Decision No. 29999.

ORIGINAL

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA.

In the Matter of Application of SOUTHERN PACIFIC GOLDEN GATE FERRIES, LTD., for authority to abandon its ferry lines between San Francisco and Richmond and the Foot of Broadway, Oakland, respectively.	Application No. 21237.
In the Matter of Application of SOUTHERN PACIFIC GOLDEN GATE FERRIES, LTD., for authority to abandon or to suspend the operation of its San Francisco-Berkeley Ferry Line, unless in the opinion of the Commission public interest is better subserved by the continuation for the time being of the curtailed service now in effect.	Application No. 21297.
In the Matter of the Investigation on the Commission's own motion into the rates, fares, rules, regulations, charges, classifications, facilities, practices, contracts, operations, schedules, and accounting practices, or any of them, of SOUTHERN PACIFIC GOLDEN GATE FERRIES, LTD.	Case No. 4201.
In the Matter of the Investigation and Suspension by the Commission on its own motion of reduced rates published by SOUTHERN PACIFIC GOLDEN GATE FERRIES, LTD., for the transportation of vehicles between San Francisco on the one hand and Alameda, Berkeley, Oakland and Richmond on the other hand.	Case No. 4204.
In the Matter of the Investigation and Suspension by the Commission on its own motion of reduced rates for the transportation by Southern Pacific Golden Gate Ferries, Ltd., of vehicles and passengers in vehicles between San Francisco on the one hand and Sausalito and Tiburon on the other hand.	Case No. 4225.

A P P E A R A N C E S

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A. S. WILLIAMS, for Southern Pacific Company and Pacific Motor Transport Company.

LOUIS FRIEDMANN, for Kellogg Express & Draying Company.

H. H. SANBORN, as a Stockholder of Southern Pacific Golden Gate Ferries, Ltd.

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WARE, COMMISSIONER:

OPINION

All matters in these proceedings flow from the application of the Southern Pacific Golden Gate Ferries, Ltd., to abandon service on certain of its routes, i.e., Oakland (Broadway), Richmond, and Vallejo, to abandon or suspend service on its Berkeley route, and to reduce certain of its rates and charges on its remaining routes. Various related proceedings, such as certain applications to operate bus and truck service through from Vallejo to San Francisco if and when the Vallejo service is abandoned were consolidated with the above matters for purposes of hearing, although not for decision.

As stated by the presiding Commissioner, decisions in all the related matters will be issued in two series. The first, (and present), relates only to matters of abandonment and reduced rates on the lower bay routes, i.e., all ferry routes, excepting Vallejo. The second decision, to be issued at an early date, will deal with the application to abandon the Vallejo route and those attendant applications which are related to and dependent upon such abandonment.

The present Opinion and Order, therefore, are directed solely toward those cases and applications which affect the lower bay routes.(1)

---

(1)Matters thus affected in the present Opinion and Order embrace the following:

Appl. No. 21237 - An application by the ferry company to abandon its ferry lines between San Francisco and Richmond and between San Francisco and Oakland(Broadway).

Appl. No. 21297 - An application by the ferry company to abandon or suspend the operation of the San Francisco-Berkeley route.

Case No. 4201 - A general investigation on the Commission's own motion into all rates, fares, operations, etc. of the Southern Pacific Golden Gate Ferries, Ltd. pertinent to the present Opinion and Order, excepting as to that part of the investigation dealing with the Vallejo route.

(Cont'd on page 4.)

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(Cont'd on page 4.)

A brief history of each of the applications and cases pertinent to the present Opinion and Order, and the circumstances and background surrounding such follow.

Footnote (1) cont'd from previous page.

Case No. 4204 - An investigation on the Commission's own motion into the reduced rates proposed by the ferry company between San Francisco on the one hand and Alameda, Berkeley, Oakland, and Richmond on the other.

Case No. 4225 - An investigation on the Commission's own motion into the reduced rates proposed by the ferry company between San Francisco on the one hand and Sausalito and Tiburon on the other.

Other matters consolidated with those above for purposes of hearing, but not dealt with in the present Opinion and Order, are as follows:

Appl. No. 20742 - An application by the ferry company to abandon its route between San Francisco and Vallejo.

Appl. No. 20779 - An application of W. E. Hibbitt, "Sacramento Motor Transport," to extend operative rights between Vallejo and San Francisco.

Appl. No. 20814 - An application by T. H. Halloway, d.b.a. Vallejo Express Company, to change the route over which he is now operating.

Appl. No. 20804 - An application by the San Francisco and Napa Valley Railroad for a certificate to operate a general freight and express service by motor truck as a common carrier between San Francisco and Calistoga via Oakland and including Vallejo and Mare Island.

Case No. 4201 - A general investigation on the Commission's own motion into all rates, fares, operations, etc., of the Southern Pacific Golden Gate Ferries, Ltd. (See that part of the investigation dealing with Vallejo route).

In addition to the above matters related to the proposed Vallejo route abandonment, two other applications, separate and distinct from the above, are now under submission.

Appl. No. 20805 - An application by the Napa Valley Bus Company to extend its operative rights, Vallejo to San Francisco via San Francisco-Oakland Bay Bridge, and

Appl. No. 20806 - An application by the Pacific Motor Trucking Company for a certificate of public convenience and necessity for the transportation of property by motor truck for other common carriers between Suisun - Fairfield and Vallejo, and certain intermediate points.

The San Francisco-Oakland Bay Bridge, hereinafter referred to as the Bay Bridge, was constructed under the authority of the California Toll Bridge Authority Act of 1929, and amendments thereto. The Toll Bridge Authority,[2] created by said Act, and hereinafter referred to as Authority, is charged with the construction, maintenance, operation and control of said Bay Bridge.

The Bay Bridge opened on November 12, 1936, charging automobiles a flat rate of 65 cents including the driver and not to exceed four additional passengers. This is to be compared to a previous ferry rate of 60 cents for the car plus 5 cents each for the driver and passengers. The East Bay ferries[2-a] met this bridge rate but within a short period of time the two principal routes - Berkeley and Oakland Pier - lost 91% of their vehicular traffic. In the latter part of January, 1937, the ferries applied to the Commission for the right to introduce a 30-cent rate on less than statutory notice. This application was denied. A few days later, on February 1st, the Authority put into effect the present automobile rate of 50 cents, including the driver and four passengers. Thereupon the ferries applied to the Commission on less than statutory notice to adopt this new 50-cent rate and the application was granted. The ferry company then immediately reapplied to the Commission to adopt the 30-cent rate on a full 30 days' statutory notice. Before the 30-day period expired, however, opposition to the rate reduction was filed with this Commission by the Authority. The Commission suspended the 30-cent rate and, upon its own motion, instituted a general investigation into the rates, rules, operating practices, etc. of the ferry company (Case No. 4201) and also instituted its investigation and suspension order in connection with the suspended rates (Case 4204). At a hearing on

(2) The Toll Bridge Authority consists of the Governor, the Lieutenant Governor, the Director of the Department of Finance, the Director of the Department of Public Works, and the Chairman of the Division of Highways.
(2-a) Hereinafter "East Bay Ferries" shall refer to the following five services (1) San Francisco-Oakland Pier, (2) San Francisco-Oakland (Broadway), (3) San Francisco-Alameda, (4) San Francisco-Berkeley, (5) San Francisco-Richmond.

March 11, 1937, in connection with these matters, representatives of the ferry company appeared and asked that said matters be removed from the calendar, with the right to reinstate them at a later date, the request being made presumably to permit the Authority to consider the ferry company's offer to sell its property. About June 1, the representatives of the ferry company requested the Commission to restore the matter upon the calendar. This was done and hearings were set for June 17. Pending decision in the matter the proposed 30-cent rate has remained suspended.

The background and circumstances surrounding the application for the 30-cent rate on the Sausalito route follow.

On March 1, 1937, the ferry company placed in effect the same rates charged on the East Bay routes, viz., a flat 50-cent rate for an automobile, the driver, and not to exceed four passengers. Prior to this time 60 cents was charged for the car plus 15 cents one way and 25 cents round trip each for driver and passengers.(3) On May 28, 1937, the Golden Gate Bridge was opened to vehicular traffic. The automobile rates adopted were about the same as those applied by the ferry company, but the charges adopted for commercial traffic had the effect of cutting the ferry rates by something over a third. The ferry company applied to the Commission for the right to meet the bridge's lower rates on commercial traffic on less than statutory notice. The application was granted.

Within the first week or ten days of the Golden Gate Bridge operation, the ferry lost 85% of its total vehicular traffic and 92% of its automobile traffic. The ferry company thereupon applied for the right to put into effect a 30-cent rate upon full statutory notice, such rate to become effective July 5. The Commission suspended the proposed rate reductions and instituted its order of suspension and investigation (Case No. 4225). The Commission's

(3) In addition to these charges there were commute rates at variance with those of the East Bay routes.

general investigation, Case No. 4201, was sufficiently broad in its scope to cover this route also, in addition to the other ferry routes. Opposition to this decrease was expressed by the Golden Gate Bridge and Highway District, which alleged that the prevailing rates formed a fair and just basis upon which said bridge could be paid for, and a fair and just charge upon which to maintain, operate and pay for the ferry services.

During the period that the reductions proposed by the ferry company were under suspension by this Commission, both the Bay Bridge and the Golden Gate Bridge instituted certain rate cuts. In the case of the Bay Bridge, proposed reduced ferry rates were under suspension by this Commission. The ferry company appealed to the Commission to remove the suspension to the degree necessary to permit it to meet the Bay Bridge reduction and also applied on less than statutory notice to meet the reduction of the Golden Gate Bridge. The Commission granted both applications.

Pursuant to the Commission's investigation on its own motion in Cases 4201, 4204, and 4225 noted above, a study and report was made by the Engineering Division of the Transportation Department of the Commission (Exhibit No. 1).[4]

By reason of the losses in traffic suffered following the opening of the bridges, the ferry company applied on June 3, 1937, for the right to abandon its operation on two routes which, it alleged, could not be operated except at a loss, viz., the San Francisco-Richmond and San Francisco-Oakland (Broadway) routes. (Appl. 21237). Opposition to the abandonment of the Oakland (Broadway) route was subsequently expressed by the City Council of Oakland.

Effective June 14, 1937, the ferry company reduced its service on the Berkeley route from a 20-minute headway to an

(4) This study and report, embracing 215 pages, and received as Exhibit No. 1, were made by Ford K. Edwards, Transportation Economist for the Commission.

hourly headway, such reductions being made with the desire to reduce to a minimum the operating losses which had been suffered since the bridge opened in November, 1936. Under date of June 14, 1937, the ferry company filed an application with the Commission alleging that a loss was still being incurred upon this route. It pointed out that it had filed with the Commission a tariff naming lower rates between San Francisco and East Bay points, which lower rates were intended to induce and attract sufficient traffic to its East Bay ferry lines to make them self-supporting and assure their continued operation. This tariff is under investigation and suspension by the Commission in Case No. 4204. The applicant stated that it was uncertain as to whether or not said Berkeley line could be successfully operated under the proposed reduced schedule of rates, but expressed the belief that this question could be determined with greater certainty after the result of such rate reductions on its principal East Bay route, viz., the Oakland Pier route, was known. However, the applicant further stated that if in the opinion of the Commission the present abandonment of the Berkeley line would improve the likelihood that such lower fares would better accomplish their purpose on the Oakland Pier route, then it desired authority at this time to abandon or suspend the operation of the said Berkeley line.(5)

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(5) Quoting from Application No. 21297:

"Wherefore, applicant asks that the Commission make and enter its order, either:

(1) Authorizing applicant to abandon its Berkeley ferry line; or

(2) Authorizing applicant to suspend the operation of its Berkeley ferry line subject to the further order of the Commission; unless in the opinion of the Commission the public interest is better subserved by the continued operation for the time being of said Berkeley ferry line on its present curtailed schedule."

The above background has covered the Oakland Pier, Berkeley, Sausalito, Oakland (Broadway), and Richmond routes. The disposition of the Vallejo route matters as hereinabove stated, is reserved for a later decision. The company has in addition three other routes over which it holds operating rights, viz., San Francisco-Alameda; San Francisco (Ferry Building)-Sausalito; and San Francisco-Tiburon. The services on the first two of these routes are now being provided by the passenger ferries of the Southern Pacific Company and the Northwestern Pacific Railroad Company, respectively, and, as a result, the continuation of the services places no added burden upon the ferry company.

The San Francisco-Tiburon services consist of one round-trip per day operated by the ferry company with boats regularly scheduled to other lines. No application was made for the abandonment or suspension of these three routes. Instead they are embraced within the group of lines for which the company is asking reduced rates.

To sum up, the ferry company is requesting reduced rates on its following routes:

San Francisco-Oakland Pier
San Francisco-Alameda
San Francisco-Berkeley
San Francisco (Hyde Street) - Sausalito
San Francisco (Ferry Building) - Sausalito
San Francisco-Tiburon

It is asking for the right to abandon its San Francisco-Oakland (Broadway), San Francisco-Richmond, and San Francisco-Vallejo routes. As to the Berkeley route, it is further asking for an authorization to either abandon the service or to suspend the service; unless the Commission finds that public interest is better served by a continued operation for the time being of the present curtailed schedule.

During the hearings held in this matter, evidence was introduced by the following parties or interests, in the order named: Engineering Division of the Commission, Southern Pacific Golden Gate Ferries, Ltd., Ferry Workers, the City Council of Oakland, Golden Gate Bridge and Highway District, and the Authority.

A review of the Engineering Division's study and report, and a resume of the evidence offered and the positions taken by each of the remaining parties, follow herewith.

<u>Engineering Division's Report</u>

The first evidence introduced herein was Exhibit No. 1, hereinabove referred to. A brief outline of the procedure adopted in this study and the findings made are presented herewith.

The report briefly states that the fundamental problem involved is that of determining whether the Southern Pacific Golden Gate Ferries, Ltd. can economically justify future operations under the rates which it proposes. The study, after summarizing certain financial, operating, and revenue data, approaches the problem in three steps. These are:

1. The determination of the minimum revenue needed to sustain operations.
2. The volume of the traffic necessary to yield this revenue.
3. The probability of the company attracting this traffic.

Subsequent to the completion of the study, but before its publication, the Golden Gate Bridge was opened to traffic and an addendum was added to portray this situation, based, however, upon a very brief test period.

The report disclosed the effect of bridge competition upon the ferries with rates at an approximate parity. Ferries have lost 91% of their former vehicular traffic[5-a] on the principal East Bay routes, Berkeley and Oakland Pier, and have lost 85% of it on the Sausalito route. Taking the most recent month, viz., June, 1937, the evidence in the record indicates that the Berkeley and Oakland Pier routes were handling 2.1% of the combined ferry and Bay Bridge

(5-a) As employed herein the term "vehicular traffic" embraces automobiles, trucks, trailers, busses, motorcycles, etc; the term "automobiles" includes trucks of under 3000 pounds tare weight and passenger automobiles.

automobile traffic; 27% of the total truck traffic; and 41% of the total tonnage.(6)

The financial effect of this competition upon the various ferry routes during March, 1937, was as follows:

Berkeley route	$23,000	loss
Oakland Pier route	20,000	"
Oakland (Broadway) route	2,400	"
Richmond route	1,900	"
Tiburon route	1,100	"

Sausalito route losses, based on a short test period in June, were $13,500 per month. Total losses thus exceed $60,000 per month on these lower bay routes before allowance for return on the investment, depreciation, income taxes, employes' dismissal wages, and certain non-cancellable leases.(7)

A brief review of certain of the financial and operating data serves to depict the present financial condition of the ferry company. The entire capital stock of the Southern Pacific Golden Gate Ferries, Ltd., the operating company, is held by the Southern Pacific Golden Gate Company, a holding company. The Southern Pacific Company owns 50.8% of all classes of the holding company's stock and the balance is widely held by the public. Both the operating company and the holding company were organized in 1929 at the time of the consolidation of several ferry companies operating on San Francisco Bay, into the present organization.

(6) As of June: (Avg. per day)

	Automobiles		Trucks		Total Vehicles		Tonnage	
Ferry	573	2.1%	347	27%	961	3.4%	767	41%
Bridge	26,184	97.9%	934	73%	27,696	96.6%	1,086	59%
Total	26,757	100.0%	1,281	100%	28,657	100.0%	1,853	100%

NOTE: Ferry figures based on values of June 16 - 30, 1937, and reflect decreased service on Berkeley route.

(7) The losses represent the difference between the revenues and those expenses chargeable to a continued operation.
One purpose of the study was to reflect which was the cheaper "to operate" or "not to operate," considering that certain financial obligations were of a recurring nature, even upon complete abandonment.

At the time of this reorganization, the Southern Pacific Golden Gate Ferries, Ltd. had outstanding $10,000,000 of bonds, of which $1,964,500 were actually outstanding at the date of these hearings. Obligations to employes under dismissal wage agreements approximate $1,000,000. To meet these obligations, the company had about $1,000,000 cash on hand, as of the date of these hearings, and its floating and terminal equipment and properties. The sale or salvage value of the floating equipment is highly indeterminable. The company stated that it had no method of arriving at what it might receive from a sale, although as little as $700 has been received fro certain of the older boats sold as scrap.

The company's investment in its properties as of December 31, 1936, totalled $13,049,363, of which $11,985,744 represented vessels, terminals, buildings, equipment, etc., and $1,063,619 represented land. Its reserve for depreciation and obsolesence fully balanced the $11,985,744 investment in depreciable properties. However, of this $11,985,744 reserve, only $6,670,025 was charged to operating expenses, the balance of $5,315,719 having been charged to profit and loss. The profit and loss account stood at $6,052,435 (loss) as of December 31, 1936. Hence $5,315,719 of this loss is chargeable to the company's depreciation and obsolescence write-off.

The cost analysis appearing in the Engineering Division's study had as its prupose the determination of the minimum gross expenditures which the ferry company must incur on each route if continued in operation. This value then becomes the minimum gross revenue the ferry company must earn to economically justify its continued operation. Such costs do not include certain items such as bond interest, dismissal wages, and lease obligations which will continue irrespective of abandonment. The costs shown in this exhibit represent those costs chargeable solely to a continued operation.

The minimum monthly revenues required from its transportation services, after taking credit for certain non-transportation revenues from leases and concessions, are shown below for the various routes. The actual revenues from transportation for March, 1937, are shown for comparison:

	Required Monthly Minimum Revenues	Revenue March, 1937
Berkeley	$32,256	$9,097
Oakland Pier	45,142	24,756
Oakland(Bd'way)	6,082	3,621
Richmond	2,370	430

The Sausalito route did not feel the full effect of the opening of the Golden Gate Bridge until June, 1937.

The second step of the study is that of determining the volume of traffic necessary to yield this revenue. As to the East Bay, it was assumed that certain minor rate reductions proposed by the ferry company in the rates charged commercial traffic would only serve to stop the small but steady loss of this traffic to the Bay Bridge, and would have the effect of holding the March, 1937, revenues from this traffic at about a constant level.(8) Under this assumption, all additional revenues would have to come from passenger vehicle traffic. A determination of the number of automobiles necessary to yield the required revenue under the 30-cent basic rate proposed by the ferry company, and also under the 35-cent basic rate assumed in the study, became a matter of simple mathematical computation.(9)

The third step in the study is directed toward the probability of the ferries attracting this needed volume of traffic. It is pointed out that the required traffic can only come from three

(8) March was taken, first, because it was the last month for which accounting figures were available to this study, and secondly, because it appeared as representative of the effect of bridge competition.

(9) The 30-cent basic rate embraces the following: one way, 30¢; round trip 50¢; commute 20¢; and a weighted average of 25¢ per auto. The 35-cent basic rate assumes 35¢, 60¢, and 23¢, respectively, and a weighted average of 29.5¢ per automobile. The company's application did not embrace the basic 35¢ scale but it was included in the study in order that its effect might be noted.

sources, viz., present traffic, newly-created or induced traffic, and traffic diverted from the bridges.

The volume of newly-induced traffic which might be expected by 1938, with the 30 as against the 50-cent basic rate in effect, is estimated at 25% of the 1936 pre-bridge traffic. This is based upon past experience from several transbay rate cuts and with no bridge competition in effect. To compensate for the fact that the bridges have undoubtedly tapped some of that traffic which the 30-cent fare might have been expected to reach, the value of 25% is reduced to 15%. Were the 35-cent rate adopted, the induced traffic would be, in proportion, something over 11%. A value of 10% was taken. These values of 15% and 10% respectively were to be applied theoretically against that traffic which the ferries carried, or would have carried, at the presently prevailing 50-cent basic rate had there been no bridge competition.

These percentages were applied as a practical matter against the 1936 volume of traffic moving under the pre-bridge rates which yielded over 70 cents per automobile. Adjustment for the unduly conservative result thus obtained was made by reference in the conclusions to the report and if applied would reduce the required Bay Bridge diversion from 3.9% to 2.5% or from 923 cars per day to 589 cars per day.

The third source of ferry traffic is that which may be diverted from the bridges. Knowing the present traffic and the expected induced traffic, the volume of needed diversions from the bridges becomes a matter of simple mathematical calculation.

The final application of the three steps in the study is made in Table No. 80-A, page 150, Exhibit No. 1, set forth below.

TABLE NO. 80-A
SOURCES OF REQUIRED AUTOMOBILE TRAFFIC ASSUMING BERKELEY ROUTE
ABANDONED OAKLAND (PIER) ROUTE 30-CENT BASIC RATE

Average Per Day		
Operating costs per day (Plan I)		$1,484.00
Present truck and freight revenues:		
Oakland (Pier) route	$655.26	
75% of Berkeley route revenue	120.58	
Total truck and freight revenues		775.84
Costs to be met out of revenues from automobiles and extra passengers		708.16
Number automobiles required		2,800
Present volume (Oakland)	309	
33-1/3% - Berkeley volume	106	
Assumed Induced Traffic (Oakland)	1,113	
75% " " (Berkeley)	349	
Total present and induced volume		1,877
Balance to be diverted from bridge		923

Relation:

$$\frac{\text{Needed diversion from bridge}}{\text{Present bridge auto traffic (March)}} = \frac{923}{23,594} = 3.9\%$$

The assumption is made in the foregoing Table No. 80-A that 75% of the present commercial traffic; 33-1/3% of the present auto traffic; and 75% of the induced auto traffic credited to the Berkeley route will move over the Oakland Pier route if the Berkeley route is abandoned.

The foregoing Table No. 80-A refers to a required diversion of 923 cars, or 3.9% of the Bay Bridge March automobile traffic. It was assumed that the induced traffic would amount to 15% of that which would have moved at present rates (i.e., 50 cents) had there been no bridge competition. The 15% was applied, however, as explained above, to that volume of traffic which moved under the former pre-bridge rate of 60 cents per car, plus 5 cents per passenger (i.e. over 70 cents per car). If correction is made for this factor, the needed diversion drops from 3.9 to 2.5% of the March volume, or from 923 to 589 cars.

In giving consideration to the probable extent of the diversions of traffic from the bridge to the ferries, the conclusion was drawn that the answer to this question lies wholly with each automobile owner, and that an accurate answer could only come from an actual trial of the rates over a period of time. This test being unavailable to the record, the experience of the ferry companies elsewhere was noted. After reviewing the experience of major bridge (or tunnel) crossings elsewhere in the face of 50% differentials the conclusion was drawn that:

> "Major bridges and tunnels, strategically located, appear to be affected little, if any, by such ferry rate differentials. While there probably have been some diversions to ferries, the influence of the depression and other factors makes it impossible, from the evidence available, to credit a definite loss to ferry rate differentials. At best it is a 'very few' per cent." (Exhibit No. 1, p.175.)

Whatever may have been the diversions in other areas studied, the conclusion was drawn that the diversions would be relatively less in the San Francisco Bay area because of the less favorable competitive position of the Bay ferries. Based on the facts and circumstances drawn from experience elsewhere, but particularly from the New York area, and after giving consideration to the relatively weak competitive position of the East Bay ferry routes, the conclusion was drawn that the diversion from the Bay Bridge would not exceed 5% of the traffic of the bridge. A similar conclusion was reached concerning the Golden Gate Bridge.

The needed diversion of 589 automobiles is to be compared with the Bay Bridge experience since February, 1937, the date of the application of the present 50-cent basic rate. The experience of the Bay Bridge in handling automobile traffic since February has been as follows:

	Autos per day	Increase over previous month
February, 1937	22,866	-
March, "	23,594	728
April, "	24,360	766
May,(10) "	25,642	1,282
June, "	26,184	542

(10) Values for May 27-31, 1937, excluded to prevent the effect of the Golden Gate Fiesta from giving a distorted result.

The experience of the Golden Gate Bridge was too short to permit of similar comparisons, as only six selected week days were available to the study.

The conclusion was reached in Exhibit No. 1, that the operation of the Berkeley route would not economically justify itself because of the anticipated inability of this route to attract the required volume (roughly over 100%) of its former automobile traffic necessary for it to continue in operation. After making allowance for the assumed induced traffic, the route would have to divert between 10 and 12% of the Bay Bridge traffic in addition to the needed Oakland Pier route diversions. A diversion of this amount was believed to be unattainable.

The conclusion was further drawn that the Oakland Pier route had but a doubtful chance to economically justify its operation if the Berkeley route continued in service. After allowing for the assumed induced traffic, it must divert between 7 and 8% of the Bay Bridge traffic in addition to the Berkeley route diversions. Such diversions also were held as unobtainable.

The conclusion was drawn that the Oakland Pier route had what might be termed a "fair" or "reasonable" chance to economically justify its operation if the Berkeley route were abandoned. In such case the required bridge diversions under the assumptions stated hereinabove, would amount to but 2.5% of the March Bay Bridge traffic. This small percentage of diversions would decline with each successive month since March by virtue of the steady increase of traffic which the Bay Bridge has enjoyed. By referring to the preceding Bay Bridge traffic table the fact is apparent that the necessary diversion of cars from said Bridge to the ferries in each month following March is less than the average increases that said Bridge has enjoyed from month to month.

Throughout the study the assumption is made that the Bay Bridge will make no cut in its rates on automobiles and no drastic cut in its rates on commercial traffic. Should this assumption not be supported and should such cuts be made there is little doubt but that the ferries would have to abandon operations on all routes.

Concerning the desirability of the 30-cent rate as compared with the 35-cent rate, the conclusion is drawn that the probability of the ferries economically justifying their continued operation and of making some return thereon is substantially greater under a 30-cent basic rate than a 35-cent basic rate. This conclusion rests in part upon the premise that successful operation in the future rests upon the ability of the ferry to induce or create substantial volumes of new transbay traffic, i.e., to arouse new travel habits among those members of the population who cannot afford to use the bridge at the present rates. The study points to the ineffectiveness of certain small differentials on the Berkeley route in holding traffic, much less attracting more. The experience of ferries in the New York area supports this view, according to the study. After much experimenting the competitive ferries have found it necessary to go to 25 and 30 cents in competition with the Holland Tunnel's 50¢ charge and that even these differentials which induced very substantial volumes of new traffic during the depression are now failing to hold it in its entirety. Under conditions of economic recovery, portions of it are drifting back to the Holland Tunnel despite the higher rates of the latter. The pyschological effect of a round trip at 50 cents under the 30-cent basic rate, as compared with the 60 cents under a 35-cent basic rate is also taken into consideration in supporting the above conclusion.

As to maintaining the status quo (rate parity), the conclusion is drawn that none of the lower bay ferry routes can justify continued operation under the existing parity of rates. The losses ranging from $1,900 to $23,000 per month on the routes in question support this view.

An Addendum was added to Exhibit No. 1 to present certain data and conclusions concerning the Sausalito route, which were not originally available to the study. The test period used was short, consisting of six week days which extended from Tuesday, June 2, to Saturday, June 6, and also included Monday, June 8. This brief period was necessitated by the fact that the bridge opened May 28, 1937, and the hearings in this case began on June 17, 1937. Statistics later introduced by the ferry company and the Golden Gate Bridge and Highway District indicated that the traffic data was reasonably representative of subsequent ferry traffic and revenue, but was low for the bridge.[11] The study indicates that the ferries were handling 8% of the automobiles, 80% of the trucks, 100% of the freight tonnage, and 100% of the foot passengers which they might have expected to carry had there been no bridge competition. Revised rate schedules applied by the bridge against commercial traffic, and adopted by the ferry, had the effect of reducing the latter's average revenue per unit handled by 37%.

The study is carried forward upon both a 30-cent and a 35-cent basic rate, and for both a 15-minute and a 20-minute headway. Costs per year under a 20-minute headway are found to be approximately $456,000 per year. The required volume of automobile traffic needed to justify the operation amounts to 43.3% of the pre-bridge traffic.

The conclusions were reached that under a 15-minute headway the ferry must handle under either rate basis something over one-half of its pre-bridge traffic, and under a 20-minute headway about 40% of such traffic to economically justify its operation. If only the required additional traffic is considered, a 20-minute service requires that it regain something over 30% of its previous traffic.

(11) During the short week-day period selected, the Golden Gate Bridge traffic averaged about 10,000 vehicles per day. The average for the entire month of June, including weekends, was later reported to be 14,650 vehicles per day. (Exhibit No. 30).

The study points out, as significant, the fact that the ferry company has retained the greater part of its freight, truck, and foot passenger business; that the automobile traffic on this route, before any rate reductions were placed in effect, was increasing at the rate of 17% per year; and that the rate reductions of March, 1937, boosted this increase during April, 1937, the last calendar month before the bridge opened, to 48%. The statement is made that, in the light of this experience, and the experience of the Golden Gate Bridge in inducing over 100% new movement,[12] that the territory served is one of rapidly increasing vehicular traffic and general economic activity and that the ferries might be reasonably expected to benefit from it, especially as to commercial traffic.

Upon consideration of the above facts and circumstances, and after again noting that the period of observation has been short, the belief is expressed that the ability of the ferry company to economically justify this operation under its proposed rates is within the realm of reasonable probability, particularly if a 20-minute service is offered in lieu of the present 15-minute service.

<u>A summary of the evidence and testimony introduced by the Engineering Division is to the effect that the profitable maintenance of the status quo (rate parity) is impossible; that the ferry company has a reasonable chance of justifying the continued operation of the Oakland Pier route with a rate differential (provided service on the Berkeley route is abandoned or suspended); that the successful operation of the Sausalito route is within the realm of reasonable probability, especially if a 20-minute service is operated: and that the probability of the ferries economically justifying their proposed operation and of making some return thereon is greater under a 30-cent basic rate than a 35-cent rate.</u>

(12) The average number of total vehicles handled daily by the Sausalito ferry during April, 1937, was 5,693. The Golden Gate Bridge, during the month of June, 1937, averaged 14,650 vehicles per day. Some allowance should be made for seasonal effect.

The conclusions are based upon the assumption that the rates proposed by the ferries and suspended by the Commission will go into effect; that neither of the bridges will cut its automobile rates or drastically reduce its rates on commercial traffic; and that upon the full and complete cessation of service on the Berkeley route, a certain portion of the traffic now moving over this route or credited to this route as potential induced traffic will be attracted to and handled by the Oakland Pier route.

Position of the Southern Pacific Golden Gate Ferries, Ltd.

The position and policies of the Southern Pacific Golden Gate Ferries, Ltd. were presented by W. A. Worthington, a director of both this company and the Southern Pacific Golden Gate Company (holding Company). This witness pointed out that the bonds issued by the ferry company were certified by the State as a legal investment for savings banks and trust funds, and expressed the belief that some savings banks now held them. It was pointed out that between the opening of the Bay Bridge and the Golden Gate Bridge, it was the earnings of the Sausalito route that enabled the company to carry on. This source of revenue has, of course, now ceased. The experience of the ferries in competition with the bridges demonstrated, according to the witness, that it was impossible for the ferries to compete with the Bridge on even terms as to rates, and earn sufficient to pay the cost of operation. The ferry company, it was pointed out, now faces extinction unless it can be permitted to protect itself through a rate differential, to which it is clearly entitled because of its slower time in transit. The view was expressed that inasmuch as the bridge operation created a large additional transbay traffic which did not heretofore exist, there should be no great objection, even on the part of those conducting the bridge operations, to the ferry company being given a chance to cover its operating costs and obtain some return on the investment by securing some of the business it formerly enjoyed, and which has been diverted from it. The witness further added that if the ferry company is permitted to operate as economically as possible with a proper rate differential, the public will continue to have the use of the service of the ferry lines as well as that of the bridges; that the interests of its bondholders and stockholders will be protected; and that its employes will have continued occupation at the kind of work they are best fitted to perform.

The appeal of the proposed differential rates, the witness pointed out, would be to a certain part of the travelling public which valued the economy more than the increased time required in transit.

As to the propriety of differential rates, the witness stated that differential charges exist everywhere throughout the United States, particularly where time in transit is longer, or where speed merits a premium. Lower rates are made for transportation, for equal distances, by water than by land, whether over rivers, lakes, or by sea. Railroads charge passengers less on ordinary than on certain excess-fare trains. Passengers occupying inferior space upon the same trains pay a lower fare. The public pays less for transporting its commodities by freight than by express. Busses generally charge less than railroads, although in many cases there is little difference in time. Land transportation is cheaper to passengers than the faster movement by air. In summing up, the witness added:

> "I know of no case where a differential is more justified than in the present instance of the Southern Pacific Golden Gate Ferries. If the speed advantage of the bridges over the ferries had not been so great as has been proven, very likely the ferries would have retained sufficient of their traffic to permit them to operate profitably at equal rates with the bridges. In that case this petition would not have been before the Railroad Commission and naturally there could have been no

opposition on the part of any one to a continued operation of the ferries, which would remain an optional means of transportation."(13) (14)

The witness pointed to experience elsewhere, particularly in New York and Philadelphia, where a differential had enabled the ferries to secure substantial patronage notwithstanding bridge competition.

It was further indicated that the ferries serve a very definite public convenience and necessity in the handling of trucks, due to the absence of grades and the consequent savings in gasoline.

Concerning possible bridge diversions, it was pointed out that this was merely a recovery of business which the ferries previously handled, and would probably represent in its entirety only a small volume compared with the additional new traffic created by the bridges.

Concerning the Oakland (Broadway) route in particular, it was pointed out that a recent attempt had been made to improve the earning status of the route, mainly used by foot passengers, by increasing the foot passenger fare from 5 cents to 10 cents. The expected revenue increase did not materialize, however, and the present losses are $104 per day. The company's previous experience with the 5-cent fare before the opening of the transbay bridge was cited as evidence of the futility of seeking relief by returning to the 5-cent fare. A reduction in operating costs was believed impossible as only one boat is now assigned to the run. Abandonment, the witness pointed out, was the only course left.

Future economies in operation were expected as a result of the hoped-for relief from supporting unprofitable lines, from the retirement of 80% of the bonded debt, from the use in the future of only the company's most modern Diesel boats, and from reductions in overhead and rentals. Also the number of employes had been drastically reduced.

(13) Tr. P. 486
(14) Evidence in the record indicates that the initial traffic studies (Hoover-Young Report) gave the ferries from 20 to 25% of the total traffic. This is to be compared with the 3.4% of all vehicles the ferries actually handled in June, 1937.

While the bridges have considered the risk of calamity great enough to insure heavily against it, there is no assurance to the public of any way to cross the waterway during such period as they might be out of service. Witness stated that this consideration alone was such as to make it distinctly in the public interest to permit the ferries to earn sufficient to keep them in operation.

The position of the Southern Pacific Company was explained by this witness.[15] While this company owns slightly more than half of the stock of the ferry company,[16] it has no other responsibility for its operations and naturally could not be expected to insure the company by advances against deficits which might result. The ferry company must stand on its own feet and if its operations are to be continued, this can only be possible if they are made financially self-sustaining. It is independently operated and is not a part of the Southern Pacific system.

It was further testified that no request was ever made to the Commission to raise rates and thus cover the anticipated losses to be suffered through the construction of the bridges.

Mr. F. G. Mott, General Manager of the Merchants Express Corporation, Oakland, appeared as a second witness on behalf of the Southern Pacific Golden Gate Ferries, Ltd. The Merchants Express, (a common carrier under the jurisdiction of this Commission), was represented as probably the largest single user of the ferry service on the Oakland Pier route and also one of the largest draying concerns in the bay area. This company found that the most economical method of moving transbay freight was by way of the ferries, using low powered, light-weight tractors followed by two vans. With this equipment toll charges were kept between 75 and 76 cents per ton.

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(15) W. A. Worthington, in addition to being a director of the S.P.G.G.Co. and the S.P.G.G. Ferries, Ltd., is also Vice President of the Southern Pacific Company.

(16) Witness testified that the Southern Pacific Company also owns about 40% of the bonds outstanding ($802,000 par value), and that the remaining 60% was held by the general public, savings banks, and others. (Tr. p. 484.)

The witness indicated that if the Bay Bridge were used for between-terminal movements, the line haul was increased by 10 miles with running costs ranging between 6 and 20 cents per mile, depending on the equipment used. With toll charges the same, the use of the bridge represents increased costs of 40 to 60 cents per ton of revenue freight. The witness further testified that the company's tractor equipment was inadequate, and underpowered to speedily pull the grades on the bridge, particularly at San Francisco, and that its replacement would mean a large capital cost which would be avoidable if the ferries were permitted to live. In correlating the expenses of his company's operation to the public interest, the witness pointed out that the continuation of the present trans-bay drayage rate scale demanded the retention of the ferries.(17) In further amplification of his position, the witness stated that he would rather pay the ferries 35 cents a ton for cargo than run the bridge free under existing conditions. A reduction in the rates of 10 or 15 cents per ton on commercial traffic would, in the opinion of this witness, merely have the effect of shifting tonnage from the common carrier to the contract carrier or to the proprietary truck without inducing much new tonnage.

Clarence E. Day testified that in his opinion, in the light of the company's past experiences, the boats would be loaded on an average to the 36.6% of capacity, which is needed to earn direct expenses. It was further testified that if the company's

(17) Witness F. G. Mott further stated: "If the ferries wish to make an effort to regain some of the lost traffic at a 30-cent rate level, I believe the public interest will be served by giving them the authority to make the attempt as secondary carriers and at differential rates. I believe the public interest demands that the bridge have continued private competition. I believe the public interest demands stand-by service, so that we are not dependent upon one route, the bridge." (Tr. p. 555). The company's East Bay consolidation point for less-than-truckload lots is located in the Outer Harbor area. It was estimated that the new Outer Harbor overpass would reduce the present 10 excess miles to 8 for those traveling the Bay Bridge from the same location.

pre-bridge load factor of 57% were obtained, the Oakland Pier route would enjoy an annual profit of $185,000, all of which could be devoted toward sinking funds, bond interest, etc. Similarly, it was determined for the Sausalito route that a load factor of 34% would be required to meet operating expenses, but that if the pre-bridge load factor of 47.5% were equalled, the annual profit would be $113,000. No discussion was given, however, to the actual probability of the company being able in the future to duplicate its former load factors. Concerning the cost values used, the witness testified that his cost studies had resulted in no substantial differences from those reported in the study of the Engineering Division and that the values appearing in the latter were therefore used in his analysis.

Carl F. Fennema, Assistant to the General Manager of the Southern Pacific Golden Gate Ferries, Ltd., introduced exhibits presenting traffic studies of the Oakland (Broadway) and Richmond routes which the ferry company desires to abandon. During 1936, the foot-passenger traffic on the Oakland (Broadway) route averaged 215 per trip under a 5-cent fare and 91 per trip during the first five months of 1937 under a 10-cent fare. Vehicles handled during the two periods averaged 0.92 and 0.45, respectively, indicating the lack of vehicular traffic on this route.

Turning to the Richmond route, the witness pointed out that during 1936 an average of 11.6 vehicles were handled per trip, while 6.56 were handled in the first five months of 1937. The boat had a capacity for about 70 vehicles. The average number of foot passengers per trip declined from 8.97 to 7.48 between the two periods. Evidence was also introduced to indicate that the adoption of the flat 50-cent rate for a vehicle and five occupants on the Sausalito route, effective March 1, 1937, had greatly stimulated the flow of traffic. This additional movement was designated as newly created traffic. Other evidence indicated that on the Oakland Pier route, automobile and truck traffic has remained at a more or less uniform level since the first of the year. The belief was expressed that, in the light of studies made by the company, the needed traffic to justify continued operation was available, and, furthermore, that the greater portion of it would be induced traffic.

Glenn E. Collins, General Traffic Agent for the ferry company, testified as to the public convenience and need of preserving the ferries for truck traffic. After pointing out that the average load on a truck using the bridge was 1.117 tons as compared to 2.16 tons on the ferry, the witness drew the conclusion that the heavy trucks found the ferry more desirable. It was further pointed out that use of the ferries eliminated the long grades on the bridge and that there might be some saving in mileage, depending upon the points of origin and destination of the trucks. Similar testimony was introduced concerning the Golden Gate Bridge with its two miles or more of 6% grades on the approaches and its 5½-mile longer highway route when compared with the ferry. On a heavily loaded truck and trailer, used as an example, a saving of almost an hour's time through use of the ferry as compared to the bridge was noted.

Concerning the probability of new traffic being created or induced, this witness pointed to the company's experience of 1926, when a rate cut made in December of 1925 was followed by a 71% increase in traffic the following year, most of which was attributed to the reduced rates. During the first 19 days the Bay Bridge was open, November 12 to 30, 1936, the total transbay travel, bridge and ferry, increased by 200.9% over the previous ten months' average (pre-bridge) of 11,886 vehicles per day. This increase was credited to the opening of a new artery plus a slight reduction in rates.(18) 24,874 vehicles per day were handled in February and

(18) The average daily traffic handled by the combined agencies was 38,145 (Tr. p. 672). Some part of this was undoubtedly "curiosity" travel.

25,799 in March of 1937, an increase of 109.2 and 117%, respectively, over the pre-bridge 1936 figures. In May the combined agencies carried 30,000 vehicles per day. On November 15, the Sunday following the opening of the bridge, 88,700 vehicles were handled. The witness pointed to these values as indicative of the reservoir of traffic available and stated that in his judgment the rates proposed would attract the required traffic necessary to make the routes self-supporting. The view was further expressed that most of the added traffic required by the ferries would be created by the proposed rates and but a small portion would be diverted from the bridges. The Engineering Division's estimate that one-third of the Berkeley automobile traffic and 75% of the truck traffic would shift to the Oakland Pier route if the former route were abandoned and the proposed automobile and truck rate reductions placed in effect was believed reasonable, although the witness added that "no one knows until we try it out." When asked to consider the possible effect of a drastic reduction in truck rates, the witness stated that the ferries would also have to reduce their rates with the result that the distribution of traffic would remain undisturbed but both parties would get a much lower revenue than is received at the present time. Questioned as to the effect of the overpass under construction, which will connect the outer harbor with the Bay Bridge approach system, the witness testified that it would not divert any traffic from the ferries for the reason that the plants located in the area did not develop any heavy traffic that moves transbay.

Concerning the matter of differentials allowed in favor of water carriers as against land carriers, Morton G. Smith, of the freight traffic department of Southern Pacific Company, pointed to certain precedents. Differentials in both freight and passenger rates have existed between the Sacramento river boats and the railroads. The California Railroad Commission approved rates for the boat lines lower than the rail rate in a Sacramento-San Francisco Canned Goods Case. (38 C.R.C. 216) Exhibits were introduced listing 45 representative commodities upon which a water rate differential exists over rail between San Francisco and Los Angeles Harbor, 40 commodities upon which the Interstate Commerce Commission had prescribed water differentials on movements between California ports and North Pacific Coast ports, and 40 other commodities moving water and rail between New York piers and Pacific Coast points upon which a differential existed as compared with the all rail rates. Attention was also drawn to the differential in the rates of the intercoastal lines operating through the Panama Canal as compared with the rates of the transcontinental rail lines, and to the differential rates enjoyed by the river boats and barges on the Mississippi River and its tributaries as compared with parallel rail lines.

Position of the Ferry Workers

Captain George W. Fouratt appeared as in intervener on behalf of the ferry workers employed by the Southern Pacific Golden Gate Ferries, Ltd., who have lost their position or who are losing their positions on account of the reduction in ferry service following the diversion of traffic to the bridges. It was pointed out that already 310 ferry workers had lost their employment on account of the opening of the bridges and that this would be increased by another 125 if the Vallejo, Richmond, and Oakland (Broadway) routes were abandoned. The witness pointed out that many of the men were old in the service, were trained for no other work, and would have difficulty in obtaining other employment even as common laborers. He added that the group displaced were taxpayers and substantial citizens and not an itinerant class, and that they had lost their employment in the interests of progress. He further pointed out that if the Commission denies the application of the ferry company to reduce the fares on the Oakland and Sausalito routes, many more men will be thrown out of work, and added:

"We believe that the proposed reduced fares would develop a class of traffic that is not patronizing the bridges to any appreciable extent. It would invite a class of traffic that is willing to sacrifice time for economy; therefore, the bridges will not suffer materially. In other words, the ferries, if allowed to run, will be the means of second class transportation, bearing the same relation to the bridges as the bus lines bear to the railroads."

"This class of service, under the reduced rates, would unquestionably benefit many people who cannot afford to pay the present bridge fare."

The witness pointed out that the men who, under their seniority, will hold the jobs on the two main routes that might continue to operate, will be those oldest in service and the class that would "absolutely be unable to get positions in any other work." (Tr. p. 723). Concerning the dismissal wage, the witness stated that while the employes have the protection of the wage agreement, this protection does not adequately fulfill their needs.

Position of Oakland

Mr. John W. Collier, appearing on behalf of the Council of the City of Oakland, presented the resolution of said Council in opposition to the abandonment of the ferry service between San Francisco and the foot of Broadway, Oakland. He contended that the retention of this service was in the public interest and that it afforded a portion of Oakland with necessary and convenient transportation. In support of these views, evidence was adduced to show that certain shippers would suffer inconvenience and loss were they to be deprived of this Broadway (or Creek) route service. Mr. Collier offered no protest against the proposed differential in rates.

Position of The
Golden Gate Bridge and Highway District

Sydney W. Taylor, Consulting Traffic Engineer for the Golden Gate Bridge and Highway District testified in his official capacity. This bridge was open to traffic on May 28, 1937. The witness stated that the traffic for June exceeded the 1930 estimates of the traffic engineers and averaged 14,508 vehicles per day. An average daily traffic of 9500 vehicles is necessary to meet the financial requirements of the bridge, including service on bonds, operating expenses and insurance. After making allowances for curiosity travel and for the seasonal factor, the conclusion was drawn that the traffic was exceeding the financial requirements of the District.(19)

(19) The witness Taylor pointed out that the Bridge district has two alternatives, in case there is a deficit in revenues. One is to raise tolls, and the other is to levy a tax upon the District to make up the deficiency. Conversely, if the bridge District should experience more than enough prosperity than is necessary to meet full costs and maintain a healthy surplus, the Directors are mandated to reduce tolls, for the said bridge is not a profit-making entity.

We quote the following excerpt from Mr. Taylor's testimony, Tr. p. 1044, L. 15 et seq., questioned by George H. Harlan, Atty for District:

"Q. Could you summarize the present position of the bridge with regard to its revenues as compared with its expenses and required bond interest? In other words, making allowance for the seasonal factor based on the experience of June, is it meeting its requirements?

A. It is more than meeting its requirements based on the traffic of June.

Q. Taking that traffic and extending it (adjusted for seasonality) . . . . . over the entire year, will it meet the requirements for the year?

A. Oh, yes.

Q. Based upon your very short experience?

A. That experience, of course, is a little bit out of joint because, as I say, there is novelty travel still going over the bridge. I hardly think we will be able to make a rational stab at that until the end of August. The Bay Bridge created this kind of a situation: It has taken a great deal of the novelty travel and people have gotten in the habit of going over the Bay Bridge for the sake of going over a bridge. We would not expect the novelty travel to last as long as the Bay Bridge; people have gotten used to it.

Q. Have you an estimate of the average number of vehicles required per day to meet your financial requirements?

A. About 9500.

Q. That covers both service on the bonds and operating expenses?

A. That services the bonds and pays operating expenses.

(Footnote continued on page 32.)

Concerning the assumptions made in the Engineering Division's report that the diversion of traffic from the bridges by a 30-cent fare would not exceed 5%, this witness stated: (Tr. p.1034)

Footnote (19) continued from previous page.

Q. And insurance?

A. And insurance.

Q. And judging from the brief experience in June and with other allowances for curiosity travel and making what adjustment you can for the seasonal factor, you are apparently somewhat better than that average if you extended it?

A. That is true."

Concerning that portion of the Golden Gate Bridge novelty traffic which originates in the East Bay, the record indicates that it did not last for long, as judged by the following traffic experience of the Bay Bridge (Automobiles per day):

Average May 1 - 26	25,642	
Sunday May 23	34,051	
Wednesday May 26	23,510	
Thursday " 27	25,814	
Friday " 28	30,934	G.G.Bridge opened & Fiesta
Saturday " 29	39,201	
Sunday " 30	51,380	
Monday " 31	40,408	
Tuesday June 1	24,990	
Wednesday " 2	24,142	
Thursday " 3	22,360	
Sunday " 6	33,927	
Average for June	26,184	

(Weather fair on days shown)

The above data indicates that the East Bay curiosity travel to the Golden Gate Bridge opening and Fiesta rose to a sudden peak and as quickly disappeared again, supporting the views of Mr. Taylor.

"It might be 5, and it might be more or less. . . . . I think the estimator, who estimates to arrive at a precise conclusion, his path would be beset with many pitfalls. The best we can do is to give a fairly reasonable educated guess. I have no doubt that Dr. Edwards may be somewhere within the truth, I don't know what my figure would be. I have never made one. His report is a very well considered, able document. He has given quite a lot of thought to it, and I have no reason at this time to doubt that he may be somewhere near correct."

Regarding the source of the ferries' needed automobile traffic, the witness stated that in his opinion some of it would be induced traffic and some of it would naturally be diverted from the Golden Gate Bridge. When questioned as to whether this diversion might cause the bridge such losses that it would be forced to do something in the way of reduced rates or imposing taxes, the witness stated:

"That rate (50 cents on the Golden Gate Bridge) is below the point of diminishing returns. I mean that if you reduced that rate you would not increase your revenue. Accordingly, to make up the amount of the decrease you could raise it and get more revenue, but you could not reduce it and get more revenue." (Tr. p. 1049).

"I would not expect the diversion from the bridge to put the bridge in an awkward financial position; due to this cut of 20 cents on the part of the ferry." (Tr. p. 1039).

Mr. Taylor disclosed the fact that the bridge had opened under very adverse highway and approach conditions, and that lack of sufficient approaches had interfered with the traffic flow. Illustrating these current difficulties the witness pointed out that trucks are now forced to follow very unfavorable routes in reaching either end of the Golden Gate Bridge. The principle approach of the bridge from the north, the Waldo approach, is one of the heaviest pieces of construction in the entire California highway system and involves colossal cuts and fills which are bound to experience during the formative period of said approach, seasonal slides which may impede the flow of traffic. Development of the approach system, it was indicated, would see in Marin County the Sausalito lateral extended into the main street of the City by means of a more direct and easier grade, the elimination of the bottleneck in San Rafael, the widening of the highway to the north, and a new route into the

Sacramento Valley; and in San Francisco this current development of the approach system will usher into extensive usefulness the Funston Avenue approach tapping the Richmond and Sunset Districts and carrying Route 101 directly across the Golden Gate Park, the Richardson Avenue and Lyon Street approach, and the improvement of Francisco Street into Alhambra and thence to the Bay. It is anticipated that there will be a tunnel under Russian Hill extending on Lombard Street into Columbus Avenue, thereby facilitating and expediting traffic to and from the San Francisco approach of said Bridge.

Concerning the diversion of traffic by the bridge and ferry, the traffic engineer's report dated August 1930 assigned 20.5% of the traffic to the ferries and 79.5% to the bridge. These early prognostications provide the original basis for the estimates of the earning capacity of this structure. The traffic report of the Golden Gate Bridge and Highway District submitted by the witness Taylor, in Exhibits 30 and 31, is proof that this great structure is experiencing and is likely to continue to experience not only the patronage which was necessary to its financial success but an unanticipated revenue and popularity. Of the total traffic handled across the Golden Gate in June, 1937, the bridge received 439,503 vehicles, or 94.5% and the San Francisco-Sausalito ferry received 25,684 vehicles, or 5.5%.

Position of the California Toll Bridge Authority

Four witnesses took the stand on behalf of the California Toll Bridge Authority.[20]

A declared policy of this Act, according to C. H. Purcell, is that the State of California acquire and own all toll bridges situated upon any part of the highways of the State with the end in view of ultimately eliminating all toll charges as soon as such can

(20) C. H. Purcell, Chief Engineer of the San Francisco-Oakland Bay Bridge and State Highway Engineer of the Division of Highways, Department of Public Works of the State of California; Ralph A. Tudor, Senior Designing Engineer, Dept. of Public Works; Charles E. Andrew, Bridge Engineer of the San Francisco-Oakland Bay Bridge, Dept. of Public Works, (also in charge of Bridge operation); and Lester S. Ready, Consulting Engineer, retained by the California Toll Bridge Authority.

be done with a view to the financing and money expended. It was indicated that the payment of principal and interest on bonds issued in the financing of the Bay Bridge must come solely out of the tolls and revenues of the bridge as the State of California is not obligated in any way to meet such charges. Something over 61 million dollars was borrowed from the Reconstruction Finance Corporation in 1932 for the construction of the bridge, the agreement being that this corporation would bid for the bonds on a 5% interest basis. In 1933 and 1934 negotiations were completed with the Reconstruction Finance Corporation for an advance of approximately ten million dollars additional, also at 5%, to be used in constructing the interurban rail facilities and the tunnels. In 1934, the Corporation, under a blanket resolution, reduced the interest rate to approximately 4% for a period of five years, i.e., to April 1, 1939, or until it should sell its bonds to the public.

The witness testified that after this loan had been made the California Toll Bridge Authority has had a desire to pay a lesser rate of interest and discussions had been entered into with representatives of investment banking houses in New York and San Francisco. It was indicated that interest had been shown in the purchase of securities on a 4% basis or thereabouts, but concern of the banking houses was expressed as to the effect of a reduction in ferry tolls before bridge tolls. Banking houses and officials of the Federal Government even went to the extent of suggesting that some provision be made to acquire the ferry companies. However, at the present time the Toll Bridge Authority is without the power to make such acquisition.

It is this possible effect of the ferry differential upon the Authority's desire to refinance at a lower rate of interest that provides the basis for the Authority's opposition.

The record developed that when the bridge was projected, and the financing arranged, those responsible for such financing estimated that 25% of the total traffic would go to the ferries.

In actual experience the bridge obtained a much greater share than was anticipated. The value of 25% is to be compared with the 3.4% of the total vehicular traffic now received by the ferries and the approximate 10% needed to justify continued ferry operation on the Oakland Pier route. It was also anticipated from the inception of the bridge project that the ferries would continue to operate as long as they could and that they would be a constant source of competition to the bridge to the best of their ability.

The record indicates that the bridge is insured against structural damage and against loss of tolls during such period as it may be inoperative. When questioned as to whether anything had been done to assure or guarantee to the travelling public a physical method of getting across San Francisco Bay pending repairs on account of some possible major catastrophe, the witness stated, "No. We have done our best to design so that won't happen, but we have made no provision for that." (Tr. p. 1258.)

The second witness for the Toll Bridge Authority, Ralph A. Tudor, introduced amortization tables which presented a comparison of the cost of finnncing the bridge at 5% interest as compared with the hoped for 4%. The 5% basis shown actually reflected the cost of a 4-3/4% bond issue sold at such a discount as to yield 5% at maturity.(21)

In anticipating the effect of the rate reduction requested by the ferries, this witness assumed 500,000 vehicles per year would be diverted from the bridge, leaving the latter, in 1938, with

(21) The facts concerning the refinancing were summed up as follows: The California Toll Bridge Authority has an agreement with the Reconstruction Finance Corporation for this enlargement of its loan. However, the objective is to get a better agreement from them or from the public bond market. Up to the date of the hearing, no commitment had been made by the Corporation with reference to future financing. When questioned as to whether the Corporation has given any indication that it would not continue the temporary rate of interest beyond the end of the reduced interest period (and assuming they still carried the loan), a representative of the Authority stated: "No, not specifically, except what we might deduct from their general attitude and the fact that the Reconstruction Finance Corporation is desirous of cutting down its existence as soon as possible in so far as this type of loan is concerned." (Tr. p. 1304-5).

9,600,000 vehicles and an expected vehicular income of $4,992,000.

It was testified by the witness that in 1942 the bridge could make a reduction in tolls from an average of 52 cents per vehicle to an average of 36 cents and it was not contemplated that the ferries could survive this reduction. Hence it was assumed that the ferries could not in any event survive beyond the year 1941.

The purport of the testimony was to the effect that if the bridge could refinance at 4% in lieu of its present 5% (yield basis), its total expenditures for interest and repayment of principal[22] between the year 1936 and 1960 could be reduced from $129,658, 975 to $118,501,925, a saving of something over $11,000,000. Should such refinancing be accomplished it was likely that the Authority might be able to make the first cut in 1939 and to make a second cut to a base rate of 25 cents in 1949.

However, it was also pointed out by the witness that if the tolls were kept higher, the indebtedness could be paid off before 1960 under either the 5% or 4% interest rates, but quicker under the latter.

The savings credited to the 4% financing plan arise both from the effect of lower interest rates, and from the greater traffic expected by the bridge if the ferries cease operation.

Although the Authority is not required to start payments upon the principal of its loans until 1941, the record indicates that it expects, in spite of the proposed rate cuts by the ferries and the expected resulting traffic diversions, to be able to redeem $2,000,000 in bonds in 1938, $2,000,000 in 1939, and $2,300,000 in 1940, in addition to setting up the sinking fund reserves required of it.

Questioned as to the assurance the Authority had that it could obtain a 4% interest rate if the ferries ceased operation, a

(22) Also includes $25,600 per year as premium for Use and Occupancy insurance, which is unchanged under either plan of financing.

representative of the Authority made the following statement:

"I was in . . . . . New York last April and at that time the bond market was bad comparatively. The bonds of the Triborough Bridge . . . . I don't know exactly how much, but 28 millions worth, or more than that, were put on the market by one of the bond syndicates at slightly over 4% in what was considered a bad bond market. We have had indications ranging all the way from 3½% to 4¼%, depending upon the market and the conditions . . . . the general indication being that the short term bonds would have a lower rate of interest than the long term bonds, or vice versa, depending upon the type of market. And in that connection the reference to the ferries was simply a constant reference,...... Have you done anything to eliminate the threat of competition? And that is the substance of it, Mr. Commissioner. It was just the subject of the discussions. . . . . . .

Q. In the event you (the Authority) could not refinance, then what is the result?

A. The result is we have a definite obligation between ourselves and the Reconstruction Finance Corporation and we get our money and we complete the construction of the interurban facilities and, we hope, on the basis of 5% less the concession which the Reconstruction Finance Corporation has made to us as long as the Corporation continues to make it to us . . . ." (Tr. p. 1309-10. Statements by Mr. Dinkelspiel, of counsel for the Authority.)

The assumed loss of 500,000 vehicles at 52 cents each, would mean an annual revenue loss of $260,000. Over the expected remaining four year life of the East Bay ferries, the total loss becomes four times this amount, or $1,040,000. It is this potential loss of $1,040,000 over the next four years that provides the basis for the Toll Bridge Authority's fears as to its refinancing.(23)

"Q . . . . The anticipated loss to you in the next four years of about $1,000,000 will cause those . . . . refinancing the bridge to soak you additional cost of about $11,000,000. Is that the situation?

A. That is what we fear." (Tr. p. 1312-13)

When question was raised as to the possibility of refinancing in 1942, when the ferries are expected to pass out of existence, thus avoiding the waste of paying $11,000,000 to cover a loss of $1,000,000, the witness replied:

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(23) The assumed loss of $1,040,000 is to be compared with the Authority's expected vehicular revenue during the same four year period, 1938-1941, incl., and despite the ferry competition, of $20,919,600. The inclusion of the expected income from the interurban lines and concessions will raise this to $23,333,600.

"We don't know what the bond market will be at that time. There is an opportunity to refinance now and we would like to capture it." (Tr. p. 1313).

This assumed loss of $1,040,000 is based upon an assumed diversion of 500,000 vehicles per year to the ferries, although a subsequent witness for the Authority, in predicting a failure of the proposed ferry operation, estimated that the ferry would not be able to divert more than 300,000 vehicles per year from the Bay bridge. If this latter value is used the loss becomes $156,000 per year or $624,000 over the four year period. These potential losses in traffic revenue are to be compared with the Bay Bridges expected remaining revenue of $23,333,600 during the four year period.(24)

Charles E. Andrew, in charge of Bay Bridge operation, directed his attention principally to the fate of the ferries. His lack of concern over traffic diversions from the bridge is briefly summed up in his statement in connection with induced and recaptured traffic:

".... I think, after all, the diversion from the bridge don't mean so much to us, anyway. The one thing I am attempting to show is the fate of the ferries instead of worrying about what is going to happen to the bridge . . . . " (Tr. p. 1387).

To the minimum required ferry revenues set forth in the Engineering Division's study (Table 80-A set forth hereinabove), the witness added 5% to allow for contingencies and some profit. He also assumed that in the event the Berkeley Route were abandoned a total of 55% of the present truck movement and 47½% of the automobile traffic on that line would be recovered by the Oakland Pier route. An exhibit showing the effect of the reduction in Berkeley route service from 20-minute to hourly headway, but not reflecting any rate reduction, indicates that the Oakland route's recapture of Berkeley truck traffic might be less and the recapture of passenger traffic much greater than the estimates of either this witness or the Engineering Division contemplated. (Exhibit No. 40.) One tends to offset the other, however.

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(24) Exhibit No. 35. The $23,333,600 consists of the anticipated revenue, from vehicles, interurban traffic and concessions, remaining after the estimated loss of 500,000 vehicles.

In approaching the all-important matter of the reduced ...verted traffic to be expected from a rate reduction the witness stated that it was a very elusive question. He differed with the estimates of the Engineering Division, pointing out that the method employed by the latter for estimating induced traffic would have been feasible if the Bay Bridge had not come into competition with the ferries. However, he gave no recognition to the fact that this method, which he approved under non-competitive conditions, had produced a value of 21% in 1936, and a value of 25% in 1938 for induced traffic and that this latter value had been reduced 40% (or to 15%) to allow for such factor of bridge competition. (Exhibit No. 1, p. 144).

The witness pointed to the 71% increase in East Bay ferry traffic between 1925 and 1926 (one of the rate cuts to which the Engineering Division's study referred) and stated his belief that of this increase, 30% only was due to the reduction of automobile rates from $1.05 to 60 cents, effective December 8, 1925.(25) Th... Engineering Division's study had credited this drastic cut with inducing a 50% traffic increase.

In commenting upon comparisons between the Bay experi... and experience elsewhere, the witness drew the conclusion that position of the ferries adjacent to the Holland Tube, in so f... ability to retain, recapture, or induce traffic is concerne... considerably more favorable than in the case of the San Fra... Oakland ferry. As an expression of this relative abilit... duced a factor which consisted of the ratio of that tr... by seven Hudson River ferries when the Holland Tunn... to that traffic lost (92½%) by the Oakland ferry ... opened. The inverse ratio of 53 over 92 was ... approximate measure of what public opinion ... facilities in comparison with the competin...

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(26) The seven ferries are those opera... side of the Holland Tube.

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In commenting upon comparisons between the Bay experience and experience elsewhere, the witness drew the conclusion that the position of the ferries adjacent to the Holland Tube, in so far as ability to retain, recapture, or induce traffic is concerned, was considerably more favorable than in the case of the San Francisco-Oakland ferry. As an expression of this relative ability he introduced a factor which consisted of the ratio of that traffic lost (53%) by seven Hudson River ferries when the Holland Tunnel opened,(26) to that traffic lost (92½%) by the Oakland ferry when the bridge opened. The inverse ratio of 53 over 92 was then stated to be an approximate measure of what public opinion thinks of the two facilities in comparison with the competing facility. Or, in other

(25) Certain other factors such as increased service during the following year were given major credit.

(26) The seven ferries are those operating within a mile of either side of the Holland Tube.

words, it was believed that the power of the San Francisco-Oakland Bay ferries to induce and divert traffic, when compared with a comparable case like the seven adjacent ferries to the Holland Tube, is in the inverse ratio of 92 to 53.

The Holland Tube opened in November 1927. Between 1928 and 1934 the ferries generally reduced their rates to about half that of the tube with the major reductions being made about 1933 or prior. Their annual traffic increased during this period by approximately 1,000,000 vehicles, or about 17% of their projected pre-tunnel traffic. The application of the ratio of 53 over 92 to the figure of 17% results in a value of 9.8% which the witness believed to be the probable percentage of recaptured pre-bridge traffic which might be anticipated on the East Bay ferries. It includes both the expected induced traffic and the expected diverted traffic.

In virtue of the importance attached to this value certain comment should be made thereon at this point - particularly with regard to its derivation. In the first place, one of the ferries in the group referred to (Erie Railroad) reduced its rates within a few months after the tunnel opened, thus holding up its traffic volume during the first year to 78% of its 1927 movement, although its revenues fell off by 42%. (Exhibit No. 1, p. 158.) Although this action may have had small influence upon the total traffic handled by the ferries in question, there is no doubt but that the spread of 1,000,000 vehicles between the low point of ferry traffic in 1928 and the higher point in 1934 would have been greater had there been a more complete test with rates at a parity. Another factor that might distort the result of such a calculation is the fact that whereas the present and proposed ferry rates may be similar in the areas compared, the pre-bridge rates, and the relative volumes of traffic moving thereunder, might have been quite different. As the results are derived in terms of a percentage of this former traffic, this factor should be given consideration.

A much more serious criticism may be made of the attempt, in this instance, or in any other instance in these proceedings, to use Hudson River experiences as a measure of the expected induced or diverted traffic of a particular ferry line elsewhere. This is for the reason that even among those ferries closely competitive with the Holland Tunnel, the widest range in experiences are to be noted.

Taking four individual routes for which data appear in the record[(27)] the experiences between 1928, the year after the tunnel opened, and 1934, include an 80% loss of traffic and the discontinuance of one line, an 80% loss of traffic followed by a 68% net recovery on a second line, and a 22% loss followed by a 165% net recovery on the remaining two routes. In the last named instance the losses in terms of revenue were 42% and the net recovery 106%. Such losses and recoveries are expressed in terms of the pre-tunnel volumes of traffic.

Comparing the above individual experiences with the group experience of 17%, derived as explained above, it does not appear that this group value could be used with safety even in predicting the traffic for some of the members within that group.[(28)]

(27) Two of the routes terminate within a quarter mile of the Holland Tube entrance on the New Jersey side, and within one mile and one and one-half miles, respectively, on the other side. The other two routes terminate about one mile from the tube approach on the New Jersey side and within a few blocks, and one and one-half miles, respectively, on the New York side. (Exhibit No. 1, p. 158-61).

(28) Certain testimony appears in the record in support of the adequacy of the formula, (Tr. p. 1415). In applying it against the known experience of the Erie Railroad Ferries, witness noted that the Hudson River group of seven ferries lost 53% as against the 27% loss of the Erie Railroad. The direct ratio of 53/27 was used to arrive at a result of 900,000 vehicles in 1933, which is very close to the actual 1933 traffic of 817,704. This compares with a pre-tunnel traffic of 488,646 in 1927 and a traffic of 435,896 vehicles in 1932. The mathematical detail of such check does not appear in the record but if the same application of the formula were made here as in the case of the San Francisco Bay situation, the results would be 53/27 x 17% of 488,646, or a recovery of 163,000 vehicles, and a total traffic for 1933 of 651,646 vehicles as compared to the actual traffic of 817,704 vehicles.

The formula was also applied on the basis of the 1936 experience of the Philadelphia-Camden Bridge and resulted in a traffic yield of 10.5% for the East Bay ferries as compared to the 9.8% yield when the

(Footnote continued on page 43).

The witness did not hold this formula to be a mathematical cure-all, but rather expressed the view that it was a factor that should be introduced and which filled a gap which had not been filled before.

It is probable that the most valuable use that can be made of eastern experiences is in the indication they give of the probable effect of rate cutting in diverting tunnel traffic to the ferries, a factor discussed elsewhere in this opinion. The witness also expressed the view that the size of the toll cut had little effect upon the percentage of traffic induced, i.e., that a rate cut of 25%, 35% or 40% will induce about the same percentage of traffic, if made at one time. He stated in amplification:

> "People say, 'Well, I can go across the bridge now and pay 25% less, let's go'. If it was 35% less or 40% less there wouldn't be any more of them go. I think that is the general trend." (Tr. p. 1408).

In support of this view the witness pointed to the fact that the 10 cent reduction in tolls (from the ferry's pre-bridge average revenue per vehicle of about 74 cents to the bridge's opening revenue of about 64 cents) increased travel by 80%, while the 15 cent cut of February 1, 1927, only induced 21½% of travel.

To quote:

> "We opened the bridge in November and in the month of December, with a 10 cent reduction in tolls, or about 16%, we increased travel 80%, that is, automobile travel . . . Now, in February we reduced again; we reduced the rate 15 cents now, or 23% cut, which is greater than the first one, and we only induced 21½% of travel." (Tr. p. 1407-8).

Footnote (28) continued from page 42.

Hudson River experience was used. The rate cuts proposed in the San Francisco Bay area, however, are much greater than those made at Philadelphia where the bridge charges automobiles and light trucks 25 cents as compared to 20 cents charged by the ferry. This differential (5 cents) is increased somewhat on heavy trucks. In using the Philadelphia experience as a possible guide in predicting the effect of a 21 cent cut in the East Bay area, the witness noted the disparity of rates and differentials, but stated that the Eastern cut was 25% as compared with an anticipated 50% cut in the East Bay and added that he did not believe that there was any great error in assuming that a 50% cut will not give much more traffic than a 25% cut if it is all done at one time. (Tr. p. 1414-15). Comments upon this assumption appear elsewhere.

The witness added that this proved that a 25 cent reduction would have only increased the traffic 101%, whereas the first 10 cent reduction increased it 80%. The witness, however, gave no credit in the above presentation to the convenience of the bridge itself or to the curiosity travel during the first full calendar month of operation. As the Golden Gate Bridge, during its first full calendar month of operation, induced between 150% and 200% new automobile traffic with no change in the rates, it appears reasonable to assume that a very large part of the 80% on the Bay Bridge was due to the convenience factor.(29) This seriously affects the validity of the argument. The conclusions reached as to the effect or lack of effect of a large rate cut, as compared with a small rate cut do not appear to be fully supported by the evidence offered.

The witness drew the general conclusion that the present automobile fares on the bridge were almost at or just a little beyond the point of diminishing returns and also expressed the view they had not passed it in freight revenues. He further added that the point of diminishing returns was a very elusive thing and one that is a matter of opinion.

By application of the 9.8% value to the projected 1936 pre-bridge traffic(30) of the Oakland Pier and Berkeley ferries, the witness arrived at a value for both induced and diverted traffic of 294,000 and 195,000 vehicles respectively. He here expressed the view that although it was difficult in his analysis to separate the induced traffic from the diverted traffic, it was believed that practically all of the probable traffic will be taken from the bridge. This was based upon the probability that the recent drastic reductions in trans-bay tolls had "pretty well tapped the immediate reservoir of traffic which may be induced." (Tr. p. 1420).

(29) The assumption that a 16% cut (10 cents) induced 80% new traffic is also inconsistent with previous testimony to the effect that an automobile rate cut of over 40% (from $1.06 to 60 cents) was responsible for an increase of only 30% out of a total increase of 71%.

(30) Traffic for 1936 projected through to the end of the year to obtain the effect if there had been no bridge.

The final result of this calculation and the assumption made therein is that the Oakland Pier ferry route will be short 1,766 vehicles daily of the required number of automobiles and will suffer a loss, estimated by this witness at $163,000 per year.(31) In the opinion of this witness this will be the result if the ferry company's application is granted.(32)

Concerning the matter of induced and diverted traffic he summed up his conclusions in the statement:

> ". . . . . believe all of the induced and diverted traffic, except that diverted from the Berkeley ferry, will come from the bridge and will amount to approximately 300,000 vehicles per year." (Tr. p. 1424).

Certain criticisms made hereinabove as to the procedure followed and assumptions adopted in the above study are sufficient to cast serious doubts upon the mathematical results obtained. Furthermore, the estimate of a succeeding witness of the Authority that the ferries might induce a volume of traffic equal to 10% of their pre-bridge volume is at serious variance with the above conclusion that practically all new traffic will come from the bridge.

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(31) The 294,000 Oakland vehicles plus 47½% of the195,000 Berkeley vehicles (93,000) were credited to the Oakland Pier route as the effect of the proposed differential.

(32) In further support of his beliefs that the ferries could not survive, the witness mathematically determined the volume of traffic required, under his assumptions, to support the line. This amounted to 1,339,000 vehicles, including a 5% allowance mentioned hereinabove, and is to be compared with the Engineering Division's estimate of 1,177,490 vehicles without such allowance. Out of this 1,339,000 vehicles, the witness charged 500,000 to induced traffic and 500,000 to diverted traffic, explaining, of course, his disbelief in any such attraction of traffic. Such a percentage of recovery expressed in terms of the pre-bridge ferry traffic was then compared with the recovery of traffic by the group of seven ferries competing with the Holland tube and with the Philadelphia-Camden and other situations, and the conclusion was drawn that such a volume of induced and diverted traffic could not be obtained under the local conditions which the witness pointed to as being more difficult than certain Eastern situations cited. The same comments made above apply here. While some of the ferries in the East may have lost heavily and discontinued service (as is also expected of the Berkeley and other routes) others in highly competitive positions have had remarkable success in regaining traffic formerly lost. From the record it appears that the overwhelming majority elsewhere has successfully survived competition, although some ferries no doubt are aided by railroad passenger traffic.

Broadly commenting upon the results of his study, the witness stated that the Commission was confronted with the problem of what is going to happen to the ferries, and since an actual experience was not now available, the bridge representatives were attempting to give their ideas of what they thought would happen, which was all they could do. He further noted under cross examination that the answer could not be known until it was tried out.

Concerning the Bay Bridge, the witness stated that the effect of a loss of 300,000 cars per year (believed to be the maximum) on the San Francisco-Oakland Bay Bridge would be nominal, and, were it not for other ill-effects, would go unnoticed. Likewise the loss of 500,000 cars would not seriously harm the security of the bridge in his opinion. However, at a period when the bridge was endeavoring to refinance, the threatened reduction of tolls injected an element of uncertainty.

The potential loss to the bridge from such uncertainty is one of the points of significance in this case. The degree of certainty or positiveness with which representatives of the Authority view this potential loss is tersely summed up in the following examination of this witness:(33)

(33) The degree of assurance that the 4% might be obtained is set forth in the following cross examination:

> "Q. . . . . why the 4%; why not 3-3/4% or 4½%? I was wondering if you had a commitment from a banking syndicate or the Reconstruction Finance Corporation. I was trying to get the definiteness with which the Commission could be assured of that 1% saving."
>
> A. For the reason that that 4% is brought to mind, I would say, because we are now under a temporary 4% agreement, and the Reconstruction Finance Corporation has definitely indicated, at least, that they would not go below 4%. Now, whether we could finance in the open market, if times get better, is a question. I don't know. We might be able to get money at 3-3/4% or we might have to pay 4½%. But the figure of 4% is the one that we think is more likely than any other at the present time." (Tr. p. 1446).

Mr. Dinkelspiel: "Q. I want to ask one question along the line of Commissioner Ware's question so that the record will have no uncertainty in it with respect to it. You have been questioned about your estimates of savings and also your estimates of costs to the Bay region people by reason of the continued operation of the ferries. You also estimated an approximate $11,000,000 loss in the event that the ferries continue to operate and refinancing becomes impossible. Now is this a fair statement, Mr. Andrew? That that loss is not given by you as a positive loss, but it is true, as Mr. Commissioner Ware suggests, that we may be able to refinance 2 or 3 years or 4 years from now with the ferries out of business. Is that correct?

A. That is correct.

Q. But it is also true, is it not, that the opportunity to finance at this time under favorable bond market conditions has an objection to it in the present existence of the ferries and the threat of competition.

A. That is true.

Q. And that dealing with present conditions and not knowing when the bond market will return to this low interest yield, you stated that the ferry competition does create the possibility of an $11,000,000 loss to the Bay region people.

A. Under those conditions, yes.

Q. And that is the extent of your testimony. You did not mean to say the loss was certain or positive, but that is the threat of this competition and the threat of the unfavorable granting of the application herein.

A. I don't think we can make any positive statements in this whole case about traffic or income or refinancing, or anything else, because I don't think it is a finite problem; it is one that has more or less opinion and certainly has its indefiniteness connected with it. Everything that we assume, - - I don't care who attacks the problem, it is still a matter of judgment and very indefinite. And I think the Commission has simply got to use their judgment as we have used ours in arriving at our conclusions. That is all. It is not a finite problem." (Tr. p. 1443-45).

The record indicates that the policy of making the bridge free as soon as possible vs. the policy of postponing this date and of graduating the tolls downward in the near future rested with the personnel of the Authority. Two schools of thought exist. Some believe it should be passed on to posterity to assist in the payment; others believe it should be made free as soon as possible. The latter plan would involve the retention relatively of a higher scale of toll charges than in the former case and, the record indicates, might give the ferries a longer lease on life than four years, providing they find they could survive under a differential. A period of two or three months was estimated by a witness for the Authority as long enough to determine whether the ferries can survive.

Lester Ready, Consulting Engineer, appearing on behalf of the Authority, first stated that the ill-success in the past of attempts to base local traffic predictions on the Holland Tube or Philadelphia-Camden Bridge experience had shocked his confidence in being able to step from one of these sets of facts or records to an estimate of the other.

He accepted the facts presented in the Engineering Division's study but added that he differed on some matters of judgment. Among these was the Division's estimate of an induced traffic of 15%.(34) The witness would place this value at 10%.

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(34) We quote from the testimony of the witness Ready: (Tr.p.1465).

> "A. . . . I personally do not believe that the stimulation in business by the reduction will exceed 10% at the most and that which was theretofore compared with the 15% that Dr. Edwards figures. Now, that is my judgment. I cannot give you a mathematical formula for my calculation . . ."
>
> Q. And on that basis of 10% instead of 15% stimulation to the ferry, there would be a substantial loss in the ferry company's out-of-pocket cost expenditure. Is that correct?
>
> A. Or it would have to be made up by a large percentage of divergence from the bridge."

The witness' reduction from 15% value to 10% of the Division's figure for induced traffic was credited to the large development of business which had already occurred on the bridge.

> "Q. Mr. Ready, you stated that you expected there would be an induced traffic of 10%. Would you mind explaining very briefly how you arrive at that?
>
> A. I said I did not expect it to be more than 10%. It was nearer 10% than 15. It is largely from judgment, from the attempt to equate what might be a 20 or 25% increase had there been no development of business to the extent now developed, to what it might be with it; it is possibly a judgment based upon no mathematical analysis. I don't know how to make a mathematical analysis excepting this proposition, that the 25 or 26 minute saving in time has very materially dipped into the travelling public that would go by automobile . . ." (Tr. p. 1484).

The witness said that he had not made any study of the possible diversion of the traffic from the Bay Bridge. The previous Authority witness estimated this at 300,000 vehicles per year or about 3% of bridge traffic. The Engineering Division's study assumed that not over 5% could be diverted, but that a diversion of about 2.5% was, under the assumptions made as to induced traffic, sufficient.

This judgment value of 10% for induced traffic may be compared with the 9.8% value of the previous Bay Bridge witness. The figure of 9.8%, however, was based upon experiences in the New York and Philadelphia areas and represented, almost wholly, the expected bridge diversions, the conclusion being drawn by this former witness that there would be little induced business.

Concerning the relative deflection of business from the bridge with a basic fare of 30 cents as against 35 cents, the witness expressed the view that the stimulation of traffic under a 35 cent rate as compared to 30 cents would be relatively greater than the Engineering Division's study indicated. The latter used the relative values for induced traffic of 10 and 15% respectively, thus giving some credit to the assumed drawing power of the 50 cent round trip (under the 30 cent basic rate) as compared with a 60 cent round trip (35 cent rate). The witness, however, expressed his belief that the figure of 12 rather than 10% was more nearly correct to be used compared with the 15%. The use of the figure of 10%, he noted, overemphasized the desirability of dropping rates to 30 cents as compared with a cut to 35 cents. In support of this conclusion the witness stated:

> "The general observation or experience with rate reductions has been that the stimulation of business has been fairly proportional, not exactly proportional, but bares a fairly definite relation to reduction of fares." (Tr. p. 1466).

This conclusion is to be compared with the conclusion reached by a previous witness for the Authority that there was no great error in assuming that a 50% cut would not give much more traffic than a 25% cut if made at one time.

This witness introduced data to indicate that the ferries, under the status quo, were losing their traffic. Whereas in December the ferries got 6% of the total vehicles, in June they handled but 3.4%. In January the ferries handled 59.3% of the tonnage and by June this value had dropped to 42.9%. Such decline in the proportion of traffic handled by the ferries indicated an additional hurdle which, in the opinion of the witness, must be discounted in estimating what may happen in the future. (35)

The witness also pointed to a possible deflection (diversion) of interurban passengers under the reduced rates but added that this deflection could not be as large asthat caused by the bridge because the time saving was not there. Such deflection would only be temporary or until through interurban trains were operated over the bridge. At such time the witness expected a loss of anywhere from 400,000 to 600,000 vehicles a year by the bridge, as compared with what it would otherwise handle. (36) Attention was also directed to the approach and highway improvements being built to feed traffic to the bridge rather than to the ferries.

This witness further pointed to a very significant factor which, he stated, was apt to be very detrimental to the ferry company. This lay in the possible future policy of the bridge in the matter of assessing toll charges on freight (in addition to the charges assessed against the truck). He pointed to the fact that bridges elsewhere had generally removed such charges on tonnage and

(35) The drop in the percentage of traffic handled arose more from increased traffic handled by the bridge than from absolute losses by the ferries. Between January and June 1 - 15, the total vehicles handled per day by the Berkeley and Oakland Pier routes decreased from 1071 to 1001 which would indicate that the shift in the percentage figures shown was due more to traffic increases on the bridge than to net losses by the ferries. The corresponding values on freight tonnage per day are January 809 and June 1 - 15, 863 tons. (See Exhibit No. 1, p. 124 and Exhibit No. 40, Sheet 1).

(36) The record does not indicate that the future traffic estimates introduced by Bay Bridge witnesses (Exhibit No. 35) took cognizance of this potential loss, although credit was taken for the interurban income expected.

expressed the belief that such elimination would be a logical step. As such revenues constitute over half of the ferries' revenue from commercial traffic, the elimination of the charges, the witness pointed out, will be the thing that hits the ferry company the most. In further support of this factor he noted that automobile rates had recently been reduced and the commercial rates had not, hence the trend would probably be toward reduction of the latter. Such potential reductions he believed would be likely to eliminate the ferries. Questioned as to the effect of such reductions on other freight carriers by water on the Bay, the witness noted that it might eliminate them too.

Faced with the broad question as to what he would do if he were in the position of the ferry company, the witness said that he would give the differential a trial. The question and answer are quoted:

> "Q. Maybe you can answer this question, Mr. Ready: Suppose you were responsible now for the operation and management of the Southern Pacific Golden Gate Ferries,--you realized you were facing about a million dollar labor commitment; that you owed approximately $2,000,000 in bonds,--and you have got $1,000,000 in the treasury,--and you have an opportunity to experiment with the proposed differential; would you give it a trial?
>
> A. Yes, I think I would for a month or two. If it didn't develop then I would quit quick. I wouldn't continue another month." (Tr. p. 1489).

Counsel for the ferry company interposed to support the point as to quitting in the event of failure.

Summary of the Position of the Respective Parites

There follows below a brief summary of the conclusions of the Engineering Division and of the conclusions and position taken by the other parties to this proceeding.

Engineering Division's Report

A summary of the evidence introduced by the Engineering Division is to the effect:

(1) That the profitable continuance of the ferries under the status quo (rate parity) is impossible;

(2) That the ferry company has a reasonable chance of justifying the continued operation of the Oakland Pier route with a rate differential (but only if the service on the Berkeley route is abandoned or suspended);

(3) That the successful operation of the Sausalito route is within the realm of reasonable probability, especially if a 20 minute service is operated;

(4) That the probability of the ferries economically justifying their continued operation and of making some return thereon is greater under a 30 than a 35 cent basic rate;

(5) That a successful operation in the future rests principally upon the ability of the ferry to induce or create substantial volumes of new transbay traffic, i.e., to arose new travel habits among those members of the population who cannot afford to use the bridge at the present rates;

(6) That a so-called profitable operation, as the term is used herein, does not envisage the previous level of profits, but rather takes cognizance of which is the cheaper "to operate" or "not to operate" considering that the company has heavy financial obligations toward its bondholders and the dismissed employees, and also that it has made a heavy investment from which it cannot now withdraw.

The above conclusions are based upon the assumption that the rates proposed by the ferries and suspended by the Commission will go into effect and that neither of the bridges will cut its automobile rates or drastically reduce its rates on commercial traffic.

Southern Pacific Golden Gate Ferries, Ltd.

The evidence introduced by the ferry company may be summed up to the effect:

(1) That the company faces extinction unless it can protect itself through a rate differential;

(2) That it is entitled to such because of its slower time in transit;

(3) That if thus permitted to operate the public will continue to have the use of the service of the ferry lines as well as that of the bridges; that the interests of the company's bondholders and stockholders will be protected; and that its employees will have continued occupation at the kind of work they are best fitted to perform;

(4) That differentials exist everywhere throughout the United States, particularly where time in transit or speed merits a premium. If the speed advantages of the bridges over the ferries had not been so great as has been proven, the ferries would likely have retained sufficient traffic to permit operation at a rate parity. In such case there could have been no opposition to a continued ferry operation;

(5) That differentials elsewhere have enabled the ferries to operate notwithstanding bridge competition;

(6) That diversions from the bridge will be merely a recovery of previous ferry business and will probably represent but a small volume compared with present bridge traffic;

(7) That the trial of both 5 cent and 10 cent passenger fares on the Oakland (Broadway) route had been made without success; that operating costs could be reduced no further; and that the abandonment of this route is the only course left;

(8) That while the bridges had considered the risk of calamity great enough to insure themselves against it and against any interference with their revenues, there was no assurance to the public of any transbay service during any period that either bridge might be incapacitated;

(9) That the ferry company must stand on its own feet and can only continue operation as long as its operations are self-sustaining;

(10) That the use of the ferries as compared with the bridge provides a substantial saving on heavily laden truck movements;

(11) That the needed traffic to justify continued operation can be attracted, and that the greater portion of it would be in the form of newly induced traffic;

(12) That there exists a large reservoir of traffic, which the 30 cent rate will tap.

City Council of Oakland

The position of this body was to the effect:

(1) That the Oakland (Broadway) route, at the rates charged, supplied a much needed type of transportation not furnished by other services to San Francisco; and

(2) That the abandonment was therefore opposed.

Golden Gate Bridge and Highway District

The evidence introduced by this body may be summed up to the effect:

(1) That the traffic and revenues on the Golden Gate Bridge have exceeded estimates;

(2) That the present traffic, after allowances for curiosity travel and for the seasonal factor, exceeds the financial requirements;

(3) That it is not expected that the traffic diversions resulting from the proposed differential would financially embarass the bridge; and

(4) That the Golden Gate Bridge opened under very adverse approach conditions; the continued improvement of which is expected to increase both commercial and passenger traffic.

California Toll Bridge Authority

The evidence introduced by the Authority may be summed up to the effect:

(1) That the ferries cannot exist under a rate parity, and likewise cannot exist even under the proposed differential; (37)

(2) That, even assuming the Oakland Pier route was successful under the differential, it could not possibly last beyond the year 1941 when the bridge contemplated a rate reduction which will eliminate the ferry.

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(37) There is some variance in the testimony of certain Authority witnesses. In estimating the hurt done to the Bay Bridge, the annual loss of traffic to the ferry was set at 500,000 vehicles; but in predicting the failure of ferry operation, a diversion of only 300,000 cars was allowed. It was further estimated by one witness that the ferries might regain a total of 9.8% of their former traffic, most of which will come from bridge diversions, and very little in the form of induced traffic. However, another witness testified that the stimulated or induced traffic might amount to 10% of pre-bridge traffic. There is also some confusion as to the probable effect of a 30 cent as compared with a 35 cent rate, one witness holding that the Engineering Division had not made a sufficient nicety of adjustment as between the 30 cent and 35 cent rates while another witness, in supporting analogies drawn from the experience with a 5 cent differential in the Philadelphia-Camden area, expressed the view that the effect of a 25% cut would not greatly differ from the effect of a 50% cut if done at one time.

(3) That the Bay Bridge has done substantially better than the engineering estimates anticipated;

(4) That the Authority believes that it might be able to do still better if the threat of ferry competition were definitely stilled;

(5) That such betterment lies in the hope that it can refinance at 4% as compared with the present 5%. (It is to be remembered that the Authority is now enjoying a temporary interest reduction to about 4%, under a blanket resolution of the Reconstruction Finance Corporation, and such reduction may continue to April, 1939, and at that time might or might not be extended.);

(6) That the hoped for interest rate of 4% represents as yet but a more or less tentative estimate; no commitments having been received from any financial interests; and the final value, if refinancing plans are presently carried through, may range from 3½% to 4½%;

(7) That the Authority may be equally able to refinance as advantageously at a later date as now, but nevertheless desires to take advantage of present known low interest rates; and

(8) That regardless of what happens, the financial security of the Bay Bridge is in no way jeopardized.

It appears that the opposition of the Authority rests not upon a belief that the ferries can successfully operate under a differential but upon their fear of the anxiety that may rest in the minds of financial interests who may ask "What about the ferry competition?"

General Observations

The Golden Gate Bridge and Highway District consists of the City and County of San Francisco, the counties of Marin, Sonoma and Del Norte, and parts of the counties of Napa and Mendocino. It was created by ordinances passed by the boards of supervisors of the said City and County and said counties. The structure has been built and financed with funds raised from the sale of bonds, the issuance of which was approved and sanctioned by a vote of the electors residing in said territory. The District therefore is a governmental entity with the special functions to build, maintain and operate the Golden Gate Bridge and approaches thereto, with the power to fix rates, and with the duty to liquidate the indebtedness incurred by said District, such liquidation to be effectuated through the medium of the revenues flowing from traffic patronizing the Golden Gate Bridge, and, in the event that these revenues should prove inadequate, through the medium of taxes levied by the Directors of said District upon the real property contained therein.

The San Francisco-Oakland Bay Bridge is under the control and management of the Authority. This bridge has been built with money received through the sale of bonds which are secured only by the revenues earned by said bridge. In this sense this bridge is a self-liquidating structure and is distinguished from the Golden Gate Bridge by virtue of the fact that no lien can be impressed against any of the taxpayers in California to effectuate the liquidation thereof.

To protect the earnings of this bridge the Reconstruction Finance Corporation placed as a condtion in the agreement to purchase the bonds of the Authority that California legislation be passed to prohibit the establishment of any public transportation service by ferry, bridge or otherwise, across the San Francisco Bay, within a distance of ten miles on either side of the bridge. Such legislation was passed at the 1933 session of the California Legislature. Therefore, it is apparent that once an established ferry service over the San Francisco Bay is permanently abolished or discontinued, it cannot be restored by virtue of this law.

The development and regulation of the ferries since 1920 warrant comment. During these years automobiles have increased prodigiously in numbers and the state's highways have been developed in stride with these tremendous increases. Simultaneously, have these ferries expanded their routes and services, and they have added extensively to their pier facilities and floating equipment. In fact this Commission in recognition of public interest has urged, from time to time, the management of these boats to provide additional floating and terminal equipment to meet public necessities. Obedient to such regulatory mandates, the ferry operators have issued and sold bonds, and the investing public, cognizant that their investment was secured by property found by this Commission to be used and useful in the public interest, bought these bonds. In the inevitable and welcome march of progress we now witness the public expenditure of more than $100,000,000 to accomplish the erection of these gigantic bridges. This, too, is most definitely in the public interest. Viewed from every angle we believe that those who have invested their money in these ferries have the common right to protect their investment in any prudent manner which may continue to redound to the public good. The proposed differential in rates we believe lies within the realm of reasonable prudence. The benefits that are bound to flow therefrom likewise become a public profit.

The Commission recognizes that the bridges are of primary importance in the matter of affording vehicular and passenger transportation in across the bay. In recognition of this fact, the financial stability of these bridges is likewise a matter of primary importance. Their operating experience affords convincing evidence which impels the conclusion that the financial structure of each bridge is upon an impregnable foundation. This record is a mathematical demonstration that rates on these structures affecting passenger vehicles have reached, or passed below, the point of diminishing returns, and that the necessary traffic to vouchsafe the perpetuation of the San Francisco-Oakland Pier and San Francisco-Sausalito ferries involves a negligible deflection of bridge revenues which would not jar or more than mildly affect the earning power of either bridge.

Therefore, the final question is: Should these two ferry services be permitted to survive?

We believe the retention of the San Francisco-Oakland Pier and the San Francisco-Sausalito ferry services to be in the public interest. In analyzing automobile and truck traffic, speed is generally the controlling factor of the former, and economy of operation is generally the controlling factor of the latter. In eastern experiences which afford competitive conditions between ferries, on the one hand, and the Holland Tube and various bridges, on the other hand, we find convincing proof that the ferries have profitably survived because they have afforded a desirable and a necessary second-class service. In these eastern examples, we find that the ferries are operating on a differential of rates below those which are charged by the competing tunnel and bridges identical to the proposed differential involved in these proceedings. The patronage which these eastern ferries receive is proof that they operate in the public interest.

We believe that the Bay area needs a standby service. Either or both of these great bridges could, seriously, if not totally, be incapacitated, by damage and disaster caused by slides, collisions, fires, explosions and earthquakes. Moreover there are times during peak movements of traffic when the available ferries operating between San Francisco and Oakland Pier and San Francisco and Sausalito might be strained to capacity, notwithstanding the high degree of service afforded by these bridges.

From the standpoint of speed in transit and headway, these ferry services are classified as second in class to the bridges. Nevertheless the facts are unconvertible that these same ferries offer many unique opportunities for rest, food, refreshments, recreation and comfort that cannot be supplied by any means of transit over either bridge. The people are entitled to the benefit of these low rates and this so-called "second class" service just so long as the ferries can give this service to them. This record affords convincing proof that such a service will attract thousands of motorists who have hitherto refrained from crossing the Bay because of their unwillingness or their inability to meet the prevailing tolls.

We would be remiss in our task of regulation were we to deny the public the savings and the advantages which are offered through the medium of these reduced rates over these proposed ferry services. Likewise these great bridges, in their present robust status, offer no justification for a rate war which can only accomplish two things, first, the extinction of these necessary ferry services, the retention of which, we believe to be in the public interest, and secondly, the absorption by the bridges of the negligible ferry patronage which has been demonstrated as being unnecessary to the financial welfare of the bridges.

Findings of Facts

The evidence introduced in these proceedings is of the greatest aid in pointing toward a solution of the problems arising but it becomes of double significance to the degree that it throws light upon the answer to any one of the following three questions:

1. Is the retention of the ferry service of public interest?
2. Can the ferries economically justify a continued operation under the proposed rates?
3. Will such operation financially jeopardize the Bay Bridge or the Golden Gate Bridge?

Concerning the first of these, the record indicates that there exists very definite savings to heavy commercial traffic in the retention of ferry service. The elimination of approach grades and of operative mileage is the cornerstone of this saving. The record also contains much evidence, more or less unassailable, that the public will be benefited from a basic rate of 30 cents as compared to 50 cents.

Such benefits will primarily flow from the financial savings to that group which cannot afford to use, or which uses infrequently, the bridges at 50 cents.

Other benefits of a much more intangible nature arise from the provision of a standby service in the event of any possible disruption of bridge traffic. While the engineers have apparently done everything humanly possible in the design of these structures to prevent such interference with service, yet such disruption of service cannot be considered an impossibility. It is to be pointed out in this connection, however, that the provision of such a standby service on the part of the ferries will probably end, for economic reasons, upon the first substantial rate cut made by the bridges.

Concerning the matter of a differential, ample references appear in the record to indicate that the granting of such, in this instance, will not constitute a reversal of precedent. In fact the tremendous convenience and time saving offered by the bridges, and to which bridge witnesses repeatedly referred, constitute a very large differential under the status quo. This is evidenced by the split in vehicular traffic at the present time in the ratio of about 95% to the bridges and 5% to the ferries. Such a spectacular and somewhat unforseen redistribution of patronage arises, not from a failure of the water carrier to exhaust the potentialities of its type of service, but from what may be termed the inherent characteristics or "built-in" advantages of a strategically located bridge crossing. Therefore, to term the present situation, i.e., operation under a rate parity, a condition of "economic equality between two such different types of service" is an error.

Concerning the ability of the ferries to successfully operate under the differential, much difference of opinion exists. The ferry company's witnesses testified to the probable success of the operation while witnesses for the Authority predicted failure. On the other hand, the Engineering Division's study, the most exhaustive of those introduced, couched its favorable prognostications in such conservative terms as "reasonable chance" and "within the realm of reasonable probability." There was unanimity of opinion only as to the belief that, "You don't know for sure until you try it out."

Comment may here be made concerning possible bridge rate cuts on automobile or commercial traffic. The assumption has heretofore been made that the bridges do not now plan to make any extensive rate cuts. This was the only tenable conclusion that might be drawn from their position in this case and their opposition to the proposed ferry rate reductions.(38) Should, however, their future

(38) Testimony of bridge witnesses was to the effect that rates on automobile traffic had probably reached or passed beyond the point of diminishing returns.

As to commercial traffic, a witness for the Authority testified to the possibility of rate cuts, pointing out the severe effect it would have on the ferry company. The probable effect of any general rate cut of this nature may be anticipated somewhat as follows.

The average daily revenue of the ferry company from trucks and freight during the latter half of June averaged $660 per day. The Bay Bridge revenue averaged about $1350 per day. (Based on a charge of 75 cents per truck and 60 cents per ton of freight handled in June 1937). This indicates that the bridge now handles about 2/3rds of the total commercial traffic.

If the Bay Bridge drastically reduced rates on commercial traffic by one-third, it may be assumed the ferries would cut in proportion. The bridge would then have to handle a 50% increase in traffic to break even, i.e., to earn its former $1350. If rates were cut in half the bridge would have to attract a 100% increase in its former commercial traffic to break even, or, if this forced the ferry company into an abandonment of its operations, the bridge would have to handle 134% of the entire present transbay traffic of both ferry and bridge to equal its previous commercial revenues.

It is assumed herein that the ferry would meet such drastic cuts, at least until its finances were exhausted. The bridge would lose, relatively, $2 for every $1 lost by the ferries as its commercial traffic is roughly twice as great at present as that of the ferries. However, the resources of the Bay Bridge are, of course, infinitely greater. Its truck and freight revenues amount to but a small fraction (probably not over 8%) of its total revenues as compared to a value of about 50% in the case of the ferries. The ferries would thus be highly vulnerable to such extensive rate cuts, although it is very doubtful if the revenue position of the ultimate victor (referring to revenue from commercial traffic only) would be improved.

This analysis is made solely upon the assumption that neither party at present desires a reduction in its gross revenues.

financial situations and the policies controlling them permit of substantial rate cuts, it is believed inevitable that the ferries will have to cease operation.

Turning toward the third question of possible jeopardy to the financial structure of the bridges, the record indicates that there was unanimity of opinion among all parties that whatever had been the traffic injury to various bridges and the Holland Tube in the East, as a result of ferry differentials, it would be distinctly less in the San Francisco Bay area. The record amply indicates that such injury to major crossings in New York and Philadelphia has been very little.

The witness appearing for the Golden Gate Bridge and Highway District testified that the proposed differential would not financially embarrass that body, which was successfully meeting all financial commitments.

The record similarly indicates that, regardless of the differential, the financial security of the Bay Bridge is in no way jeopardized. The opposition of the Authority rests upon the possible effect of ferry competition upon its refinancing at a lower rate of interest. However, the relationship of a continued ferry operation to the projected financial savings of the Bay Bridge is of an extremely indefinite nature. In the first place, the saving of 1% in interest through a refinancing at 4% is highly problematical, as no commitments have been received and the possible interest rates range from 3½% to 4½%. Furthermore, the hoped-for savings between the present date and April, 1939, are of a somewhat dubious nature, inasmuch as the Authority is now enjoying, through Reconstruction Finance Corporation, rebates, approximately its desired 4%.

The record also points to a reasonable probability of the Authority being able to successfully refinance at a subsequent date when ferry competition is expected to be definitely stilled by bridge rate reductions. The record is also inconclusive in its indication that the Authority could not successfully refinance in spite of a survival of the ferries. It may be true, as the record indicates, that financial interests have asked "What about ferry competition," but it is not clear that this necessarily means a 5% interest rate, or that such interest rate would necessarily continue long after the close of 1941 when lowered bridge tolls are expected to eliminate the ferries from the lower San Francisco Bay.

It is clear that, at the time of the original conception of the bridges, there was no thought but that the vehicular ferries would be permitted to compete to the best of their ability. With these great bridge structures now built and their financial stability assured, this Commission should carefully scrutinize and weigh the relative benefits that may be reasonably expected to result from its decision in this matter.

Relative to the San Francisco-Berkeley route, the Commission must determine, in this proceeding, whether this service is to be, first, abandoned, secondly, suspended, thirdly, continued on its present curtailed schedule. In the foregoing opinion, it is clear that the continued operation of said service can only be maintained with large losses to the Company and such continued maintenance would cast a serious burden upon the operation of the San Francisco-Oakland Pier and San Francisco-Sausalito routes. The Commission, however, has recognized the prudence of preserving the day for the total abandonment of this route until such time as the future operating experiences and the various public requirements may combine to afford the determination of when such total abandonment may be in the public interest. In abiding such action, it should be understood that this Commission is not deviating from its practice and principle of either exacting from every public utility and common carrier full performance of the public service to which it is dedicated, on the one hand, or requiring that said public utility or common carrier vacate the field and allow a newcomer unimpeded chance to render such service, on the other hand. In the case of the Berkeley service, it is apparent, from all that has preceded in this opinion, that once this service is abandoned, recent legislature action has been effective to preclude the inauguration by a newcomer of this abandoned service. We believe that the very near future will afford the conclusive answer as to whether this Berkeley service should be reserved, in the public interest, to meet temporary or permanent conditions. We have, therefore, concluded that this service should be suspended at this time for a period of six months following the date of this order and that upon the termination of this six months period the Commission, by appropriate supplemental proceedings instituted upon the application of the Southern Pacific Golden Gate Ferries, Ltd., will order the said San Francisco-Berkeley service further suspended for an additional and definite period of time, totally abandoned, or resumed. Such course will avoid the attendant and inevitable operating losses that would result from a continuation of the present curtailed service and will reserve to the public the possible benefits of such a service should future exigencies direct the necessity of the same.

Upon full and careful consideration of all the facts and circumstances of record, including those directly hereinabove mentioned, the following findings of fact are made:

1. That the ferry routes involved in this order are suffering a daily direct operating loss in excess of $2,000 since the Golden Gate Bridge opened, and said ferries cannot be expected to long continue their losing operations under the present parity of rates;

2. That the retention of the San Francisco-Oakland Pier and the San Francisco-Sausalito Ferry service are in the public interest;

3. That the abandonment of the San Francisco-Richmond and San Francisco-Oakland (Broadway) routes is in the public interest;

4. That the suspension of the San Francisco-Berkeley route is in the public interest;

5. That while it cannot be stated with finality that the continued operation of the San Francisco-Oakland Pier and the San Francisco-Sausalito Ferries, under a differential, will be economically successful, the probabilities point in this direction.

6. That, as to the East Bay routes, the indicated savings to the Authority which might flow from the removal of all ferry competition are too tenuous and indefinite when compared with the known benefits of a continued ferry service between San Francisco and Oakland Pier to warrant an order of this Commission which would at this time eliminate all East Bay Ferry services.

7. That, as to the San Francisco-Sausalito route, the record affords no justification for denying the ferry company's application to furnish service under the proposed differential of rates.

The following form of order is recommended:

O R D E R

A public hearing having been held on the above entitled applications and cases, and all of said matters having been duly submitted, and the Commission being fully advised,

1. IT IS HEREBY ORDERED that provided Southern Pacific Golden Gate Ferries, Ltd., within thirty (30) days from the date hereof, on not less than five (5) days' notice to the Commission and to the public, cancel all rates, rules, regulations and time schedules for the transportation of freight and passengers between San Francisco, California (Ferry Building Terminal) on the one hand and Oakland (Broadway Wharf) and Richmond, California, on the other hand, said Southern Pacific Golden Gate Ferries, Ltd. be and it is hereby authorized to discontinue and abandon said service upon the effective date of said cancellation.

2. IT IS HEREBY FURTHER ORDERED that provided Southern Pacific Golden Gate Ferries, Ltd., within thirty (30) days from the date hereof on not less than five (5) days' notice to the Commission and to the public, supplement its tariff and time schedule on file with the Commission to show that its service has been suspended as authorized herein, said Southern Pacific Golden Gate Ferries, Ltd. be and it is hereby authorized to suspend its freight and passenger service between San Francisco and Berkeley, California, for a period of six (6) months immediately following the effective date of said supplement to its tariff and time schedule.

3. IT IS HEREBY FURTHER ORDERED that Case No. 4201 shall be and the same hereby is continued for further consideration and order of this Commission.

4. By orders dated March 8, May 3, June 28 and August 7, 1937, the Commission suspended until September 8, 1937, Third Revised Page 9, Sixth Revised Page 20, Third Revised Page 21, First Revised Page 23, Seventh Revised Page 27, Second Revised Page 28, First Revised Page 29, Fifth Revised Page 35, Fourth Revised Page 36, Third Revised Page 37, First Revised Page 39, Seventh Revised Page 43, Sixth Revised Page 44, Fourth Revised Page 45, First Revised Page 46, Sixth Revised Page 50, Sixth Revised Page 51 and Third Revised Page 52 to Southern Pacific Golden Gate Ferries, Ltd., Local Freight Tariff No. 1, C.R.C. No. 5, and Local Passenger Tariff No. 1, C.R.C. No. 31; also Southern Pacific Golden Gate Ferries, Ltd., Special Tariff No. 5-B, C.R.C. No. 159, and Special Tariff No. 5-B, C.R.C. No. 160, naming reduced rates for the transportation of vehicles and passengers in vehicles between San Francisco on the one hand and Alameda, Berkeley, Oakland and Richmond on the other hand.

Hearings were held in Case No. 4204, and the Commission, finding that the foregoing suspended rates are justified and in the public interest, the cause for suspension has thus been removed and our orders of March 8, May 3, June 28 and August 7, 1937, should be and the same hereby are vacated and this proceeding discontinued. Therefore, good cause appearing,

<u>IT IS HEREBY FURTHER ORDERED</u> that our orders of March 8, May 3, June 28 and August 7, 1937, in the above entitled proceeding, suspending Third Revised Page 9, Sixth Revised Page 20, Third Revised Page 21, First Revised Page 23, Seventh Revised Page 27, Second Revised Page 28, First Revised Page 29, Fifth Revised Page 35, Fourth Revised Page 36, Third Revised Page 37, First Revised Page 39, Seventh Revised Page 43, Sixth Revised Page 44, Fourth Revised Page 45, First Revised Page 46, Sixth Revised Page 50, Sixth Revised Page 51, and Third Revised Page 52 to Southern Pacific Golden Gate Ferries, Ltd., Local Freight Tariff No. 1, C.R.C. No. 5, and Local Passenger Tariff No. 1, C.R.C. No. 31; also Southern Pacific Golden Gate Ferries, Ltd., Special Tariff No. 5-B, C.R.C. No. 159, and Special Tariff No. 5-B, C.R.C. No. 160, be and they are hereby vacated and this proceeding discontinued as of the date hereof.

5. By orders dated June 8 and August 3, 1937, the Commission suspended until September 4, 1937, Item No. 1105-B, 7th Revised Page 62; Items Nos. 1165-C and 1170-B, Third Revised Page 63; and Item No. 1221, original page 64-A, of Southern Pacific Golden Gate Ferries, Ltd., Local Freight Tariff No. 1, C.R.C. No. 5, and Local Passenger Tariff No. 1, C.R.C. No. 31, naming reduced rates for the transportation of vehicles and passengers in vehicles between San Francisco on the one hand and Sausalito and Tiburon on the other hand.

Hearings were held in Case No. 4225 and the Commission finding that the foregoing suspended rates are justified and in the public interest, the cause for suspension has thus been removed, and our orders of June 8 and August 3, 1937, should be and the same are hereby vacated and this proceeding discontinued. Therefore, good cause appearing,

<u>IT IS HEREBY FURTHER ORDERED</u> that our orders of June 8 and August 3, 1937, in the above entitled proceeding suspending Item No. 1105-B, Seventh Revised Page 62; Items Nos. 1165-C and 1170-B, Third Revised Page 63; and Item No. 1221, original page 64-A, of Southern Pacific Golden Gate Ferries, Ltd., Local Freight Tariff No. 1, C.R.C. No. 5, and Local Passenger Tariff No. 1, C.R.C. No. 31, be and they are hereby vacated and this proceeding discontinued as of the date hereof.

Excepting as provided in paragraphs 1, 2, 4 and 5 herein, the effective date of this order shall be twenty (20) days from the date hereof.

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 9th day of August, 1937.

Wallace L. Ware

Leon O. Whitsell

Frank R. Devlin

[illegible]

Ray L. Riley

Commissioners.