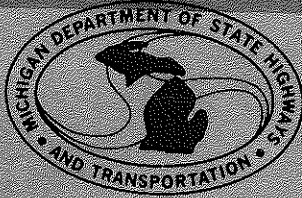


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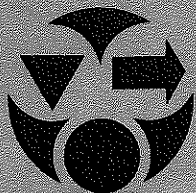
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

AN EVALUATION  
OF THE  
UNITED STATES RAILWAY ASSOCIATION  
PRELIMINARY SYSTEM PLAN  
AS IT PERTAINS TO  
THE ANN ARBOR RAILROAD

APRIL 10, 1975

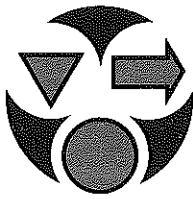
PREPARED FOR  
MICHIGAN DEPARTMENT OF TRANSPORTATION  
RAIL SERVICE PLANNING SECTION  
UNDER SUPPLEMENT TO AGREEMENT #17  
BETWEEN  
WISCONSIN DEPARTMENT OF TRANSPORTATION  
AND  
UPPER GREAT LAKES REGIONAL COMMISSION

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WASHINGTON, D.C. • 20004



V.M. MALANAPHY & ASSOCIATES, INC.  
CONSULTANTS TO MANAGEMENT

April 10, 1975

Mr. Roger Brower  
Rail Planning Section  
Michigan Department of Transportation  
425 W. Ottawa Street  
Lansing, Michigan 48933

Dear Mr. Brower:

This study is the analysis of the United States Railway System Preliminary System Plan called for in our agreement which is a supplement to Agreement #17 between Upper Great Lakes Regional Commission and the state of Wisconsin Department of Transportation.

The section dealing with the evaluation of the A. T. Kearney Report is the work of G. W. Fauth, an expert in Transportation Costing, and much of the material utilized in this section has been used in testimony before the Commission by him as an expert witness in Ex Parte No. 293. He also contributed to the section evaluating the light density line analysis methodology.

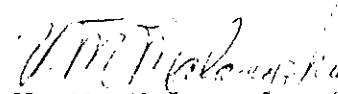
Due to time constraints, a bibliography of the sources utilized in the report was not included but through footnotes and references within the text, it should be apparent what sources were utilized.

This report was prepared by V. M. Malanaphy and Associates, Incorporated which is responsible for the validity of the facts, the accuracy of the data, and the soundness of the conclusions presented and does not necessarily represent the views, policy nor final conclusions which the Michigan Department of Transportation, the Wisconsin Department of Transportation or the Upper Great Lakes Regional Commission will ultimately adopt.

We appreciate the opportunity to assist you in your planning efforts.

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Sincerely,

  
V. M. Malanaphy  
President

VMM:sd

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LIST OF EXHIBITS

NUMBER

1. The Public Response To The Secretary Of Transportation's Rail Services Report, Volume III - Mid-Western States - Ann Arbor: Frankfort To Toledo
2. Preliminary System Plan - Lake Michigan CarFerry Operations
3. Preliminary System Plan - Ann Arbor Light Density Line Analysis
4. Inventory of Ann Arbor Railroad CarFerry Operations
5. A 19-Year Synoptical History of the Ann Arbor Railroad (1949 - 1967)
6. Six-Year Analysis of Traffic Originating & Terminating at On-Line Stations of the Ann Arbor Railroad
7. R. C. Courtney Pro-Forma Income and Cash Flow Projections in I. & S. Docket No. 8808
8. Analysis of Annual Carloads Highly Susceptible to Cross Lake Routing
9. Comparison of Ann Arbor Cross Lake Traffic with Potential Market and Location of Sales Offices
10. Analysis of Ann Arbor Cross Lake Traffic By Origination, Destination and Average Revenue Per Car for Selected States
11. Ann Arbor (Lake Michigan) CarFerry Traffic (Over 25 Cars) By Origin and Destination for 1973
12. Green Bay and Western Interchange Traffic at Kewaunee, Years 1970 - 1973
13. Traffic World Article on Rock Island Surcharge
14. Mileage Operated at Close of Year - Ann Arbor 1974
15. Car Ferry Cost Adjustments
16. Projected Car Ferry Costs
17. Interchange Adjustment for Chicago
18. Partial Restatement of Table D-2 Comparison of Total Movement Costs

## I. INTRODUCTION

On Friday, March 21, 1975, the Michigan Department of State Highways and Transportation acting on behalf of the Wisconsin State Department of Transportation and the Upper Great Lakes Regional Commission engaged the firm of V. M. Malanaphy and Associates, Inc. to undertake a work program, under the direction of Michigan Department of State Highways and Transportation, as a supplement to Agreement #17 between Wisconsin Department of Transportation and Upper Great Lakes Regional Commission.

The overall objection of this undertaking was to develop written testimony to be submitted to the Rail Service Planning Office (RSPO) and the United States Railway Association (USRA) regarding the adequacy of the analysis which was utilized as the rationale for the exclusion of the Ann Arbor Railroad from the Preliminary System Plan (PSP) issued by the USRA on February 26, 1975.

Under the agreement the contractor was to accomplish the following analysis and any additional pertinent written assessments possible within the budgetary and time constraints of the contract:

1. Written analysis of the portion of "Analysis of Railroad Operated Ferry and Litherage Operations" submitted by A. T. Kearney, Inc. to USRA dealing with the Lake Michigan car ferry situation.
2. Critical analysis of the methodology and "factual" information utilized by USRA and submitted as rationale for omitting most of the Ann Arbor (AA) from Con Rail. This includes the lack of discussion of the included portion from Toledo to Dundee, treatment of bridge traffic, the segmented analysis, a discussion of the unit coal trains and revenues, the treatment of proposals from solvent carriers (D. T. & I.), the treatment of the sand traffic potential at Yuma and any additional particulars.
3. Written analysis of the potential short and long term profitability of selected portions and the entire Ann Arbor Railroad.
4. Any other tasks which are pertinent and which are within the financial and time constraints of this supplement to the original agreement as deemed appropriate by the Michigan Department of State Highways and Transportation.



The contractor was given the date of April 10, 1975 as the delivery date of five copies of the final report to the Upper Great Lakes Regional Commission and five copies will also be submitted to both Wisconsin Department of Transportation and the Michigan Department of State Highways and Transportation.

On Monday, March 24, 1975, V. M. Malanaphy met with John M. Chase, Jr. - Trustee of the Ann Arbor at corporate headquarters of the Company in Dearborn, Michigan, and advised him of the project and requested information that would be helpful in conducting the assignment.

On Wednesday, March 26, 1975, V. M. Malanaphy at the request of Mr. Roger Brower, Michigan Rail Planning Section, accompanied him to Cadillac, Michigan to meet with members of the Northern Michigan Railroad Users Association for the purpose of obtaining their feelings on the proposals set forth in the Preliminary System Plan.

Mr. Chase notified V. M. Malanaphy on Thursday, March 27, 1975 that the information requested on Monday was being gathered and would be furnished when he received a written request. The following morning a letter explaining the project and listing the requested data was hand delivered to his office and left on his desk. Since it was Good Friday the offices were not manned by any clerical personnel. On Friday, April 4, 1975, a special delivery package containing most of the requested data was received with a letter explaining that the report showing various traffic information for the year 1973 which had been furnished to USRA was of a proprietary nature and could not be furnished by him. Instead of the Monthly Carferry Cost and Car Count Reports and the Annual Summary prepared by the Accounting Department (year 1974) requested, a statement showing Carferry costs, by ICC account was attached.

On April 3, 1975, a request was made to Mr. R. H. Timson, Assistant Vice President - Marketing of the D. T. & I. - Ann Arbor Railroads, in the absence of his superior Mr. M. Barron on a history of the tractor-trailer rates for the carferries since 1967. This information was received via a special delivery letter from Mr. Chase on the a.m. of April 7, 1975.

Due to the lateness in the advice on the proprietary nature of the traffic analysis and the absence of the requested data on the carferry cost and volumes, the analysis

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is not as detailed as planned but is sufficient to meet the requirements of the work program.

On Friday, April 4, 1975, meetings were held with personnel in USRA responsible for the line density analysis and the marine operation analysis sections. These personnel were very cooperative and made their files and reproduction facilities available to V. M. Malanaphy and his Associate G. W. Fauth, an expert on Transportation Costing. Mr. Thomas O'Connor who was responsible for much of the cost formulae utilized in the basic-density analysis was not present on Friday but he did spend two hours on the telephone Monday, April 7 explaining the methodology and answering all questions presented to him.

Also on Monday, April 7, 1975 a meeting lasting approximately four hours was held with numerous personnel in the Rail Service Planning Office - ICC.

The analysis contained in this report is based on the records furnished by the carrier; the publications contained in the bibliography and from the personal experience of the author as a Marketing Officer of the Ann Arbor.

A request put forth by the Northern Michigan Railroad Users Association was that the report be written in simple language and any reference made to transportation terms or concepts foreign to a layman's knowledge be explained so that the report would be meaningful. To this end a glossary of terms is contained in Section XI and it is recommended that this section be reviewed for those who are unfamiliar with traffic terminology.

For reference those sections of the Public Response to the Secretary of Transportation's Rail Services Report and the United States Railway Association - Preliminary System Plan sections dealing with the marine operational analysis and line density analysis of the Ann Arbor are contained in Exhibits 1, 2 & 3.

A better understanding of the report would be possible through a map of Michigan displaying those lines which are considered excess, the lines slated for inclusion in Con Rail and the lines of the solvent carriers, but due to the unavailability of such maps at the federal agencies and the time constraints preventing this firm from preparing such an exhibit, such a map is unavailable at this time. The United States Railway Association is in the process of developing

such a map and requests by any interested party for such a map should be directed to that organization.



SECTION II

SUMMARY

The Ann Arbor Railroad Company, a Michigan Corporation, is a wholly-owned subsidiary company of the Detroit, Toledo and Ironton Railroad Company, a Delaware Corporation, with headquarters at One Parklane Boulevard, Dearborn, Michigan. The line was acquired in 1963 from the Wabash and has operated as a separate subsidiary since then but under the same management. The main line of the Ann Arbor runs north-westerly from Toledo, Ohio through the state of Michigan to Frankfort, passing through the towns listed on Exhibit #6.

From Frankfort, the railroad operates carferry service to the Ports of Kewaunee and Manitowoc, Wisconsin. This service includes the movement of passengers, passenger cars and tractors and trailers in addition to rail cars. The carferry fleet consisted of three vessels up until 1974 when one of the vessels was sold for scrap. Since that time another vessel has incurred a broken crank shaft and is not in service nor are there any plans on repairing it or returning it to service. Due to the inability of the one vessel to provide service to both ports, the company has embargoed shipments through the Port of Manitowoc where the Ann Arbor connected with the Chicago and Northwestern and the Soo Line. At Kewaunee it connects with the Green Bay and Western Railroad.

Two other carriers provide similar service. The Chessie System operates vessels between Ludington, Michigan and the Wisconsin Ports of Manitowoc, Kewaunee and Milwaukee. The Grand Trunk Western operates between Muskegon, Michigan and Milwaukee, Wisconsin. Both of these carriers have in recent months petitioned the Interstate Commerce Commission to abandon their carferry services.

The profitability of the company took a turn for the worse in the late sixties and on October 15, 1973 the company applied for reorganization under Section 77 of the Interstate Commerce Act. Federal Judge Pratt appointed John M. Chase, Jr. as trustee. After engaging a consulting company to evaluate reorganization potentials and as a result of their study, the Trustee advised Judge Pratt that it was non-reorganizable. Judge Pratt then recommended that

it be considered for inclusion in Con Rail as provided for in the Rail Reorganization Act.

The company continues to be operated by the management of the D. T. & I. under arrangements with the trustee.

On February 26, 1975, the United States Railway Association issued its Preliminary System Plan which recommended that only that portion of the Ann Arbor from Toledo to Diann where it connects with the D. T. & I. be included in the Con Rail System. The portion from Diann north was made available to the State of Michigan for operation under subsidy provisions of the Act. The original plan has since been revised to include two additional miles to Dundee and has recommended the Saline Branch of the Ann Arbor be served from a Con Rail line.

According to the PSP, marketing will play a major role in the success of the system and the plan has a chapter dealing with the subject. Analysis indicates that no marketing plan was utilized in the development of the system nor has one been developed for the system. Instead the chapter is an exposition on a marketing philosophy.

A market analysis was conducted as part of this study and it indicates that a significant growth in traffic originating or terminating on line has taken place in the last six years and from all appearances would continue to grow if service were maintained. The most significant growth is occurring on that portion of the line north of Owosso which has been almost devoid of traffic. This growth is a result of the development of sand deposits on the line by Sargent Sand Company. A plant at Yuma has been in operation for over two years and a second plant has been constructed and will commence operations this year at Harlan. The shipments in 1974 totaled over 3,000 carloads and projections are that the combined plants will ship 10,000 - 15,000 cars per year.

An analysis was also made of the potential market for cross lake traffic and this also indicates that the potential for growth in this area is significant. The decline in car-ferry traffic to date can be attributed to the reduction in service and that a continued erosion of carferry traffic can be expected if the present marketing strategy of the Ann

*USRA  
lack of  
marketing  
in PSP  
development*

*potential  
traffic not  
considered  
by USRA*

Arbor is continued. The sales effort is being reduced, advertising promotes a competitive route between a competing road and its parent rather than via the cross lake route and the service on the through train that ran daily between Toledo and Frankfort has been reduced to every other day.

Since the advent of longer rail cars and due to the fixed capacity of the vessels, traffic handled should be evaluated by revenue produced per foot including a factor for the empty return experience of the equipment. It was demonstrated through examples of existing traffic presently moving that what appeared as high revenue traffic when evaluated on a revenue per car basis turned out to be the lowest revenue producing on a foot basis. By being selective in the solicitation of the traffic presently moving across lake, a better product mix could be developed which could improve the financial plight of the company.

A review was made of the reorganization study conducted for the trustee and it was found to be of no value in this analysis because of the underlying assumptions and factors utilized in the analysis.

A review was conducted on the study of A. T. Kearney which was supposedly utilized by the Association in their determination of the exclusion of the Ann Arbor carferry service from the system. This review found that the study evaluated nine typical moves over various carferry service alternatives and compared them with the all-rail movement via the Chicago gateway. This analysis indicated that the movements via all routes were profitable on the aggregate for all alternatives with the all-rail movements having the lowest cost. However, analysis of the costs which went into the computations uncovered two significant errors and correction of these errors reverse the conclusion reached previously and made the carferry alternative the low cost method of movement. Neither study should be considered as a measure of the profitability of the carriers participating in the moves since the analysis was concerned with the total through - put cost. 7

Review of USRA files indicates that the firm originally recommended a joint carferry operation be retained at Ludington for the system because of the slight differential between all-rail via Chicago and cross lake via carferry. The same

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*given the AA bank survey  
data not valid in  
analysis*

*scener choice  
of rail cars  
and comm.  
critical in  
running  
carferry*

*They took  
the facts  
figures as  
given  
see PMM  
page 1*

*USRA own  
study  
shows the  
carferry  
most  
profitable*

Reference Cch #8  
As to what these could mean to increase such a surcharge possibly 8-10  
shippers could satisfy everyone

report recommended that in the event a carferry service were not retained, the shippers in the state of Wisconsin should be assured that the rates presently published as a result of the short line miles via the cross lake route would be maintained. This recommendation was also removed from later reports.

USRA wants all it can get rate-wise.

A review of the Consad report which dealt with the "Criteria for Line Retention" indicated that the firm had done a significant amount of research and had reached well-founded conclusions as a result of their research. Interviews with Association personnel developed that the methodology developed by Consad was discarded in favor of an internally developed system. This being the case, little time was expended on an evaluation of their methodology.

USRA didn't use their own consultants work and anal. own methodology well.

A review of the Association's light density analysis of the Ann Arbor Railroad indicated that the line segments utilized for their analysis were illogical but acceptable for analysis purposes. It was found that they had missed one station on the segment from Dundee to Owosso which generated 10,590 carloads that year and the criteria for viability required 9,174 cars so this segment was viable.

an example of the error did not use RSPO hearing data

The segment from Owosso to Thompsonville did not include an analysis of the line with the projections of the sand traffic as developed at the RSPO hearings as required by the Act. The inclusion of these projections made this line viable as well.

Overhead traffic was included in the line segment from Thompsonville to Kewaunee but since the car ferry costs were the same as those utilized in the Kearney report, this analysis was considered invalid. It was also found that the Association had made no provision for overhead traffic on the Owosso line segment which has the heaviest concentration of overhead traffic on the system.

switch in analytical procedure?

A great deal of effort was expended on analyzing the methodology of the light density line viability program and it was concluded that it was an excellent tool for approximating the relative profitability of branch lines. It was also concluded that the only section of the Ann Arbor to which the formula should have been applied was the Saline Branch of the Ann Arbor which amounts to 6.47 miles. The remaining 290 miles are main line and the

because this points are contradictory which are connected by arrows

I agree that AA is a bridge carrier and totally misanalyzed by USRA  
Complaints have been made to USRA in this regard so no award throughout the process

formula was never intended for use in analyzing main lines. It was also found that the formula should not apply to abandonment procedures because of the type cost utilized.

*Interesting note*

A cursory evaluation was made of the impact of the plan upon the viability of other carriers serving the state and it was found that the plan, if implemented, would have an adverse affect upon the Detroit, Toledo and Ironton, the Detroit & Toledo Shoreline and the Grand Trunk Western and would eventually disrupt the competitive rail transportation structure of the state unless these carriers were granted market extensions or protective arrangements.

*We may wind up losing all.*

From the analysis it can be concluded that:

1. The Ann Arbor and its carferry were not properly evaluated by the USRA and its exclusion from the Preliminary System Plan was in error.

2. No line should be evaluated on a segmented basis unless the segments are logically put together and its origin and terminus determined on the basis of operating requirements or divisional junction points.

*rate divisions none at Durdell*

3. Any line considered for exclusion by the system should be analyzed prior to approval on the basis of industrial development potential or the development of mineral deposits contiguous to it.

4. The discontinuance of carferry service cross Lake Michigan by USRA would have a detrimental effect upon the future development of the states of Wisconsin and Michigan since it appears they will discontinue the rates produced via the use of the short line miles over those routes.

5. The Preliminary System Plan as it relates to the State of Michigan requires further investigation especially into the area of impact upon the viability of the existing carriers who will be adversely affected through implementation of the plan.

6. The light density line criteria methodology requires further refinements before it should be accepted as a tool for the abandonment of lines.

7. The extension of markets by carriers having access to a limited number of gateways should be granted to insure their continued viability.

*DT&I and GTW have complained and should be backed by Mich*

*Sargent and Gurnea Harlan Industry statement*

*DT&I frozen out of Toledo possibly*

To insure the continuing development of the states of Michigan and Wisconsin; protection of the public interest, and the continuation of a balanced rail transportation system within the state of Michigan, it is recommended that:

*not spelled out previously*

1. Responsible state officials immediately convey to the USRA and RSPO the errors in the PSP as they relate to the exclusion of the Ann Arbor from the Con Rail System.

2. Investigation be made immediately into the means by which the Act or its scheduled implementation date can be changed to insure the other lines proposed for exclusion have been properly evaluated.

3. The Rail Planning Sections of each state should be given sufficient time and resources to evaluate the impact of the PSP upon the state or states.

4. A bi-state committee be established to evaluate the alternatives available for either the retention of cross lake ferry service as it exists today or alternatives for the future. Determination should also be made if the needs of all interested parties can be met through the continuance of a single cross lake service with access by more than one carrier.

5. A committee within the state be appointed with representation of responsible officials from Utilities, Railroads, Manufacturing Industry, Agricultural Industry and State Chamber of Commerce to assist in the development and evaluation of both federal and state rail service plans.



SECTION III

BACKGROUND ON THE ANN ARBOR RAILROAD

The Ann Arbor Railroad Company, a Michigan corporation, is a wholly owned subsidiary company of the Detroit, Toledo and Ironton Railroad Company, a Delaware corporation, with headquarters at One Parklane Boulevard, Dearborn, Michigan. The line was acquired by the D. T. & I. in 1963 from the Wabash Railroad, and has been operated as a separate subsidiary since then but under the same management. The main line of the Ann Arbor runs northwesterly from Toledo, Ohio through the state of Michigan to Frankfort, passing through the towns listed on Exhibit #6.

From Frankfort, the railroad operates carferries to the Ports of Kewaunee and Manitowoc, Wisconsin. An inventory of the Ann Arbor Railroad carferry operations conducted by Consad Research Corporation, November 1974, developed the data contained in Exhibit #4 pertaining to the physical characteristics. Since the time of this inventory, the City of Green Bay has been sold for scrap. In 1973, the Arthur K. Atkinson experienced a broken crankshaft and has been removed from service. The Viking is the only vessel the AA presently has operating and because of the restricted capacity as a result of having only one vessel available, the railroad has embargoed the Port of Manitowoc. The operating rights to Manitowoc have not been abandoned as has been stated in reports prepared by and for the USRA. The Port of Manitowoc permitted the AA to connect with the Soo Line and Chicago and Northwestern. At the Port of Kewaunee, the AA connects with the Green Bay and Western Railroad which is heavily dependent upon the carferry service of the Ann Arbor and the Chessie System from Ludington, Michigan for its survival. A stock acquisition of the GBW by the Burlington-Northern is presently before the I.C.C. and the agreement for the stock acquisition is conditioned upon the continuance of the carferry operation at Kewaunee. The management of the Burlington-Northern feel that a savings of 3 - 5 days transit time on traffic which would normally move through the congested Chicago gateway could be realized through routing via the Kewaunee gateway for movement beyond by carferry.

*These days  
are costly  
inventory,  
oper absent,  
cars, etc.*

*BN  
a point  
not buying  
by USRA or  
appressed  
one or the other  
McClellan told  
me BN  
wants to get  
coal trains  
to Lake Michigan  
BN would  
have to  
spend at least  
\$50 million  
on new yards  
and still not  
get the  
service they  
could over  
the Lake*

The Chessie System also operates carferries to the city of Milwaukee ~~from~~ Wisconsin. The Grand Trunk and Western Railroad currently provides carferry service between Muskegon, Michigan and Milwaukee, Wisconsin. Both of these carriers have recently petitioned the I.C.C. to abandon their carferry operations on Lake Michigan.

Each year it is necessary for these vessels to be inspected by the Coast Guard in dry dock. When the Viking is dry docked, the AA <sup>leases</sup> bases one of the G.T.W. vessels in order to continue operations.

"The principal business of the carferry is the transporting of railcars. The Ann Arbor's annual volume of traffic in 1972 was 33,206 carloads across Lake Michigan. In addition, there were 17,751 empty cars moved for a total of 50,957 cars. In 1973, 39,666 cars were moved -- 26,421 loaded and 13,425 empties. This represents a reduction of more than 10,000 cars per year from 1972, reflecting the abandonment of the Manitowoc service." (1)

"In addition to the railcar traffic, the Ann Arbor carferry also transports passengers and automobiles between Wisconsin and Michigan. This traffic is principally composed of tourists traveling during the summer months. Normally, six to eight automobiles and 20 to 30 passengers are transported on each trip during the summer. Motor carrier trailers are a small but consistent part of carferry traffic. On the average, one or two trailers are transported on each trip." (2)

When the Ann Arbor operated either two or three vessels, they ran on a schedule which was published and adhered to, but with the operation of a single vessel there is no schedule.

Exhibit #5 is a 19 year synoptical history of the Ann Arbor Railroad Company from 1949 through 1967. During that period prior to acquisition by the D. T. & I., it only had one deficit year - 1959. After the acquisition it incurred two deficit years, 1963 and 1966.

*violated NWMRU request for sample*

(1) A. T. Kearney, Inc., Analysis of Railroad Operated Ferry and Litherage Operations, U.S.R.A. Planning Project No. 6, Page II - 4.

(2) Ibid, Page II - 2.

When the line was acquired, the D. T. & I. made substantial capital expenditures in converting two of the carferries, one from coal to oil and the other to diesel power, and in raising the super structure to increase clearances so that the carferries could handle the high cube and multi-level equipment utilized in the automotive industry. The upgrading cost of the line was an estimated 15 million dollars, the greatest portion of which was furnished by the D. T. & I.

Losses on the line increased after 1967 and on October 15, 1973 the company applied for reorganization under Section 77 of the Interstate Commerce Act. Federal Judge Phillip Pratt appointed John M. Chase, Jr. as Trustee. Mr. Chase engaged the consulting firm of Peat, Marwick and Mitchell to evaluate Reorganizational Alternatives for the Ann Arbor Railroad. Based on their recommendations, the railroad was considered non-reorganizable under the provisions of Section 77, and Judge Pratt recommended that it be considered for inclusion in the Con Rail as provided for in the Rail Reorganization Act.

The company continues to be operated by the management of the D. T. & I. under arrangements with the Trustee.

On February 26, 1975, the United States Railway Association issued its Preliminary System Plan which recommended that only that portion of the Ann Arbor from Toledo to Diann where it connects with the D. T. & I. be included in the Con Rail System. The portion from Diann north was made available to the state of Michigan for operation under a subsidy for two years as required by the Act. Since the original report was issued, the United States Railway Association has included an additional two miles northward to Dundee for inclusion and has recommended the Saline Branch of the Ann Arbor be served from a Con Rail line.

SECTION IV

THE ROLE OF MARKETING  
IN UNITED STATES RAILWAY ASSOCIATION PLANS

*Possibly to the  
deficiency of  
marketing  
in each  
segment*

Marketing will play a major role in the Con Rail system if it is to be successful. The Preliminary System Plan points this out in Chapter 9. This chapter is prefaced with the statement that ..... "The Association believes significant gains can be made in both the long and short term by adopting an aggressive and reasoned rail marketing strategy."

Simply stated, marketing is that process whereby a corporation satisfies a customer's needs while at the same time achieving the corporate objectives. Profits and the payment of dividends is normally the prime objective for the existence of a corporation but it is not by any means the only objective.

The process of railroad marketing usually consists of:

1. Market Research to develop the particulars pertaining to the market being analyzed. These particulars include such items as size of the market, competitive conditions, cost to produce the service, desirability, etc. If the market under study is one in which the carrier is participating, the research might be restricted to an evaluation of the profitability, continuation in the market or the development of means to improve the profitability or share of the market.

Within this research is the development of equipment design and needs, service requirements and other service factors which will impact upon the carriers' cost.

2. Development of a Pricing Strategy is then made to determine what price level will achieve the optimum results for the corporation. The optimum results might be an enlargement, a reduction or a complete forfeiture of its share of a particular market.

3. Development of an Advertising and Sales Strategy are then made and implemented. This step is one of the most critical in the process because it is

the device which convinces the customer that your product is better than the competitions if the objective is to enlarge the market share. If on the other hand, your objective is to reduce or forfeit your share in the market, the strategy then calls for a reduction or elimination in the advertising and sales effort.

4. Auditing of the program is the final step. This step measures the success of the program and determines if it is achieving the desired results. If it is not, the causes must be determined so corrective actions can be taken. The auditing or quality control measurements of the service factors inherent in the plan become a permanent part of the day-to-day operation of the business. This phase is accomplished through internal control systems and feedback from the customer through personal contact.

Rail traffic is secured in a competitive environment because one or more of the following factors influence the party controlling the method and routing of his traffic:

1. Rate Advantage
2. Equipment Leverage
3. Better Service
4. Effective Sales Force
5. Greater Reliability
6. Common Interest

*no discussed in H H report.*

While there are other factors, these by and large are the controlling ones.

To have a rate advantage the traffic must be moving under local rates or differential rates since most interline movements of traffic are moving at the same rate via all carriers that can participate in the movement. Since rates are usually processed through territorial rate bureaus which represent all the carriers in the territory, it is unusual for a single carrier, acting on his own, to secure a rate advantage over his competition on interline movements. For inter-territorial movements it is just about impossible because the carriers in the other territory are protecting the shipper of the same product within their territory. The differential rate is normally the only rate advantage granted in interline shipments and the establishment of these rates is usually done on the basis that the route over which they apply have an inherent weakness in some other area such as a less desirable route.

*and differential rates could be secured by selected products to insure profitability*

*GBW would loose supply car with loss of AA & CO*

Equipment leverage is secured when a carrier can supply the shipper with the type and quantity of car equipment best suited for his shipments. In this age of special equipment, this is probably the most influencing factor in the procurement of traffic.

*reduced damage and time a commonly cited add. of cross lake*

Better service via one carrier over another in the area of expedient handling and reduced transit time is a very critical factor in the transportation of high valued commodities due to the impact of additional inventory costs. On low-valued products this is not as critical.

Better service, however, is not restricted to only transit time, but also involves such things as car tracing, rate quotations, good communications, etc.

All other things being equal, the carrier that has the most effective sales force will receive the large share of a shipper's business. This is the area that has caused the greatest loss of traffic for most carriers. Today's complex distribution systems require consultative sales techniques rather than the common practice of social entertainment. An effective sales force in the rail industry today has to be one that can analyze and solve his customer's distribution problems.

*lacking on AA?? If BN comes in so does a dynamic sales force*

Reliability of service can influence those shippers that want to minimize inventory levels while at the same time minimizing the risk of stock-outs.

Common interest needs little explanation. If a carrier is owned by the shipper or there is a relationship through directorships, it will have a definite effect upon the routing of traffic.

*major shortcoming of plan no effort to determine potential on branch lines was attempted RSPD data other than which may not have been used.*

The Preliminary System Plan, as presented by the Association, does not contain a marketing plan but rather what the development of a plan might do for Con Rail. In the section of the chapter on marketing dealing with opportunities the Association admits this with the statement "...The development of these precise strategies by the Association for individual customers has not been feasible.."

What is presented is not a plan but rather a marketing philosophy, which from the examples used to illustrate the actions they expect to implement, appears to be the "maximization - of - revenue."

*The lack of concern for shippers regarding short cross lake mileage in event C+O & BTW go*



*long haul line  
and branch line  
outback at much  
expense not  
should be allowed*

To achieve the elimination of short hauls in order to maximize their division of the revenue will most likely result in a more costly operation; will definitely result in a poorer service and reliability, and in the long term the eventual loss of the traffic. In the short term it will increase cash flow and nothing more.

A marketing strategy for the "optimization of revenue" is what must be developed or else the new corporation will be in reorganization in a short time. Traffic should be routed via those junctions that produce the optimum balance in service and cost so that the customer's service needs and the corporate profit needs are met.

*cash flow is stressed  
emphasis of the need  
because of the  
to make profitable look  
and pay for major Tacker Act  
rehabilitation avoid  
at the cost of possibly  
reorganization of future  
Emphasis is on profit  
cash flow rather than  
adherence to the Act.*

SECTION V

ANN ARBOR RAILROAD MARKET ANALYSIS

*What  
given  
not*  
*could a line do?*  
*the situation does*  
*+ 1973 data*  
*make it*

The Association in their Preliminary System Plan indicates that due to time constraints a marketing analysis of the lines involved could not be done. It is felt that prior to the abandonment of any line or service in the system a marketing analysis of each line that fails the so-called light density viability test be conducted.

On Exhibit #6 is displayed a six-year analysis of traffic originating and terminating at on-line stations of the Ann Arbor Railroad. The analysis is based on the years 1969 through 1974 and since one of the problems the Ann Arbor has been burdened with, as stated by Mr. Nash of the D. T. & I. in his testimony before the Rail Service Planning Office, has been the lack of on-line traffic on the section of the railroad north of Owosso, the analysis divides the Ann Arbor into two sections -- North of Owosso and South of Owosso. It should be pointed out that these numbers represent only loaded cars that either originated or terminated at industries at these stations of the Ann Arbor and in no way reflect the additional cars that are bridged over the line.

In 1969, there were 16,441 loads handled at the stations south of Owosso and only 3,937 north of Owosso and a total of 20,378 for the line. Eighty-one percent of the traffic originated south of Owosso. By 1973, the traffic on the line increased to 27,413 carloads and the most significant cause of this was the acquisition of the Saline Branch from the Penn Central. A large Ford Motor plant is located on this line and it can be seen from the entries for Saline that the traffic from this station has increased from 343 to a high of 3,987 in 1973. In 1974 the number of cars at this station decreased to 3,155 and this can be attributed to the slump in the automotive industry. The addition of this traffic while contributing significantly to the growth of the line in general had an adverse effect on the distribution of traffic north and south of Owosso. It increased the percent south of Owosso to a high of 85.7 in 1972 and 83.7 in 1973. In 1974 the ratio of traffic south of Owosso was 77.7% or the lowest in the six year period.

*Has any of this type of analysis gone down at USRA? No! Why?*

In the six-year period the traffic on the line has increased over 20%. The traffic north of Owosso has encountered a growth of over 40%. Overall growth of traffic on the line would have been significantly greater if the downturn in the economy had not occurred. The average number of cars per mile of line has increased from 70.3 in 1969 to 85.2 in 1974. With overhead traffic included in this number the figure would be in excess of 150 cars. However, there is no significance attached to this number other than the fact that there are those who feel that a line is light density if it does not handle a specific number of cars and then mistakenly interpret this as a measure of profitability. Some feel that 33 cars per mile is a good measure, others 75 and in a recent meeting with personnel of United States Railway Association they felt that a branch line breaks-even at approximately 100 cars per mile. Quantity in any business does not within itself guarantee a profit. To the quantity must be added the quality. A product mixed with a greater proportion of high mark-ups will require fewer units to produce higher profits.

*Commodity and rates must enter the analysis*

The growth of the traffic north of Owosso is attributable to the development of sand deposits at Yuma, Michigan. Testimony before the Rail Service Planning Office indicates that this traffic should reach 10,000 cars per year in the near future. The sand presently moves to a casting plant at Cleveland, Ohio and is also being considered for use at a plant in the Detroit area. Other markets for the sand are apparently being developed and negotiations for the return movement of spent sand in the same cars that moved the sharp sand down to Cleveland appear promising. Another sand plant has been constructed at Harlan, Michigan (just north of Yuma) and is scheduled to go into operation this year. The sand deposits on the Ann Arbor are the first inland deposits of this magnitude developed to date. Most sand of this type has been mined from the dunes along the shore of Lake Michigan and there is a movement by environmental groups to put an end to this practice. This could lead to further development of these deposits so that the growth in this segment of the line would appear to be assured.

*USRA should be asked if this was taken into account*

The growth of the sand deposits has been hampered due to an investigation of the rates to Cleveland (I. & S.

Docket No. 8808) by the Interstate Commerce Commission. The case was instituted two years ago, hearings conducted a year ago and a decision is expected shortly.

In the oral hearing held on the rate investigation, Mr. R. C. Courtney, then Vice President of Finance of the Ann Arbor, stated that if the sand traffic did materialize, it could make the Ann Arbor a viable operation. Exhibit #7 contains the pro-forma income and cash flow statements he submitted in support of his testimony.

Other negotiations are being conducted, which are of a confidential nature at this time, but if they are successfully culminated, an additional 10,000 - 15,000 cars per year could be terminated in the Cadillac area.

With the shift of industry out of the major metropolitan areas into the rural areas, the industrial development potential along the Ann Arbor is good, provided the carrier and the communities along the line actively engage in such a development program.

Car ferry figures for the year 1974 were not made available but the volume of traffic has probably decreased due to the service curtailment of a one-vessel operation. An analysis of the 1966 - 1% waybill sampling on a state-to-state distribution appears on Exhibit #8. The analysis is restricted to twenty states whose traffic was felt to be highly susceptible to cross lake routing because their boundaries (all or part) lie above Chicago, Illinois. While there would be a high coefficient of error in the results obtained by multiplying this sample by a hundred, it will be done for this analysis. This analysis indicates that there are approximately 649,100 cars susceptible to movement via carferry. The analysis also showed that 437,000 of these cars moved from west to east compared to 212,100 from east to west or almost a ratio of 2 to 1. It is apparent that the development of a balanced movement cannot be achieved if any special equipment is utilized.

Exhibit #9 is a comparison of Ann Arbor cross lake traffic with the potential market and the location of sales offices. D. T. & I. - Ann Arbor maintain joint sales offices at Atlanta, Georgia, Chicago, Illinois, Cincinnati and Springfield, Ohio, Dearborn, Michigan, Green Bay, Wisconsin, New York, New York, Pittsburgh, Pennsylvania, Toronto, Ontario

*How did USRA account for sand business?*

*new business  
A business in bankrupcy would not do this 1973 fig?*

*Auto traff may not be best for ferris  
careful choice of traff important to econ. feasibility of operation*

obviously the  
conferences have  
not been pushed  
and the question  
whether the offices  
in the AA are  
a marketing  
to make  
money.

of are  
interest  
may be valid.

In all fairness to  
the AA-PTD management  
is the current bankruptcy  
and the ensuing  
lack of interest in  
spending money to  
upgrade.

and Montreal, Quebec. The number of sales personnel in the states studied for potential traffic is indicated in parenthesis after the state on Exhibit #9. Only five of the sales offices have clerical positions for answering the telephone or providing service to a local shipper. Recently sales offices in New England and Minnesota have been closed.

The states of Michigan, Minnesota, Ohio and Wisconsin accounted for 74% of the actual traffic handled and in the sample these states account for 55% of the potential traffic. It would appear that where there are sales forces the Ann Arbor picks up a greater share of the market than it does where there are not.

This confirms the findings of United States Railway Association expressed on page 112 of the Preliminary System Plan which states,

"In order to learn more about how shippers view the advantages of competition, U.S.R.A. asked one of its consultants (Simat, Helluson and Eichner) to gather a group of knowledgeable shipper representatives to discuss these issues. A few of the findings are pertinent.

Shippers believe that the "personality" of the individual railroad is a significant factor in the treatment of its customers -- both large and small. Some small railroads consider every account of major significance to them, are generally successful at maintaining good communications with their customers through personal contacts and achieve efficient operation in all aspects of their business over which they have control."

Carferries unlike rail yards can be considered as having a fixed capacity. Rail yard capacity can be increased simply by increasing the frequency of train departures until you have reached the maximum level of classification or car handling. The rate structure of the maritime reflects this inherent deficiency in that their rates are published on a cube and weight basis rather than strictly a weight basis. It would be impractical for the rail carriers operating car ferries to publish rates of this nature but there is nothing that prevents them from withdrawing from participation in rates that do not generate sufficient revenue to meet their needs.

A good  
practical  
choice of  
commodities  
for carferry  
work must  
make sure it  
pays for  
itself

# of dollars  
by  
\$/ft  
return  
ratio.  
car size

Since car ferries have a high cost of operation and fixed capacity, only high revenue traffic should be solicited for handling via that route. Revenue per car is an indicator of this type traffic and an analysis of Ann Arbor cross lake traffic by origin and destination and average revenue per car for selected states appears on Exhibit #10. However, an analysis of traffic based strictly on revenue per car is unrealistic since cars come in varying size. To be of any value, the analysis would have to consider revenue per foot per car. In addition, the empty return ratio of the commodity moving in the car would have to be considered.

For example, Exhibit #11 contains Ann Arbor (Lake Michigan carferry traffic (over 25 cars) by origin and destination for 1973. Bulk commodities, because of their high density, will unlikely ever move in cars in excess of 50' unless the gross weight per 4 axle car is raised significantly higher than 315,000 pounds or the number of axles per car are increased. Because of the contamination problems, cars handling bulk loads normally have a 100% empty return. With these assumptions a comparison of some bulk movements can be made from data on Exhibit #11. From Kaolin, Georgia to Minnesota 101 cars moved generating \$14,781 Ann Arbor revenue or an average revenue of \$146.35 per car or \$2.92 per foot on a one-way basis. Since the car must return empty this has to be halved so the actual revenue per foot is \$1.46. Chemicals moving (from Wyandotte to Wisconsin produce an effective revenue of 3.49 per foot. Steel and primary metals would also be high density and move in 50' cars but might have a lower than 100% empty return ration because of the ability to move these cars to the Chicago area for return loads. Assuming a 75% return ratio, it can be demonstrated that shipments of primary metal from Ecorse to Wisconsin have an effective revenue per foot of \$3.08 and between Sibley and Wisconsin, \$3.47.

two way  
special cars

Transportation equipment out of Toledo on the other hand while appearing to produce a high revenue per car to Minnesota (\$3.20 per car) is poor on a per foot basis because it is moving in 86' cars with 100% empty return or \$1.86 per foot. Cars from Brownstown to Minnesota produce similar results with \$1.13 per foot.

This cursory analysis would indicate that the carferry routing from an internal marketing strategy should be restricted to cars 50' or less and minimums should be developed internally as for what is acceptable. This change would



produce a product mix which would produce higher contributions to the company. It also demonstrates that any measure of profitability based on units such as revenue per car or number of cars is meaningless.

*How about revenue per ton mile?  
JUST AS BAD??*

Analysis also indicates that if service had been maintained at previous levels on a scheduled basis with an expanded sales force and an advertising program soliticing traffic via this route, traffic would have remained at previous levels or increased. There is also the possibility that the Ann Arbor when operated by the Wabash had a more profitable traffic mix and that is what made the company profitable. This can not be confirmed, however, without a detailed analysis of the movements and revenues then and now.

*sales force  
= traffic*

The marketing strategy of the Ann Arbor today can only lead to a further erosion in carferry traffic. The sales effort is being reduced, advertising promotes a competitive route between a foreign road and its parent rather than via the cross lake route and the service on the through train that ran daily between Toledo and Frankfort has been reduced to every other day.

*what  
are the  
details  
on this  
statement*

It would appear that the market is there but it is not being tapped.

Testimony and statements to the press by top officials of the Burlington-Northern indicate that the carferry route can save 3 - 5 days over the route through Chicago, so for some traffic this is the service route. With the Chessie System application for abandonment of its Ludington service the G. B. & W. could make over 33,000 cars per year available for routing through Frankfort. Stock acquisition of the Burlington-Northern would enlarge the traffic potential because of equipment leverage and the location of sales offices. Here again, the quality of the traffic would have to be evaluated.

*Is this the  
same  
diversion  
which  
the PC  
is  
here on.*

*USCA  
Mc Clellan  
wants to  
coal  
Great  
to get  
only  
takes*

Since entering bankruptcy, the Rock Island has been imaginative in developing self-help programs, the latest of which is a surcharge on cars originating or terminating on their line. (See Exhibit #13). It is understood that the proposal has since been withdrawn because further investigation indicated a large diversion of traffic to truck. Perhaps at a lower level of charges the program can be successful.

*\$30 a  
car was  
proposed*

SECTION VI

A REVIEW OF PEAT, MARWICK AND MITCHELL  
REORGANIZATION STUDY

A review of the report of the Peat, Marwick, Mitchell and Company which was developed for Mr. J. M. Chase, Jr. Trustee of the Ann Arbor, was reviewed to determine whether it would be of any value in evaluating the Preliminary System Plan of the Association. The Peat, Marwick and Mitchell report evaluated ten alternate operating plans as reorganizational alternatives for the Ann Arbor.

Six of the ten alternatives appeared to generate positive cash flows, three of which included a subsidy for the marine operation. However, the conclusion which was ultimately reached was that none of the alternatives which they examined would appear to offer a financially attractive reorganization situation.

The study and its underlying assumptions was found to be of no value for this analysis and none of the data was utilized.

No marketing studies were made in the development of revenue projections and the report recognized that cross lake traffic was decreasing.

*See one that did not look into validity of data accepted at face value*

*Of course given the situation*

SECTION VII

A REVIEW OF A. T. KEARNEY  
STUDY OF CARFERRY OPERATIONS

The firm of A. T. Kearney, Incorporated was retained by the Association to make an analysis of railroad operated ferry and lighterage operations. As part of this work program, a review was made of the sections of the final report submitted which pertained to the Ann Arbor Railroad carferry operation. In addition, the complete file of the United States Railway Association on the earlier submissions was reviewed as well as internal critique of the plan.

Prior to the discussion of the costs utilized in the Kearney report, it would be proper to note the carferry costs - 1974 as supplied by Mr. Chase, Trustee of the Ann Arbor.

Account 241 - Wharves & Docks	12,490.41
Account 323 - Repairs	126,565.04
Account 408 - Operations	1,267,364.39
Account 409 - Health & Welfare	67,675.39
Account 414 - Insurance	120,409.80
	<u>1,594,505.03</u>

Depreciations

Wharves & Docks	15,240.72
Car Ferries	344,579.52
	<u>1,954,325.27</u>

*costing off a boat that is not prod. revenue in a new situation*

The depreciation reflects two vessels and for any cost analysis on a one-boat operation should not include the cost of depreciation for a vessel which is sitting idle as a result of a management decision. The Viking has a book value of \$3,453,459 and its actual depreciation rate, as reported on its books and to the Interstate Commerce Commission, is 5.39% which would make the depreciation cost for a year \$186,144. Total marine cost for the year 1974 for cost study purposes should be \$1,795,890. On page II - 15 of the Kearney Report it states that ... "the total ferry operating expense for 1974 (Kewaunee only) is projected to be \$2,739,000. If revenue to the Ann Arbor in 1974 averages \$223 per car (\$199 plus 12% inflation), it would yield

*change this  
AA for D.T. & D.  
from all  
scratch*

*where did these figures  
come from?*

*explanator*  
77

\$4,268,000 based on the seven-month average shown in Table 11-2. This leaves \$1,529,000 from carferry traffic available for use by the Ann Arbor to defray rail operating expenses." Even with the depreciation for both vessels included, the actual ferry cost was over-estimated by \$784,675 or an error of 40% to actual. It should be remembered that this basic error is carried through in all the cost studies contained in the report.

The study also pointed out that the movements by commodity for the carferry traffic - 1973 totaling over 25 cars per year totaled 7,441 cars or only 28% of the traffic, suggesting that traffic is relatively dispersed. The ten largest shipments were found to be:

*by shipper*

<u>ORIGIN</u>	<u>DESTINATION</u>	<u>COMMODITY</u>	<u>ANNUAL NUMBER OF CARS</u>
Dearborn, Michigan	Fordson, Minnesota	Transportation Equipment	324
Green Bay, Wisconsin	Detroit, Michigan	Pulp, Paper	311
Sibley, Michigan	Milwaukee, Wisconsin	Primary Metal Products	275
Green Bay, Wisconsin	Lima, Ohio	Pulp, Paper	272
Colloid Spur, Wyoming	Flat Rock, Michigan	Stone, Clay and Glass Products	197
Norco, Saskatchewan	Sims, Ohio	Chemicals	139
Saline, Michigan	Fordson, Minnesota	Transportation Equipment	133
Green Bay, Wisconsin	Woodlawn, Ohio	Pulp, Paper	128
Green Bay, Wisconsin	Toledo, Ohio	Pulp, Paper	112
Byron, Wisconsin	Dayton, Ohio	Pulp, Paper	107
Total			<u>1,998</u>

Source: Exhibit II-4.

After consultation with the client, nine moves were selected for a cost analysis comparing the cost via all rail and carferry under different alternatives. The moves selected and the commodities were as follows:

<u>ORIGIN</u>	<u>DESTINATION</u>	<u>COMMODITY</u>
Wisconsin Rapids, Wisconsin	Jersey City, New Jersey	Magazine Paper
Algoma, Wisconsin	Pittsburgh, Pennsylvania	Plywood
Green Bay, Wisconsin	Detroit, Michigan	Disposable Diapers
Owosso, Michigan	Kenosha, Wisconsin	Auto Parts
Green Bay, Wisconsin	Toledo, Ohio	Bulk Cheese
Casper, Wyoming	Flat Rock, Michigan	Clay
Dearborn, Michigan	St. Paul, Minnesota	Transportation Equipment
Green Bay, Wisconsin	Lima, Ohio	Paper, Pulp
Wyandotte, Michigan	Milwaukee, Wisconsin	Primary Metal Products

As can be seen on table 5, page 5 of Exhibit #2, on the average all moves and alternatives were profitable. Three of the moves on an individual basis lost money via the car-ferry route and they were the moves involving the Disposable Diapers, Magazine Paper and Wood Pulp, all items which have been marked for an 8% increase in Chapter 9 of the Preliminary System Plan, but this increase has not been reflected here. The revenue reflects the rate times the minimum weight which might not be the actual weight moving. The length of the cars involved is not known so a comparison of the revenue per foot with the arrived cost could not be made to determine if the cost formula utilized reflected true costs.

As will be shown, the cost attributed by A. T. Kearney in comparing the total ferry-rail costs with all-rail costs substantially overstate the cost of the ferry operation and substantially understate the cost of railroad operation via the Chicago gateway. When such figures are corrected they show that the through ferry-rail route between the same representative pairs of origins and destination is at lower cost than the all-rail route.

*Also, if  
selective  
moves were  
were addressed  
to losses  
could be  
avoided.*

Tables 3, 4 & 5 on pages 4 & 5 of Exhibit #2 show the Ann Arbor carferry costs as developed by Kearney and the comparisons of the cost for the selected movements previously mentioned via ferry-rail and all-rail. Table 5 compares the costs via the two routes with the total revenue and although it does show that the total ferry-rail costs (using the present service operations) of \$5,789 are less than the total revenue of \$6,406 by a substantial margin, it also indicates that the corresponding all-rail costs for the aggregate nine movements are only \$4,794. This would indicate on its face that the all-rail route is more economical than the shorter distance ferry-rail route across Lake Michigan. However, there are errors in both sets of costs which reverse this conclusion.

First, the costs shown on table 3 for the "marine operating costs" of the Ann Arbor Ferry are so far above any costs previously calculated for that service (even by the Ann Arbor in an abandonment effort) as to be unrealistic and misleading. The basic error is that these "marine" costs have been augmented by adding to them a substantial amount of railroad expenses which are incurred on land on the railroad system of the Ann Arbor. The error is compounded by the fact that the Kearney calculations have included in the rail portion of the ferry-rail costs the normal average rail costs of handling for the land movement. What has happened is that the table has picked out certain of the railroad costs (presumably actually performed on land by the Ann Arbor in connection with the interchange and rail transportation) and has added those to the marine costs. However, they are already calculated into the railroad portion of the costs on an average basis and the Kearney approach is purely a duplication of costs.

On Exhibit #15 the "marine" costs as shown by Kearney in its study are listed and the necessary adjustments have then been made to remove these railroad interchange expenses and similar overstatements from the marine costs. The adjusted items on lines 1 through 3 of Exhibit 15 are all normal rail interchange type costs. Assume, instead of there being a ferry, the G.B.&W. railroad interchanged with the Ann Arbor at Frankfort. In that light, the existence of Frankfort Station, the dispatching facilities and the car inspection of the rolling stock on interchange at Frankfort are all normal railroad operations which occur at an impor-

*If from there as no this*



tant interchange point such as Frankfort. Similarly, the three locomotive units at Frankfort are there to service local business, to make up the trains and to provide rail linehaul service in addition to the limited function of pushing cars on and off the ferry. Even the latter function corresponds to the interchange run which is necessary in an interchange between two railroads and should also be considered as reflected in the average rail cost figures which have been added to the marine costs based upon territorial rail costs. In view of these facts, the station, dispatching and car inspection costs have been removed and, to be conservative, one of the three locomotive units has been charged against the marine costs.

The next substantial overstatement in the ferry costs is the \$28,700.00 per month charged as depreciation in table 3, which has been mentioned earlier and should be \$15,512 per month.

Another unusual item which has been listed by Kearney as part of marine costs is the "casualty costs" of \$14,300.00. Inquiries were made concerning that item to the Ann Arbor accounting personnel and advised that they could not identify such an item. Similarly, the listing of \$39,500.00 per month for "employee benefits" could not be validated upon inquiry at the Ann Arbor. While such a figure is sometimes added to costs on an overhead type basis at a particular percentage figure (e.g. 10 percent), here that is evidently unnecessary because the various costs being charged to the ferry, e.g., boat operation, boat maintenance, etc. are all identifiable from the Ann Arbor's accounts and include the employee benefit costs in them.

After adjusting out these clearly erroneous items, the restated cost per month is \$135,262.00 rather than the \$228,250.00 per month shown in table 3 of the Plan. Using the same number of loaded cars per month, 1,592, a realistic cost per car for ferry service is \$85.00 rather than the \$143.00 shown in Table 3 of USRA's Plan.

The second major error in the Kearney costing relates to the projected operating costs of an upgraded car ferry as purportedly reflected on table 5. To begin with, the projection of the operating costs of a new car ferry started by assuming the same \$228,250.00 current operating costs discussed above, which are really only \$135,258.00. The principal

error, however, is that the projection of the upgraded car ferry by Kearney fails to reflect either of the two principal economies derived from such a new vessel, viz., (1) the reduction in crew complement from 35 men to 24 men; and (2) the addition of a second separate deck to handle tractor-trailers and the substantial revenue which would be derived there from at no additional operating costs for the vessel. On Exhibit #16, this present operating costs of \$135,258.00 have been restated and the additional \$30,000 of expenses has been added as on the Kearney projection. The ferry has also been credited with revenue of \$136,100.00 from the tractor trailer traffic (assuming that the ferry would handle only 46% of its actual capacity) and the crew costs have been adjusted in the amount of \$14,667.00 to reflect the crew reduction. Both of these adjustments are based directly upon Appendix A to the A. T. Kearney study which indicates present car ferry revenue of \$54. per tractor trailer one-way (App. A-4 and a capacity of 42 tractor-trailers per trip, App. A-6,7). Also added is the financial costs of an \$18 million ferry of \$90,000.00 per month, a factor which Kearney had not included in its projection. After all these adjustments, including the financial costs of the ferry, and giving effect to the new traffic estimate of 3,913 cars per month handled by the new ferry as shown in the Kearney report, the average cost per car would drop to \$27.00 with a new boat operation.

The third major area where the Kearney study has erred is in its computation of the all-rail costs via Chicago. It is notorious in the transportation industry that Chicago is the highest cost and slowest moving switching district in the country. Yet, the Kearney study gave no effect to and took no cognizance of this extraordinary situation. Instead, it simply used the average interchange costs throughout the East and West and ignored Chicago interchange costs. This operation involves typically two linehaul carriers plus an intermediate switching carrier; as compared with the normal interchange operation which involves two carriers. Therefore, to reflect the Chicago switching operation it is necessary to add one additional interchange cost above the normal single interchange costs. Exhibit #17 shows the additional costs attributable to the Chicago interchange.

Using the Exhibit #17 data, costs have been calculated for two complete interchanges at Chicago including 5 days total time, and then subtracted from the regional cost for

interchange between two carriers. The resultant figure is the added cost of the Chicago interchange, above and beyond the normal interchange costs built into the Kearney study. As indicated on page 2 of Exhibit #17, the added cost for the Chicago interchange would average \$68.25 per car when indexed up to 1974.

The important point here is that the added cost of the Chicago interchange almost equals the entire present ferry cost per car of \$85.00; and it exceeds the projected operating cost of \$27 per car on an upgraded carferry.

Exhibit #18 summarizes the cost comparisons between the ferry-rail movements, both on the basis of the present carferry and an upgraded carferry, and the all-rail costs for movements via Chicago.\* As shown there, for 7 of the 9 representative selected movements the ferry-rail route is presently lower cost than the longer all-rail route. Taken collectively, the costs for the 9 ferry-rail movements via the present ferry or an upgraded ferry compare with the all-rail movements as follows:

COMPARISON OF TOTAL MOVEMENT COSTS  
(9 Representative Movements)

All Rail Costs	\$5,409.00
Present Carferry-Rail	5,267.70
Upgraded Carferry-Rail	4,745.70

As shown, either with the present boat or with an upgraded boat the ferry-rail total costs are lower than the all-rail costs. This means that the basic premise upon which the USRA plan recommends cessation of the Ann Arbor carferry service is erroneous.

While not reflected in the Conclusion concerning the carferry in USRA's Plan, the Kearney study went into seven criteria bearing upon the retention/abandonment issue. And it generally found that such non-cost criteria favored the retention of the carferry vs. diverting the traffic to all-rail routes via Chicago. Even on the cost issue, it acknowledged that Conrail would have the ability to route traffic sufficient to fill the carferry and thus reduce substantially the cost per car via the ferry route (p. II-20).

The other criteria found pertinent in the Kearney study are listed below:

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\*Total revenues are shown as given by Kearney and are restated to show the full impact of general increases authorized in 1974

1. Effect on Green Bay & Western Railway
2. Supply of empty cars to Northern Wisconsin;
3. Transit time on ferry route vs. Chicago;
4. Effect on maintaining present competitive rates to and from Wisconsin;
5. Environmental.

A preliminary submission of the report recommended that the differential between all-rail and a combined car-ferry operation at Ludington was so slight that the service should be retained. It should be pointed out that the costs nor the revenue reflected in this exercise are those of Con Rail or the Ann Arbor because they represent the through cost and revenue over the entire move. Therefore, they are not indicative of the profitability of a specific carrier but rather that of a particular movement.

In addition to the preliminary report recommending the retention of cross lake service, it also recommended that the Wisconsin shippers be given protection as to the continuation of the rate structure based on the short line miles produced by the carferry routes.

It should be pointed out that none of the studies to date have shown that carferries, if built as a continuation of a highway system, could be financed out of the highway fund with 70% of Federal funding. It would have to be operated by either one of the states or a bi-state agency. Charges based on operating costs would have to be assessed but only those funds put up by the state would go into the amortization so the depreciation and cost of capital costs would be reduced by 70 percent.

Highway  
Funds

SECTION VIII

A REVIEW OF THE CONSAD REPORT

Consad Research Corporation prepared for the USRA a report titled "Criteria for Line Retention." The report was reviewed but no analysis was made of the mathematical formulae utilized in the model for determining line viability because it developed at a meeting with USRA personnel that the Consad formulae were basically dropped and new ones developed internally based to a large degree on the Canadian method of evaluating branch lines for government subsidy. A great deal of research went into the Consad report and it included a review of methods used by other countries. Some of the conclusions or evaluations made by the Consad are relevant to this work program. Direction quotations from the report on the evaluation of the British and Canadian methods are as follows:

"Differences between the Canadian and the United States economy and rail systems makes direct use of Canadian Experience a matter for cautious analysis." Page 91.

"Perhaps the most significant and sobering conclusion to be drawn from the British experience is that a large reduction in track mileage through abandonment did not necessarily lead to a total system viability. British route mileage was reduced by 35 percent from 17,800 miles in 1961 to 11,500 at present, yet after earning small profits in 1969 and 1970, the system incurred losses in 1971 and 1972." Page 114.

In discussing various aspects of the line viability analysis, the following remarks were worth repeating.

"Statistically valid operating surveys and engineering studies would do much to close the knowledge gap vis-a-vis individual line segments. Although the Association has undertaken considerable research in these areas, time and resource constraints have been limiting factors in their development." Page 27.

"The most straight forward, but the least effective method of projecting future revenues generated by a branch segment would be the use of a statistical trend or forecasting model. The use of such models requires the assumption of a maintenance of the status quo, not only in regional growth patterns, but in railroad operating and marketing procedures as well..... Intensive research should be conducted on each branch segment to determine the economic trends and current development plans of the area being served by the branch. Only with this data can a realistic determination be made of the future traffic and revenue potential of the branch lines under consideration." Page 275.

"For many branch lines and secondary main lines, overhead traffic will constitute the major portion of traffic handled on the line; it is therefore necessary that such traffic be analyzed and included in the viability analysis. Failure to include these overhead traffic revenues and avoidable costs may invalidate the viability analysis." Page 185.

"Although it has been estimated that 30% of all USRA segments under study have bridge traffic, it is believed that there are relatively few cars involved on most of these lines and hence the net carrier revenue will be relatively small. There are some obvious exceptions to this, specifically, the Ann Arbor Railroad and the trackage on the Delmarva Peninsula. It is, therefore, recommended that a zero percent retention factor be used unless a significant amount of traffic on a segment that moves as bridge traffic can be identified." Page 189.

It is also interesting that Footnote #3 on page 127 of the United States Railway Association - Preliminary System Plan states "Both forecasts include the revenue and tonnage for the branch lines that are under consideration for abandonment. It has been assumed that the losses on these lines will be subsidized and that the traffic will remain on the railroads."

SECTION IX

A REVIEW OF UNITED STATES RAILWAY ASSOCIATION LIGHT DENSITY ANALYSIS OF THE ANN ARBOR RAILROAD AND CAR FERRY

Exhibit #3 contains the USRA line density analysis of the Ann Arbor upon which their recommendations were based. The way in which the line segments were selected is not known but whatever method was utilized, it is illogical for evaluating a rail system. A point in case is the USRA line no. 1300 which is described on pages 1 and 2 of Exhibit #3. The line segment supposedly starts at Dundee (Milepost 22.8) and extends to Owosso, Michigan (Milepost 106.0).

The USRA-Preliminary System Plan includes the segment from Toledo to Diann, where the line connects with the D. T. & I., in the proposed Con Rail system. At Diann there is a yard at which the Ann Arbor - D. T. & I. interchange cars and if the Con Rail Corporation was to interchange cars with whomever was to take over the line north of Owosso, there would be no way of doing it.

On page 2 of Exhibit #3 the analysis for this segment is contained as well as the traffic data and operating conditions which went into the analysis. In their preliminary analysis they state that the segment is a loser and recovery of costs would require approximately a 125 percent increase in traffic or a 65 percent rate increase over the 1973 levels.

Exhibit #6 contains the traffic data for six years on this line and it can readily be seen that Dundee generated 10,590 cars in 1973 and these cars have not been included in the Association's analysis.

Utilizing the Association's formula of the need for an increase of 125 percent in the number of cars to make this segment viable would require 9,174 cars. It can be, therefore, concluded that this line is viable by the Association's criteria when the traffic figures are revised to include the 10,590 cars generated at Dundee and missing from the analysis.

The next segment analyzed is the portion from Owosso (Milepost 106.0) to Thompsonville, Michigan (Milepost 270.3) and this analysis appears on pages 2 and 3 of Exhibit #3. This section also fails to meet the criteria for retention and it also requires a 125 percent increase in traffic or an 80% rate increase over the 1973 levels.

As mentioned in the market analysis, the sand as projected at Yuma is materializing and this information is contained in the Association's section on information provided by RSPO, shippers and government agencies on page 3 of Exhibit #3. The average revenue per car in 1973 for this segment was \$214 and the total was \$1,122,655. An 80% rate increase would mean a need for \$898,124 additional revenue to make this line viable by the Association's standards.

A review of the underlying work papers for the analysis indicates that the sand traffic on this line generates an average revenue per car of \$252 per car which would indicate that an increase in sand traffic of 3,563 cars would make the line viable. An increase of 1616 cars occurred in 1974 and the shipper and receiver have both projected annual carloads in excess of 10,000 or an increase of 8663 more than twice the number required and this has been ignored.

An evaluation of the segment from Thompsonville to Kewaunee is on page 4 of Exhibit #3 and since the cost of float operation reflects the same errors in A. T. Kearney's report, the conclusions reached from an analysis based on the erroneous numbers is likewise erroneous.

However, it is interesting to note that the Association has included the ferry traffic in their analysis which consists of a significant amount of bridge traffic. On page 350 of the Preliminary System Plan the Association explains how they have handled overhead traffic in the analysis and the explanation is as follows:

"The net revenue from traffic overhead to the branch required special treatment. The questionnaires indicate the volume of overhead traffic for each line, but overhead traffic exists on only a few of the lines under analysis. The analytical complexities arise from two sources. First, ConRail operations probably will result



in the re-routing of a significant but as yet unknown proportion of the traffic. In addition, use of a line to provide service to overhead traffic necessarily will require provision of local pick-up and delivery service on the line.

Second, the impact of the overhead traffic on a line's viability is difficult to evaluate lacking such critical information as the commodities involved, the total length of haul and the revenue realized by the carrier. Without such specific information, the analysis can only be carried forward on the basis of general averages. Due to these complexities, the reported results of the viability analysis exclude the effects of overhead traffic. However, the recommendations reflect the required use of the line for overhead traffic."

On page 1 of 5 of Exhibit #1 there is a footnote #20 which refers to Mr. Nash, attorney for D. T. & I., and his details of traffic on the Ann Arbor and within that description is his remarks concerning the Ann Arbor acting as an intermediate carrier on a unit train operation from Toledo to Owosso and Mr. Shoemaker, President of the D. T. & I., states on the same page that the line is used for hauling approximately 5 unit trains per week between Toledo and Owosso. This would approximate 26,000 cars per year and in no part of the Association's analysis is this given consideration.

At the meeting with the Association personnel, we were advised that the Association plans on moving the traffic themselves to Midland and Essexville. It was pointed out that they did not have a line into the area because they were also recommended for exclusion. With that, it was explained they would obtain trackage rights from Detroit to this area over the C & O.

A great deal of effort was expended on analyzing the methodology of the light density line viability program and it was concluded that it was an excellent tool for approximating the relative profitability of branch lines. It was also concluded that the only section of the Ann Arbor to which the formula would have application is on the Saline Branch. Exhibit #14 shows the branch line mileage of the Ann Arbor and it amounts to 6.47 miles. The remaining 290

miles are main line and the program was never intended for use in analyzing main lines.

It should be pointed out that because of the type costs utilized in the formula, it does not meet the standards set up by the Commission for the evaluation of lines for abandonment.

SECTION X

THE IMPACT OF THE IMPLEMENTATION  
OF THE PRELIMINARY SYSTEM PLAN ON THE VIABILITY  
OF OTHER CARRIERS SERVING MICHIGAN

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"The Association believes that protection of competition comes before protection of competitors. USRA cannot neglect competitive impacts on rail carriers in the Region but where the interests of these carriers may conflict with the interests of creating the best long run solution for consumers generally, the latter course must be favored." Page 110, Preliminary System Plan.

With this preamble it is rather obvious that the well-being of some of the smaller carriers in the state of Michigan will be jeopardized with the implementation of the plan as it now exists. From a brief review of the carriers serving the state it would appear that the three carriers whose viability could be seriously affected are the Detroit, Toledo and Ironton Railroad, the Detroit and Toledo Shore Line Railroad and the Grand Trunk & Western.

Approximately 60% of the D. T. & I. traffic originates or terminates within 15 miles of Dearborn, Michigan and mainly from five plants that are open to a number of carriers, the Con Rail system being one of them. A unit train presently handled by them originates at a Con Rail mine and terminates at a utility served by both of them. Three through trains a day are delivered by the D. T. & I. to the Penn Central at Toledo or South Charleston, Ohio. The D. T. & I. has a trackage right agreement over the Ann Arbor from Diann to Toledo which is an important gateway to them and which is slated for inclusion in Con Rail. Without consideration to the charges that Con Rail might assess in comparison to what they now pay to the Ann Arbor, it is rather obvious that the traffic moving via this gateway will be impacted significantly by the plan.

The reason the D. T. & I. was able to pick up a great deal of this traffic was due to its modern classification yard at Flat Rock, Michigan and the service impairments brought about by insufficient plant capacity in the Detroit area on the parent company Penn Central. One of the areas slated for improvement in plant is the Detroit terminal.

The D. T. & I. will probably lose a significant portion of this traffic when the impairments are corrected with Federal assistance and through the equipment leverage the Con Rail system will be able to apply with a car fleet as planned.

With such an emphasis being placed upon intermodal traffic by the Association, it can be assumed that such an expansion will impact upon the other carriers within the state. Trailer on flat car or piggyback was originally conceived by the carriers as a device for attracting traffic that was moving via highway. Rates and accessorial services were maintained at a level high enough to discourage the diversion of traffic from boxcars. In recent years, this policy has changed and the large carriers through rate devices are using it as a means of invading the territories of other carriers.

Both the D. T. & I. and G. T. W. are heavily dependent upon the automotive industry for a major portion of their traffic. Many of the plants from which they derive their traffic are either open to switching or served jointly by them and what will be Con Rail. A great many points that this traffic is destined to or from will be on the Con Rail system and is susceptible to diversion.

The Con Rail system apparently will be permitted to shed itself of all branch lines it deems marginal in nature. The solvent carriers in the state will be burdened with their branch lines and the cross subsidization that is associated with them.

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SECTION XI

CONCLUSIONS

From the analysis it can be concluded that:

1. The Ann Arbor and its carferry were not properly evaluated by the USRA and its exclusion from the Preliminary System Plan was in error.

2. No line should be evaluated on a segmented basis unless the segments are logically put together and its origin and terminus determined on the basis of operating requirements or divisional junction points. ✓

3. Any line considered for exclusion by the system should be analyzed prior to approval on the basis of industrial development potential or the development of mineral deposits contiguous to it. ✓

4. The discontinuance of carferry service cross Lake Michigan by USRA would have a detrimental effect upon the future development of the states of Wisconsin and Michigan since it appears they will discontinue the rates produce via the use of the short line miles over those routes. ✓

5. The Preliminary System Plan as it relates to the State of Michigan requires further investigation especially into the area of impact upon the viability of the existing carriers who will be adversely affected through implementation of the plan. ✓

6. The light density line criteria methodology requires further refinements before it should be accepted as a tool for the abandonment of lines.

7. The extension of markets by carriers having access to a limited number of gateways should be granted to insure their continued viability.

SECTION XII

RECOMMENDATIONS

To insure the continuing development of the states of Michigan and Wisconsin; protection of the public interest, and the continuation of a balanced rail transportation system within the state of Michigan, it is recommended that:

1. Responsible state officials immediately convey to the USRA and RSPO the errors in the PSP as they relate to the exclusion of the Ann Arbor from the Con Rail System.

2. Investigation be made immediately into the means by which the Act or its scheduled implementation date can be changed to insure the other lines proposed for exclusion have been properly evaluated.

3. The Rail Planning Sections of each state should be given sufficient time and resources to evaluate the impact of the PSP upon the state or states.

4. A bi-state committee be established to evaluate the alternatives available for either the retention of cross lake ferry service as it exists today or alternatives for the future. Determination should also be made if the needs of all interested parties can be met through the continuance of a single cross lake service with access by more than one carrier.

5. A committee within the state be appointed with representation of responsible officials from Utilities, Railroads, Manufacturing Industry, Agricultural Industry and State Chamber of Commerce to assist in the development and evaluation of both federal and state rail service plans.

SECTION XIII

GLOSSARY OF TRAFFIC TERMS

Abandonment of Operation on a railroad implies a cessation of service over a line or segment of a line coupled with the intention not to resume such service or use and requires permission of the I.C.C. (1)

Arbitraries are charges to be added to the basic rate for the benefit of short or weak lines of railroad and accrue to that carrier before the division of revenue is made amongst the participating carriers.

Branch Line -- a branch line is commonly distinguished from an industrial track, yard track or siding in that branch lines serve one or more stations beyond the point of junction with the main line or another branch line.

Bridge Traffic is traffic that neither originates or terminates on a carrier's line but instead is bridged over that carrier's line between two junctions of another carrier or two junctions of the different carriers.

Class Rates are the basic price structure of the carriers and apply only in the absence of commodity rates. A class rate is in effect on all commodities between all points served by railroads. It is made up of two essential elements: the distance factor, called a "rate basis number", and the transportation characteristic factor called a "rating". (2)

Commodity Rates are constructed on a variety of bases. The three most common types are:

1. Commodity rates which are specific rates published to apply on a specific commodity or group of related commodities between specific points and generally via specific routes.
2. Commodity rates which are not published to apply between specific points but are expressed in terms of column numbers. These rates are often, although not always, tied to a class

(1) Akron and Barberton Belt R.R. Abandonment of Operation, 239 ICC 250,254.

(2) Flood, Kenneth U., Traffic Management Second Edition, William C. Brown, Publishers 1965, Page 138.

rate scale. In this respect they are similar to exception ratings.

3. Commodity rates applicable on mixed freight.

The terms "all-commodity rates", and "freight, all kinds" are used interchangeably. (3)

Coordinated Service is when two or more carriers coordinate the scheduling of their operations so that traffic between two points over their lines moves in an expedient manner.

Cross-Subsidization is the condition of the profitability of one portion of traffic or segment of the railroad supporting another portion of traffic or segment of the railroad that is not covering the cost of handling the traffic and is not making a contribution toward the overhead costs..

Differential Rates are usually thought of as a reduced form of rates. There are two common situations in which such reductions are deemed necessary. First, there is the situation where two routes are involved, one a so-called standard all-rail route and the other a so-called differential route. A differential route can be either an all rail or a rail water or some other combination of carriers over which service is less desirable than over the standard all-rail route. The differential rate is established between two points served by both types of routes by deducting a fixed amount from the rate applying over the standard route between the same points. (4)

From New England to many points in the United States via the more circuitous routes of the Canadian carriers, there are differential rates. (5) The rates were implemented to attract traffic to the longer and more time consuming route through Canada. Sufficient traffic developed over these lines to enable it to become the service route between many points.

Division of Revenue - "Division" is a Railroad term relating to the allocation of a portion of the total

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(3) Ibid. Page 150

(4) Ibid. Page 160

(5) Lloyd Bros. Co. v. G.T.W. R.R., 227 ICC 479.



revenue, by and between two or more carriers participating in the movement of goods from the point of origin to the point of destination. Each railroad participating in the carriage or movement will receive some revenue, a division or proportion of the total freight paid by the shipper, for its participation in the movement of goods. This division of revenue is accomplished either voluntarily by and between the carriers or in the final analysis through the powers which the Interstate Commerce Commission has in the fixation of divisions, or through the Federal Courts. A mileage prorate is a common method for the determination of the division of a rate by the use of the ratio of the mileage performed by each individual or group of carriers with relation to the entire service. However, this is not the only method of the division of revenue. There are numerous methods such as actual mileage prorate, short line mileage prorate, first class rate prorate, commodity rate prorate, going rate prorate, average rate prorate and revenue rate prorate. (6) Very few, if any, of these methods could be a reflection of the individual carriers' cost of handling the traffic, but it could be said that a mileage prorate probably covers mileage variable costs.

Embargo - The Interstate Commerce Commission has stated "the carriers have the right, in order to prevent complete paralysis of their operating facilities, to protect themselves by embargo against the acceptance of freight." As a temporary measure, an embargo suspends transportation service but leaves the rate structure undisturbed and cannot be used as a permanent measure to control traffic movements. To be legal, an embargo must be issued for good and sufficient reasons. (7)

F.O.B. Destination - If the terms of sale are F.O.B. (freight on board) destination, the shipper is responsible for all costs incurred until the goods exit the doorway of the car and retains legal title to those goods until that time. (8)

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(6) William N. Meade, Some Aspects of Railroad Division of Revenue, and the Interstate Commerce Commission, An Original Paper Submitted in Partial Fulfillment of the Requirements for the Certification of Membership in the American Society of Traffic and Transportation, Inc.

(7) Flood, Page 246

(8) Ibid. Page 337

F.O.B. Origin - If the terms of sale are F.O.B. (freight on board) origin or a named shipping point, the shipper is responsible for all packaging and shipping costs until the goods enter the rail car and retains legal title to those goods until that time. Freight costs for the movement of the goods to destination are the receivers' responsibility. (9)

Gateways - are geographical points which are normally terminating points or junction points of a number of carriers over which the divisional split of revenue breaks, i.e., Chicago, St. Louis, Cincinnati, etc.

Interchange Point - is the point where two carriers' lines connect either physically or through a switching carrier and where a car passes from the account of one railroad to the account of another. It is also the point upon which the mileage prorated or division is based.

Interline Traffic is traffic that either originates on another carrier (interline received) or terminates on another carrier (interline forwarded).

Local Rates - a local rate is assessed for transporting a shipment between two points when the line-haul service is performed by one carrier. Additional switching service or pick-up and delivery service performed by a second carrier has no effect on the structure of the rate.(10)

Local Traffic is traffic that both originates and terminates on the same carrier.

Long Haul - is when a carrier has traffic routed over, onto or off of his line via a route that affords him the greatest division of the through charges. This greatest division usually reflects the longest possible distance over that carrier's line for that particular route.

Main Line is the line or lines of a carrier that extend from the origin point of that carrier's system to the terminating point of that system over which the preponderance of traffic is moved.

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(9) Ibid. Page 337.

(10) Ibid. Page 153

Minimum Weight is the least weight at which carriers will compute freight charges or apply certain rates, for example, the lowest weight on which the carload rate would apply. (11)

Operating Agreement is an agreement between two or more carriers permitting the movement of traffic via other than tariff routes for operating convenience. For revenue accounting and rate-making purposes the tariff routing applies.

Overhead Traffic is traffic that neither originates or terminates on a carriers' line but instead is bridged over that carriers' line between two junctions of another carrier or two junctions of the different carriers.

Per Diem is the car rental charge a using carrier pays the owning carrier while that car is on his line. This charge is currently based on a daily rate depending on the car value and mileage rate.

Rates are the published charges for the movement of goods between two or more points.

Routes are usually defined as an arrangement, express or implied, between connecting carriers, by which they offer through transportation service from a point on the line of one to destination on the line of another. (12) The person paying the freight charges has the right to select the route over which the traffic will move.

Short Haul is when a carrier has traffic routed over, onto or off of his line via a route that produces less than his maximum division or revenue.

Short Line Miles (Docket 28300 Miles) - In Docket 28300 (1945) the I.C.C. prescribed and the carriers established a uniform scale of class rates between all railroad points in the United States east of the Rocky Mountain. As a result when a commodity moves on class rates only, a producer in every section east of the Rocky Mountains is able to ship to any market on the same mile-for-mile level of rates. (13) In this case, the Commission

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(11) Ibid. Page 221

(12) Ibid. Page 153

(13) Ibid. Page 138

established distances between points computed by determining the shortest possible rail routes by which cars may be moved without transfer of lading.

Surcharge is a charge, approved by the Commission, that is in addition to the published freight rates and is usually of a temporary nature.

Through Rates can be defined either as the charge applying to an interline shipment or as the sum total of all rates that apply via a through route. (14)

Through Trains are trains which are assembled at origin in such a manner that the movement of the train between to points is not interrupted due to the need to re-sort or classify the cars within the train. This method of operation permits trains to move through crew charge points or interchange points between two carriers without breaking the train.

Trackage Rights - The Interstate Commerce Commission has defined the term "Trackage Rights" as the right of one carrier to use the tracks of another for a compensation usually varying with the extent of the use. L. A. & T. Ry. Operation, 170 ICC 602,606.

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south route which by-passes Flint and Detroit. In support of this contention Mr. Shoemaker said that the entire trackage between Toledo and Owosso is used to haul approximately five unit trains of coal a week to the Bay City-Midland-Saginaw area. The DT&I is prepared to acquire pertinent parts of the AA's trackage that complement its operations and is willing to explore the possibilities of operating those properties of the AA for which a rail service continuation subsidy may be provided.

Mr. Shoemaker also pointed out that the DOT Report does not consider the traffic potential of the sand deposits at Yuma nor the main line function of the AA as part of a transcontinental rail routing using its cross-lake rail car ferry service between Frankfort, Michigan and Kewaunee and Manitowoc, Wisconsin.<sup>19</sup> Testimony supporting the continuation of the ferry service was submitted by a number of individuals. Paul Treska of the UTU pointed out that continuing the car ferries would prevent the bankruptcy of the Green Bay & Western Railroad in Wisconsin, which is heavily dependent on cross-lake traffic. The Seafarers International Union of North America, representing employees of the car ferries, testified that the car ferry is one of the most economical modes of transportation and elimination of the ferries would increase unemployment and welfare payments and reduce the Frankfort area's tax base. Among the businesses using the ferry are the Ameel Distributing Co.; Art Brockman, Inc., which shipped 25 carloads of heavy machinery in 1973; and the Packaging Corp. of America, which moves approximately 600 carloads of pulpboard via the ferry annually.

In 1972, the AA ferry hauled 78,808 carloads of freight and 2,254 tractor-trailers. According to Frederick C. Nash, attorney for the DT&I, of the AA's total gross freight revenues of \$10,588,410, \$6,460,772 was received from the car ferry operation.<sup>20</sup> Mr. Nash pointed out that the AA has little or no on-line business over the greater portion of its rail line between Frankfort and Owosso, and the AA's on-line business south of Owosso is incapable of supporting the car ferries under present conditions. Mr. Shoemaker contends that the cross-lake

<sup>19</sup> According to William R. Thomas, the ferries *City of Green Bay* and *Arthur K. Atkinson* are docked in the Elberta-Frankfort harbor (Betsy Bay) and are out of service until repairs can be made. Mr. Thomas reported that the AA has only one operating ferry at this time.

<sup>20</sup> Mr. Nash stated that the AA's remaining traffic came from the following four main sources: traffic originating or terminating at a cement shipper in southeastern Michigan (\$1,394,600); traffic originating or terminating at an auto parts producer in southeastern Michigan (\$338,900); traffic originating or terminating at an automobile manufacturer in Toledo, Ohio (\$332,600); and a unit coal train operation which AA handles as an intermediate carrier (between Penn Central-Toledo and Penn Central-Owosso) for a chemical plant and public utility at Midland and Essexville (Bay City), respectively (\$1,009,900).

#### AA: Frankfort to Toledo

The 292 mile Frankfort to Toledo line is operated by the bankrupt Ann Arbor Railroad Company<sup>18</sup> and serves the communities of Frankfort, Elberta, Pomona; Yuma, Cadillac and McBain in Zone 165; Farwell, Claire, Mount Pleasant, Shepherd, Alma, Ithaca and North Star in Zone 162; Elsie in Zone 161; Owosso, Durand, Oak Grove, Howell and Hamburg in Zone 160; Whitmore Lake, Pittsfield and Milan in Zone 153; and Dundee, Diann, Federman and Toledo, Ohio in Zone 113. The DOT Report declared all but three segments of the AA potentially excess. The three segments are: Owosso to Durand (Zone 160); Whitmore Lake to Saline (Zone 153); and Dundee to Toledo, Ohio (Zone 113).

According to Kent P. Shoemaker, President of the DT&I, it would be impractical for the AA to remain in business to operate these non-connecting line segments. Mr. Shoemaker contended that the cost of breaking up the AA south of Owosso into three segments is difficult to justify when it is possible to preserve a viable north-

<sup>18</sup> Stock of the Ann Arbor is owned almost entirely by the Detroit, Toledo and Ironton Railroad Company which manages its affairs under arrangement with the trustee.

car ferry operation of the AA cannot be made economically viable and self-sustaining, and no railroad should be expected to conduct these operations without subsidy from those who benefit from the retention of this service.

The difficulties of the AA, according to Mr. Nash, have already been amply explained to the Interstate Commerce Commission in car ferry abandonment proceedings brought before the Commission. Mr. Nash stated that the Commission denied permission to the AA to abandon its car ferry routes between Frankfort and Manitowoc (Finance Docket No. 26373). The Commis-

**Table 150: Traffic Profile: Frankfort to Toledo**

Rail user	Commodity	Estimated carloads		
		1972	1973	Projected
<b>Zone 165</b>				
North American Cold Storage Co.	Tin cans, cherries			
Cherry Central Cooperative	Cherries, sugar			
Pet Milk Co.	Frozen food products	106		
Smeltzer Orchard Co.	Fruit			
Luedtke Engineering Co.	Construction materials		4	
Glassland Fruit Coop.	Cherries		7	20
Volger Lumber Co.	Lumber	11	11	
M. Walters and Co.	Christmas trees		125	
Sargent Sand Co.	Foundry sand		1,400	4,000-10,000
Mitchell-Bentley Corp.	Interior automotive trim assemblies		440	
Wickes Corp.	Lumber, insulation		11	
Sandell Storage & Wholesale	Foodstuffs	96	31	
Cadillac Malleable Iron Co.	Coal, coke, clay, metals	192	262	600
St. Johns, Inc.	Furniture		36	
McBain Co-op	Fertilizer		45	
Falmouth Cooperative Co.	Fertilizer, feed grain, building materials, coal	45	45	
Brooks and Perkins, Inc.	Pallets		791	
Red Mill Lumber Co.	Building material		3	
<b>Zone 162</b>				
Reynolds Chemical Products Division, Hoover Ball & Bearing Co.			100-150	
Great Lakes Gas Transmission Co.	Gas pipe			594
Seiter Brothers Lumber, Inc.	Lumber		75	
Bader Milling Co.	Grain, fertilizer		61	
Con Agra	Feed, raw materials		69	
Cashway Lumber Co.	Lumber		47	

Rail user	Commodity	Estimated carloads		
		1972	1973	Projected
Dowell, Division of DOW Chemicals				36
Fertino Beverage Co.	Wine, beer			40
Mt. Pleasant Salvage and Steel Co.	Scrap iron			36-60
Alma Iron & Metal	Scrap iron	32	80	
Crippen Mfg. Co.				12
Alma Plastic	Chemicals, plastic			120
Total Leonard, Inc. (Mt. Pleasant) (Alma)	Petroleum products, pipe			10 20
Gratiot Metals Co.	Steel, scrap metal			481 500-600
Ithaca Roller Mills	Grain, fertilizer	23	44	
Whitman Industries, Inc.				127 185
Lee L. Woodward Sons, Inc.		9	12	
North Star Elevator Co.	Grain			92
Michigan Bean Elevator Co.	Beans, grain	135	116	
<b>Zone 161</b>				
Borden, Inc., Chemical Division				12 25-30
<b>Zone 160</b>				
Genesse Stamping Co. Subsidiary of Aetna Industries, Inc.				
Owosso Iron & Metal Co.	Scrap iron			170-200
Standard Lumber & Supply Co.				57
Dayco Corporation		24	4	36
Chevron Asphalt Co.		4-8	4-8	4-8
Bruce Products Corp.				51 108-121
Glaser's Elevator & Lumber	Building products			228
Corunna Elevator & Coal Co.	Agricultural products			125
Lott Elevator Co., Inc.	Fertilizer, grain	34	78	86-96
Aetna Industries, Inc.				
<b>Zone 153</b>				
Ford Motor Co. (Saline)	Automobiles			4,000
American Foundries Co.	Coal	13	15	
Wickes Corp.	Lumber			82
Milan Lumber Co.	Lumber	12	12	12
<b>Zone 113</b>				
Toledo Blade Co.				1,920 <sup>2</sup>
Dundee Cement Co.	Cement			10,341
Cone Elevator Co.	Feed, grain	108-145	108-145	108-145

<sup>1</sup> The company also ships 25 trailers a year via piggyback but since there are no loading ramps in Cadillac they are trucked to Grand Rapids.

<sup>2</sup> Figure is for the past five years.

sion now has before it the AA's application to abandon all its car ferry routes and a portion of its line north and west of Thompsonville, Michigan (Docket No. AB-49).

Mr. Shoemaker expressed concern that the DOT Report will discourage the location of any new industries on the AA in southeast Michigan, an area which according to all projections will be entirely populated and industrialized before many years. A traffic profile of the AA is contained in Table 150.

Opposition to the abandonment of the line was voiced by the Traverse Bay Area AFL-CIO Central Labor Council for the following reasons: it would cause closing or relocation of local factories; alternative transport modes are not available; transportation costs would increase; and 200 Frankfort residents, employed either directly or indirectly by the AA might be laid off. According to the Benzie County Board of Commissioners, the existing unemployment rate in the Frankfort-Elberta area is 13.4 percent. Pet, Inc. stated that the Frankfort area is a particularly poor one for truckers because they normally have to "dead head" from Chicago or Detroit in order to pick up local outbound shipments. A forced shift to motor transportation would increase Pet Milk's freight bill by an estimated 25 to 30 percent. In 1972, Pet Milk used the AA ferry for 48 one-way trips and 16 round trips.

One of the more important users of the AA line is the Sargent Sand Company of Yuma. The company has invested approximately \$700,000 in the development of the sand resources served by the AA. During its first year of operation, in 1973, the firm shipped approximately 1,400 carloads of foundry sand. The firm projects an ultimate need for 10,000 rail cars per year. Testimony supplied by the Cadillac Area Chamber of Commerce indicated that negotiations are now underway to transport used or spent sand back to Wexford County. Based on present operations and plans, this could mean an additional 5,000 to 10,000 inbound carloads per year on the AA. Additionally, according to the Chamber, Sargent is reported to be constructing a new sand pit at Harlan near the west border of Wexford County. Removal of sand from the Yuma pit has important ecological advantages in that it would preserve the Lake Michigan dunes near Ludington. It is the contention of Bernard Sterk, a partner of the Sargent Sand Company, that the counties of Benzie, Manistee and Wexford contain many hundreds of millions of tons of high quality industrial sand. He anticipates that a number of other sand companies will move into the area in the next few years to develop the sand deposits. Mr. Sterk stated that Michigan produces more industrial sand, not including silica, than any other state.

Ford Motor Co. sees abandonment of the AA as a major problem because of the movement of sand from

Yuma. Ford now moves 40 carloads of sand a week to its Cleveland, Ohio casting plant and its potential traffic to Cleveland and to its Michigan casting center in Flat Rock, Michigan would be 10,000 carloads of Yuma sand per year.

The Cadillac Area Chamber of Commerce which voiced disapproval of the abandonment of the PC also opposed the abandonment of the AA. The Chamber's position on the proposed rail abandonments has been discussed previously. Table 151, which contains a listing of those companies that presently utilize the AA, was supplied by the Cadillac Area Chamber of Commerce. The Chamber noted that an iron working business, which would generate an estimated 100 carloads per year, is considering locating on the AA in the Cadillac area.

Seventy-five Michigan members of the Institute of Scrap Iron and Steel support retention of the AA. One of them, Gratiot Metals Co., stressed that the nature of its traffic requires service by rail and that increases in the price of steel scrap indicate that shipments will increase in the future.

Robert A. Peacock, of Cadillac Malleable Iron Company, estimated that using trucks to transport raw materials would increase his firm's yearly freight bill by over \$150,000. Mr. Peacock illustrated the problem by showing that the cost to the firm to move coke via railroad is \$8.10 per ton, whereas coke moved by truck costs the firm \$16.75 per ton.

The Mitchell Bentley Corporation furnishes interior automotive trim assemblies to Chrysler, General Motors, and other automobile manufacturers. According to Willard C. Haight, of Mitchell Bentley, Chrysler and General Motors require that all deliveries to their plants be made by rail. The firm anticipates its rail usage will increase by 20 to 25 percent. If this line is abandoned, the company expects to terminate the employment of 300 to 350 employees.

Total Leonard, Inc., a marketer and refiner of petroleum products, located in Mount Pleasant and Alma, stated that the distance and size and weight factors associated with moving drilling equipment and pipe preclude the use of motor carriers as an alternate mode of transport.

Sidney Smith, President of the Mount Pleasant Area Chamber of Commerce, reported that 1,000 carloads are generated in the Mount Pleasant area annually.

Sonoco Products Company is constructing a new plant and accompanying rail siding in Shepherd, which is expected to be completed in July 1974. Sonoco will employ 35 people. The proposed elimination of the AA trackage is expected to create severe handicaps in the provision of adequate transportation services for this plant.

The Genesee Stamping Company currently routes its

rail cars to Kenosha and Milwaukee over the AA car ferry. Loss of this routing is expected to add one to two days transit time delays to Genesee's shipments.

The Corunna Elevator and Coal Co. of Corunna and Glaser's Elevator and Lumber of Vernon are both located north of Durand (Zone 160) on portions of the AA that DOT considered viable. They reported concern, however, that the DOT proposal would disrupt the customary service and, by leaving the AA with only inoperable segments of main line, would result in loss of service to all stations.

The General Manager of Stores at the University of Michigan testified as to the importance to the University of service by the AA.

The Thompson Beverage Company is located in Ann Arbor on a spur from the AA. It received 42 carloads in 1973 and expects to double its traffic by 1980. Ninety-eight percent of its traffic arrives by rail since rail is the only economically feasible mode of movement from California.

Rhe Tech, Inc. has a plant on the AA at Whitmore Lake. It received 2,000,000 pounds of material in 1973 and considers continued rail service essential to its growth.

According to Thomas J. Fegan, representing the Washtenaw County Metro Planning Commission, the loss of direct north-south rail service to Toledo, which would result from the abandonment of the AA between Pittsfield (Zone 153) and Dundee (Zone 113), would severely reduce industrial development potential along this corridor.

Representatives of Dundee Cement Company pointed out that requiring the AA to maintain rail service west of Owosso, including the ferry operation, has caused it to incur heavy losses, thereby dooming the entire line.

**Table 151: Traffic Profile of the Cadillac Area—1973**

Rail user	Commodity	Originating carloads
Brooks & Perkins, Inc.	Dockwood, plywood	5
Kraft Foods	Cheese	8
Mitchell-Bentley	Apts	241
St. John's, Inc.	Furniture	23
J. Hofert Co.	Christmas trees	39
Brehm Tree & Land	Christmas trees	23
I. Fogel Co.	Christmas trees	19
Lee Swallow	Lumber	1
Bud Gernant	Christmas trees	1
John P. Minock	Hay	2
Associated Pipeline	Pipe	1
Sargent Sand Company	Sand	1,378
Eugene Green	Christmas trees	2
Brenteson Whse.	Christmas trees	15
Ron Cochrane	Christmas trees	5
M. Walter Co.	Christmas trees	97
Harris & Thomas	Christmas trees	1
Total:		1,861

Rail user	Commodity	Terminating carloads
Brooks & Perkins, Inc.	Limestone, lumber, plywood, balsawood, coal	87
Cadillac Auto Supply	Paper	1
Cadillac Candy	Paper	4
Cadillac Co-op	Fertilizer	1
Cadillac Metal Casters	Clay and sand	11
Cadillac Malleable Iron	Brick, clay, coal, coke, sand, scrap iron	297
Cadillac Rubber & Plastics	Rubber and carbon black	39
Consumers Power Co.	Poles	5
K & K	Feed	1
Harris	Grain	1
Kysor of Cadillac	Lumber	12
Mid-State Fruit, Inc.	Paper	3
Mitchell-Bentley	Apts and racks	249
Quality Beverage	Beer	12
Sandell Storage	Foods	25
Tribune Record	Newsprint	1
Western Concrete	Brick	16
William-Dahlquist	Coke	19
Wickes Lumber Co.	Lumber	8
Shell Pipeline	Pipe	13
Lee Swallow	Lumber	4
Consumers Power Co.	Engines	3
Marion Grain	Fertilizer, feed, coal	17
Marion Lumber	Lumber	8
McBain Co-op	Lumber, fertilizer, feed, roofing	49
McBain Grain	Feed and fertilizer	5
Ellens Farm Equipment	Agricultural implements	3
M. Jenema & Sons	Agricultural implements	1
Clayton Taylor (Lucas)	Coal	17
Michigan Consolidated Gas Co.	Pipe coating	18
Dunn Brothers	Machinery	1
Ann Arbor RR	Spent sand	1
J. T. Sandell Storage	Food	96
Joseph Supply	Cement	1
Consumers Power (Mesick)	Transformers	1
(Copemish)	Poles	1
Milarch Nursery (Copemish)	Trees	1
Total:		1,032

Toledo Blade Co. reported that, because of the AA's proximity to the Blade building, it provides the most convenient service of any railroad serving Toledo. Toledo Blade also reported that a truck trailer can haul 23-26 paper rolls compared to 80 rolls in a rail car and that the use of trucking would necessitate finding additional storage for paper, which at this time is non-existent.

Great concern over the potential increased transportation cost of a shift to motor carriage was expressed by the Chevron Asphalt Company, Dayco Corporation and Lott's Elevator Company. The Chevron Company al-



leged that the increased cost of shipping via tank truck would result in the loss of its competitive position. Lott Elevator has plants at Cohoctah and Oak Grove on the AA. It serves area farmers as a grain market and a source of feed and fertilizer. Loss of rail service would cut business in half and cause Lott to discharge five or six employees. It would have taken 450 semi loads carrying an average of 800 to 900 bushels per load to move the grain which it shipped in 68 rail cars in 1973. Lott stated that finding sufficient trucks at harvest time would be almost impossible and that farmers would lose about \$50,000 per year or 10 cents per bushel. Cohoctah is located 12 miles from a Class A highway and it would cost \$49,000-\$50,000 per mile or about \$600,000 to convert the connecting road to Class A. During periods when the frost laws are in effect, loads are cut 40 percent to comply with weight limitations.

SOURCE: The Public Response to the Secretary of Transportation's Rail Services Report, Volume III - Mid-Western States.

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## Railroad Marine Operations

*The Association's analysis of rail service in the Northeast and Midwest includes review of car-ferry operations, principally those across Lake Michigan, Chesapeake Bay and New York Harbor. Marine transportation provides a special service to shippers, but it has imposed a substantial financial burden on the bankrupt carriers. Many existing facilities and most of the vessels soon will have to be replaced or rehabilitated to make the level of service more safe and efficient. The capital expenditures needed to complete such a project would be considerable.*

*This chapter explains the methods used to analyze car-ferry operations. In essence, these systems were considered as light-density branch lines and subject to the same analytic procedures. The Association has concluded that due to the high cost of modernizing the existing car-ferry fleet and facilities, ConRail should not be responsible for maintaining and improving marine operations. As a result, these lines would become available for the subsidies authorized in Title IV of the Regional Rail Reorganization Act of 1973.*

Most marine operations of the bankrupt railroads in the Region have been declining for many years. These operations include:

- Ann Arbor Railroad—
- Lake Michigan Car Ferry Service
- Penn Central—
- Cape Charles, Virginia, to Little Creek (Norfolk), Virginia, Car Float Service
- Penn Central, Erie Lackawanna and Lehigh Valley—
- New York Harbor Car Float and Lighterage Services
- Reading Company—
- Delaware River Car Float Service
- Mackinac Transportation Company—
- Mackinac Straits Car Ferry Service

The Ann Arbor service on Lake Michigan, which has retained a reasonably substantial volume of traffic, essentially is part of a secondary through route in connection with the Green Bay & Western Railway. Similarly, the Cape Charles-Little Creek service is a link in a through route of secondary importance, although local factors are also involved. Traffic on this marine route also has held up relatively better than on the others.

The New York Harbor and Delaware River operations are essentially local in nature, handling traffic between rail terminals and waterfront locations not directly on the lines of the operating companies. The Mackinac Transportation Company's Mackinac Straits service forms a bridge between little-used branch lines.

Car-ferry operation is much more expensive than train operation on a per-mile basis. On a typical car ferry, 35 men perform the work that 5 men accomplish moving the same amount of traffic over rails. The cost of maintaining a ship and float bridges exceeds the equivalent cost of track and locomotive maintenance, and the ship uses much more fuel than a locomotive. The economics of car-ferry operation do not resemble those of marine transportation in general. In essence, it is a piggyback service of a very specialized nature whose sole justification is the avoidance of an extreme amount of railroad circuitry.

Gains in rail productivity have been made by increasing the size of individual cars, thus requiring less handling and switching per ton of cargo moved, and by increasing the number of cars made up into trains, thus requiring fewer crew and motive units. Bigger rolling stock and longer trains do not result in equivalent productivity gains for marine operation, however, because of the absolute limit on the number of rail cars that can be accommodated and thus the freight tonnage that can be floated. Moreover, as land freight speeds increase, water links are put at a further disadvantage.

The marine services in the Region are at a crucial juncture because certain vessels need imminent replacement, but they will have to compete for funds with mainline consolidation and improvement, including a

large amount of deferred maintenance. Large investments in new marine equipment could reduce operating costs substantially—including fuel, crew, general operating capacity, maintenance and repair. However, these investment expenditures to reduce marine operating costs would be desirable only where the marine service must of necessity be continued, since new investment which yields a lower but continuing deficit is less attractive than abandonment.

Two of the five marine operations in the Region are potential medium-density routes for freight service and are presently used for through freight. The Lake Michigan car ferries serve traffic which would otherwise move via the Chicago gateway; the Chesapeake Bay car float is an alternative to the Potomac Yard (Alexandria Va.) gateway and also serves as a route for oversized loads; car-float interchange at New York Harbor avoids extreme circuitry for freight moving between the Long Island RR and the PC, LV and EL Railroads.

The revenues derived from waterborne traffic are generally lower than those which would be earned on the same traffic moving via an alternative rail route since the water route is generally the short route and rail rates traditionally have been based on average costs and distance, not specific costs. Shippers recognize these rate-making benefits and press for continued marine service. On the other hand, service over the shorter land-water route can be more expensive to provide than longer all-land service.

The revenues attributable to a marine service such as a car ferry are not easily disentangled from overall revenues for the movement, and they depend heavily on the particular commodity and origin-destination combination. Thus, the analyses of individual marine operations set out below emphasize comparative costs of various land-water and all-land routes as being the most valid measure of the preferred alternative.

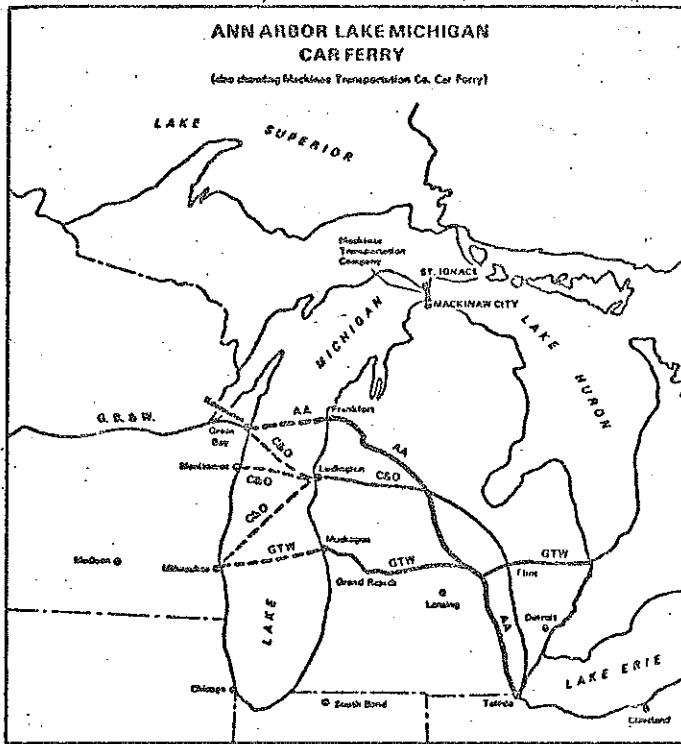
### Ann Arbor Car Ferry Service

Currently, three railroads provide car ferry service across the center of Lake Michigan (see Figure 1):

- C&O (Chessie System)* between Ludington, Mich., and Milwaukee, Manitowoc and Kewaunee, Wis.
- Ann Arbor RR* between Frankfort, Mich., and Kewaunee, Wis.
- Grand Trunk Western RR* between Muskegon, Mich., and Milwaukee, Wis.

Of the three, the Chessie's is the most extensive operation, serving three separate routes from a single port on the Michigan side of the Lake. The Ann Arbor service is second with 30-35 trips per week over its single remaining route. The GTW service consists of one round trip 5 days per week, the prime purpose of which is to provide access to Milwaukee. The Chessie and GTW

FIGURE 1



are seriously considering discontinuance of their car ferry operations.

The Ann Arbor car-ferry service normally is conducted by 1 vessel, the *Viking*, which is capable of handling 26 rail cars. A second ship, the *A. K. Atkinson*, is out of service due to the need for extensive repairs. The *Viking* is adequate normally for the amount of traffic currently handled; when a substitute or auxiliary vessel is needed, a spare GTW ferry is rented. Two round trips per day is the normal operation. Formerly three other car-ferry routes were operated from Frankfort by the Ann Arbor, but these were discontinued due to declining traffic. On the remaining Frankfort-Keweenaw route, traffic has remained relatively steady.

The principal connection on the Wisconsin side of the Lake at Keweenaw is the Green Bay & Western R. R.,

which operates a single main line without branches across northern Wisconsin, terminating at Winona, Minn., on the west bank of the Mississippi River. This line relies on the car-ferry connections at Keweenaw for approximately half its overall traffic. This traffic is divided between the Ann Arbor and the Chessie in a ratio of approximately 3:2. Thus, we find the AA and GB&W, two roads of comparable size and similar in some characteristics, each dependent upon the other for approximately 30 percent of its traffic. However, the GB&W still makes a small profit and the AA is bankrupt. That the AA is encumbered with the car-ferry operation probably is one of the principal reasons for the disparity. Table 1 shows the comparison.

Since most of the traffic using the car ferry is relatively long haul to the AA, it accounted for 51 percent of the 1973 revenue or approximately \$5,380,000. The northern 185-mile section of the AA is nearly devoid of local traffic and therefore almost wholly related to the car ferry.

As indicated in Table 2 total traffic averages approximately 2,500 cars per month, of which 1,600 are loads and 900 are empty cars. The percentage of loaded cars is approximately 70 percent eastbound, but total cars are reasonably close to balance. As the northern two-thirds of the Ann Arbor RR exists mainly for the ferry connection, it is apparent that the greatest revenue source is also the most acute problem.

Traffic over the Keweenaw-Frankfort route, which has held steady or increased slightly during the last 3 years, amounts to about 20,000 annual carloads, with the *Viking* generally used to capacity eastbound. Total

TABLE 1.—Comparison of the GB&W and AA operations, 1973

	Miles of road	Revenue (\$000)	Expense (\$000)	Net profit (loss) (\$000)	Operating ratio (percent)
GB&W...	254	\$8,820	\$8,638	\$282	82.5
AA.....	202	10,542	12,327	(1,785)	97.9

Source: Railroad operating records.

TABLE 2.—Ann Arbor Lake Michigan car ferry traffic between Keweenaw and Frankfort, monthly by direction, 1974

	Month									Monthly average	Average number of cars per trip
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
Westward:											
Loads.....	395	440	480	424	785	447	434	456	257	484	7.2
Empties.....	684	643	608	701	268	604	604	600	527	630	8.7
Total.....	1,079	1,083	1,128	1,215	1,163	1,111	1,128	1,056	684	1,094	13.9
Eastward:											
Loads.....	1,225	1,094	1,256	1,255	650	1,030	1,033	1,052	1,002	1,105	17.1
Empties.....	200	187	237	205	423	276	286	286	209	254	3.0
Total.....	1,425	1,281	1,492	1,460	1,279	1,356	1,321	1,318	1,201	1,359	21.0
Number of round trips.....	65	60½	69	67½	60½	65	65	67	62	64.0	

Source: Ann Arbor Railroad operating records.

Ann Arbor car-ferry traffic has declined substantially due to the reduction of vessels and routes served and to increased car sizes; more than 40,000 average annual carloads were moved by car ferry during the 1960's, but 1973 traffic was 27,000 carloads, and 1974 will show about 20,000 carloads, based on monthly movements through September. More than half the car-ferry traffic originates in either Minnesota, Wisconsin or Michigan, and more than half of traffic terminations are in Wisconsin, Michigan and Ohio.

Continuation of the Ann Arbor service is strongly supported by Wisconsin interests because of its assumed importance (a) for the traffic and revenues of the Green Bay & Western, (b) in providing a regular flow of empties westbound, (c) in providing what is viewed by shippers as better and more reliable transit time relative to the Chicago gateway and (d), probably uppermost in shippers' minds, providing the short-route rate base for traffic in the Northern Midwest, especially northern Wisconsin and Minnesota.

As seen in Table 3, total expenses charged to car-ferry operations for the single vessel in service during early 1974 have been approximately \$239,000 per month. This figure is inclusive of vessel depreciation and dock-side expenses at both Kewaunee and Frankfort. Deleting \$11,000 per month to reflect income earned in passenger service gives a net marine operating cost of \$228,000 per month, or about \$2.7 million per year. A comparison to revenues anticipated for 1974 traffic (which total less than 1973 because Manitowoc service has been abandoned) would leave about \$1.6 million, over and above marine costs, to defray rail costs for the northern track-age and shore facilities.

The two most likely alternatives are (1) upgrade the car-ferry service via purchase of a new vessel (which

TABLE 3.—Ann Arbor projected marine operating costs, 1974

Category	Operating cost per month
Boat Operation.....	\$99,000
Boat Maintenance.....	13,200
Miscellaneous Operation.....	600
Boat Depreciation.....	23,700
Boat Insurance.....	10,300
Frankfort Station and Dispatch Expense.....	8,000
Frankfort Maintenance of Equipment (Car Inspection).....	10,500
Dock Maintenance and Depreciation.....	2,200
Kewaunee Station, Joint Costs.....	1,600
Three Locomotive Units (Maintenance and Depreciation).....	11,250
Casualty Costs.....	14,300
Employee Benefits.....	39,500
<b>Subtotal</b> .....	<b>239,150</b>
Less Passenger Revenue.....	10,900
<b>Total</b> .....	<b>228,250</b>

Source: A. T. Kearney, Inc., *Analysis of Railroad Operated Ferry and Lighterage Operations*, January 1975.

could serve any ports designated) or (2) abandon the car-ferry service and route the traffic all-rail via Chicago. A comparison of these alternatives follows:

TABLE 4.—Comparison of present Lake Michigan car ferry and major alternatives  
AVERAGE PER CARLOAD

	Present service	New vessel Kewaunee-Frankfort	All-rail via Chicago
Marine costs.....	\$143	\$80	
Incremental rail costs <sup>1</sup> .....			\$3
Total-move costs (major shipments).....	\$643	\$584	\$53
Fuel consumption (gallons).....	150	144	50

<sup>1</sup> These costs are the total all-rail route costs less the rail portion of through-route costs incurred in a comparable movement via the car ferry; thus the "incremental rail" cost by way of Chicago is comparable to the marine cost by way of Frankfort.

Source: A. T. Kearney, Inc., *Analysis of Railroad Operated Ferry and Lighterage Operations*, January 1975.

A new vessel would require incremental investment of approximately \$18 million. Further expenditures on shore facilities and supporting rail lines are not included. Both alternatives are superior to present service in that the cost per carload would be reduced while less energy was consumed. Foregoing any investment, it would be possible to save \$110 per car by routing through Chicago, whereas the new vessel would give lesser savings of approximately \$80 per car. The choice between these two alternatives will depend on the estimated benefit of increasing the level of traffic through Chicago versus the willingness of the various interested parties to provide financial support for the new vessel.

Retention of the marine operation would be slightly more attractive than portrayed in Table 4 if it were feasible to shift the service to the Chessie port of Ludington, thereby reducing the distance traveled for both segments of the move. Although this route would be difficult to arrange, it may be worthy considering if service is continued under subsidy.

Table 5, which follows, shows a more detailed cost relationship of various methods of moving traffic between selected points.

Tables 6 and 7 are included to show the origins and destinations of the traffic handled. As previously mentioned, it will be noted that the states of Michigan, Wisconsin, Minnesota and Ohio predominate.

TABLE 5.—Comparison of carload cost for total movement, selected movements and alternatives, Ann Arbor Lake Michigan ferry

Movement	Present service	Present service (capacity)	Upgraded service present traffic	Upgraded service increased traffic	Upgraded and consolidated service	Cheslea	All rail	Total revenue
Marine cost.....	\$143.00	\$60.00	\$162.00	\$66.00	\$62.00	\$60.00	\$32.45	
Owosso to Kenosha.....	495.49	442.49	514.49	418.49	397.83	425.83	275.42	\$52
Green Bay to Detroit.....	450.07	403.07	475.07	379.07	361.30	389.30	265.70	817
Green Bay to Toledo.....	514.32	461.32	533.32	437.32	413.04	441.04	453.13	643
Algoma to Pittsburgh.....	654.27	601.27	673.27	577.27	552.93	580.93	553.10	873
Wisconsin Rapids to Jersey City.....	1,019.16	966.16	1,038.00	942.16	920.41	948.41	916.43	927
Wyandotte to Milwaukee.....	561.76	508.76	580.76	484.76	449.95	477.95	392.84	800
Dearborn to St. Paul.....	592.97	539.97	611.97	515.97	496.14	524.14	510.51	724
Green Bay to Lima.....	498.02	436.02	503.02	412.02	393.21	421.21	334.54	296
Casper to Flat Rock.....	1,008.64	953.64	1,025.64	907.65	929.64	635.65	893.81	2,258
<b>Total.....</b>	<b>5,789.70</b>	<b>5,312.70</b>	<b>5,600.60</b>	<b>5,074.71</b>	<b>4,914.45</b>	<b>5,144.46</b>	<b>4,794.78</b>	<b>6,407</b>
Average of 9 moves.....	643.30	590.30	622.29	563.86	540.05	571.61	532.75	711

Source: A. T. Kearney, Inc., *Analysis of Railroad Operated Ferry and Lighterage Operations, January 1976.*

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**Conclusions**

Use of funds provided in the Act to modernize marine operations would prove to be a mistaken reinvigoration of obsolete facilities and equipment since the economic justification for the investment program is marginal at best. It is more efficient to channel the millions of investment dollars required for new vessels toward improved all-rail mainline freight service. Further, the higher traffic density on mainline routes resulting from discontinuance of water operations would lend further support to improvements in roadbed track and signaling, further enhancing service quality.

The Association has therefore concluded, subject to further review and negotiations with interested parties, that car-ferry service on Lake Michigan and the Chesapeake Bay car float should be excluded from the Final System Plan, on the basis of economic factors. The costs of these marine operations exceed the cost of available all-rail alternatives. Continuation of marine operations would require investment of approximately \$25 million in new boats, plus additional expenditure for rehabilitation of support facilities.

Although estimated carload costs via new vessels could be improved significantly, all-rail costs for comparable movements by land show an even greater potential for cost reduction. A new large-capacity vessel for the Chesapeake Bay float could be theoretically as economical as all-rail services if the traffic is more than doubled, but it is more than likely that any increase in traffic via the car-ferry route would be in large part at the expense of all-rail routings.

The decision to exclude the Lake Michigan and Chesapeake Bay marine links from the Final System Plan is also based on the fact that all-rail land movements are considerably more energy-efficient, that sig-

nificant future productivity gains would not be attainable using the marine services and that marine costs are more susceptible to fuel and labor cost inflation.

The New York Harbor marine operations of the Penn Central and Lehigh Valley also should be excluded from the Final System Plan because alternative carfloat and lighterage services are offered by two Brooklyn terminal companies. Use of the Penn Central's tunnel under the Hudson and East Rivers by freight trains is not feasible for technical reasons. Neither Penn Central nor Lehigh Valley can effectively use even minimal marine equipment and facilities since rail-handled traffic has dropped sharply and most marine expenses must be absorbed by the railroads' regular tariff, whereas commercial firms could perform breakbulk handling or small-scale car floating if the fee were compensatory. Thus, the movement of car-float traffic might be continued, although not by ConRail.

The Mackinac Transportation Co.'s service on Lake Michigan would be excluded from the Final System Plan because its traffic has dwindled almost to the vanishing point. Abandonment has been in litigation.

The possibility that the Chesapeake Bay car-float operation could be taken over by a solvent carrier, such as Southern or Richmond, Fredericksburg and Potomac (see Chapter 4) in the course of extending its operations into the Wilmington area, has not been fully assessed, since the implications are much broader than disposition of the marine operation and its contiguous rail link on the Delmarva Peninsula.

USRA has concluded that the marine operations should be treated in the same manner as services on light density lines: First, it is assumed that subsidy funds provided under the Act would be available for marine operations under the 70-30 federal-state sharing formula. Second, it is assumed that the capital costs of new or rehabilitated float equipment would fall under the provisions of Section 403 of Title IV, as in the case of light density line rehabilitation, and would not become a cost to ConRail.

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**PORTION OF TOLEDO-TO-FRANKFORT LINE**

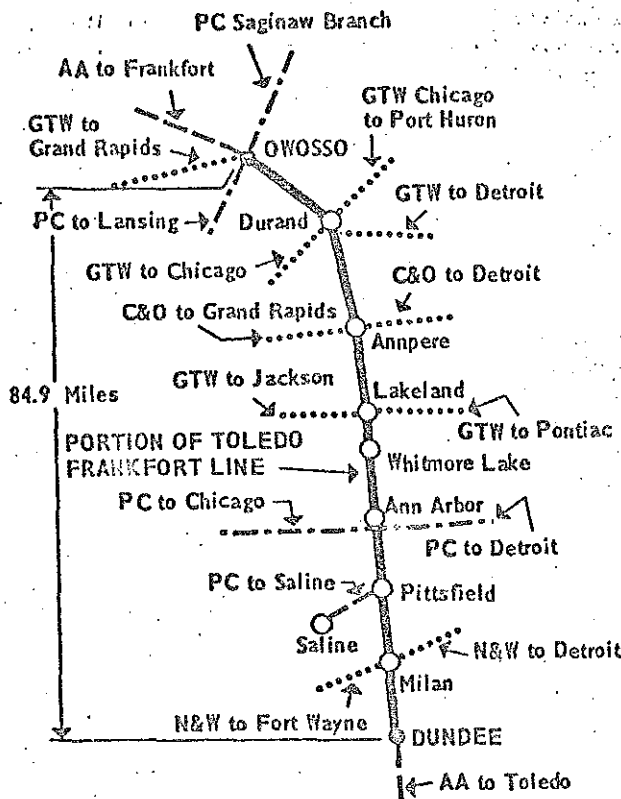
**USRA Line No. 1300**

**Ann Arbor**

This portion of the Toledo-Frankfort line extends from *Dundee* (Milepost 22.8), to *Owosso, Mich.* (Milepost 106.0) a distance of *83.2 miles*, in Monroe, Washtenaw, Livingston and Shiawassee Counties, Mich. This study segment connects with the Penn Central's Chi-

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icago to Detroit line at Ann Arbor, the Saginaw Branch at Owosso, and the Ida Branch at Federman. The Saginaw Branch and the Ida Branch are also under study



in this report. The Grand Trunk Western crosses at Owosso, Durand and Lakeland; the Norfolk & Western crosses at Milan, and the Chesapeake & Ohio crosses at Howell. The portions of this line north of Whitmore Lake and south of Pittsfield were described as potentially excess in the U.S. DOT Report (see Zones 113, 153 and 160).

**Traffic and Operating Information**

Stations (with their 1973 carloads) served by this line:

Milan	116
Urania	1
Pittsfield	32
Saline	3,803
Ann Arbor	1,303
Whitmore Lake	1,227
Hamburg	2
Annpere	5
Howell	340
Oak Grove	13
Cohoctah	87
Byron	13
Durand	2
Vernon	218
Corunna	112
<b>Totals carloads generated by the line</b>	<b>7,339</b>
Average carloads per week	141.1
Average carloads per mile	88.2
Average carloads per train	28.2

**1973 operating information:**

Number of round trips per year	280
Estimated time per trip (hours)	12.0
Locomotive horsepower	2,500
Train crew size	3

**Information Provided by RSPO, Shippers, Government Agencies**

Information provided at the hearings conducted by the Rail Services Planning Office as reflected in their reports entitled "The Public Response to the Secretary of Transportation's Rail Service Report" indicated that Ford Motor Co. at Saline shipped 4,000 carloads of autos in 1973. Lott Elevator indicated a great reliance on rail service.

**Information for Line Retention Decision**

Revenue received by AA	\$921,400
Average revenue per carload	\$125
<b>Variable (avoidable) cost of continued service:</b>	
Cost incurred on the branch line	1,105,160
Cost of upgrading branch line to FRA Class I: (1/10 of total upgrading cost)	0
Cost incurred beyond the branch line	432,039
<b>Total variable (avoidable) cost</b>	<b>1,537,799</b>
<b>Net contribution (loss): total</b>	<b>(616,399)</b>
Average per carload	(84)

This line would require no upgrading to meet requirements of the Federal Railroad Administration's minimum safety standards (Class I track, which has a maximum safe operating speed of 10 m.p.h.).

**Preliminary Recommendation**

It is not recommended that this portion of the Toledo-to-Frankfort Line be included in the ConRail System. Continued operation of this line would require a rail service continuation subsidy. Under 1973 traffic revenue and cost levels, this line generates an annual excess financial burden amounting to 616,399 or \$84 per carload. Recovery of costs would require approximately a 125-percent increase in traffic or a 65-percent rate increase over the 1973 levels.

**PORTION OF TOLEDO-FRANKFORT LINE**

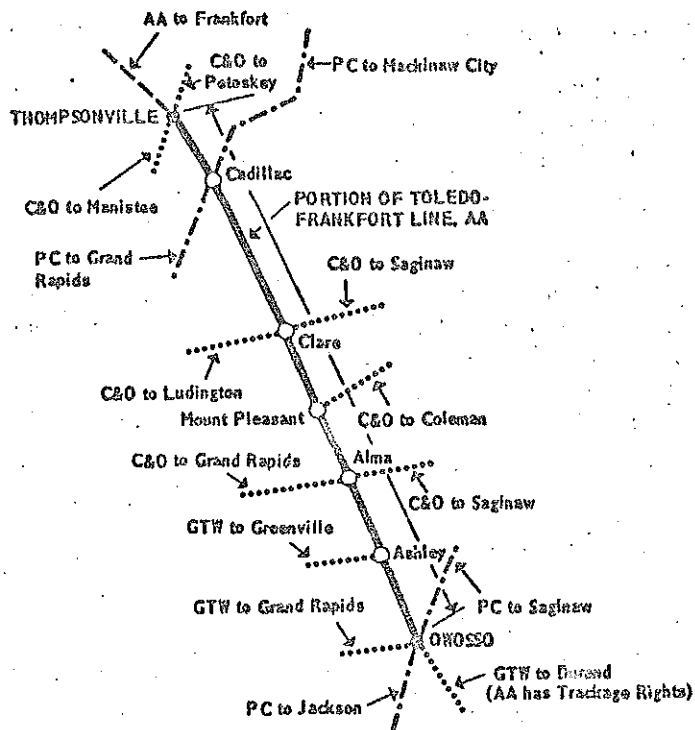
**USRA Line No. 1301**

**Ann Arbor**

This portion of the Ann Arbor Railroad extends from Owosso (Milepost 106.0) to Thompsonville, Mich. (Milepost 270.3), a distance of 164.5 miles, in Shiawassee, Clinton, Gratiot, Isabella, Clare, Missaukee, Wexford, Manistee, and Benzie Counties, Mich. The



Ann Arbor line continues north to Frankfort and south to Toledo with both extensions also under study in this Report. This line connects with two Penn Central lines,



the Saginaw Branch at Owosso and the GR&I Branch at Cadillac, both of which are also under study. The Grand Trunk Western operates over the Ann Arbor between Owosso and Ashley where it regains its own trackage for movement to/from Greenville. The GTW utilizes its own trackage from Owosso to Durand. Connections are made with the Chesapeake and Ohio at Alma (the Lakeview-to-Saginaw line), Mt. Pleasant (the Branch from Mt. Pleasant to Coleman), Clare (the Saginaw-Ludington line), and Thompsonville (where the Petoskey-Grand Rapids line crosses). This line was described as potentially excess in the U.S. DOT Report (see Zones 160, 161, 162 and 165).

**Traffic and Operating Information**

Stations (with their 1973 carloads) served by this line:	
Owosso	1,686
Carland	1
Elsie	16
Ashley	407
North Star	91
Ithaca	387
Alma	201
Shepherd	201
Mt. Pleasant	195
Rosebush	59
Clare	60
Farwell	10
Marion	25
McBain	63
Cadillac	967
Yuma	1,338
Thompsonville	20
<b>Total carloads generated by the line</b>	<b>5,227</b>

Average carloads per week	100.5
Average carloads per mile	31.8
Average carloads per train	28.1
<b>1973 Operating Information:</b>	
Number of round trips per year	200
Estimated time per round trip (hours)	15.8
Locomotive horsepower	2,500
Train crew size	5

**Information Provided by RSPO, Shippers, Government Agencies**

Information provided at the hearings conducted by the Rail Services Planning Office as reflected in their reports entitled "The Public Response to the Secretary of Transportation's Rail Service Report" indicates that Mr. Nash of DT&I said that AA has little or no on-line business between Frankfort and Owosso. A new sand operation at Yuma, Michigan (Sargent Sand Co.) has spent \$700,000 developing sand resources. In 1973 Sargent Sand Co. shipped 1,400 cars of foundry sand and expects to reach 10,000 carloads per year and hopes to develop methods of bringing "used" or "spent" sand back to Yuma, meaning another 5,000-10,000 carloads a year. Sargent also is developing sand facilities at Harlan, also on AA.

Cadillac Malleable Iron Co. said lack of rail could boost their costs by \$150,000. Mt. Pleasant, Michigan generates 1,000 carloads annually. Cadillac operates about 3,000 carloads.

**Information for Line Retention Decision**

Revenue received by AA	\$1,122,655
Average revenue per carload	\$214
Variable (avoidable) cost of continued service:	
Cost incurred on the branch line	1,609,938
Cost of upgrading branch line to FRA class I (1/10 of total upgrading cost)	0
Cost incurred beyond the branch line	403,938
<b>Total variable (avoidable) cost</b>	<b>2,013,876</b>
<b>Net contribution (loss) total</b>	<b>(890,986)</b>
<b>Average per carload</b>	<b>(170)</b>

This line would require no upgrading to meet the requirements of the Federal Railroad Administration's minimum safety standards (Class I track, which has a maximum safe operating speed of 10 mph).

**Preliminary Recommendation**

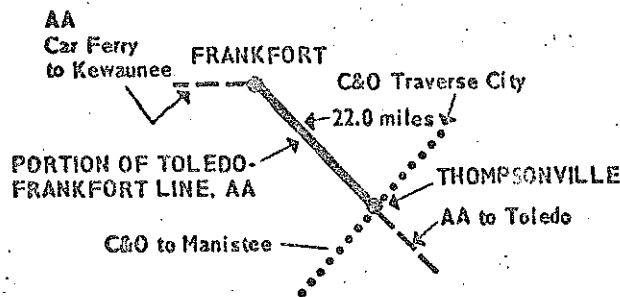
It is *not* recommended that this portion of the Toledo-Frankfort line be included in the ConRail System. Continued operation of this line would require a rail service continuation subsidy. Under 1973 traffic, revenue and cost levels, this line generates an annual excess financial burden amounting to \$890,986 or \$170 per car-

load. Recovery of costs would require approximately a 125 percent increase in traffic or an 80 percent rate increase over the 1973 levels.

## PORTION OF TOLEDO-FRANKFORT LINE AND THE CROSS LAKE FERRY

USRA Line No. 1302/1303

Ann Arbor Railroad



This portion of the Ann Arbor Railroad, extends from Thompsonville (Milepost 270.5) to Frankfort, Mich. (Milepost 292.3), a distance of 21.8 miles, in Benzie County, Mich. Connecting with this segment is the Cross Lake Ferry Service between Frankfort, Michigan and Kewaunee, Wisconsin. This line is the western end of the Ann Arbor line from Toledo. The C&O Traverse City to Manistee line crosses at Thompsonville. At Frankfort the AA operates Cross Lake Ferry Service to Kewaunee, Wis. which is also under study in this report. This line was described as potentially excess in the U.S. DOT Report (see Zone 165).

### Traffic and Operating Information

Stations (with their 1973 carloads) served by this line:

Beulah	27
Elberta	20
Frankfort	137
Kewaunee	19,037
Manitowoc	7,487

Total carloads generated by the line..... 27,314

Average carloads per week..... 525.3

Average carloads per train..... 62.4

1973 operating information:

Number of round trips per year..... 521\*

Estimated time per round trip (hours)..... 3.0\*

Locomotive horsepower..... 5,000\*

Train crew size..... 5\*

\*For rail services only.

Information Provided by RSPO, Shippers, Government Agencies

Information provided at the hearings conducted by the Rail Services Planning Office as reflected in their

reports entitled "The Public Response to the Secretary of Transportation's Rail Service Report" indicated that opposition to the abandonment of this segment of line was voiced by the Traverse Bay Area AFL-CIO. Abandonment would retard future growth and development, and would result in employee layoffs. They also stated that an estimated 200 Frankfort residents are employed directly or indirectly by the Ann Arbor. The Benzie County Board of Commissioners noted that the existing unemployment rate in the Frankfort-Elberta is 13.4 percent. Hence, any increase in this could have severe effects on the economy of the area.

Pet, Inc. who shipped 106 carloads in 1972, stated that the area is a particularly poor one for truckers because of the distances involved. They are also concerned about the increased transportation costs inherent in the switch from rail freight to truck freight.

### Information for Line Retention Decision

Revenue received by AA.....	\$5,628,318
Average revenue per carload.....	\$206

Variable (avoidable) cost of continued service:

Cost incurred on the branch line.....	670,530
Cost of upgrading branch line to FRA Class I (1/10 of total upgrading cost).....	0
Cost of float operation.....	2,499,000
Cost incurred beyond the branch line (rail haul).....	3,802,977

Total variable (avoidable) cost..... 6,972,502

Net contribution (loss): total.....	(1,343,689)
Average per carload.....	(49)

This line would require no upgrading to meet the requirements of the Federal Railroad Administration's minimum safety standards (Class I track, which has a maximum safe operating speed of 10 m.p.h.).

### Preliminary Recommendation

It is *not* recommended that this portion of the Ann Arbor be included in the ConRail System. Continued operation of this line would require a rail service continuation subsidy. Under 1973 traffic, revenue and cost levels, this line generates an annual excess financial burden amounting to \$1,343,689 or \$49 per carload. It is *not* recommended that the AA Ferry be operated. (See chapter 18 for discussion.)

SOURCE: United States Railway Association Preliminary System Plan - Volume II

EXHIBIT #3

INVENTORY OF ANN ARBOR  
RAILROAD CARFERRY OPERATIONS

1.0 PHYSICAL CHARACTERISTICS

1.1 Vessels

In 1971, the Ann Arbor Railroad operated 3 carferries, the Viking, the City of Green Bay, and the Arthur K. Atkinson out of the port of Frankfort. The City of Green Bay, having been laid up for part of the year 1971, was completely removed from service in 1972. A broken crankshaft in one of the two diesel engines of the Arthur K. Atkinson resulted in that ferry being taken out of service in August of 1943. The Viking now is in service almost 24 hours a day, with no standby vessel on hand, operating between Frankfort and Kewaunee 2 round trips daily.

DESCRIPTION OF VESSELS:

Viking: Originally built in 1925 as the Ann Arbor #7, rebuilt in 1965. It has a length of 360', width 58', draft 17', tonnage of 1287, and displaces 2713 gross tons. It is capable of carrying thirty 40' railcars and 345 passengers. Diesel-electric engines provide 7040 units of horsepower. A crew of 35 currently mans the Viking. The general condition of the vessel is considered good but will require \$457,000 over the period 1972-77 for special maintenance. Normal maintenance for the same time period will approximate \$190,000 per year. The expected useful life is 15-20 years, (1972 figure) which is subject to revision downward due to the restrictions of anti-pollution legislation which may be enacted.

Although the full crew size is thirty-five men, only eight men are on duty at a time while cruising. Of this eight, two men - an engineer and an oiler - are required in the engine room. Also, five electrician-handymen are on duty during the day. With automated methods for handling cars, it is estimated that three carhandlers and three seamen could be eliminated from the crew complement.

Arthur K. Atkinson: Originally built in 1917 as the Ann Arbor #6, rebuilt in 1959. It has a length of 384', width 58', draft 15', tonnage of 1826, and displaces 3241 gross tons. Five thousand five-hundred units of horsepower are provided by its diesel engines. Four crew members are needed to man the ferry. Prior to experiencing a broken crankshaft, it was considered in fair condition and had an expected useful life of 10 years. The cost of overhauling the engine is estimated at \$500,000, including drydocking. Replacement of both engines with a more modern drive system and replacement of its steam steering mechanism with a hydraulic system would approximate \$1,080,000. In addition, approximately \$190,000 per year will be needed for normal running maintenance in the period of 1972-77. The ferry has a capacity of carrying thirty 40' railcars and 119 passengers.

City of Green Bay: Built in 1927, it has a length of 380', of 58', draft of 16', tonnage of 1833 and displaces 3350 gross tons. Its steam engines provide 2700 units of horsepower. She is slower than either the Viking or A. K. Atkinson. (City of Green Bay cruises at 14 knots versus 18 knots for the other vessels). The City of Green Bay has not supplied full services since 1971 and was entirely removed from operations in May, 1972. It is

estimated to require \$225,000 to to put her back in service.

Source: Expense figures taken from I.C.C. Finance Docket AB-49

**Witness:** C. L. Towle, President  
Ann Arbor Railroad Company

**Crew Size:** I.C.C. Finance Docket AB-49, Exhibit 1  
**Witness:** Alexander C. Robinson, Vice President -  
Operations  
D.T. & I. Railroad Company  
Ann Arbor Railroad Company

**Vessel Characteristics:**  
Transportation Lines On the Great Lakes,  
1973. Corps of Engineers, Washington D.C.

A 19 YEAR SYNOPTICAL HISTORY OF  
THE ANN ARBOR RAILROAD COMPANY  
(In Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	<u>Freight Revenue</u>	<u>All Other Revenue</u>	<u>Total Revenue</u>	<u>Operating Expenses</u>	<u>Net Operating Revenue</u>	<u>Taxes, Rents And Other Income</u>	<u>Available For Fixed Charges Dividends</u>	<u>Fixed Charges</u>	<u>Surplus</u>	<u>Earned Surplus Balance Beginning</u>
1949	7,332	310	7,642	6,333	1,309	( 790)	519	227	8,440	2,730
1950	9,133	267	9,400	6,750	2,830	(1,350)	1,480	230	9,671	3,684
1951	8,991	217	9,207	6,906	2,302	(1,253)	1,048	258	9,469	1,897
1952	7,496	132	7,628	6,400	1,229	( 263)	965	250	9,945	2,140
1953	9,231	212	9,443	7,211	2,232	(1,194)	1,039	241	10,551	2,438
1954	8,542	194	8,735	7,156	1,580	( 835)	744	232	10,579	2,295
1955	9,087	237	9,323	7,434	1,890	( 818)	1,071	224	11,167	2,417
1956	9,545	211	9,756	7,792	1,964	(1,100)	863	230	11,570	2,668
1957	9,246	218	9,464	8,135	1,329	( 634)	694	278	11,761	2,309
1958	8,563	187	8,749	7,610	1,139	( 557)	582	315	11,946	1,750
1959	8,549	201	8,749	7,987	762	( 772)	(9)	327	6,079**	1,131
1960	8,187	148	8,335	7,156	1,179	( 760)	419	307	6,047	4,207
1961	7,747	140	7,887	6,695	1,191	( 656)	535	285	6,056	4,216
1962	7,382	116	7,496	6,371	1,125	( 650)	475	271	6,051	4,222
1963	7,464	153	7,616	7,000	616	( 709)	(93)	264	5,604	3,775
1964	8,036	199	8,235	6,953	1,282	( 966)	316	367	5,553	3,724
1965	9,372	266	9,638	7,721	1,917	(1,471)	446	499	5,501	3,672
1966	8,839	287	9,125	7,875	1,251	(1,510)	(259)	497	4,744	2,915
1967	8,617	315	8,931	7,229	1,702	(1,228)	474	519	4,699	2,870

\*\* ICC write down

SOURCE: Moody's Transport

EXHIBIT # 5

SIX (6) YEAR ANALYSIS OF TRAFFIC ORIGINATING & TERMINATING  
AT ON-LINE STATIONS OF THE ANN ARBOR RAILROAD

<u>STATION</u>	<u>MILE POST</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Toledo	0	2,664	2,849	2,749	3,203	3,476	3,613
Temperance	9	23	29	29	25	25	17
Samaria	11	66	95	33	18	4	3
Federman	19	0	0	0	0	0	0
Diann	20	0	0	0	0	0	0
Dundee	22	8,472	9,515	8,472	10,187	10,590	8,284
Milan	31	270	287	210	202	116	74
Urania	37	11	0	0	0	0	0
Pittsfield	41	0	0	0	0	37	60
Saline	43	343	3,135	2,981	3,432	3,987	3,155
Ann Arbor	45	1,110	916	932	918	1,040	875
Osmer	51	0	0	0	0	0	0
Whitmore Lake	57	375	440	920	1,028	1,310	1,001
Hamburg	59	5	7	2	3	1	2
Lakeland	62	0	0	0	0	0	0
Chilson	67	0	0	0	0	0	0
Ann Pere	72	0	0	0	0	0	0
Howell	74	407	311	335	327	341	295
Oak Grove	80	504	9	18	6	7	12
Cohoctah	85	35	19	21	21	71	46
Byron	89	16	18	20	15	12	3
Durand	96	0	0	0	3	0	0
Vernon	99	104	92	160	212	229	169
Corunna	104	14	17	22	54	115	63
Owosso	107	<u>2,022</u>	<u>1,827</u>	<u>1,552</u>	<u>1,425</u>	<u>1,589</u>	<u>1,527</u>
Sub-Total (South of Owosso) -		16,441	19,566	18,456	21,079	22,950	19,199
Carland	115	6	9	5	9	11	9
Elsie	120	10	45	22	6	14	27
Bannister	124	0	0	0	0	0	0
Ashley	128	565	387	324	876	384	30
North Star	134	113	87	44	69	91	62
Ithaca	138	436	351	244	241	365	304
Alma	145	317	180	150	161	191	118

MICHIGAN DEPARTMENT OF  
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<u>STATION</u>	<u>MILE POST</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Forest Hill	150	0	2	0	0	0	0
Shephard	156	167	159	132	133	213	139
Mt. Pleasant	164	686	555	365	224	198	185
Rosebush	171	18	52	54	48	51	45
Clare	179	39	40	53	65	55	55
Farwell	184	57	31	24	6	8	10
Lake George	194	7	11	37	9	55	3
Temple	201	33	9	0	0	0	0
Marion	209	23	32	28	22	25	13
McBain	217	53	48	59	58	62	50
Lucas	221	31	16	14	9	29	8
Cadillac	227	601	937	940	944	974	1,097
Selma	228	0	0	0	0	0	0
Boon	238	4	0	0	0	6	1
Yuma	248	68	0	9	18	1,395	3,011
Mesick	254	70	17	26	33	27	27
Harlan	262	4	0	2	0	0	0
Pomona	265	54	0	36	79	95	53
Copemish	268	12	21	4	2	0	60
Thompsonville	270	13	2	14	20	19	34
Welden	277	0	0	0	0	0	0
Beulah	282	101	86	114	131	12	12
Elberta-Frankfort	290	449	558	404	341	183	168
Sub-Total (South of Owosso)	-	<u>3,937</u>	<u>3,635</u>	<u>3,104</u>	<u>3,504</u>	<u>4,463</u>	<u>5,521</u>
TOTALS	-	<u>20,378</u>	<u>23,201</u>	<u>21,506</u>	<u>24,583</u>	<u>27,413</u>	<u>24,720</u>

% Traffic South of Owosso of Total	80.7	84.3	85.6	85.7	83.7	77.7
Number of Cars Per Mile	70.3	80.0	74.3	84.8	94.5	85.2

SOURCE OF DATA: I. & S. Docket No. 8808, ICC, Sand from Yuma, Michigan to Cleveland, Ohio- Witness, V.M. Malanaphy (Data to 1972) 1973 - 1974 from J. Chase, Trustee.



REVISED

THE ANN ARBOR RAILROAD COMPANY

INCOME - EXHIBIT "A"

	(a) 1972 Actual Results	(b) 1973 Forecast Without Sand Traffic	(c) Pro-Forma 1973 Forecast With Anticipated Sand Traffic	(d) Pro-Forma 1973 Forecast With Full Year Sand Traffic
<u>REVENUE</u>				
Freight	\$10,588,410	\$12,105,000	\$12,913,800	\$13,722,600
Miscellaneous	414,555	397,000	397,000	397,000
Total	<u>\$11,002,965</u>	<u>\$12,502,000</u>	<u>\$13,310,800</u>	<u>\$14,119,600</u>
<u>OPERATING EXPENSES</u>				
M. of W. & S. - Excl. Depr.	\$ 1,527,354	\$ 1,836,500	\$ 1,986,500	\$ 2,207,800
- Depreciation	93,567	96,000	96,000	96,000
Total M. of W. & S.	<u>\$ 1,620,921</u>	<u>\$ 1,932,500</u>	<u>\$ 2,082,500</u>	<u>\$ 2,303,800</u>
M. of E. - Excl. Depr. & Fltg. Equip.	\$ 1,308,541	\$ 1,225,200	\$ 1,225,200	\$ 1,225,200
- Depreciation	648,760	595,800	595,800	595,800
- Floating Equipment	364,566	276,000	276,000	276,000
Total M. of E.	<u>\$ 2,321,867</u>	<u>\$ 2,097,000</u>	<u>\$ 2,097,000</u>	<u>\$ 2,097,000</u>
Transportation:				
Floating Equipment	\$ 2,167,964	\$ 1,981,025	\$ 1,981,025	\$ 1,981,025
Other Transportation	3,457,267	3,702,075	3,702,075	3,702,075
Total Transportation	<u>\$ 5,625,231</u>	<u>\$ 5,683,100</u>	<u>\$ 5,683,100</u>	<u>\$ 5,683,100</u>
Miscellaneous Operations	\$ 12,312	\$ 11,400	\$ 11,400	\$ 11,400
Traffic	208,510	206,700	206,700	206,700
General	451,094	493,500	493,500	493,500
Total Operating Expenses	<u>\$10,239,935</u>	<u>\$10,424,200</u>	<u>\$10,574,200</u>	<u>\$10,795,500</u>
NET REVENUE FROM RAILWAY OPERATIONS	<u>\$ 763,030</u>	<u>\$ 2,077,800</u>	<u>\$ 2,736,600</u>	<u>\$ 3,324,100</u>
Federal Income Taxes	\$ -	\$ -	\$ -	\$ -
Railway Taxes	271,908	276,000	290,500	295,000
Payroll Taxes	550,917	636,000	636,000	640,000
Equipment Rents	1,163,050	1,228,000	1,319,000	1,410,000
Joint Facility Rents - Cr.	118,077	115,000	115,000	115,000
Net Railway Operating Income	Def. <u>\$ 1,104,768</u>	<u>\$ 52,800</u>	<u>\$ 606,100</u>	<u>\$ 1,094,100</u>
Non-Operating Income	\$ 80,026	\$ 60,000	\$ 60,000	\$ 60,000
Interest on Funded Debt	875,165	905,400	905,400	905,400
All Other Deductions	58,319	60,000	60,000	60,000
NET INCOME	Def. <u>\$ 1,958,226</u>	Def. <u>\$ 852,600</u>	Def. <u>\$ 299,300</u>	<u>\$ 188,700</u>

EXHIBIT #7  
 Page 1 of 2

REVISED

## THE ANN ARBOR RAILROAD COMPANY

CASH FLOW - EXHIBIT "B"

	(a) 1972 Actual Results	(b) 1973 Forecast Without Sand Traffic	(c) Pro-Forma 1973 Forecast With Anticipated Sand Traffic	(d) Pro-Forma 1973 Forecast With Full Year Sand Traffic
Cash and Liquid Assets -				
Beginning of Period	\$ 510,811	\$ 633,956	\$ 633,956	\$ 633,956
<u>SOURCE OF FUNDS</u>				
Net Income	(1,958,226)	(852,600)	(299,300)	188,700
Depreciation	742,327	691,800	691,800	691,800
Advances from D.T.& I.	1,467,900	800,000	200,000	-
Sale of Capital Assets and Capital Scrap	117,263	400,000	400,000	400,000
Retirements	1,989	2,000	2,000	2,000
Total	<u>\$ 371,253</u>	<u>\$ 1,041,200</u>	<u>\$ 994,500</u>	<u>\$ 1,282,500</u>
<u>DISPOSITION OF FUNDS</u>				
Conditional Sales Agreements	\$ 477,316	\$ 322,000	\$ 322,000	\$ 322,000
Repayment of Advances or Notes to D.T.& I.	156,237	175,000	175,000	175,000
Total Disbursements	<u>\$ 633,553</u>	<u>\$ 497,000</u>	<u>\$ 497,000</u>	<u>\$ 497,000</u>
Balance	<u>\$ 248,511</u>	<u>\$ 1,178,156</u>	<u>\$ 1,131,456</u>	<u>\$ 1,419,456</u>
Capital Expenditures	\$ 64,824	\$ 300,000	\$ 400,000	\$ 660,000
Dividends	-	-	-	-
Excess Over Requirements	\$ 183,687	\$ 878,156	\$ 731,456	\$ 759,456
Increase or Decrease in Material	(D)\$ 214,134	(I)\$ 50,000	(I)\$ 75,000	(D)\$ 50,000
Accruals Over Cash Disbursements	236,135	-	-	124,544
Accruals Under Cash Disbursements	-	345,000	250,456	-
Cash and Liquid Assets -				
End of Period	<u>\$ 633,956</u>	<u>\$ 483,156</u>	<u>\$ 406,000</u>	<u>\$ 934,000</u>

Dearborn, Michigan,  
March 20, 1973

ANALYSIS OF ANNUAL CARLOADS  
HIGHLY SUSCEPTIBLE TO CROSS LAKE ROUTING  
FROM 1966 - 1% WAYBILL SAMPLING (1)

DESTINATION ORIGIN	CONNECTICUT	IDAHO	IOWA	MAINE	MASSACHUSETTS	MICHIGAN	MINNESOTA	MONTANA	NEW HAMPSHIRE	New Jersey	NEW YORK	N. DAKOTA	OHIO	OREGON	PENNSYLVANIA	S. DAKOTA	VERMONT	WASHINGTON	WISCONSIN	WYOMING	TOTALS TERMINATIONS
Connecticut	-	0	0	-	-	-	0	0	-	-	0	-	0	-	0	-	-	11	7	0	18
Idaho	13	-	-	0	15	58	-	-	0	31	71	-	62	-	45	-	0	-	-	-	295
Iowa	21	-	-	21	114	75	-	-	6	138	165	-	108	-	145	-	7	-	-	-	800
Maine	-	0	0	-	-	-	7	0	-	-	-	0	00	-	0	-	-	8	18	0	33
Massachusetts	-	0	0	-	-	-	11	0	-	-	-	0	12	-	0	-	-	31	5	0	59
Michigan	-	0	81	-	-	-	174	13	-	-	-	0	45	-	6	-	-	32	551	0	902
Minnesota	29	-	-	0	52	104	-	-	0	73	148	-	116	-	116	-	9	-	-	-	647
Montana	7	-	-	0	0	30	-	-	0	17	15	-	24	-	12	-	0	-	-	-	105
New Hampshire	-	0	0	-	-	-	0	0	-	-	-	0	-	-	0	-	-	0	0	0	0
New Jersey	-	0	10	-	-	-	14	0	-	-	-	0	-	16	-	0	-	23	18	0	81
New York	-	0	16	-	-	-	40	0	-	-	-	0	-	20	-	0	-	80	59	0	215
North Dakota	0	-	-	0	10	5	-	-	0	6	20	-	0	-	5	-	0	-	-	-	46
Ohio	-	0	55	-	-	-	124	6	-	-	-	8	-	39	-	0	-	120	145	0	497
Oregon	25	-	-	12	53	130	-	-	11	59	180	-	121	-	103	-	0	-	-	0	694
Pennsylvania	-	0	25	-	-	-	55	9	-	-	-	6	-	26	-	0	-	82	113	-	316
South Dakota	0	-	-	0	15	13	-	-	0	10	9	-	-	-	10	-	0	-	-	-	66
Vermont	-	0	0	-	-	-	0	0	-	-	-	0	0	-	-	0	-	0	-	-	0
Washington	17	-	-	0	53	68	-	-	5	62	117	-	89	-	100	-	0	-	-	-	511
Wisconsin	19	-	-	12	78	336	-	-	8	92	234	-	192	-	168	-	7	-	-	-	1,146
Wyoming	0	-	-	0	0	30	-	-	0	0	6	-	16	-	8	-	0	-	-	-	60
TOTAL	131	0	187	45	390	849	425	28	30	488	965	14	737	158	712	6	23	387	916	0	6,491
Originations	131	0	187	45	390	849	425	28	30	488	965	14	737	158	712	6	23	387	916	0	6,491

(1) SOURCE: State-To-State Distribution, Carload Waybill Statistics, 1966,  
Interstate Commerce Commission - Bureau of Economics

COMPARISON OF ANN ARBOR CROSS LAKE TRAFFIC  
WITH POTENTIAL MARKET AND LOCATION  
OF SALES OFFICES

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STATES (1)	1% Sample (2)		TOTAL SAMPLE ORIG. & TERM. (4)	Ann Arbor (3)		TOTAL ANN ARBOR ORIG. & TERM. (4)
	ORIGINATIONS	TERMINATIONS		ORIGINATIONS	TERMINATIONS	
Connecticut	1,800	13,100	14,900 (13)	8	501	509 (12)
Idaho	29,500	00	29,500 (12)	591	14	605 (10)
Iowa	80,000	18,700	98,700 ( 7)	8	15	23 (20)
Maine	3,300	4,500	7,800 (15)	272	198	470 (13)
Massachusetts	5,900	39,000	44,900 (11)	40	892	932 ( 9)
Michigan (4)	90,200	84,900	175,100 ( 2)	3,297	4,976	8,273 ( 2)
Minnesota *	64,700	42,500	107,200 ( 5)	3,099	1,927	5,026 ( 4)
Montana	10,500	2,800	13,300 (14)	302	116	418 (14)
New Hampshire	00	3,000	3,000 (18)	20	92	112 (18)
New Jersey	8,100	48,800	56,900 (10)	63	99	162 (16)
New York (2)	21,500	96,500	118,000 ( 4)	236	2,297	2,533 ( 6)
North Dakota	4,600	1,400	6,000 (17)	171	109	280 (15)
Ohio (3)	49,700	73,700	123,400 ( 3)	1,463	6,067	7,530 ( 3)
Oregon	69,400	15,800	85,200 ( 3)	889	240	1,129 ( 8)
Pennsylvania (1)	31,600	71,200	102,800 ( 6)	649	1,944	2,593 ( 5)
South Dakota	6,600	600	7,200 (16)	69	35	104 (19)
Vermont	00	2,300	2,300 (19)	19	139	158 (17)
Washington	51,100	38,700	89,800 ( 8)	967	213	1,180 ( 7)
Wisconsin (1)	114,600	91,600	206,200 ( 1)	8,826	3,723	12,549 ( 1)
Wyoming	6,000	00	6,000 (20)	517	4	521 (11)
TOTALS	649,100	649,100	1,298,200	21,506	23,601	45,107

EXHIBIT # 9

- (1) Number Following State is Number of D. T. & I. - Ann Arbor Sales Personnel in that State.  
(2) 1966 - ICC 1% Waybill Sample Multiplied By 100 To Approximate Total.  
(3) SOURCE: USRA Planning Project #6 "Analysis of Railroad Operated Ferry and Litherage Operations" -  
January, 1975, Submitted by A. T. Kearney, Inc. (1973 Traffic Data).  
(4) Number in Parenthesis Following Total Originations and Terminations Represents Rank  
\* In 1973 there was a sales office in Minneapolis which has since been closed.

ANALYSIS OF ANN ARBOR CROSS LAKE TRAFFIC  
BY ORIGINATION-DESTINATION AND  
AVERAGE REVENUE PER CAR (1)  
FOR SELECTED STATES (2)

STATES (3)	ORIGINATIONS			TERMINATIONS		
	Number Of Loads	Total Ann Arbor Revenue	Average Revenue Per Car	Number Of Loads	Total Ann Arbor Revenue	Average Revenue Per Car
Connecticut	8	\$ 1,173	\$147	501	73,090	\$146
Idaho	591	102,561	174	14	2,456	175
Iowa	8	1,093	137	15	2,237	149
Maine	272	40,563	149	198	28,501	144
Massachusetts	40	5,538	138	892	133,564	150
Michigan (4)	3,297	817,356	248	4,976	1,084,268	218
Minnesota *	3,099	638,139	206	1,927	417,204	217
Montana	302	50,759	168	116	28,182	243
New Hampshire	20	2,960	148	92	13,352	145
New Jersey	63	14,225	226	799	142,361	178
New York (2)	236	41,452	176	2,297	413,743	180
North Dakota	171	39,819	233	109	18,752	172
Ohio (3)	1,463	359,509	246	6,067	1,373,434	226
Oregon	889	172,595	194	240	56,571	236
Pennsylvania (1)	649	134,733	208	1,944	351,139	181
South Dakota	69	16,664	242	35	7,662	219
Vermont	19	3,406	179	139	23,110	166
Washington	967	181,963	188	213	53,922	253
Wisconsin (1)	8,826	1,614,395	183	3,723	820,556	220
Wyoming	517	138,456	268	4	497	124
TOTALS	21,506	\$4,377,359	203	24,301	5,044,601	207

(1) Source: Special USRA Computer Run of Ann Arbor Traffic Tapes for 1973.

(2) Selected on the Basis of Greatest Potential for Generating Cross Lake Traffic.

(3) Number in Parenthesis Following State is Number of D. T. & I.-Ann Arbor Sales.

\* In 1973 there was a sales office in Minneapolis which has since been closed.

ANN ARBOR (LAKE MICHIGAN) CARFERRY TRAFFIC  
(OVER 25 CARS) BY ORIGIN AND DESTINATION FOR 1973

<u>Origin State</u>	<u>Origin Station</u>	<u>Code</u>	<u>Terminating State</u>	<u>Freight Station Accounting Code</u>	<u>Number of Cars</u>	<u>Ann Arbor Revenue</u>
Wisconsin	Superior	Pulp, Paper and Allied Products	Ohio	17065	27	\$ 6,566
Wisconsin	Oconto Falls	Pulp, Paper and Allied Products	Michigan	17000	28	3,784
Wisconsin	Sheboygan	Chemicals and Allied Products	Michigan	17327	28	9,730
Wisconsin	Sheboygan	Chemicals and Allied Products	Michigan	17327	58	19,736
Wisconsin	Kenosha	Transportation Equipment	Ohio	00600	43	15,437
Wisconsin	Wausau	Stone, Clay, and Glass Products	Ohio	14330	28	7,213
Wisconsin	Wausau	Stone, Clay, and Glass Products	Ohio	14330	34	9,817
Wisconsin	Green Bay	Food and Kindred Products	Michigan	05600	27	6,423
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Delaware	03503	27	5,039
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Indiana	08463	46	4,890
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Maine	00704	61	14,070
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Michigan	05509	41	5,112
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Michigan	05600	311	47,774
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Michigan	05815	34	4,270
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Michigan	17000	28	4,342
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Michigan	17200	53	4,828
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	00600	112	21,181
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	01585	31	5,532
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	01638	61	8,946
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	04020	128	17,979
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	04031	27	4,238
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	04046	30	5,209
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	00133	272	44,363
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	03875	26	2,904
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	05663	28	3,436
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	10184	32	6,092
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	17366	41	7,344
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	07905	63	9,516
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	07905	83	12,920
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	08114	34	3,904
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	08114	45	5,258
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Ohio	13168	33	9,016
Wisconsin	Green Bay	Pulp, Paper and Allied Products	Pennsylvania	02003	30	4,367
Wisconsin	Steven's Point	Pulp, Paper and Allied Products	New York	10228	71	20,808
Wisconsin	Steven's Point	Pulp, Paper and Allied Products	Ohio	04031	57	18,430
Wisconsin	Steven's Point	Pulp, Paper and Allied Products	Pennsylvania	00101	56	14,356
Wisconsin	Byron	Pulp, Paper and Allied Products	New York	10228	37	9,910
Wisconsin	Byron	Pulp, Paper and Allied Products	Ohio	04031	107	32,978
Wisconsin	Byron	Pulp, Paper and Allied Products	Pennsylvania	00101	27	6,444
Wisconsin	Byron	Pulp, Paper and Allied Products	Virginia	01199	35	9,226
Wisconsin	Steven's Point	Pulp, Paper and Allied Products	New York	10228	52	14,736
Wisconsin	Kremlin	Stone, Clay and Glass Products	Ohio	14330	51	14,839
Wisconsin	Superior	Pulp, Paper and Allied Products	Michigan	05505	28	6,899
Wisconsin	Abbotsford	Food and Kindred Products	New York	10590	31	5,705
Wisconsin	Abbotsford	Food and Kindred Products	Vermont	02123	50	11,256
Wisconsin	Abbotsford	Food and Kindred Products	Vermont	35140	41	5,408
Wyoming	Upton	Stone, Clay and Glass Products	Michigan	00017	29	6,085
Wyoming	Colloid Spur	Stone, Clay and Glass Products	Michigan	07465	43	14,213
Wyoming	Colloid Spur	Stone, Clay and Glass Products	Michigan	00017	197	40,149
Wyoming	Stauffer	Chemicals and Allied Products	Nova Scotia	11110	92	26,710
Wyoming	Stauffer	Chemicals and Allied Products	Pennsylvania	03530	74	20,163
Wyoming	Upton	Chemicals and Allied Products	Ohio	00600	41	19,160
					<u>7,441</u>	<u>\$1,644,128</u>

Source: Special USRA computer run of Ann Arbor traffic tapes for 1973.

ANN ARBOR (LAKE MICHIGAN) CARFERRY TRAFFIC  
(OVER 25 CARS) BY ORIGIN AND DESTINATION FOR 1973

<u>Origin State</u>	<u>Origin Station</u>	<u>Code</u>	<u>Terminating State</u>	<u>Freight Station Accounting Code</u>	<u>Number of Cars</u>	<u>Ann Arbor Revenue</u>
Minnesota	Duluth	Transportation Equipment	Michigan	17355	58	\$ 12,141
Minnesota	Grand Rapids	Pulp, Paper and Allied Products	Ohio	04031	69	21,216
Minnesota	Bemidji	Lumber and Wood Products	Ohio	11058	92	16,384
Minnesota	Bayport	Lumber and Wood Products	Massachusetts	00381	66	8,041
Minnesota	Bayport	Lumber and Wood Products	Maine	00070	53	5,316
Minnesota	New Ulm	Food and Kindred Products	Michigan	22033	55	13,849
Minnesota	New Ulm	Food and Kindred Products	Ohio	13023	38	8,729
Minnesota	Wabasha	Food and Kindred Products	New Jersey	00075	39	8,550
Minnesota	Minneapolis	Food and Kindred Products	New Jersey	00075	30	7,140
Minnesota	Minneapolis	Food and Kindred Products	New York	09033	50	9,813
Minnesota	Minneapolis	Food and Kindred Products	New York	09044	35	5,873
Minnesota	Mpls. Shoreham	Food and Kindred Products	Ohio	00465	30	9,306
Minnesota	Mpls. Shoreham	Petroleum and Coal Products	Michigan	00000	44	9,328
Minnesota	St. Paul	Food and Kindred Products	Ohio	00507	37	8,220
North Carolina	Canton	Pulp, Paper and Allied Products	Wisconsin	04168	32	2,515
North Dakota	Lehigh	Petroleum and Coal Products	New York	10240	27	4,798
Nova Scotia	Tupper	Pulp, Paper and Allied Products	Wisconsin	00287	29	7,067
New York	Bushwick	40	Wisconsin	00005	35	5,617
New York	Tarrytown	40	Wisconsin	00005	26	4,630
Ohio	Brittain	Rubber	Oregon	12375	61	9,075
Ohio	Toledo	Transportation Equipment	Minnesota	05698	78	24,980
Ohio	Toledo	Transportation Equipment	Washington	04107	57	18,775
Ohio	Toledo	Transportation Equipment	Washington	04394	48	18,506
Ohio	Brownstown	Transportation Equipment	Minnesota	01003	37	7,372
Ohio	Brownstown	Transportation Equipment	Minnesota	01003	98	17,116
Ontario	S.S. Marie P.B.	Pulp, Paper and Allied Products	Kentucky	01000	92	21,020
Oregon	N. Portland	Lumber and Wood Products	Quebec	28580	27	5,385
Oregon	Pilot Rock	Lumber and Wood Products	Ohio	00112	74	11,057
Pennsylvania	Falls Creek	Stone, Clay, and Glass Products	Ontario	04286	49	9,314
Quebec	La Tuque	Pulp, Paper and Allied Products	Wisconsin	00287	32	6,931
Quebec	Waterloo	39	Minnesota	05001	58	5,641
Quebec	Carey Mine	40	Wisconsin	04352	26	5,368
South Carolina	Charleston	Pulp, Paper and Allied Products	Wisconsin	00130	69	7,767
Saskatchewan	Norco	Chemicals and Allied Products	Ohio	14104	139	51,801
Saskatchewan	Allan Mines	Chemicals and Allied Products	Ohio	07905	31	9,312
Washington	Everett	Pulp, Paper and Allied Products	Michigan	00007	26	3,032
Washington	Everett	Pulp, Paper and Allied Products	Michigan	17011	29	3,802
Washington	Cherry Point	Primary Metal Products	Ohio	06408	34	11,004
Washington	Cosmopolis	Pulp, Paper and Allied Products	Ohio	00600	42	10,609
Wisconsin	Superior	Food and Kindred Products	Ohio	00507	75	16,581
Wisconsin	Superior	Pulp, Paper and Allied Products	Michigan	05505	57	14,157
Wisconsin	Superior	Pulp, Paper and Allied Products	Michigan	05800	39	7,517
Wisconsin	Superior	Pulp, Paper and Allied Products	Michigan	17355	68	18,894

UNITED STATES RAILWAY ASSOCIATION

GREEN BAY AND WESTERN INTERCHANGE TRAFFIC

<u>Year</u>	<u>Traffic Interchanged with the AA &amp; C&amp;O at Kewaunee (Carloads)</u>	<u>Percent of Total GB&amp;W System (Carloads)</u>	<u>Traffic Interchanged with the AA at Kewaunee (Carloads)</u>	<u>Percent of Total GB&amp;W System (Carloads)</u>	<u>Traffic Interchanged with the C&amp;O at Kewaunee (Carloads)</u>	<u>Percent of Total GB&amp;W System (Carloads)</u>	<u>Total System Carloads Handled by GB&amp;W</u>
1970	31,939	47.7%	17,942	27.8%	13,997	20.9%	66,981
1971	31,639	48.7	19,833	30.5	11,806	18.2	65,007
1972	29,816	46.7	18,239	28.6	11,577	18.1	63,858
1973	33,718	47.9	19,875	28.2	13,843	19.7	70,389

Sources: Interstate Commerce Commission, Ex Parte 293 hearings.  
Lawrence J. Kelly, Vice-President.  
Green Bay and Western Railroad.



## Entire ICC Approves Filing of \$30 Per-Car Surcharge by Rock Island

The Interstate Commerce Commission unanimously has voted to allow the Rock Island Railroad to file for a terminal surcharge of \$30 per car and \$15 per trailer on five days' notice.

The surcharge will apply only on shipments originating and terminating on the Rock Island and will remain in effect "not to exceed 60 days from the effective date, unless terminated, modified, changed or otherwise ordered."

The surcharge, docketed at the ICC as Special Permission No. 3450—Emergency Surcharge Tariff, is subject to protest and possible suspension by the Commission.

In the order served March 27 the Commission specified that on traffic originating and terminating on the Rock Island, the assessment will be against the party paying the bill.

On traffic originating but not terminating on the Rock Island, the surcharge will be due from the original shipper, prepaid or collect.

On traffic terminating on the Rock Island, the surcharge will be assessed against the receiver, prepaid or collect.

Commission sources told *Traffic World* the feeling of unanimity among the commissioners in approving the surcharge was "rare."

"Something had to be done to enable the road to continue operations and this was the quickest way to do it," one source said. "The problem of possible diversion is one for the Rock Island management."

In a separate action, the Commission opened an expedited investigation to determine if intrastate traffic in the 13 states served by the RI should reflect the emergency surcharge.

The order also was served March 27 in No. 36156, Chicago, Rock Island & Pacific Terminal Railroad Co., Emergency Terminal Surcharge Tariff (Intrastate Application).

Intrastate traffic may be subject to the surcharge in Arkansas, Colorado, Illinois, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, New Mexico, Oklahoma, Tennessee and Texas.

Interested parties must notify the Commission within five days of publication of the order in the *Federal Register*.

Five days will be allowed for opening statements, 10 days for protestants' statements, and five days for replies.

The Commission's surcharge action came one day before a hearing at which U.S. district court Judge Frank J. McGarr was expected to appoint a Rock Island trustee.

### Operations to June

The Commission's action is expected to insure that the Rock Island will operate at least until June.

Filing of the surcharge came in a surprise move late March 19. The road asked permission to impose the surcharge on all in-

terstate and intrastate shipments originating and terminating on its lines. Bridge movements would be exempt (T.W., Mar. 24, p. 14).

Prior to filing the surcharge the Commission was expected to issue a directed service order to insure continued service.

The Commission's Division 2 in an unusual move held hearings on the proposal March 21, at which Rock Island officials estimated they would receive \$600,000 to \$1,500,000 monthly during the 60 days the surcharge remains in effect.

Presumably, these funds would give the trustee of the bankrupt line enough time to reorganize the road into a money-making operation.

Opponents of the surcharge argued that possible traffic diversion could leave the railroad in even worse financial shape.

Diversion estimates ranged from 8 to 25 per cent. But neither side produced figures to buttress the predictions.

Dr. Paul H. Banner, executive vice-president of the Rock Island, summed up the diversion issue: "We know there will be some. But have no idea how much," he said.

With the Rock Island assured of receiving funds to continue operations, at least temporarily, the scene now shifts to Capitol Hill and the U.S. Railway Association where the road will attempt to gain more operating funds.

### Congressional Measures

Presently pending before Congress are five bills dealing with the Rock Island situation. Three aim at operations and two deal with funding.

Perhaps the bill with the best chance of getting somewhere is S. 917 and its companion bill H.R. 4261, introduced by Senator James B. Pearson (R-Kan.) and Representative Larry Winn, Jr. (R-Kan.).

Basically, the bill would give the Commission authority to allow railroads interested in merging with the Rock Island to take over should the RI cease operations because of financial problems.

The temporary authority would be accomplished through a procedure similar to temporary takeover applications in motor carrier merger cases (T.W., Mar. 10, p. 29).

In addition, several midwestern senators and representatives have introduced legislation calling on the Department of Transportation to loan \$100 million to the Rock Island.

The bill, H.R. 4898, was introduced by Representative Glenn L. English (R-Okla.), and others. The number of the companion bill in the Senate is S. 1306 (T.W., Mar. 24, p. 73).

(See earlier story on page 54)



Table 11-7.

Ann Arbor Projected Marine  
Operating Costs, 1974(1)  
 (As shown in USRA Plan)

<u>Category</u>	<u>Operating Cost per Month</u>
Boat Operation	\$ 99 000
Boat Maintenance	13 200
Miscellaneous Operations	600
Depreciation - Boat	28 700
Insurance - Boat	10 300
Frankfort Station and Dispatch Expense	8 000
Frankfort Maintenance of Equipment (Car Inspection)	10 500
Dock Maintenance and Depreciation	2 200
Kewaunee Station, Joint Costs	1 600
Three Locomotive Units (Maintenance and Depreciation)	11 250
Casualty Costs	14 300
PRT and H&W	<u>39 500</u>
Subtotal	\$239 150
Less Passenger Revenue (12-Month Average)	(10 900)
Total	\$228 250

Note: Appendix B, Reference 13.

ADJUSTMENT OF BOAT COSTS TO REMOVE INTERCHANGE  
 EXPENSES AND OTHER OVERSTATEMENTS

<u>Line No.</u>	<u>Item</u>	<u>A. T. Kearney Amount</u>	<u>Factor</u>	<u>Restated</u>
	<u>Interchange Cost Incl. By Marine Operating Costs</u>			
1	Frankfort Station & Dispatch Exp.	\$ 8 000		-
2	Frankfort Maintenance of Equipment (Car Inspection)	\$ 10 500		-
3	Three Locomotive Units (Maintenance and Depreciation)	\$ 11 250	1/3	\$ 3 750
4	Depreciation Restatement	\$ 28 700	5.39% <u>A/</u>	\$ 15 512
	<u>System Overheads</u>			
5	Casualty Costs	\$ 14 300		-
6	PRT and H&W	39 500		-
7	Sub Total	\$112 250		\$ 19 262
8	Other Expenses Not Restated	<u>116 000</u>		<u>116 000</u>
9	Total Expense--Sum, L.7+L.8	\$228 250		\$135 262
10	Average Loaded Cars per Month	1 592		1 592
11	Cost per Loaded Car--L.9 ÷ L.10	\$ 143		\$ 85

A/ Used AA railroad actual depreciation rate x book value of \$3,453,459.

Table A-7

Projected Operating Costs of  
Upgraded Carferry  
 (As shown in A. T. Kearney Study)

<u>Category</u>	<u>Operating Cost per Month (1)</u>	<u>Source</u>
Current Operating Cost of Viking (1974)	\$228 250	Appendix A, Table A-3
Increased Fuel Cost	20 000	Previous Kearney Study Data (Confidential)
Additional Vessel Maintenance	5 000	A.C. Robinson Testimony Docket No. AB-49
Additional Vessel De- preciation	5 000	A.C. Robinson Testimony Docket No. AB-49
<b>Total</b>	<b>\$258 250</b>	

Note: (1) No change in interest cost is shown since this would depend on financing arrangements. Passenger and truck traffic is conservatively estimated to remain unchanged.

RESTATEMENT OF PROJECTED OPERATING COSTS  
 OF UPGRADED CARFERRY

<u>Line No.</u>	<u>Category</u>	<u>Amount</u>
1	Current Operating Cost of Viking (1974)	\$135 258
2	Increased Fuel Cost	20 000
3	Additional Vessel Maintenance	5 000
4	Additional Vessel Depreciation	5 000
5	Sub Total	\$165 258
	<u>Other Additions and Credits</u>	
6	Interest on \$18,000,000 @ 6%	\$ 90 000
7	Reduction in Crew Complement Costs @ \$16,000 Per Man--35 vs. 24	(\$ 14 667)
8	Additional Revenue From New Truck Dock and Passenger Facilities at 46% of Capacity	(\$136 100)
9	Restated Operating Costs--Sum, L.5 thru L. 8	\$104 491
10	New Traffic Estimate From A.T. Kearney Report	3 913
11	Restated Costs per Car--L.9 ÷ L.10	\$ 27

INTERCHANGE ADJUSTMENT FOR MOVEMENTS VIA CHICAGO

Line No.	Item	Source	Region II	Region III	Region IV	Region V	Region VI	Region VII
1	Interchange Switching Cost	ICC Stm. ICI-70, Table 12, L.2,7	\$14.04	\$14.09	\$ 8.38	\$ 9.82	\$14.47	\$12.25
2	Interchange Car Cost (One Day)	ICC Stm. ICI-70, Table 12, L.3,8	\$ 4.32	\$ 4.36	\$ 3.07	\$ 3.22	\$ 4.13	\$ 3.70
2A	Average interchange cost per RR	Sum, L. 1 + L.2 x 1/2	\$ 9.18	\$ 9.23	\$ 5.73	\$ 6.52	\$ 9.30	\$ 7.99
3	Car Costs @ 2 1/2 days	L. 2 x 2.5	\$10.80	\$10.90	\$ 7.68	\$ 8.05	\$10.33	\$ 9.23
4	Adjusted Total Interchange Costs	Sum, L. 1 + L. 3	\$24.84	\$24.99	\$16.06	\$17.87	\$24.80	\$21.53
5	Box Car, GS, Unequipped, Empty Return Ratio	ICC Stm. ICI-70, Table 14	1.51	1.51	1.48	1.50	1.45	1.49
6	Box Car, GS, Interchange Costs	L. 4 x L. 5	\$37.51	\$37.73	\$23.77	\$26.81	\$36.70	\$32.03
7	Box Car, GS, Equipped, Empty Return Ratio	ICC Stm. ICI-70, Table 4	1.80	1.80	1.82	1.56	1.56	1.55
8	Box Car, GS, Equipped, Interchange Costs	L. 4 x L. 7	\$44.71	\$44.98	\$29.23	\$27.88	\$38.69	\$33.59
9	Box Car, SS, Empty Return Ratio	ICC Stm. ICI-70, Table 14	1.95	1.95	1.79	1.81	1.81	1.81
10	Box Car, SS, Interchange Costs	L. 4 x L. 9	\$48.44	\$48.73	\$28.75	\$32.34	\$44.89	\$32.97
11	Open Hopper, GS, Empty Return Ratio	ICC Stm. ICI-70, Table 14	1.87	1.87	1.91	2.10	2.10	2.10
12	Open Hopper, GS Interchange Costs	L. 4 x L. 11	\$46.45	\$46.73	\$30.67	\$37.53	\$52.08	\$45.21
13	Refr., Mech., Empty Return Ratio	ICC Stm. ICI-70, Table 14	1.69	1.69	1.71	1.47	1.47	1.47
14	Refr., Mech., Interchange Costs	L. 1 x L. 13	\$23.73	\$23.81	\$14.33	\$14.44	\$21.27	\$18.05

## ADDED INTERCHANGE COST AT CHICAGO FOR EACH RAILROAD

		<u>Region II</u>	<u>Region III</u>	<u>Region V</u>	<u>Region VI</u>
Box car GS	L.6 - (L.2A x L.5)	\$23.65	\$23.79	\$17.03	\$22.94
Box car GSE	L.8 - (L.2A x L.7)	28.17	28.37	17.71	24.18
Box car SS	L.10 - (L.2A x L.9)	xx	30.73	20.54	28.06
Open Hopper	L.12 - (L.2A x L.11)	29.29	xx	xx	32.55
Refr.	L.14 - (L.1x1/2xL.13)	xx	11.90	7.22	xx

PARTIAL RESTATEMENT OF TABLE D2  
COMPARISON OF TOTAL MOVEMENT COSTS

Line No.	Item	Present Service	Up Graded Service Increased Traffic	All Rail	Total Revenues	Restated Revenue
1	Marine Cost (Restated)	\$ 85	\$ 27			
2	Owasso to Kenosha	\$ 437.49	\$ 379.49	\$ 451.29	\$ 559	\$ 624
3	Green Bay to Detroit	398.07	340.07	433.89	317	354
4	Green Bay to Toledo	456.32	398.32	472.25	645	720
5	Algoma to Pittsburgh	596.27	538.27	621.62	879	982
6	Wisconsin Rapids to Jersey City	961.16	903.16	992.30	927	1 035
7	Wyandotte to Milwaukee	503.76	445.76	484.16	807	901
8	Dearborn to St. Paul	534.97	476.97	570.71	724	809
9	Green Bay to Lima	431.02	373.02	412.01	298	333
10	Casper to Flat Rock	<u>948.64</u>	<u>890.64</u>	<u>970.77</u>	<u>1 250</u>	<u>1 396</u>
11	Total	\$5 267.70	\$4 745.70	\$5 409.00	\$6 406	\$7 154
12	Average to Nine Movements	\$ 585.30	\$ 527.30	\$ 601.00	\$ 712	\$ 795
13	Net Difference--All Rail vs. Ferry	(\$ 15.70)	(\$ 73.70)			

EXHIBIT #18