

## BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

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In the matter of the application of  
the CLEAR LAKE SUSPENDED MONORAIL  
COMPANY for an order authorizing the  
issuance of stocks and bonds, and the  
CLEAR LAKE RAILROAD COMPANY for an  
order authorizing the sale of assets  
to the Clear Lake Suspended Monorail  
Company.

Application No. 2219

Chas. L. Brown for the Clear Lake Suspended  
Monorail Company and for the Clear Lake  
Railroad Company.

GORDON, Commissioner.

O P I N I O N

This is a joint application by the Clear Lake Suspended Monorail Company, hereinafter referred to as the Monorail Company, and by the Clear Lake Railroad Company, hereinafter referred to as the Railroad Company, in which the Monorail Company asks the authority of the Commission to issue certain stocks and bonds and to buy certain assets of the Railroad Company; and in which the Railroad Company asks permission to sell its assets to the Monorail Company.

The Monorail Company proposes to construct and operate a line of railroad between Hopland, Mendocino County, and Lakeport, Lake County, via Kelseyville, Lake County, of an estimated length of 24 miles.

The Monorail Company was incorporated in California on March 23, 1916, to construct and operate, as a common carrier of passengers, express, freight, and mail, a suspended monorail railroad line between the points named. Its capital stock is \$50,000, of which \$26,400 has been subscribed for and 10 per cent paid into the treasury of the corporation. The remainder of the subscrip-

tion is subject to call from time to time.

The Monorail Company asks the Commission for authority to issue its stock to its subscribers to the extent of its authorized capital stock; namely, the sum of \$50,000, under conditions which will later be discussed more fully, and to issue its 40 year 6 per cent participating gold bonds in the sum of \$900,000, the proceeds of the bond issue to be used for the purpose of constructing the road. A hearing in this application was held in Lakeport on May 11, 1916.

The project of a railroad from Hopland to Lakeport has heretofore been the subject of a decision by this Commission. In Application No. 651, the Clear Lake Railroad Company, one of the parties to the present application, asked for an order authorizing the issue of bonds of the face value of \$500,000 and capital stock of the par value of \$200,000. This matter was decided on October 29, 1913, Decision No. 1046 (Vol. 3, Opinions and Orders of the Railroad Commission of the State of California, p. 817). In that decision, and in a supplemental one of May 14, 1914, (Decision No. 1507 Vol.4, Opinions and Orders of the Railroad Commission of the State of California, p. 989), the Commission authorized the Railroad Company to issue, for the purpose of constructing a surface standard gauge steam railroad, capital stock to the par value of \$75,000 and \$500,000 face value 6 per cent first mortgage bonds, under conditions as set forth in said Decision No. 1507, to which reference is hereby made. A considerable amount of grading on the proposed line was done prior to the application to the Railroad Commission. The Railroad Company, however, was unable to complete its financial arrangements for the sale of its securities, construction stopped, and no work has been done since the fall of 1914,<sup>with the result</sup> that now the

Railroad Company is willing to abandon its project, sell its assets, and go out of existence.

Applicant, the Monorail Company, now proposes to give railroad facilities to Lake County by means of a new method of transportation not at this time in general use anywhere in this country. It is stated in the application that the Monorail Company will operate under a license issued by M. C. Miller to F. D. Flint, one of the directors and promoters of the Monorail Company, for "all of the rights and privileges in the use of his designs, details, specifications, trucks, etc., whether covered by patents, applications for patents, or patents hereafter to be granted." Under this license the Monorail Company proposes to build a type of bridge construction with wood, steel, or reinforced concrete towers set on concrete bases, where, suspended from a special I-beam rail fastened to a steel cross-arm, an electrically driven suspended car will operate approximately 10 to 20 feet above the surface of the ground.

In exhibits introduced at the hearing, the proposed type of construction is described in full and certain advantages are claimed over standard surface railroad construction.

The Miller license is made a part of the application. One of its provisions calls for a building royalty of \$1000 per lineal tower mile to be paid to M. C. Miller or his assigns for each mile as it is constructed.

The right to operate under the license is made contingent upon the adoption of the system of financing devised by M. C. Miller.

This plan, according to the application, is of "a revolutionary character and designed to remove the stigma attached to railroad securities." In its essential parts, however, it is merely a plan for financing by an issue of participating bonds, stock to be issued only after all the

bonds are retired. It is proposed to finance the entire construction by the issuance of 40 year 6% semi-annual participating bonds.

The plan then provides that after the road has been in operation for a year and every expense of every kind and nature shall have been paid, including taxes and interest, and provision shall have been made for sinking and emergency funds, then the portion <sup>of net earnings</sup>/remaining shall be divided into four parts, namely,

- a- 20% to the account of Lake County, in payment of franchises.
- b- 20% to the bondholders over and above interest on the bonds.
- c- 20% to the employees of the road over and above their regular wages.
- d- 40% to the operating company over and above the regular salaries of the officials of the road.

The common stock of the Monorail Company of the authorized par value of \$50,000 is to be divided into two parts, according to the plan presented.

- 1- \$26,400 par value subscribed by the stockholders of the Monorail Company, this stock to be surrendered into the treasury of the corporation after it has been issued, and to be exchanged for first mortgage bonds, except that one share each shall be held for the purpose of qualifying directors.
- 2- The remaining \$23,600 par value to be issued and placed with the trustee for the benefit of the stockholders of the Clear Lake Railroad Company, in consideration of the transfer of all of the latter corporation's rights of way, property and franchises.

Provision is made also for an option by which Lake County may at some future date acquire and operate the railroad properties.

With reference to estimated traffic, earnings and operating expenses, the Monorail Company refers to the former application of the Clear Lake Railroad Company (Application 651), to which I have heretofore called attention. The

traffic estimates are based entirely on the data considered by the Commission in connection with that application. There is, however, submitted to the Commission a revised estimate of annual operating revenues and expenses, as follows:

Earnings:

50,000 tons freight in and out @ \$4.00	\$200,000
35,000 Passengers @ \$3.00 round trip,	105,000
Mail and Express, 13¢ per passenger mile,	<u>10,000</u>
Total	\$315,000

Operating Expenses:

Interest on \$900,000 Bond Issue @ 6%	54,000		
Sinking fund, per annum	10,000		
Emergency Fund, per annum,	3,000		
Renewal, upkeep, betterment, repairs	20,000		
Taxes,	2,000		
Insurance,	1,000		
Power for 365,000 car miles (annual)	18,250		
Office expenses, printing,	5,000		
Help 1 track man	1,825		
4 agents	7,300		
4 motormen	7,300		
4 conductors	7,300		
2 extra men	3,650		
5 officers- including auditor, secretary, manager,			
	<u>15,000</u>	<u>42,375</u>	<u>155,625</u>
Net			\$159,375

It would appear that in accordance with this estimate the Monorail Company figures on a net revenue, after interest and sinking fund requirements, of approximately \$160,000 per annum, on the basis of an operating ratio of about 50%.

There was filed at the hearing, as an exhibit, a statement showing the assets of the Clear Lake Railroad Company. This statement shows that on March 31, 1916 a total of \$85,954.93 had been spent for the construction of the standard gauge steam road proposed by the Railroad Company. According to the inventory made by the Monorail Company, items consisting of engineering, rights of way, fencing, and office equipment of a

total value of \$23,904.85 can be usefully employed in the construction of the Monorail railroad. As to the principal items of expenditure by the Railroad Company, such as grading, bridging, etc., it is stated that the Monorail Company does not actually demand such work, and these items are therefore not included as assets in the inventory. It is also provided that the old company will clear up its outstanding indebtedness before the transfer of its assets shall occur.

Commissioner Thelen in his opinion in Decision No. 1046, heretofore referred to, went exhaustively into the history of the transportation situation in Lake County, and the Commission in that decision, in its analysis of existing and prospective traffic, both passenger and freight, came clearly to the conclusion that there is now a very considerable traffic in and out of Lake County and that a large increase may confidently be expected if one of the projected railway enterprises could be carried to a successful conclusion.

The proposed suspended monorail railroad intends to make use of principles and types of construction that are not now in existence for railroad purposes anywhere in the United States. This particular type of railroad construction has, however, been used in Germany for at least twenty years with a great degree of safety and apparently with considerable success from a transportation and business point of view. It is necessary to add that conditions on the monorail lines abroad, with reference to density of population, topography, traffic, and other important matters, are not analogous to this project.

The question of cost of construction was thoroughly gone into at the hearing. Originally the applicant figured on an estimated cost per mile of from \$30,000 to \$35,000, and the amount of bonds to be issued under the terms of the application evidently

was determined upon that cost basis. The cost estimate first submitted by the applicant did not contain sufficient details to permit of even a superficial check, and the Monorail Company, upon the engineering department's request, submitted a more detailed estimate which is now part of the record. This estimate follows, as far as possible, the classification of construction expenditures for electric railways and reaches a grand total, for the proposed 24 miles of road, of \$1,223,904, or slightly in excess of \$50,000 per mile. This estimate follows:

Engineering and superintendence	50,000.00
Rails,	320,310.00
Rail fastenings and joints,	1,320.00
Frogs and switches,	4,000.00
Steel for towers,	537,900.00
Pile and frame trestles,	1,304.00
Signal apparatus,	2,500.00
Telephone and telegraph lines,	1,296.00
Distribution system,	45,878.00
Shops and car houses,	1,450.00
Stations and waiting rooms,	2,000.00
Passenger and combination cars,	40,000.00
Freight, express and mail cars,	23,100.00
Service equipment,	2,000.00
Shop equipment,	3,000.00
Substation buildings,	400.00
Substation equipment,	15,000.00
Interest during construction,	15,000.00
Discount on bonds,	120,000.00
Taxes,	10,000.00
Miscellaneous	3,542.00
	<hr/>
	1,200,000.00
Add property to be purchased from Clear Lake Railroad Company.	<hr/>
	23,904.85
	<hr/>
	\$1,223,904.85

In the Commission's decisions Nos. 1046 and 1507, already referred to, the cost of a surface standard gauge steam railway of the same length, including equipment, was estimated variously from \$470,000 to \$680,000, depending upon adopted standards of construction. It is clear, therefore, that suspended monorail construction is considerably more expensive, mile for mile, than a standard gauge road could be built for in this territory; but it developed at the hearing that even the revised estimate of over \$50,000 per

mile is based on altogether insufficient data and that no really reliable estimate can be made until definite location surveys have been completed, definite standards of construction fixed upon, specifications drawn up, and sufficient details compiled to permit of definite bids from responsible contractors. A superficial check by the Commission's engineering department of the estimates submitted by the Company has led to the conclusion that it will not be possible to build this proposed type of road for less than \$60,000 per mile.

✓ If this is true, the amount of securities asked to be authorized will not realize sufficient funds to complete the road.

It does not seem necessary at this time to go further into the question of the cost of construction.

According to the estimate of traffic and earnings made by the Monorail Company and abstracted heretofore in this opinion, the Company expects to operate at a ratio of about 50%. When it is remembered that established steam and electric railroads in more thickly settled territory in a majority of cases cannot operate at better than with a 70% ratio, and some smaller roads with even a less favorable percentage, a close scrutiny of the figures submitted seems necessary. Assuming the figures of freight tonnage and the number of passengers to be reasonable, it appears that the freight rate is based on approximately 20 cents per ton mile and the passenger rate on approximately 10 cents per passenger mile. Applicant believes such rates reasonable by a comparison with the present team and automobile stage rates. I shall at this time only call attention to the fact that on no railroad, steam or electric, in this state does the average freight or passenger rate approach the figures underlying this estimate. I <sup>also</sup> desire/ to call attention to the assumption made in the estimate that with these rates the Monorail Company will be able to eliminate



all possible team or motor competition, an assumption not borne out by a study of conditions in other similar portions of the State. Any decrease of the assumed average rates or any decrease of the estimated traffic would, of course, reduce the total of expected earnings.

Coming to the estimated expenses, I am of the opinion that the total is greatly below the figure that will have to be expected. It will only be necessary to point out the principal items in which I believe the estimate is too low. Only \$20,000 per annum is allowed for "renewals, upkeep, betterments and repairs." This figure, on the face of it, is unreasonably low, especially since it is to cover, as stated at the hearing, the item of depreciation. This item, with this particular type of construction, will be an exceedingly heavy one. It developed at the hearing, according to the testimony of the applicant's witnesses, that the estimated life of the entire overhead structure is assumed at only 40 years. Taxes in the estimate are shown at \$2,000 per annum. The state tax alone on the estimated income will be in excess of \$16,300. On the other hand, the estimate of annual car mileage of 365,000 is undoubtedly <sup>largely</sup> in excess of what should reasonably be expected, while the cost of electric power may be reasonable.

It is clear to me that the project cannot under any circumstances hope to have net earnings approaching the figure shown in the application, and it is doubtful if operating expenses could be earned during the first few years, to say nothing of interest on bonds and sinking fund.

I am forced to the conclusion that all of the estimates submitted to the Commission, both those for cost of construction and those for revenue and expenses, are so haphazard and unsatisfactory that it is impossible to attach to them any considerable weight. It would appear to me that before the Commission can

give serious consideration to any proposed plan of financing these fundamental data must be worked up and submitted in such shape and in such detail as to admit of a careful investigation.

The unsatisfactory and fragmentary nature of all underlying data became increasingly clear at the hearing. It developed, for instance, that the location of the proposed Monorail line, as shown in the application, follows exactly the location adopted for the standard gauge steam railroad placed before the Commission in Application No. 651. This location is governed by a 4% maximum grade line and requires a distance of 24 miles between Hopland and Lakeport, when the air-line distance between these two points is approximately 12 miles.

One of the principal advantages of the suspended monorail type of construction is supposed to be its ability to disregard grades which would be entirely excessive for surface railroad construction. Attention was called to this feature at the hearing, and the company's representative expressed his immediate willingness to change the line of location if such a change should, for any reason, prove desirable. I can only say that it must be obvious that any type of railroad construction should seek the shortest possible line between points to be reached, commensurate with governing grades. And it must be equally obvious that any change in line distance must of necessity change all construction estimates and, to an extent, equally the operating estimates.

Having these facts in mind, it is my opinion that the Commission cannot at this time base an intelligent opinion on the location, construction and operating data submitted by the Monorail Company.

I do not desire in this opinion to go at length into the Miller lease submitted with the application. Mr. M. C. Miller, the promoter of this project and the lessor in the pro-

posed contract, was a witness at the hearing and testified that as a matter of fact he was not in possession of any exclusive rights, leases, or patents for the construction or operation of this system of railroads. He testified that, as far as he was aware, anyone might undertake to promote and construct a suspended monorail railroad. The witness did state that it was his intention to shortly make application for a patent for an improvement of the now existing type of suspended monorail truck.

Under these circumstances the subject of the lease and of the special plan of financing provided for in the lease cannot be of more than academic interest.

It is clear to me, however, even at this time that the Commission should not approve the proposed plan of financing.

The plan in its essence contemplates that the capital shall be raised through an issue of bonds. The division of profits is important only in case there are profits to divide. The Miller plan consumes 7.44 per cent of the investment before profits can be reached.

Moreover applicant has no contract for the sale of its bonds and its intended plan of financing must remain a matter of conjecture until it presents tangible evidence that it can raise the amount of money required for the project.

Railroad transportation facilities are needed for the development of Lake County, and I would be willing to recommend the authorization of an issue of stocks and bonds upon any reasonable railroad enterprise for this section of the State if it were properly conceived.

With reference to the particular plan placed before the Commission in this application, it appears to me that the

construction of a suspended monorail line of the type proposed is feasible, although in this instance it would undoubtedly be more costly than the standard type of steam or electric railroad.

We have before us estimates that a standard type of steam railroad can be built from Hopland to Lakeport for approximately \$600,000, while the estimate for the monorail construction is \$1,223,000, or twice as much.

It is my opinion that this Commission should not stand in the way of experiments or development of the nature here proposed provided that those who have the financial ability are willing to carry the project to completion and with full understanding to assume the risks and liability. I am of the opinion that this Commission should not authorize the sale of an issue of securities, if it appears probable that the undertaking will be started, large amounts of money expended and then the enterprise left uncompleted or abandoned. It is my belief that the people of Lake County, and in fact the people of the entire state, will be in accord with this view of the Commission, as no benefits can be gained by anyone, save perhaps the promoters, by the starting and subsequent abandonment of new utility projects.

It is my recommendation, therefore, that the Commission do not authorize the issue and sale of any stocks or bonds upon the fragmentary and incomplete presentation of the Clear Lake Suspended Monorail Company.

I believe that this application, on the evidence presented to this Commission, should be denied, without prejudice however, to the right of the applicant to renew its petition when it shall have completed its engineering studies, estimates of cost,

arranged for the sale of its stocks and bonds and performed the other acts mentioned in this opinion as essential to an adequate presentation of this matter.

I submit the following form of order:

O R D E R

Clear Lake Suspended Monorail Company having applied to this Commission for authority to issue stocks and bonds, and Clear Lake Railroad Company having applied to this Commission for an order authorizing the sale of its assets to Clear Lake Suspended Monorail Company, and a hearing having been held and this Commission being fully advised in the premises, for the reasons stated in the foregoing opinion,

IT IS HEREBY ORDERED that the same be and it is hereby denied, without prejudice.

The foregoing opinion and order are hereby approved and ordered filed as the opinion and order of the Railroad Commission of the State of California.

Dated at San Francisco, California, this 10<sup>th</sup> day of June, 1916.

Max Theiler  
H. H. Donaldson  
Oliver Gordon  
Edwin O. Edgerton

Commissioners