, while the maximum is nearly one-half greater than the average. Further, in many instances the feeder wires are insufficient for present demands, to say nothing of largely increased future needs.

The details of modifications of power requirements that would be required are beyond the scope of this report and therefore need not be

gone into extensively. However, we have inspected certain charts and other data relating to the subject which have been prepared by the engineering department of the Company. The Company is also in possession of a report on the subject prepared by the General Electric Company. These give evidence of a profound knowledge of the matter and are respectfully commended to the earnest consideration of the management.

In undertaking to handle a substantial increase in its traffic the Company would need to provide greatly enlarged terminals. The combined passenger and freight terminal at St. Louis is already cramped and congested and must expand. Some land already has been purchased for this purpose. Doubtless the time is near at hand when much of the l.c.l. freight must be handled at the Salisbury street yard at the west end of the McKinley bridge, where there is still considerable room for expansion. This can be accomplished by the use of off-line pick up stations scattered about the city, and by trucking the freight to Salisbury street in somewhat the same manner as is now done by the North Shore railroad in Chicago. Such a course would leave the present terminal at 12th and Lucas streets reasonably free for passenger and team track uses and similar purposes. It will be noticed by those familiar with the situation that the present terminal can be easily arranged to serve the St. Louis wholesale district along Washington avenue, thus adding a valuable feature in the event the St. Louis-Chicago line is established.

The Sulphur yard at Granite City is already too small. At Spring-

ILLINOIS TRACTION SYSTEM - St. Louis-Chicago Line

field it is impossible to handle standard freight cars into or out of the l.c.l. terminal at Tenth and Monroe streets because of sharp curves, and the Company belt line is now too far from the business district to permit the establishment of the station thereon. This necessitates the handling of such matter in system express cars, precluding the use of foreign equipment. At Peoria the terminal is also cramped, and at East Peoria the Company has insufficient lands for the establishment of any extended terminals.

In short the road is very deficient in sidings and in terminal facilities. Our space is too brief to enumerate all such cases, hence we shall content ourselves with suggesting that a thoroughgoing study be made of these needs and a program for their accomplishment be prepared.

In the event of the contemplated increase in traffic much new equipment would have to be provided, including electric locomotives, and passenger and freight cars of various kinds. Some new cars have already been purchased, and provisions for others can be made of type and number after the exact needs are known; hence extended discussion of the matter is not necessary at this place.

In substance, the foregoing amounts to the undertaking of a program of improvements, including removal of tracks from city streets so far as possible, elimination of sharp curves and heavy grades, and avoidance of other obstacles of like character. Begin by making a complete survey of all undesirable attributes of the road, and prepare

estimates of cost of removing them. Then go about the work of systematically eliminating them as fast as financial considerations will permit. Perform this work with a vision of twenty years in the future, and when it is completed the traction company will have a road that will make the steam lines know it is a factor in the St. Louis-Chicago trade.

It will of course be said that the foregoing advice is easy to give and hard to take; that everybody knows the above facilities must be provided and that there is no money with which to do the work. However, it can be remembered that exactly these things ailed the North Shore and South Shore railroads, yet they now are thriving. Both were much worse off then the Illinois Traction System; nevertheless, vision and hard work have made at least one of them internationally famous, and we believe similar things can be accomplished with the Chicago-St. Louis line of the Illinois Traction System by using it as a trunk and the remainder of the system as feeders thereto. It serves a territory that has grown at the rate of 3% annually for the last 30 years, and has a number of cities that are growing very rapidly, particularly Peoria, Bloomington, Decatur, Springfield, and the tri-city district. For example, at Springfield there is now being established a radiator factory that will employ 1,200 men; Decatur now has the $10,000,000 plant of the Staley Company, the only rival of the Corn Products Company; and in Granite City the $11,000,000 plant of the Coke & Chemical Company furnishes a great deal of traffic. By 1940 it is estimated that

the center of manufacturing in the United States will be at or near Springfield.

b. Morton Connection: 1.0 Mile: The second link in the Chicago entrance consists of the construction of a connection between the electric line and the Pekin branch of the Santa Fe at Morton, Illinois, nine miles southeast of Peoria. This connection preferably should be built about one-half mile east of Morton and would be about one mile long. The topography is quite level and the building of the track presents no engineering difficulties.

c. Use of Santa Fe from Morton to Ancona: 45.7 Miles: The third step consists of the purchase in fee or acquisition of operating rights over the Pekin branch of the Santa Fe from Morton to Ancona, a distance of 45.7 miles. This portion of the route may be roughly divided into two sections, that from Morton to Roanoke, a distance of 22 miles, and from Roanoke to Ancona, a distance of 24 miles. The road is single track throughout, has excellent alignment, and right of way in general 100 feet wide, although in a few places for short distances it decreases to 75 feet. The right of way is fenced with woven wire fencing practically the entire distance. The grading is quite heavy from Morton to Roanoke and will average about 18,000 cubic yards per mile. North of Roanoke the grading is much lighter, and will average about 9,000 yards per mile. Ballast between Ancona and Roanoke is practically all gravel and south of Roanoke it is about one-half gravel and the remaining one-half is cinders. Ties are standard untreated soft wood, spaced

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21 to the 33-foot rail. Rail is Illinois Steel Company 80-pound relayer and appears in good condition. Near Washington there are about five miles of 75-pound rail. Water stations are located at Dana, Roanoke, and Washington. From Streator Junction, one mile north of Eureka, to Pekin Junction, about one mile north of Washington, trains are operated over the single track of the Toledo, Peoria and Western, a distance of about 8 miles. Bridges are comparatively unimportant, there being only one stream of consequence, which is Walnut creek about one mile west of Eureka. There are but few industries, the principal of which are a shale brick plant and coal mine at Roanoke and a canning factory at Eureka. From Ancona to Eureka, a distance of 31 miles, there is a wood pole line of the Postal Telegraph Company carrying an average of 24 wires.

The only traffic on this branch consists of one passenger train each way daily and two freight trains each way daily, the latter both running as locals, one in the morning and the other in the evening. An idea of the amount of business done can be gained from the fact that the average freight train consists of about 30 loads. For northbound traffic out of Pekin, engines of the 1081 class - that is 2-6-2, weighing about 80 tons on the drivers - will handle 750 tons, while north of Roanoke the same engine will handle 1,600 tons. For southbound traffic this engine will handle 1,800 tons between Ancona and Roanoke, while south of the latter place it will handle 1,250 tons.

ILLINOIS TRACTION SYSTEM - St. Louis-Chicago Line

In our letter to Mr. L. E. Fischer, dated June 2, 1927, it is stated:

"We deem an entrance to Chicago a practical necessity to the future growth of your road if it is to fulfill its greatest usefulness. As a partial means to that accomplishment, we are of the present opinion the Pekin branch of the Santa Fe between Morton and Ancona affords at least one practical link, and consequently that it would not be amiss at this time to discreetly approach the Santa Fe officials with the view of reaching an agreement by which your trains can operate over that line. Inasmuch as there are other possible routes between the same points, we cannot express a definite opinion as to which might prove the better, as we have not before us sufficient information to pass upon their relative merits. However, it is certain that the Santa Fe route is practical from the engineering standpoint."

We now can express the definite opinion that we believe the Santa Fe link preferable to others between Morton and Streator. If the line were purchased outright it would of course be necessary to acquire the entire branch from Ancona to Pekin, a distance of about 58 miles. However, this would be desirable, as it would give a connection with the Chicago & Illinois Midland at Pekin, and that road forms a vital link in the controlled coal tonnage between the Springfield district mines and the Insull power plants in the Chicago district. Hence we strongly recommend its purchase. We understand that some four years ago the Santa Fe was willing to dispose of the branch, but now does not look so favorably upon the proposition. However, it is very probable the use of the branch could be obtained under the terms of a joint users contract, which is the method now commonly employed. This plan usually involves the payment by the tenant of 5% interest on the value of the property and its proportion of maintenance as determined upon a car-

mile basis.

It may be pointed out at this place that the acquisition of this branch might make an excellent means of securing the Insull-controlled tonnage hereinafter mentioned. Otherwise it might become desirable for the Chicago & Illinois Midland itself to construct the link to Joliet and thus leave little or none of such coal to be handled by the Traction Company, even should the latter build the Chicago connection. Such a condition would be distinctly detrimental to the highest success of the proposed Traction plan. However, because of the large holdings of the Insull interests in the North American Light & Power Company properties, it appears a reasonable assumption that a solution of the Chicago-Peoria link can be worked out that will be mutually satisfactory, including the furnishing of power therefor in case the road is electrified all the way through, as it should, and doubtless will be.

As an alternative to the use of the Santa Fe track above mentioned, and in case it cannot be secured, we suggest similar negotiations with the Chicago & Alton railroad looking to the use of its Peoria branch between East Peoria and Streator. This is similar in many respects to the line of the Santa Fe, but there probably would be less prospect of securing it.

d. Ancona to Streator: 7.0 Miles: This requires the construction of about 7.0 miles of single track railroad northerly from Ancona, skirting Streator on the east and connecting with the Streator branch of the Traction Company at a point about one mile north of Streator,

which we have designated North Streator. This link presents no engineering difficulties, as the land is generally quite level and could be obtained at about farm prices. The line would cross the Chicago & Alton, Wabash, Big Four, and Santa Fe, and probably would have to be interlocked in each case. We do not deem it practical to obtain rights over the main line of the Santa Fe from Ancona to Streator because of the density and high speed of traffic on that road between the two places.

e. Improvement of Streator Branch: 15.0 Miles: From North Streator to South Ottawa, a distance of 15.0 miles, the proposed entrance would utilize the Streator branch of the Traction System, and this line would require improvement in the same manner as advocated for the St. Louis-Peoria portion. These improvements would include new ballast, ties, and ultimately, new rail. There is now one substation, and doubtless this would have to be improved and enlarged, and the overhead system would require rehabilitation. However, at the beginning, only comparatively moderate expenditures would need be made, as the improvements mentioned could be consummated as earning increase.

f. Illinois River Crossing at Ottawa: 1.0 Miles: In the event of the construction of the Chicago link it would be necessary to construct a new crossing of the Illinois river at Ottawa in order to connect the Streator branch with the main line of the Illinois Valley division. This is because the present crossing would be unsuitable for the proposed traffic on account of heavy grades in South Ottawa and sharp curves in that place

and in Ottawa, and the necessity of traversing principal streets in the latter place, a feature that is practically out of the question. Then, too, the bridge over the Illinois river that is now used by the Traction cars is owned by the city of Ottawa, and probably could not be obtained for much heavier traffic, principally because it is probably too light for this work.

We consider that this crossing, which would be about one mile long, could be made in two ways: (1) building a new viaduct to the east of Ottawa, and (2) secure operating rights over the Streator branch of the Burlington railroad. The first plan is the better, but the latter has distinct advantages in that it would be cheaper and could be made to connect to the proposed Ottawa belt line, described under a subsequent caption. While it is doubtful whether the necessary rights could be obtained from the owners, nevertheless we suggest the Burlington officials might be be tentatively approached on the matter, provided the management decided to adopt the idea of the Chicago entrance.

g. Use of Illinois Valley Division Ottawa to Rockdale: 41.3 Miles: From Ottawa to Rockdale, a distance of 41.3 miles, the proposed entrance to Chicago would make use of the present Illinois Valley division of the Traction company. This line is partly described in the preface and in more detail on another page, under the caption "Abandonment of Certain Lines". Between Ottawa and Rockdale it has excellent alignment and grades, and could be made use of initially at comparatively little expense, although eventually it would need complete rehabilitation, including new ballast, ties, rail and overhead. From Rockdale to Joliet, local pass-

enger service could be maintained over present tracks, but freight and limited passengers would be routed by the line described in the next paragraph.

h. Rockdale to Novak: 21.4 Miles: Between (see map in back of report) these two places, a distance of 21.4 miles, the Public Service Company of Northern Illinois now owns a 150-foot right of way for a proposed 132,000 volt transmission line. At Rockdale this right of way is a short distance west of the refractories plant, and it is thoroughly practical to construct a railroad upon it, as there is sufficient width for both railroad and transmission line purposes. Excellent alignment and grades could be obtained easily except at the Rockdale connection, where the grade out of the Desplaines river valley might be somewhat heavy, but doubtless could be kept at less than 1.0 percent.

i. Novak to Harvester Junction: 10.7 Miles: At Novak the proposed line described in the preceding paragraph would connect (see map in back) with the present line of the Chicago & Illinois Western Railroad Company, owned in equal parts by the Illinois Central Railroad Company, the Commonwealth Edison Company of Chicago, and the Peoples Gas Light & Coke Company, also of Chicago. The line extends from Novak to Harvester Junction, near 31st street and Western avenue, in the city of Chicago, a distance of 10.7 miles, where it connects with the Panhandle line of the Pennsylvania. Connections doubtless could be easily arranged with the Baltimore & Ohio Chicago Terminal and Chicago Junction railroads at the same place, as all three lines are closely parallel.

described for freight, and by constructing a connection about one mile long, passenger trains could reach the elevated structure of the Chicago Rapid Transit Company at 21st and Western avenue. This connection could be in the form of an elevated structure, which would be expensive; or one at the level of the B&OCT tracks for most of the way, with a short incline to reach the elevated tracks of the Chicago Rapid Transit Company. In some studies of the transit developments in Chicago it has been proposed to extend the elevated roads on Western avenue, and should this occur in the near future it would make the connection here proposed much simpler. Thence the route would be over the elevated structure to the Union loop, Chicago, a distance of 4.5 miles, whence passengers could be delivered to any one of the ten elevated stations surrounding the business heart of Chicago.

As an alternative to the loop entrance just discussed, it may be mentioned that, should such entrance be found impracticable because of unwillingness of inability (because of ordinance restrictions) of the Rapid Transit company to admit another road to the privileges of the Union loop, the Traction Company doubtless could secure rights over the Illinois Central through a connection at Central Park avenue, in the westerly part of Chicago, to its proposed new terminal at 13th street and Michigan avenue, Chicago, as it is our understanding that the Illinois Central would be glad to secure another tenant line, especially over its uncrowded western entrance.

The cost of the work contemplated in the above described St. Louis-Chicago line is of course vital. Unfortunately we can give no more than

Or, to put it in another way, the new capital approximates the sum the road will receive for its power equipment, and there can be no question that the value of the Chicago connection to the road would be many times that of the old power houses to it.

The St. Louis-Chicago line, above described, would enable the Traction company to compete upon very even terms with the steam roads between Chicago and St. Louis, and would have the distinct advantage of electric transportation, a feature that is greatly appreciated by travelers. We are of the opinion that it forms the principal means of increasing both gross and net revenues of the Company and is economically sound.

Controlled Coal Tonnage: The desirability of the Chicago link is greatly enhanced because of the possibilities of sharing in the tonnage controlled by the Insull interests in and around Chicago; in fact, such participation is quite essential to the fullest success of the plan. This tonnage consists principally of coal from the central Illinois fields that is used in the large electric generating and gas stations owned by those interests. The amounts of coal used by each during the year 1926 were as follows:

ILLINOIS TRACTION SYSTEM - St. Louis-Chicago Line

	Tons Consumed in 1926
Commonwealth Edison Company:	
Crawford Avenue Station	674,613
Northwest Station	699,556
Calumet "	718,929
Fisk Street "	903,051
Quarry " "	352,755
Other "	19,471
Public Service Company of Northern Illinois:	
Waukegan Station	160,422
Joliet "	189,148
Blue Island "	119,420
Northern Indiana Public Service Company:	
East Chicago Station	121,715
The Peoples Gas Light & Coke Company:	
Crawford Avenue Plant	7,000
State Line Generating Company:	
State Line Station (Under Construction)	700,000*
	4,666,080

* - Estimated

The above tonnage is growing at the rate of about 8% annually, and assuming the Traction System can secure its reasonable proportion, it seems certain that it would put the road well on the way to a hitherto unknown prosperity. The line herein proposed would be separated from the Joliet plant of the Public Service Company only by the Desplaines river and would serve it directly if it is ever moved to the north side of that stream, as has been rumored it would be. With only one or two switching absorptions it likewise would serve all other plants of the Insull companies named in the above table.

It may be well to point out that the Insull interests now have a line of their own (Chicago & Illinois Midland) from the Central Illinois coal fields to Pekin, but no present link between that place and Chicago. This fact further justifies the construction by the Traction Com-

pany of the Peoria-Chicago link herein advocated, for it would furnish the tie that the Insull interests now lack in handling coal from these fields to Chicago. But if the Chicago & Illinois Midland built on through from Pekin to Chicago it might be a considerably different matter; hence it should be agreed in advance that the Midland should not extend its line provided the Traction company builds the Morton-Chicago link.

It is our understanding that at a meeting of the traffic bureau of the Insull interests held in Chicago in the spring of 1927, it was stated that if a way could be found to get their coal into Chicago without the present burdensome switching charge absorptions, they could readily save their companies $600,000 a year without lessening the proportion of the traffic now given line haul carriers from the Illinois field.

At the present time the minimum switching charge in the Chicago district is about 20 cents a ton, and while there are some $6.00 and $8.00 absorptions, the general average is probably close to $10.00. Hence if the Traction Company, for example, could deliver coal at Rockdale to the Chicago & Illinois Western, which serves the Crawford avenue station of the Commonwealth Edison Company, it would secure a very large proportion of the line haul, as there would be no switching charge to be deducted.

In this connection it seems pertinent to point out that the fullest success of this plan can be assured only by full co-operation of

the Insull interests, to the end that all possible tonnage be routed by the Traction lines. This can best be done by impressing upon purchasing agents, routing clerks, and others having to do with routing of Insull tonnage that the Traction line is an integral part of the family and must be given consideration. It is our understanding that at the present time this has not been done and that at least some of the traffic managers of the Insull interests have not had this fact impressed upon them, with the consequence that other carriers are favored to the hurt of the Traction line. Hence we suggest the management of the Traction system take up with the Insull interests the question of assuring to the electric line its full share of the tonnage they control.

Tonnage from Valley Division: In addition to the foregoing reasons for constructing the link, we believe there is enough traffic available along the Valley line to make it reasonably profitable at the present time, provided the Chicago outlet is constructed. It is our information from Mr. Tuohy and Mr. F. E. Fisher that there are in sight about 225,000 cars of freight annually in the towns served by the Valley division between LaSalle and Joliet, all carload stuff, such as sand, gravel, cement, roofing products, etc., which could be secured provided the Traction company had an outlet of its own to Chicago. The sand pits along the Illinois valley division are now delivering at the rate of about 100 cars per day, and of this the Traction company gets about 20. During the first eight months of 1927 the Illinois Valley division handled 4,763 carloads of freight of all kinds, of which a considerable

part went south. Most of it was sand and gravel, but considerable miscellaneous matter was also handled. There are about 20,000 carloads from industries now served by the Traction lines, and if it had the Chicago outlet the road undoubtedly could participate in other traffic which now goes to the Burlington, the Illinois Central, or the Rock Island. Even if the Traction company secured only 10% of that available in the Illinois Valley field it would put it in the class of paying properties.

Under present conditions it must be admitted that the Traction system has very little to commend it to shippers in Chicago as a means to get to St. Louis and the southwest. The Rock Island and Santa Fe are of some assistance to the electric road on St. Louis shipments, but not a great deal. Terminal Railroad Association switching charges in St. Louis are only $4.95 a car, and in some cases there are two charges, as with the Wabash, Missouri Pacific and the Frisco lines. If the Chicago link were built as herein recommended, these disabilities would be removed, and there is no doubt in our minds the Traction line would then get its fair share of that business.

Chicago is world famous for its rapid growth, enterprise, and desirability as a location for almost any kind of business. It is the greatest railroad terminal in the world, and its supremacy in this respect is unquestioned. During the past five years it has expanded at a very rapid rate, and the Chicago switching district takes in an area of about 400 square miles of territory and includes more than 4,500

miles of railroad tracks, of all kinds. The Chicago plan considers territory as far north as Milwaukee, to the Fox river on the west, and to Gary on the east. If the Chicago link is built on the above route we believe the territory adjacent to it between Joliet and Chicago will rapidly settle up and thus give the road an assured future. Such has been the history of every railroad entering the city, and there appears no reason why the present case should be an exception. In short, the position of Chicago as a freight center is too well known to require extolling, and it seems hardly necessary to present arguments to support the statement that, in order to best serve its purpose, the road should be extended to that city, thus reaching the greatest freight and railroad terminal in the world and one which has made prosperous many of the steam roads centering there.

Alternate Locations: Naturally, the line above described is not the only means for securing the Chicago link, but we believe it is the best in this case for the principal reason that it makes the greatest use of existing traction lines, and does this with very little increase in distance over the most direct line between Morton and Chicago, which is the Santa Fe all the way. By this road it is 142 miles from Dearborn station, Chicago, to Morton, while by the line above recommended for the Chicago link it is 147.6 miles, a practically insignificant difference.

Alternate routes to the above might include:

a. An entirely new line between Morton or Peoria and Joliet. We

regard it as unlikely that either the Interstate Commerce Commission or the Illinois Commerce Commission would sanction the construction of such a line in view of the number of roads now giving service between Peoria and Chicago, to say nothing of its probable impracticability from the standpoint of cost.

b. Use of the Chicago & Alton Peoria line between East Peoria and Streator. This permission probably would be difficult to obtain and would have the serious disadvantage of practically eliminating the use of the Valley division of the Traction System.

c. Some plan involving the use of the Coal City branch of the Elgin, Joliet & Eastern railroad, crossing the Illinois river at Minooka, at which place there is now a connection between that road and the Valley division. This plan has the serious disadvantages that it requires a link from Coal City to Morton and also would enable only relatively unimportant use to be made of the Valley division. Then, too, we understand that the branch might now be difficult to secure for the reason that certain interests have purchased much coal acreage along it for purposes of immediate development.

d. Some plan involving combinations of the foregoing routes.

Objections to Chicago Link: However, it should be mentioned that there are two ways of looking at the matter of the Chicago entrance. Under the present conditions, the Company delivers some Chicago-bound freight from St. Louis to the Santa Fe at Morton, and receives 52-1/2 percent of the revenue therefrom, besides taking out a bridge terminal charge before the division is made. Thus the Traction Company does not

bear any of the switching charges in Chicago, which may run as high as $25 a car, although the average is probably about $10. If the Traction line came into Chicago by way of the Chicago & Illinois Western railroad, as just described, it would not touch a single industry of its own in the Chicago switching district, but would have to pay switching charges on every car handled. As a result the electric line would have to haul the freight from Morton or Peoria into Chicago for the difference between that switching charge and whatever there might be in the 47-1/2 percent of the entire St. Louis-Chicago rate. For example, a car of oil from the southwest coming through St. Louis to Chicago via Morton now nets the Company about $30. If handled by the electric line through to Chicago with a switching charge of $12, the Company would be hauling from Morton to Chicago for only $18, a condition not nearly so profitable as under existing arrangements. However, it must be borne in mind that the condition mentioned is a "horrible example", and the general average would not be nearly so bad. A similar condition prevails on one or two of the steam roads between St. Louis and Chicago, notably the Wabash which has but few industries in and near Chicago, but manages to extract an excellent living nevertheless. Then, too, the switching requirements in Chicago would be no worse than they now are in St. Louis and Peoria, where the Traction Company manages to overcome them very well and make a profit on its operations in these places. If the Chicago & Illinois Western were owned, it can be seen that the connections just mentioned would generally involve only one absorption of switching

charges, and with comparatively few exceptions, this condition is as good as any of the steam roads enjoy.

Specifically, we are thoroughly convinced the Morton-Chicago link should be constructed as above outlined, and so recommend. In this we believe we are supported by the best thought of the Traction Company officials themselves, but our recommendation is independent thereof.

Ottawa Belt Line: The Traction line now traverses some of the principal east and west streets of Ottawa, and the handling of freight over these tracks is prohibited by ordinance. Even if such were not the case, good operation would demand that freight service be not thus furnished. To overcome this difficulty, Company officials have suggested that the road construct a belt line over which freight could be carried. The proposed line would occupy the south berm of the old Illinois & Michigan canal, would be 3.26 miles long, and cost about $200,000. It is believed permission can be obtained from the state to use the berm, and such a route would not only greatly improve the present alignment, but it would enable the Company to reach a number of profitable freight producing customers, such as certain plate glass plants in the southwestern part of the city, which it cannot do at present. The proposed route is also near enough to the business district to permit the abandonment of the present line through the city except possibly for purely local business.

In our talks with Company officials, particularly Superintendent F. E. Fisher, who has served on this division for many years, there

appears no doubt this belt line would be successful. We also express the independent judgment that it would be successful and recommend that its construction be undertaken.

St. Louis Belt Line: (See map in back of report) At the time of this report the Illinois Traction System has acquired control of (a) the Illinois Terminal Company, a railroad extending from Alton, Illinois to LeClaire, Illinois, a distance of about 15 miles, and which is described on page 6; (b) the St. Louis, Troy & Eastern, also described on page 6, and extending from Troy to East St. Louis, a distance of about 19 miles. It now is constructing an elevated connection to the McKinley bridge, which also has been heretofore described; and (c) the St. Louis & Illinois Belt Railroad extending from LeClaire, near Edwardsville, to Formosa Junction, a distance of about 7.0 miles, with an extension now under construction from Formosa Junction to O'Fallon, a distance of about seven miles.

By referring to the map in the back of this report, it will be observed that these three roads form a partial belt around the industrial territory on the east side of the Mississippi river, opposite St. Louis. The Illinois Terminal Railroad has in the past been quite profitable (its net for first 6 months of 1927 was about $500,000) and its acquisition by the Illinois Traction System is now before the Interstate Commerce Commission. As stated in our letter to Mr. L. E. Fischer of June 2, 1927:

ILLINOIS TRACTION SYSTEM - St. Louis Belt Line

"We are of the present opinion that the entrance into St. Louis over the elevated structure, which you are now constructing, is founded upon good judgment and will prove itself worth the expenditures that are being made therefor. It will afford one of the quickest means of reaching St. Louis that now exists, and that feature alone justifies the expedient."

After more extensive investigation we are of the same opinion, and we further believe that in order to make the best possible use of the belt principle in this case that it should be comprehensive, that is, completely encircle the district on the east side of the river. This best can be accomplished by (1) constructing the section from Formosa Junction to O'Fallon, a distance of about 7 miles, a work already about one-half completed; (2) by either constructing the gap from O'Fallon to Belleville, a distance of about 7 miles, or else acquiring in fee the branch of the Louisville & Nashville railroad between those points or acquiring operating rights thereover. A preliminary investigation of this portion renders us of the opinion it would be much better to construct this link entirely new, and locate it to the east of Belleville so as to connect directly with the Carondelet branch of the Illinois Central, which forms the next link. The O'Fallon branch of the Louisville & Nashville has good alignment and grades, is laid with 70-pound rail on oak ties with cinder and earth ballast, and serves one or two coal mines. However, as just stated, it does not afford the most direct location between the required points in O'Fallon and Belleville, and we believe that the new construction would be preferable; and (3) also acquiring either in fee or operating rights thereover the Carondelet branch of the Illinois Central railroad extending from Belleville to East

Carondelet, a distance of 14 miles, thus affording a connection with the Missouri Pacific railroad at or near the north entrance to Dupo yard, one of the largest hump terminals in the world. The branch has good grades and alignment, is laid with 70-pound rail on pine ties with cinder and earth ballast, and has a number of stone quarries along it.

The sections just described would give a belt line completely encircling the east side district, and would afford connections with every railroad entering the St. Louis terminal from the east. The cost of this construction is not here gone into, inasmuch as it is beyond the province of this report to prepare such estimates, but it doubtless would be relatively inexpensive, particularly the Illinois Central link, which now is little used.

In case the Illinois Central link cannot be acquired, an alternate route serving the same purpose would be the construction of the gap from Belleville to Millstadt, about 7 miles, and the acquisition of the Millstadt branch of the Mobile & Ohio railroad. This alternate we regard with less favor than the Illinois Central branch because of the greater mileage and the further fact that the latter has considerably greater possibilities in the development of traffic, particularly stone products, because of its greater proximity to the district.

The industrial district embraced by this proposed belt is, in our opinion, second in importance in the middle west only to that surrounding Chicago. The district includes Alton, Wood River, Mitchell, Venice, Madison, Granite City, Brooklyn, Namioki, and East St. Louis with

a combined population of about 135,000, and through it must pass all freight between St. Louis and the east. Wood River, with its huge oil refineries, alone furnishes the Illinois Terminal Company with many thousands of cars of oil annually, to which must be added a large volume of other traffic, such as that from the glass factory at Alton and other industries in the district, making a total over 700,000 cars each year. The district now has no other belt line that serves it in the same manner as the one herein proposed, which in addition to the usual belt functions, offers numerous excellent industrial locations, especially in the vicinity of Belleville, a feature that makes it particularly attractive.

We are of the opinion the acquisition of the Illinois Terminal Company was a far-sighted step, and that the construction of the belt herein proposed would initially pay and eventually be very profitable, especially in connection with the elevated connection which is now being built to the east end of the McKinley bridge and which will afford a splendid entrance to St. Louis for the Traction trains. We therefore unqualifiedly approve the steps that have been taken in this matter thus far and recommend the extensions above suggested in order to make a real belt line around the East St. Louis-Alton industrial district.

Split Rock-LaSalle Relocation: From Split Rock to LaSalle, a distance of about two miles, the alignment and grades of the Valley division are almost prohibitive for freight traffic. For example, the east approach to the grade crossing with the Illinois Central railroad at LaSalle is about eight percent, and the reverse curve

ILLINOIS TRACTION SYSTEM - Split Rock-LaSalle Relocation:

at Split Rock could not be much worse and permit operation.

To overcome these handicaps and allow the road to handle freight, it has been proposed to relocate the line from Split Rock to LaSalle, so as to follow the low level berm of the Illinois & Michigan canal instead of the higher level along the bluffs that it now does. Permission to build on this berm doubtless could be obtained from the state, and it would give grades and curves comparable to those of the Rock Island, which it would rather closely parallel. No estimate of the cost has been made, but it probably would be about $150,000. We do not believe this relocation could be carried west of Marquette street in LaSalle, hence would be of no benefit to traffic from Peru, immediately west of LaSalle.

Hereinafter we recommend the abandonment of the Valley division west of Peru. This would leave only freight from that place and LaSalle to be handled over the relocated line, and we believe such freight as the Traction line might receive from those two cities would not justify the expense that would be incurred. Passenger business can be handled sufficiently well over the present track, and the heavy grade would favor eastbound traffic, hence the lower grade would be needed only for westbound traffic, which is quite light. To overcome ordinance restrictions, it is probable that all freight arising in LaSalle and Peru could be handled in package cars to which the city would not object, and possibly permission to handle the little amount of heavy freight at night might be obtained.

ILLINOIS TRACTION SYSTEM - Split Rock-LaSalle Relocation

During the first five months of 1927 only 158 tons of freight originated at LaSalle and none at Peru, or a total of only five or six cars, or at the rate of about one a month. During the same period, 6,107 tons were received, or at the rate of only one or two cars a day. Business in this amount would not justify any such outlay as that above estimated for this purpose.

For these reasons we recommend that the relocation herein discussed be deferred until such time as the more important projects shall be passed upon, or until there appear greater possibilities for its success than now are visible.

ILLINOIS TRACTION SYSTEM - Eastward Route to Chicago:

Eastward Route to Chicago: It has been suggested that the Springfield-Danville line of the Traction company might be used to form a link in an eastwardly route to the Chicago terminals, and we have been asked to pass upon the question of whether it is advisable for the Traction line to participate in an arrangement whereby freight would be routed over it and certain other carriers, particularly the Chicago, Attica & Southern railroad, thus giving the electric line a share of the profits in the haulage arising from the arrangement.

In our letter of June 2, 1927, addressed to Mr. L. E. Fischer, it was stated:

"We have inspected this road, extending from West Melcher to LaCrosse, Indiana, a distance of about 120 miles. The road generally has good grades and alignment, but has very light rails, ranging from 56# to 85#, by far the greater portion being 70#. Much of the ballast is cinders with considerable gravel. If it is expected to handle heavy traffic over the line, it would practically have to be rebuilt, including the bridges, of which the principal one is that over the Wabash river at Attica. To place the road in first-class condition is merely a question of money, there being no engineering difficulties whatsoever. As to whether it should be considered as a possible link with your road in a line between the central Illinois coal fields and the Chicago district is a question upon which we cannot pass definitely at the present time. It can, however, be said that such a route would be about 100 miles longer than the present direct routes between the same points, and therefore the increased expense of handling coal between those districts via the Chicago, Attica and Southern would be a heavy handicap. Further investigation on our part is necessary before we can pass definitely upon this question, as there are a number of factors that must be fully considered before the usefulness of the Chicago, Attica and Southern railroad route to the Illinois Traction System can be determined."

The Chicago, Attica & Southern railroad is a single track, steam operated line extending (see map in back) from West Melcher, Indiana, northerly to LaCrosse, Indiana, a total distance of 119.6 miles, with

branch from Percy, Indiana to State Line Junction, 18.6 miles. General offices of the Company are located in the depot at Attica, Indiana. Arrangements have been made with Pere Marquette railroad at LaCrosse so that trains can be operated from there to Wellsboro, a distance of about 15 miles, under trackage rights which call for payment of $50 a train. Shipments are made for points as far east as Buffalo, and also to St. Louis.

The road handles freight business only, as its physical and financial condition are not favorable for giving passenger service. Most of the traffic is grain, stock, lumber and oil, nearly all of which is received from connecting lines, there being but little originating traffic along the road. The company serves a 100,000 bushel elevator at Yeddo and furnishes all the clay to the Rochelle Brick Company at Veedersburg, which uses an average of 5 cars of shale daily. A new railway equipment plant is under construction at Veedersburg, and the road expects to secure considerable business from it. There are nine Standard Oil plants on the line, and a new gasoline plant has been built at Goodland recently. The National Car Company at Attica furnishes about 300 cars a year. There are track scales at Veedersburg and Goodland.

Grades are generally very good, the heaviest northbound being 6 miles long and 0.86 percent, and extending through the valley of the Wabash river just north of Attica. The heaviest southbound grade is within the city limits of Attica, and is 1.0 percent. The maximum curve

on the main line is 4 degrees.

A single pole line with two telegraph circuits belonging to the company extends the whole length of the road, and dispatching is done by telegraph.

The road has 100-foot right of way nearly all the way, the land having an average value of about $150 an acre, and it is all fenced with American Field wire fence, most of which is in fair condition. The company owns about 30 acres of land in the vicinity of the station in the heart of Veedersburg.

There are comparatively few grade crossings with other lines, the principal ones being with the Big Four and Nickel Plate at Veedersburg; the Wabash at Attica; Nickel Plate at Oxford; Pennsylvania at Goodland; the Big Four at Swanington; the Monon at Fair Oaks and Jadoc; the New York Central at Wheatfield; and the Erie at Wilders.

Nearly the entire line is ballasted with gravel of good quality obtained from pits along the road. All ties are #2 treated oak, are purchased locally, are spaced 18 to 20 inches, and the entire road was retied while under Federal control. Rail is nearly all 30-foot 65# with small amounts of 85# on curves. Frogs are mostly #9 and #10 spring rail, and angle bars are principally 4 holes, although some 6 hole are used.

The principal bridge is that over the Wabash river at Attica, which is designed for Coopers E-43 loading. There is a single span through Pratt truss over Cold creek, about one mile south of Veedersburg, and a

ILLINOIS TRACTION SYSTEM - Eastward Route to Chicago

similar span over the same stream about 5 miles north of that place. The highest bridge is a wood trestle over Shawnee creek, and is about 90 feet above the water. Over Pine creek there is a single span double intersection truss bridge, while over Silver creek there is also a steel bridge. Practically all other bridges are wooden trestles, but these are not numerous.

The road has two American Locomotive Company engines which are 95 tons on drivers and four 85-ton Baldwin locomotives. Trains using one of the Baldwin engines normally can handle 1,200 tons, northbound, with a maximum of 1,600 tons. Most of the trains are run at night, and in general handle a maximum of 35 to 40 cars, at an average speed of only about 15 miles an hour because of the condition of the track. Owing to slow speed and care, there has not been a single wreck in the last five years.

Interchange is had with the Nickel Plate at Veedersburg, at which place there is also a water station jointly used with the Big Four, the latter receiving pay for each tank. There is an interchange track with the Wabash at Attica, which makes a very convenient switching arrangement for both companies, and the Chicago, Attica & Southern Railroad gets a lot of gravel business there. The road also interchanges with the Lake Erie & Western and Nickel Plate at Oxford.

At Winthrop there is a Fairbanks-Morse wooden coaling station with a capacity of 50 tons, and a wooden water tank with a capacity of 50,000 gallons, both steam operated. The plant handles #5 Indiana coal, costing $2.35 at the mine, and about three or four cars of coal are used

weekly here. No coal mines along the road are being operated at the time of this report. There is a 50,000 gallon tank at Lochiel, which is run by a gasoline engine, and at Perry Junction there is a 50,000 gallon tank operated by steam. At Fair Oaks there is a water station of 50,000 gallons capacity and a coaling station with 15 buckets of 1,000 pounds capacity, operated by hand. There is a concrete water station at LaCrosse a short distance south of the crossing with the Pennsylvania railroad.

The wage scale on this road is about 25% below that of standard roads in this territory. It is our information that during the first quarter of 1927 the road showed a profit of about $400 after all operating expenses and interest had been paid.

Such, in brief, is the road, and we come now to the question as to whether it may profitably form a connecting link by which freight from the Illinois Traction System can be delivered to the Chicago district. Without examining closely minor reasons why this proposal is economically unsound, we may consider in some detail two major reasons which present obstacles so nearly insurmountable as to practically preclude the possibility of thus making use of this line. These are (1) the physical condition of the property and (2) the excessive length of the route.

1. Physical Condition of the Property: In the preceding paragraphs we have described the property briefly. In short, it consists of a single track railroad beginning at an obscure point in Indiana and

ending at LaCrosse, a small city in the northern portion of the same state. Hence the road has no terminals worthy of mention. Its physical condition is such that it would practically have to be rebuilt in order to make it useful to any considerable extent as a portion of a through route to the Chicago district. In fact, it can almost be said that about all there is of the railroad is a good right of way. To place it in proper physical condition would require an expenditure of not less than $40,000 per mile, or a total of about $4,800,000, a sum upon which it would be difficult to earn. For these reasons, in our opinion, it is not feasible from this standpoint to make the Chicago, Attica & Southern a portion of a link from the Springfield district to the Chicago district.

2. Excessive Length of the Route: In order to properly visualize the effect of an attempt to make this road a portion of the Springfield-Chicago link it is well to compare the distances a shipment of coal would have to travel in order to reach the Chicago district by this route. For this purpose we may compare mileages over this route from Springfield to the proposed State Line Generating Station, Hammond, Indiana, and via direct line, for which purpose will be chosen the Illinois Central Railroad as affording the best facilities for the latter purpose. The distances over the several lines involved in each case are concisely shown in the following tabulation:

ILLINOIS TRACTION SYSTEM - Eastward Route to Chicago

Springfield to Chicago

	Route	Miles
Via Eastward Line:		
Springfield to Hillery	ITS	119.3
Hillery to Veedersburg	Big Four	24.5
Veedersburg to LaCrosse	CA&S	95.7
LaCrosse to Michigan City	Monon	26.0
Michigan City to East Chicago	CSS&SB	34.0
East Chicago to State Line Plant	EJ&E	4.0
		303.5
Via Direct Line:		
Springfield to Kensington	ICRR	178.7
Kensington to East Chicago	CSS&SB	8.0
East Chicago to State Line Plant	EJ&E	4.0
		190.7

From the above tabulation it is seen that the eastward route here proposed from the central Illinois coal fields is about 59% longer than via direct line, a fact that practically deals a death blow to any possibility of success for the project. This may be made plainer by an example. The coal rate from the Springfield district to Chicago is $1.65 a ton. On the Chicago & Eastern Illinois, which is a coal carrying line, serving much the same territory, the average cost of handling all freight in 1926 was about 6.7 mills per ton-mile. For the sake of argument we will assume coal could be handled over the eastward route for 6.0 mills per ton-mile, although there is probably not a mile thereof on which it could be handled for less than 7.5 mills. At the rate of 6.0 mills it would cost 6 x 303.5 or $1.82 to transport a ton of coal from the Springfield district to the State Line plant, or $0.17 more than would be received for the service. This is entirely neglecting the fact that one of the carriers (EJ&E) would perform a switching ser-

vice instead of line haul, and receive about 20 cents a ton for the service instead of the pro rata of 2.4 cents included in the above computation. While the result would be mitigated to a considerable extent by the haulage of higher class freight, nevertheless it does not appear within the realm of possibility for this effect to overcome the heavy outlays that would be necessary to place both the Traction and Attica lines in proper condition.

Hence, the computation, simple though it is, practically determines the fate of the proposal, for it shows conclusively it is an economic impossibility.

Therefore, in view of the foregoing, we adhere to the opinion expressed in our letter of June 2, 1927, (p.99) which is to the effect that the Illinois Traction System could not justify participation in the plan, especially in view of the fact that the proposed St. Louis-Chicago line is much better adapted to the furnishing of an entrance into Chicago for the Illinois Traction System.

ILLINOIS TRACTION SYSTEM - Abandonment of System

Abandonments

On preceding pages we have discussed in some detail various proposals having to do with the betterment of the system, and have laid particular stress upon improvement of the St. Louis-Peoria-Chicago line. It does not follow, however, that it appears worth while to improve the entire system. In fact, the contrary is true, and there are certain portions of the road that may not be worth the keeping. Just what these portions are seems to be a matter of diverse opinion, ranging from the entire system to the smallest of the branches. Hence, it appears convenient to consider the matter by particular parts of the road, first, however, discussing the claim for general abandonment.

1. General Abandonment of System: It has been said of the Illinois Traction System by some persons outside of the organization that the entire property should be abandoned, because it furnishes an unnecessary service and therefore that its ultimate fate will be dissolution. Clearly, then, this forms probably a vital question with which this report must deal.

Briefly, we may answer this question in the negative, for, in our opinion, it should not only remain a carrier of distinction in the electric railway industry of the United States, but it should continue to grow and its future should be much better than its past. We believe thoroughly that the road can be built up into a first-class operating property that will find a place in the economic structure of the state of Illinois and adjoining commonwealths.

ILLINOIS TRACTION SYSTEM - Abandonment of System

While our opinion of the property has thus been expressed, nevertheless that dictum alone is not sufficient upon which to base a recommendation; hence, let us see just what has been the history of the road.

In the table on page 37 it is seen that during the past five years the net revenues of the company have decreased somewhat, as again shown in the following tabulation:

1922	$1,819,570
1923	1,929,555
1924	1,456,538
1925	1,669,653
1926	1,672,958

A large part of this decrease is due to the loss of the electric business the company formerly had and which has been taken over by the Illinois Power and Light Corporation. If this is taken into consideration it will show that the railroad is now improving financially and the outlook for its future is growing better. Hence it would be unwise even to consider general abandonment under such circumstances.

Further, the balance sheet given on page 38 shows that, on April 30, 1927, the Company had a Plant and Property account in its traction system of $54,632,242. This is an enormous sum, and should not be dissipated by a general abandonment unless it became clear beyond a reasonable doubt that the future was hopeless, which is far from the case at the present time. This is a fact so patent that argument seems unnecessary to support it. In our opinion the time has far from arrived when even the junior security holders are confronted with the loss of their entire investment by abandonment, and we cannot too strongly

express our opinion that the road should continue in operation. While the junior security holders temporarily may have to get along with little or no return, nevertheless they will still have the property back of their investment, and some unforseen economic change may re-establish their outlays and bring back prosperity to the road. Such result might come from a lessening of the use of automobiles, the opening of the St. Louis-Chicago line, or other cause.

At any rate, we regard it as unthinkable that any general program of abandonment be undertaken at this time.

Abandonment of Valley Division

It also has been said by some that the entire Illinois Valley division should be abandoned because of its failure to exhibit earning power, which has been somewhat on the decline during the last five years. Before taking up the question of its earnings, however, we may consider just what the proposition involves in the way of physical property.

The Illinois Valley Division comprises a single track (except less than one-half mile in Joliet and one-half mile in LaSalle) electric railroad extending from Joliet along the Illinois river through LaSalle to Princeton, Illinois, a distance of 85.48 miles, with a branch from Ottawa to Streator, a distance of 16.76 miles. These lines are not physically connected with the Main division, and are operated in many ways independently of the principal portions of the system. The road was constructed about 1901 under the general railroad laws of Illinois, and it is possible to handle M.C.B. equipment the entire distance.

ILLINOIS TRACTION SYSTEM - Abandonment of Valley Division

Tracks are operated as follows:

	Miles
First main	101.02
Second "	0.78
Sidings and wyes	9.27
Connection tracks	1.50
	112.57

Between Joliet and Split Rock, a distance of 58 miles, the line has very good curvature and grades, the maximum curve, except through cities, being 6 degrees, and the maximum grade about one percent. The maximum grade for the entire line between Joliet and Princeton is at the Illinois Central hill in LaSalle, where it approximates 8.0 percent for a distance of several hundred feet. Most sidings are 350 to 400 feet long and there are also some passing tracks for passenger service. Except where it is in city streets, the line is almost wholly upon private right of way, which varies from 75 feet to 100 feet in width, although for short distances it is reduced to 25 feet in a number of places. On the Streator branch the right of way is partly 66 feet and partly 75 feet.

Originally the entire line was ballasted with gravel, but a few years ago the Company began using cinders and pea gravel, the latter donated by the Moline Sand and Gravel Company, with a pit 5 miles west of Ottawa. In general there are about 6 or 8 inches of good gravel under the cinders, but between Ottawa and Joliet there is only one 6-inch lift. The Streator branch has stone ballast for the entire length.

Ties are nearly all treated oak laid on 24-inch centers. On the

ILLINOIS TRACTION SYSTEM - Abandonment of Valley Division

Streator branch they also are treated oak and gum, the latter forming only a small percentage of the total.

Rail is partly 60-pound and partly 70-pound ASCE, the relative amounts being shown in the table on page 20. The Company is required to pave an 8-foot strip in all towns, and at the time of this report is maintaining a total of 12.57 miles of paving.

There are about 40 bridges between Morris and Joliet, and about 7 wooden trestles west of Peru. There is a single truss span 150 feet long over the Illinois & Michigan canal east of Marseilles. The Illinois river bridge on LaSalle street in Ottawa is owned by the city, and the Company pays $150 a month for crossing it.

The Valley division has a number of excellent combined depots and substations, such as Rockdale, Minooka, Marseilles and Princeton. Other stations range from more or less elaborate structures to mere shelter sheds or signs denoting stops.

The Company operates Illini Beach park, comprising 22 beautifully wooded acres 4 miles south of Ottawa, It also is the only line directly reaching the famous Starved Rock park, about seven miles west of Ottawa. The park is on the south bank of the Illinois river, and passengers are taken across the stream from the traction station by a ferry owned by other interests. During July, 1927, the Company sold 1,152 tickets from various places to this park.

The railroad furnishes power and light to four customers, two of which are gravel companies, all located where it is impossible to buy

power from any other source.

The Company owns and maintains the 3-phase 33,000 volt wood pole transmission line which extends the length of the road. East of Marseilles the line carries 25-cycle current and 60-cycle energy on the west end. For part of the way the transmission line is carried on the trolley line and on an independent line the remaining distance. On the Streator branch the 3 phase 25 cycle 33,000 volt transmission line terminates in the substation at Grand Ridge.

Trolley poles are nearly all 30 foot cedar except where they carry high lines, in which case they generally are 35 feet. On the Streator branch they are mostly 35 feet and set in concrete. All new poles are butt-treated. On the main line both bracket and span construction are used, the former largely predominating, the latter being confined principally to city streets. On the Streator branch the construction is all bracket until the city limits of Streator are reached, and trolley suspension is catenary except in Streator. The messenger wire is 7/16 inch steel. All trolley wire is 3/0 grooved except for some 3/0 figure 8 west of Seneca. This appears sufficient for present freight traffic.

Buses: The only bus competition on the Valley division is from the Mohawk Bus Company, which operates between Chicago and Davenport, Iowa, via Hammond, Indiana, and is an interstate carrier. Formerly these buses handled some local passengers, as between LaSalle and Ottawa and between Moline and Joliet, but the Traction company secured an in-

junction against the practice, and since then the buses have handled only interstate traffic, although recently the line has sought a permit to do intrastate as well as interstate business. The Traction company is resisting this application. There is no bus competition between Ottawa and Streator, although one company asked for a permit, which was denied.

The foregoing shows just what the abandonment of the Illinois Valley division would mean in the way of destruction of physical property, and in the following tabulation are given the results of operation during the last five years, from which we may judge the loss of earnings that might result from discontinuance of operation.

ILLINOIS TRACTION SYSTEM - Abandonment of Valley Division

For the purpose of drawing conclusions as to its past earning power, the revenues and expenses of the line for the five years, 1922 to 1926, inclusive, are shown in the following table:

Illinois Traction System
REVENUES AND EXPENSES
Illinois Valley Division

	1922	1923	1924	1925	1926
REVENUES:					
Passenger . . .	$ 391,890	$ 378,496	$ 334,614	$ 367,737	$ 320,921
Baggage	2,380	2,215	1,837	1,627	1,454
Mail	,	,	,	,	497
Express	17,844	17,145	14,052	15,740	17,115
Milk	1,193	1,176	621	116	166
Freight	82,949	49,413	45,451	36,948	44,944
Switching . . .	27,112	31,326	31,964	29,849	28,426
Rent of Equip't	7,883	8,866	9,480	11,214	11,443
Rent of Bldg's.	84,831	101,504	118,311	120,653	131,711
Buses	,	,	,	,	9,797
Miscellaneous .	12,835	27,376	22,330	24,551	22,391
Total . . .	$ 628,917	$ 617,517	$ 578,660	$ 608,435	$ 588,865
EXPENSES:					
Ways & Struct's	$ 70,589	$ 78,761	$ 71,327	$ 84,846	$ 82,873
Equipment . . .	48,329	48,300	46,976	54,219	41,519
Power	88,618	94,403	84,954	80,015	80,707
Transportation.	121,775	126,112	133,352	133,943	125,557
Traffic	11,144	19,005	18,387	17,872	20,363
Gen'l & Misc. .	79,989	69,541	69,865	72,886	73,341
Taxes	30,172	29,950	41,200	36,450	40,600
Buses	,	,	,	,	11,874
Total . . .	$ 450,616	$ 466,072	$ 466,061	$ 480,231	$ 476,634
REVENUES	$ 628,917	$ 617,517	$ 578,660	$ 608,435	$ 588,865
EXPENSES	450,616	466,072	466,061	480,231	476,634
NET*	$ 178,301	$ 151,445	$ 112,599	$ 128,204	$ 112,231

* - Available for depreciation and return on investment

ILLINOIS TRACTION SYSTEM - Abandonment of Valley Division

The foregoing table shows that the net earnings of the Illinois Valley division have decreased about one-third since 1922, due to practically the same causes as on the Main division, that is, principally motor car competition. It will be noticed, however, that freight revenues increased slightly, which again is in line with our contention that freight traffic forms the hope of the road for the future.

The net earnings of the line are unsatisfactory, but if they grow no worse, it is probable the road could continue indefinitely, and hence there can be no reason for contemplating a general abandonment of the property. Then, too, there are three factors which have not been tried out which offer considerable hope for the future. These three factors, in the order of their importance, are (1) use of the portion east of Ottawa for the Chicago link, (2) possibility of increasing freight traffic by constructing the Chicago link and the Ottawa belt, both previously described, and (3) the construction of the Illinois deep waterway and its possible beneficial effect upon industrial activities in the Illinois valley with consequent betterment to the road. The first two have been discussed in some detail, and it is obvious that the part of the line east of Ottawa cannot be abandoned and still form a part of the Chicago link. The third factor is wholly conjectural at this time, and hence there is little use in using much space concerning its probable effects. Suffice it to say that, on the whole, we are inclined to believe it would be beneficial to the road to a small extent, as it may increase the number of industries along the Desplaines and Illinois rivers.

ILLINOIS TRACTION SYSTEM - Abandonment of Valley Division

In view of the foregoing, there should be no thought of abandoning the entire Illinois Valley division at this time. However, as set forth within the next few paragraphs, it is recommended that data be accumulated for the purpose of determining the advisability of discontinuing operations over the portion of the line from Peru to Princeton.

Lines to be Abandoned

While there should be no general program of abandonment of either the System as a whole or the Illinois Valley division in its entirety, nevertheless there are several sections of the road, usually short, that appear to be unprofitable and, in our opinion, should cease operations. These are (1) Peru to Princeton, 23.0 miles; (2) part of Homer branch; (3) part of Ridge Farm branch; (4) part of Catlin branch. Each of these will be considered in turn.

Peru to Princeton: 23.0 Miles: This part would not be needed for the Chicago link, and therefore we can consider it in the light of the financial showing it makes. That showing we have been unable to ascertain, because of the manner in which the books of the Company are kept in that they do not show revenues and expenses for portions of the line but only for the whole. However, we did address ourselves to the considerable task of ascertaining the amount of freight and passengers handled on the portion of the Illinois Valley division between Peru and Princeton during the first five months of 1927, and these figures are given in the following tabulation:

ILLINOIS TRACTION SYSTEM - Abandonment of Peru-Princeton Line

Illinois Traction, Inc.
FREIGHT AND PASSENGERS HANDLED
AT EACH STATION ON ILLINOIS VALLEY DIVISION
First Five Months of 1927

	Mile	Forwarded Tons	Forwarded Gross Revenue	Received Tons	Received Gross Revenue	Ticket Sales
Joliet-Peru:						
Joliet	0	480	$ 2,366	157	$ 857	$ 9,117
Rockdale	3	15	47	,	,	.323
Minooka	11	3,691	1,952	4,636	3,891	1,364
Morris	22	401	591	2,716	2,172	8,139
Griggs Siding		40	25	,	,	,
Wilson		284	176	,	,	,
Seneca	32	1	8	113	288	3,451
Marseilles	38	4,783	4,393	2,274	1,896	5,567
Ottawa	45	1,291	1,725	969	1,334	18,647
Mitchell Siding		161	300	10,533	5,004	,
Utica	54	2,701	1,831	785	877	1,924
LaSalle	59	158	633	6,107	4,346	10,009
Peru	62	,	,	,	,	2,151
		14,006	$14,047	28,290	$20,665	$60,692
Peru-Princeton:						
Spring Valley	65	1,446	$ 1,323	160	$ 301	$ 2,037
DePue	71	8,443	3,075	1,486	1,330	2,418
Bureau	76	,	4	565	358	1,160
Princeton	85	1,149	1,052	9,030	4,177	2,510
North Princeton		,	,	,	,	135
		11,038	$ 5,454	11,241	$ 6,166	$ 8,260
GRAND TOTAL		25,044	$19,501	39,531	$26,831	$68,952
Unredeemed mileage						17,449
						$86,401
Interchangeable paid other companies						3,065
						$83,336

From the foregoing it is seen that during the first five months of 1927, all stations forwarded a total of 25,044 tons of freight, for which $19,501 was received. The same stations received 39,531 tons of freight and $26,831 in revenues, or a total of $46,332 in revenues. During the same period total tocket sales amounted to $68,952. That is, total revenue from freight and passengers was $115,284, of which only $19,880,

or about 17%, came from the part west of Peru. Since this part of the line comprises 27% of the total, it is seen the showing is considerably worse than the average, which is none too good. However, it must be admitted that the foregoing figures are somewhat inconclusive because of our inability to completely allocate cash fares.

Because of low earning capacity the physical condition of the entire Valley division is below what it should be by about 10%. In addition its poor alignment and heavy grades west of Peru render it impossible to make a good railroad out of it except by the expenditure of excessive amounts of money, a procedure that would be wholly unjustifiable when we take into consideration the character of the territory and its low business producing possibilities.

The portion from Ottawa to LaSalle should not be abandoned, as it is required for the passenger business to Starved Rock Park, one of the foremost places of interest in Illinois, and the traffic to which is quite heavy in the summer months, and doubtless will increase materially if the Chicago link is constructed. In addition, this portion of the road has large present and potential possibilities for freight traffic, as most of the sand and gravel pits from which business is or may be had are on this part of the road. All of this business could be handled over the previously discussed Ottawa proposed belt line in excellent manner, and should prove profitable.

In view of the inconclusive showing made by the figures given above, it is recommended that the portion of the Illinois Valley division west

ILLINOIS TRACTION SYSTEM - Abandonment of Peru-Princeton Line

of Peru (or possibly Spring Valley) be studied with a view of ascertaining the exact results of operation thereon and appropriate action can then be taken in the light of that showing.

Homer Branch: 5.5 Miles: This is a single track branch, 5.5 miles long, extending from a connection with the Champaign-Danville line at Ogden south to Homer, Illinois, with a population of about 1,000. Fourteen daily trains are operated in each direction. The line has one elevator and a small amount of l.c.l. freight is handled. As shown by the records of the Company average passenger earnings of this line during certain periods have been as follows:

Period	Average Daily Revenues
January 3 - January 9, 1923	$ 12.45
July 13 - July 19, "	17.75
February 15 - February 21, 1924	13.78
June 17 - June 23, "	13.06
February 22 - February 28, 1925	15.94
August 28 - September 3, "	12.24
January 15 - January 21, 1926	11.04
July 11 - July 17, "	9.09
February 6 - February 12, 1927	14.08
July 1 - July 31, "	4.95
Average	$ 12.44

We have been unable to secure the freight earnings of this line, but they are very small. The total revenues of the branch are insufficient to pay operating expenses, and we recommend that the line be abandoned in the near future from state road to Homer, a distance of 3.0 miles. This would mean the discontinuance of all passenger service on the branch, but occasional freight service could be maintained as

far as the state road and thus secure what revenues are to be had from the elevator and possibly other small amounts.

Ridge Farm Branch: 16.45 Miles: The Ridge Farm branch is a single track line extending from (see map on front cover) Danville nearly due south to Ridge Farm, a distance of 16.45 miles. The line is on private right of way averaging 33 feet in width except in Danville, Westville, Georgetown, and Ridge Farm. It is laid with 60# and 70# rail, a considerable part of which is in paving and is paralleled its entire length at an average distance of 50 feet by a hard road which it crosses or intersects eleven times. It serves no industries, although it traverses a coal mining district. However, all the mines are served by the Cairo branch of the Big Four railroad, which parallels it on the west at an average distance of about one-half mile. Passenger service is maintained 16 hours daily at intervals of one hour, and a freight makes a round trip on alternate days. Passenger cars are heavy, two-men type, and fares are based on 3 cents a mile. At present eight trainmen are employed on the line an average of 9-1/2 hours each daily at the rate of 67.5 cents hourly. If the line were classed as a street railway, the men would receive 52 cents and 53 cents.

An idea of the traffic on this branch can be obtained from the figures in the following tabulation:

ILLINOIS TRACTION SYSTEM - Abandonment of Ridge Farm Branch

Period	Average Daily Revenues
January 3 - January 9, 1923	$434.46
July 13 - July 19, "	376.53
February 15 - February 21, 1924	398.02
June 17 - June 23, "	256.56
February 23 - March 1, 1925	344.89
August 28 - September 3, "	327.09
January 15 - January 21, 1926	333.90
July 11 - July 17, "	233.05
February 6 - February 12, 1927	282.50
July 1 - July 31, "	168.62
Average	$315.56

During the month of July, 1927, earnings from this branch were as follows:

Ridge Farm Line	Passenger Number	Passenger Earnings
Passenger:		
Tokens	1,611	$ 96.66
Cash Fares	20,963	2,765.71
Ticket Sales - Local	12,931	2,315.76
" " - Thru	19	5.97
Fare Books	163	43.21
From and to Off-line Points		29.15
	35,687	$5,256.46
Other:		
Baggage		$ 0.96
Milk		6.10
Mail		73.46
From and to Off-line Points		39.52
		$ 120.04
GRAND TOTAL		$5,376.50

Practically all the business done by this line is from Georgetown north. For example, southbound car #305 left Danville at 1:00 p.m. August 9, 1927, with 17 passengers and had 5 when it arrived at Ridge Farm, which is a place of 850 population, Georgetown having 3,061 and

ILLINOIS TRACTION SYSTEM - Abandonment of Catlin Branch

Westville, 4,241. Upon the return trip northbound this car left Ridge Farm with 3 passengers, and we are informed the cars frequently have none.

In view of all the above figures, we are of the opinion that operation and maintenance should be discontinued for the portion of this line between Georgetown and Ridge Farm, a distance of about 5.5 miles. This does not mean that the tracks should be torn up at this time but they may be allowed to remain until such time as they become practically inoperable before removal. The remaining portion of the line, that is, between Danville and Georgetown, should be continued in operation, one-man cars substituted for those now used, and the line placed upon a street railway basis as to wages and other operating conditions.

Catlin Branch: 5.4 Miles: The Catlin line branches from the Ridge Farm line about one mile south of the Danville station and extends to Catlin, a distance of 5.4 miles. The line is on private right of way except thru the cities of Tilton and Catlin, and about one-third is laid with 70# ASCE rail and the remaining two-thirds with 60#. The road is paralleled the entire distance by a hard surface highway. One-man cars are operated on this branch, and there is practically no business over it, as shown by the following tabulation taken from the records of the Company:

ILLINOIS TRACTION SYSTEM - Abandonment of Catlin Branch

Period	Average Daily Revenues
January 3 - January 9, 1923	$ 98.22
July 13 - July 19, "	69.75
February 15 - February 21, 1924	107.39
June 17 - June 23, "	54.90
February 23 - March 1, 1925	60.96
August 28 - September 3, "	50.21
January 15 - January 21, 1926	52.86
July 11 - July 17, "	35.80
February 6 - February 12, 1927	55.50
Average	$ 65.07

Revenues from this branch for the months of April, May and June, 1927, as taken from the records of the Company, were as follows:

	Passenger	Other	Total
Between Danville and Wabash Connection	$2,778.46	$22.63	$2,801.09
Wabash Connection and Catlin	875.33	56.60	931.93
	$3,653.79	$79.23	$3,773.02

This is an average of only $310 a month for the part west of the Wabash connection, and would be still less for the portion west of the County farm, the latter of which we hereinafter recommend to be abandoned.

In view of the poor earning capacity of this line, we recommend that operation thereover be discontinued from the County Farm to Catlin, a distance of about 2 miles. The remaining portion should be considered as street railway and operated accordingly, with schedules suited to the needs of the community. By keeping the line in service from Danville to the County Farm, there will be preserved the connection with the Wabash railroad at Tilton, and such reduced operation will give all advantages heretofore received from the branch with none of the disadvantages

accruing from maintaining and operating a very unprofitable section of railroad.

Decatur to Danville: 84.3 Miles: From Decatur to Danville, a distance of 84.3 miles, the road traverses an almost purely agricultural territory, with some coal mining in the vicinity of Danville. The principal cities served are:

	Miles from Decatur	Population
Cerro Gordo	13.7	1,003
Bement	22.4	1,663
Monticello	29.3	2,280
Champaign	50.6	18,191
Urbana	52.9	11,348
Ogden	66.2	448
Fithian	70.6	482
Oakwood	75.5	573
Danville	84.3	37,021
		73,009

From Decatur to Bement, 22.4 miles, the electric road closely parallels the St. Louis-Detroit line of the Wabash; from Monticello to Champaign, 21.3 miles, the Decatur branch of the Illinois Central; and from Champaign to Danville, 33.7 miles, the Peoria branch of the Big Four. Thus the service is duplicated along practically the entire line by standard steam lines which have nearly all the industries. The electric road can handle freight into and out of Danville in only limited quantities owing to ordinance restrictions and the heavy grades at the Vermilion river and Possum Trot.

Because of their better facilities the steam lines handle by far the greater portion of the freight between Decatur and Danville, leaving

ILLINOIS TRACTION SYSTEM - Lines of Questionable Value

the passenger traffic largely to the traction company. The largest freight customer of the electric road along this line is the University of Illinois, which uses a large amount of coal each year. For example, during the year ended June 30, 1927, it used 917 cars of coal, but during that year the university bought most of its coal from mines not on the electric road, so that the latter received only a switching charge. However, it is hoped that in the future the traction company can secure a considerable line haul from this traffic and thus greatly enhance its revenues. We believe this can be done now that the electric road has placed the Champaign belt line in operation. Prior to that time it could not bring coal from the Springfield district because it could not be handled through Champaign streets. Further, the road is now closing a deal with the university whereby tracks are to be installed to handle the large amounts of building and other materials used by the university, amounting to approximately $2,500,000 annually. Heretofore this has been handled in other ways, largely by trucking from the Illinois Central or Big Four railroads, which are an average of about one mile away. The Company also expects to secure additional business from a new bulk oil station in Champaign, elevators at Urbana and Glover, a large strip mine near Danville, and several other sources. Now that the new freight house at Champaign is completed and the new freight line through that place and Urbana is in operation, it is expected that the freight business will greatly increase.

There can be little doubt the future business of this part of the

line will be much greater than in the past. However, with the exception of Decatur, the communities it serves are of slow growth due to their agricultural characteristics. Claim is made that the passenger business on the line will support it, but this we have been unable to verify from our examination of the books because of the way in which they are kept.

As a retrospective thought, it appears regrettable that the original builders of the traction line between Decatur and Champaign did not purchase the Illinois Central branches from Decatur to Champaign and from White Heath to Clinton, as it would have prevented an economic loss. As matters stand, there are two railroads closely paralleling each other between Decatur and Champaign and dividing a business that is hardly sufficient for one. While it is now too late to correct this mistake, nevertheless it is too bad that the two roads cannot work out a method whereby the costs of maintaining both could be saved.

While it must not be thought we harbor the idea the electric road between Decatur and Danville should be abandoned, nevertheless we do recommend that careful figures be kept of the results of operation thereon. Then the management can pass definite judgment upon its relative profitableness or unprofitableness.

Mechanicsburg Branch: This is a single track line extending from a connection with the Springfield-Decatur main line at Mechanicsburg Junction to Mechanicsburg, a distance of 3.49 miles. At the time of this report seven trains are operated in each direction daily. As shown by the

records of the Company, earnings during the month of July, 1927 were as follows:

Passenger	$129.48
Freight	37.94
	$167.42

Checks made for approximately one week each during the summer and winter months of 1923, 1924, 1925, 1926 and 1927 showed average passenger earnings of $2.94 daily. However, in an average year, Mechanicsburg produces about 300 cars of freight for the road, and this is sufficient to justify its retention for freight purposes, at least. The passenger revenues are insufficient to pay the wages of the trainmen employed in that service. Mechanicsburg has a population of 470, and has no other railroad service. However, in view of the showing made in passenger traffic, such service is not badly needed. Inasmuch as very little is now being spent for maintenance, we recommend that passenger service on the line should be discontinued but that freight service be maintained.

Proposed Plan of Operation.

In the preceding paragraphs we have briefly discussed various extensions to, and abandonments from, the present Illinois Traction System. Having done this, it seems fitting at this place to outline our ideas as to its future operation. Briefly, this would consist of stressing heavily the operation of the St. Louis-Chicago line, giving it preference in matters of physical upkeep, operation of trains, and any other conditions that might be nec-

essary to make it a desirable transportation line between those two important cities. The remainder of the system would serve as feeders, the traffic reaching it by the shortest line, as, for example, Chicago bound freight from Decatur would be handled by way of Bloomington and Mackinaw, while that destined for St. Louis from the same city would be routed by Springfield. Shops could be retained at Decatur, but later might require moving to Springfield or other point more centrally located than is Decatur. Local traffic would be handled along the usual lines, and there is little need for more exact specifications in relation thereto. Traffic should be sought intensively, and any features possessed by the road, such as Starved Rock Park, should be advertised to the fullest extent, somewhat along the lines adopted by the North Shore and South Shore lines between Chicago and Milwaukee and Chicago and South Bend, respectively, which have achieved notable successes in this field.

Money for Improvements: The improvements hereinbefore suggested will cost a large sum of money, including, as they do, right of way, grading, ballast, ties, rail, substations, transmission and distribution lines, equipment, and, in fact, nearly all articles used by a railroad company. As previously stated, we do not know exactly what the total cost will be, as we have made no close estimates thereof because of the amount of time that would be required and the consequent expense. However, for the purposes of this report, it will be sufficient to as-

sume that the ultimate outlay will approximate the amount hereinbefore shown, that is, $13,000,000.

That is a large sum, and the question arises as to whether it is better to (a) raise it all at once or (b) gradually as it is needed. Upon this question we can only generalize at the present time, not knowing exactly the amount involved nor the rate at which it is to be spent. Assuming, however, that it is in the neighborhood of the foregoing amount, we may express the opinion that a reasonable procedure would be to have estimates of the improvements prepared and determine the relative importance of each. Then proceed to raise the money as needed, as we believe it not only would be easier but it would avoid endangering a large investment in an undertaking that has some elements of uncertainty.

Quality of Service: We believe that the general public prefers electric transportation to steam transportation, providing other conditions are approximately equal, and that in this fact lies the probability for greater success for the electric line. It is much more mobile and has greater possibilities in the way of higher speed than have the steam railroads with their inhibitions due to heavy trains hauled by one locomotive. This fact, we believe, is the key for the unlocking of greater business opportunities, and should be made the most of. In order to do this, however, the road must be in position to utilize to the fullest extent the high speed desired by the public. This means straight track, well surfaced, and unhampered so far as possible by short radius curves, heavy grades, or crossings at grade. And it requires modern

cars that are comfortable to the verge of luxury. There is so much money in this country and so many to spend it that about all one now has to do is provide something better than any one else does, and there will be buyers aplenty. Good service, of course, means courtesy to patrons, which costs nothing but buys a great deal. This the Company now furnishes quite satisfactorily, although, as previously stated, we believe it can still be improved, and it is a matter that needs constant attention in order to prevent slipping into old ways.

Traffic Surveys

About two years ago the Company published a list of all shippers along its lines, and it is our understanding this is kept constantly up to date. This is as it should be. Then, too, solicitors keep in touch with new buildings or similar operations and attempt to secure the business. These solicitors are supposed to call on all shippers, but are not required to make reports of their activities, showing on whom they have called, the results of their visits, etc. There can be little doubt that the activities of all solicitors should form the subject of daily reports to the chief of the traffic department, for that department, if it functions properly, must let slip no opportunities to secure business.

We are informed the Company has made a survey which showed that the output of mines that could be reached by the System was 6,500,000 tons annually, and in 1926 the road actually handled 1,200,000 tons of coal. A survey of the grain raised in traction territory showed that

ILLINOIS TRACTION SYSTEM - Classes of Traffic

20% of it was handled by the electric road, which seems a fair showing, especially as the traction elevators were the last built. Also, we are informed the Company has in its files blue prints showing actual or proposed track connections to every major industry along the lines. In view of the foregoing, we can do no more than suggest that which the Company is already doing, that is, keep its list of shippers, both actual and potential, constantly up to date and card indexed so that ready reference may be made thereto. Then keep in touch with all prospective business and work night and day to get it. This is a sure recipe to secure a fair share of it, and there is no other way. It might here be mentioned that excellent industrial surveys have been made by the North Shore and South Shore railroads under direction of Mr. C. H. Wheeler, and they have proved of material benefit.

Classes of Traffic

The territory served by the Illinois Traction System includes some of the finest agricultural lands in the United States, but it also has many industries. In examining the classes of traffic handled by the road it was noticed that not much live stock was hauled, although produced in the territory in considerable quantities. Upon inquiry we found that, while there are ordinance restrictions relative thereto in certain towns, they were not strictly enforced, and that the reason is really because the business is not of a desirable class. In this same undesirable class are also included drain and building tile, sewer pipe and similar products.

ILLINOIS TRACTION SYSTEM - Classes of Traffic

Cattle are considered undesirable to handle because about the only market reached by the road is that at East St. Louis. The average rate received for a car of cattle thereto is $17, out of which must come about $4.00 a car per diem and $5.00 switching charge, leaving only about $8.00 for the Company for the line haul. On top of this is a claim on about every fifth car for loss in transit because of price drops, which sometimes amounts to more than the freight. Hence the business is not solicited, although it is taken if offered, but nothing is spent in building cattle pens or otherwise in inducing the business.

Drain and other tile is undesirable because of the large losses from breakage. As an example, the Company handled 143 cars of drain tile from one company and claims for damage were filed on 116 of them. Minneapolis flours and feeds are not profitable, but are taken if offered. This is one reason the Minneapolis office was closed. It was getting about 1,000 cars a year, but 75% or 80% were handled at a loss.

In view of the foregoing, we are of the opinion the Company is justified in its stand on the question. However, it must continue to do as it has in the past, that is, handle such shipments if offered, taking all possible precautions to avoid losses therefrom. General business experience is to the effect that one must take all classes of business that properly fall within his activities and be prepared to serve as a real common carrier if that is his line.

ILLINOIS TRACTION SYSTEM - Differential Rates

Differential Rates

During this investigation it came to our attention that the traction rate on coal between Danville and Champaign was 91 cents, while the Big Four rate was 76 cents per ton. Upon the face of things, with this difference the Traction company could not hope to get any of this business, although the University of Illinois, a large user, is directly served by it. However, upon further inquiry, it develops that the Big Four rate is from a small mine south of Danville from which the university bought about 15 cars. The traction rate of 91 cents applies to mines at Dolan, Missionfield, and Grays, and it hauls quite large amounts to Champaign from these mines. It can get no business from the mine south of Danville because it has no connections thereto, and were it to meet the Big Four rate it would lose the 15 cents a ton on shipments from Dolan, Missionfields and Grays, thus sacrificing its revenues with benefit to no one except the strip mines involved.

Another example of like nature involved the reduction by the Cincinnati, Indianapolis & Western railroad of the coal rate from the Springfield district to Decatur from 90 cents a ton to 70 cents. The Wabash met the rate, and asked the Traction company to do likewise, which it finally did. So far as the Traction company is concerned, the principal beneficiary of the reduction was the Illinois Power & Light Corporation power station at Decatur, and the net effect was to transfer 20 cents a ton from the railroad to that company. Further, the railroad company could make no money on such a rate, as, under it, the road was compelled to haul coal at $8.00 a car, or 10 cents a car mile, an unprofitable

proceeding.

We of course have not gone at length into this matter of differential rates owing to the time and consequent expense it would involve. The two examples given are self-explanatory, and we are assured the Company is constantly on the alert to avoid inequalities in rates which may cause it to lose profitable business. We therefore can only suggest that the Company keep a close watch on such conditions and take such action as may be necessary to meet each situation.

Equipment

The Company is not bound by any rules as to the amount of equipment it must carry, but can depend on foreign line cars if it so desires. In fact, this is done to a considerable extent, but in 1926 its per diem excess amounted to about $175,000. As is well known, the present car rental between owners of freight equipment is $1.00 per day. During the first five months of 1927 the Illinois Traction paid out for rent of foreign cars the sum of $130,397, and received as rental for its equipment the sum of $39,757, or an excess against the Company at the rate of about $217,000 annually. This amount of money would help considerably in the purchase of new equipment, for, strictly speaking, the amounts thus paid to other roads and received from them should balance as nearly as possible. When they do not, it usually is time to buy new cars.

That the Company is woefully deficient in its car supply is also shown by the following tabulation secured from the records of the Company:

ILLINOIS TRACTION SYSTEM - Equipment

Line	Miles Main Line	No. of Freight Cars	Freight Cars Per Mile of Main Line
Chicago & Alton	1,052	14,355	13.63
Wabash	2,524	26,394	10.45
Illinois Central	6,862	68,814	10.05
Louisville & Nashville	5,038	65,285	12.93
Baltimore & Ohio	5,196	107,170	20.62
Chesapeake & Ohio	2,627	57,218	21.95
Virginian	545	10,280	18.86
Troy & Eastern	24	1,000	41.66
ILLINOIS TRACTION	425	986	2.32

From this it will be seen that the Traction Company has only about one-tenth as many cars per mile of main line as the steam railroads operating in the same territory. Comment upon this showing therefore is not required.

When it comes down to actualities, there is not a car that can be depended upon to be had from foreign lines. The roads will promise them, but they fail to arrive on time, or not enough are sent, or something or other happens that renders dependence almost out of the question. It has happened that when there is a shortage of coal cars the Interstate Commerce Commission will order such cars returned empty to their owners, and this requirement sometimes makes for a lot of dead haulage which eats up the profits.

It is our information that about three years ago the Company purchased 100 new cars, and 200 new drop bottom cars have been bought that can also be used as gondolas. If 200 more could be added within the next six months it would greatly relieve the situation, and thereafter 100 new cars a year should be added.

ILLINOIS TRACTION SYSTEM - Equipment

From the above it is very evident that the Traction Company is very deficient in freight equipment and should provide itself with additional rolling stock of this class just as quickly as possible. This need would be quickly accentuated in case the Chicago link is constructed.

The Company also sadly lacks modern passenger coaches. The best it now has are about 14 years old and are now obsolete although a brave appearance is kept up by liberal use of paint and varnish. If the Company is to operate cars over the elevated lines in Chicago it would have to secure some narrower type than its present types to enable them to pass station platforms. They also would have to be equipped with third rail shoes and the air lines modified for the automatic stopping devices in use by the Chicago Rapid Transit Company on its cars.

In our opinion, the matter of new passenger and freight equipment is quite vital to the future of the Company and should receive the prompt and earnest attention of the management.

Increased Rates

The passenger fares on the Illinois Traction System are now based on 3.0 cents per mile, while steam railroad rates in the same territory are upon the country-wide 3.6 cents basis. It has been proposed by certain Company officials that the Traction fares should be placed on the same level as that of the steam railroads, thus enabling it to be recognized by the latter as an equal, and placing it in position to enter into joint arrangements with them for through rates and routes. It could also exchange information with all

other roads in the association on a more equal basis than at present. It is argued by the proponents of the 3.6 cent rate that the Company then could possibly participate in some long haul traffic. For example, many people go from Springfield to the southwest via St. Louis and can obtain tickets through to destination from the steam railroads serving Springfield, while the best that the traction line can do is to take them to St. Louis. As a result much of this through business is lost. The road sells no interline tickets except at Champaign to Chicago via the Chicago and Eastern Illinois, and the Wabash at Springfield and Decatur. It is argued by those who contend for the higher fare that an interline agreement would be of great benefit to the Company, for then the road would be in position to check baggage through to destination and arrange for transportation between depots, as is now done by the steam lines. It is our understanding that the traffic department manager believes that the road would benefit materially by reason of the ability to put into effect such interline arrangements. The opponents of the plan claim that the road does not give service worth 3.6 cents a mile, and that it would lose considerable business if it went to the higher fare.

In so far as the service rendered by the Illinois Traction System between St. Louis and Springfield, for example, the writer can see little difference in quality between it and that given by the steam roads between those places. The electric service is fast and much more frequent than the steam lines and in many ways the trip is more enjoyable, because of greater freedom from dust, noise, and other usual accompani-

ments of steam travel. Hence, in our opinion, the service is upon a reasonable parity. Regarding the contention that there would be loss in business we agree that probably such would be the case, for that was the experience of the road about seven years ago when, for a time, interstate fares were higher than the 2¢ permitted by the Illinois law. Patrons would go to Venice under the 2¢ rate and change to bridge cars to avoid the 3¢ through rate. Hence, it is claimed that the 60¢ present difference, for example, between the steam and traction rate from Springfield to St. Louis, or vice versa, secures considerable business for the electric road. On the other hand, it may be pointed out that when the North Shore and South Shore lines went on the 3.6 cent basis there was comparatively little loss in traffic, and this was more than made up by the greater revenues accruing from the higher fares.

It is our understanding that vice president Snyder is agreeable to higher rates provided the bus situation is cleared up. The Company has been faced with bus competition on state road #4 between Bloomington, Springfield, Staunton and St. Louis by a company that has had an application before the Illinois Commerce Commission for the last two years. The bus rates are based on 2.5 or 3.0 cents a mile, and many of the officials believe that if the traction company raised its fares to 3.6 cents a mile it would invite destructive competition from bus lines, as such has been the experience in other localities, particularly on certain lines in Indiana. When the traction fares and bus fares were equal, the patronage was also about equally divided; when traction fares

were placed at 1/2 cent less than the bus fares, the proportion became about 60% traction and 40% bus, and vice versa, thus showing that about 20% of the patrons are influenced by the rate of fare.

While the question is difficult to decide, nevertheless we are of the opinion that probably the best interests of the road would be served by keeping the 3 cent rate in effect, at least until the road is in position to compete with the steam lines on a strict basis of merit.

Traffic Department

It appears advisable in this report to touch at some length upon the traffic department of the road for the reason that upon it will devolve the task of furnishing the business in case the road enters upon the more extended development herein contemplated. At the present time the traffic department is headed by Mr. W. H. Wylie, traffic manager, with headquarters at Springfield. Mr. Wylie is a man with extensive experience in this field and impressed us as a capable executive. In addition to supervising his office he spends much of his time handling the larger matters involving other railroads, tariffs, public and business relations, and other major questions. Mr. E. E. Kester, assistant traffic manager, devotes his time to handling passenger traffic on the System, except the Valley division, and Mr. H. A. Tuohy, assistant traffic manager, is expected to handle the Chicago situation. Mr. W. H. Blair is chief of the tariff bureau, and there are a number of efficient and capable general agents in the larger towns, of whom we may mention Mr. E. L. McKee, of the Spring-

field office, who works as far north as Lincoln, as far east as Buffalo, and south to Carlinville, and Mr. H. C. Leutert, who efficiently handles the situation at St. Louis. These executives are assisted by a force of clerks, but it is our understanding that the force is too small. Moreover, the Company's solicitors are paid only about one-half the salaries paid by the steam railroads for similar services. The result is that less efficient help is secured and the results accomplished are correspondingly less. For example, street men employed by the Wabash railroad in St. Louis receive $300 a month, while the Traction men receive $140 and $150. The general agent of the Traction company who looks after its interests in one of the principal cities served by it receives $160 a month, while equivalent services on the steam lines receive about $300. The ticket agents, with whom the public comes into contact more than with any other employes of the road, receive from $35 a month to $105 a month, the latter at the larger terminals. These positions require 10 or 11 hours' service seven days a week and are paid at the rate of $170 to $175 a month on steam roads. Baggage men, who are also in close contact with the public, receive $75 a month at the larger stations.

We have heard criticisms of the traffic department to the effect that it did not cooperate with agents and others in securing business, that it was slow, lacked aggressiveness, and other charges of like nature. However, we believe most of the criticisms are unwarranted and that the department is functioning as well as could be expected when we consider the limitations under which it operates in the way of salaries and too few men.

Much more along these lines could be written, but it would still

fail to clarify the situation. Since the most urgent need of the road is additional business, it can safely be said that there is no better way in which the Company can spend some money than in increasing the number and quality of traffic department employes. For example, each of the present superintendents, all of whom get much business for the road, might be provided with a chief clerk to relieve them of some of the details they now handle. The plan of having plenty of good help has been quite successful on both the North Shore and South Shore railroads and doubtless would work out well in the present case.

At any rate, it is certain that if the traffic department is to function as it should in securing the additional business for the greatly enlarged program herein contemplated, it must have more and better paid help, and we recommend that all possible steps be taken towards that end.

Accounting Records

At the time of this report the accounting offices of the Company are in Champaign, entirely removed from any other of the general offices. As a matter of fact, the accounting department really works for the Illinois Power & Light Corporation, although the Traction company pays part of the bills. Further, the auditor does not report directly to vice president Snyder, and it is our understanding that if the Springfield offices wish accounting information quickly, which is frequently the case, they must call up on the telephone for it. This results in considerable bookkeeping being done

on divisions by clerks who should be employed on other work, and thus needlessly duplicates the work of the auditor.

The above rather remarkable state of affairs appears a survival of bygone operating days when the present system consisted of six different roads, and it is perpetuated apparently in the belief that it will save small amounts in rents and clerk hire, no regard being paid to the great amount of inconvenience caused and time wasted of higher officials.

Further, the revenues and expenses are not divided by districts except as between the Main division, comprising about four-fifths of the system, and the Valley division, comprising the remainder. The result is that, except for special studies generally made by Springfield employes, the officials are almost completely in the dark as to what takes place on any particular portion of the road, such as from Springfield to St. Louis. Hence it is impossible to tell accurately which lines pay and which do not. During the course of our investigations we have sought this information assiduously for several of the branch lines and part of the Valley division. We were unable to obtain information of the kind needed that was of value, and therefore have resorted to such makeshifts as securing the number of tickets sold from certain stations or the amount of freight forwarded and received. The earnings and expenses of the Company are not divided by divisions of the road, and at the present time it is impossible to determine the financial showing made by each. Tonnage originated and received can be ascertained for each of the stations, but it is only by a large amount of research that it is possible to get any

useful information of this sort. It is only recently that there have been any attempts to divide expenses between passengers and freight. About three years ago this division was made, however, and now about 55 percent of the actual expenses are divided. Power is divided on a car mile basis. Further, it may be mentioned that in nearly all our work we were compelled to rely largely upon special studies and reports in the Springfield office rather than upon the books, where one naturally would expect to find the data. This is not to be construed as a criticism of any person in the accounting department, as all of them gladly gave us all assistance possible. The fault is with the system employed, which could not well be more inconvenient or non-informative.

A mere inspection of the territory served by some of the branches is almost prima facie evidence they do not pay, but is not sufficient to condemn them in a report of this kind. We believe it would be fairly easy and practical to change the accounting system so as to show the actual results of operations upon the branches open to suspicion of unprofitableness and upon certain divisions of main line, notably from St. Louis to Springfield; Springfield to Peoria; Springfield to Decatur; Decatur to Danville; Decatur to Mackinaw; Joliet to Princeton; and each of the branches. In this way it would be possible to ascertain accurately the results on each and thus furnish information upon which the operating officials can lay out budgets, apportion operating expenses, and otherwise do intelligently the numerous things that depend primarily upon their financial aspects.

ILLINOIS TRACTION SYSTEM - General Offices

In the light of our investigation we strongly recommend that the accounting offices of the Company be consolidated with its other general offices and that the accounting records be kept in such manner as to furnish results on specific portions of the line and thus afford information of real value to operating officials as above outlined.

General Offices

At the present time the general offices of the Traction company are in Springfield, with the exception of the accounting department, which, as just seen, is in Champaign. The general offices of the Illinois Power & Light Corporation, the controlling company, are in Chicago.

While Springfield is reached rather easily from most points on the Traction system, nevertheless it seems as if much time and trouble could be saved if the general offices were consolidated, either in Chicago or St. Louis, preferably the latter at the present time. Then, too, the present offices are inadequate, present an appearance that is none too good, and, worst of all, are continually menaced by the liability to destruction of valuable records by fire. Consolidation of the offices would undoubtedly save much time and expense in the way of telegrams and telephone calls, and would better coordinate the facilities. Division offices would be maintained approximately as heretofore. For these reasons we suggest the management give consideration to the advisability of consolidating the general offices in either St. Louis or Chicago.

ILLINOIS TRACTION SYSTEM - Future Financial Structure

Future Financial Structure

As shown by the balance sheet of April 30, 1927 (page 38), the Illinois Traction System had outstanding $29,931,000 of bonds on which the annual interest requirements are $1,461,135. The details of these amounts are shown in the following tabulation:

Security		Annual Interest Requirements
$16,775,000 5% Underlying Bonds;		
Outstanding	$8,676,500	$ 433,825
Owned by I.P.L. Corp'n	28,000	1,400
Owned by I.T.S. and pledged as part security for First and Refunding Bonds	6,666,000	
Sinking Fund	1,404,500	
$13,156,000 First and Refunding; 6%		789,360
$ 4,316,000 Bond Account; owned by I.P.L.:		
St. Louis Electric Terminal R'y; 5%	$1,724,000	86,200
St. Louis Bridge Company; 5%	2,592,000	129,600
*$415,000 Notes Payable; 5%		20,750
		$1,461,135

Interest paid during year ended 4-30-1927;	
Illinois Traction, Inc.	$1,192,652
St. Louis Electric Terminal	86,200
" " Bridge	129,600
	$1,408,452

* - The Illinois Power & Light Corporation receives notes for monies expended on fundable construction until such time as the amounts become large enough to issue bonds wherewith to retire the notes

The table of revenues and expenses on page 37 shows that during the year there was available for interest and depreciation the sum of $1,672,958, which gives somewhat insufficient leeway above interest requirements. If, then, the program hereinbefore suggested is carried out, it is easily seen that if $13,000,000 new money is put into the property, that it must have almost certain prospects of success, or

that arrangements must be made to reduce in some way the present interest obligations. This has been accomplished in part by the sale of the power plants, as hereinbefore detailed. However, this is not sufficient to care for the above amounts and it seems that if the money is to be raised for the improvements, it must be done by using the credit of the Illinois Power & Light Corporation, which is excellent, and which could easily meet the situation. Just what form the procedure might take is scarcely within the province of this report, but must be left to those more familiar with the financial structure of the property and its ability to raise money. Of one thing we are certain, and that is that the Chicago entrance forms the present greatest hope of the road and the plan should be put into execution if it can be properly financed with safety.

Management

This report would not be complete if it did not express an opinion of the management. And we are much gratified that we can conscientiously express a good opinion of it, for that is our belief. During the course of our investigation we have come much in contact with a comparatively large number of employes of all departments, ranging from vice president D. W. Snyder, Jr. to trainmen, agents, and others. We have almost without exception found them obliging and capably filling their positions. We are particularly impressed with the ability and vision of Mr. Snyder, and sincerely believe the System is very fortunate in having him for its active operating head, for he cer-

tainly knows his business. In short, we believe the road is very capably handled, for we found all with whom we came in contact very loyal to its interests and anxious to make the most of their respective positions.

Conclusion

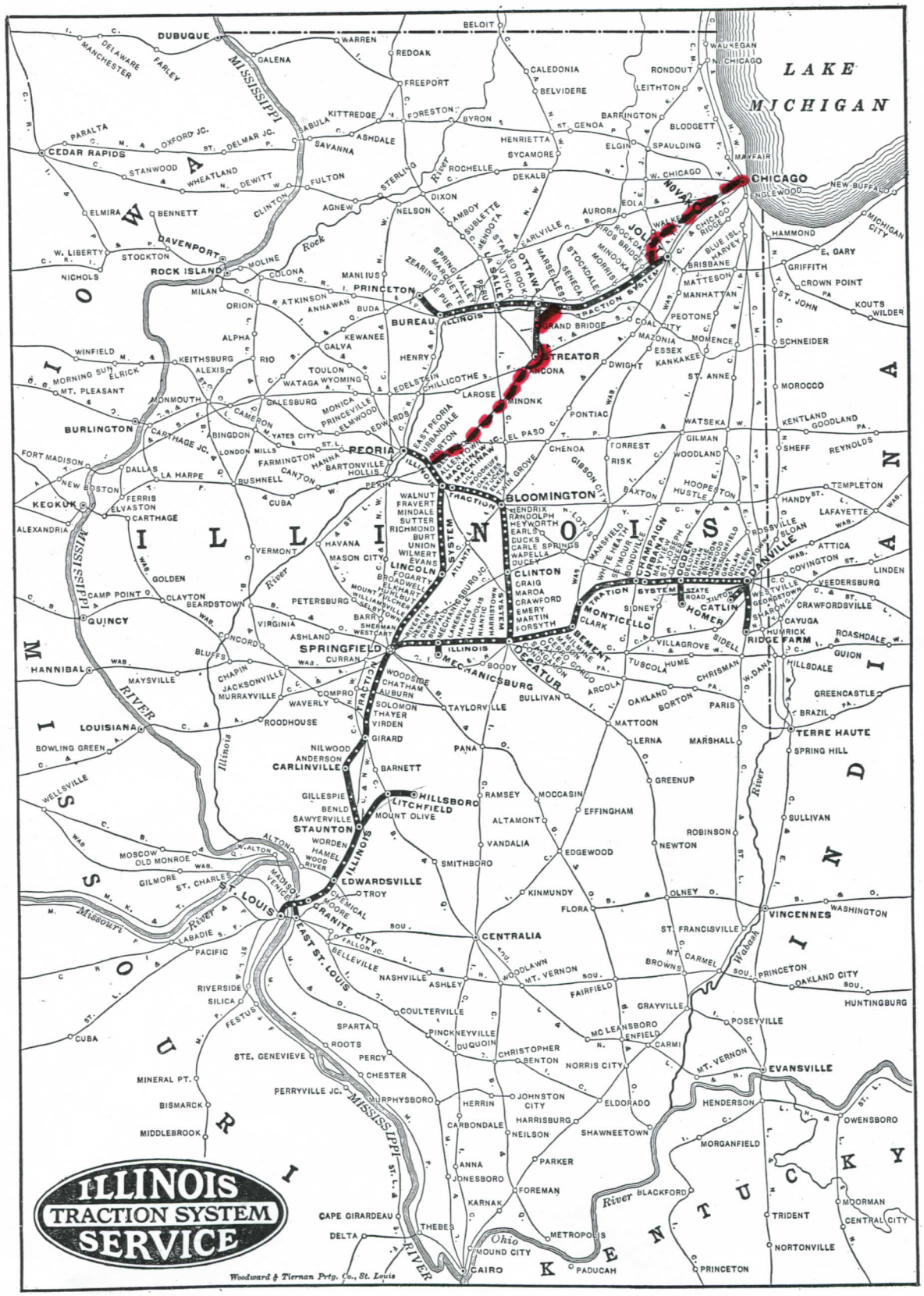
In the foregoing pages we have presented as briefly as possible general descriptions of the properties of the Illinois Traction System, the results of its operations during the last five years, and certain suggestions and recommendations which we believe will be of help in making the road more prosperous in the future. The latter include extensions designed to enable the road to reach Chicago advantageously, certain abandonments to remove unprofitable operations, and various changes intended to improve general operating efficiency. Few, if any, of the suggestions are new to the management, nevertheless they are presented to the best of our ability in the hope that their codification, if nothing more, will enable those who direct the destinies of the road to place in effect the changes that are necessary to make of it a prosperous transportation system, serving well its patrons and owners. If any one of the suggestions herein offered accomplishes these purposes in a noticeable degree, then has our time been well spent.

-ooOoo-

HEB-M

PROPOSED ST. LOUIS - CHICAGO LINE

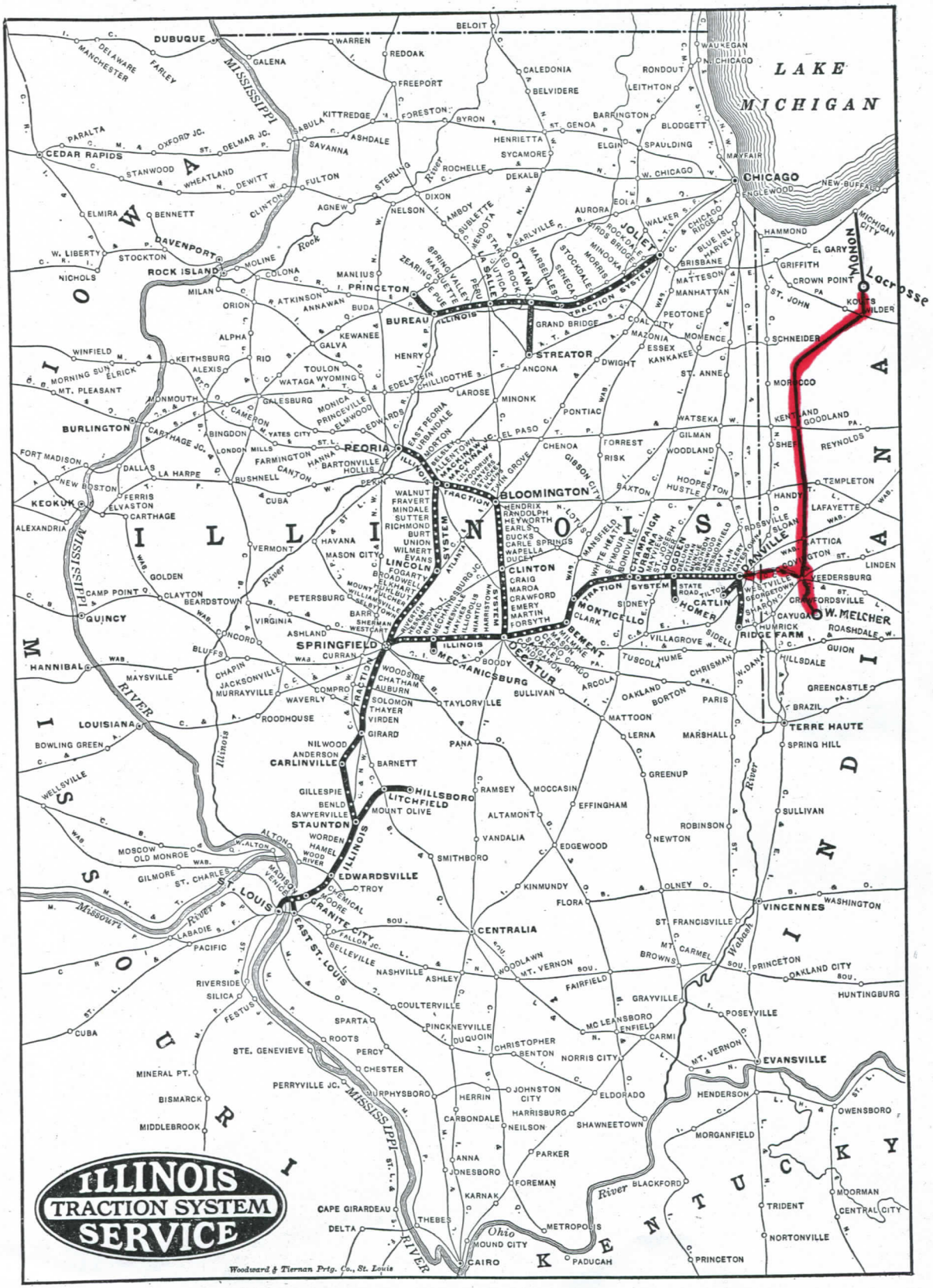
New Lines
Trackage Rights

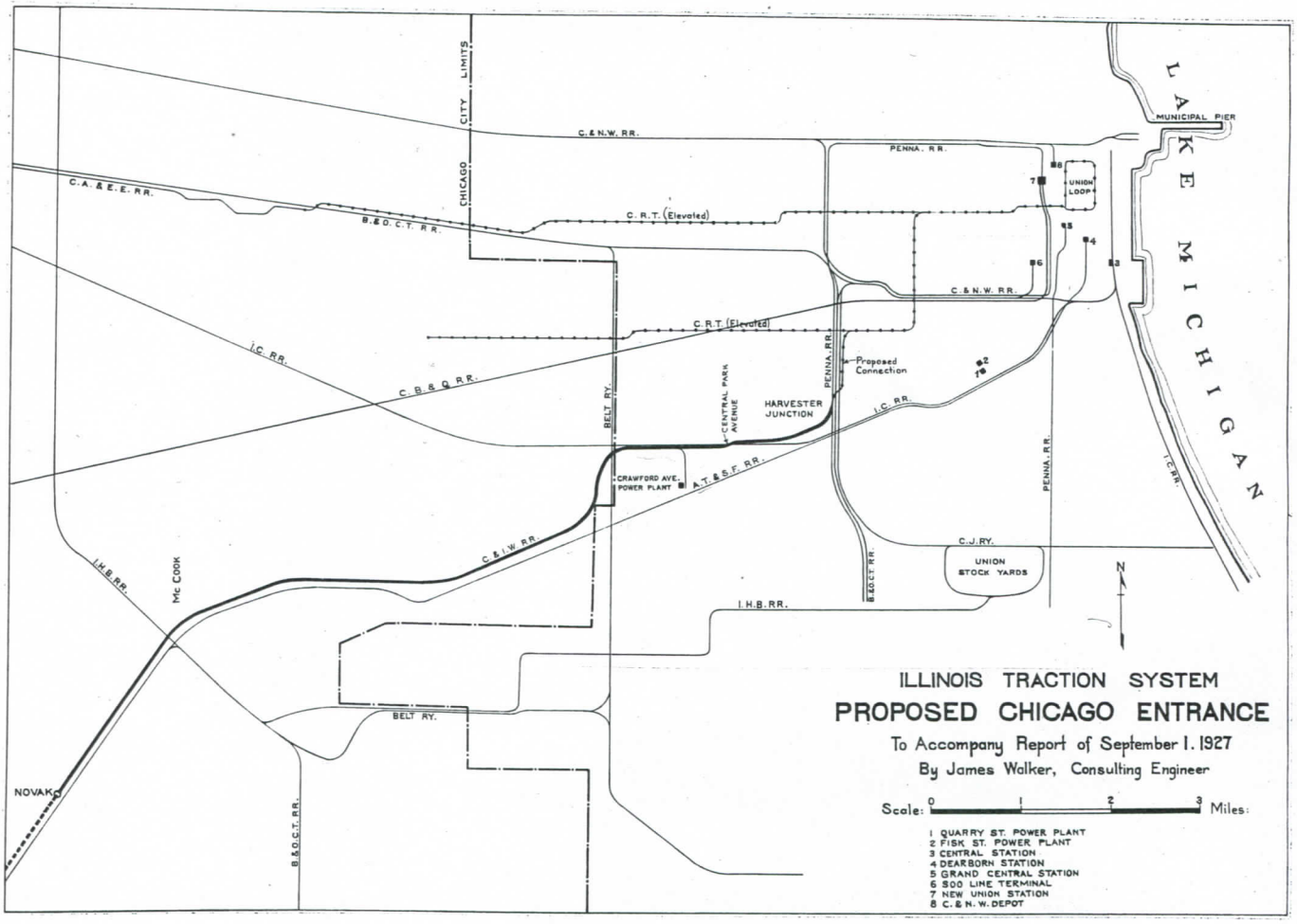


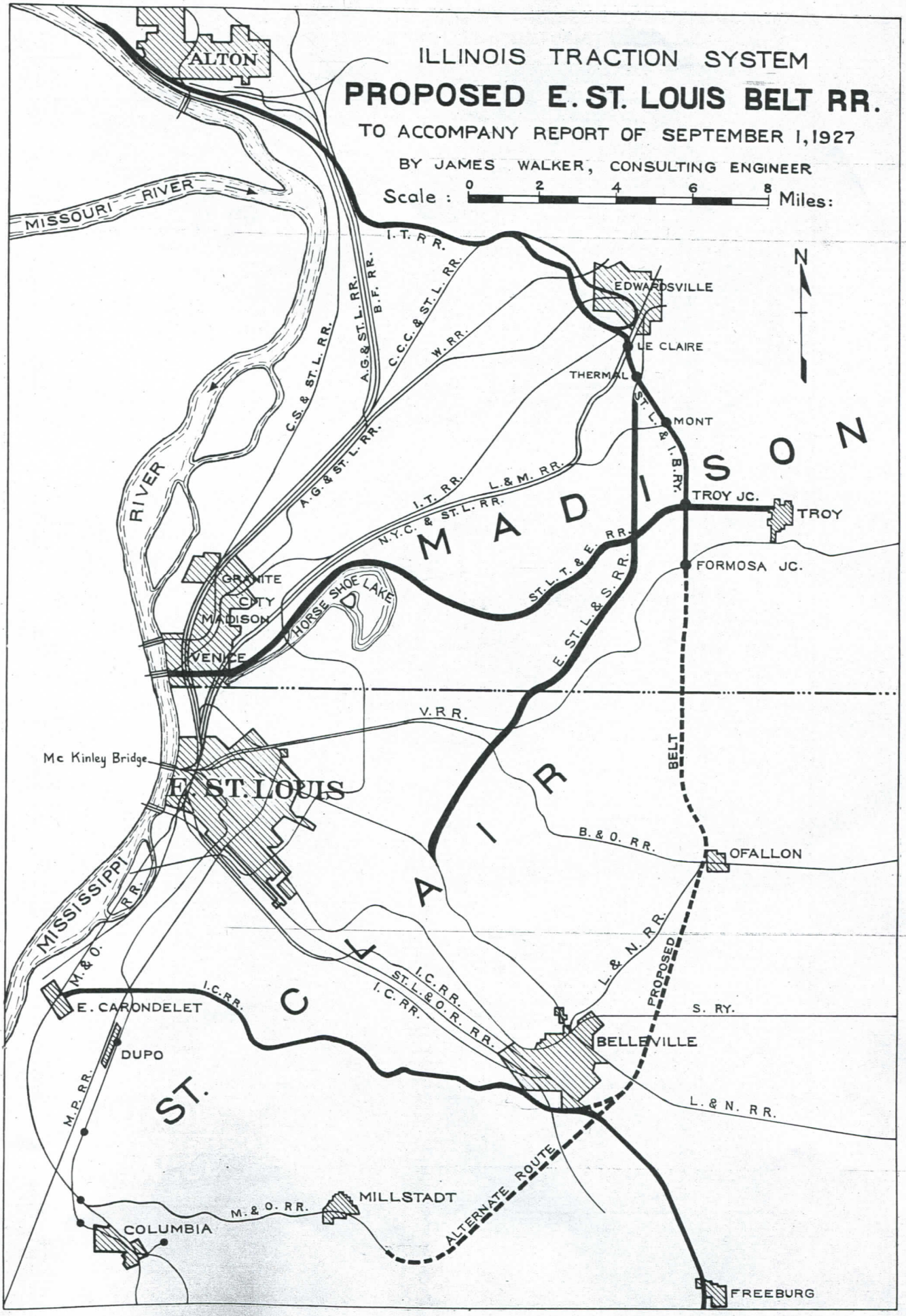
EASTWARD ROUTE TO CHICAGO

Chicago, Attica & Southern Railroad

Big Four Railroad




CITY LIMITS
CHICAGO
LAKE MICHIGAN
MUNICIPAL PIER
C. & N.W. RR.
PENNA. R.R.
UNION LOOP
C.A. & E.E. RR.
B. & O.C.T. RR.
C.R.T. (Elevated)
C. & N.W. RR.
C.R.T. (Elevated)
I.C. RR.
C.B. & Q. RR.
BELT RY.
CENTRAL PARK AVENUE
HARVESTER JUNCTION
PENNA. RR.
Proposed Connection
I.C. RR.
CRAWFORD AVE. POWER PLANT
A.T. & S.F. RR.
PENNA. RR.
I.C. RR.
C.J. RY.
UNION STOCK YARDS
B. & O.C.T. RR.
I.H.B. RR.
C. & I.W. RR.
I.H.B. RR.
Mc COOK
BELT RY.
NOVAK
B. & O.C.T. RR.
N
ILLINOIS TRACTION SYSTEM
PROPOSED CHICAGO ENTRANCE
To Accompany Report of September 1. 1927
By James Walker, Consulting Engineer
Scale: 0 1 2 3 Miles:
1 QUARRY ST. POWER PLANT
2 FISK ST. POWER PLANT
3 CENTRAL STATION
4 DEARBORN STATION
5 GRAND CENTRAL STATION
6 500 LINE TERMINAL
7 NEW UNION STATION
8 C. & N. W. DEPOT


ILLINOIS TRACTION SYSTEM
PROPOSED E. ST. LOUIS BELT RR.
TO ACCOMPANY REPORT OF SEPTEMBER 1, 1927
BY JAMES WALKER, CONSULTING ENGINEER
Scale : 0 2 4 6 8 Miles:
N
ALTON
MISSOURI RIVER
I. T. R R.
A.G.& ST.L. RR.
B.F. RR.
C.C.C.& ST.L. RR.
W. RR.
C.S. & ST. L. RR.
EDWARDSVILLE
LE CLAIRE
THERMAL
MONT
ST. L. & I. B. RY.
MADISON
TROY JC.
TROY
FORMOSA JC.
I.T. RR.
L.& M. RR.
N.Y.C. & ST.L. RR.
A.G. & ST. L. RR.
ST. L. T. & E. RR.
E. ST. L. & S. RR.
GRANITE CITY
MADISON
VENICE
HORSE SHOE LAKE
V. R R.
Mc Kinley Bridge
E. ST. LOUIS
BELT
AIR
B. & O. RR.
OFALLON
MISSISSIPPI RIVER
M. & O. RR.
I.C. RR.
E. CARONDELET
DUPO
ST. CLAIR
I.C. RR.
ST. L. & O. R. RR.
I. C. RR.
L. & N. RR.
PROPOSED
S. RY.
BELLEVILLE
M.P. RR.
L. & N. RR.
MILLSTADT
M. & O. RR.
COLUMBIA
ALTERNATE ROUTE
FREEBURG

ILLINOIS TERMINAL RAILROAD COMPANY

PASSENGER CARRIED ON VARIOUS TRAINS

WEEK OF APRIL 1, 1940

Train No.	92					96					94				
Days	Parlor Revenue	Parlor Deadhead	Coach Revenue	Trailer Revenue	Coach and Trailer Deadhead	Parlor Revenue	Parlor Deadhead	Coach Revenue	Trailer Revenue	Coach and Trailer Deadhead	Parlor Revenue	Parlor Deadhead	Coach Revenue	Trailer Revenue	Coach and Trailer Deadhead
Monday	6		54		11	6		55	29	19			71		22
Tuesday	4		45		19	7		44		20			56		20
Wednesday	3	5	47		26	4	2	68		28			65		19
Thursday	5		42		20	5		46		20			64		17
Friday	4		71		13	6		65	49	20	9		87		17
Saturday	6		63	63	21	13		75	58	23	13		100	83	19
Sunday	11	5	37	28	15	8	4	72	52	27			57	57	16

Train No.	97					93					91				
Days	Parlor Revenue	Parlor Deadhead	Coach Revenue	Trailer Revenue	Coach and Trailer Deadhead	Parlor Revenue	Parlor Deadhead	Coach Revenue	Trailer Revenue	Coach and Trailer Deadhead	Parlor Revenue	Parlor Deadhead	Coach Revenue	Trailer Revenue	Coach and Trailer Deadhead
Monday	7		63		17	4		47		12	10	1	57		17
Tuesday	9		49		17	3		23		17			30		17
Wednesday	9		58		24	2		40		8			33		18
Thursday	1	3	54		30	5		38		10			29		16
Friday	11		107		21	7	2	48		21			46		25
Saturday	8		77		40	13		53	55	18	6		82		22
Sunday	16		97	89) 23)	40	8		42	28	10	3		57		20

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

A. M. Lenbach
Please Return

REPORT

ON

ILLINOIS TERMINAL RAILROAD COMPANY

SEPTEMBER 21, 1945

COVERDALE & COLPITTS
CONSULTING ENGINEERS
120 WALL STREET, NEW YORK

REPORT

ON

ILLINOIS TERMINAL RAILROAD COMPANY

September 21, 1945

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A	Summary of Operating Revenues, 1935-1944
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G	Income Statement for Years 1940 to 1944, Inclusive
H	Comparative Condensed Balance Sheet as at December 31
I	Statement Showing Junction Points and Connecting Rail and Barge Lines

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COVERDALE & COLPITTS
CONSULTING ENGINEERS
120 WALL STREET
NEW YORK 5, N. Y.

September 21, 1945

Mr. Allen Van Wyck, Chairman of the Board
Illinois Terminal Railroad Company
St. Louis, Missouri

Dear Sir:.

In accordance with your instructions, we have prepared the following report on the affairs of Illinois Terminal Railroad Company. On July 22, 1940 we submitted to you a comprehensive report on the Company, based on extensive studies of the operations, earnings and records, as well as a physical inspection of the property. The purpose of the present report is to revise and bring up to date the earlier survey. Throughout the report, which follows, we shall refer to Illinois Terminal Railroad Company as the I.T. or as the Company.

I - HISTORY AND CAPITAL STRUCTURE

The present Illinois Terminal Railroad Company had its origin in a charter granted on July 6, 1895, under the laws of Illinois, to a company to be known as Illinois Terminal Railroad Company. The Company started with an authorized and issued capitalization of $25,000 capital stock, of $100 par value, and no bonds or other debt.

The purpose of the Company was to build a road to supply terminal facilities to the lines entering the city of Alton, Illinois, and to develop the manufacturing interests of that city. The initial step was to build a line from Alton to Hartford, Illinois, a distance of about six miles. At Hartford connection was made with the Wabash Railroad, whose line was leased from Hartford to Edwardsville Junction, a distance of about seven miles, with a further trackage arrangement for about two miles over the Wabash between Edwardsville Junction and Edwardsville, Illinois, which was the eastern terminus of the line for a number of years.

About 1905 an extension of approximately four miles was made around Edwardsville from Cotters, Illinois, to Le Claire, Illinois, where interchange was effected with the Nickel Plate and Litchfield & Madison railroads.

Around 1915 trackage rights were obtained covering operation over the line of the St. Louis and Illinois Belt Railway for about seven miles between Le Claire and Formosa Junction, Illinois, providing interchange facilities with the Illinois Central Railroad at Mont, Illinois, and with the Pennsylvania Railroad at Formosa Junction.

On December 20, 1922 the name of the corporation was changed to Illinois Terminal Company.

In 1928 the present Illinois Terminal system began to take form. In April of that year the Interstate Commerce Commission authorized the Company to lease the following lines:

The St. Louis, Troy and Eastern Rail Road Company
St. Louis and Illinois Belt Railway
St. Louis Electric Terminal Railway Company
and the lines comprising the main division of
Illinois Traction, Inc.

The terms of the leases were substantially identical. They were dated as of January 2, 1928 and extended for 99 years, subject to termination upon six months' prior notice or by default. The annual rentals payable were as follows: to The St. Louis, Troy and Eastern Rail Road and the St. Louis and Illinois Belt Railway, $160,000; to the St. Louis Electric Terminal Railway Company, $190,000; and to Illinois Traction, Inc., $650,000.

The property of The St. Louis, Troy and Eastern Rail Road Company, as at December 31, 1927, consisted of 19 miles of road from East St. Louis, Illinois, to Troy, Illinois, with appurtenant sidings. It in turn leased the property of St. Louis and Illinois Belt Railway. All of the capital stock of The St. Louis, Troy and Eastern Rail Road Company was owned by the Illinois Power and Light Corporation (now Illinois Power Company).

The property of St. Louis and Illinois Belt Railway as of December 31, 1927 consisted of seven miles of road with sidings, from near Edwardsville to near Formosa, Illinois. The property was leased to The St. Louis. Troy and Eastern Rail Road Company, and all of its capital stock was owned by Illinois Power and Light Corporation.

The St. Louis Electric Terminal Railway Company owned and operated a street railway line and buses in Madison, Granite City and Venice. Mileage

operated as at December 31, 1927 between St. Louis and Granite City, including trackage rights in Granite City, aggregated 10.60 miles. Capital stock and all outstanding bonds were owned by Illinois Power and Light Corporation.

Illinois Traction, Inc. supplied freight, express and passenger service between St. Louis and important cities in central Illinois, including Danville, Champaign, Urbana, Decatur, Bloomington, Peoria, Springfield and Edwardsville. Common stock was all owned by Illinois Power and Light Corporation.

After the Interstate Commerce Commission had given the Company authority to lease the lines noted above, the Illinois Power and Light Corporation, about May 1, 1928, purchased all the stock of Illinois Terminal Company for $7,500,000. Thus the principal interurban and steam lines controlled by Illinois Power and Light Corporation were consolidated into a single system serving shippers in the St. Louis and east side industrial zones with trans-river and terminal facilities and with freight, express and passenger service between St. Louis and important cities in central Illinois. This network of lines now became generally known as the Illinois Terminal Railroad system.

In 1929 an extension of the steam lines from Formosa Junction to O'Fallon, Illinois, a distance of 7.25 miles, was put in operation and effected interchange with the Baltimore and Ohio and the Louisville and Nashville railroads at the latter point. In 1940 the Louisville and Nashville abandoned its line from Belleville to O'Fallon, and in 1941 removed all of this line except the tracks and facilities in O'Fallon used by the I. T. under lease. In April 1943 these tracks and facilities were purchased by the I. T., after which certain changes were made to afford a better connection with its O'Fallon Freight Line.

Also in 1929 an improvement program for the St. Louis terminal facilities was undertaken, including the construction of a new freight and passenger terminal, and a more direct route from the McKinley Bridge to the proposed

terminal in the business district of St. Louis by elevated and subway tracks, permitting of largely increased movement of traffic.

The Interstate Commerce Commission, on June 14, 1930 (ICC Docket 8178), authorized the Company to acquire control by lease of the Alton and Eastern Railroad Company, the St. Louis and Alton Railway Company and the O'Fallon Freight Line of the East St. Louis and Suburban Railway Company.

The Alton and Eastern lease was dated as of January 1, 1930, and involved annual rental payments of $125,000. The Alton and Eastern Railroad Company was incorporated in December 1924 to acquire and operate a line of road which was formerly part of the old Chicago, Peoria and St. Louis Railroad Company and which was sold under foreclosure sale in November 1924. The property, on December 31, 1929, consisted of about 38 miles of road with appurtenant sidings, extending from Grafton, Illinois, to East St. Louis, Illinois. Capital stock was all owned by the Illinois Power and Light Corporation.

The St. Louis and Alton lease was dated as of July 1, 1930, and involved annual rental payments of $37,500, (later increased to $87,500 per annum). This company formerly operated an interurban electric railway line from East St. Louis to Alton with a branch from Mitchell to Edwardsville. Property as at December 31, 1929 consisted of about 34 single track miles of electric line with necessary substations, feeder system and equipment. All capital stock, except directors' qualifying shares, was owned by Union Electric Light and Power Company, controlled by North American Edison Company which, in turn, was controlled by The North American Company.

The lease of the O'Fallon Freight Line of the East St. Louis and Suburban Railway Company was dated July 1, 1930, and involved annual rental payments of $12,500. This company formerly operated electric railway lines and bus lines for passenger service between the cities of St. Louis, Missouri, and Belleville,

Collinsville, Edwardsville and Glen Carbon, Illinois, and within the city of Belleville, Illinois. It also operated a steam railway line between O'Fallon Junction and O'Fallon, Illinois, which served as an outlet for coal from several mines in that vicinity. It has since abandoned operations and its useful property has been disposed of to affiliated companies. Under the terms of the disposition of the property, the St. Louis and Belleville Electric Railway Company became the lessor company of the O'Fallon Freight Line, simply displacing the East St. Louis and Suburban Railway Company as lessor. The St. Louis and Belleville Electric Railway Company was controlled by the East St. Louis and Suburban Company which was a subsidiary of Union Electric Light and Power Company.

Effective March 1, 1934, the McKinley Bridge of the Illinois Power and Light Corporation was leased to the Illinois Terminal Company at an annual rental of $300,000.

The Interstate Commerce Commission on August 11, 1937 issued an order approving the consolidation of six railroads into one company, to be known as the Illinois Terminal Railroad Company. The new corporation was formed on October 18, 1937, and the change in accounting was made effective as of October 1, 1937. The roads consolidated were:

Illinois Terminal Railroad Company (formerly Illinois Terminal Company)
Illinois Traction, Inc.
The St. Louis, Troy and Eastern Rail Road Company
St. Louis and Illinois Belt Railway
Alton and Eastern Railroad Company
Alton Terminal Railway Company

The new company acquired the properties of St. Louis Electric Terminal Railway Company in exchange for 97,000 shares of its capital stock. It also acquired the McKinley Bridge from Illinois Iowa Power Company (formerly Illinois Power and Light Corporation) in exchange for $2,700,000 principal amount of its First and

Refunding Mortgage bonds. The new company also issued to Illinois Iowa Power Company, in exchange for all the outstanding capital stock of the consolidated companies and their indebtedness held by Illinois Iowa Power Company at the date of consolidation, 153,000 shares of capital stock, par $100, and $4,924,000 First and Refunding Mortgage bonds of the consolidated corporation. The leased properties of the St. Louis and Alton Railway Company and the St. Louis and Belleville Electric Railway Company were allowed to remain as such.

The Interstate Commerce Commission in 1938 authorized the abandonment by the Company of its line through Edwardsville, 3.06 miles including sidings, and of a line 2.93 miles long between Kenwood and Champaign, Illinois.

Also, in March 1939 the Interstate Commerce Commission authorized abandonment of the Company's Litchfield branch, extending from Staunton to Litchfield, Illinois, approximately 15.3 miles.

Pursuant to authority granted by the Interstate Commerce Commission in Finance Docket No. 12806, and by the Illinois Commerce Commission in Docket No. 28691, the entire railroad properties and assets of two of the Company's leased lines, the St. Louis and Alton Railway Company and the O'Fallon Freight Line of the St. Louis and Belleville Electric Railway Company, were conveyed to the Company on December 31, 1940, but effective as of October 1, 1939. Since that time there have been no important changes in the mileage operated by the Company.

The Company does not have any investments in other railroads and the only leased line mileage which it operates is 3.18 miles between South Wood River and Wanda, Illinois, which is leased from the Wabash Railroad Company.

The entire capital stock of the Company, as well as all of the outstanding mortgage bonds, are owned by Illinois Power Company (formerly Illinois Iowa Power Company).

II - PROPERTY

LOCATION

The Illinois Terminal Railroad Company, a Class I railroad, operated as of December 31, 1944, 476 miles of road and 664 miles of all tracks including 3.18 miles of leased line and 6.43 miles of trackage rights, all standard gauge. For operating purposes, the railroad is divided into two divisions: the Steam Division consisting of about 92 road miles; and the Electric Division with 384 miles of road. The railroad is single track with the exception of about 10 miles of double track. The accompanying map shows the lines of the I.T., as well as the principal towns and cities served.

The Steam Division principal main lines extend from Alton, Illinois, to O'Fallon, Illinois; from Grafton, Illinois, to East St. Louis; and from East St. Louis to Troy, Illinois. Included in the Steam Division is the O'Fallon Freight Line of the former St. Louis and Belleville Electric Railway between O'Fallon and Prairie Mine, which is now incorporated within the Illinois Terminal Railroad's switching limits of O'Fallon, Illinois, and is not operated as main line track.

The Electric Division principal main lines extend from Peoria to St. Louis, from Springfield to Danville, from Mackinaw Junction to Decatur, in addition to the line of the former St. Louis and Alton Railway between East St. Louis and Alton, Illinois.

The Company also conducts bus operations between East St. Louis and Granite City and between St. Louis and Venice.

The Illinois Terminal Railroad Company is a composite terminal switching railroad, belt line, interurban passenger railway and road-haul carrier. It serves a large number of important industries, many of them exclusively. It provides connections to the North, East, South and West, having direct connections with

12 important trunk lines and indirect connections with eight additional important trunk line railroads (see Exhibit I).

ROADWAY

Alignment and Grades

On the Steam Division grades and curvature are not severe. The steepest grade on the main line between Alton and O'Fallon is .83 per cent. Curvature, except in terminals, is less than 4 degrees. Between East St. Louis and Troy there are some 5 and 6-degree curves and the maximum grade is about 1 per cent.

On the Electric Division, however, there are numerous sharp curves, many being 6 or 8-degree curves, and several even sharper. Generally speaking, grades are much heavier on this division, in several instances exceeding 2 1/2 per cent. In some instances, pusher service is required, and on other grades it is necessary for freight trains to double the hills. This situation has been improved during the past five years by the construction of new electric locomotives with greater tractive effort, so that the amount of pusher service has been reduced in spite of the large increase in traffic.

Rail

For a number of years the Company has improved its track structure by the laying of heavier rail. From 1929 to 1939, both inclusive, there were removed and installed in first and second main tracks the following rail sections:

Removed			Installed		
Weights	Miles	Average Miles Per Year	Weights	Miles	Average Miles Per Year
70-pound	129.33	11.76	70-pound	1.52	.14
Other	14.83	1.34	90-pound	137.93	12.54
			100 & 112 pound	4.71	.42
Total	144.16	13.10	Total	144.16	13.10

During the five years from 1940 to 1944, both inclusive, the Company has continued its policy of replacing 70-pound with 90-pound rail, and of replacing badly worn 90-pound with new 90-pound rail as rapidly as new rail was available. The average miles per year installed in main tracks during this period has been 7.33 miles of new 90-pound rail and 5.24 miles of good 90-pound relay rail. In addition to the 90-pound rail, a substantial amount of heavy rail, principally 100 and 112 pounds, has been installed on curves and in terminals.

Between Decatur and Danville, and between Decatur and Mackinaw, there is a considerable amount of 70-pound rail which was laid in 1905 and 1906 and which is being replaced with good 90-pound relay rail as fast as it is available.

Although during the past 15 years, especially during the depression years, a considerable amount of secondhand 90-pound rail has been laid in the main tracks, rail conditions are still adequate for the volume and speed of the traffic handled.

The following summary shows the weight of rail in main line tracks as of December 31, 1944:

Weight of Rail (Lbs. per yard)	Miles of Main Track	Per Cent of Total
Under 70	7.69	1.6
70	115.70	24.1
75-85	23.54	4.9
90	298.16	62.2
100 & over	34.30	7.2
Total	479.39	100.0

Ties

From 1929 to 1939, tie renewals averaged 65,500 per annum; in 1940 and 1941 they averaged 66,800; and from 1942 to 1944 they averaged 55,400 ties per annum, the decrease being due to conditions brought on by the war.

Crosstie renewals have been adequate, except that there has been some deficiency in renewals during the last three years. Over 90 per cent of the ties in main line tracks are treated, the creosote process being used.

Main lines of the Electric Division are 100 per cent tie-plated south of Gillespie, and main lines of the Steam Division are entirely tie-plated. North of Gillespie, all curves and turnouts are tie-plated, as are also sections where new rail has been laid in the past five years.

Ballast

During the last five years no large replacements of ballast have been made, but the Company has been using from 5,000 to 7,500 tons of gravel annually in ordinary maintenance of the roadbed. As of December 31, 1944, the mileage of main track ballasted with the various kinds of materials was as follows:

Kind of Ballast	Miles of Main Track
Rock	17
Crushed slag	19
Gravel	135
Cinders, chats, etc.	308
Total	479

Rock and slag ballast average about eight inches under the ties; gravel averages between six and eight inches; cinders generally have a depth of between eight and twelve inches.

Bridges

The total length of bridges on the Illinois Terminal Railroad system is 42,837 feet. Of this amount, permanent structures aggregate 32,661 feet or 76 per cent of the total. The balance of 10,176 feet of timber trestles are mostly located on the electric lines.

Within the past five years, two major bridge renewals have been made. One of these was the replacement in 1940 of two light steel through truss spans over Lake Springfield with a permanent structure of steel deck girders supported by concrete piling, with a short creosoted pile approach at one end. The other renewal, made in 1942, consisted of the replacement of a light 125-foot through truss south of Carlinville, with a similar through truss having greater horizontal and vertical clearances. Both of these structures were designed for Cooper's E-50 loading.

Bridges on the steam lines are generally of Cooper's E-50 rating or better. On the Electric Division all bridges which have been renewed since 1920 are rated E-50, but there are still several old bridges which have the equivalent of about an E-35 rating. These lighter structures have been sufficient for the traffic handled, but as conditions permit, the Company intends to replace them from time to time with bridges having a minimum capacity of Cooper's E-50.

Station and Roadway Buildings

Station and roadway buildings have been adequately maintained. Stations in the more important cities are of brick or other permanent construction and are in good condition. Frame buildings are generally in fairly good condition.

Coal Dock

In 1938 the Company built a coal dock on the Mississippi River at Alton, Illinois, with a mechanical unloading, conveying and loading system, by means of which coal is unloaded from railroad cars into river barges. Cars of coal handled over the dock during the past six years were as follows:

Year	Cars	Year	Cars
1939	5,764	1942	13,408
1940	10,045	1943	6,023
1941	11,956	1944	9,188

The decrease in the last two years was due principally to high water, but the general situation at the mines and shortage of man power, tugboats and barges were contributing factors.

During the past three years improvements have been made at this dock which have increased the efficiency of handling coal, reduced unit costs and provided increased capacity.

Shops

The Company has two main shops, one at Decatur, Illinois, and the other at Alton, Illinois. The former handles most of the heavy repair work on passenger cars and all of the electric locomotive repairs. Repairs to steam locomotives and freight cars are handled at the Alton shop. A smaller passenger car shop at Granite City does running repair work on passenger cars, as well as some heavy and general repairs on passenger cars in the St. Louis suburban service. In addition, repairs to the Company's buses are made at this shop.

During the last five years car washing facilities have been enlarged and a wheel and axle shop, an oil house and a soda ash house have been added to the Alton shops. Sundry items of machinery have been replaced or added in all shops, the principal one being a wheel lathe at Decatur, costing about $38,000.

The shops appear to be efficiencly run and are adequate for the needs of the Company.

Power Distribution System

The Electric Division operates on a 600-volt D.C. overhead trolley system, the power being metered at the D.C. switchboards in the substations. The railroad company maintenance gangs maintain not only the railroad trolley wires, etc., but also the power transmission lines, poles, fixtures, etc., which latter maintenance is billed against Illinois Power Company by the railroad company.

Considerable difficulty has been experienced in past years through lack of sufficient power. As the Company proceeded with its program of increasing the tractive power of its electric locomotives and the construction of heavier locomotives, it also provided for power requirements by the construction of six new substations. In addition, three substations were enlarged in 1941 and 1942. There is now under construction a substation 2 1/2 miles south of Carlinville. With the completion of this unit, the Company's requirements in this respect should be satisfied.

General

Right of way in general is about 50 feet wide, although in certain territory it is considerably less. Embankments are generally sufficient for the track structure. Drainage conditions appeared adequate.

Maintenance sections average about eight miles in length on the Steam Division and about ten miles on the Electric Division. During the winter season sections average slightly over two men, while during the summer the average is normally about three and a half men. Relaying of rail is done by extra gangs and additional forces are employed to take care of extraordinary maintenance.

On the Electric Division there is a considerable amount of mileage operated through the streets of various cities and towns. Freight trains are operated through city streets for distances aggregating a total of 24 miles. About eight miles are in the territory between St. Louis and Peoria, ten miles between Springfield and Danville, and six miles on the Bloomington Branch.

EQUIPMENT

Locomotives

The following statement shows the number of locomotives divided between steam and electric, and further divided by class of service. Data are also shown as to average tractive effort and average age as at December 31, 1944:

	Service	Number	Average Tractive Effort (Lbs.)	Average Age (Years)
Steam	Freight	4	49,700	20.3
	Switching	18	39,500	19.7
	Total - Steam	22	41,400	19.8
Electric	Freight	20	46,250	13.7
	Freight and switch	16	30,000	31.4
	Switching	8	30,812	17.6
	Passenger	2	30,000	26.5
	Total - Electric	46	37,123	21.1
	Grand Total	68	38,503	20.7

Since January 1, 1940, the Company has retired one steam switching locomotive and several electric locomotives; it has built or rebuilt in its own shops five 110-ton electric freight locomotives of the Class "D" type, each of 1,800 h.p., at a total cost of $296,000. In addition, it has built a combination diesel electric switching locomotive in its own shops at a cost of $58,000. In 1942, two electric locomotives were reclassified as passenger engines.

It is contemplated that two Class "C" electric locomotives will be retired within the next five years, to be replaced by one or two Class "D" engines, depending upon traffic conditions. It is also contemplated that larger, more up-to-date motors will be installed on four Class "C" locomotives to replace the present obsolete motors.

It is probable that four of the older steam locomotives used in switching service will be retired within the next five years, and consideration is being given to replacing these units with diesel switchers, which should result in operating economies.

The motive power has been well maintained and has been able to handle the increased wartime business with a minimum of delay. It should be noted that the average tractive effort of electric freight locomotives has been increased from 40,300 pounds in 1939 to 46,250 pounds in 1944, an increase of 15 per cent.

Freight Cars

The Company's freight cars have been well maintained and are in good condition. As of December 31, 1944, bad order cars amounted to only seven tenths of one per cent of the total ownership, which is the lowest figure for unserviceable freight cars in the past 16 years. As of December 31, 1944, the ownership of freight-carrying cars consisted of the following:

847	Box cars	- average age 8 years
700	Gondolas and hoppers	- average age 14 years
63	Flat cars	- average age 11 years

During the first six months of 1945, four box cars and 59 coal cars were retired, leaving the ownership at 1,547 cars. All but 34 of these cars are suitable for interchange requirements and are equipped with "U" type cast steel truck sides conforming to A.A.R. requirements. 860 of the interchangeable cars have been equipped with "AB" brakes and the balance are being so equipped at the rate of 120 per year.

Since our 1940 report, the Company has acquired 450 new box cars and 75 new hopper cars, and has 50 flat cars on order, delivery being expected in the fall of this year. The wisdom of these purchases is shown by the fact that, in spite of a much greater volume of business, the Company's net debit for per diem payments in 1944 was slightly below the corresponding figure for 1940.

During the next five years the Company expects to retire between 350 and 400 freight cars, and it is contemplated that these cars will be replaced if traffic conditions justify.

Passenger Cars

The following statement shows the Company's ownership of passenger cars by types as of December 31, 1944, as well as the average age as of that date:

Type	No. of Units	Average Age
Passenger cars - with motors	57	22.9
- with trailers	14	26.3
Parlor cars	4	33.5
Sleeping cars	1	34.5
Baggage and express cars	5	17.1
Total	81	23.8

The above table includes two express trailers classified as "other freight train cars" as of December 31, 1944, which have since been reclassified as passenger service equipment.

In the last five years the Company has retired three, rebuilt six, and reclassified three units of equipment.

Many of the Company's passenger carrying cars are of ancient vintage; 42 cars with an average age of 34 years were built between 1906 and 1913. Many of these cars should be subject to retirement in the near future, as maintenance costs on such old equipment are necessarily high.

Eight new streamlined cars for operation between St. Louis and Peoria are contemplated for delivery early in 1946, at an estimated cost of $650,000. Consideration is being given to the purchase of additional passenger equipment, but we would suggest that such purchases should not be made until the Company has formulated a definite postwar policy with respect to its passenger traffic. Although wartime passenger business has been very heavy, there will be a tremendous decline in such traffic as soon as new passenger automobiles and tires are in plentiful supply.

Work Equipment

Company service equipment as of December 31, 1944 was as follows:

Business cars	1
Ballast cars	8
Derrick cars	5
Wrecking cars	8
Other company service units	57
Total	79

Work equipment is generally adequate for its purposes. It is expected that about 13 units will be retired within the next five years, and they will be replaced by similar units constructed from retired freight equipment. The Company has not purchased the weed burner referred to in our 1940 report, but has recently bought a Fairmont mowing outfit and is using this machine in conjunction with the spraying of a chemical solution to control weed growth.

Other Equipment

The Company owns 11 buses which are operated on two bus routes between East St. Louis and Granite City and between St. Louis and Venice. During the past five years this fleet has been increased from 7 to 11 units. The Company also has 19 trucks and 1 trailer which are used in nonrevenue service in the conduct of its business. In addition, the Company owns one tugboat in connection with its Alton Coal Dock operations.

INVESTMENT IN ROAD AND EQUIPMENT

As of December 31, 1944 the total investment as shown by the books of the Company was $52,634,863, subdivided as follows:

Road	$36,580,319
Equipment	7,567,344
General	9,160,445
Improvements on leased railway property	43,860
Acquisition adjustments	-523,439
Donations and grants	-193,666
Total	$52,634,863

Accrued depreciation on equipment amounted to $3,722,382 and the similar accrual for road items amounted to $524,268, leaving the net book investment at $48,388,213.

VALUATION

According to the Valuation Engineer of the Company, the I.C.C. valuation, based on original cost, with additions and betterments since valuation date added at actual cost and retirements deducted on the same basis, amounts to $43,388,493, including land and rights, as of December 31, 1942. Net book additions and retirements in 1943 and 1944 amounted to $962,545, increasing the valuation to $44,351,038 as of December 31, 1944. This figure excludes certain property carried by the Company in Account 701, but classed by the Commission as noncarrier.

III - TRAFFIC AND REVENUES

Exhibit A shows a summary of operating revenues by principal classes for each of the ten years ended December 31, 1944. Total operating revenues show an increase in every year since 1938, the large gains in the last three years resulting primarily from wartime activities.

FREIGHT

Operating revenues of the Company are derived principally from freight traffic. Prior to the war, freight and switching revenue normally constituted about 80 per cent of total operating revenues. During the last three years the percentage of such revenues dropped because of the abnormal increase in passenger revenue (the percentage in 1943 was 71.5).

Tonnage and Revenue by Classes

Over the past ten years the revenue tonnage handled by the Company has averaged 21.6 per cent local and 78.4 per cent interline. The following table shows the percentage of each of the four classes of freight revenue to the total for 1939, 1944 and the ten-year average:

Class of Traffic	Year 1939	Year 1944	Average 1935-1944
Local	25.3	14.8	21.6
Interline forwarded	28.2	31.5	29.1
Interline received	33.9	41.2	36.4
Overhead	12.6	12.5	12.9
Total	100.0	100.0	100.0

During the war period the tonnage of local traffic remained fairly constant; overhead business increased moderately; and substantial increases took place in interline forwarded and interline received tonnage, the greatest increase occurring in the latter class.

The division of revenue among the four classes is available only for the years 1939 and 1944, and was as follows:

	Per Cent	
	1939	1944
Local	28.2	15.0
Interline forwarded	33.1	42.5
Interline received	27.1	32.8
Overhead	11.6	9.7
Total	100.0	100.0

Tonnage and Revenue by Commodity Groups

Exhibit B is a statement showing the tonnage and revenue by principal commodity groups from 1935 to 1944. Traffic is concentrated in two main groups, "Products of Mines" and "Manufactures and Miscellaneous". These two groups account for about 94 per cent of the Company's tonnage and about 91 per cent of its freight revenue. During the ten-year period the "Manufactures and Miscellaneous" group produced 66.7 per cent of the Company's freight revenue, ranging from a low of 62.3 per cent in 1942 to a high of 71.6 per cent in 1944.

Principal Commodities

Exhibit C is a statement for the last ten years, showing the revenue from the 22 most important commodities, listed in the order of the revenue produced in the year 1944. Any commodity which had revenue of $100,000 or more in any one year in the period has been included in the list.

It will be noted that there are several commodities which have experienced phenomenal increases because of the war. Examples of these are explosives, crude petroleum and copper. It is expected that the Company will suffer losses in revenues of approximately the following amounts from the 1944 level of traffic:

Explosives	$ 815,000
Petroleum, crude	100,000
Copper	90,000
Sulphur	20,000
Total	$1,025,000

Note:
Officers of the Company estimate that about $1,300,000 of the 1944 freight revenue was earned on traffic to and from the two ordnance plants at Illiopolis, Illinois, and on copper and sulphur shipments diverted from water to rail movement during the war. All of the above revenue, constituting about 15 per cent of the 1944 freight revenues, will be lost.

In addition to the above commodities, the movement of which resulted almost entirely from war conditions, there are a number of other commodities which were affected to a considerable extent by the war. Some of these items were glass bottles and jars, lubricating oils and greases, iron and steel and several other miscellaneous commodities. There will undoubtedly be a reduction in the movement of such commodities in the postwar period.

On the other hand, the Company expects to obtain additional freight traffic from the new plant which it is reported that the International Harvester Company will build between Federal and Wood River. In addition, the proposed construction of gasoline and oil storage tanks in North St. Louis may result in increased traffic for the Company.

Bituminous coal, gasoline and fuel oil have long been important commodities on the Illinois Terminal Railroad and, although the movement of the first two named items was above normal in some of the war years, it should be expected that the Company will continue to derive large revenues from these three commodities in the postwar period. Revenues from glass bottles and jars should continue to constitute an important item and although the volume of such traffic will probably drop from the wartime high, as tin cans displace glass for the packing of certain products, nevertheless the revenue from this commodity should remain substantially above prewar level

Comparison with Other Railroads

In our 1940 report we pointed out that the Illinois Terminal Railroad Company's freight revenue did not drop to such a low point in the depression period as did that of other Class I and II railroads in the general territory or as that of all Class I railroads; we, likewise, called attention to the higher relative level of the Company's freight earnings in 1939. During the war period the Company's freight revenues did not increase to the same extent as did other Class I railroads in the territory and elsewhere. This, however, is not necessarily an unfavorable factor, as it may well mean that the Company will not experience so great a decline in freight revenue in the postwar period as will other railroads.

Factors Affecting Freight Revenue Trend

Some of the factors which were important in determining the trend of freight revenues on the I.T. before the war were:

1. Formation of Illinois Terminal Railroad System in 1928 and its acquisition by Illinois Power and Light Corporation.
2. Increase in length of haul and division of revenue.
3. Nature of territory served.
4. Character of solicitation and service.
5. Growth of new industries.

From 1928 on, the Company was undoubtedly able to obtain greater revenues because it had become an integrated system with coordinated service and effort. In addition, it was aided by reason of having considerable influence over the routing of traffic to and from its public utility affiliates. In the year 1939 such affiliated company traffic produced about $125,000 freight revenue for the I.T.

Undoubtedly some additional traffic was obtained by the Company by reason of the influence of the purchasing power of the public utility affiliates. It is believed that such business approximated an additional $75,000 per annum gross freight revenue. Although there has been a change in the relationship of some of the former affiliates, the Company is still routing a substantial portion of the traffic involved. By reason of the retarded maintenance and improvement programs of public utility plants during the war period, the revenues realized by the I.T. from this source were reduced, but the Company expects that in the postwar years there will be a substantial increase in the movement of such traffic.

Since the acquisition of the electric lines, the officers of the Company have made continuous efforts to increase the earnings by endeavoring to obtain the long haul wherever possible. Traffic which was formerly interchanged by the Steam Lines with eastern connections frequently moves over both the steam and electric lines, with consequent increase in the Illinois Terminal's division of the revenue. The following table shows the greater proportion of traffic now interchanged at electric line junctions:

Loaded Cars Interchanged With Connections

Year	Steam Lines	Electric Lines	Total	Per Cent Electric Lines
1930	132,886	113,791	246,677	46.1
1931	110,601	88,678	199,279	44.5
1932	71,716	61,569	133,285	46.2
1933	79,919	74,903	154,822	48.4
1934	78,338	73,527	151,865	48.4
1935	79,240	78,787	158,027	49.9
1936	82,375	96,744	179,119	54.0
1937	91,729	111,362	203,091	54.8
1938	76,854	84,710	161,564	52.4
1939	82,698	99,288	181,986	54.6
1940	83,214	107,636	190,850	56.4
1941	84,933	135,918	220,851	61.5
1942	82,641	148,423	231,064	64.2
1943	73,563	151,284	224,847	67.3
1944	86,399	173,233	259,632	66.7

The diversion of traffic from Steam Line to Electric Line junctions has been a factor in the increased haul obtained by the Company, as shown in the following table:

Year	Average Haul Per Revenue Ton of Freight (miles)	Year	Average Haul Per Revenue Ton of Freight (miles)
1930	45.8	1938	56.6
1931	47.0	1939	57.8
1932	49.6	1940	56.6
1933	51.5	1941	61.8
1934	52.2	1942	61.4
1935	54.5	1943	68.1
1936	57.3	1944	69.5
1937	56.4		

Thus, between 1930 and 1944 there was an increase of 52 per cent in the average haul.

Exhibit D gives population statistics for the counties served by the I.T. by census years from 1910 to 1940. Similar figures are shown for the more important cities served by the Company. Although the increase in population of the I.T. counties from 1910 to 1940 is somewhat lower than that of the State of Illinois or the entire United States, it will be observed that the principal Illinois cities served by the I.T. show a population increase of 53.8 per cent compared with increases of 40.1 and 43.2 per cent for the State of Illinois and the United States respectively. The St. Louis Metropolitan District, which includes some of the Illinois cities given separately, shows an increase of 46.6 per cent.

Although the Illinois Terminal Railroad Company operates through a fertile agricultural region, it depends to only a small extent on products of agriculture; from the standpoint of traffic and revenues, it serves primarily an

industrial area, and is affected to only a minor extent by such factors as drought, grasshoppers, etc., operative on railroads serving primarily agricultural territory.

In addition to the large number of industries served by the Illinois Terminal Railroad, another important factor is the large coal acreage served by the railroad, located at or near Edwardsville, Gillespie and O'Fallon. Although there was a reduction in the volume of coal shipped from I.T. mines during the thirties, primarily because of truck competition, the Company was able to replace some of this lost tonnage by the construction of its Alton Coal Dock, by means of which coal destined principally to points on the Upper Mississippi River is transferred from railroad cars to barges.

The Illinois Terminal Railroad Company provides excellent service to its shippers and consignees and offers them access to a great number of routes, as it connects with all important lines to and from all sections of the country (see Exhibit I). The traffic department's solicitation policies have been well thought out and have produced excellent results. For example, certain overhead business with low per-car earnings is not solicited; perishable traffic moving in refrigerator cars is not sought, as the net revenue, after paying private car mileage and loss and damage claims, is insufficient to pay other out-of-pocket expenses; livestock is not actively solicited.

The railroad is located in a highly competitive territory. In the year 1939, 93 per cent of the carload traffic originated or terminated at competitive points on the Illinois Terminal Railroad. Of course, not all of this business was competitive, as the railroad serves certain industries exclusively. Of the 130,105 cars originating or terminating at competitive points in the year 1939, a total of 52,360 cars, or 40 per cent, were handled at industries served exclusively by the Illinois Terminal Railroad. Figures for more recent years are not

available and would probably not be representative because of wartime traffic conditions.

The Company has been successful in obtaining more than its share of the business of industries served jointly. The four largest industries served jointly forwarded or received 102,534 carloads in 1939. The Illinois Terminal Railroad handled 47,003 of these, or 46 per cent. These industries are served by from one to three railroads in addition to the Illinois Terminal. If the business had been shared equally by all roads involved, the Illinois Terminal would have obtained 31,863 cars, or 31 per cent, instead of 47,003 cars, or 46 per cent.

Another important factor in the growth of the Illinois Terminal's freight business is its success in inducing new industries to locate on its line. During the period from 1929 to 1939, 140 new industries have been located on Illinois Terminal rails. Total capital invested in the plants of these new companies is not available for all industries, but we do know that 105 of the new industries invested capital amounting to $32,708,200, or an average of $311,507 per industry. The total carloads forwarded and received by these 140 companies via the Illinois Terminal Railroad in the year 1939 approximated 25,000 cars, or about 18 per cent of the total carload traffic loaded and unloaded on Illinois Terminal rails. Data as to new industries established since 1929 are not available; during the past few years no important new industries have been established except those which were war-connected.

PASSENGER REVENUE

Passenger revenues of the Illinois Terminal Railroad Company are earned almost entirely on the Electric Division. Although the Company operates through

service between Peoria and St. Louis, it is primarily an interurban electric railway as far as passenger service is concerned.

Passenger revenues declined from $1,859,910 in 1929 to a low of $585,795 in 1933. Some recovery was made from that point, but in 1939 revenue from passengers was only $725,124, or 12.3 per cent of total operating revenues. In 1929 passenger revenue accounted for 22.8 per cent of all revenue.

In common with other railroads, the I.T. has experienced a tremendous increase in passenger business because of wartime restrictions on gasoline, automobiles and tires. In 1944 passenger revenue amounted to $2,181,745 and constituted 18.9 per cent of the Company's revenues.

From 1929 to 1941 the Company's passenger revenue declined 56 per cent, compared with a reduction of 41 per cent for all Class I railroads; from 1941 to 1944 the Company experienced a gain of 171 per cent in passenger revenue, compared with a rise of 248 per cent for all Class I roads.

During the postwar period we can expect a precipitous decline in passenger revenue, probably to about $800,000 per annum. Since some of the passenger service will be conducted at a loss, it will be incumbent on the management to determine what further reductions should be made in passenger train service.

Revenues earned by the Company's two bus routes previously mentioned are included in the passenger revenues referred to above. Bus revenues increased from $40,370 in 1939 to $155,951 in 1944, and net operating income from bus operations increased from $6,906 in 1939 to $78,249 in 1944.

OTHER PASSENGER TRAIN REVENUE

Under this heading are included revenues received for the transportation of mail, express, milk and excess baggage, as well as parlor and sleeping car revenues. Ever since 1929 this group of revenues has shown a general downward

trend and, although there has been some increase since 1941, the revenue for the year 1944 is practically the same as for 1938. Revenue from mail has been well maintained, but express revenue has declined generally since 1929.

SWITCHING REVENUE

Switching revenue declined generally for a number of years after 1929, reaching a low point in 1938. Since that time there has been an upward trend, which was greatly accelerated during the past three years because of war traffic. It is expected that this class of revenue will show substantial reductions in the postwar period.

ALL OTHER REVENUE

This group embraces all revenues not included in the first four captions on Exhibit A. Prior to 1934 revenues in this category were relatively small, but effective with March 1, 1934 they were increased by reason of the vehicular tolls from the McKinley Bridge, which was leased to the Company by Illinois Power and Light Corporation. Since that time this group of revenues has shown a general upward trend, primarily due to increased tolls from the McKinley Bridge (now owned by the Company), greater coal handling receipts from the Alton Coal Dock and revenues received from International Carloading Company for handling freight.

IV - FINANCIAL

OPERATING RATIO

Prior to the war, the operating ratio of the Illinois Terminal Railroad Company generally ranged between 65 and 70, although in the two depression years of 1932 and 1938 it exceeded 70. During the last three years the Company has been able to attain a ratio ranging between 55 and 57 because of the heavy war traffic. The following table compares the Company's operating ratios with those for all Class I railroads during the past ten years:

Year	Illinois Terminal Railroad	All Class I Railroads
1935	67.1	75.1
1936	63.7	72.4
1937	65.4	74.9
1938	71.2	76.3
1939	65.7	73.0
1940	66.3	71.9
1941	61.2	68.5
1942	55.1	61.6
1943	57.0	62.5
1944	55.7	66.6*

* Preliminary

MAINTENANCE OF WAY AND STRUCTURES EXPENSES

Exhibit E shows the annual expenditures for maintenance of roadway and structures for the past ten years, together with the average cost per mile of road maintained. The Company commenced accruing depreciation on road property in 1943, in accordance with Interstate Commerce Commission rules, and the amount of such accruals has been excluded from the maintenance expenditures for the last two years in order to effect comparability with previous years. The cost of maintenance per mile of road averaged $1,487 for the ten-year period.

In 1943 and 1944 maintenance expenses increased substantially, primarily because of the heavier traffic, but also because of higher wage rates. Principal increases took place in the following accounts:

202 Roadway maintenance
208 Bridges, trestles and culverts
216 Other track material
220 Track laying and surfacing

The Company's maintenance of way ratio in 1943 and 1944 was slightly over 11 per cent, which is fairly comparable with the ratio in prewar years.

In 1943, pursuant to orders of the I.C.C., the Company commenced accruing depreciation on roadway property, shop machinery and power plant machinery, the amounts set up being as follows:

	1943	1944
Road property	$294,987	$295,660
Shop machinery	8,619	8,939
Power plant machinery	2,259	2,335
	$305,865	$306,934

MAINTENANCE OF EQUIPMENT EXPENSES

In prewar years the I.T.'s maintenance of equipment ratio normally averaged between 14 and 15. The heavier traffic of the last three war years has enabled the Company to maintain equipment at a ratio of between 10 and 11, in spite of higher wage rates. All Class I railroads reduced their prewar ratio of 19 to a wartime ratio of about 16.

Locomotive Repairs

Steam locomotive repairs averaged about 21 cents per locomotive mile in prewar years; during the past three years such costs have ranged between 24 and 27

cents per mile. These costs seem high, but are not unduly so in view of the heavier demands on power and the increase in wage rates.

Repairs to electric locomotives have increased only about one cent per locomotive mile over prewar costs.

Locomotive repair costs for steam and electric locomotives combined per thousand gross ton miles are shown in the following table for the past ten years:

	(Cents)		(Cents)
1935	26.6	1940	27.1
1936	22.3	1941	25.5
1937	27.0	1942	26.5
1938	29.4	1943	25.4
1939	28.1	1944	24.5

Locomotives have been well maintained, as is shown by the fact that no defective engines were reported by the Federal Bureau of Locomotive Inspection from 1938 to 1943 inclusive. In 1944, 13 per cent was reported as defective, presumably due to heavy demands on locomotives and the labor shortage. In spite of the heavy traffic, electric locomotive failures on the line have been consistently lower in recent years than in the average prewar year.

Car Repairs

Freight car repair costs per car-mile have been generally lower in recent years than in the average prewar year, primarily due to the acquisition of new freight cars previously referred to in this report, and in spite of higher wage scales.

Passenger car repair costs per unit of equipment owned have increased from about $1,900 per year in the prewar period to approximately $2,800 during the past two years. These high costs are due to the more intensive use and greater age of the equipment, as well as to increased wage costs. The average

cost of repairs per car-mile during the war years has been slightly lower than in the prewar period.

Depreciation and Retirements

Since 1935 depreciation has been accrued on various types of equipment at the following rates:

	Per Cent
Steam locomotives	3.45
Other locomotives	3.20
Freight train cars	3.60
Passenger train cars	3.68
Work equipment	3.77
Floating equipment *	9.50
Miscellaneous equipment	17.52

* Acquired in 1940

Equipment depreciation accruals were $247,831 in 1944. Two hundred box cars purchased in 1944 are not being depreciated but are currently being amortized on a five-year basis. If the unamortized value of this equipment is to be depreciated in the ordinary manner after the current year, it is estimated that total annual depreciation accruals on rolling stock should be about $275,000 per annum. Depreciation rates as presently charged appear to be adequate.

Other Maintenance of Equipment Expenses

All other maintenance of equipment expenses have increased moderately over the prewar level, primarily due to increased maintenance costs for shop and power plant machinery and miscellaneous equipment repairs.

TRAFFIC EXPENSES

Traffic expenses of the Company have increased moderately during the past five years, but in 1944 constituted only 2.1 per cent of total operating

revenues. With normal revenues traffic expenses will probably amount to more than three per cent of revenues, which is a reasonable ratio for a road of the size of the I.T.

Traffic expenses have been well controlled and traffic effort and solicitation have been effectively directed.

TRANSPORTATION EXPENSES

The transportation ratio of the I.T. has dropped from a prewar average of slightly over 33 to a wartime figure of about 30. All Class I railroads combined had the same transportation ratios in 1942 and 1943 as did the I.T.; in 1944, however, the I.T.'s ratio remained at 30 while that of all Class I roads increased to 31.5.

Station Service

Account 373, "Station Employees", increased from $214,253 in 1939 to $474,258 in 1944, an increase of 121 per cent. A portion of this increase occurred because of the larger tonnage of freight handled by the Company's platform forces for the International Carloading Company, revenue for which was credited to Account 143. It is suggested that further study be made of station operating costs, particularly since less carload freight tonnage increased only 9 per cent from 1939 to 1944.

Account 376, "Station Supplies and Expenses", has increased moderately since 1939.

Yard Service

Switching operations are performed almost entirely in connection with freight service and hence can be measured by comparing total yard expenses with

freight car-miles. The following table shows yard expenses (Accounts 377-391, inclusive), freight car-miles and cost per car-mile for the past ten years:

Year	Accounts 377-391, Incl. ($)	Freight Car-Miles	Cost per Car-Mile (¢)
1935	422,695	14,955,794	2.83
1936	455,566	16,734,000	2.72
1937	502,842	17,426,000	2.89
1938	437,222	15,012,000	2.91
1939	463,608	16,650,000	2.78
1940	496,512	17,055,000	2.91
1941	561,616	19,560,000	2.87
1942	648,443	21,360,000	3.04
1943	715,391	20,874,000	3.43
1944	886,326	26,186,000	3.39

The increased cost of switching per car-mile in the past three years was caused primarily by increased wage and fuel costs.

Train Service - Freight

The following table shows freight train expenses in total and per train-mile and per thousand gross ton-miles for the past ten years:

Year	Freight Train Expenses (Accts. 392-402, Incl.) $	Per Freight Train-Mile $	Per 1,000 Gross Ton-Miles $
1935	448,226	0.642	0.764
1936	513,489	0.672	0.754
1937	530,135	0.662	0.736
1938	452,762	0.664	0.758
1939	490,550	0.678	0.725
1940	512,475	0.700	0.732
1941	592,171	0.747	0.713
1942	724,436	0.841	0.774
1943	716,585	0.838	0.758
1944	873,563	0.950	0.765

Although the expenses per freight train-mile have increased considerably, the cost per thousand gross ton-miles has remained fairly steady due largely to the improvement in trainload and in spite of increased wage scales.

The following statement shows the steady improvement in freight train performance since 1935:

Year	Speed (Miles per Hour)	Gross Ton-Miles	
		Per Train-Mile	Per Train-Hour
1935	10.1	865	8,444
1936	10.9	910	9,700
1937	11.3	911	10,178
1938	12.0	886	10,502
1939	11.8	945	11,008
1940	11.7	967	11,159
1941	11.7	1,060	12,261
1942	11.3	1,106	12,246
1943	12.2	1,126	13,453
1944	11.5	1,260	14,210

The average trainload has increased 31 per cent during the ten-year period. This increase, coupled with the higher speed, has resulted in an improvement of 68 per cent in the gross ton-miles per train-hour, which is a very satisfactory performance.

Train Service - Passenger

Passenger train expenses in total and per train-mile, and the percentages of such expenses to the total passenger train revenue are shown on the following page:

Year	Passenger Train Expenses (Accts. 392-402, Incl.) $	Per Passenger Train-Mile $	Per Cent of Passenger Train Revenue (Accts. 102-109, Incl.)
1935	415,926	0.153	49.5
1936	417,058	0.156	44.8
1937	435,382	0.164	45.5
1938	432,749	0.163	53.1
1939	429,253	0.164	52.9
1940	427,971	0.166	53.3
1941	434,004	0.168	49.6
1942	526,331	0.195	33.5
1943	633,536	0.222	28.9
1944	692,007	0.241	30.4

While these expenses are low on a passenger train-mile basis, because of the character of the service rendered, the unit cost has steadily increased because of heavier traffic, longer trains and increases in wage rates. The ratio of expenses to revenue trended upward through 1940; thereafter the ratio declined materially because of the increased traffic due to the war.

Fuel and Power Performance

The next table below shows the unit cost of fuel and power in freight and switching service during the past 11 years:

Year	Cost per 1,000 Gross Ton-Miles	
	Coal Used in Freight and Switching Service (Cents)	Power Used in Freight and Switching Service (Cents)
1934	42.9	37.1
1935	38.0	31.0
1936	37.4	32.2
1937	36.3	31.4
1938	34.8	32.9
1939	33.9	30.8
1940	34.3	32.0
1941	33.8	31.5
1942	36.5	33.1
1943	41.0	33.3
1944	46.0	31.6

The decline in the unit cost of coal from 1934 to 1941 reflects fuel conservation as well as commendable motive power maintenance policies. The somewhat higher unit coal costs in the past three years were due primarily to the increased prices paid for coal.

The cost of electric power per thousand gross ton-miles has varied only slightly in the past ten years.

Power used in passenger train service from 1935 to 1944 has varied slightly, ranging from 4.8 to 5.1 cents per train-mile.

All Other Transportation Expenses

Included in this group of expenses are superintendence, dispatching trains, signal and interlocker operation, insurance and other overhead accounts.

Such expenses have increased from $306,144 in 1939 to $440,862 in 1944, a rise of 44 per cent, as contrasted with an increase of 96 per cent in operating revenues.

Miscellaneous Operations

These expenses increased from $22,402 in 1939 to $40,313 in 1944, due to increase in dining car service expenses and to higher wages for toll collectors.

GENERAL EXPENSES

General expenses of the I.T. have increased from $196,820 in 1939 to $280,666 in 1944, the principal increase being in the salaries and expenses of general office clerks and attendants. The ratio of general expenses to total operating revenues dropped from 3.3 in 1939 to 2.4 in 1944.

Expenses in this category have been well controlled on the I.T., with the result that the ratio of such expenses to operating revenues is substantially below that of other small railroads in the general area.

TAXES

Railway tax accruals on the I.T. have increased from $494,140 in 1939 to $3,343,246 in 1944, largely as a result of wartime traffic and earnings and the accompanying increase in Federal income taxes. Illinois state taxes also increased sharply in 1944, partially due to the accrual of a portion of the 1943 taxes in 1944. The following table gives a comparison of the I.T.'s taxes in 1939 and 1944:

	1939	1944
State taxes		
Illinois	$311,243	$ 610,111
Missouri	63,284	54,528
Other	190	457
Subtotal	$374,717	$ 665,096
Federal taxes		
Normal income	$	$ 445,200
Excess profits		1,908,400
Capital stock	6,688	56,500
Old age retirement	69,164	137,307
Unemployment insurance	39,032	126,745
Other U. S. taxes	4,539	3,998
Subtotal	$119,423	$2,678,150
Grand Total	$494,140	$3,343,246

RENTS

Net equipment rents payable (primarily for freight car hire) averaged $280,940 per year during the five years 1935 to 1939 and increased moderately to $315,144 per year during the period from 1940 to 1944. Most of this advance was brought about by larger payments for private line freight cars. Net payments on per diem cars increased only slightly, in spite of a much greater volume of interline traffic during the war period. The wisdom and foresight of the management in acquiring new freight cars during the past five years deserve commendation.

Joint Facility Rents have shown a net credit balance of about $40,000 a year for the past ten years, increasing to $50,000 in 1944.

OTHER INCOME AND DEDUCTIONS

Items under these headings are small in amount and represent principally miscellaneous rents and rent income, income from miscellaneous nonoperating physical property, miscellaneous tax accruals and the like. For the past five years "Other Income" has averaged $28,880 per annum and "Miscellaneous Deductions" has averaged $12,731 per year.

FIXED CHARGES

Fixed charges have been slightly under $600,000 per annum during the past five years. In 1944 such charges aggregated $587,680, made up as follows:

Interest on First and Refunding Mortgage Bonds	$540,000
Interest on Equipment Trust Certificates	9,671
Interest on unfunded debt	32,002
Rent for leased roads	3,757
Amortization of discount on funded debt	2,250
Total	$587,680

The only bonded indebtedness outstanding consists of $13,500,000 of First and Refunding Mortgage Bonds due in 1967 and carrying interest at the rate of four per cent. These bonds are all owned by Illinois Power Company.

Equipment trust notes outstanding as of December 31, 1944 aggregate $1,082,000. Series "A" notes mature serially to 1951 and Series "B" to 1954, both issues bearing interest at two per cent.

Interest on unfunded debt has been a minor item in recent years, except that in 1944 interest payments amounted to $32,002, primarily as a result of additional assessments of income and excess profits taxes for the year 1942.

Rent for leased roads covers the rental payment for the lease of Wabash tracks between South Wood River and Wanda, Illinois.

INSURANCE

The Company has substantial insurance coverage against calamities of fire, accident, personal and property damage, burglary, defalcations, and the like. Fire, windstorm and hail coverage are provided at locations having insurable value in excess of $10,000, with a deductible provision of $10,000 in case of each loss. Public liability provides coverage of $525,000 for injury, death or property damage arising out of freight or passenger train operations, subject to a $25,000 deductible provision for any one loss.

The McKinley Bridge is covered by $700,000 fire insurance and by $1,500,000 windstorm insurance.

INCOME STATEMENT

In our 1940 report we presented a pro forma income statement for the five years ended December 31, 1939, adjusted to the conditions in effect as of the end of the year 1939 with respect to leased line rentals, interest on funded debt and other items. This statement is repeated in this report and is marked Exhibit F. Based on this adjusted income account the five-year averages (1934-1939) for certain significant items were as follows:

Net railway operating income	$1,145,697
Income available for fixed charges	1,153,482
Net income	436,436

Exhibit G is an income statement for the five years ended December 31, 1944, based on the Company's annual reports to the Interstate Commerce Commission. Principal net earnings items averaged as follows during the past five years:

Net railway operating income	$1,554,742
Income available for fixed charges	1,570,890
Net income	989,272

Current Earnings

During the eight months ended August 31, 1945 operating revenues were 0.9 per cent greater than in the corresponding period of 1944; net railway operating income increased 1.3 per cent; income available for fixed charges 1.7 per cent; and net income 1.2 per cent.

The above figures are the net result of an upward trend in gross and net earnings through June and a downward trend in July and August. Significant income items for July and August of this year compared with the same months of 1944 are shown below:

	Months of July and August		Per Cent Decrease
	1944	1945	
Operating revenues	$2,108,075	$1,764,974	16.3
Net railway operating income	254,354	209,747	17.5
Income available for fixed charges	257,362	213,765	16.9
Net income	165,066	119,407	27.7

BALANCE SHEET

Exhibit H is a statement showing condensed balance sheets of the Company as of December 31 for the years 1939 to 1944 inclusive, based on the Company's annual reports to the Interstate Commerce Commission, adjusted to conform to changes in classification prescribed by the Commission.

Road and Equipment

There has been little change in the investment account since January 1, 1939, the net increase being $777,449, representing the net of additions and betterments, retirements, adjustments, etc.

Working Capital

The following table shows the current assets and liabilities of the Company since 1939, adjusted to include certain deferred and unadjusted debits and credits which officers of the Company advise are of a current nature:

At December 31	Current Assets	Current Liabilities	Net Working Capital
1939	$1,751,088	$1,585,354	$ 165,734
1940	1,452,286	1,564,931	-112,645
1941	1,376,221	1,864,882	-488,661
1942	2,951,398	2,738,041	213,357
1943	5,180,910	4,306,044	874,866
1944	6,313,466	5,130,019	1,183,447
At July 31 1945	6,885,386	5,143,507	1,741,879

We are of opinion that the Company had an excess in working capital over its normal requirements of about $400,000 as of December 31, 1944. As of July 31, 1945 the spread between current assets and liabilities had widened, so that the estimated excess working capital amounted to about $900,000.

The Company has not set up any reserve to take care of possible refunds in connection with the movement of lend-lease and other freight under governmental auspices which may have been entitled to land grant rates. It is not expected that any large refund will have to be made, but the Company has not furnished us an estimate of the possible amount involved.

Capital Stock

The capital stock of the Company consists of 250,000 shares of common stock of a par value of $100 per share, the issue of which was authorized on October 18, 1937, when the present Illinois Terminal Railroad Company was formed. All of the stock is owned by Illinois Power Company, except for six qualifying shares.

Long-Term Debt

The funded debt has been discussed in a previous section of the report.

Attention should be called to the item of $492,325 outstanding at the end of 1939 and 1940, representing a nonnegotiable debt due Illinois Iowa Power Company (later Illinois Power Company). This debt represented borrowings to meet obligations of periods prior to the 1937 consolidation, and the entire amount was repaid to Illinois Power Company in 1941.

Surplus

The corporate surplus increased from $8,404,746 in 1939 to $10,634,457 in 1944. Almost the entire increase took place in earned surplus, as unearned or capital surplus remained almost stationary.

Earned surplus increased from $27,691 as of December 31, 1939, to $2,257,275 as of December 31, 1944, as shown below:

Credit balance as of December 31, 1939	$ 27,691	
Add:		
Net income, 1940 to 1944 inclusive	4,946,360	
Miscellaneous credits	6,141	
		$4,980,192
Deduct:		
Loss on retired property	429,867	
Dividends on capital stock	2,250,000	
Miscellaneous debits	43,050	
		2,722,917
Balance December 31, 1944		$2,257,275

Dividends

Total dividends paid by the Company since the consolidation in 1937 to the end of 1944 amounted to $2,250,000 and were as follows:

October	30, 1941	$ 250,000
December	31, 1941	250,000
May	29, 1942	250,000
September	29, 1942	250,000
October	1, 1943	500,000
March	30, 1944	125,000
June	30, 1944	125,000
September	30, 1944	125,000
December	28, 1944	375,000
Total		$2,250,000

To date this year two dividends of $125,000 each have been declared, payable on March 31 and June 29.

V - CONTRACTS AND FRANCHISES

The following are the more important contracts which the I.T. has in effect with other corporations:

ILLINOIS POWER COMPANY

This company supplies electric power for the operation of the I.T.'s trains as well as for other purposes under a contract dated January 1, 1928. The original contract covered a period of ten years subject to four five-year extensions upon one year's notice and with provision that Illinois Power Company owns a majority of the capital stock of the Illinois Terminal Railroad Company. The present extension period expires January 1, 1948.

The contract covers the purchase of electrical energy (principally direct current at nominal voltage of 650) supplied at various locations at a rate computed each month according to a formula based upon maximum demand and schedules of primary and secondary charges. This contract is favorable to the railroad as it pays approximately one cent per K.W.H. for power purchased. The annual consideration involved is slightly less than $500,000.

CENTRAL TERMINAL COMPANY

This company owns and operates a large seven-story terminal, office and warehouse building in St. Louis. It rents to the I.T. track level and space in the building for use as a freight and passenger station under a contract dated September 26, 1932, expiring October 1, 1980, which is subject to a 50-year extension upon notice before October 1, 1979. The approximate annual consideration involved is $72,000.

In addition the Central Terminal Company rents office space in its building to I.T. at an annual rental of approximately $15,000, in accordance with

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In addition the Central Terminal Company rents office space in its building to I.T. at an annual rental of approximately $15,000, in accordance with

a contract dated January 30, 1933 which expires January 31, 1948, but subject thereafter to 90 days' notice by either party.

The Central Terminal Company is a wholly owned subsidiary of Illinois Power Company and has outstanding six per cent mortgage notes in the amount of $675,000 which were due but were not paid on November 27, 1940. These notes are all owned by North American Light and Power Company. The Central Terminal Company also has $4,648,064 outstanding in the form of six per cent income notes, all owned by Illinois Power Company.

WABASH RAILROAD COMPANY

The I.T. leases in perpetuity 3.18 miles of track from the Wabash Railroad Company, extending from South Wood River to Wanda, Illinois, under a lease dated December 1, 1921. Rental paid by the I.T. is on the basis of five per cent of the agreed value of the line, and is now being paid at the annual rate of $3,757. The I.T. stands the expense of all additions and betterments on the leased line. The lease provides also for possible joint use of the line by the I.T. and the Wabash, as well as for possible joint use of certain mileage now owned and used solely by I.T.

OTHER CONTRACTS

In addition to the above mentioned contracts the Company has agreements with the Alton and Big Four railroads covering joint switching arrangements at Alton, Roxana and Wood River. It also has an agreement covering the use of I.T. tracks and freight station by the Chicago, Burlington and Quincy Railroad between Alton and Wood River, as well as other agreements covering rental for joint tracks and facilities. In addition it has the usual contracts with the United States Government covering the transportation of mail and a standard agreement with Railway Express Agency, Inc.

FRANCHISES

The Company's lines occupy streets in several cities and towns under franchises which were generally obtained between 1905 and 1908 and which ordinarily cover a period of 50 years. The operation of the Company's subway and elevated tracks in St. Louis is covered by an ordinance expiring January 26, 1979. The Company also has a few permits allowing operations in public highways.

VI - GENERAL

MANAGEMENT

As of December 31, 1944 the Board of Directors consisted of six men, all of whom were officers of the Company or of Illinois Power Company. Three of the Board members held offices in both companies.

Principal officers of the Company are as follows:

Allen Van Wyck	Chairman of Board
A. P. Titus	President and General Manager
H. G. Powell	Vice President - Traffic
J. H. Keys	Vice President - Finance and Accounting
H. E. Johnson	Secretary-Treasurer
J. F. Cress	Comptroller
W. L. Conant	Superintendent, Motive Power and Equipment
J. I. Catherman	Chief Engineer

The organization is compact and efficient. We were favorably impressed with the ability of the officers of the Company. The policies of the Company have been wisely conceived and well carried out. The President and Traffic Vice President of the Company are each over 70 years of age; most of the other officers are well under retirement age.

LABOR CONDITIONS

The average number of employees of the Company in 1944 was 1,696, compared with 1,439 employees in 1940.

Rates of pay of several classes of employees of the Company are slightly below standard rates paid by trunk line railroads but are comparable with those in effect on other electric and short-line railways. Up to the end of 1944 the I.T. employed only one man to operate an electric locomotive, although it is required practice on trunk lines for a second man to be on electric and diesel locomotives. Since early in 1945 the Company has found it necessary to place helpers on electric

switching locomotives, at an estimated annual cost of $40,000, based on 1944 operations. If it were found necessary to place helpers on electric road locomotives it is estimated that the additional cost would be about $90,000 per annum, based on 1944 operations.

The employees of the Company are generally members of railway labor organizations. We are informed that labor relations are generally satisfactory.

It is probable that there will be general increases in the rates of pay of railroad employees in the near future.

ABANDONMENTS

We believe that the Company's officers should make abandonment studies of certain portions of the light traffic lines in the near future. Studies of this nature were made in 1942 and showed that the Company's earnings in 1940 and 1941 would have been increased by the abandonment of 59 miles of road between Mackinaw and Forsythe, Illinois, and of 75 miles of road between Decatur and a point near Danville, Illinois. In addition to analyzing the earnings and expenses of these two lines, the management should also make a similar study of the Grafton branch.

FUTURE CAPITAL REQUIREMENTS

At the present time the Company's charges to depreciation and amortization of rolling stock are on the basis of about $384,000 per annum, the increase over 1944 resulting primarily from the amortization over a five-year period of the cost of 200 box cars acquired in 1944. The Company's capital requirements for rolling stock during the next five years, including installments on outstanding equipment trust certificates, should average about $375,000 per annum.

If the present amortization basis for the 200 box cars is changed to a normal depreciation method, the annual depreciation accruals would not be sufficient

to finance all of the contemplated capital requirements for rolling stock. Amortization of the 200 box cars is currently being charged at the rate of $133,300 per annum.

Depreciation accruals on fixed property aggregate about $307,000 per year. The Company's estimate of capital expenditures for roadway items, shop machinery and miscellaneous items for the next five years totals $1,075,000 or an average of $215,000 per year, or approximately 70 per cent of the current depreciation accruals on fixed property.

VII - CONCLUSIONS

Our principal conclusions are as follows:

FIRST:

The Illinois Terminal Railroad, a Class I road, operates 476 miles of standard gauge railroad, 391 of which are electrified. It is a composite terminal switching railroad, belt line, interurban passenger railway and road-haul carrier. The Company also operates two short bus routes in the St. Louis area.

SECOND:

The fixed property of the Company has been satisfactorily maintained, although there has been some deficiency in tie renewals during the past three years. Some of the rail and several of the bridges on light traffic sections of the electric lines, while adequate for the business handled, are old and of light construction; however, some of these sections may be abandoned as unprofitable within the next few years.

THIRD:

Rolling stock has been adequately maintained. Purchases of new freight cars since 1940 have enabled the Company to attain a proper ownership of freight equipment and to reduce per diem charges. Many of the passenger cars are old, but no further commitments for new passenger equipment should be made until the Company has formulated a definite postwar policy with respect to passenger traffic and service.

FOURTH:

The railroad serves an industrialized section which has experienced substantial growth in population during the last three decades; it has through routes and junctions with 20 trunk line railroads; and its traffic solicitation

policies and efforts have been well directed and executed. During the period from 1929 through 1939 a total of 140 new industries, with invested capital of over $32,000,000, were located on I.T.'s line.

FIFTH:
Both freight and passenger revenues have increased greatly during the war period. Passenger revenues will probably decline to the prewar level and reductions in freight revenue will be substantial in the postwar period. We estimate that gross freight revenue earned by the Company on traffic of its public utility affiliates normally approximates not more than $200,000 per annum.

SIXTH:
During the months of July and August of this year operating revenues declined about 16 per cent and net income about 28 per cent below the figures for the same two months of 1944.

SEVENTH:
The Company's operations have been conducted efficiently; its operating ratio has ranged between 55 and 57 during the past three years; its improvement in freight train performance has been noteworthy.

EIGHTH:
Depreciation rates in effect appear to be reasonable and adequate.

NINTH:
The Company has substantial insurance protection against catastrophes of fire, accident, personal and property damage, burglary and defalcations.

TENTH:
The Company has favorable contracts with Illinois Power Company for the purchase of power and with Central Terminal Company (a subsidiary of Illinois Power Company) for the rental of its St. Louis freight and passenger station. The former contract expires on January 1, 1948 and is subject to two 5-year extensions

upon one year's notice, and with the provision that Illinois Power Company owns a majority of Illinois Terminal Railroad Company stock.

ELEVENTH:
The Company has local franchises for operation in the streets of various towns and cities; these were generally obtained between 1905 and 1908 and extend for a period of 50 years.

TWELFTH:
We are informed that labor relations on the railroad are generally satisfactory. Wages paid certain classes of employees are at a slight differential below those paid on trunk lines but are comparable with those paid on other electric and short-line railways. The Company employs only one man to operate an electric road locomotive; the general practice on larger railroads requires two men. Average number of employees of the Company in 1944 was 1,696. General increases in the rates of pay of railroad employees may be expected in the near future.

THIRTEENTH:
The Company has a compact and efficient organization and is well managed. The President and Traffic Vice President of the Company are each over 70 years of age; most of the other officers are well under retirement age.

FOURTEENTH:
The Company should in the near future give serious consideration to the possibility of abandonment of certain light traffic sections of its line.

FIFTEENTH:
As of July 31, 1945 the Company had current assets of $6,885,386*, current liabilities of $5,143,507* and net working capital of $1,741,879. We are of opinion that this net working capital was about $900,000 in excess of normal working capital necessary.

*Adjusted to include items of a current nature, not presently classified as current on Company's balance sheet.

SIXTEENTH:

The Company's estimate of average annual capital requirements (exclusive of new rolling stock) for the next five years approximates 70 per cent of current annual charges to depreciation (exclusive of depreciation on rolling stock).

Average capital requirements for rolling stock during the next five years, including present equipment trust installments, will probably be somewhat less than the current annual depreciation and amortization accruals on rolling stock. If the present amortization of the cost of 200 box cars ($133,300 per year) is changed to a normal depreciation accrual basis, the annual depreciation accruals on rolling stock would not be sufficient to finance all of the contemplated capital requirements for rolling stock.

SEVENTEENTH:

Net income averaged $1,130,805 per annum during the three war years, 1942 to 1944; average annual net income for the years 1939 through 1941 was $693,894. Net income available for charges (after taxes) averaged $1,705,238 per annum during the three war years and $1,341,695 per year during the period from 1939 through 1941. Federal income and excess profits taxes aggregated $2,353,600 in 1944.

EIGHTEENTH:

The entire capital stock of the Company (other than six qualifying shares) and all of the outstanding bonds are owned by Illinois Power Company.

We wish to express our appreciation of the cooperation and assistance we have received from various officers of the Company during the course of our investigation.

The statements and opinions expressed in this report do not constitute a certificate with respect to the purchase or sale of the stock, bonds or physical assets of the Illinois Terminal Railroad Company and no part of this report may be used in connection with such purchase or sale without our permission.

Respectfully submitted,

Coverdale & Colpitts
Consulting Engineers

EXHIBITS

Exhibit A

RMINAL RAILROAD COMPANY

' OPERATING REVENUES

1935 - 1944

37	1938	1939	1940	1941	1942	1943	1944
3,569	$4,130,367	$4,657,470	$4,773,919	$5,515,057	$6,555,349	$6,967,102	$ 8,436,596
6,535	718,022	725,124	733,012	806,006	1,488,040	2,094,780	2,181,745
0,154	96,479	86,222	70,355	68,658	83,873	97,310	96,222
0,365	29,180	44,958	70,914	87,967	129,671	159,854	182,304
0,685	327,913	388,006	426,019	552,248	619,369	651,822	688,607
6,308	5,301,961	5,901,780	6,074,219	7,029,936	8,876,302	9,970,868	11,585,474
OTAL OPERATING REVENUE							
9%	77.9%	78.9%	78.6%	78.4%	73.9%	69.9%	72.8%
3	13.5	12.3	12.0	11.5	16.8	21.0	18.9
	1.8	1.4	1.2	1.0	0.9	1.0	0.8
	0.6	0.8	1.2	1.2	1.5	1.6	1.6
	6.2	6.6	7.0	7.9	6.9	6.5	5.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Company records

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

ILLINOIS TERMINAL RAILROAD COMP

SUMMARY OF OPERATING REVENUES

1935 - 1944

Class of Revenue	Account No.	1935	1936	1937	1938
Freight	101	$4,120,937	$4,692,762	$4,828,569	$4,130,367
Passenger	102	750,065	828,302	856,535	718,022
Other passenger train	103-109 Incl.	90,886	102,943	100,154	96,479
Switching	110	55,892	47,432	40,365	29,180
All other revenue	111-152 Incl.	295,009	327,188	370,685	327,913
Total Operating Revenue		5,312,789	5,998,627	6,196,308	5,301,961
		PER CENT OF TOTAL OPERATING RE			
Freight	101	77.5%	78.2%	77.9%	77.9%
Passenger	102	14.1	13.8	13.8	13.5
Other passenger train	103-109 Incl.	1.7	1.7	1.6	1.8
Switching	110	1.1	0.8	0.7	0.6
All other revenue	111-152 Incl.	5.6	5.5	6.0	6.2
Total Operating Revenue		100.0	100.0	100.0	100.0

Source: Company record

ILLINOIS TERMINAL RAILROAD COMPAN

FREIGHT TONNAGE AND REVENUE BY PRINCIPAL COM

1935 - 1944

	Products of Agriculture		Animals and Products		Products of Mines		Products of Forests		
	Tons	% of Total	Tons	% of Total	Tons	% of Total	Tons	% of Total	
					T O N N A G E				
1935	95,436	2.1	6,190	0.1	1,926,423	41.4	94,595	2.0	
1936	112,665	2.1	9,687	0.2	2,260,087	42.5	113,317	2.1	
1937	115,014	2.0	8,454	0.1	2,457,369	41.9	151,460	2.6	
1938	159,919	3.5	13,688	0.3	1,982,036	43.5	96,342	2.1	
1939	158,755	3.1	17,538	0.4	2,300,684	45.1	98,808	1.9	
1940	187,550	3.5	19,845	0.4	2,403,702	44.2	110,728	2.0	
1941	201,364	3.3	23,390	0.4	2,656,979	43.2	119,474	1.9	
1942	186,109	2.5	26,684	0.4	3,702,778	51.0	120,168	1.7	
1943	290,545	4.2	38,493	0.5	2,936,321	42.9	108,973	1.6	
1944	284,609	3.6	43,976	0.6	3,215,449	41.3	97,404	1.3	
Total 10 Years	1,791,966	3.1	207,945	0.3	25,841,828	43.8	1,111,269	1.9	
					R E V E N U E				
1935	$ 122,280	2.6	$ 11,299	0.2	$ 1,163,088	24.6	$ 83,661	1.8	$
1936	147,357	2.8	16,425	0.3	1,304,103	24.5	105,124	2.0	
1937	143,267	2.6	12,815	0.2	1,324,190	24.4	127,352	2.3	
1938	224,394	4.9	24,162	0.5	1,142,415	24.9	95,720	2.1	
1939	219,585	4.3	36,244	0.7	1,304,223	25.0	104,687	2.0	
1940	252,621	4.8	40,312	0.8	1,326,289	24.9	108,699	2.0	
1941	244,369	4.0	49,828	0.8	1,507,399	24.3	120,795	2.0	
1942	244,547	3.4	57,662	0.8	2,099,151	29.3	147,443	2.1	
1943	354,853	4.7	70,119	0.9	1,683,794	22.2	134,951	1.8	
1944	357,698	3.9	81,473	0.9	1,885,502	20.5	117,934	1.3	
Total 10 Years	2,310,971	3.8	400,339	0.7	14,740,154	24.3	1,146,366	1.9	

Source: Company records.

Exhibit B

ILLINOIS TERMINAL RAILROAD COMPANY

TONNAGE AND REVENUE BY PRINCIPAL COMMODITY GROUPS

1935 - 1944

ducts of Mines		Products of Forests		Manufactures and Miscellaneous		L.C.L.		Grand Total C.L. and L.C.L.	
ons	% of Total	Tons	% of Total	Tons	% of Total	Tons	% of Total	Tons	% of Total
		T O N N A G E							
926,423	41.4	94,595	2.0	2,493,199	53.6	34,426	0.8	4,650,269	100.0
260,087	42.5	113,317	2.1	2,785,119	52.4	34,483	0.7	5,315,358	100.0
457,369	41.9	151,460	2.6	3,093,014	52.8	33,604	0.6	5,858,915	100.0
982,036	43.5	96,342	2.1	2,273,491	50.0	25,776	0.6	4,551,252	100.0
300,684	45.1	98,808	1.9	2,500,480	49.0	27,433	0.5	5,103,698	100.0
403,702	44.2	110,728	2.0	2,679,623	49.4	28,342	0.5	5,429,790	100.0
656,979	43.2	119,474	1.9	3,119,657	50.7	33,149	0.5	6,154,013	100.0
702,778	51.0	120,168	1.7	3,193,008	44.0	26,485	0.4	7,255,232	100.0
936,321	42.9	108,973	1.6	3,448,474	50.4	24,721	0.4	6,847,527	100.0
215,449	41.3	97,404	1.3	4,118,819	52.8	29,805	0.4	7,790,062	100.0
841,828	43.8	1,111,269	1.9	29,704,884	50.4	298,224	0.5	58,956,116	100.0
		R E V E N U E							
163,088	24.6	$ 83,661	1.8	$ 3,170,912	67.2	$ 170,927	3.6	$ 4,722,167	100.0
304,103	24.5	105,124	2.0	3,561,329	66.9	184,510	3.5	5,318,848	100.0
324,190	24.4	127,352	2.3	3,660,031	67.3	174,786	3.2	5,442,441	100.0
142,415	24.9	95,720	2.1	2,963,656	64.4	146,346	3.2	4,596,693	100.0
304,223	25.0	104,687	2.0	3,408,976	65.2	148,484	2.8	5,222,199	100.0
326,289	24.9	108,699	2.0	3,442,508	64.7	150,588	2.8	5,321,017	100.0
507,399	24.3	120,795	2.0	4,087,130	66.1	174,949	2.8	6,184,470	100.0
099,151	29.3	147,443	2.1	4,466,397	62.3	152,156	2.1	7,167,356	100.0
683,794	22.2	134,951	1.8	5,200,731	68.5	140,913	1.9	7,585,361	100.0
885,502	20.5	117,934	1.3	6,591,645	71.6	168,142	1.8	9,202,394	100.0
740,154	24.3	1,146,366	1.9	40,553,315	66.7	1,611,801	2.6	60,762,946	100.0

Source: Company records.

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

ILLINOIS

FREIGHT REVENUE*

I.C.C. Class No.	Commodity	1935	1936	1
450	Petroleum oils, refined, and all other gasolines	$1,013,502	$ 954,929	$ 8
300	Bituminous coal	855,551	938,222	9
662	Explosives n.o.s.	17,783	20,010	
700	Glass: bottles, jars and jelly glasses	218,356	256,062	2
451	Fuel, road and petroleum residual oils, n.o.s.	472,064	473,195	4
452	Lubricating oils and greases	98,630	135,001	1
513	Iron and steel, rated fifth class	167,982	208,872	2
370	Asphalt (natural, by-product or petroleum)	39,517	65,167	
310	Coke	74,155	79,757	
582	Tractors and parts	29,908	41,990	
511	Iron and steel pipe and fittings. n.o.s.	45,489	130,867	1
693	Scrap iron and scrap steel	112,973	138,748	1
522	Lead and zinc: ingot, pig or bar	92,712	126,997	1
695	Paperboard, pulpboard and wallboard	46,529	70,268	
20	Corn	42,523	64,558	
360	Petroleum, crude	1,279	2,752	
520	Copper: ingot, matte and pig	389	2,189	
430	Lumber, shingles and lath	46,556	69,596	
640	Fertilizers, n.o.s.	37,634	48,473	
650	Newsprint paper	78,068	85,631	
350	Gravel and sand (other than glass or moulding)	28,123	26,086	
351	Stone, broken, ground or crushed	46,699	48,883	
	Total 22 Commodities	3,566,422	3,988,253	3,9
	All Other Commodities	984,818	1,146,085	1,3
	Total Carload Traffic	4,551,240	5,134,338	5,2
	Per cent 22 Commodities of Total Carload Traffic	78.4	77.7	

* Before absorptions

** Includes all commo
in any one year
"All other" grou

Source: Company reco

ILLINOIS TERMINAL RAILROAD COMPANY

GHT REVENUE* - TWENTY-TWO PRINCIPAL COMMODITIES**

1935 - 1944

1936	1937	1938	1939	1940	1941	1942	1943	1944
954,929	$ 891,004	$ 822,087	$ 725,412	$ 618,557	$ 536,518	$ 488,936	$ 692,960	$1,148,407
938,222	902,148	785,953	803,873	800,823	799,837	1,057,074	943,292	1,043,142
20,010	24,440	15,217	16,468	13,856	15,139	18,210	292,253	831,412
256,062	240,041	240,243	243,550	217,974	332,518	463,872	580,070	568,030
473,195	402,986	281,247	289,281	296,190	345,422	505,197	412,331	312,706
135,001	146,728	129,183	137,047	141,963	171,744	186,253	234,320	284,873
208,872	245,766	93,874	163,519	195,538	265,588	248,074	216,461	229,043
65,167	89,031	61,685	87,192	70,082	182,886	266,070	182,940	200,765
79,757	93,281	89,878	119,858	221,118	233,384	108,885	74,767	183,785
41,990	49,973	32,678	45,663	63,725	81,607	94,504	135,306	171,398
130,867	128,103	70,763	130,483	130,804	143,345	91,198	97,194	148,939
138,748	127,963	86,039	102,223	143,473	135,750	148,723	128,032	148,908
126,997	179,496	95,386	162,593	152,886	139,504	152,995	139,829	141,506
70,268	67,191	82,686	105,613	125,527	132,564	128,386	129,733	136,586
64,558	50,446	97,537	77,801	93,880	73,897	89,487	99,204	102,023
2,752	3,675	3,191	52,804	19,188	5,712	10,980	20,369	99,565
2,189	2,484	1,980	3,591	3,103	67,136	120,198	108,823	87,956
69,596	76,121	50,983	62,437	73,035	83,247	108,496	83,986	86,002
48,473	50,841	44,027	62,608	52,460	67,744	106,779	80,026	76,184
85,631	91,128	56,472	87,709	105,320	91,032	87,389	73,481	75,459
26,086	38,543	25,075	34,702	22,740	30,273	174,716	94,075	73,699
48,883	35,081	35,581	38,207	23,407	35,092	233,089	69,185	49,152
988,253	3,936,470	3,201,765	3,552,634	3,585,649	3,969,939	4,889,511	4,888,637	6,199,540
146,085	1,331,185	1,248,582	1,521,081	1,584,780	2,039,582	2,125,689	2,555,811	2,834,712
134,338	5,267,655	4,450,347	5,073,715	5,170,429	6,009,521	7,015,200	7,444,448	9,034,252
77.7	74.7	71.9	70.0	69.3	66.1	69.7	65.7	68.6

ore absorptions, corrections, etc.
ludes all commodities with revenue over $100,000
n any one year during the last ten years. Excludes
All other" groups.

: Company records.

Exhibit

AILROAD COMPANY

O PRINCIPAL COMMODITIES**

1944

938	1939	1940	1941	1942	1943	1944	Total for 10 Years	Average Per Year
22,087	$ 725,412	$ 618,557	$ 536,518	$ 488,936	$ 692,960	$1,148,407	$7,892,312	$ 789,231
35,953	803,873	800,823	799,837	1,057,074	943,292	1,043,142	8,929,915	892,992
15,217	16,468	13,856	15,139	18,210	292,253	831,412	1,264,788	126,479
40,243	243,550	217,974	332,518	463,872	580,070	568,030	3,360,716	336,072
31,247	289,281	296,190	345,422	505,197	412,331	312,706	3,790,619	379,062
29,183	137,047	141,963	171,744	186,253	234,320	284,873	1,665,742	166,574
3,874	163,519	195,538	265,588	248,074	216,461	229,043	2,034,717	203,472
1,685	87,192	70,082	182,886	266,070	182,940	200,765	1,245,335	124,533
9,878	119,858	221,118	233,384	108,885	74,767	183,785	1,278,868	127,887
2,678	45,663	63,725	81,607	94,504	135,306	171,398	746,752	74,675
0,763	130,483	130,804	143,345	91,198	97,194	148,939	1,117,185	111,718
6,039	102,223	143,473	135,750	148,723	128,032	148,908	1,272,832	127,283
5,386	162,593	152,886	139,504	152,995	139,829	141,506	1,383,904	138,390
2,686	105,613	125,527	132,564	128,386	129,733	136,586	1,025,083	102,508
7,537	77,801	93,880	73,897	89,487	99,204	102,023	791,356	79,136
5,191	52,804	19,188	5,712	10,980	20,369	99,565	219,515	21,952
4,980	3,591	3,103	67,136	120,198	108,823	87,956	397,849	39,785
9,983	62,437	73,035	83,247	108,496	83,986	86,002	740,459	74,046
9,027	62,608	52,460	67,744	106,779	80,026	76,184	626,776	62,678
8,472	87,709	105,320	91,032	87,389	73,481	75,459	831,689	83,169
9,075	34,702	22,740	30,273	174,716	94,075	73,699	548,032	54,803
8,581	38,207	23,407	35,092	233,089	69,185	49,152	614,376	61,437
8,765	3,552,634	3,585,649	3,969,939	4,889,511	4,888,637	6,199,540	41,778,820	4,177,882
1,582	1,521,081	1,584,780	2,039,582	2,125,689	2,555,811	2,834,712	17,372,325	1,737,233
5,347	5,073,715	5,170,429	6,009,521	7,015,200	7,444,448	9,034,252	59,151,145	5,915,115
69	70.0	69.3	66.1	69.7	65.7	68.6	70.6	70.6

etc.
venue over $100,000
t ten years. Excludes

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

POPULATIONS OF COUNTIES AND PRINCIPAL INDUSTRIAL CITIES SERVED BY ILLINOIS TERMINAL RAILROAD COMPANY

	1910	1920	1930	194
Counties in Illinois				
Champaign	51,829	56,959	64,273	7
De Witt	18,906	19,252	18,598	1
Jersey	13,954	12,682	12,556	1
Logan	30,216	29,562	28,863	2
McLean	68,008	70,107	73,117	7
Macon	54,186	65,175	81,731	8
Macoupin	50,685	57,274	48,703	4
Madison	89,847	106,895	143,830	14
Peoria	100,255	111,710	141,344	15
Piatt	16,376	15,714	15,588	1
St. Clair	119,870	136,520	157,775	16
Sangamon	91,024	100,262	111,733	11
Tazewell	34,027	38,540	46,082	5
Vermilion	77,996	86,162	89,339	8
Total 14 Counties	817,179	906,814	1,033,532	1,08
Cities in Illinois				
Alton	17,528	24,682	30,151	3
Bloomington	25,768	28,725	30,930	3
Champaign-Urbana	20,666	26,117	33,408	3
Danville	27,871	33,776	36,765	3
Decatur	31,140	43,818	57,510	5
East St. Louis	58,547	66,767	74,347	7
Granite City	9,903	14,757	25,130	2
Peoria	66,950	76,121	104,969	10
Springfield	51,678	59,183	71,864	7
Total 9 Cities	310,051	373,946	465,074	47
St. Louis Metropolitan District*	933,190	1,071,529	1,293,516	1,36
State of Illinois	5,638,591	6,485,280	7,630,654	7,89
Continental United States	91,972,266	105,710,620	122,775,046	131,66

* Comparable areas used in all four years.

Source: U.S. Department of Commerce, Bureau of the Census.

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POPULATIONS OF COUNTIES AND PRINCIPAL INDUSTRIAL CITIES SERVED BY ILLINOIS TERMINAL RAILROAD COMPANY

	1910	1920	1930	1940	% Increase or Decrease 1910 to 1940
Illinois					
	51,829	56,959	64,273	70,578	36.2
	18,906	19,252	18,598	18,244	-3.5
	13,954	12,682	12,556	13,636	-2.3
	30,216	29,562	28,863	29,438	-2.6
	68,008	70,107	73,117	73,930	8.7
	54,186	65,175	81,731	84,693	56.3
	50,685	57,274	48,703	46,304	-8.6
	89,847	106,895	143,830	149,349	66.2
	100,255	111,710	141,344	153,374	53.0
	16,376	15,714	15,588	14,659	-10.5
	119,870	136,520	157,775	166,899	39.2
	91,024	100,262	111,733	117,912	29.5
	34,027	38,540	46,082	58,362	71.5
	77,996	86,162	89,339	86,791	11.3
Counties	817,179	906,814	1,033,532	1,084,169	32.7
inois					
	17,528	24,682	30,151	31,255	78.3
rbana	25,768	28,725	30,930	32,868	27.6
	20,666	26,117	33,408	37,366	80.8
	27,871	33,776	36,765	36,919	32.5
	31,140	43,818	57,510	59,305	90.4
ais	58,547	66,767	74,347	75,609	29.1
	9,903	14,757	25,130	22,974	132.0
	66,950	76,121	104,969	105,087	56.9
	51,678	59,183	71,864	75,503	46.1
ties	310,051	373,946	465,074	476,886	53.8
opolitan District*	933,190	1,071,529	1,293,516	1,367,977	46.6
ois	5,638,591	6,485,280	7,630,654	7,897,241	40.1
ited States	91,972,266	105,710,620	122,775,046	131,669,275	43.2

* Comparable areas used in all four years.

Source: U.S. Department of Commerce, Bureau of the Census.

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

Exhibit E

ILLINOIS TERMINAL RAILROAD COMPANY

MAINTENANCE OF WAY AND STRUCTURES EXPENSES

1935 - 1944

Year	Maintenance of Way and Structures Expenses	Miles of Road Maintained	Expense Per Mile of Road
1935	$593,826	509	$1,167
1936	619,478	494	1,254
1937	663,772	488	1,360
1938	609,257	488	1,248
1939	641,653	474	1,354
1940	715,858	470	1,523
1941	708,032	470	1,506
1942	698,744	470	1,487
1943	868,907*	470	1,849
1944	993,206*	469	2,118
Av. Year	711,273	480	1,487

* Excluding depreciation on Road property of $294,987 in 1943 and $295,660 in 1944.

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

ILLINOIS TERMINAL RAILROAD COMPANY

PRO FORMA INCOME STATEMENT FOR YEARS 1935 TO 1939, INCLUSIVE

Adjusted to include in all periods (a) rental on present annual basis for properties of St. Lo
St. Louis and Belleville Electric Railway Company (O'Fallon Freight Line) and (b) interest on
December 31, 1939. Adjusted further to exclude (c) rental paid for McKinley Bridge, (d) inter
outstanding during these years and (e) interest received from and paid to affiliated companies
bution of sundry debits and credits of lessor lines prior to consolidation also adjusted to co
of operating company.

		1935	1936	1937
RAILWAY OPERATING INCOME				
501	Railway operating revenues	$5,312,739	$5,998,627	$6,196,3
531	Railway operating expenses	3,629,520	3,823,556	4,054,2
	NET REVENUE FROM RAILWAY OPERATIONS	1,683,219	2,175,071	2,142,0
532	Railway tax accruals	393,161	633,742	606,4
	RAILWAY OPERATING INCOME	1,290,058	1,541,329	1,535,6
RENT INCOME				
504	Rent from locomotives	4,834	3,340	4,0
507	Rent from work equipment	2,244	1,148	2,3
508	Joint facility rent income	61,054	64,586	62,8
	Total Rent Income	68,132	69,074	69,2
RENTS PAYABLE				
536	Hire of freight cars - Dr.	236,559	278,425	346,9
537	Rent for locomotives	8,905	9,124	11,5
540	Rent for work equipment	348	527	1
541	Joint facility rents	21,097	19,710	17,6
	Total Rents Payable	266,909	307,786	376,3
	NET RENTS	198,777*	238,712*	307,0
NET RAILWAY OPERATING INCOME		1,091,281	1,302,617	1,228,5
OTHER INCOME				
510	Miscellaneous rent income	20,375	22,925	24,1
511	Miscellaneous nonoperating physical property	286	2,283	3,0
515	Income from unfunded securities	1,033	179	2
516	Income from sinking and other reserve funds		150	1
519	Miscellaneous income	196	161	1
	Total Other Income	21,890	25,698	27,7
	TOTAL INCOME	1,113,171	1,328,315	1,256,2
MISCELLANEOUS DEDUCTIONS FROM INCOME				
543	Miscellaneous rents	18,068	12,931	9,1
544	Miscellaneous tax accruals	3,210	4,759	4,8
551	Miscellaneous income charges	2,644	2,280	1,5
	Total Miscellaneous Deductions	23,922	19,970	15,6
	INCOME AVAILABLE FOR FIXED CHARGES	1,089,249	1,308,345	1,240,6
FIXED CHARGES				
542	Rent for leased roads	98,224	98,423	98,6
546	Interest on funded debt	607,710	607,710	607,7
547	Interest on unfunded debt	1,930	782	2
548	Amortization of discount on funded debt			1,0
	Total Fixed Charges	707,864	706,915	707,6
	NET INCOME TRANSFERRED TO PROFIT AND LOSS	$ 381,385	$ 601,430	$ 532,9

* Denotes deficit

Exhibit F

ILLINOIS TERMINAL RAILROAD COMPANY

PRO FORMA INCOME STATEMENT FOR YEARS 1935 TO 1939, INCLUSIVE

eriods (a) rental on present annual basis for properties of St. Louis and Alton Railway Company and ctric Railway Company (O'Fallon Freight Line) and (b) interest on funded debt outstanding as of further to exclude (c) rental paid for McKinley Bridge, (d) interest on funded debt actually rs and (e) interest received from and paid to affiliated companies prior to consolidation. Distri- credits of lessor lines prior to consolidation also adjusted to conform with subsequent distribution

	1935	1936	1937	1938	1939
venues	$5,312,739	$5,998,627	$6,196,308	$5,301,961	$5,901,780
penses	3,629,520	3,823,556	4,054,217	3,775,542	3,877,583
LWAY OPERATIONS	1,683,219	2,175,071	2,142,091	1,526,419	2,024,197
	393,161	633,742	606,466	506,763	494,140
COME	1,290,058	1,541,329	1,535,625	1,019,656	1,530,057
	4,834	3,340	4,085	1,841	2,334
ent	2,244	1,148	2,366	2,149	1,071
ncome	61,054	64,586	62,816	61,879	58,681
	68,132	69,074	69,267	65,869	62,086
- Dr.	236,559	278,425	346,910	227,756	293,594
	8,905	9,124	11,537	7,676	7,535
nt	348	527	193	701	321
	21,097	19,710	17,687	18,701	15,360
e	266,909	307,786	376,327	254,834	316,810
	198,777*	238,712*	307,060*	188,965*	254,724*
E	1,091,281	1,302,617	1,228,565	830,691	1,275,333
come	20,375	22,925	24,102	22,303	20,295
ating physical property	286	2,283	3,023	5,664	5,673
securities	1,033	179	264	29	417
nd other reserve funds		150	150	150	150
	196	161	170	165	120
	21,890	25,698	27,709	28,311	26,655
	1,113,171	1,328,315	1,256,274	859,002	1,301,988
INCOME					
	18,068	12,931	9,174	6,845	4,755
ruals	3,210	4,759	4,862	4,197	3,933
charges	2,644	2,280	1,575	5,153	6,952
s Deductions	23,922	19,970	15,611	16,195	15,640
FIXED CHARGES	1,089,249	1,308,345	1,240,663	842,807	1,286,348
	98,224	98,423	98,682	98,700	98,895
bt	607,710	607,710	607,710	608,510	615,165
debt	1,930	782	216	18,320	20,565
unt on funded debt			1,077	1,364	1,250
s	707,864	706,915	707,685	726,894	735,875
D TO PROFIT AND LOSS	$ 381,385	$ 601,430	$ 532,978	$ 115,913	$ 550,473

* Denotes deficit

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

ILLINOIS TERMINAL RAILROAD COMPANY

INCOME STATEMENT FOR YEARS 1940 TO 1944, INCLUSIVE

		1940	1941	1942
RAILWAY OPERATING INCOME				
501	Railway operating revenues	$6,074,219	$7,029,936	$8,876,302
531	Railway operating expenses	4,025,795	4,299,991	4,890,498
	NET REVENUE FROM RAILWAY OPERATIONS	2,048,424	2,729,945	3,985,804
532	Railway tax accruals	601,735	893,374	1,668,191
	RAILWAY OPERATING INCOME	1,446,689	1,836,571	2,317,613
RENT INCOME				
504	Rent from locomotives	3,366	3,429	420
507	Rent from work equipment	1,433	691	791
508	Joint facility rent income	50,478	49,135	62,188
	Total Rent Income	55,277	53,255	63,399
RENTS PAYABLE				
536	Hire of freight cars - Dr.	323,722	316,513	290,097
537	Rent for locomotives	8,046	8,912	103
539	Rent for floating equipment			
540	Rent for work equipment	419	258	301
541	Joint facility rents	11,291	9,570	22,183
	Total Rents Payable	343,478	335,253	312,684
	NET RENTS	288,201*	281,998*	249,285
NET RAILWAY OPERATING INCOME		1,158,488	1,554,573	2,068,328
OTHER INCOME				
510	Miscellaneous rent income	19,737	17,096	20,607
511	Miscellaneous nonoperating physical property	5,116	5,993	7,893
514	Income from funded securities			
515	Income from unfunded securities	588	1,484	25
516	Income from sinking and other reserve funds	150	150	150
519	Miscellaneous income	20	5	6
	Total Other Income	25,611	24,728	28,681
	TOTAL INCOME	1,184,099	1,579,301	2,097,009
MISCELLANEOUS DEDUCTIONS FROM INCOME				
543	Miscellaneous rents	8,260	8,156	8,755
544	Miscellaneous tax accruals	2,595	2,655	3,208
551	Miscellaneous income charges	2,590	407	842
	Total Miscellaneous Deductions	13,445	11,218	12,805
	INCOME AVAILABLE FOR FIXED CHARGES	1,170,654	1,568,083	2,084,204
FIXED CHARGES				
542	Rent for leased roads	19,989*	4,650	4,699
546	Interest on funded debt	613,285	579,740	570,164
547	Interest on unfunded debt	272	3,273	1,039
548	Amortization of discount on funded debt	1,354	2,207	2,326
	Total Fixed Charges	594,922	589,870	578,228
	NET INCOME TRANSFERRED TO PROFIT AND LOSS	575,732	978,213	1,505,976

Source: Annual Reports to I.C.C.

* Denotes deficit.

ILLINOIS TERMINAL RAILROAD COMPANY

INCOME STATEMENT FOR YEARS 1940 TO 1944, INCLUSIVE

	1940	1941	1942	1943	1944
nues	$6,074,219	$7,029,936	$8,876,302	$9,970,868	$11,585,474
nses	4,025,795	4,299,991	4,890,498	5,683,187	6,456,218
AY OPERATIONS	2,048,424	2,729,945	3,985,804	4,287,681	5,129,256
	601,735	893,374	1,668,191	2,535,419	3,343,246
ME	1,446,689	1,836,571	2,317,613	1,752,262	1,786,010
	3,366	3,429	420	4,729	77
nt	1,433	691	791	867	595
come	50,478	49,135	62,188	66,630	78,716
	55,277	53,255	63,399	72,226	79,388
Dr.	323,722	316,513	290,097	240,762	397,197
	8,046	8,912	103	18	13
pment				678	4,289
t	419	258	301	190	601
	11,291	9,570	22,183	25,530	28,288
le	343,478	335,253	312,684	267,178	430,388
	288,201*	281,998*	249,285*	194,952*	351,000*
	1,158,488	1,554,573	2,068,328	1,557,310	1,435,010
ome	19,737	17,096	20,607	20,149	19,994
ting physical property	5,116	5,993	7,893	7,434	7,284
urities				1,752	8,292
ecurities	588	1,484	25	4	383
d other reserve funds	150	150	150	78	
	20	5	6	5	5
e	25,611	24,728	28,681	29,422	35,958
	1,184,099	1,579,301	2,097,009	1,586,732	1,470,968
INCOME					
	8,260	8,156	8,755	10,180	9,047
uals	2,595	2,655	3,208	2,928	2,422
harges	2,590	407	842	918	694
us Deductions	13,445	11,218	12,805	14,026	12,163
IXED CHARGES	1,170,654	1,568,083	2,084,204	1,572,706	1,458,805
	19,989*	4,650	4,699	3,906	3,757
t	613,285	579,740	570,164	550,850	549,671
ebt	272	3,273	1,039	463	32,002
nt on funded debt	1,354	2,207	2,326	2,173	2,250
es	594,922	589,870	578,228	557,392	587,680
TO PROFIT AND LOSS	575,732	978,213	1,505,976	1,015,314	871,125

Source: Annual Reports to I.C.C.

* Denotes deficit.

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

ILLINOIS TERMINAL RAILROAD COMPANY

COMPARATIVE CONDENSED BALANCE SHEET

AS AT DECEMBER 31

	1939	1940	1941
ASSETS			
Total investments	$51,615,328	$51,609,427	$52,378,40
Current assets			
Cash	1,000,385	685,260	661,73
Demand loans, time drafts and deposits			
Special deposits	2,891	1,650	11,56
Material and supplies	422,626	428,278	437,80
All other current assets	309,321	320,096	236,77
Total	1,735,223	1,435,284	1,347,87
Deferred assets	9,483	9,676	10,08
Unadjusted debits	75,497	68,639	77,03
TOTAL ASSETS	53,435,531	53,123,026	53,813,40
LIABILITIES			
Capital stock	25,000,000	25,000,000	25,000,000
Long-term debt:			
Funded debt unmatured	15,000,000	14,229,000	14,560,000
Nonnegotiable debt to affiliated companies	492,325	492,325	
Total	15,492,325	14,721,325	14,560,000
Current liabilities:			
Tax liability	337,552	468,655	735,445
Other current liabilities	965,369	829,377	1,023,249
Total	1,302,921	1,298,032	1,758,694
Deferred liabilities	31,422	8,019	5,339
Unadjusted credits:			
Accrued depreciation - road	2,920,198	3,004,770	3,143,122
Accrued depreciation - equipment	283,919	268,884	126,459
Other unadjusted credits	3,204,117	3,273,654	3,269,581
Total			
Corporate surplus:			
Unearned surplus - paid in	8,377,055	8,376,960	8,376,985
Total Appropriated Surplus	8,377,055	8,376,960	8,376,985
Profit and loss balance (earned surplus)	27,691	445,036	842,808
Total Corporate Surplus	8,404,746	8,821,996	9,219,793
TOTAL LIABILITIES	53,435,531	53,123,026	53,813,407

Note: In order to eliminate variations arising from changes in I.C.C. Classificat following adjustments have been made in figures for the years 1939 to 194 "Grants in Aid of Construction" has been eliminated from the "Liabilities from "Total Investments"; "Additions to Property through Income and Surpl from "Corporate Surplus" and deducted from "Total Investments"; "Reorgani Adjustments of Capital" transferred to "Unearned Surplus" from Account 75 years 1939 and 1940 and from "Profit and Loss" in the years 1941 and 1942 Liability" transferred from "Unadjusted Credits" to "Current Liabilities"

ILLINOIS TERMINAL RAILROAD COMPANY

COMPARATIVE CONDENSED BALANCE SHEET

AS AT DECEMBER 31

Exhibit H

	1939	1940	1941	1942	1943	1944
	$51,615,328	$51,609,427	$52,378,406	$52,340,478	$52,311,824	$53,283,563
	1,000,385	685,260	661,732	1,975,852	3,477,563	3,570,901
	2,891	1,650	11,567	8,575	500,000	1,200,000
	422,626	428,278	437,804	454,187	8,956	12,905
	309,321	320,096	236,773	487,321	452,031	577,885
	1,735,223	1,435,284	1,347,876	2,925,935	688,168	659,170
	9,483	9,676	10,088	8,615	5,126,718	6,020,861
	75,497	68,639	77,037	68,694	33,639	244,167
	53,435,531	53,123,026	53,813,407	55,343,722	78,219	99,444
	25,000,000	25,000,000	25,000,000	25,000,000	57,550,400	59,648,035
	15,000,000	14,229,000	14,560,000	14,254,000	25,000,000	25,000,000
es	492,325	492,325			13,948,000	14,582,000
	15,492,325	14,721,325	14,560,000	14,254,000	13,948,000	14,582,000
	337,552	468,655	735,445	1,502,079	2,752,535	3,466,906
	965,369	829,377	1,023,249	1,120,991	1,412,371	1,508,809
	1,302,921	1,298,032	1,758,694	2,623,070	4,164,906	4,975,715
	31,422	8,019	5,339	3,956	3,317	3,590
	2,920,198	3,004,770	3,143,122	3,304,943	242,622	524,268
	283,919	268,884	126,459	136,306	3,527,600	3,722,382
	3,204,117	3,273,654	3,269,581	3,441,249	148,636	205,623
	8,377,055	8,376,960	8,376,985	8,376,985	3,918,858	4,452,273
	8,377,055	8,376,960	8,376,985	8,376,985	8,376,985	8,377,182
	27,691	445,036	842,808	1,644,462	8,376,985	8,377,182
	8,404,746	8,821,996	9,219,793	10,021,447	2,138,334	2,257,275
	53,435,531	53,123,026	53,813,407	55,343,722	10,515,319	10,634,457
					57,550,400	59,648,035

ariations arising from changes in I.C.C. Classifications, the have been made in figures for the years 1939 to 1942, inclusive: struction" has been eliminated from the "Liabilities" and deducted ts"; "Additions to Property through Income and Surplus" eliminated us" and deducted from "Total Investments"; "Reorganization ." transferred to "Unearned Surplus" from Account 757-1/2 in the d from "Profit and Loss" in the years 1941 and 1942; "Tax from "Unadjusted Credits" to "Current Liabilities".

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

ILLINOIS TERMINAL RAILROAD COMPANY

STATEMENT SHOWING JUNCTION POINTS AND CONNECTING RAIL AND BAR

Junction Point	Name of Connecting Railroad or Barge Line	Ch
Alton, Ill.	Alton R.R.	(
	Chicago, Burlington & Quincy R.R.	(Direct
	Missouri & Illinois Bridge & Belt R.R.	(
	Missouri-Kansas-Texas R.R.	via Missouri & Illinois Bri
	New York Central System	Direct
Auburn, Ill.	Chicago & Illinois Midland Ry.	Direct
Benld, Ill.	Chicago & North Western Ry.	Direct
Bloomington, Ill.	Alton R.R.	via New York Central System
	Illinois Central R.R.	(
	New York Central System	(Direct
	New York, Chicago & St. Louis R.R.	via Illinois Central R.R. o
Bronson, Ill.	Chicago & Eastern Illinois R.R.	Direct
Champaign, Ill.	Illinois Central R.R.	Direct
	New York Central System	(
	Wabash R.R.	(via Illinois Central R.R.
Danville, Ill.	Chicago & Eastern Illinois R.R.	(via Wabash R.R.
	New York Central System	(
	Wabash R.R.	via Tilton, Ill.
Decatur, Ill.	Baltimore & Ohio R.R.	via Wabash R.R.
	Illinois Central R.R.	(
	Pennsylvania R.R.	(Direct
	Wabash R.R.	(
East St. Louis, Ill.	Alton R.R.	Direct (at Venice)
	Alton & Southern R.R.	Direct (at Madison)
	Baltimore & Ohio R.R.	Direct (at Venice)
	Chicago, Burlington & Quincy R.R.	via Terminal R.R. Ass'n of
	Chicago & Eastern Illinois R.R.	via Terminal R.R. Ass'n of
	East St. Louis Junction R.R.	Direct
	Gulf, Mobile & Ohio R.R.	via Terminal R.R. Ass'n of
	Inland Waterways Corporation	via Terminal R.R. Ass'n of
	Illinois Central R.R.	(
	Litchfield & Madison Ry.	(Direct (at Madison)
	Louisville & Nashville R.R.	via Terminal R.R. Ass'n of
	Manufacturers Ry.	via Terminal R.R. Ass'n of
	Missouri Pacific R.R.	via Terminal R.R. Ass'n of
	New York Central System	via Terminal R.R. Ass'n of
	New York, Chicago & St. Louis R.R.	Direct (via Madison)
	Pennsylvania R.R.	Direct
	St. Louis Southwestern Ry.	via Terminal R.R. Ass'n of
	St. Louis-San Francisco Ry.	via Terminal R.R. Ass'n of
	St. Louis & O'Fallon Ry.	(
	St. Louis & Ohio River R.R.	(via Terminal R.R. Ass'n of
	Southern Ry.	(
	Terminal R.R. Ass'n of St. Louis	(Direct
	Wabash R.R.	via Terminal R.R. Ass'n of
	St. Louis & Belleville Electric Ry.	via Terminal R.R. Ass'n of

ILLINOIS TERMINAL RAILROAD COMPANY

ING JUNCTION POINTS AND CONNECTING RAIL AND BARGE LINES

Railroad e	Character of Connection
uincy R.R. dge & Belt R.R. .R. and Ry.	((Direct (via Missouri & Illinois Bridge & Belt R.R. Direct Direct
Ry. Louis R.R. is R.R.	Direct via New York Central System ((Direct via Illinois Central R.R. or New York Central System Direct
    is R.R. 	Direct ((via Illinois Central R.R. ((via Wabash R.R. (via Tilton, Ill. via Wabash R.R. ((Direct (
   ncy R.R. is R.R. R.R. tion	Direct (at Venice) Direct (at Madison) Direct (at Venice) via Terminal R.R. Ass'n of St. Louis or Southern Ry. via Terminal R.R. Ass'n of St. Louis or Alton & Southern R.R. Direct via Terminal R.R. Ass'n of St. Louis, Alton & Southern R.R. or Southern Ry. via Terminal R.R. Ass'n of St. Louis
  .R. Louis R.R.	((Direct (at Madison) via Terminal R.R. Ass'n of St. Louis, Alton & Southern R.R. or Southern Ry. via Terminal R.R. Ass'n of St. Louis, or Alton & Southern R.R. via Terminal R.R. Ass'n of St. Louis or Alton & Southern R.R. via Terminal R.R. Ass'n of St. Louis, Alton & Southern R.R. or Southern Ry. Direct (via Madison) Direct
. y. R. . Louis ectric Ry.	via Terminal R.R. Ass'n of St. Louis or Alton & Southern R.R. via Terminal R.R. Ass'n of St. Louis ((via Terminal R.R. Ass'n of St. Louis, Alton & Southern R.R. or Southern Ry. ((Direct via Terminal R.R. Ass'n of St. Louis, Alton & Southern R.R. or Southern Ry. via Terminal R.R. Ass'n of St. Louis, Alton & Southern R.R. or Southern Ry.

ILLINOIS TERMINAL RAILROAD COMPANY

STATEMENT SHOWING JUNCTION POINTS AND CONNECTING RAIL AND BARGE LINES

Junction Point	Name of Connecting Railroad or Barge Line	Character o
Edwardsville, Ill.	Litchfield & Madison Ry.	(Direct
	New York, Chicago & St. Louis R.R.	(
	Wabash R.R.	Direct (via Edwardsvi
Federal, Ill.	Chicago, Burlington & Quincy R.R.	Direct (via Alton)
Girard, Ill.	Chicago, Burlington & Quincy R.R.	Direct
Glover, Ill.	Chicago & Eastern Illinois R.R.	Direct
Harristown, Ill.	Wabash R.R.	Direct
Hillery, Ill.	New York Central System	Direct
Mackinaw, Ill.	New York Central System	Direct
Mont, Ill.	Illinois Central R.R.	Direct
Morton, Ill.	Atchison, Topeka & Santa Fe Ry.	Direct
	Pennsylvania R.R.	via Atchison, Topeka &
North Wood River, Ill.	Alton R.R.	Direct
O'Fallon, Ill.	Baltimore & Ohio R.R.	Direct
Pait, Ill.	Pennsylvania R.R.	Direct (via Collinsvill
Peoria, Ill.	Alton R.R.	(
	Atchison, Topeka & Santa Fe Ry.	(
	Chicago & Illinois Midland Ry.	(
	Chicago & North Western Ry.	(
	Chicago, Burlington & Quincy R.R.	(
	Chicago, Rock Island & Pacific Ry.	(via Peoria & Pekin Uni
	Illinois Central R.R.	(
	Inland Waterways Corporation	(
	Minneapolis & St. Louis Ry.	(
	New York Central System	(
	New York, Chicago & St. Louis R.R.	(
	Pennsylvania R.R.	(
	Peoria & Pekin Union Ry.	Direct
	Peoria Terminal Co.	(
	Toledo, Peoria & Western R.R.	(via Peoria & Pekin Uni
St. Louis, Mo.	Chicago, Burlington & Quincy R.R.	Direct
	Chicago, Rock Island & Pacific Ry.	(
	Inland Waterways Corporation	(
	Mississippi Valley Barge Line	(via Terminal R.R. Ass'n
	Manufacturers Ry.	(
	Missouri Pacific R.R.	(
	Missouri-Kansas-Texas R.R.	via Chicago, Burlington
		Terminal R.R. Ass'n of
	St. Louis-San Francisco Ry.	via Terminal R.R. Ass'n
	Terminal R.R. Ass'n of St. Louis	Direct.
	Wabash R.R.	via Terminal R.R. Ass'n

ILLINOIS TERMINAL RAILROAD COMPANY

STATEMENT SHOWING JUNCTION POINTS AND CONNECTING RAIL AND BARGE LINES

oint	Name of Connecting Railroad or Barge Line	Character of Connection
Ill.	Litchfield & Madison Ry. New York, Chicago & St. Louis R.R. Wabash R.R.	(Direct (Direct (via Edwardsville Junction)
	Chicago, Burlington & Quincy R.R.	Direct (via Alton)
	Chicago, Burlington & Quincy R.R.	Direct
	Chicago & Eastern Illinois R.R.	Direct
l.	Wabash R.R.	Direct
	New York Central System	Direct
	New York Central System	Direct
	Illinois Central R.R.	Direct
	Atchison, Topeka & Santa Fe Ry. Pennsylvania R.R.	Direct via Atchison, Topeka & Santa Fe Ry.
er, Ill.	Alton R.R.	Direct
	Baltimore & Ohio R.R.	Direct
	Pennsylvania R.R.	Direct (via Collinsville)
	Alton R.R. Atchison, Topeka & Santa Fe Ry. Chicago & Illinois Midland Ry. Chicago & North Western Ry. Chicago, Burlington & Quincy R.R. Chicago, Rock Island & Pacific Ry. Illinois Central R.R. Inland Waterways Corporation Minneapolis & St. Louis Ry. New York Central System New York, Chicago & St. Louis R.R. Pennsylvania R.R. Peoria & Pekin Union Ry. Peoria Terminal Co. Toledo, Peoria & Western R.R.	((((((via Peoria & Pekin Union Ry. ((((((Direct ((via Peoria & Pekin Union Ry.
	Chicago, Burlington & Quincy R.R. Chicago, Rock Island & Pacific Ry. Inland Waterways Corporation Mississippi Valley Barge Line Manufacturers Ry. Missouri Pacific R.R. Missouri-Kansas-Texas R.R. St. Louis-San Francisco Ry. Terminal R.R. Ass'n of St. Louis Wabash R.R.	Direct (((via Terminal R.R. Ass'n of St. Louis ((via Chicago, Burlington & Quincy R.R. or Terminal R.R. Ass'n of St. Louis via Terminal R.R. Ass'n of St. Louis Direct. via Terminal R.R. Ass'n of St. Louis

ILLINOIS TERMINAL RAILROAD COMPANY

STATEMENT SHOWING JUNCTION POINTS AND CONNECTING RAIL AND BARGE LINES

Junction Point	Name of Connecting Railroad or Barge Line	Character of Connecti
Springfield, Ill.	Alton R.R.	(
	Baltimore & Ohio R.R.	(Direct
	Chicago & Illinois Midland Ry.	(
	Illinois Central R.R.	(
	Springfield & Southwestern R.R.	via Illinois Central R.R
	Springfield Terminal Co.	(
	Wabash R.R.	(Direct
Staunton, Ill.	Wabash R.R.	Direct
Urbana, Ill.	Wabash R.R.	Direct
Wood River, Ill.	New York Central System	Direct (via Hartford)

Source: Official Railway Equipment Register of July, 1945.

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

ILLINOIS TERMINAL RAILROAD COMPANY

STATEMENT SHOWING JUNCTION POINTS AND CONNECTING RAIL AND BARGE LINES

ction Point	Name of Connecting Railroad or Barge Line	Character of Connection
field, Ill.	Alton R.R. Baltimore & Ohio R.R. Chicago & Illinois Midland Ry. Illinois Central R.R. Springfield & Southwestern R.R. Springfield Terminal Co. Wabash R.R.	((Direct ((via Illinois Central R.R. ((Direct
n, Ill.	Wabash R.R.	Direct
Ill.	Wabash R.R.	Direct
ver, Ill.	New York Central System	Direct (via Hartford)

Source: Official Railway Equipment Register of July, 1945.

Coverdale & Colpitts
Consulting Engineers
120 Wall St., New York

(COPY)

STONE & WEBSTER ENGINEERING CORPORATION

49 Federal Street, Boston 7, Mass.

July 30, 1954

Toledo, Peoria and Western Railroad,
Peoria,
Illinois

Attention Mr. J. Russell Coulter,
President.

Dear Sirs:

SURVEY OF PROPERTY
OF ILLINOIS TERMINAL RAILROAD COMPANY

In accordance with your request to Mr. L. H. G. Bouscaren on June 21, 1954, confirmed by Mr. Bouscaren on June 29, we have completed a survey of certain property of Illinois Terminal Railroad Company. This survey included an inspection of the track, ties, ballast, bridges, trestles, buildings and electrical system, but specifically excluded the Terminal Building in St. Louis, as well as the McKinley Bridge.

As requested by you, based on our survey, we have prepared estimates of the extent of repairs required on the property and the amount of salvage which would probably be realized from the discontinuation of electric passenger service with the exception of the operation between St. Louis and Granite City.

Our basic estimates have been predicated on use of the main line for Diesel freight service. However, you have advised us that if you were to acquire this property you hope also to acquire certain trackage rights which would eliminate the need for portions of the Terminal property and consequently reduce maintenance expenditures. Our estimates have been prepared with these contingencies in mind, although we have not attempted to determine any financial benefits which might be obtained from selling or leasing structures which would remain on the nonuseful sections of the Right of Way.

The Illinois Terminal Railroad Company operates 356.78 miles of first and second main track, 55.22 miles of passing track, and 123.93 miles of switch track. The Company is still operating reasonably safely and efficiently even though maintenance expenditures have been reduced to a bare minimum since the first of this year.

The Diesel Division which comprises 70 miles of main track and 90 miles of sidetrack in the East St. Louis, Alton, and Granite City areas handles the greatest density of traffic. The main line, except for less than two miles, is laid with 90 lb rail. Twenty-two miles have been renewed during the last ten years but the remainder is 20 to 30 years old. A few miles of this line were reballasted recently with crushed slag but the remainder is constructed of cinder and gravel ballast which is worn out and extremely dirty. For the most part drainage is good but some additional ditching is necessary.

The Illinois Suburban Division includes 8 miles of main track and 3 miles of sidings. The main line track which runs between St. Louis and Granite City will be serviceable for street cars for a considerable number of years with only a minor amount of maintenance.

We consider that the 17th Street Passenger Yard in Granite City is in very poor condition. On the assumption that passenger service is to be continued, we believe that 50% of this yard could be eliminated without materially affecting service. However, the remaining portion of the yard would require extensive repairs. The Hadley Street freight track in St. Louis, approximately 1,500 ft. long, is laid with 130 lb rail. This track is in fair to poor condition. New switch material for replacement is already on the property.

In our opinion, expenditures made during the period 1950 to January 1954 should have resulted in satisfactory maintenance and if this same rate of expenditure is reestablished under your jurisdiction, supplemented by an amount sufficient to offset deferred work since January 1954 and certain other deficiencies, the property will be restored to a good operating condition. The deficiencies referred to include the following:

Approaches to McKinley Bridge	
Work to be done in three years	$335,640
Work to be done within ten years	190,000
Subway near Carlinville	70,000
Bridge over Sangamon River	91,000
All other bridges and supporting structures	75,000
Buildings in Federal Yard which replace use of the Decatur facilities	175,000

The cost of this program would be offset to an appreciable extent by a reduction of the maintenance expenditures which would no longer be required on the McKinley Bridge, the Decatur Shops, and other facilities which may be sold or abandoned.

Under most any set of circumstances there are a number of small existing buildings which should be dismantled which would reduce maintenance costs and generally improve the appearance of the property.

Based on Toledo, Peoria and Western Railroad costs we believe that the amount expended by Illinois Terminal Railroad during 1953 would have maintained the property in good operating condition and, in addition, would have provided for re-laying 10 miles of track. We further believe that 10 miles per year of railroad renewal constitutes a satisfactory rail program.

If trackage rights were to be obtained between East Peoria and Mackinaw Junction, the East Peoria shops and yard would no longer be required. In our opinion, this property should be attractive on the market and might sell for as much as $250,000.

The Passenger Station and Office Building at Peoria has not been in use for several years and although in need of considerable repairs it is a sound structure and could be adapted to many uses. We understand that the owner has recently received an offer of $80,000 for this property.

If shop operations were to be discontinued at Decatur, a number of large old buildings and one good storage building would be available for lease. We believe this location might be salable for an industrial development.

Assuming that passenger service is abandoned on the lines from St. Louis to East Peoria and from Springfield to Champaign and Urbana, it will be in order to discontinue electric traction on these lines. Street car service from the St. Louis Terminal, over the McKinley Bridge to Granite City, will probably be maintained for some time after abandonment of main line passenger service, which would result in continuing that section of the 600 v trolley in service.

If and when electric traction on the main line is discontinued, it will permit removal of overhead contact trolley wires and trolley feeders, the salvage value of which would be appreciable. Removal of this overhead system will also result in more advantageous use of mechanical roadway equipment than is possible with the trolley wires in place.

Power supply for electric traction is purchased from Illinois Power Company at 600 v d-c trolley voltage. Several contracts with the Power Company cover the supply of power. It is our understanding that the Power Company is agreeable to cancellation of existing contracts. There are 51 substations on the system, of which only seven are owned by Illinois Terminal Railroad Company. Six of these seven substations could be dismantled if and when passenger service on the main line is abandoned. The seventh substation is located at Chambers Street in St. Louis and would be required as long as street car service to Granite City is continued.

The overhead system, in general, consists of a single catenary supporting the contact trolley. Messenger wire and hangers are steel; trolley wire is grooved copper 4/0 for the most part, with some short sections constructed of 3/0. The catenary is supported either by cross span wires between two wood poles or by mast arm brackets of pipe or steel angle construction on a single pole. Passing tracks and sidings, generally, are single trolley construction without catenary. Trolley feeders are carried on the wood poles and are mostly 4/0 and 6/0 bare, solid copper with a limited amount of 500 MCM stranded. These same wood poles carry railroad signal and telephone circuits on separate crossarms. The communication and signal circuits would undoubtedly be maintained in service for Diesel train operation.

We estimate a total of 4,315,000 lb of copper in trolley and feeders which could be salvaged if passenger service on the main line is eliminated. At a scrap price of 24 cents per lb the amount recoverable would be $1,035,600. The net salvage would be reduced by the cost of salvage operations, which we estimate at approximately $300,000. The salvage operations also provide for removal of trolley mast arms, cross span wires, messenger wire and hangers, although little salvage could be realized for these items since mixed scrap does not command a high price.

Since the pole structures carry signal and telephone wires they would, in general, be maintained in service. However, in the case of yards having single trolley for contact wire, practically all of the poles could be removed when the trolley is removed. The salvage value for poles would be negligible.

There is practically no market for the substation equipment which consists in the main of obsolete transformers, rotary converters and switching equipment. We believe that not more than $1,000 would be realized from abandonment of the six substations.

Although a large majority of the 80 crossing signals are actuated by track circuit control, there are signals at eight locations which are actuated by trolley contactors. Removal of the trolley at these locations would necessitate the substitution of track circuit controls at an estimated cost of approximately $8,000.

We believe that future operation of the Illinois Terminal property under Toledo, Peoria and Western management would result in economies. Use of modern methods and equipment such as are presently employed on your property would result, we believe, in material savings.

Our field survey was conducted by three of our engineers who inspected the structures, roadway, and electric plant. During the course of our investigation, we interviewed all general officers of both the Illinois Terminal and Toledo, Peoria and Western Railroad Companies.

Yours very truly,

/s/ S. F. KOSTERS,

Vice President.

1952 Power and Feeder Anaylsis

of the
ILLINOIS TERMINAL RAILRAOD COMPANY

Prepared by

John Leisenring, Electrical Sup't

The intent of the following report is to outline, and estimate the cost of certain possible changes in the present System of moving freight between LeClaire and East Peoria.

The figures made are on the assumption that it should be possible to move 3,000 tons per train over this territory without normally exceeding a running time of eight hours.

There are several methods of accomplishing this result:

First - By continuing to operate electrically, changing the voltage in the overhead distribution system and trolley wire from 600 volts to 1200 volts DC making the necessary increases in substation capacity.

Second - By continuing to operate at 600 volts Direct Current, increasing substation capacity and the overhead system as necessary.

Third - By continuing the present system of distribution without change, purchasing Diesel electric locomotives to operate in multiple unit with our present D engines.

Fourth - By the use of a combination Diesel electric locomotive, using Diesel power except through towns.

Fifth - By the use of straight Diesel equipment for through freight movements, retaining electric distribution for passenger trains and local freight.

In the following report, we have relied upon long experience and knowledge of the System with a minimum of mathematical calculations. The results, while they may not be in strict agreement with those arrived at by a more detailed engineering study, are practically correct and can be taken as such.

In preparing this report, the System as it now exists has been used as a basis. Some of the substations belong to Illinois Power Company and some to the Railroad. It has not been possible to maintain this difference in considering logical combinations of this apparatus and estimates have been made without regard to this condition.

With the recognized economies gained by electric operation and the large investment already made in this type of plant, it is natural that first consideration be given to the possibility of continuing this with such additions as are necessary.

The 1200 Volts D. C. System

There are few 600 volt D. C. systems in operation where freight loads are as heavy as those it is desired to handle here. The idea of raising this to 1200 volts D. C. should therefore be examined as a first possibility.

1. To make this change would require doubling up present rotary converters connecting them in series. Additional substations would have to be added. Some of these could be placed in buildings from which existing equipment was moved. Others would be placed in new buildings at new locations. These would be automatically controlled rectifiers fed from the 33 KV lines now located on railroad right-of-way.

2. The overhead system would require improved insulation to ground at numerous locations. It is customary to use pantograph collection for voltages above 600, but this does not seem necessary in this case. There is no reason why the trolley pole cannot be insulated for 1200 volts.

3. The major changes required would be in the car equipment. Few of our present motors and none of our control has insulation that would stand 1200 volts to ground. Some of this equipment could be re-insulated. But a large amount would have to be replaced. This is definitely true with respect to our new passenger trains. These motors and their control would have to be completely new. By using our present substation equipment in series 1200 volts would be obtained. This is now an odd voltage for the manufacturers and all equipment would be special.

The increase to 1200 volts would be considered for North of LeClaire Yards only. Six-Hundred volts would still be maintained South of LeClaire and East of Springfield. All mainline passenger equipment would therefore, have to operate on both 600 and 1200 volts. This adds some cost for both construction and maintenance.

4. Many minor changes would result such as; The increased hazard of 1200 volts in shops and when working on top of passenger or work cars. The present method of bonding through resistance would, for safety, have to be changed. Any 600 volt lighting as used in outlying stations or the use of 600 volt motors for track equipment would be eliminated. All trolley type crossing signals would have to be converted, where possible, to track circuit control.

5. This change when made would allow two converted D engines to move 3000 tons as proposed, but a large write off of replaced equipment would be involved. This would amount to thousands of dollars.

Estimated Cost

(1)	15 new 1000 KW Ignitron Substations	1,155,000
	Combine alternate existing stations	105,000
(2)	Reinsulate overhead trolley system	377,500
(3)	Convert new passenger equipment	450,000
	Convert freight locomotives (10)	600,000
	Convert old passenger cars (8)	240,000
(4)	Miscellaneous changes	50,000
		$2,977,500

Retain 600 volts D. C. System

The present 600 volt system is now overloaded. It has been for sometime. It has been built up over the years from a purely passenger and express carrying interurban. Second hand rotary converters were added as they became available on other similar roads that were being abandoned. No additional feeder copper has been added since 1925. There is no other electric railroad in the country that is moving as much tons per train mile on a 600 volt trolley.

To increase, in fact almost double, the tonnage per train (the present limit is 1750 tons) will require major additions in both feeders and substation capacity.

1. To make this change will require increasing the capacity of many substations, doubling up others and adding new ones. The present gaps are too long

for transmitting the amount of current required without excessive drop and loss. Such new equipment would be 1000 KW ignition rectifiers, automatically controlled. Where larger rectifiers replaced existing 500 KW rotary converters those released would be moved into other 500 KW stations and the two rotaries operated in parallel. To do this some buildings would have to be enlarged.

Naturally the greatest current required is when a train is being started. Were it possible to keep a freight train moving, after under way, a large part of the expenditure for added capacity would be unnecessary. Also if meeting points for freight trains could be definitely established or if the freight train could be kept moving when meeting a passenger train, additional capacity could then be placed only at yards, grades and fixed meeting points. With the many variables affecting railroad operation this, however, does not seem possible. To provide sufficient capacity for starting or meeting at any point along the railroad will require from twelve to fifteen additional substations.

2. The overhead system would have to be increased. We now have less than 900,000 CM in feeder capacity. The Chicago, North Shore and Milwaukee has 2,000,000 CM. While the North Shore does not operate the freight loads that we handle even now, their peaks when starting their longer passenger trains approximate ours. Our present trolley is 4/0. To make it possible to deliver the required current to the two D engines more copper must be added. This can be done either by using a larger New Haven section of trolley wire which is of 6/0 capacity or by stringing a second 4/0 trolley below the existing wire. We have done this in some locations where heavy current is now collected. At some locations, additional feeder capacity would also be required. This would be in short sections on the heavier hills.

3. To continue 600 volt operation, little change would be required in equipment. It would be necessary to arrange the D locomotives for multiple unit operation. No other changes need be made.

4. There would be no effect on other miscellaneous operations now using 600 volt apparatus.

5. This change would allow two D engines in multiple unit operation to move the desired 3,000 tons. There would be no write off if this method was used.

Estimated Cost

(1)	15 - 1000 KW Ignitron Substations	1,155,000
	Combined 2 - 500 KW rotaries in stations where the one now in service is too small	40,000
(2)	Install 2nd trolley wire under present wire	150,000
(3)	Convert D locomotives to multiple unit	15,000
(4)	Miscellaneous	25,000
		$1,385,000

With either of the above plans once adopted, operation for the forseeable future must be confined to electric propulsion. Otherwise the expenditure would not be justified.

The System Demand for power purchased would be increased without a corresponding increase in total current used. This may bring about a request from the Illinois Power Company for a revision of the power contract.

Under the terms of the present contract, most of if not the entire cost of the substation changes and additions would have to be borne by the Railroad.

We now have five Class D electric engines. By combining these for multiple unit operation, only two locomotives capable of pulling 3,000 tons would result.

Other types of available electric engines if combined would not handle this load.

Combined Electric and Diesel Operation in Multiple Unit

On roads where electricity is used as a source of propulsion power and it has been found necessary to operate trains which are too heavy for the electric engine alone, it has been the daily practice to use a Diesel engine as a "pusher" or to double head over certain grades. In such cases, engine men have been used on both locomotives.

The reason for this is that the characteristics of the two locomotives differ.

As the speed of the train reduces the electric engine tends to "hog" the load. It is, therefore, necessary for the motorman on the electric engine to "cut back" the controller of the electric unit.

To make possible multiple unit operation of electric and Diesel locomotives, an indication of the current being taken by the motors of both units must be available to the engine man of the leading unit. This should be electric.

The control of the speed of the Diesel generator from the leading unit is also necessary. General Electric engineers agree that this is possible, but that under the present conditions and with the special engineering required to develop such a control, they advise against attempting this now.

For the time being, therefore, the idea of continuing the use of our present electrical capacity, using Diesel units to augment this, must be discarded.

It is not now possible to obtain even a tentative estimate for such a control.

Combination Diesel Electric Units

This plan would eliminate the use of Diesel power through the objecting towns by having in addition to the Diesel control, either a complete or partial electric control.

A Diesel unit with a complete electric control would have to be especially designed to provide space for electric contactors, resistances, etc. Such a unit would develop full tractive effort at all speeds on either source or power. It is questionable if this is justified.

Complete full electric control would be of value only in case of failure of the Diesel unit or the desire for high speed operation through the towns. The latter is not desirable.

Our present 1,000 HP road switches have space for housing a simplified electric control which would allow operation with all motors in series. This would start a maximum train and move it up to 10 or 15 miles per hour.

Two such units coupled in multiple would move the tonnage desired. This was demonstrated during the Spring floods.

There are two 1600 HP locomotives considered as standard equipment by the General Electric Company. One has four axles and one six. Neither of these has the weight on drivers to start the desired train under all conditions.

To use two 1000 HP units electrically would require increasing the sub-station capacity at only the 5 or 6 points where operation through towns was involved. Electrical equipment for this increase could be obtained by releasing equipment from those stations which would not be required for electric passenger trains only.

This plan would release the D engines for other use, replacing older equipment.

It is probable that some of the electrical equipment released from these engines could be used in additional Diesel combination units later.

This plan will cost less than the one involving increased capacity at 600 volts. It, however, brings up the comparative cost of operating and maintaining Diesel and electric equipment in freight service. It is possible that this difference might justify a higher first cost. These figures should be available in our Accounting Department.

Such a change over could be made gradually after the power supply had been increased. One unit at a time could be purchased until our requirements had been supplied.

There would be a minimum of retirement later if the restriction on Diesel operation was lifted.

This plan would require the conversion of all trolley contact signals to track circuit, except those located in the towns where the trolley would be used.

The following estimate is made on the basis of two 1000 HP road switches coupled together for multiple unit control on either electric or Diesel power.

Estimate with complete electric control

(1)	6 - 1000 HP road switches at $189,800	$1,138,800.00
(2)	Increase capacities at Morton, Lincoln, Virden, Carlinville and Gillespie	30,000.00
(3)	Convert trolley contact signals at Worden, Elkhart, Walnut, Cash, Herberger at $3000	15,000.00
		$1,183,800.00

Estimate with simplified electric control

(1)	6 - 1000 HP road switches at $135,550	$ 813,300.00
(2)	Increase capacities at 5 substations	30,000.00
(3)	Convert 5 trolley contact signals	15,000.00
		$ 858,300.00

Straight Diesel Operation

Were it not for the objection raised by a number of towns through which we operate, we would probably use straight Diesel operation without much question.

The investment costs would be less. The equipment would be standard and could also be salvaged and it would correspond with other equipment already in service, thereby eliminating duplication of repair parts.

If at some future date passenger service was entirely abandoned, the use of straight Diesel locomotives would allow the entire electrical system to be removed.

If this type of equipment was used, all trolley contact signals would have to be changed to some other type or removed. Other than this, no changes would be necessary.

In case such use was possible, the costs below are given for comparative purposes and in order to round out the entire picture.

A comparison of maintenance and operating costs for the straight Diesel as compared to the straight electric locomotive, should be considered before adopting this or any other type of new equipment.

Estimated Cost

(1)	6 - 1000 HP road switches at $114,800	$ 688,800.00
(2)	Convert all trolley contact signals LeClaire to Peoria $27,000	27,000.00
		$ 715,800.00

TO SUMMARIZE: It is assumed that the electric system will be retained for passenger trains. In none of the following has consideration been given to the requirements for servicing Diesel equipment. If train lengths are materially increased, it would be advisable to eliminate as many stops as possible. Automatic interlocking should be considered for Benld, Gillespie, and Morton. It would also be advisable to consider the installation of communications between the engine and caboose.

First - The plan for raising voltage apparently costs more than can be justified. There is also the problem of the large write off.

Second - To increase the capacity at the present voltage involves an expenditure that can be justified only if electric operation is continued indefinitely, and operating economies offset higher first cost.

In either of the above plans, if abandonment ultimately occurred, there would be little sale for the equipment released.

Third - While the plan for combining electric and Diesel operation would have the advantage of a possible step by step increase in train tonnage, and would keep in service all of our present freight locomotives, it can not be developed under the present emergency.

Fourth - If it is essential that electric operation be continued through the limits of certain towns, the purchase of Diesel locomotives with simpli-

fied electric control, with required capacity to pull this tonnage through these towns, seems to offer a favorable solution. This development could be made gradually, it would require a minimum of additional electrical substation capacity and would have a salable value at any time in the future.

The disadvantage of this plan is that it eliminates the use of our present electric freight locomotives on these trains. Some of the older ones could be retired and others used for local freight.

The comparative cost of electric and Diesel operation on a ton mile or train mile basis, should have considerable weight in deciding between this plan and plan two above.

Fifth - Straight Diesel operation for freight has merits from the investment standpoint.

If the difference in cost between this and other practical plans was used to reduce or eliminate the objections by the towns, it might be the logical solution. If, however, electric passenger service is to be retained, this plan makes no use whatever of the investment in the electric system. The comparable cost of operation is also of importance.

All of the above has been based on the characteristics of the present system, both physical and operational. No large increase in total tonnage handled has been assumed. To reduce the cost of handling our present tonnage has been the prime consideration. No thought has been given to the method of financing any of the suggested changes.

When considering any of the above plans, it seems necessary to point out that with the present tonnage of freight being moved and assuming that the tons per train can be increased to 3000, it should be possible to eliminate two freight trains per day in each direction between LeClaire and Peoria, 151 miles.

The present crew cost for D locomotives is $78.30 for a trip. Two round trips totals $313.20. If this saving was made every day of the year, it would amount to $114,318.00. Using 13% as the necessary return to cover all charges, then an expenditure of only $879,370.00 could be justified.

Illinois Terminal Railroad Company

Progress Report

1970

Illinois Terminal Railroad Company

E. B. WILSON
PRESIDENT

710 N. TWELFTH BOULEVARD
P.O. BOX 7282
ST. LOUIS, MO. 63177

"The Road of Service"

To our Valued Customers:

Soon after becoming President I visited our customers from coast to coast to renew old acquaintances and make new ones. During these visits several promises were made in connection with improvements I expected to make within the first year, both in the physical plant and in the service product.

The year 1969, while not profitable, proved to be one of progress for our company. As the photographs attached will attest, considerable expenditures were made for equipment and upgrading of property. These pictures are offered as evidence of our sincerity in attempting to provide the best possible service. It is acknowledged that we have much further to go before it can be truly said "There is no finer railroad". However, I know of no other transportation company which in one year committed over 80 percent of its total gross revenue to capital improvements as we did.

Major outlays were made for 13 new diesel locomotives, 300 freight cars, 15.5 miles of continuous welded rail and extensive remodeling of our largest train yard. Total costs exceeded $8,000,000. Late in the year a complete change in our terminal operations at Peoria, Illinois was made which is effectively reducing delays previously experienced.

Certainly our short-comings are many, but they are fewer than last year and will be even less next year. This too I promise.

Respectfully,

E. B. Wilson

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RAILROAD
ILLINOIS TERMINAL
COMPANY

VIABILITY EVALUATION

of the

ILLINOIS TERMINAL RAILROAD

St. Louis, Missouri

June 11, 1979

VIABILITY EVALUATION

of the

ILLINOIS TERMINAL RAILROAD

St. Louis, Missouri

June 11,1979

June 7, 1979

Mr. Walter J. Cassin, President
Illinois Terminal Railroad
12th & Delmar Streets
St. Louis, Missouri 63101

Dear Walter:

The accompanying examination of the viability of the Illinois Terminal RR shows that:

1. Realistic operating changes and track upgrading/construction projects are achievable over the next three years which, if authorized and implemented promptly, will lead to a viable operating property, with return to positive net income sufficient to meet or exceed fixed charges in 1981 and subsequent years;

2. The railroad's cash flow is presently tenuous. Return to viable operation will require cash infusion, mainly to support critical track upgrading projects, totalling between $5.0 million and $6.7 million, approximately as follows (1979 dollars in thousands):

1979	$1,800	-	$2,650
1980	2,850	-	3,300
1981	350	-	750
	$5,000	-	$6,700

3. The initial reasons the Illinois Terminal was acquired in 1954 by the original owners must be reviewed. Each owner must determine whether continued participation is compatible with that owner's current plans, and further determine its willingness to accept the financial risk of supporting the Illinois Terminal in the short term. Alternatives for funding IT's cash shortfall include:

   A. Cash advances by owners

   B. Refinancing of First Mortgage

   C. Second Mortgage issue subscribed to by owners

   D. Bank loan guaranteed by owners

   E. Recapitalization by stock issuance

F. 4-R Act preference share funding or guaranteed loans. (Would probably require further guarantee by owners.)

G. Refinancing of IT equipment obligations

H. Shipper loans to be repaid based on traffic shipped

4. Likely approaches to changes in IT ownership are:

A. Sale to major carrier(s), whether current owners or other, with the IT system either merged or operated as a subsidiary according to whichever plan will lead to expedient ICC approval.

B. Sale to a non-railroad owner such as a major shipper or equipment leasing firm, with continued IT operations as a Class II carrier.

C. Sale to employees, with continued operation as a Class II carrier.

It is emphasized, here and in the report, that the railroad must continue to receive positive direction and responsible financial guidance, regardless of any concurrent plans for change in ownership, in order to avoid confusion born of uncertainty about the future.

It is also emphasized that 1979 dollars are used for future years in the study because no reliable means is known for adequately estimating rates of inflation. To the extent that actual cost inflation rates exceed those of revenues, the cash flows in the report could be less favorable than shown even though great care was taken to keep all estimates conservative.

During the conduct of this study, all areas of operation and activities on the IT were observed, numerous conferences were held, problems identified, and reasonable courses for future action were agreed upon. Departments were examined to insure the plans of each were consistent with the collective best interests of the railroad as a whole.

Throughout the preparation of the study, the spirit, dedication, and cooperation of Illinois Terminal people was outstanding. I want to express special appreciation to:

Messrs. S. J. Anthony
J. M. Beirne
R. A. Gentzel
L. B. Rudloff
E. T. Walker

And to Juva, Gloria, Donna, and Judy who supported us so graciously, go my sincere thanks. Finally, the substantial assistance provided by IT retirees W. A. Nelson and E. L. McKinzie, by officers of proprietary lines, and by W. G. Richmond, is gratefully acknowledged.

Yours very truly,

Wilburn R. Allen

I. INTRODUCTION

A. Nature and Scope of Study

1. The purposes of this study are:

   a) Determine whether the Illinois Terminal Railroad (IT) can operate in future years with a sustained fixed charge coverage of at least 1.0 given a plausible operating strategy and justifiable fixed plant improvements.

   b) Determine whether IT system should continue to serve the same territory as at present, or to what extent the system should be reduced in size to achieve greater financial strength in terms of fixed charge coverage.

   c) Recommend plans or changes which will be desirable given that IT is judged to be a viable concern in a) and b) above.

   d) If IT does not appear viable in either present or altered form, recommend changes in corporate structure which would serve the best collective interests of the shipping public and IT's owners.

2. This analysis has been prepared by IT officers and staff under the direct supervision of W. R. Allen, Consultant, who is responsible for the report's content and conclusions. Specialists employed by IT-owner lines in the fields of transportation, maintenance of way, maintenance of equipment, data processing, and accounting have been consulted during the study to supplement evaluations made.

B. Background

1. The viability of the IT is being examined because, while the company's financial performance improved substantially between 1969 and 1974, it subsequently declined to the point of major loss in 1978:

Year	Revenue (000's)	Income (Loss) Before Taxes (000's)	Percent-Income (Loss) to Revenue
1969	$ 10,357	$ (383)	(3.7)
1970	11,586	75	0.6
1971	12,355	1,125	9.1
1972	12,390	835	6.7
1973	14,632	641	4.4
1974	17,451	1,729	9.9
1975	16,973	1,062	6.3
1976	22,430	1,073	4.8
1977	23,496	542	2.3
1978	24,805	(3,248)	(13.1)

2. IT has a relatively small fixed charge liability ($1.186 million in 1978) and its fleet of locomotives and cars is generally adequate and in good condition. The road operates on a total of 607 track miles including yards, about 45 percent of which is on trackage rights over other carriers, primarily Illinois Central Gulf (ICG), and Norfolk and Western (N&W). See map in Exhibit I. IT currently operates 34 regular switching and 9 road assign ments daily.

3. Several factors led to IT's unsatisfactory financial performance. Chief among these are:

a) Train- and Engine Men Paid Hours, both yard and road, remained fairly steady on a per load basis 1968 through 1973, but began to increase substantially in 1974. This unfavorable trend accelerated in 1977 and 1978:

Year	Total Carloads	T&E Paid Hours	T&E Hours Per Load	Year-to-Year Increase (Decrease)
1968	149,443	426,833	2.86	
1969	147,623	414,168	2.81	(.05)
1970	153,200	430,625	2.81	-
1971	140,124	379,879	2.71	(.10)
1972	130,014	377,868	2.91	.20
1973	138,813	395,617	2.85	(.05)
1974	140,315	423,085	3.02	.17
1975	123,040	411,268	3.34	.32
1976	142,525	481,115	3.38	.04
1977	135,541	522,059	3.85	.47
1978	129,544	569,605	4.40	.55

The same generally unsatisfactory pattern holds for T&E hours per revenue ton mile even though average revenue ton miles per carload have increased steadily on IT since 1968. Also, overtime paid has become a larger proportion of T&E compensation:

	Percent of T&E Compensation			
Year	Straight Time	Overtime	Const. Allow.	Total
1974	69.0	19.3	11.7	100.0
1975	70.5	18.7	10.8	100.0
1976	66.2	23.8	10.0	100.0
1977	65.8	23.5	10.7	100.0
1978	65.7	23.1	11.1	100.0

Owing to the disproportionate growth of crew time paid, T&E compensation has become a greater proportion of total IT payroll:

Year	T&E Share of IT Payroll
1974	36.5%
1975	36.9
1976	36.8
1977	39.6
1978	40.8

This problem is currently being addressed through rescheduling of switch engine assignments and closer operating supervision with the result that T&E hours per load have begun to decline:

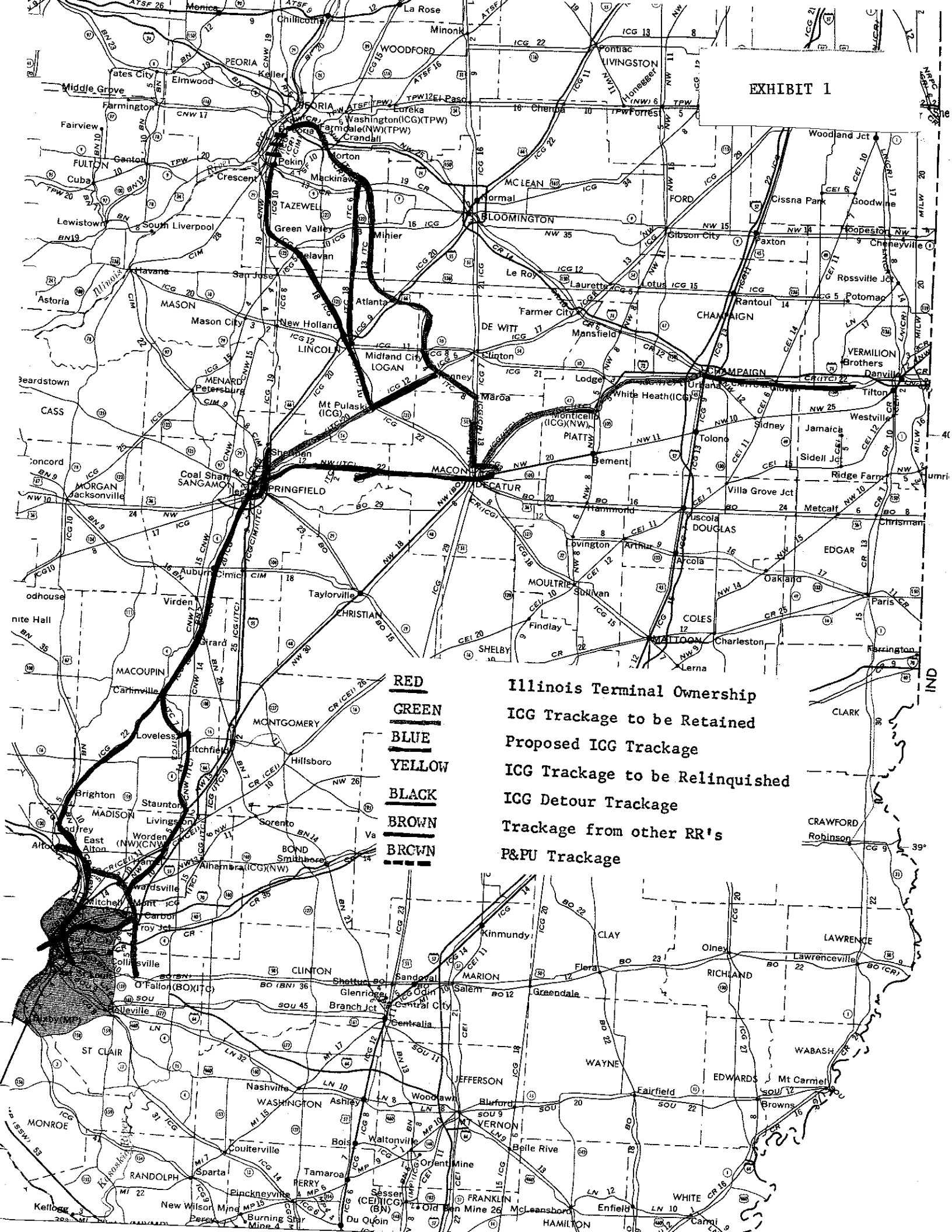
EXHIBIT 1
RED
GREEN
BLUE
YELLOW
BLACK
BROWN
BROWN
Illinois Terminal Ownership
ICG Trackage to be Retained
Proposed ICG Trackage
ICG Trackage to be Relinquished
ICG Detour Trackage
Trackage from other RR's
P&PU Trackage
PEORIA
PEKIN
FULTON
TAZEWELL
MASON
LINCOLN
LOGAN
MENARD
CASS
SANGAMON
SPRINGFIELD
MACON
DECATUR
MORGAN
MACOUPIN
MONTGOMERY
CHRISTIAN
MOULTRIE
DOUGLAS
COLES
CHAMPAIGN
VERMILION
DE WITT
PIATT
MC LEAN
FORD
LIVINGSTON
WOODFORD
MADISON
CLINTON
MARION
CLAY
RICHLAND
LAWRENCE
CRAWFORD
EDGAR
CLARK
ST CLAIR
WASHINGTON
JEFFERSON
WAYNE
EDWARDS
WABASH
HAMILTON
WHITE
FRANKLIN
JACKSON
RANDOLPH
MONROE
BOND
SHELBY
MACOUPIN
Havana
Astoria
Lewistown
Cuba
Fairview
Middle Grove
Yates City
Farmington
Elmwood
Chillicothe
La Rose
Minonk
Pontiac
Woodland Jct
Cissna Park
Goodwine
Gibson City
Paxton
Hoopeston
Cheneyville
Rossville Jct
Potomac
Rantoul
Tilton
Westville
Danville
Sidney
Jamaica
Tolono
Sidell Jct
Ridge Farm
Villa Grove Jct
Metcalf
Chrisman
Hammond
Bement
Monticello (ICG)(NW)
White Heath(ICG)
Urbana
Lodge
Mansfield
Farmer City
Le Roy
Laurette
Lotus
Normal
Bloomington
Chenoa
Forrest
Pontiac
Eureka
El Paso
Washington(ICG)(TPW)
Farmdale(NW)(TPW)
Crandall
Morton
Mackinaw
Crescent
Delavan
Green Valley
Mihier
South Liverpool
San Jose
New Holland
Mason City
Atlanta
Midland City
Clinton
Maroa
Mt Pulaski (ICG)
Sherman
Coal Shaft
Jacksonville
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Virden
Girard
Carlinville
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Alhambra(ICG)(NW)
Edwardsville
Mitchell
Carbon
Troy Jct
Collinsville
O'Fallon(BO)(ITC)
Belleville
Shattuc
Sandoval
Glenridge
Odin
Salem
Kinmundy
Flora
Olney
Lawrenceville
Greendale
Central City
Centralia
Branch Jct
Nashville
Ashley
Woodlawn
Bluford
Fairfield
Browns
Mt Carmel
Mt Vernon
Waltonville
Bois
Coulterville
Sparta
Tamaroa
Pinckneyville
Percy
New Wilson Mine
Burning Star Mine 4
Orient Mine
Old Ben Mine 26
Sesser
Du Quoin
Belle Rive
McLeansboro
Enfield
Carmi
Kellogg
Lerna
Charleston
Mattoon
Arcola
Arthur
Lovington
Findlay
Sullivan
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Farmdale(NW)(TPW)
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Morton
Mackinaw
Crescent
Delavan
Green Valley
Mihier
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New Holland
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Browns
Mt Carmel
Mt Vernon
Waltonville
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Carmi
Kellogg
Lerna
Charleston
Mattoon
Arcola
Arthur
Lovington
Findlay
Sullivan
Oakland
Paris
Farrington
Robinson

Period	T&E Hours Per Load
Year 1976	3.38
Year 1978	4.40
Jan 1979	5.23
Feb 1979	4.91
Mar 1979	4.33
Apr 1979	4.17

b) On-Line Car Detention has grown dramatically. Car hire records show that average foreign car days on line increased as follows:

Year	Average Days on Line
1976	4.82
1977	5.54
1978	7.13
1979 (Jan.)	10.27
1979 (Feb.)	8.77
1979 (March)	8.67

This impacts IT's Net Rents account both in foreign car payables, and in receivables forfeited due to on-line detention of system cars. Expanded car turn times caused by the added detention led directly to lost loading. According to Marketing Department officers, the bulk of IT's traffic decline has been due to recent poor service and inability to place sufficient cars for loading, rather than a lack of available traffic.

c) Derailments also increased dramatically since 1976:

Period	Average Derailments per Month
Year 1976	36.4
Year 1977	44.6
Year 1978	50.5
1st Qtr 1979	53.0

According to FRA figures for 1976, IT had 52.9 accidents per million train miles compared with a national average of 13.2. Over one-half of IT's recent derailments were found to be track related.

4. The principal causes of these problems have been identified as:

a) Management, particularly in the Operating and Engineering Departments. Personnel changes in these and related areas were made in February, 1979, and reversal of the unfavorable trends in transportation are evident.

b) Deteriorated track condition:

i IT-owned segments, especially yards, the Peoria Secondary line and the A&E line between Alton and Madison, Illinois, have suffered long-term deferred maintenance.

ii Foreign trackage in poor condition includes ICG between Decatur and Maroa, Illinois, between Decatur and Champaign, Illinois, and previously between Mont and Springfield, Illinois.

c) Shifting of traffic mix to greater proportion of on-line local moves, especially grain products to Alton-Granite City Port area where IT yard facilities are currently inadequate to efficiently handle volume of cars, resulting in more switch engine hours for a given level of car loading than would otherwise be necessary.

d) Loss of bridge at Mackinaw, Illinois, in August, 1977, forcing costly detour of trains to and from E. Peoria, pending completion of upgrading work on Peoria Secondary line which by-passes the destroyed bridge.

e) Loss of use of McKinley Bridge over Mississippi River in November, 1978, owing to deteriorating bents on approach structure, forcing detour over TRRA Merchants Bridge.

f) Extreme winter weather, and spring flooding during last three years, particularly in 1979.

II. DETERMINATION OF VIABILITY

A. The approach used in this analysis is to establish whether, within a 5-year period (i.e., by 1983) it would be possible to make physical and operational changes sufficient to generate an income statement with fixed charge coverage of at least 1.0, and whether an associated cash flow plan can be established to satisfactorily fund the required track work within the period.

Principal summary figures are included in text or as exhibits in this section, and additional back-up information appears in Section IV, organized according to major departments. A complete detail file supporting all numbers presented in this report is available separately for inspection. 1979 constant dollars are used for future years throughout this study because no reliable basis is known for estimating rates of inflation.

B. A full ICC-basis income statement for the 5-year period 1979 through 1983 appears as Exhibit 2 and shows that IT would, because of extensive operating expense (O.E.) track work, suffer deficits in 1979 and 1980, but would have positive net income beginning in 1981:

	1978	1979 dollars (000)				
	Actual	1979	1980	1981	1982	1983
Net Income (loss)	$(3,339)	$(2,091)	$(1,466)	$293	$1,322	$2,181
Fixed Charge Cov.	(1.74)	(.61)	.01	1.09	1.68	1.99

From an income statement point of view, IT is judged a viable concern because:

a) the market available to the railroad is growing, and is long term in nature,

b) it is physically possible to effect track improvements and construction within 5 years that will permit a satisfactory and marketable transport operation, and,

EXHIBIT 2

INCOME STATEMENTS - 1979 through 1983
(Actual for 1978 and projected for years 1979 through 1983, in 1979 dollars - 000's)

	Actual 1978	1979	1980	1981	1982	1983
Operating Revenues	$24,805	$28,230	$28,773	$29,631	$29,705	$29,960
Operating Expenses:						
Way and Structures	4,464	6,314	5,858	5,332	4,807	4,716
Equipment	5,683	5,257	5,489	5,492	5,408	4,721
Transportation	13,663	14,700	14,306	13,824	13,648	13,626
General and Administrative	3,215	3,239	3,203	3,203	3,203	3,203
Total Operating Expenses	27,025	29,510	28,856	27,851	27,066	26,266
Net Operating Income (Loss)	(2,220)	(1,280)	(83)	1,780	2,639	3,694
Other Income (Expense)	158	487	105	105	105	105
Income (Loss) Before Fixed Charges	(2,062)	(793)	22	1,885	2,744	3,799
Fixed Charges:						
Interest on Funded Debt and Capitalized Lease Obligations	1,181	1,293	1,542	1,730	1,632	1,901
Other Fixed Charges	5	5	5	5	5	5
Total fixed charges	1,186	1,298	1,547	1,735	1,637	1,906
Fixed Charge Coverage	(1.74)	(.61)	.01	1.09	1.68	1.99
Income (Loss) Before Income Taxes	(3,248)	(2,091)	(1,525)	150	1,107	1,893
Provisions For Income Taxes						
Current	91	-	-	-	-	-
Deferred	-	-	(59)	(143)	(215)	(288)
Total Provision for Income Taxes	91	-	(59)	(143)	(215)	(288)
Net Income (Loss)	$(3,339)	$(2,091)	$(1,466)	$ 293	$ 1,322	$ 2,181

c) net income from operations, on a long-term basis, will be sufficient to cover existing mortgage, and equipment fixed charges.

Exhibit 3 shows the projection of IT's railway operating expenses underlying this conclusion which, in turn, are based on the following principal elements:

1. Marketing (details in Section IV-B). Loads and revenue available to IT given that adequate service is provided (1979 dollars):

	1979	1980	1981	1982	1983
Total loads	134,960	137,262	140,815	141,400	142,500
Opr. Rev. (000)	$ 28,230	$ 29,170	$ 29,230	$ 29,700	$ 29,960

2. Transportation (details in Section IV-C) Yard and road assignments will, in total, change little but will be more effectively organized and will be operated with less overtime, 12-hour crew changes and somewhat fewer people:

	Regular Assignments		Overtime to Total T&E Dollars Paid	T&E Employees
	Yard	Road		
1978 Actual	34	9	23.1%	196
1979	33	9	20.8%	190
1983	32	8	14.4%	179

This will result in levels of T&E paid hours per load comparable with those achieved in the recent past:

	1974	1976	1978	1979	1983
T&E HRS/LD	3.02	3.38	4.40	4.20	3.54

It is not thought the future ratio will equal that of the past because of increasing average ton miles per load.

RAILWAY OPERATING EXPENSES

Line No.	ICC Acct. No.	Item	Actual 1978	Estimated - 1979 Dollars 1979	1980	1981	1982	1983
		Way and Structures:						
1	201	Administration	$ 197	$ 192	$ 192	$ 192	$ 192	$ 150
2	202	Repair and Maintenance, Roadway	2,864	4,976	4,441	4,041	3,690	3,696
3	203	Repair and Maintenance, Structure (included in Acct. 202)						
4	204	Joint Facilities - Dr.	891	602	703	697	697	697
5	205	Joint Facilities - Cr.	(362)	(625)	(565)	(565)	(565)	(565)
6	206	Casualties and Insurance	99	105	105	105	105	105
7	207	Other Expenses	692	989	907	787	613	558
8	208	Depreciation	83	75	75	75	75	75
9		Total Way and Structures	4,464	6,314	5,858	5,332	4,807	4,716
		Equipment:						
10	211	Administration	120	130	130	130	130	130
11	212	Repair and Maintenance, Machinery	37	35	85	35	35	35
12	213	Repair and Maintenance, Locomotives	1,052	975	1,355	1,355	1,236	1,030
13	214	Repair and Maintenance, Cars	2,057	2,183	2,203	2,144	2,144	2,144
14	215	Repair and Maintenance, Other Equipment	164	150	150	150	150	150
15	216	Joint Facilities - Dr.	43	50	50	50	50	50
16	217	Joint Facilities - Cr.	(71)	(80)	(80)	(80)	(80)	(80)
17	218	Equipment Rents - Dr.	3,895	3,579	3,500	3,270	3,250	3,250
18	219	Equipment Rents - Cr.	(6,118)	(6,379)	(6,652)	(6,406)	(6,439)	(6,777)
19	220	Casualties and Insurance	161	190	190	190	190	190
20	221	Other Expenses	3,446	3,532	3,462	3,367	3,367	2,950
21	222	Depreciation	897	892	1,096	1,287	1,375	1,649
		Total Equipment	5,683	5,257	5,489	5,492	5,408	4,721

			1978	1979	1980	1981	1982	1983
		Transportation:						
23	231	Administration	958	950	950	950	950	950
24	232	Road Crews	1,227	1,331	1,175	1,127	1,109	1,075
25	233/243	Fuel and Power	1,176	1,745	1,944	1,948	1,974	1,995
26	234	Other Road Expenses	455	501	501	501	501	501
27	235	Joint Facilities - Road - Dr.	107	118	118	118	118	118
28	236	Joint Facilities - Road - Cr.	(286)	(315)	(315)	(315)	(315)	(315)
29	242	Yard Crews	3,925	4,238	4,213	3,854	3,709	3,715
31	244	Other Yard Expenses	835	919	919	919	919	919
32	245	Joint Facilities - Yard - Dr.	162	178	178	178	178	178
33	246	Joint Facilities - Yard - Cr.	(283)	(311)	(311)	(311)	(311)	(311)
34	252	Specialized Services Operations	-	-	-	-	-	-
35	253	Administrative Support Operations	761	837	837	837	837	837
36	255	Joint Facilities - Other Transportation - Dr.	-	-	-	-	-	-
37	256	Joint Facilities - Other Transportation - Cr.	-	-	-	-	-	-
38	257	Loss and Damage Claims	109	140	130	120	120	120
39	258	Casualties and Insurance	1,466	1,375	1,370	1,355	1,340	1,325
40	259	Other Expenses	3,051	2,994	2,597	2,543	2,519	2,519
41		Total Transportation	13,663	14,700	14,306	13,824	13,648	13,626
		General and Administrative:						
42	271	Administration	372	390	390	390	390	390
43	272	Administrative Operations	1,468	1,475	1,475	1,475	1,475	1,475
44	273	Joint Facilities - Dr.	-	-	-	-	-	-
45	274	Joint Facilities - Cr.	(59)	(60)	(60)	(60)	(60)	(60)
46	275	Casualties and Insurance	10	10	10	10	10	10
47	276	Other Expenses	1,012	989	1,008	1,008	1,008	1,008

			1978	1979	1980	1981	1982	1983
48	277	Uncollectible Accounts	-	-	-	-	-	-
49	278	Property and Other Taxes	412	435	380	380	380	380
50		Total General and Administrative	3,215	3,239	3,203	3,203	3,203	3,203
51		Grand Total	$27,025	$29,510	$28,856	$27,851	$27,066	$26,266

Average car days on line will be reduced from 7.13 in 1978 to 5.0 in 1982 and 1983 (This compares with 4.82 car days on line in 1976). These changes will be possible due to:

a) rearrangement of yard assignments to reduce idle yard engine time, and closer operating supervision,

b) operation over Peoria Secondary rather than detours, and,

c) track upgrading and yard expansion, which is outlined next.

3. Maintenance of Way and Structure (details in Section IV-D)
Track improvements and construction necessary to support marketing and transportation estimates of operating expense:

a) Upgrading and regular maintenance work of IT-owned trackage including ties, ballast, surfacing, and some rail, primarily at:

- o Mains & yards in E.St.L-Alton-Edwardsville Triangle
- o Springfield
- o Decatur
- o Allentown

b) Capital upgrading and construction:

- o Peoria Secondary line between Maroa and Farmdale using both IT and IDOT funds.
- o Expansion of A. O. Smith yard, increasing capacity from 190 cars to 490 cars.

- o New more direct connections with ICG at Wood River.

c) Total cost of this work, including ongoing regular maintenance, will be (1979 Dollars in thousands):

	1979	1980	1981	1982	1983
O.E.	$4,976	$4,441	$4,041	$3,690	$3,696
Capital	3,003	1,560	1,000	-	-
Total	$7,979	$6,001	$5,041	$3,690	$3,696

4. Mechanical (details in Section IV-E)

a) Locomotive fleet will consist of 36 units for revenue service. Six GP7's will be sold, rebuilt to GP8's outside, and leased back. Thirteen SW units will be overhauled at IT Alton shops.

b) Car fleet will be increased by net of 288 cars by 1983 resulting from retirement of 212 cars, and addition of 500 cars as follows:

	Cars
Flat 100-ton	50
Gon 100-ton	50
Opn. Hop 100-ton	50
Cov. Hop 100-ton	150
Box (XM) 50' 70-ton	200
	500

c) It is assumed all new and rebuilt equipment will be leased and this is reflected in IT's fixed charge requirements.

C. On a cash flow basis, taking into account all probable sources and applications of funds, IT will have an accumulated cash short fall (beyond that of 1978) totalling $6.7 million through 1981, declining to a short-fall of $1.8 million as shown in Exhibit 4, and outlined below (1979 dollars):

	1978 Actual	1979	1980	1981	1982	1983
Net Year-End Cash Position (000's)	$(3,113)	$(2,642)	$(3,284)	$(774)	$1,671	$3,218
Post 1978 Accumulated Cash (Shortfall)	--	(2,642)	(5,926)	(6,700)	(5,029)	(1,811)

If favorable, but uncertain conditions occur as shown in the exhibit, the IT's cash position would improve somewhat:

	1978 Actual	1979	1980	1981	1982	1983
Net Year-End Cash Position with favorable Contingencies (000's)	$(3,113)	$(1,789)	$(2,828)	$(368)	$1,877	$3,424
Post 1978 Accumulated Cash (Shortfall)	--	(1,789)	(4,617)	(4,985)	(3,108)	316

These shortfalls are due primarily to MofW outlay necessary to insure long-term revenue achievement and operating cost reductions reflected in the Income Statement of Exhibit 2.

D. Summarizing the foregoing, IT is a basically viable railroad. Because of prior mismanagement and deferred maintenance the line will require cash infusions totalling between $5.0 million and $6.7 million over the period 1979 through 1981 (excluding interest on infusion, if any), in order to sustain the operation as presently structured.

Possible sources for all or part of the needed cash would be:

a) Payment by others for cost of A. O. Smith Yard expansion. This would reduce IT's cash shortfall by $2.5 million.

EXHIBIT 4

STATEMENT OF CASH POSITION 1979 THROUGH 1983
(Actual for year 1978 and Projected for Years 1979-1983 in 1979 Dollars - 000's)

	Actual 1978	1979	1980	1981	1982	1983
Financial Resources Provided By:						
Net Income (Loss)	$(3,339)	$(2,091)	$(1,466)	$ 293	$ 1,322	$ 2,181
Depreciation and Amortization	984	967	1,171	1,362	1,450	1,724
Capitalized Lease Obligations	-	2,229	8,985	1,561	6,240	-
First Mortgage Released Property	779	450	-	-	-	-
IDOT Grant	-	1,250	-	-	-	-
Missouri Pacific Rail Exchange	-	854	-	-	-	-
Sale of 6 GP-7 Locomotives	-	360	-	-	-	-
Proceeds from sale and salvage of property	279	200	200	200	200	200
Other - Net	489					
Total	$(808)	$ 4,219	$ 8,890	$ 3,416	$ 9,212	$ 4,105
Financial Resources Used For:						
Property under Capital Lease	$	$ 2,229	$ 8,985	$ 1,561	$ 6,240	$ -
Additions and Betterments - Road and Equipment	704	3,003	1,560	1,000	-	-
Long-term Debt Reduction	1,601	1,629	1,629	1,629	1,301	887
Total	$ 2,305	$ 6,861	$12,174	$ 4,190	$ 7,541	$ 887
Increase (Decrease) in Working Capital	$(3,113)	$(2,642)	$(3,284)	$(774)	$ 1,671	$ 3,218
Contingent Items Not Included Above:						
McKinley Bridge "B" Bond Interest		$ 78	$ 156	$ 156	$ 156	$ 156
Sale of Land		750	250	200		
Beneficial Effects of Incentive Per Diem on Gondolas		25	50	50	50	50
		$ 853	$ 456	$ 406	$ 206	$ 206
Increase (Decrease) in Working Capital with Above Contingent Items		$(1,789)	$(2,828)	$(368)	$ 1,877	$ 3,424

b) Cash advances by owners.

c) New bond issue subscribed to by owners or others.

d) 4-R Act preference share funding or guaranteed loans. (Would probably require further guarantee by owners.)

e) Refinancing of IT equipment obligations and/or First Mortgage.

f) Shipper loans to be repaid based on traffic shipped.

g) Bank loan, probably guaranteed by owners.

h) Stock issuance.

If it were possible to borrow, say, $6.1 million at an 11% annual interest rate, structure of loan might be as follows:

a) Loan received in segments:

1979	$2.65 million
1980	2.65
1981	.80
	$6.10 million

b) Term of loan - 14 years (through 1992)

c) Repayment deferred until 1983, then annual installments of $1.3 million could be made which would be within IT's financial ability to handle.

If no practical way emerges to fund IT's cash shortfall, or if owners decide not to arrange funding of the shortfall, restructuring of the corporate entity will be unavoidable.

III. ALTERNATIVES AND RECOMMENDATIONS

A. Continued operation of IT in present form assuming cash short fall is funded, has the following generally favorable aspects.

1. Inherently viable operation, as discussed in Section II, but fragile cash flow. Attempts to change corporate structure would be time consuming, and resulting uncertainties would increase danger of financial failure.

2. Retention of multiple carrier service to major Central Illinois cities is strongly desired by shippers, and state and federal political bodies.

3. Relatively favorable labor climate and agreements. Strong morale among IT officers, staff, and field forces.

4. Car and locomotive fleet relatively new and well maintained.

5. During the past 21 years, IT has twice recovered from serious financial slumps; those occurring in 1958 and again in 1968-69. In both cases recovery was accompanied by written studies which focused management attention on critical problems.

Unfavorable aspects include:

1. Current management is competent and enthusiastic but several key individuals are new in present positions.

2. Successful turn-around of IT is dependent upon cost effective execution of track rehabilitation and expansion on timely basis. IT personnel have had limited exposure to program work of this scale, even taking into account current work on the Peoria Secondary Line.

3. Operation between E.St.Louis area, Peoria, and Decatur is circuitous. CNW operates direct to Peoria and N&W has direct line to Decatur.

4. The value of a correctly functioning Management Information System on the IT is not generally understood by field forces. Improper and incomplete data input is a current problem, but can be corrected with concentrated effort.

5. General office overhead, while not excessive, could be reduced if IT were not operated independently.

6. Existence of IT, as viable concern, does not appear to be of any particular benefit to owner lines.

B. Reduce IT System. During the course of this study, the following four outlying segments of IT's operation were scrutinized for profit-worthiness: (Work is continuing on other segments.)

1. McKinley Bridge line between McKinley Junction and St. Louis. An avoidable cost evaluation shows the line is marginally profitable using the current TRRA detour over Merchants Bridge and would be somewhat more profitable if the approximately $500,000 repair cost for McKinley Bridge approach were amortized over 10 or more years and operations resumed over that route. Nevertheless, the following considerations suggest caution is strongly warranted before committing to this expenditure:

   i IT's tariff structure would not be impaired if service to St. Louis is continued using detours.

   ii Traffic over this route, while currently profitable, is declining and may not remain remunerative over the 10 year period mentioned above.

iii It is not anticipated that other major bridge-related repair costs would become necessary over future years, but unforeseen problems could certainly involve substantial cost because of the large amount of bridge and approach structure involved.

For the purpose of this study it is assumed therefore, that detour via Merchants Bridge will continue through 1983.

2. Decatur - Champaign line over ICG is currently out of service in places forcing detour over N&W Decatur to Lodge, Illinois, thence to Champaign via ICG Clinton Line. Avoidable cost analysis shows clear benefit in continuing to serve Champaign on trackage rights basis. The subject of possible acquisition and upgrading of ICG Decatur - White-Heath line for IT's sole use has not been evaluated at this writing.

3. Urbana-DeLong line is operated on Conrail trackage rights on irregular basis depending upon need. Rate structure is favorable to IT and revenue exceeds the avoidable cost of handling traffic. If operation between Decatur and Champaign became infeasible, however, continued operation to Delong would not be practical either.

4. Kenney-E.Peoria (Peoria Secondary) line is being upgraded in 1979 and will require 115-lb rail after 1983. (Entire cost of this work will be capitalized.) Assuming capital costs are amortized (10-year period for ties and surfacing; 20-year period for rail), avoidable cost analysis shows the line will clearly contribute to IT's net income. Owing to strong shipper and state government interest, there appears to be little likelihood that ICC permission to abandon the line would be granted (even if the line was not profitable).

C. Ownership Changes and/or Merger, joint or common management with TRRA or others must be considered in the light of prevailing agreements; and legal memos:

a) "Under date of November 11, 1954, an agreement, designated the basic agreement, was entered into between Illinois-Missouri (Now Illinois Terminal) and the subscribers to its capital stock, its potential proprietary companies, under which it was mutually agreed, among other things, that no subscriber would sell or transfer any share or shares of stock in Illinois-Missouri unless a written offer to sell such shares at par value had been made to and declined by Illinois-Missouri, and that company agrees to buy such shares promptly at that price if its financial condition so warrants, and also agrees thereafter not to reissue or sell any such shares. In case Illinois-Missouri declines or fails to purchase the stock it is to be offered to the stockholders in acquired proportions at the same price for a sixty day period." (Interstate Commerce Commission Finance Docket No. 18752, Illinois-Missouri Terminal Railway Company et-al purchase, etc.)

b) "The proprietary lines are presently burdened with two separate joint and several liabilities. First, the proprietary lines act as guarantors of the Illinois Terminal's contractual obligation to pay the city of Venice $250,000 per year rental for the use of the McKinley Bridge ..... which must be made until certain bonds issued by the City of Venice are retired; the bonds are scheduled to retire in 1988.... If and when the City bonds are retired, the rent will be $25,000 per year.

The second liability exists under an agreement dated Dec. 1, 1962, where the proprietary lines agreed to act as guarantors of the Illinois Terminal's First Mortgage Bonds. Approximately $5,353,000 (as of April 30, 1979) remaining outstanding..... The bonds are due December 1987." (Letter March 16, 1979 Subject Illinois Terminal Co., Dennis T. Rathman SLSF Ry.)

"Bankruptcy of the IT constitutes an act of default under the bond indenture. The trustee under the bond indenture may upon written request of the holders of 25% of the bonds declare the principal of the bonds then outstanding to be due and payable immediately including all bearers of interest upon all bonds. The trustee may also waive such default and the rights and remedies and powers of the trustee under the bond indenture. The bond holders in event of bankruptcy could rightfully claim that this provision requires the proprietary lines to pay the bond holders off immediately and become subrogated to the bond holder's interest in the bankruptcy estate." (Letter March 16, 1979, Subject Illinois Terminal Co., Dennis T. Rathman, SLSF Ry.)

c) "Any proposal for joint or common management would seem to be impractical because of competitive relationships which normally should exist between companies in the area in which they jointly serve." (Memo - Legal Matters for consideration in connection with possible merger or joint control of TRRA & IT)

In Missouri-Pacific's recent application to acquire the Rock Island line between Kansas City and St. Louis, this opinion was disputed, however.

The above statements do not preclude the possibility of joint management or control by a non-competitive concern or owner. They also do not preclude the possiblity of sale of owners' shares to another entity who possesses the financial responsibility to assume the obligation of the proprietary lines. Ownership by employees is also a realistic possibility.

D. Recommendations

It is recommended that ownership of the Illinois Terminal Railroad be reduced through either sale to, and absorption by, a major carrier or carriers (current owners or others), or through sale to an outside non-rail concern (or group of employees) and operated by them as a Class II railroad because:

a) even though IT is viable on a long-term basis, it is doubtful the present owners would be prudent in diverting funds from their own railroads to satisfy IT's cash requirements. At the present time, it appears only IDOT loans would likely be forthcoming without owner guarantees.

b) while considered valuable by shippers and state interests as an independent carrier, IT would not, even as a going concern, further the interests of IT's present owners.

It is emphasized that any change in ownership or structure must be accompanied by positive direction of the railroad's day-to-day business to maintain employee morale, effective service, and fiscal guidance. It is also emphasized that all conclusions in this report are based on figures expressed in constant 1979 dollars. Should cost rate of inflation exceed that of revenues, IT's financial position will be adversely affected.

IV. OVERVIEW BY DEPARTMENT

A. System Employment and Payroll

1. IT's average mid-month headcount increased since 1974, primarily due to increased T&E and MofW employment:

Category	1974	1975	1976	1977	1978	1983
Officers, Clerks, Misc.	165	170	168	167	161	160
M of W & Structures	72	73	126	92	112	86
M of E & Stores	91	78	89	82	84	88
Train- and Enginemen	153	151	171	183	196	179
Other Transportation	24	25	25	26	24	24
Total	505	497	579	550	577	512

The level of T&E employment (and associated T&E hours per load handled) is excessive and will be reduced. M of W employment on the other hand, must initially remain at or near current levels to support planned track construction and upgrading, but will decline as major work is completed. By 1983 total head count is expected to stabilize at about 512.

Payroll taxes, and health & welfare costs have increased from 20.7 to 22.1 percent of total payroll costs, between 1974 and 1978, although the proportion is expected to level off somewhat in future years:

	1974	1975	1976	1977	1978
Direct Payroll (000's)	$7,418	$7,867	$10,391	$11,004	$12,665
Payroll Taxes, H&W (000's)	1,541	1,649	2,767	2,479	2,795
Percent of Payroll	20.7	20.9	21.8	22.5	22.1

This, coupled with high employment levels led to a steadily increasing wage ratio:

	1974	1975	1976	1977	1978
Percent Total Payroll Cost to Revenues	51.34	56.07	56.43	57.38	62.33

In the paragraphs that follow, major anticipated changes aimed at reversing IT's fiscal condition are outlined by department.

B. Marketing

1. IT's traffic outlook is outlined here based on four viewpoints:

a) Total loads and revenue are expected to recover from the non-recession low of 1978, and increase moderately through 1983:

Year	Loads			Road & SW Revenue (000)	Rd & SW Revenue Per Load	Rev. per Load Year-to-Year Increase
	Road	Switching	Total			
1973	103,643	35,170	138,813	$14,131	$102	
1974	99,718	40,597	140,315	16,603	118	15.7%
1975	91,978	31,062	123,040	16,429	134	13.6
1976	104,051	38,474	142,525	21,713	152	13.4
1977	100,578	34,963	135,541	22,394	165	8.6
1978	94,829	34,715	129,544	23,587	182	10.3
1979	99,132	35,830	134,962	27,080	201	10.4
1980	101,385	35,877	137,262	31,021	226	11.9
1981	104,815	36,000	140,815	35,063	249	10.2
1982	105,000	36,400	141,400	38,199	270	8.4
1983	106,000	36,500	142,500	41,461	291	7.7

Switching traffic is expected to be fairly stable while road haul traffic increases. With the inclusion of normal incidental revenues (demurrage), this forecast will yield the following total railway operating revenues:

Railway Operating Revenue (000)

Year	Current Dollars	1979 Constant Dollars
1979	$28,230	$28,230
1980	32,616	28,778
1981	36,355	29,631
1982	39,568	29,705
1983	42,912	29,960

b) Commodity Mix is expected to show relative growth in coal and grain products accompanied by a decline in scrap. The other major commodites shown below will comprise about the same proportions of total loadings as in the past.

Major Commodity	Percent of Total Road Haul Loads									
	74	75	76	77	78	79	80	81	82	83
Coal	7.6	12.4	13.9	15.3	14.7	14.2	15.4	15.3	15.5	15.9
Food & Knd. Prod.*	22.5	23.1	25.3	24.4	26.8	26.7	27.0	27.3	27.9	28.0
Paper & Prod.	6.6	5.4	5.1	4.7	5.5	5.6	5.6	5.6	5.7	5.7
Chemicals	6.5	6.8	7.1	7.2	6.6	6.7	6.7	6.5	6.5	6.5
Petroleum Prod.	14.3	13.4	12.6	12.8	12.3	12.7	12.7	12.8	12.8	12.8
Primary Metal	7.9	5.8	5.5	4.8	4.3	4.0	4.0	4.2	4.0	4.1
Scrap.	13.4	13.2	11.5	11.0	11.0	11.5	10.6	10.3	10.2	10.3
Total of above	78.8	80.0	81.0	80.2	81.2	81.4	82.0	82.0	82.6	83.3
All other	21.2	19.9	19.0	19.8	18.8	18.6	18.0	18.0	17.4	16.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Grain products and soybeans

c) Traffic mix has changed substantially over the years, with a clear proportionate shift toward local moves (primarily grain products from Decatur to the Mississippi River) and away from intermediate (overhead) movements. It is expected this trend will continue. It is also expected that received traffic, primarily coal, will increase.

Year	Percent of Total Car Loads				
	Local	Forwarded	Received	Intermediate	Total
1964	17.3	25.1	38.7	18.9	100.0
1974	21.6	32.1	35.6	10.7	100.0
1975	22.3	28.3	39.9	9.5	100.0
1976	25.9	28.6	37.8	7.7	100.0
1977	25.8	30.3	34.7	9.2	100.0
1978	25.7	26.7	38.2	9.4	100.0
1979	26.0	27.5	38.0	8.5	100.0
1980	26.5	27.5	38.0	8.0	100.0
1981	27.0	27.0	38.5	7.5	100.0
1982	27.0	27.0	38.5	7.5	100.0
1983	27.5	26.5	39.0	7.0	100.0

d) Traffic flow on the IT is heaviest in the Alton/Granite City/Edwardsville triangle, and on line between the

Triangle, Decatur, Peoria and Springfield. These flows are diagramed in Exhibit 5 and in 1978 accounted for about 85% of IT's road haul loading:

Location	Percent of Road Haul Car Loads* 1978	Est. 1983
Triangle	45.5	47.5
Between Triangle, Decatur and East	21.2	23.0
Between Triangle, Peoria	11.7	13.5
Between Triangle, Springfield and Illiopolis	6.3	5.5
Total of above	84.7	89.5

*Single count of revenue loads, when "first sighted" as originations or interline receipts.

Of the four principal movements, the traffic flows in the Triangle, and between the Triangle, Decatur and Peoria are expected to increase as indicated by the percentages above.

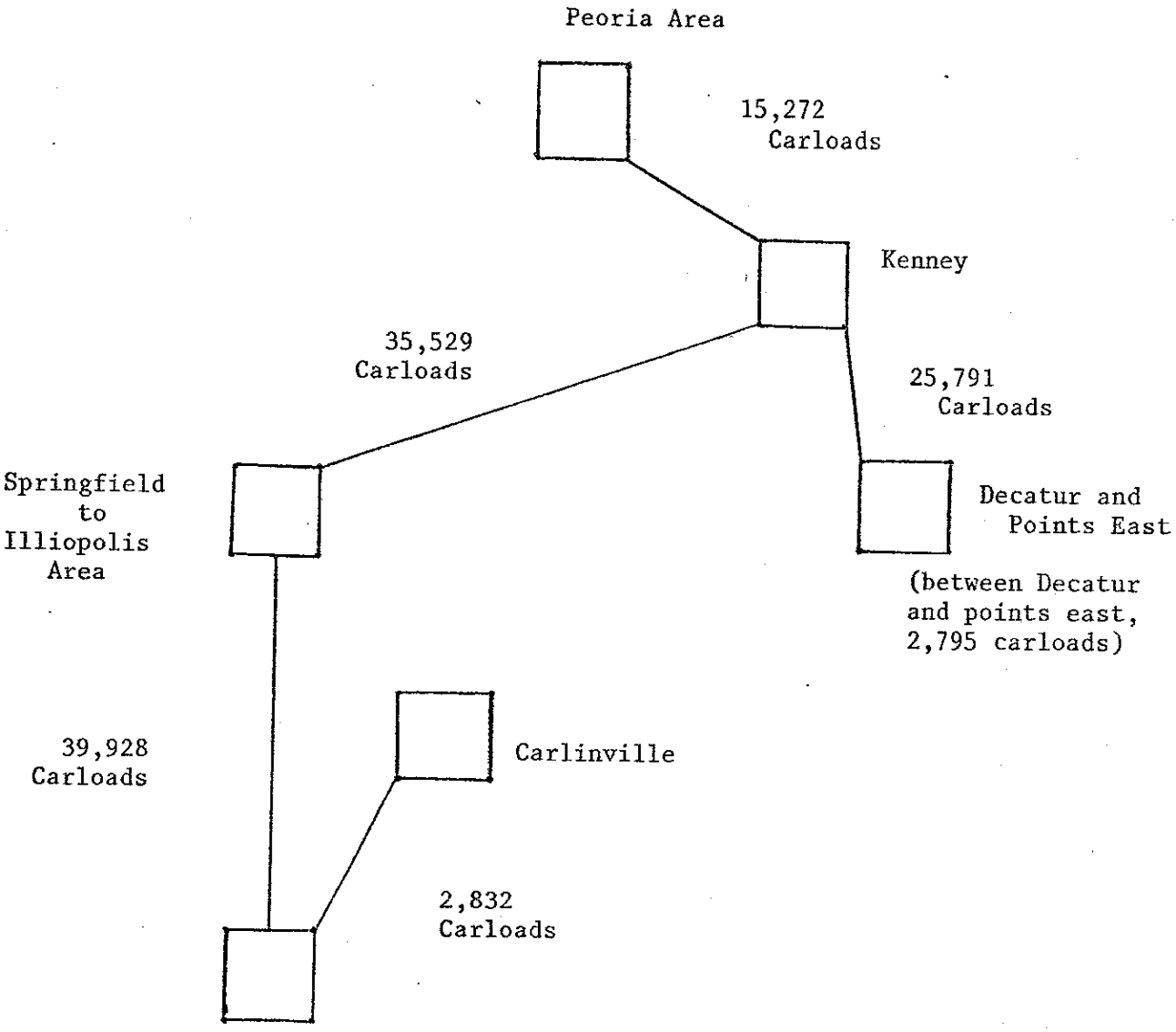
Switching loading is, and will continue to be, concentrated in the Triangle.

2. Effects of railroad mergers currently proposed have been included in the above traffic outlook. The anticipated effects are:

   a) BN/SLSF. Little detrimental effect on IT. Traffic involved would be between Alton or Peoria and SLSF most of which is either not readily divertable or would be protected by route and gateway stipulations in final merger approval. This would largely guarantee IT routes.

Exhibit 5

1978 TRAFFIC FLOWS BETWEEN AREAS



The number of carloads indicates the total number of revenue carloads moved between the primary areas of the IT system during 1978. The traffic levels indicate how this traffic would have travelled had the Peoria Secondary (the links between Decatur and Peoria) been in full service. In addition to the above revenue carload figures, 34,715 loads were handled by the IT in switching service. The large majority of these loads were switched in the E.St.L-Alton-Edwardsville Triangle.

b) N&W/SOU. Final merger approval is expected to require that present routes and channels of trade be maintained. IT will suffer some diversion of intermediate traffic, as well as forwarded and received business, which will become local to the merged system. As discussed earlier, however, intermediate traffic is already a small and declining proportion of IT buisness.

c) Chessie/SCL. Little impact anticipated.

Overall, it is thought that the current merger picture does not pose any significant threat to ITC.

C. Transportation

1. IT's operating plan is to accomodate increased traffic growth with less-than-proportionate increases in transportation expense by:

   a) exercising much closer operations supervision,

   b) reorganizing yard assignments to minimize umproductive time, and,

   c) expanding and upgrading trackage to reduce car handling in yards and reduce over-the-road travel times (track projects are detailed in Part D of this section)

   The E.St.L-Alton-Edwardsville triangle is the most concentrated area of IT's operations, accounting for 45% of all traffic handled, over 55% of T&E crew hours, over 50% of locomotives operated, and 60% of all planned track rehabilitation and capital construction costs.

2. Yard assignments will change only slightly during the 1979-1983 period. The growing traffic anticipated will be absorbed through better planning and by operating some assignments a greater number of days per week on a consistent basis:

	Regular Yard Assignments				
	4 Days	5 Days	6 Days	7 Days	Total
Early 1979	2	9	4	18	33
1983	3	6	3	20	32

Of these assignments, all but seven are in the triangle area (1979 and 1983). The remainder are in Springfield, Decatur and Allentown.

3. Road assignments in 1978 and 1983 are:

Train	Frequency (Days per Week) Early 1979	1983
100 McKinley - Springfield	7 days	7 days
101 Springfield - McKinley	7	7
102-3 Federal - Springfield Turn	7	7
202-3 Decatur - Springfield Turn	7	7
Decatur-Illiopolis Turn	6	6
East Local: Decr - DeLong	2	6
Monterey Mine - Granite City	not started	1
Allentown - Kenney Turn	not started	7
200 Springfield - Allentown	7	dropped
201 Allentown - Springfield	7	dropped
North Local: PSL	2	dropped
Total Regular Assignments	9	8
Extras	8/week	4/week

The decrease of total road assignments over the 1979-1983 period will result from:

a) startup of Monterey Mine coal move.

b) 200/201 and North Local dropped in favor of Allentown - Kenney Turn.

c) reduction of extras called.

4. Road and yard T&E hours paid per load handled will be reduced to pre-1975 levels owing to reduction of:

a) overtime

b) number of 12-Hour Rule crew replacements

c) terminal delays

This will produce T&E crew efficiencies comparable to those better-performance past years:

	T&E Paid Hours	Percent Overtime Paid Dollars	Total Paid Hrs. Per Load	No. of Employees Receiving Pay
1974	481,115	19.3	3.02	174
1978	569,605	23.1	4.40	217
1979	567,000	20.8	4.20	190
1983	505,000	14.4	3.54	179

5. Overall T&E payroll, based on the above, will be (1979 dollars in thousands):

	1979	1980	1981	1982	1983
Yard	$4,238	$4,213	$3,854	$3,709	$3,715
Road	1,331	1,125	1,127	1,109	1,075
Total T&E	$5,569	$5,388	$4,981	$4,818	$4,790

Changes in other transportation functions including dispatching, clerical, etc., are not contemplated here pending evaluation of reductions that may be possible with changes in computer systems. Nevertheless, it is thought that substantial saving (approximately 20% of 1978 levels) are reasonable goals in Accounts 244: Other Yard Expenses - Yard and Clerical, and 253: Administrative Support - Clerical Employees.

D. Maintenance of Way

1. Consistent with IT's overall operating plan, Engineering objectives are to provide and maintain a railroad plant (IT-owned portion) capable of accommodating the following time table speeds:

- o Maroa-Farmdale (Peoria Secondary): 25 MPH by January 1980.
- o McKinley-Alton via Edwardsville: 30 MPH by January 1981.
- o Granite City - Wood River: 25 MPH by January 1981.
- o Nearly all other IT-owned trackage: 10 MPH by January 1981.

2. Trackage rehabilitation and construction projects needed to achieve the operating plan, using IT and contractor forces, are (this schedule assumes go-ahead approval by July 1, 1979):

a) Operating expense items:

Project	Direct Labor & Material Costs*
1979	
Ties - T&E MP 22-29	$ 58,000
Granite City Terminal Lead ties, surfacing	180,000
Ties - A&E	51,000
Piling - A&E	65,000
Welded Rail A&E	718,000*
A.O. Smith Leads - ties, rail, relay, t.o.'s	55,000
Federal Yard Leads - ties, rail, surfacing	35,000
Piasa Street Lead - ties, rail, surfacing	110,000
McKinley Yard - ties, rail, t.o.'s, surfacing	115,000
McKinley Bridge - approach bents (Est. $500,000. Assume continue detour to St. Louis)	
McKinley Connections TRRA crossing	60,000

* $600,000 paid in prior years. All figures are in 1979 dollars.

Decatur Yard - drainage, ties, rail, t.o.'s	261,000
1979 Total	$1,708,000

1980

Ties T&E MP 8-18	$ 96,000
Ties A&E Granite City	18,000
Turnouts -115 lb A&E - part of rail work	100,000
AOS Existing Yard - ties, ballast	13,000
Federal Yard - ties, surfacing	135,000
Roxana Yard - ties, surfacing	→ 70,000
McKinley Yard - ties, rail	95,000
McKinley Connection - ties, rail, surfacing, diamonds	50,000
Wilds Yard Area - ties, rail	5,000
Springfield Yard - ties, rail, surfacing	74,000
Carlinville Line - ties	= 118,000
Decatur Yard and ADM Leads - ties, rail, surfacing	148,000
Peoria Line - sufacing	60,000
Wood River - diamonds	100,000
1980 Total	$1,082,000

1981

T&E - ties	$ 74,000 complete ?
AOS Existing Yard - ties, surfacing	13,000 complete ?
Federal Yard - ties, rail, surfacing	70,000 X in 1980
McKinley Yard - ties, rail, surfacing	40,000 X
McKinley Connections - ties, rail, surfacing diamond	100,000 ?
Wilds Yard Area - ties, rail	5,000 ?
Peoria Line - surfacing	~~60,000~~ /
Glover to DeLong - ties	38,000 ?
Illiopolis - ties	60,000 ?

Springfield Yard - ties		37,000
Decatur Yard - ties		40,000
Decatur Drainage Project		50,000
	1981 Total	$ 587,000

1982

Existing T&E - ties		$ 16,000
AOS Yard - ties, surfacing		13,000
McKinley Yard - ties		40,000
Wilds Yard Area - ties, rail		5,000
Allentown Yard - ties, surfacing		33,000
Springfield Yard - ties		37,000
	1982 Total	$ 440,000

1983

A.O. Smith Existing Yard - ties, surfacing		$ 14,000
McKinley Yard - ties		40,000
	1983 Total	$ 54,000

b) Capital Items

1979

MoPac Rail A&B		$ 228,000*
Borden - Illiopolis Expansion		130,000
Kenney Sidings - 2 @ 1 mile each		300,000
ICG Connection Wood River - Evans Ave.		85,000
Terminal Lead Granite City (A&B Portion)		3,000
Peoria Secondary - ties, surfacing, bridges		2,089,000
Culverts - Maryville		168,000
	1979 Total	$3,003,000

*All paid in prior years.

1980	
ICG Connection, W.R. - Ferguson Ave.	$ 60,000
Port Yard - 300 cars (begin)	1,500,000
1980 Total	$1,560,000

1981	
Port Yard - 300 cars (complete)	$1,000,000

NOTE: Some of above costs are recovered through joint facility charges.

3. Estimated MofW budget and capital cost (direct labor and material, or contractor cost, in 1979 dollars) to complete the work described in (1) and (2) above is (000's omitted):

	1979	1980	1981	1982	1983	5 years
Regular Maintenance	$3,268	$3,359	$3,454	$3,546	$3,642	$17,269
Rehab Projects	1,708	1,082	587	144	54	3,575
Total O.E.	$4,976	$4,441	$4,041	$3,690	$3,696	$20,844
Capital Projects	$3,003	$1,560	$1,000			5,563
Total - Way & Struct.	$7,979	$6,001	$5,041	$3,690	$3,696	$26,407

NOTE: O.E. total includes small amount of rail upgrading. None of the above figures include rail for Peoria Secondary Line. Timing of projects may be varied somewhat from year to year. However work described above may not be reduced in scope without impacting transportation expense and operating revenue figures. Of the rehab and capital work alone, about 60% will be in the Triangle in order to handle increasing activity in that area.

4. ITC MofW manpower requirements for rehabilitation, construction, and regular maintenance are: (excludes contractor forces)

Craft	1979	1980	1981	1982	1983
Section Laborers	135	115	95	69	51
Track Inspectors	4	4	4	4	4
Machine Operators	10	10	10	10	9
Bridge men	19	19	15	13	13
Signal men	4	4	4	3	2
Welders	4	4	4	3	2
Electricians	1				1
Supervisors/Officials	6	6	6	6	4
	183	162	138	108	86

Total mancount will decline as shown as major projects are completed.

E. Mechanical Operations

1. Principal mechanical facilities on IT are:

a) Alton-Federal: Three-track, 26,600 sq ft main shop six-car heavy repair building, 50-car heavy rip, locomotive fuel and service.

b) McKinley-Madison: Run-through spot car repair with 77-foot pole building, locomotive fuel and service.

c) Springfield: Small 9-car rip, locomotive fuel and service.

d) Decatur: Small 13-car rip, locomotive fuel and service.

e) Allentown: Locomotive fuel (tank truck service)

Fuel storage capacity is:

Federal	43,800 gallons
McKinley	67,500 gallons
Springfield	10,000 gallons
Decatur	20,400 gallons
TOTAL	141,700 gallons

This storage capacity is sufficient for current and planned operations. An additional 70,000 gallons can be stored in IT-owned tank cars if necessary as hedge against delivery delays.

Shop and servicing equipment is generally adequate except that fuel pumps are one-spot manually controlled with 35 gallons per minute supply. Upgrading to automatic shut-off control would save fueling time and spillage.

2. Locomotives:

a) IT owns or leases 20 yard and 17 road units, plus 1 added road unit on short-term lease. Average age of fleet is very low for road power, but high for yard units:

Model	Units	HP	Age @ 12/31/79	Owned/ Leased	Lease Expiration	Lease Cost per Unit
SW 800	1	800	28.7	Owned		
SW 1200	12	1200	24.0	Owned		
SW 1500	7	1500	9.8	Leased	3/25/85	$18,122
TOTAL SWs	20		19.3			
GP 10	1	1750	3.0	Leased	7/11/81	45,625
*GP 8	6	1600	0.5	Leased	(not established)	
GP 38-2	4	2000	2.5	Leased	7/01/92	38,398
TOTAL GP	11		1.5			
SD 39	6	2300	10.6	Leased	5/31/84	21,270
TOTAL UNITS	37					

Note: One additional 1500 hp GP 7 is under short-term lease until 12/31/79 at annual rate of $51,100.

*Assumes existing GP7's are rebuilt to GP8"s in 1979.

b) Locomotive maintenance force for 38 units totals 36 employees including General Superintendent-Equipment, shop supervision, and clerical, giving a maintenance ratio of .95 employees per unit. This compares favorably with other carriers as follows:

Road	Maintenance Ratio	Comments
ITC	.95	Includes supervision and clerical
BN	1.30	Excludes supervision, includes clerical
SLSF	1.30	Includes supervision and clerical
ICG	.85	Excludes supervision, clerical and remanufacturing employees
MP	1.07	Excludes supervision and clerical
N&W	.92	Excludes supervision, includes clerical

c) Utility of IT locomotives is also good. In 1978 availability averaged:

Road	94.5%
Yard	88.7
All Units	91.4%

Locomotives counted available on IT include only those units actually in transportation service. Units in shop, awaiting repair, dead in train, or out of service for any reason are counted bad order. Locomotive failures which keep a unit out of service 24 hours or more were acceptably low at .33 per unit per month in 1978. This figure has been adversely affected by six 25-year old GP 7's whose failure rates averaged 1.2 per unit per month during the same year. These units have become increasingly unreliable and are to be rebuilt. In late May one of the GP7's failed completely (crankcase explosion) and is out of service.

d) Major overhaul programs during next 5 years are expected to be:

i Road Units: Six GP 7 units are to be rebuilt by ICG to GP 8's in 1979. Financing will be on sale/lease back basis. Mileage on all road units is low; averaging about 50,000 miles per year.

ii Yard Units: Nine of 12 SW 1200's (1200 hp) will require major overhaul during the next five years including primarily:

- o renewal of electrical cabinet equipment and wiring

- o truck frame rebuilding
- o unit exchange of power assemblies
- o overhaul of air compressor
- o unit exchange of main generator and auxilliary generator
- o unit exchange upgrade of traction motors to D 57's

This work can be performed at IT's shops with the net addition of three apprentice employees, at a total direct labor and material cost of $97,000 per unit. Life of unit after overhaul will be about 12 years. Production rate will be about four units per year. The remaining 3 SW 1200's have received partial overhauls and will not require major work during the next 5 years.

In addition minor overhauls are planned for 4 of 7 SW 1500's (1500 hp) to follow the SW 1200 program. The remaining 3 SW 1500's have already been overhauled. Minor overhaul estimated cost is $45,500 and includes:

- o unit exchange of power assemblies
- o overhaul of air compressor
- o unit exchange of main generator and auxilliary generator

Life of minor overhaul is about 8 years.

e) Overall, anticipated changes to IT's locomotive fleet during next 5 years are:

Unit Number	Type	Date Built	HP	Number of Units	Major Changes Planned
801	SW 8	8/50	800	1	None
1201-12	SW 12	12/55	1200	12	Nine units to be overhauled
1501-6	GP 7	3/8/55	1500	6	Replace all 6 with rebuilt GP 8's
1509-15	SW 15	2/70	1500	7	Four units to be overhauled
2001-4	GP 38	6/77	2000	4	None
2301-6	SD 39	5/69	2300	6	None, except replace main generators and power assemblies as needed
1750	GP 10	1976	1750	1	None (Renew lease 7/81)
PCN 599	GP 7	1952	1500	(1)	Return to lessor 12/79
12/31/79	TOTAL			36	

Given that physical plant improvements are made as detailed in this paper, it does not appear that additional locomotives will be required for revenue service between the present time and 1983, although the addition of two slug units for use at the Granite City Port and on the E. Peoria-Allentown line appears to be warranted. It is intended that two additional units will be leased short-term for exclusive use in Peoria Secondary Line work-train service. The rental charges will be capatilized as part of the total PSL upgrading project.

3. Cars

a) Car Department employment is 51 persons, including supervision and clerical. Of these, 30 are located at the Alton office, yard and heavy rip facility, and 15 more are employed at McKinley yard and spot repair facility. The remaining 6 Car Department employees are located at Springfield and Decatur. As of April, 1979, IT had 2504 revenue cars consisting primarily of covered hoppers, box cars, and gondolas. The car fleet is relatively new, having an average age of 8 years, and bad order level is very low at 81 cars, or 3.2% of revenue fleet as shown below:

Type	Owned or Leased	Bad Order	% Bad Order	Approx. Average Age (yrs)	Cars in Assigned Service
Flat 50-ton	42	8	19.0	33	-
Flat 70-ton	45	-	-	7	2
Bulk H. 100-ton	50	-	-	1	50
TOTAL FLAT	137	8	5.8	13	52
Gons 50-ton	92	1	1.1	26	-
Gons 70-ton	98	2	2.0	13	-
Gons 100-ton	345	1	0.3	7	-
TOTAL GONS	535	4	0.7	11	-
Open Hoppers 70-ton	22	-	-	26	-
Cov. Hoppers 70-ton	45	1	2.2	16	17
Cov. Hoppers 100-ton	654	8	1.2	5	72
TOTAL COV HPRS	699	9	1.3	5	89
Box 40' 50-ton	58	1	1.7	9*	-
Box 50' 50-ton	472	16	3.4	8	-
Box 50' 70-ton	502	43	8.6	8	47
Box 60' 100-ton	2	-	-	11	2
All-Door	77	-	-	3	77
TOTAL BOX	1111	60	5.4	8	126
FLEET TOTAL	2504	81	3.2	8	267

Note: The above figures do not include shipper-owned cars which operate regularly over the IT.

* Includes 58 cars rebuilt in 1971

b) Heavy repairs are made at Alton with existing forces at the rate of about 7.6 cars per month which corresponds very closely to the rate at which IT cars are bad ordered for heavy repair. This means the present force should be able to maintain the current bad order level of 3.2% but will not be able to reduce it. In addition to regular heavy repairs, the following car projects are in progress:

i 100-ton gondolas--friction bearing converted to roller bearing because 6½ x 12" 100-ton friction bearings are no longer acceptable in interchange. Of 96 cars, 40 remain to be converted. Cars not yet converted are operated at 70 ton maximum capacity rather than being held out of service.

ii Box cars -- running board removal per FRA requirement. Of 134 cars, 43 remain to be worked.

iii Flat cars -- redecking for Fiat Allis and Parke Warehouse for machinery loading. Of 25 cars, 12 remain to be completed.

iv Plug-door box cars -- AAR now requires that all plug doors have a third upper crank arm assembly installed by January 1, 1981. IT has 170 plug door cars and it is expected all can be worked prior to the AAR deadline.

v U-1 wheel changes -- completed on all but 4 cars still off line.

vi FRA inspection -- system cars eight or more years of age. Summarized below are cars due inspection compared with probable completions with existing forces:

Date Due	Cars Due	Completion by Existing Forces	Shortfall	Accumulated Shortfall
12/31/79	876	93	783	783
12/31/80	350	136	214	997
12/31/81	245	116	129	1126
12/31/82	271	164	107	1233

Addition of four carmen to present force for FRA inspection work is the maximum increase practical and would lead to the following results:

Date Due	Cars Due	Completion by Expanded Forces	Shortfall	Accumulated Shortfall
12/31/79	876	200	676	676
12/31/80	350	275	75	868
12/31/81	245	245	-	868
12/31/82	271	271	-	868

It is assumed in this study that the above four men will be added in July, 1979, and that short-fall cars will receive FRA extensions rather than being held out of service.

c) Rehabilitation and rebuilding of cars is beyond the capability of IT shops, however IT has 129 50-ft 70-ton box cars approaching 15 years of age which could be rebuilt outside on a sale lease-back basis. The cars are covered by CSA's due to expire in 1981. An additional 143 box cars, built in 1972 would be good candidates for an OT 37-B outside rehabilitation program, also on a sale lease-back basis. These cars are covered by a CSA due to expire in 1982. Pending availability of suitable funding, all IT CSA's are being considered for refinancing and the above rebuild/rehabilitation projects could be included as part of the package. This work would significantly improve the utility of the box cars and, because of re-aging and/or revaluation, IT's car hire receivables would be favorably affected, particularly in that an IT XM box car spends about 75% of its time off-line.

d) Light running repairs are made at most all principal IT yards; the bulk of the work being at Federal and McKinley:

	Cars Receiving Running Repair - 1978		
	System	Foreign	Total
Federal	3446	1502	4948
McKinley	552	3192	3744
	3998	4694	8692

Plans are currently being made to increase the McKinley run-through spot-repair operation to two shifts per day to increase the amount of ARR billable work on foreign cars, and to make more complete running repairs to system cars. The Federal light repair track will be considered for upgrading to run-through spot-repair based on performance of the expanded McKinley operation.

e) Car fleet composition is expected to change according to current marketing plans:

i Flat Cars. 50-ton flats will decline owing to age-imposed retirement; they are used as substitutes for 70-ton cars where possible. 70-ton flats are used for implement and tractor loading at Springfield, Decatur and Peoria, which is significantly increasing. We estimate an additional 50 flat cars (70 or 100 ton) will be warranted for this traffic in 1981. 100-ton bulkhead flats are used in assigned pulpboard/lumber service; current fleet is sufficient.

ii Gondolas. 50-ton (41'6") gons are used for shipments of freight car castings. Current fleet is sufficient. Seventy- and 100-ton gons (52'6") are used for scrap and steel slab/steel bar loading. There is more of this traffic than IT's fleet can handle, but some of the shortfall has been made up with foreign gons. We expect,

however, that addition of 50 100-ton gons in 1982 will be warranted to maintain IT's share of this traffic.

iii Open Top Hoppers. Existing 70-ton cars will be retired during next two years owing to worn-out condition. Mill scale loading currently available to IT warrants the addition of 50 100-ton hoppers in 1980. It would be desirable to equip some of these cars with ballast doors so they may be effectively used in IT's upgrading projects.

iv Covered Hoppers. 70-ton cars will be retired in one to two years. Principal commodity carried, sand, does not warrant continued investment in the 70-ton cars. 100-ton covered hoppers are used primarly to haul grain, corn, and soybeans originated at Decatur moving to Mississippi River at Alton or Granite City, or to Gulf Coast ports. This traffic has grown continuously since 1969, and about 1000 additional private covered hoppers have been supplied by IT's two principal grain shippers to help handle the volume. We believe, however, that IT will be warranted in acquiring about 150 additional cars in 1982 to replace returned or destroyed cars and to accommodate forecasted traffic.

v Box Cars. 40-foot cars no longer serve desirable markets on the IT and will be retired when expiration of lease can be

arranged (probably by 1980). 50-foot 50-ton boxcars have a current, but declining market in scrap paper and certain general merchandise. Of the 472 cars now in service 282 will be retired upon lease expiration in January, 1983. The remaining 190 cars will be retired in June, 1984. IT has 502 50-ft 70-ton box cars, 104 of which will be retired in 1980 and of which 28 will be under lease through (and beyond) 1983. The remaining 370 cars are under CSA's most of which expire in 1981 and 1982.

We believe a sale/rebuild/lease-back arrangement for the CSA cars will be desirable from both marketing, financing and car hire viewpoints. Two hundred new 50-ft. 70-ton XM box cars are on order to satisfy an ICC settlement that will allow IT to use earmarked IPD funds for lease of the cars. Sale/leaseback cars placed in XM service would also help absorb accumulated IPD funds according to current ICC rules. The majority of IT's box fleet is in general service. On-line loading for these cars is primarily plupboard and corn starch, which is steady or growing in volume. 60-foot and all-door cars are in special assignments; current fleet is sufficient.

Based on the above, new additions to IT's car fleet through 1983 will be:

Type	1979	1980	1981	1982	1983	5 Years
Flat 100-ton			50			50
Gon 100-ton				50		50
Opn. Hop. 100-ton		50				50
Cov. Hop. 100-ton				150		150
Box 50' 70-ton	200					200
TOTAL	200	50	50	200		500

This in turn will lead to the following overall revenue car fleet:

Type	Year-End 1979	1980	1981	1982	1983
Flat 50-ton	42	38	34	30	26
Flat 70-ton	45	45			
Flat 100-ton Bulk H.	50	50	100	100	100
TOTAL FLAT	137	133	134	130	126
Gons 50-ton	92	85	80	75	70
Gons 70-ton	98	98	98	98	98
Gons 100-ton	345	345	395	495	495
TOTAL GONS	535	528	573	668	663
Open Hoppers 70-ton	22	-	-	-	-
Open Hoppers 100-ton	-	50	50	50	50
TOTAL OPEN HPRS	22	50	50	50	50
Cov. Hoppers 70-ton	45	45	-	-	-
Cov. Hoppers 100-ton	654	654	804	804	804
TOTAL COV HPRS	699	699	804	804	804
Box 40' 50-ton	58	58	-	-	-
Box 50' 50-ton	472	472	472	472	190
Box 50' 70-ton	702	598	598	598	598
Box 60' 100-ton	2	2	2	2	2
All-Door	77	77	77	77	77
TOTAL BOX	1311	1207	1149	1149	1149
FLEET TOTAL	2704	2617	2710	2801	2792

NOTE: All fleet reductions are due to estimated retirements. No allowance is made for cars destroyed in accidents.

F. Other Departments were reviewed and obervations and suggestions made to management. These matters do not immediately afford the viability of IT and so are outlined here only in topical form:

a) Finance and Accounting. Strong need for better organization and operation of MIS/Computer Section particularly car accounting and statistical reporting.

b) Real Estate Sales. Continue an aggressive sales program to market the remaining real estate not necessary for the operation of the railroad.

i.

Appraised value	Approximate closing date
$1,133,600	6-1-79 to 12-30-79

ii. 785.64 additional acres, estimated value $392,820.00 in small parcels, at various locations to be sold after 1979.

c) Legal/Safety. Suggested an on-going program to effect closer liason with operating department to monitor volume and movement of hazardous materials, for the purpose of educating operating employees and determining priorities of track maintenance.

d) Materials Management. Discussed with management the need to more realistically evaluate the auto fleet requirements and revise policy of acquiring expensive low mileage autos for officer personnel.

There is now underway a program to capture the costs of auto ownership and operation which had been dropped by prior management.

DESCRIPTION OF ILLINOIS TERMINAL RAILROAD

February 1981

Part 1. St. Louis to Alton via T&E Line, including Carlinville

St. Louis

General Office - leased
Office space - 37,765 square feet at $83,762.64 a year (sixth floor)
Track comes in under building at subway level
Service to Post Dispatch

Executive department
- President
- Executive Secretary

Finance/Accounting department
- Vice President-Finance & Treasurer
- Manager-Accounting
- Manager-Revenue Accounts
- Admin. Asst. to VP-Finance & Treasurer
- Asst. Treasurer
- Manager-Car Accounting
- 14 revenue accounting clerks
- 6 accounting clerks
- 4 car accounting clerks

Management Information Services department
- Manager-MIS Department
- Computer Program Project Leader
- Programmer/Analyst
- 6 keypunch clerks.

Real Estate department
- Director Real Estate Contracts & Valuations
- Manager-Contract Administration
- Manager-Valuation
- Manager-Real Estate & Property Records
- 1 clerk

Law department
- Secretary & General Counsel
- Asst. Sec'y & Asst. to General Counsel
- Manager-Labor Relations
- Manager-Personnel
- Personnel Officer
- General Claim Agent

Materials Management department
- Director Materials Management
- Asst. Director Materials Management
- 3 clerks
- 1 janitor

Special Services department
- Manager Special Services & Freight Claims

Transportation department
- Transportation Assistant
- 1 clerk

St. Louis (cont'd.)

Marketing and Operations department
- Vice President and General Manager
- Asst. to VP & GM-Operations Planning
- Manager Operations Planning-Coordination
- System Marketing Manager
- Admin. Asst. to Vice President & General Manager
- Secretary to Vice President & General Manager

Rate department
- Chief Pricing Officer
- 2 Pricing Officers
- Asst. Pricing Officer
- 5 rate clerks

Industries served	Received	Forwarded	Total*
Hadley Street Team Tracks	-	-	-
Lueking Transfer Company	-	-	-
McKinley Iron Company	6	426	432
PVO International Company	258	7	265
St. Louis Post Dispatch	428	12	440
St. Louis Terminals Corp.	33	-	33
TOTAL	725	445	1170

Connections
- Direct with BN and MKT
- Paper interchange via TRRA with MRS, MP, NW and SSW

Operation
- To St. Louis via TRRA Merchants Bridge

McKinley

Yard Office
- 1 General Superintendent (Northern and Southern Divisions)
- 1 Superintendent-Southern Division
- 1 Administrative Assistant
- 1 Agent (covers A. O. Smith to McKinley
- 1 Superintendent of Transportation
- 1 Trainmaster)
- 2 Assistant Trainmasters) cover McKinley to A. O. Smith

Clerical
- 8 clerical positions, 13 clerks
- 4 operators
- 4 yardmasters

Mechanical repair facilities (light repairs)
- 1 car foreman
- 7 carmen
- 1 laborer
- 7 car inspectors
- 3 machinists (Diesel Repairs)

*IT roadhaul carloads, 11 months 1980

McKinley (cont'd.)

Maintenance of Way forces
6-man section gang

Yard capacity
Fifteen (15) tracks - 926 car capacity
Largest IT yard
Longest track - 85 cars
Fuel and service facilities for locomotives

Industries served	Received	Forwarded	Total*
Packers By-Products	93	357	450

Madison	Received	Forwarded	Total*
Caine Steel	34	2	36
Kacera Distributing	-	-	-
Kerr McGee Chemical Corp.	-	169	169
TOTAL	34	171	201

Connections
Direct with A&S, CNW, ICG, NW, SOU and TRRA
Via A&S or TRRA with BN, MP, SSW, BO and CR
Via A&S, TRRA or SOU with CR and LN

McKinley-Troy Junction Yard

Troy Junction Yard
Three (3) tracks - 142 car capacity
Used for storage of excess equipment

Mont
Siding - 58 car capacity

Connections
Formerly with ICG (connecting track now removed)

Industries served (between McKinley and Troy)

	Received	Forwarded	Total*
Winters	24	-	24
84 Lumber	-	-	-
Granite City Steel-Water Treat. Plant	16	-	16
L. J. Ross Lumber	40		40
TOTAL			
Sand Cut	-	-	-
Team Track	20	-	20
Collinsville Ice and Fuel	3	-	3
Cain Bros.	23	-	23
TOTAL			
13 Mile	-	-	-
Team Track			
Troy Junction	-	-	-
Public Team Track	63		63
GRAND TOTAL			

Track from Troy to O'Fallon, Illinois presently not in service, prospect for abandonment

*IT roadhaul carloads, 11 months 1980

Edwardsville (LeClaire Yards, Junction with CNW and NW)

Tower
4 operators (tower to be automated)

Maintenance of Way forces
2 signal maintainers
2 track inspectors

LeClaire Yards
Five (5) tracks - 169 car capacity
Longest track - 46 cars
Storage yard

Facilities
Sectionmen building
Signal maintainer and welder shop

Industries served	Received	Forwarded	Total*
Team Track	-	-	-

Connections
Direct with CNW and NW

Carlinville (Monterey Mine)

IT operates from LeClaire Tower to Wilson over the CNW, 33 miles, paid for on a trainmile basis, $3.77 per trainmile. From Wilson to Monterey Mine, three (3) miles, operation is over IT trackage. (CNW also operates over this IT trackage to the Mine. They pay a per car charge $2.89 per loaded car, for this right to the Mine.) North of Monterey, a wooden bridge is out of service, and rail has recently been removed.

Industries served	Received	Forwarded	Total*
Amoco**	-	-	-
Carlinville Grain**	-	-	-
Central Illinois Steel**	-	-	-
Monterey Mine	-	2688	2688
Public Team Track**	-	-	-
TOTAL	-	2688	2688

Connections
Direct with CNW at Benld (not used for actual interchange, paper interchange, only)

Roxana

Support yard for Shell Oil

Transportation forces
2 yard clerks

Mechanical forces
1 car inspector

*IT roadhaul carloads, 11 months 1980
**Presently not served by IT

Roxana (cont'd.)

Maintenance of Way forces
- 3-man surfacing gang
- 6-man section gang
- 4-man night gang
- 5-man AFE gang

Facilities
- Yard office owned by Shell

Yard tracks
- Old Yards - six tracks (6), 216 car capacity
  - longest track, 36 cars
- New Yards - fifteen (15) tracks, 358 car capacity
  - longest track, 33 cars
  - tracks 7-15, very poor condition, not used

Industries served

	Received	Forwarded	Total*
Wanda			
Farm Service	5	-	5
Team Track	-	-	-
TOTAL	5	-	5
Roxana			
Carroll Lumber	-	-	-
Shell Oil	350	5179	5529
DuPont	15	10	25
TOTAL	365	5189	5554
GRAND TOTAL	370	5189	5559

Wood River

Transportation forces
- 4 dispatchers, 3 relief dispatchers
- 3 clerks (Wood River Yard, Amoco)
- 4 operators at interlocker

Mechanical forces
- 1 car inspector

Wilde Yard
- Support yard for American Oil Company and other industries in the area
- Five (5) tracks - 95 car capacity
- Auxiliary tracks - 75 car capacity
- Additional car storage is also available at American Oil

Industries served	Received	Forwarded	Total*
Amoco	1636	2708	4344
Dome Railway	2198	2086	4284
Clark Oil	14	5	19
Team Track (UTL Lead)	-	-	-
TOTAL	3848	4799	8647

Connections
- Direct with ICG and CR

*IT roadhaul carloads, 11 months 1980

Wood River (cont'd.)

Wood River Interlocker
ITC and ICG and CR crossings
BN operates through interlocker as tenant of ITC
Interlocking system destroyed by ICG derailment
Proposed plans include electrification of interlocking system

Federal

Transportation forces
1 Service Coordinator
1 Senior Trainmaster)
1 Trainmaster) Cover Federal, Wood River and Roxana
1 Asst. Trainmaster)
1 Agent
3 yard clerical positions, 5 clerks
3 freight clerks

Maintenance of Way forces
8-man section gang
3 machine operators (System)
7-man B&B gang
1 electrician
4-man scrap gang
2 welders

Federal Shop (Mechanical Department) - Main Diesel Locomotive and Freight Car Repair Shop

Management
Superintendent of Motive Power
Assistant Superintendent of Motive Power
Superintendent of Cars and Equipment
1 clerk/secretary

Employees - Diesel Shop
1 foreman
15 machinists
1 machinist apprentice
2 laborers
4 pipefitters
1 pipefitter apprentice
5 electricians
1 electrician apprentice

Employees - Car Shop
2 foremen
19 carmen
2 laborers
3 car inspectors
1 AAR pricing clerk

Federal (cont'd.)

Industries served	Received	Forwarded	Total*
Olin Corporation	837	16	853
Airco Industrial Gases	6	5	11
Alton Box Board	1235	1318	2553
Hyman Michaels	500	177	677
Illinois Power	8543	-	8543
Laclede Steel	4389	1050	5439
National Vinegar	-	-	-
U. S. Reduction	124	102	226
Union Electric (team track service)	-	-	-
TOTAL	15,634	2668	18,302

Connections
Direct with BN

Alton

Coal Dock Yard and barge loading facility
Six (6) tracks - 90 car capacity
Dock loading facility
Built in 1937 for loading of coal
Presently leased to ADM for train-to-barge loading of grain products
ADM operates and maintains facility
Laclede Steel owns an adjacent dock loading facility served by ITC

Industries served	Received	Forwarded	Total*
Archer Daniels Midland	12,124	37	12,161
City Fuel and Supply	-	-	-
Excel, Inc. (old freight house lead)	15	-	15
Great Central Lumber	45	-	45
Laclede Steel	-	-	-
Hyman Michaels Dock	-	-	-
Owens Illinois Glass	2,130	164	2,294
Peavey Elevator A and B	36	353	389**
Elevator A served by ICG joint engine (joint with ICG, CR, ITC and BN) (Elevator capacity 1,500,000 bu)			
Elevator B served by ITC (Elevator capacity 1,750,000 bu)			
Team Track (Central Avenue)			
Alton Telegraph	17	-	17
Alton Waste Paper	-	-	-
TOTAL	14,367	554	14,921

Connections
Direct with BN and ICG

Trackage rights
BN operates over IT from Alton to Wood River, five miles, on valuation and maintenance basis

*IT roadhaul carloads, 11 months 1980
**Figures are for Peavey Elevator A

Part 2. Wood River to Madison via A&E Line

Wood River

See Part 1

Hartford

Industries served	Received	Forwarded	Total*
Continental Oil	43	-	43
Team Track	-	-	-
TOTAL	43	-	43

Oldenburg

Industries served	Received	Forwarded	Total*
Chemetco	608	245	853

St. Thomas

Maintenance of Way forces
- 1 Chief Engineer
- 1 Assistant Chief Engineer
- 1 Roadmaster
- 1 Staff Engineer
- 1 clerk
- 3 mechanics

A. O. Smith Yard

Support yard for West Granite City industries including Tri-City Regional Port (rail to barge transferring)

Five tracks (5) - 165 car capacity

Transportation forces
- 5 clerical positions (relief covered by personnel from McKinley)

Maintenance of Way forces
- 6-man AFE gang
- 5-man section gang

Mechanical forces
- 1 utility carman

Depot Yard

Classification yard for Tri-City Port
Leased from Tri-City Port ($56,806 per year)
Fourteen (14) tracks - 13,380 track feet (yard tracks)
Five (5) tracks - 18,000 track feet (warehouse tracks)
Total capacity - 450 cars

*IT roadhaul carloads, 11 months 1980

Granite City Industries	Rec.	Fwd.	Total*
Air Products & Chemicals, Inc. (via Granite City Steel)	1	-	1
American Steel Foundries	248	460	708
Corn Sweeteners (ADM)	1,033	52	1,085
Granite City Harbor (Tri-City Port Authority)			
Apex Oil Company	117	-	117
Bulk Services Corp.	24,659#	4	24,663
Granite City Steel Dock	-	-	-
Granite City Terminals, Div. of St. Louis Term.	3,111	42	3,153
Granite City Steel Company, Div. of National Steel	586	9	595
International Mill Service (via Granite City Steel)	-	121	121
Jennison Wright Corp.	-	1	1
**Lipsett Steel Products, Inc. (via Granite City Steel)	12	788	800
Paul Seebold Concrete Company	-	-	-
Public Team Tracks, 20th Street	-	-	-
Reilly Tar and Chemical	464	43	517
St. Louis Slag Products Corp.	-	28	28
Shasta Beverages	-	-	-
A. O. Smith Corp. (plant closed in July 1980)	6	1,015	1,021
TOTAL	30,237	2,563	32,800

*IT roadhaul carloads, 11 months 1980
**Lipsett Steel is a division of Luria Bros.
#Estimate for year 1980 total carloads, furnished by Bulk Services, includes switch traffic

Part 3. Wood River to Delong via Springfield and Decatur

Springfield to Wood River

IT operates over ICG, 77 miles, paid for on trainmile basis ($3.77 per trainmile)

Springfield

Facilities
- Yard office
- Sanding and fueling facilities
- Welder's shed
- Section gang building

Transportation forces
- 3 clerical positions, 4 clerks

Maintenance of Way forces
- 6-man section gang
- 2 welders
- 1 signalman

Mechanical forces
- 1 utility carman
- 1 relief man

Yards
- Seven (7) tracks - 235 car capacity
- Two (2) additional tracks, connection with ICG and NW (utilized as inbound and outbound main)

Industries served	Received	Forwarded	Total*
American Metal Supply Company	3	-	3
Amoco Oil Company, Standard Oil Division	-	-	-
Anderson Concrete Pipe, Inc.	-	-	-
C. A. Dawson & Company	11	-	11
Farm Supply Services, Inc.	83	-	83
Fiat-Allis Construction Machinery, Inc.	8	254	262
Midwest Prestressed Concrete Company	-	-	-
Prairie Wholesale Supply Company	-	-	-
Team Track	-	-	-
Sangamon County Highway Department	-	-	-
Sankey Bros., Inc.	35	-	35
Skelly Oil Company	-	-	-
Standard Concrete Pipe Company	-	-	-
Strata, Inc.	-	-	-
Central Illinois Light Company	1	-	1
Springfield Bakers	8	-	8
TOTAL	149	254	403

Connections
- Direct with ICG and NW
- Via ICG with BO

*IT roadhaul carloads, 11 months 1980

Springfield to Kenney

IT operates over ICG from Springfield to Mt. Pulaski, 21 miles, on a trainmile basis, $3.77 per trainmile. Trackage rights from Mt. Pulaski to Kenney, 12 miles, over ICG is on a valuation and maintenance basis.

Springfield to Decatur

Operation over NW trackage, rate of $3.77 per train mile, 39 miles

Industries served	Rec'd.	Fwd.	Total*
Illiopolis			
Borden Chemical	1223	809	2032
Herrin Agri-Service	1	-	1
Illiopolis Grain (elevator capacity 500,000 bu)	-	8	8
TOTAL	1224	817	2041
Mechanicsburg			
Herrin Agri-Service	-	-	-

Decatur

See Part 4

Decatur to Delong

Operation

Operation is over ICG, Decatur to Champaign/Urbana, 41 miles. Payment is on a trainmile basis.*

Operation Urbana to Delong over ConRail, 16 miles. Payment is on a trainmile basis, $3.77 per trainmile.

Industries served	Rec.	Fwd.	Total
Champaign			
A. E. Staley (through ICG)	-	-	-
C. S. Johnson	-	2	2
TOTAL	-	2	2
Glover			
Homer Grain	-	-	-
Team Track			
TOTAL	-	-	-
Fulls			
Champaign County Grain (elevator capacity 400,000 bu)	-	28	28
Team Track	-	-	-
TOTAL	-	28	28
Delong			
Fithian Grain (elevator capacity 318,000 bu)	-	8	8
Team Track	-	-	-
TOTAL	-	8	8

*Current operation is a detour arrangement over NW between Decatur and Lodge, Illinois, 33 miles, then over ICG to Champaign, about 19 miles. NW detour costs are $9.00 per trainmile, plus pilots; ICG costs are $3.77 per trainmile.

Decatur to Delong (cont'd.)

Connections

Champaign

ICG (IT/ICG interchange traffic is handled by CR for a switch charge per load)

Urbana

Direct with CR

Glover

Direct with MP (currently embargoed account track conditions)

Part 4. Decatur to Peoria

Decatur

Connections

Direct with BO, ICG, NW and WVRC

Industries served

	Received 1	Forwarded 2	Total* 3
Alton Box Board	258	1,646	1,904
Archer Daniels Midland			
East Plant (elevator capacity 6,700,000 bu)	-	-	-
North Plant (elevator capacity 500,000 bu)	776	19,248	20,024
West Plant (elevator capacity 5,200,000 bu)	-	-	-
A. E. Staley (via BO or ICG)	-	-	-
Canfield Lucas Lumber	-	-	-
Dry Milk Products	-	-	-
Grohne Concrete Products	170	-	170
Illinois Power Company	-	-	-
Parke Warehouse	41	240	281
Season-All Industries, Inc.	1	-	1
TOTAL	1247	21,136	22,383

Decatur Yard

Facilities

- Eleven (11) yard tracks - 281 car capacity
- Longest track - 40 cars
- Auxiliary storage of two (2) tracks - 104 cars
- Yard and freight office
- Mechanical building
- Section gang building
- Facilities for sanding and fueling locomotives

Transportation forces

- 1 Superintendent (Northern District)
- 2 Trainmasters
- 1 Asst. Trainmaster
- 1 Agent
- 5 clerical positions, 7 clerks
- 1 yardmaster

Mechanical forces

- 1 foreman
- 8 utility carmen

Maintenance of Way forces

- 8-man section gang
- 4-man section gang
- 1 Roadmaster
- 2 track inspectors

*IT roadhaul carloads, 11 months 1980

Decatur to Allentown

Trackage rights
Twelve (12) miles, Maroa to Decatur on ICG, valuation and maintenance agreement

Connections
Direct with ICG at Minier, Atlanta, Maroa, Kenney — not used for interchange

Industries served	Rec.	Fwd.	Total*
Martin	-	-	-
J&R Ranch Grain Company (elevator capacity 410,000 bu)	-	-	-
TOTAL			
Emery	-	-	-
CISCO Grain Company (elevator capacity 410,000 bu)	-	-	-
TOTAL			
Forsyth			
Served from ITC track connecting to ICG trackage rights	-	92	92
Team Track	-	92	92
TOTAL			
Kenney	-	-	-
Standard Oil Company	-	-	-
TOTAL			
Midland City	10	1	11
Kaiser Agriculture & Chemical Company	10	1	11
TOTAL			
Tabor	-	166	166
DeWitt County Cooperative (elevator capacity 1,000,000 bu)	-	166	166
TOTAL			
Waynesville	-	53	53
DeWitt County Cooperative (elevator capacity 100,000 bu)	-	53	53
TOTAL			
Atlanta	1	-	1
Atlanta Agriculture Center	1	-	1
TOTAL			
Armington	1	-	1
Thermal Division of Diversified Insulation, Inc.	57	-	57
HG&N, Inc. (fertilizer)	58	-	58
TOTAL			
Hittle	-	-	-
Tazewell Service			
Minier	-	-	-
Minier Cooperative Grain (elevator capacity 3,500,000 bu)	2	-	2
Tazewell Service	2	-	2
TOTAL			
Tazewell	-	-	-
Newell Soil Service			
GRAND TOTAL	71	312	383

*IT roadhaul carloads, 11 months 1980

Allentown Yard

Train and industrial support yard for business to and from Peoria Gateway Yard and Service facility was constructed in 1976 after leaving PPU

Transportation forces
2 yard clerk positions, 3 clerks

Maintenance of Way forces
5-man section gang

Four (4) yard tracks - 125 car capacity
Longest track - 42 cars

Morton

Industries served	Received	Forwarded	Total*
Affiliated Home Center	12	-	12
84 Lumber	20	-	20
Dunlop Tire	136	40	176
Farmers Co-Op Grain	-	-	-
Grimm Oil	-	-	-
Mathis Lumber	-	-	-
Morton Building Company	275	-	275
TOTAL	443	40	483

Connections
Direct with ATSF

East Peoria

Operation between East Peoria and Farmdale Junction, about five (5) miles, over Norfolk and Western trackage, rate of $3.77 per train mile

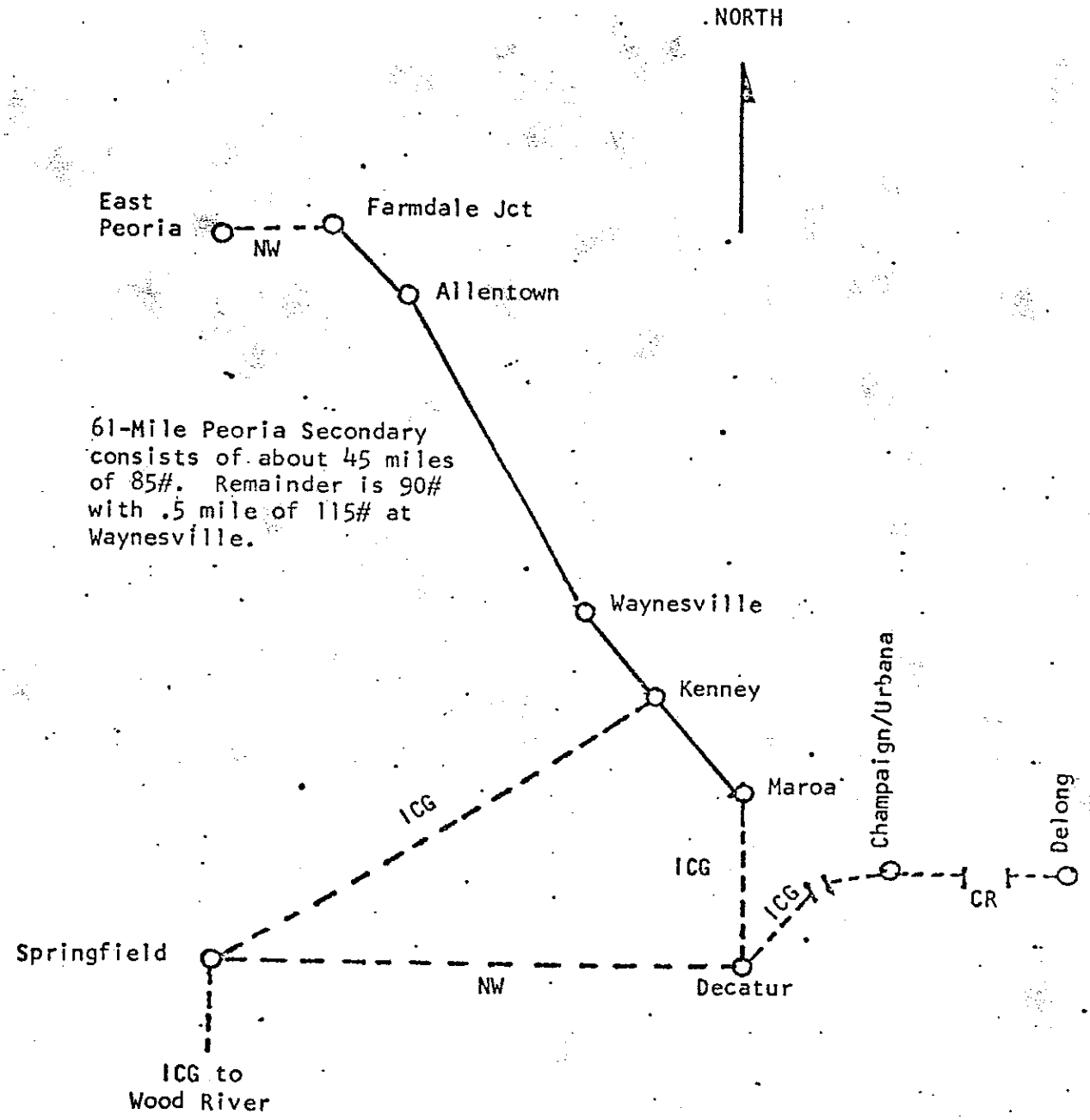
Industries served (switched by PPU)	Received	Forwarded	Total*
American Allied	18	4	22
Illini Brick	78	-	78
Sinn Oil	-	-	-
Texas Company	43	16	59
Public Team Track	-	-	-
TOTAL	139	20	159

Connections
Direct with PPU and TPW
Via PPU with ATSF, CIM, CR, ICG and CNW
Via PPU or TPW with BN, CNW and NW

East Peoria Yard
Used to service industries
Yard does not connect with ITC tracks, industrial switching done by PPU

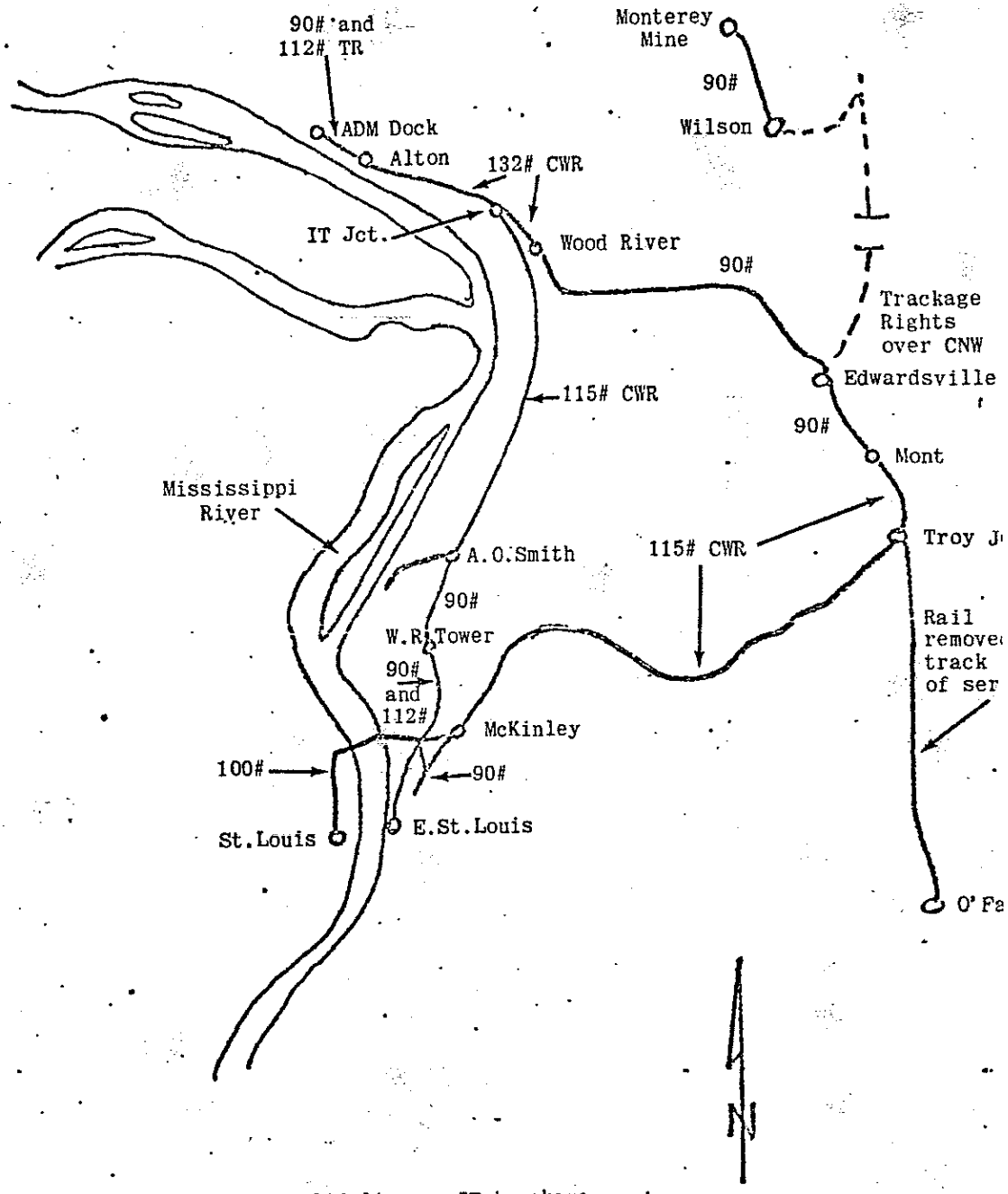
*IT roadhaul carloads, 11 months 1980

SCHEMATIC OF ILLINOIS TERMINAL RAIL WEIGHT
PEORIA SECONDARY



January, 1981

Schematic of Illinois Terminal Rail Weight
Golden-Triangle



Solid lines - IT trackage
Dotted lines - Trackage rights

Revised 1/19/81

OPERATIONS-YARD AND TERMINAL

McKinley

Yard Assignment	Days/Week	Avg. Hours	Principal Duties
7:55am North End	7	10	Yard switching
7:55am South End	7	8	Yard switching, deliver & pull interchanges
3:55pm South End	7	8	Yard switching
3:55pm A&E	6	8	Industry switching on A&E
11:55pm A&E Relief	5	8-9	Industry switching on A&E
10:30pm St. Louis Job	6	11-12	St. Louis interchange & industry work
11:55pm Bum Job	5	9	McKinley/A. O. Smith transfer

A. O. Smith Yard

Yard Assignment	Days/Week	Avg. Hours	Principal Duties
7:55am	7	8-9	Industry switch at Granite City Port & Granite City industries, pull & deliver Granite City connecting traffic
3:55pm	7	8-9	Same as 7:55am job
10:30pm	5	8-9	Same as 7:55am job
11:55pm	7	8-9	Same as 7:55am job
6:30am Depot	5	11-12	Switch Depot Yard

Roxana Yard

Yard Assigment	Days/Week	Avg. Hours	Principal Duties
3:45pm	5	10-11	Switching Shell refinery

Wood River Yard

Yard Assignment	Days/Week	Avg. Hours	Principal Duties
10:00am	5	10-11	Switch Amoco refinery

Note: Crew size on all jobs is four (4) except one job at A. O. Smith which consists of three (3) men, and one job at Federal which also consists of three (3) men.

Revised 1/19/81

Federal Yard

Yard Assignment	Days/Week	Avg. Hours	Principal Duties
7:30am Yard	7	8	Federal Yard switching
3:30pm Yard	5	9	Federal Yard switching
3:55pm Yard & Road	5	8	Industry & interchange switching in Alton/Wood River/Hartford area
11:55pm Yard & Road	5	8-9	Same as 3:55pm Yard & Road
3:00pm Laclede	7	9	Switch Laclede Steel
7:00am ABB/OIG	7	8-9	Switch Alton Box Board & OIG
Extra	3(M,W,F)	8-9	Switch Olin, Chemetco

Springfield

Yard Assignment	Days/Week	Avg. Hours	Principal Duties
6:30am Yard	7	9	Yard switching, industry & connections

Decatur

Yard Assignment	Days/Week	Avg. Hours	Principal Duties
6:30am Yard	7	8	Yard switching, connections & industrial switching
8:00am Yard	6	9	Same as 6:30am Yard
2:30pm Yard	7	11	Same as 6:30am Yard

Allentown

Yard Assignment	Days/Week	Avg. Hours	Principal Duties
10:30pm Yard	7	9	Switch yard, pull & deliver connections

Job Descriptions, Switching and Transfer Jobs
Illinois Terminal Railroad Company

1. McKinley Yard Operations

Job	Duties
a. 7:55 a.m. North End	Switch North end of McKinley Pull and deliver A&S connection Line up train 100 Switch industries McKinley/Sandcut as required Line up 7:30 Yard and Road
b. 7:55 a.m. South End	Switch South end of McKinley Switches inbound train 101 Makes up 3:55 p.m. A&E Deliver & pull connections (time permitting) Line up St. Louis Job (time permitting)
c. 3:55 p.m. South End	Switch South end of McKinley Makes up 10:30 p.m. St. Louis Job Switches 7:30 a.m. Yard & Road inbound
d. 3:55 p.m. A&E	Switch industries between McKinley & Granite City on A&E Pull & deliver CNW New Yard Connection & A&S Edwardsville Road connection Provide transfer movement from McKinley to Granite City & return
e. 11:55 p.m. A&E Relief	Relieve 3:55 p.m. A&E Job & complete same work as 3:55 p.m. Job
f. 10:30 p.m. St. Louis	Transfer traffic from McKinley to St. Louis & return via TRRA Merchants Bridge Pull & deliver St. Louis BN & MKT connection at Branch Street Switch all St. Louis industries
g. 11:55 p.m. Bum Job	Deliver and pull connections in McKinley area Switch Packers By Products

2. Granite City, A. O. Smith, Operations

Job	Duties
a. 6:30 a.m. Depot	Switch Depot Yard, lining up spots for Tri-City Port industries Transfer inbound loads from Depot to A. O. Smith after servicing

The remaining four jobs at A. O. Smith are used interchangeably to perform all other duties in the area:

b. 7:55 a.m.	Deliver empties to A&S, Edwardsville Road (normally done by 7:55 a.m. job) & pull loads from A&S (Elevator M traffic) Switch Granite City industries on A&E north of W. R. Tower (normally done at night)
c. 3:55 p.m.	Spot Tri-City Port industries (done throughout the day except for Granite City Steel Dock which is normally switched at night)
d. 10:30 p.m.	Yard switching to line up inbound spots & outbound empties for movement on train 102 & transfer to McKinley, & deliveries to to A&S connection
e. 11:55 p.m.	

3. Roxana Yard (Shell Refinery)

Job	Duties
3:45 p.m. Shell	Switch Shell refinery Line up southbound cars for afternoon pickup by 7:30 Yard & Road out of McKinley Line up northbound cars for transfer to Wood River area in late p.m. (occasionally delivers northbound cars to Wood River)

4. Wood River Yards

Job	Duties
10:00 a.m.	Switch Amoco Wood River refinery

5. Federal Yard

Job	Duties
a. 7:30 a.m. Yard	Switch Federal Yard Line up inbound industry cars (Alton Box Board, Laclede, etc.) Weigh Line up outbound 7:30 Yard & Road to McKinley Switch outbound cars from Laclede Steel
b. 3:30 p.m. Yard	Switch Federal Yard Line up 7:30 a.m. Yard & Road Pull & spot rips Switch cars to/from Laclede Steel, Alton Box Board, Owens Illinois Glass Line up empties for Laclede Dock Switch other industries as required

c. 3:55 p.m. Yard & Road

Transfer traffic between Federal & Wood River
Switch Dome, Olin, Wilds Yard
Deliver & pull ICG Wann Yard interchange
Line up pick up for train 100 at Reuters
Handles Wood River/Roxana transfer, both directions
Deliver & pull Amoco cars to/from refinery for Amoco Job

d. 11:55 p.m. Yard & Road

Relieves 3:55 p.m. Yard & Road
Pulls ADM empties from Alton Dock to Wood River
Delivers ADM loads from Wood River to Alton Dock
Handles cars between Laclede Steel & Laclede Dock
Switches Elevator B at Alton
Lines up pick up for train 102 at Wood River

e. 3:00 p.m. Laclede

Switch Laclede Steel
Weigh inbound & outbound Laclede cars
Switch Hyman Michaels

f. 7:00 a.m. ABB/OIG

Switch Alton Box Board
Switch Owens Illinois Glass
Switch Alton industries

g. Extra

Switch Wood River industries, including Olin & Chemetco
Various transfer & switching work as required

6. Springfield Yard

Job	Duties
6:30 a.m. Yard	Line up pick ups for through trains Pull & deliver connections (NW,ICG,BO) Switch Springfield industries (exception: Fiat Allis is normally switched by Illiopolis Turn)

7. Decatur Yard - All jobs are used interchangeably to perform all work.

Job	Duties
a. 6:30 a.m.	Switch industries (primarily ADM North & West plants, & deliver to ADM East Plant)
b. 8:00 a.m.	Perform interchange work (WVRC delivers & pulls IT yard, IT delivers & pulls ICG interchange track near north end of yard, & IT delivers & pulls NW & BO yards)
c. 2:30 p.m.	Line up & switch outbound & inbound trains (203/202, East Local, North Locals, Work trains)

8. Allentown

Job	Duties
10:30 p.m.	Handle Peoria traffic between Allentown & connections (PPU, ATSF, TPW) Switch Morton industries Line up train 201

a. Operations - Road

Train No./Name	From	To	No.of Crews	Frequency (days/week)	Mileage	Avg. Run Time (hours)	Avg. Locos.	L/E	Dept. Time
Through Trains									
1. 100	McKinley	Springfield	1	3½	107	10-11	3	40-60/ 40-60	10:30 p.m.
2. 101	Springfield	McKinley	1	3½	107	10-11	3	30-50/ 30-50	6:00 p.m.
3. 102/103	Granite City	Springfield & return	1	7	161[a]	11	3-4	80-110/[a] 80-110	8:00 p.m.
4. 200	Springfield	Allentown	1	3½	78	9	3-4	30-60/ 10-40	2:00 p.m.
5. 201	Allentown	Springfield	1	3½	78	9	3-4	10-40/ 20-50	varies
6. 203/202	Decatur	Springfield & return	1	7	78[a]	11	3-4	70-120/[a] 70-120	8:00 p.m.
7. Monterey Mine Coal	Federal	Monterey Mine & return	2	3[b]	94[a]	14-16	5[b]	80/[a] 80	varies
8. IPL Coal	Granite City	Alton & return	1	2-3	29[a]	7-10	3-4[c]	70-75/[a] 70-75	varies
Local Trains									
1. 7:30 Yard & Road	McKinley	Federal & return	1	7	66[a]	10-11	2-3	50-80/ 70-120[a]	7:30 a.m.
2. Illiopolis Turn	Springfield	Illiopolis & return	1	3	39[a]	7-9	1	10-15/[a] 10-15	6:30 p.m.
3. East Local	Decatur	Delong & return	1-2	3	130[a]	12-16	2-3	25-35/[a] 10-30	varies
4. North Local	Decatur	Secondary & return	1	1	varies[d]	8-12	1	5-10/[a] 5-10	varies

a. Indicates total cars handled in both directions, or round trip mileage b. BN power and one IT unit
c. MP units d. Train works as far north as necessary and returns to Decatur

JOINT ENGINES AND CONTRACT SWITCHING

A. IT Operated Joint Engines

Joint engines are operated by Illinois Terminal at:

1. Shell, Roxana; ICG, CR
2. Amoco, Wood River; ICG, CR
3. Alton Box Board, Federal; ICG
4. Pacific Vegetable Oil, St. Louis; BN

B. Foreign Road Operated Joint Engines

ICG operates a joint engine at ADM East Plant, Decatur, Illinois, for ICG/ITC.

ICG operates a joint engine at Peavey Flour Mill, Elevator A, Alton, Illinois for CR/ICG/ITC.

C. Contract Switching

PPU switches industries at Peoria for ITC under contract.

ITC switches Peavey Flour Mill, Elevator B, for BN/CR/ICG under contract. Industry is ITC (not joint).

IT Roadhaul Carloads, Eleven Months 1980
By Customer

	Received	Forwarded
1. St. Louis, MO		
McKinley Iron Co.	6	426
PVO International Co.	258	7
St. Louis Post Dispatch	428	12
St. Louis Terminals Corp.	33	---
2. National City, IL		
Packers By-Product Co.	93	357
3. Winters, IL		
84 Lumber Co.	24	---
Ross, L. J. Lumber Co.	16	---
4. Sand Cut, IL		
Cain Brothers	3	---
Collinsville Ice & Fuel Co.	20	---
5. Wanda, IL		
F. S. Services, Inc.	5	---
6. Roxana, IL		
E. D. DuPont de Nemours	15	10
Shell Oil Co.	350	5,179
7. Wood River, IL		
Amoco	1,636	2,708
Dome Railway Services	2,198	2,086
8. Reuters, IL		
Olin Corp. - D. C. Casting	837	16
9. Federal, IL		
Airco Industrial Gases, Div. of Air Reduction Co., Inc.	6	5
Alton Box Board Co.	1,235	1,318
Hyman Michaels Co., Div. of AZCON	500	177
Illinois Power Co.	8,543	---
Laclede Steel Co.	4,389	1,050
U. S. Reduction Co.	124	102

IT Roadhaul Carloads

	Received	Forwarded
10. Alton, IL		
Alton Telegraph	17	---
Archer Daniel Midland Co.	12,124	37
Ex-Cel, Inc.	15	---
Great Central Lumber Co.	45	---
Owens Illinois, Inc.	2,130	164
Peavey Co. Elevator "B"	36	353
11. Hartford, IL		
Clark Oil & Refining Co.	14	5
Continental Oil Co.	43	---
Ethyl Corp.	6	---
12. Oldenburg, IL		
Chemetco	608	245
13. Granite City, IL		
Air Products and Chemical, Inc.	1	---
American Steel Foundries	248	460
Apex Oil Co. (Granite City Harbor)	117	---
Bulk Services Corp. (Granite City Harbor)	24,659 *	4
Corn Sweeteners	1,033	52
Granite City Terminals, Div. of St. Louis Terminals Corp. (I.S.Joseph)	3,111	42
Granite City Steel Co., Div. of National Steel	586	9
International Mill Service, Inc.	---	121
Jennison Wright Corp.	---	1
Lipsett Steel Products, Inc. Div. of Luria Bros.	12	788
Reilly Tar and Chemical Corp.	464	43
St. Louis Slag Products Corp.	---	28
Smith, A. O., Corp.	6	1,015
14. Madison, IL		
Caine Steel Co.	34	2
Kerr-McGee Chemical Corp., Forest Prod. Div.	---	169
15. Monterey Mine No. 1, IL		
Monterey Coal Co.	---	2,688

* Estimate for year 1980 Total C/L, furnished by Bulk Services includes switch traffic

IT Roadhaul Carloads

	Received	Forwarded
16. Springfield, IL		
American Metal Supply Co.	3	---
Central Illinois Light Co.	1	---
C. A. Dawson & Co.	11	---
Farm Supply Services, Inc.	83	---
Fiat-Allis Construction Machy., Inc.	8	254
Sankey Bros., Inc.	35	---
Springfield Bakers Supply	8	---
17. Buffalo, IL		
Herrin Fertilizer Co.	15	---
18. Illiopolis, IL		
Borden Chemical Co.	1,223	809
Herrin Agri-Service	1	---
Illiopolis Grain Co.	---	8
19. Decatur, IL		
Alton Box Board Co.	1	2
Archer Daniels Midland Co. (West Plant)	776	19,248
Grohne Concrete Products	170	---
Parke Warehouse (12 months)	41	240
Season-All Industries, Inc.	1	---
ADM Corn Sweeteners	258	1,646
20. Champaign, IL		
C. S. Johnson	---	2
21. Full, IL		
Champaign County Grain Assn.	---	28
22. Delong, IL		
Fithian Grain Co.	---	8
23. Forsyth, IL		
Cisco Grain Co.	---	92
24. Midland City, IL		
Kaiser Agriculture & Chemical Co.	10	1
25. Tabor, IL		
DeWitt County Cooperative	---	166

IT Roadhaul Carloads

	Received	Forwarded
26. Waynesville, IL		
DeWitt County Cooperative	---	53
27. Atlanta, IL		
Atlanta Agriculture Center	1	---
28. Mt. Joy, IL		
Eminence Grain Co.	2	---
29. Armington, IL		
Thermal Div. of Diversified Insulation Inc.	1	---
H. G. & N., Inc.	57	---
Tazewell F. S.	2	---
30. Morton, IL		
84 Lumber Co. of Illinois	20	---
Dunlap Tire & Rubber Co.	136	40
Affiliated Home Center	12	---
Morton Building Co.	275	---
31. East Peoria, IL		
American Allied Railway Equipment Co.	18	4
Illini Brick & Supply Co.	78	---
Texas Co.	43	16

SPECIAL REPORT

OPERATING UPDATE

St. Louis, Missouri
April 13, 1981

Prepared by:
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OPERATING UPDATE

At the December 1980 Board Meeting, an Operating Update for the Year 1980 was submitted to you. That update summarized the operating and fiscal performance of the Illinois Terminal in 1980. The December report was based upon 10 months' actual performance and 2 months' estimated performance. The Operating Update below is based upon 12 months' actual performance. Like the report submitted in December, this summary of IT's 1980 performance indicates strong improvement in virtually all major areas.

1. Income Statement

The table below compares IT's 1980 actual income statement with those of 1978, 1979 and the Viability Study (1979 Dollars) estimate for 1980:

INCOME STATEMENT (Dollars in Thousands)

	Actual 1978	EFM: 2/1/79 Actual 1979	Viability Study Estimate for 1980	Actual 1980
Operating Revenues	$24,805	$26,844	$28,773	$33,739
Operating Expenses:				
Way and Structures	4,464	5,689	5,858	6,383
Equipment	5,683	4,666	5,489	5,366
Transportation	13,663	14,372	14,306	15,543
General and Administrative	3,215	2,887	3,203	3,144
Total Operating Expenses	27,025	27,614	28,856	30,436
Net Revenue (loss)	(2,220)	(770)	(83)	3,303
Ratio of Expenses to Revenue	108.95%	102.87%	100.29%	90.21%
Other Income (Expenses)	158	1,107	105	905
Income (Loss) Before Fixed Chgs.	(2,062)	337	22	4,208
Fixed Charges:				
Interest on Funded Debt and Capital Lease Obligations	1,181	1,502	1,542	2,134
Other Fixed Charges	5	5	5	5
Total Fixed Charges	1,186	1,507	1,547	2,139
Fixed Charge Coverage	(1.74)	(.22)	.01	1.97
Income (Loss) Before Income Taxes	(3,248)	(1,170)	(1,525)	2,069
Total Income Taxes	91	(30)	(59)	63
Net Income (Loss)	$(3,339)	$(1,140)	$(1,466)	$ 2,006

A. Operating Revenues were well ahead of 1979 and the Viability Study estimate for 1980, despite the negative effects of the 1980 recession. This strong showing was the result of:

1. An improved operating performance between Decatur and Mississippi River Ports which produced significant increases in rail-to-barge business.

2. Growth of interline forwarded coal business in the third and fourth quarters of 1980.

3. Significant Ex Parte increases in the past two years, less severe weather, and a steady, continuing program begun in 1979 to raise noncompensatory rates. Average revenue per carload (roadhaul and switch) increased from $201 in 1979 to $251 in 1980, an increase of over 24%.

B. Operating Expenses - The ratio of Operating Expenses to Revenue for 1980 (90.21%) was 12.7 percentage points better than in 1979, and over 10 percentage points better than predicted in the Viability Study for 1980. Many factors contributed to this improvement. Central among these were:

1. Way and Structures - Concentration of track rehabilitation and maintenance work on a priority, project-by-project basis, coupled with expediting completion of the work during periods of good revenues and good weather, under strong, direct supervision helped IT to accomplish the large majority of track improvements needed in 1980. This approach assured IT good productivity and quality control and kept Way and Structures expense in line with revenue.

2. Equipment - Equipment expense in 1980 was over $120,000 less than predicted in the Viability Study estimate. The cessation of Incentive Per Diem, coupled with the 1980 recession, adversely affected this area--but we were still able to earn a car hire credit of $419,000 in 1980, and an AAR billing balance of $1,152,000 receivable for 1980 compared to $17,000 payable for 1979.

3. Transportation - The strong control of Transportation expense begun in 1979 was strengthened in 1980; so much so, that it became a daily way of life for Transportation Officers. Although Transportation expense in 1980 exceeded 1979 in terms of actual dollars, the improvement in transportation cost control is evident in the ratio of Transportation expenses to Operating Revenues:

Actual 1978	Actual 1979	Viability Study Estimate 1980	Actual 1980
55.1%	53.5%	49.7%	46.1%

The 1980 improvement over 1978 and 1979, as well as the improvement of 3.6 percentage points beyond the Viability Study Estimate for 1980 derived from our increased capacity to handle the business we have been offered, from improved car handling, control of overtime, and better clerical efficiency.

Actually, we should point out that Transportation's performance was really much better than reflected in the above statistics. The rising cost of fuel was the biggest element in the 1980 total dollar increase (85%). If, in 1980, fuel costs had remained at or about the 1979 level, the increase in transportation expenses in 1980 would have been $172,000--about 1.2%--and this would have produced a transportation ratio at about the 43.1% level; 3% better than our 1980 ratio, and 6.6% better than the 1980 Viability Study Estimate.

4. General and Administrative - We continue to maintain strong control of our General and Administrative costs. Despite inflation and wage increases in 1980, our G&A costs for 1980 decreased 1.4% compared to 1979. The ratio of General and Administrative costs to Operating Revenues was 9.32% (the lowest in the history of the Company) compared to 10.76% for 1979.

II. Departmental Operations

A. Transportation - Continuous strong improvement was reflected in several areas:

1. Train & Enginemen Hours per Load - The table below summarizes T&E Hours Paid/Month on the IT since 1975. The increase in T&E Hours per Load which occurred from 1975 through 1978 was arrested in 1979 and was reduced in 1980. This reduction was the result primarily of daily monitoring of train and switching crews by Transportation Officers.

Period	Average Monthly Carloads	Average T&E Hours Paid/Month Str. Time	Overtime	Const. Allow.	Total Hours	ST and OT T&E Hours Per Load	Total T&E Hours Per Load
1975	10,253	25,726	4,576	3,970	34,272	2.96	3.34
1976	11,877	29,044	6,863	4,187	40,094	3.02	3.38
1977	11,295	31,057	7,398	5,049	43,504	3.40	3.85
1978	10,795	33,704	7,946	5,817	47,467	3.85	4.40
1979	10,493	32,173	6,796	6,674	45,653	3.71	4.35
1980	10,664	29,316	5,608	6,196	41,120	3.27	3.86

2. Average Foreign and Private Car Days on Line - Like T&E Hours Paid/Load discussed above, the increase in Average Car Days on Line begun in 1976 was arrested in 1979 and reduced in 1980.

Period	Average Foreign/Private Car Days on Line
1976	4.82
1977	5.54
1978	7.13
1979	7.90
1980	7.61

Although Car Days on Line decreased, it did not decrease as quickly as we would have liked. This was due to two factors:

a. In previous years, overhead traffic comprised a larger percentage of total IT traffic than it did in 1980 (7.7% of roadhaul traffic in 1976; 5.0% year 1980). Overhead traffic, typically, is on-line less time than originated, terminated, or local traffic; thus fewer overhead cars will cause the Car Days on Line figure to increase.

b. With the onset of the recession in Spring 1980, traffic decreases between the St. Louis/Peoria Gateways prompted a reduction in service from one train each way daily, between these points, to one train every other day. Less frequent service on this route has forced Car Days on Line upward. In addition, to better control expenses, regularly scheduled trains were laid in when traffic did not warrant operating them.

3. Gross Ton Miles per Train Hour - The table below shows Annual Gross Ton Miles per Train Hour on the IT for the years 1970 through 1980. Reversal of the downward trend after 1976 to a new all time high in 1980 is striking. This record showing is indicative of the success of the Marketing Department in securing new traffic and the success of the Transportation Department in efficiently handling this traffic.

Period	Gross Ton Miles per Train Hour
1970	44,161
1971	45,407
1972	49,650
1973	51,528
1974	49,557
1975	49,585
1976	49,374
1977	42,356
1978	38,609
1979	42,646
1980	62,128

4. Ratio: Revenue Ton Miles - The favorably increasing ratio of revenue ton miles to gross ton miles discussed in last December's Operating Update continued to improve in 1980. This was due to more effective control of empty system and foreign cars, and increasing revenue tonnages per carload.

Period	Ratio: Revenue Ton Miles to Gross Ton Miles
1973	50.97
1974	50.96
1975	51.06
1976	53.01
1977	53.43
1978	53.14
1979	54.28
1980	55.54

5. Car Hire Accounts - The favorable car hire balance reestablished in 1979, continued in 1980. The slightly weaker showing in 1980, compared to 1979, was the result of increased numbers of idle IT freight cars returning home due to the recession.

Year	System/Foreign Cars	Private Cars	ITC Leased Cars	Total Net
1973	$(2,445)	$332	$1,658	$(445)
1974	(3,426)	340	1,644	(1,442)
1975	(3,951)	312	1,708	(1,931)
1976	(3,324)	340	2,418	(566)
1977	(3.080)	352	2,719	2
1978	(2,560)	320	2,847	607
1979	(3,922)	354	2,961	(607)
1980	(4,277)	460	3,398	(419)

Note: The above is a credit balance statment. Figures in parenthesis are receivable, the others payable.

B. Mechanical Department

1. IT Freight Car Fleet - As of December 1980, the bad order ratio for all ITC equipment was 3.76%, somewhat higher than the expected figure of 3.2% cited in the Viability Study. However, excluding fifty 50-foot box cars which are being stored bad order rather than repaired, the IT bad order ratio is actually only 1.78%. (The fifty cars stored are all 9000 series, 50-ton box cars for which there is no demand at this time.)

2. Locomotive Fleet - In 1980, IT Mechanical forces continued our normal locomotive maintenance program and initiated a rebuilding program. During 1980, increased problems with older IT locomotives (foreseen in the Viability Study), adversely affected locomotive availability. The availability ratio for April 1979 was 91.4%; the availability ratio for December 1980 was 85.6%. (Locomotives "available" on the IT include only those units actually in transportation service. Units in shop, awaiting repair, dead in train, or out-of-service for any reason are counted bad order.)

To counter this problem, additional units were acquired on short-term leases. These units were essential in maintaining service, and in handling increased 1980 tonnage.

Because financing for rebuilding six GP-7's was too expensive, our mechanical forces embarked upon our own in-house rebuilding program. Major overhauls of two GP-7's and minor overhaul of one SW-1500 were successfully completed in 1980.

All rebuild work was financed by the IT directly through earnings, not through a sale/lease-back arrangement as the Viability Study indicated.

C. Way and Structures - The rebuilding and rehabilitation of Illinois Terminal trackage was viewed as critical in the 1979 Viability Study. Below are listed those Engineering projects scheduled for 1979 and for 1980 in the Study, and the status of those projects as of December 1980:

1979

Project (Operating Expense and Capital Items)	Status
1. Ties T&E MP 22-29	Complete
2. Granite City Terminal Lead, ties, surfacing	Complete
3. Ties - A&E	Complete
4. Piling - A&E	Complete
5. Welded Rail - A&E	Complete
6. A. O. Smith Leads - ties, rail, relay turnouts	Complete
7. Piasa Street Lead - ties, rail, surfacing	Complete
8. McKinley Yard Leads - ties, rail, turnouts, surfacing	Complete
9. McKinley Connections, TRRA crossing	Complete
10. Borden - Illiopolis expansion (two tracks)	1 Complete
11. Kenney Sidings - two at 1 mile each	1 Complete
12. ICG Connection Wood River - Evans Avenue	Complete
13. Peoria Secondary - ties, surfacing, bridges	Complete
14. Culverts - Maryville	Complete

1980

1. Ties T&E MP 8-18	Complete (MP 8-31)
2. Ties A&E Granite City	Summer 1981
3. Turnouts - 115 lb A&E - part of rail work	Summer 1981
4. A. O. Smith Existing Yard - ties, ballast	95% Complete
5. Federal Yard - ties, rail and surfacing	Fall 1981
6. Roxana Yard - ties, surfacing	Deferred
7. McKinley Yard - ties, rail	Deferred
8. McKinley Connection - ties, rail, surfacing, diamonds	Complete
9. Wilds Yard Area - ties, rail	Complete
10. Springfield Yard - ties, rail, surfacing	75% Complete
11. Carlinville Line - ties	Complete
12. Decatur Yard - drainage, ties, rail, surfacing	90% Complete
13. Peoria Line - surfacing	Complete
14. Wood River Diamonds	Complete
15. ICG Connection, Wood River - Ferguson Avenue	Deferred by Board
16. Port Yard - 300 cars (begin)	Grading Begun

In addition to the above projects discussed in the Viability Study, in 1980 3¼ miles of rail (primarily 90 lb) was relaid on the north end of the Peoria Secondary where aging 85 lb rail had been especially troublesome.

Although all of the rehabilitation projects cited in the Viability Study have not been completed, changing conditions since the Study reordered some of the priorities set forth in the Study. It is also fair to say that the extensive work that has been undertaken and accomplished, given the

economic restraints we have had, is meeting the major needs of the IT and has been a factor in the improved Transportation Department performance discussed above. The table below indicates the effect our track improvement program has had on the frequency of derailments. In 1979 and 1980, the average number of derailments per year declined.

Average Derailments Per Month

Period	Derailments/Month
1976	36.4
1977	44.6
1978	50.5
1979	46.4
1980	44.4

III. Conclusion

The Operating Performance of the Illinois Terminal since early 1979 is characterized by marked Transportation improvement and strengthening of equipment and fixed facilities. The Operating Performance produced a financial performance which, overall, surpassed the modest gains predicted by the Viability Study for 1979 and 1980, and which, in some areas, rivals the best previous performance of the Company.