

ORIGINAL

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

In the matter of the application of
LOS ANGELES RAILWAY CORPORATION for
an investigation of its service and
financial condition and for an order
authorizing it to so operate its sys-
tem and change its rates that the in-
come will be sufficient to pay the
cost of the service.

Application No. 4238.

Gibson, Dunn, and Crutcher, by S. M. Haskins, for Los Angeles
Railway Corporation,
Charles F. Burnell, City Attorney, and Jess E. Stephens,
Assistant City Attorney, for the City of Los Angeles,
H. E. Osborne, Jr., for Board of Public Utilities of the
City of Los Angeles,
R. P. Dix, for the Employees of the Los Angeles Railway
Corporation,
W. H. Engle, in propria persona,
W. A. Prole, for Prole Traction Transfer,
L. O. Hatch, for the City of Eagle Rock,
Clyde Woodworth, for the City of Inglewood,
E. W. Brown, for Organized Labor and Tax Payers,
Frank Karr and O. A. Smith, for the Pacific Electric
Railway Company,
Robert G. Payne, for Hyde Park Improvement League.

By the Commission:

O P I N I O N

An original and a supplemental application by the
Los Angeles Railway Corporation (hereinafter referred to as
the Company) are before the Commission in this proceeding.
The original application was filed on November 30, 1918. The
Company asked the Commission to make an investigation of its
service and its financial condition, and an order enabling it
to operate its street railway system in such a way that the

income would be sufficient to pay the cost of service, and to make such other orders as would appear necessary and equitable. In the original application, the Company claimed that for some time it had been sustaining a heavy financial loss; that such loss was the result of increases in wages and the cost of materials; that during the two years preceding the application wages had been increased at least 45 per cent, and the cost of materials from 50 to 150 per cent, and that the increase in wages alone, at that time, added to the operating expenses at least \$1,200,000.00 per year and that the only source of income from which all of these increasing expenses could be met was the revenue resulting from the fixed 5-cent fare. Financial statements and statements of operating revenues and expenses were attached to the application, and showed that during the first ten months of 1918 the Company operated with a deficit, after payment of fixed charges, ranging from a minimum of \$5,591.00, in January of 1918, to a maximum of \$93,794.00 in October of the same year.

In its original application, the Company states that it desires to so operate its system, if possible, that it will be unnecessary to increase the 5-cent fare, and that it is willing to put into practice whatever economies of operation might appear necessary to the regulating authorities. The petition asks that the Commission make an investigation of all phases of applicant's operation and business, and that after such investigation such order be made as may be necessary to enable the Company to comply with the changes prescribed.

In the first hearing before the Commission, in Los Angeles, in February, 1919, it was decided that the Commission's engineering department should make an investigation into all

phases of the Company's business, including finances, operation, and service, regardless of any jurisdictional questions as between the City of Los Angeles and the Commission. The City declared itself in agreement with this decision and promised that there should be complete co-operation between the department of the City Engineer, the department of the Board of Public Utilities, and the engineering department of the Commission during the course of the investigation. Full co-operation was also promised by all offices and departments of the Company.

For a period of nine months, subsequent to February 4, 1919, the engineers of the City and of the Commission were engaged in this investigation. As a result, there was filed with the Commission, on November 10, 1919, our engineering department's report on service, operating, and financial conditions of the Company. Copies of the report were furnished to all parties to the proceeding, and the Commission, thereafter, held a public hearing in Los Angeles on December 1, 1919, when the engineering department's report was introduced as Commission's Exhibit I (Report on Service, Operating and Financial Conditions of the Los Angeles Railway Corporation, by Richard Sachse, Chief Engineer, dated November 10, 1919).

All of the matters and recommendations contained in Commission's Exhibit I were made the subject of exhaustive discussion on the part of the City Council and the Board of Public Utilities of the City of Los Angeles, and other city departments, as also on the part of the Company.

The Commission reached the conclusion that a reasonable time should be allowed to test the results of certain of the recommendations made by our engineers and that the question

of an increase in fares should be held in abeyance until the effect of the Company's compliance with the recommendations became fairly clearly established. This also was the view of the representatives of the City of Los Angeles and of the other interested communities; for these reasons a decision and an order on the part of the Commission was deferred.

On August 23, 1920, applicant filed a supplemental application asking that the rate of fare be increased to care for the additional expense thrown upon the Company since its original application had been filed by reason of further increases in operating expenses, these increases consisting principally of additional cost of power amounting to 27 per cent (approximately \$250,000.00 per annum) and of further increases in wages (amounting to approximately \$1,000,000.00 per year). The Company also called attention to the fact that it was confronted with the imperative necessity of securing additional capital for betterments of plant and improvements of service. The supplemental application was made necessary, it was stated by the Company, despite the fact that the recommendations made by the City's and Commission's engineers had been adopted and carried out by the Company in so far as it was within its power, but that the material saving in operating expenses had been more than offset by increases in expenses.

Results of Commission's Investigation:

The engineering department's report (Commission's Exhibit I) deals with, and contains recommendations on, the following matters:

1. Financial condition of applicant,
2. Valuation,
3. Investment, operating revenues and expenses, and balance sheet,
4. Franchise conditions,
5. Service and operation,
6. Rerouting plan,
7. Abandonment of certain lines,
8. Curtailment of service,
9. One-man safety cars,
10. Paving,
11. Street traffic congestion,
12. Reserve for depreciation,
13. Relation of Company to its employees,
14. Relation of Company to the public,
15. Organization and management.

At the hearing on December 1, 1919, there was introduced as Exhibit No. 1 of the City of Los Angeles the report of Chief Engineer Osborne of the Board of Public Utilities. This report deals with the same matters of service and operation as are dealt with in the report of the Commission's engineers, and substantially similar recommendations are made.

No protest or objection was made to the engineers' report or to any of the recommendations contained therein by either the Company or the City. After the examination of the Commission's chief engineer, Mr. Richard Sachse, the Company's attorney made the following statement:

"I am prepared to make a brief general statement as to the position of the Company with respect to this report. We think it is a very remarkable report. We are very much impressed by it. It discloses a comprehensive and expert study of the traffic and street railway transportation problems of the city of Los Angeles. We, in the main, agree with the conclusions expressed in the report. We believe that if the recommendations are carried out as a whole that we can give better service than we are giving now, and that the 5-cent fare can be maintained. Now, if these hopes can be realized, it certainly means a big thing for the City of Los Angeles. It will give the city a unique and enviable position, as far as street railway service is concerned, among the cities of this country.

"Now, our hopes may not be realized. If not, of course, we shall feel at liberty to come again before the Commission and ask for more revenue, increases in rates of fare.

"Now, I have said that we believe these desirable results can be achieved if the recommendations, as a whole, contained in the report, are put into effect. Now, that means that not only must the Los Angeles Railway Corporation do certain things, invest large sums of money, but it means also that the City of Los Angeles shall carry out its part of the program. And certainly if we go ahead and make the investment in one-man cars, and so forth, and in all the special work that will be necessary for the re-routing plan, we will expect the City of Los Angeles to do its part and relieve the intolerable conditions prevailing during the rush hours of the day, so far as automobile and other traffic is concerned.

"I think that expresses the attitude of the Los Angeles Railway Corporation with respect to this report."

It became apparent, during the course of the investigation, that the street railway problem could not be dealt with alone and apart from the general problem of traffic congestion in the downtown district. There was agreement by all parties that action on the part of the city authorities would be necessary to relieve, as far as possible, the general traffic congestion, if good street railway service were to be brought about. Commission's Exhibit I deals with this phase of the matter quite exhaustively. The position of the Company in this respect is shown by the following quotation from the transcript of the hearing on December 1st (pp. 112-113):

"COMMISSIONER EDGERTON: Now, Mr. Haskins, I gathered from your few questions to Mr. Sachse that the Company was concerned in the matter of relief of street congestion in relation to street car operation?

"MR. HASKINS: We certainly are.

"COMMISSIONER EDGERTON: Will you tell us what improvement you believe, or the Company feels there will be, by the relief suggested by the engineers for relief of street congestion as affecting operation?

"MR. HASKINS: We know that it is absolutely necessary that the congestion during the rush hours of the day be relieved in order that we may give any kind of

"adequate service to the travelling public. Any one who has observed the operation of the street railway cars in Los Angeles knows that from 5 to 6:30 in the evening it is almost impossible to get the cars through town. Now, we can stand it, but the travelling public suffers, and certainly these people who use the street cars are entitled to some kind of reasonable service. No question about it. It is impossible to handle the traffic in the streets of the city of Los Angeles during the rush hours with any kind of system unless new ordinances are passed which will do away with parking and which will regulate the operation of the vehicular traffic on the streets.

"COMMISSIONER EDGERTON: I take it, therefore, from all you have said, you feel on behalf of the Company that in view of the Company's willingness to perform its full part of the recommended reforms, that in turn the Company has a right to expect the City will do its full part.

"MR. HASKINS: That is our position exactly. We are both concerned in the same problem."

Action by the City.

As regards the position of the City authorities, the Board of Public Utilities had, at the time of the December hearing, adopted -- and adopted in full -- the report of its chief engineer, Mr. Osborne (whose recommendations, as above indicated, were in complete agreement with the recommendations of the Commission's engineers) and had transmitted it to the City Council with favorable recommendations. The Commission decided that before making an order, it would be desirable to await the action of the City authorities in respect to those recommendations that lay wholly and exclusively within the jurisdiction of the City. This conclusion was reached because it was evident that upon the action of the City would depend, to a large degree, the decision to be reached by the Commission.

Prohibition of Automobile Parking in the Congested District

The main factor, as far as City action was concerned, was the attitude of the City authorities towards the recommended prohibition of automobile parking along the curbs of the main

city streets in the congested district. The engineers of the Board of Public Utilities and of the Commission made an exhaustive study of the pedestrian and the vehicular traffic in the downtown district. During June and July, 1919, a detailed traffic check was made at all important street intersections in this district and the character and the density of the traffic was noted and analyzed.

There is more automobile traffic in the City of Los Angeles (in proportion to the population) than in any other city in the country; and it is the automobile traffic, therefore, which represents the most serious traffic problem in the congested district. On May 1, 1919, the automobile registration for the City of Los Angeles was as follows:

Heavy trucks.....	5,500
Light delivery trucks.....	3,500
Passenger cars.....	<u>54,000</u>
Total.....	63,000

In the meantime this number has increased considerably and, taking into consideration the large number of cars not registered in Los Angeles but moving in the city streets, there are in the city at this time in excess of 75,000 motor vehicles.

The traffic check in June and July showed that during the rush hour from 5 to 6 P. M. 26,500 automobiles caused congestion on Main, Spring, Broadway, and Hill Streets between Third and Eighth Streets. In other words, the number of cars, either standing still or moving, in the most congested portion of the downtown district during the rush hour was equal equal to approximately 50 per cent of the total number of registered cars in the entire city.

It was also demonstrated by the engineers that the chief cause of congestion was not the moving automobile, but the automobile standing still. The parking ordinance then in operation in Los Angeles permitting parking for only a limited period did not prevent congestion. From the standpoint of traffic, a car standing still and parking in a busy street undisturbed for a long time is less objectionable than a condition where a given parking space has to be made vacant every ten minutes and is immediately occupied by another waiting car.

Another cause of congestion was found in the indiscriminate turning to the right or to the left of vehicles at street intersections. By actual time check it was determined that at the most important street intersections, a vehicle consumes 300 per cent more time in making a righthand turn, 350 per cent more time in making a lefthand turn, and 1,700 per cent more time in making a 180 degree turn than in travelling in a through direction. This condition is also true of the street cars. The engineers were unanimous in their recommendation that all lefthand turning of vehicles at street intersections in the congested district should be prohibited and that only righthand turning should be allowed. They were also unanimous in their recommendation that parking in the congested district should be prohibited entirely on week days between the hours of 8 A. M. and 6 P. M. After careful consideration, we became satisfied that these conclusions were sound and that the proposed remedies, together with the elimination of street railway congestion to be brought about by the adoption of the rerouting plan, would go a long way toward relieving the intolerable con-

gestion in the business district. There would also come about, if the proposed remedies could be made effective, a large saving in operating costs and in the time spent by the travelling public both in street cars and in automobiles and also by pedestrians.

This matter was fully discussed by the Commission with the City Council and other city authorities; and after a very thorough and exhaustive study and consideration by the Council of this recommendation and its possible effects, an ordinance was passed substantially in line with the recommendations of the City's and the Commission's engineers as approved by the Board of Public Utilities and by the Commission. This ordinance has, in the meantime, become effective.

The Board of Public Utilities has also given its consent to the re-routing of the entire street railway system as developed by the engineers and has made other recommendations to the Council and to the street railway company endorsing the recommendations and proposals of the engineers' report.

We believe the statement is warranted at this time that the City has done everything in its power thus far to carry out its part of the program to make efficient and economical street car operation possible and to improve the general traffic conditions in Los Angeles.

The results of this method of procedure have, we believe, clearly demonstrated the wisdom of laying aside questions of jurisdiction as between the City and the State and the possibilities of effective co-operation between the local authorities and the Commission. In several respects this has been an unusual proceeding and the Commission hopes that its fortunate results will point in the direction of similar procedure by other communities with similar problems in this state.

Recommendations to be adopted by the Company.

The Commission has come to the conclusion that the Company should adopt all of the recommendations contained in the engineering department's report, including the revisions in the supplemental report dated March 30, 1920. It is not practicable and not necessary to review in full this two hundred page report and merely a summary of the recommendations will be given in this decision.

The problems before this street railway utility appear to be these:

How to put the Company into a financial condition that will permit of the most efficient and satisfactory service to the public.

How to reach a better and permanent basis of understanding with the City.

How to better the present service.

How to develop a policy of mutual satisfaction between the owners, the management and the employees.

How to create an organization and management capable of accomplishing the best possible results.

We are convinced that a solution of these questions must rest on these premises:

An increase in fares should be granted only as a last resort and only after the Commission is satisfied that every possible economy in operation and service is being practiced by the Company under the best possible management. Operating savings should not be effected by decreases in wages or salaries. They should be effected in increased efficiencies in management and operation.

Leaving out of consideration the possibility of acquisition of this property by the City, with consequent municipal ownership and operation of the street railway (which cannot be regarded as an immediate practical solution), a new and better relationship can best be brought about between the City and the Company through a new general franchise (a so-called resettlement franchise).

A more satisfactory service should be established by making use of the most modern equipment and facilities with lower operating costs; by relieving street traffic congestion and by better and more direct routing of cars.

A policy of dealing with employees on the basis of merit only, and in absolute frankness and with the fullest publicity, should take the place of the past policy. It should be to the immediate and material interest of all employees to assist in enabling this utility to give the most efficient service at the lowest possible cost.

That method of organization should be adopted which will most readily permit of centralized, directly responsible and efficient management.

(1) Financial Conditions and Remedies.

It was the Commission's conclusion, after Commission's Exhibit I had been introduced and made the subject of careful study by all parties, that an increase in street railway fares in any form was not then justified and might possibly be avoided, if the engineers' recommendations were carried out and the management and operation of the system put on an efficient and economical basis. The engineers' report demonstrated that very large savings in operating and other expenditures could be effected. The estimates contained in the report and the testimony of the engineers show that savings in operating expenses alone, not taking into consideration the increased earnings resulting from increased traffic, would amount to between \$800,000.00 and \$1,500,000.00 per annum, depending on the thoroughness with which the recommended changes are put into effect. In addition, there would be considerable savings in capital expenditures if these expenditures are compared with what would be required in new money under continued development of the old system of operation. It was also estimated that with these savings, the Company would be able to meet its interest requirements and sinking fund obliga-

tions and in addition would have remaining a substantial surplus.

(2) Rerouting Plan.

The engineering investigation established the fact that the plan of routing and of schedules then in existence on the Los Angeles Railway system was obsolete and wasteful and should be radically changed. The engineers also came to the conclusion that one-man car operation, to the greatest possible extent, should be instituted.

A detailed rerouting plan was worked out resulting in the reduction of the operated car miles from 31,000,000 (estimated for 1920 under the present system of operation) to 27,000,000 (under the rerouting plan). This is equivalent to a saving of 4,000,000 car miles per annum (13 per cent of the Company's entire mileage). This large saving is the most important cause for the reduced operating expenses resulting in the savings indicated above, and the estimated savings for this item alone amounts to at least \$440,000.00 per annum.

In addition, there should come as a probably equally important consequence, a great relief to general traffic conditions in the congested district brought about principally by the elimination of 27 per cent of the total curvature in this district and by the elimination of all street railway operation on Third Street between Main and Hill and on Eighth Street between Hill and Lake, and by the turning of these streets over to vehicular and pedestrian traffic exclusively.

The Commission became satisfied that the rerouting plan would distinctly be in the interests of both the City of Los Angeles and the Company. The feasibility of the plan from an operating and technical standpoint was fully discussed with

the officials of the Company and with the engineers of the City, and no point of impracticability and no changes for the worse have been developed.

In addition to the suggestions on operating and service conditions made to the Commission at the hearings in these cases by patrons of the railway, representatives of groups of residents and improvement clubs, arrangements were made for conferences between the engineering department and any interested parties with any suggestions to offer towards improved service. A number of such conferences were held and many suggestions were made. These have all been carefully considered and the present rerouting plan embodies the last conclusions of the engineers of the City and of the Commission. The Company, in the meantime, has accepted and put into effect the rerouting plan in its entirety.

(3) Changes in Service.

In the matter of abandonment of lines and abandonment or curtailment of service, we believe the following principle should govern:

Service should not be abandoned or curtailed if there is a real public need for it and if the operation of the system as a whole can be put on a self-sustaining basis. In other words, it may be necessary to continue certain service even if it is operated at a loss if, in the opinion of the regulating authority, public convenience and necessity demands that such service be given.

With this limitation, the factors of revenue and expense are, of course, of prime importance, and the Company's policy in the future should be that new extensions should not be built unless there is a reasonable certainty that in the

fairly near future each new extension will become self-sustaining. If another policy is followed, the result will be that the great majority of the street car riders will be burdened with an ever-growing cost of unproductive service.

With these guiding considerations in mind, the Commission recommended, and the Board of Public Utilities of the City endorsed, certain changes in service (as described in the engineers' report) which have been put into effect by the Company. It is understood, of course, that changes and improvements in service will continue to be necessary as the needs of the public demand such changes from time to time.

(4) One-man Safety Car Operation.

A careful study was made by the City's and our engineers of the feasibility of changing a part of the present equipment of the street railway system to the more modern type of equipment referred to as one-man safety cars. We are persuaded that the operation of one-man safety cars wherever practicable on the Company's lines would be of great advantage not only to the Company but also to the public. To the Company the acquisition of such equipment would result in a very large operating saving -- much more than sufficient to justify the required capital expenditure represented by the cost of these cars. To the public the result would be a more frequent and, therefore, more convenient service.

Two programs are suggested in the engineers' report for the installation of one-man cars: Program I provides for the immediate purchase of 100 safety-type one-man cars at an estimated cost of \$700,000.00 and the replacing of 80 of the present cars. These cars would be operated as proposed in the

engineers' report. The result would be a net operating saving of \$150,000.00 per annum after taking care of the interest required on the purchase price of the cars.

Program II provides for the purchase of 400 safety-type one-man cars to replace 312 of the present cars and to be operated as indicated in the report. The cost of these cars is estimated to be \$2,800,000.00, and the net result would be an operating saving of \$625,000.00 per annum after taking care of interest payments on the additional equipment. This saving would permit a retirement of all of the present equipment replaced by these cars in about three and a half years.

The estimates of savings resulting from one-man car operation seem conservative, since experience in other cities has shown that there is a decrease in way and structure and other operating expenses which has not been taken into consideration in our figures. The increased revenue that is practically certain to result because of the larger number of passengers handled on these cars under a more frequent service is also not taken into consideration. This last item in other cities has amounted to from 10 to 25 per cent of the revenue derived under the old form of operation.

The Company, since the original report of the engineers came into its hands, has purchased about 70 one-man safety cars, and the greater part of the number has been delivered and is in service.

It seems desirable that a thorough experiment should be made with this new type of equipment and as soon as successful operation is demonstrated, the Company should make arrangements for the earliest possible purchase and delivery of additional equipment in order to come to a realization of the ultimate

program laid down in the engineers' report. In our opinion, public approval of one-man safety car operation will come in Los Angeles, as it has come in other cities, when the fact of more frequent and better service is definitely demonstrated and that such improved service can be given with this class of equipment there seems to be no doubt.

(5) Reserve for Depreciation.

Payments into a depreciation reserve are a portion of operating expenses, and the proper sums to be set aside should, therefore, come ahead of fixed charges and other requirements. This Company is following the practice of varying its depreciation allowance according to gross earnings and available net earnings regardless of the actual requirements for a depreciation reserve. Since 1911, the depreciation allowance has varied from a minimum of 4 per cent to a maximum of 8.4 per cent of gross income.

A policy under which a reserve for depreciation is treated as a secondary and theoretical proposition, and under which the payments into the fund vary with the earnings, is not a good one. In addition, the Company, in common with other utilities in this state, handles its depreciation reserve as a book-keeping matter only. There is at present no actual depreciation fund and there are no definite rules and regulations governing the use of such a fund.

It has become evident of late, in connection with investigations into the street railway situations in Oakland and San Diego, that the setting aside of an actual and adequate depreciation reserve is a matter of prime importance, without which

there can be no insurance of continuity of efficient and adequate service through permanency of roadway and equipment. Neither can there be a permanent protection of the integrity of investment in capital account without the actual replacement of depreciated plant property. The securing of the new capital constantly required in a property of this kind for additions, extensions, and betterments will also be much easier if depreciation is insured against in fact, and in cash, and not on paper only.

The purpose of the depreciation fund is simply this: to make provision for the replacement of certain depreciable property at the end of the reasonable expected life. It is not possible to estimate beforehand exactly what the annual allowance should be, but it is possible to approximate closely the actual requirements. The fund should be neither too large nor too small, and to accomplish this object it will be necessary, from time to time, to compare the actual depreciation of the property with the allowances and their accumulations and to either increase or decrease the periodical allowance as the actual conditions may warrant.

The depreciation fund should not be used for purposes other than those specified in the rules governing the use of the fund; and the accounting, investing, and disbursing of the fund should be under the control of the Commission. The fund should be invested with a view to safety only, and security of principal should not be sacrificed to earning power. The reserve should be held in the form of a sinking fund, analagous to a trust fund, and all earnings of the reserve should be added to the fund. It is not desirable to demand a large definite interest return from the depreciation reserve and it seems better to require merely that all earnings, whether large or small and as they may fluctuate from year to year, should become part of the fund, with the sink-

ing fund rate fixed at as low as 6 per cent.

In Los Angeles the street railway property is in a good physical condition and the service at this time has not suffered because of the inability or disinclination on the part of the Company to take care of depreciation. This condition exists because the earnings in the past, with the exception of the last year, have been sufficient to permit of all replacements being made directly out of operating expenses in addition to meeting the Company's fixed and other charges. In other words, this utility has not as yet been confronted with a condition where a desirable showing of a year's profit could be had only at the expense of the maintenance and replacement of the depreciated property. There is no guarantee, however, that in the future such a condition will not arise in Los Angeles, as it has arisen elsewhere, unless an actual depreciation fund is set aside and accumulated.

Wherever the character of the service permits, it is the Commission's purpose to allow, to utilities operating in California, such rates as will enable the utility to give good service, permit the utility to earn all necessary and reasonable expenses, to protect--as far as possible--the integrity of actual and reasonable investment and in addition to allow a fair return on the proper rate base. It is clear that in the fixing of utility rates provision for keeping the plant intact is of vital importance to the public utility owner, as well as to the utility user. This phase is of particular importance when a public utility is looked upon not as a temporary business, but a permanent and continuing enterprise essential to public service.

We know of no better method for insuring this permanency of good service and, consequently, of utility investment

and plant, than the establishment of an actual and permanent depreciation fund. The payments into the fund are part of operating expenses in exactly the same sense as operating labor and material, and it is to the rate payer's interest to have included in the rate he is to pay a proper allowance to take care of inevitable depreciation. Continued good service cannot be had without such allowance.

It must follow with equal insistence, on the other hand, that the allowance granted by the Commission for the depreciation fund cannot be used at will by the utility for whatever immediate purpose the money accumulated in the fund might profitably be used. The depreciation fund, undoubtedly, should be considered in the nature of a trust fund to be used for the purpose only for which it is intended and for which it is allowed by the Commission. To hold otherwise would mean the placing of an unfair burden on the consumers who are made to contribute that money.

The engineers for the City, the Company, and this Commission together have made a careful estimate of a proper depreciation allowance for this Company and there is agreement between them as to the result.

It is our opinion that the Company should be required to set aside for this purpose the sum of \$720,000.00 per annum in monthly installments of \$60,000.00, under regulations prescribed by the Commission. This amount will permit the replacement of a total amount of depreciable property proposed to be taken care of in this reserve of \$14,958,000.00, within an average life of approximately 14 years, assuming that the average interest earnings of the fund are approximately 6 per cent. Allowance for the depreciation fund item is made by the Commission

in the rate fixed.

(6) Organization and Management.

It became evident to us that the size and operations of the Los Angeles Railway had outgrown its system of organization and that a modern system with centralized authority and definitely placed responsibility should be adopted.

It should be a matter of course that an organization be created which will make it possible to obtain the best operating results and which will first eliminate, as far as possible, all waste, duplication, and inefficiency in the general offices and the various departments of the Company.

The course of the investigation convinced us that much improvement is possible in practically every department of the Company, including the present department of transportation and traffic, the mechanical department, the electrical department, the engineering department, the auditing, secretary and treasury department, and the claims department. The engineers' report indicates that great economies can be effected and that the efficiency of the organization can be increased by a different method of handling the purchasing of materials, stores, claims, the keeping of operating records, legal matters, etc. Great improvement and important savings can be effected in the handling of electric power. A program dealing with this phase of the Company's operation is suggested in the engineers' report. This program contemplates the resectionalizing of trolleys, the rearrangement and change of feeders, the survey of substation conditions with a view to a reduced capacity for certain stations and the installation of new stations for the reduction of power losses, the improvement of voltage, the elimination of electrolysis, the increase of flexibility of distribution and the decrease in delays and interruptions

to service.

We believe it possible to provide for better interchange of power with the Pacific Electric; for modernization of high tension switching in substations and for competent centralized line dispatching with inspectors. The matter of track bonding should be handled in a manner different from the present method.

Proper methods of storing supplies and property and efficient methods of salvaging and selling scrap material should be instituted. Great improvement to service and some saving can be effected by the rearrangement of the Company's telephone system in order to permit of more flexibility in the control of car movements. Power losses on the Company's high tension lines, we believe, can be reduced by taking appropriate measures.

In these matters of organization and management, the Company has already indicated to the Commission its complete acceptance of the recommendations. A number of the proposals have been carried out and the more important ones are in the process of being accomplished. It is desirable, however, that the Commission be kept informed in these matters to the end that the best results may be speedily accomplished.

The Franchise Situation.

To both the City and the Company a permanent settlement of the franchise question is of utmost importance. Several important franchises covering some of the Company's essential lines will expire in the near future. A re-granting of piecemeal franchises will not be to the best interests of the City. Since, under the terms of the present franchises, the Company retains the track

structure and all other property, the Company can, in case the franchise is not re-granted, take up the track and discontinue operation. For the City to acquire the railway properties piecemeal at the expiration of the franchises would practically be out of the question.

The best solution, from the point of view of both the City and the Company, would seem to be the acceptance by both parties of a form of so-called "indeterminate re-settlement franchise." Such a franchise can be drawn to protect properly all parties and interests. The new franchise should cover all of the Company's operation within the city limits of Los Angeles.

The conditions of a re-settlement franchise will, of course, be the subject of negotiations between the City and the Company. Since at best it will take considerable time before a matter of such magnitude can be agreed upon and settled, it would seem of utmost importance to both parties to commence negotiations at once. In any event, the franchise question should be settled before any considerable number of franchises expire, in order to put the Company in a position where it can make proper provision for financing such reconstruction and new construction as may become necessary. If, in a re-settlement franchise adequate provision is made for the taking over of the street railway system by the City under proper methods of determining the value of the property and the payment of just compensation, the further development of street car facilities will progress as it should with the rapid and continued growth of the City. In the absence of an adequate franchise, the further street car development must lag and the service must suffer.

One of the most important provisions in the present franchises, and one of the most burdensome to the car riders, is the matter of paving. Paving represents over 10 per cent (approximately \$2,650,000.00) of the entire reproduction cost of the Company's system and the expense of paving maintenance has, on an average per annum during the last eight years, amounted to over \$128,000.00. Assuming a ten-year life for pavement (a conservative estimate), the depreciation amounts, on the straight line basis, to \$265,000.00 per annum, and interest at 6 per cent on the capital investment amounts to \$160,000.00, making a total annual expense of:

Maintenance	\$128,000.
Depreciation	265,000.
Interest	<u>160,000.</u>

Total expenses \$553,000.

About 6 per cent of the Company's gross revenue is at present required to pay this paving bill.

The question must be answered whether, under present conditions, it is equitable and in the best interests of the City to continue such a burden on the street railway and, therefore, on the car riders.

In the earlier history of street railway operation, paving clauses were inserted in the franchises in an effort to make the companies share some portion of the street railway profits with the municipality which granted the franchise. No objection could be offered to such procedure if the old conditions still existed. They no longer exist, however. The speculative profit has been entirely eliminated from street railway operation during the last years and it is now no longer

a question of excessive profits, but rather one of finding the necessary revenue to pay operating expenses, depreciation, and a moderate return on actual value or actual investment. In addition, the great change brought about by electrical operation, as compared with the old horse-cars, has had a large effect on this item. The fact is that the paving between the rails and outside the rails is not used or required for the operation of the electric street railway. It is required and worn out (and to a greater degree than paving on other streets) by other traffic.

These are the two main reasons why paving expenditures are now different from what they were in the past. It can be demonstrated that the street railway patron in many instances is not only forced to pay the cost of paving which does not contribute to his benefit, but is forced to pay for paving which contributes to his detriment. This is true because of greater delays to street railway traffic, in well-paved streets, caused by other traffic. Under present conditions the car riders pay from 40 to 50 per cent of the cost of paving on all streets on which there are car tracks, the property owners on such streets receiving the increase in property values due to the immediate proximity of means of transportation and bearing the lesser cost of paving as compared with the owners of property on streets not occupied by car tracks.

The paving question is also of importance from another standpoint: if the City of Los Angeles should seriously contem-

plate municipal ownership and operation of its street railways, the cost of this system to the City would be very materially lessened if the Company should be relieved from the unnecessary capital expenditures for paving and from unnecessary paving maintenance expense.

The introduction of the modern light-weight one-man car on certain lines will eliminate the necessity for the heavy-type track construction, and a less expensive track and less expensive standards will be possible and will better serve the Company and the City.

It is possible, in our opinion, to work out an intelligent and detailed plan for dealing with this matter. We suggest early consultation between the City and the Company for the formulation of a better paving program in connection with the working out of a re-settlement franchise.

Changed Condition since November, 1919.

The items discussed above are, in the main, a resume of the matters contained in Commission's Exhibit I and of the recommendations made by the engineers and concurred in by the Los Angeles city authorities and by this Commission.

The main purpose of the operating economies referred to was to avoid, if possible, an increase in the 5-cent fare in the street railway system of Los Angeles by producing sufficient income for the Company to enable it to give first-class service. A decision was deferred until the effect of the measures taken

could be determined.

It was estimated by our engineering department that the savings resulting from their recommendations would enable the Company, in 1920, to meet all of its interest requirements and sinking fund obligations and, in addition, leave a substantial surplus. The savings as compared with the results under the old system of operation were estimated, with all recommendations carried out, as over \$1,000,000.00 per annum. The actual operating results up to and including December, 1920, show totals for the year as follows:

Operating Income,	\$9,052,293.
Operating Expenses,	7,245,685.
Gross Income,	1,785,610.

Taxes, interest, and other proper deductions from gross income for the year amount to \$1,712,949.00, leaving a net income from railway operation of \$72,661.00.

It may be said that the Company has in good faith carried out, to the extent that it has been possible thus far, the City's and the Commission's recommendations in the matters of re-routing, organization, and management, and in matters of service. Our recommendations on non-parking of automobiles in the congested district have been partially adopted by the City with a very considerable improvement in street car operation and in service conditions and with an equally marked improvement in general street traffic congestion. The estimates of savings from one-man car operation and from re-routing appear to have been sound, in so far as it has been possible to check the results at this time. The Company's actual revenue was greater than estimated, due to the large increase in traffic. The estimate of operating expenses

was very nearly correct until the unexpected increases in power costs and the further wage increases occurred. These large aggregate increases, amounting to approximately \$1,250,000.00 per year, practically absorbed the benefits of operating savings and a part of the net earnings from increased traffic.

An estimate of operating results for 1921 made by our engineers shows that the Company, under present rates of fare, must expect a deficit, after providing for operating expenses, depreciation, fixed charges, and sinking fund.

Valuation and Rate Base.

A complete valuation of this Company's property was made in connection with Application No. 8894. This valuation was as of December 31, 1918, and two figures were found at that time:

Reproduction Cost - Operative Property,.....	\$22,322,430.
Reproduction Cost Less Depreciation - Operative Property	19,217,269.

By adding new capital expenditures and betterments for the years 1914, 1915, 1916, 1917, and 1918, and by deducting all retirements the valuation figures for December 31, 1918, became the following:

Reproduction Cost,.....	\$26,046,764.
Reproduction Cost Less Depreciation,.....	22,900,000.

Condition per cent 89.

Additional capital expenditures from December 31, 1918, to June 30, 1920, have been made by the Company, amounting to \$671,756.00. These expenditures were the result principally

of carrying out the re-routing and one-man car program recommended by the City and by us. We have, therefore, a total historical reproduction cost undepreciated, as of June 30, 1920, of \$26,198,365.00. A condition per cent of 80 is estimated by our engineers and results in an historical reproduction cost less depreciation of \$20,958,692.00.

In order to give adequate service, it is essential that the Company make certain extensive capital expenditures during 1921 and 1922. Our engineering department lists the principal of these requirements as follows:

Cars - 132 additional	\$1,400,000.
Buildings - Housing facilities for additional equipment,.....	600,000.
Mechanical - Additional shop equipment, etc.,	600,000.
Sub-station - New sub-station Building and equipment,	600,000.
Track equipment, machinery, etc.,	75,000.
Track extensions and betterments,	700,000.
Living quarters for section employees,	<u>25,000.</u>
Total -	\$4,000,000.

In addition, the Company is faced with considerable reconstruction expenditures which will be chargeable partly to operation and partly to capital account. These other capital items are expected to amount, in the next two years, to not less than \$1,000,000.00.

It is expected that these new expenditures will pay their own way from the beginning. The financing of the necessary additional equipment, power, and shop expenditures, especially, should present no difficulties. The proposed new cars will pay

for themselves in a short time and expected operating savings and improved service conditions appear to justify the other proposed betterments.

Taking into account a reasonable return on a reasonable rate base, the revenue required to meet normal expenses for the next 12 months is estimated by our engineering department as follows:

Operating Expenses,	\$7,000,000.
Depreciation Annuity,	720,000.
Taxes,	<u>475,000.</u>
Expenses exclusive of "fair return" - -	\$8,195,000.

Fair return 8% on rate base of \$26,198,365 (Historical reproduction cost undepreciated - operative property)	<u>2,095,869.</u>
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Total revenue required	\$10,290,869.
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If adequate street railway service is to be given in Los Angeles, there appears to be no possibility for the Company to secure the necessary revenue under a continuation of the flat 5-cent fare. An increase in the fare in some form, we are satisfied, should be authorized if street railway service is not to suffer and great injury is not to result to the development of the city. Several means are available to secure additional revenue. A flat increase to a 6-cent fare is asked for by applicant.

Adoption of a zone system has been suggested. No detailed study has been made, however, to determine what the effect of the institution of such a system would be on the City or on the Company. It is apparent that there is a very widespread

opposition to zone fares with_ in the present 5-cent fare limits, and it is also true that there would be serious difficulties in fare collection if a zone system were adopted. In view of the conditions existing in Los Angeles, we are inclined to believe that zoning of the city should not be undertaken without further careful study and only as a last and inevitable remedy.

A third possibility, and one that has been suggested, is the imposition of a transfer charge. We are satisfied such a charge would result in an unjustifiable discrimination between different users of the street railway and the discrimination would be particularly obnoxious under the peculiar conditions obtaining in Los Angeles, where a large percentage of transfer passengers are short-haul riders. There would also result from a transfer charge a discrimination between various business localities in the downtown district.

It is apparent that the Company is not entitled to the full amount of additional revenue that would be produced by a flat increase to a 6-cent fare and no burden should be placed on street car patrons unless entirely necessary and justified. A fair result may be obtained for applicant, its patrons, and the City, we believe, if a distinction is made between the occasional street car user and the regular patron. We see no necessity to increase the present 5-cent fare to the regular patron if the Company will adopt a system whereby, in the form

of tokens or a strip of tickets, ten (10) fares are sold at one time to one customer for fifty (50) cents and if the individual ride is increased to 6 cents. Both the single 6-cent fare and the 5-cent token fare should retain the present transfer privileges. Our engineering department estimates the total number of 5-cent fares in 1920 as 180,650,000. With two-thirds of this total number assumed to be token fares at 5 cents (assuming blocks of 10 fares are sold for 50 cents), and the other one-third 6-cent fares, and with a further estimates of a normal increase in traffic in the next twelve months of 5%, the Company may expect a gross revenue under this rate arrangement of approximately \$10,120,000.00. This gross revenue, on the engineering department's estimate of expenses, will leave the applicant a net of \$1,925,000.00 or 7.4% on the rate base of \$26,198,365.00. It is to be remembered that further savings will result from operating economies suggested by the Commission and, also, that an estimate of only 5% increase in traffic must be considered as conservative. In 1920 the growth in traffic increased gross revenue as compared with the preceding year by over 20%.

It is not practicable to estimate more closely revenues and expenses and the proportions of sales of different classes of fares.

In a time of declining costs and prices, and having in mind the unavoidable uncertainties in estimates of this nature, it may confidently be expected that applicant will earn, under the rates suggested, and under economical and efficient management, a full measure of the contemplated fair return. With the income from the rates fixed in this decision, the applicant will be in a position, we believe, to secure the necessary capital for new equipment, betterments, and extensions, and the Commission will expect the betterment program be carried out. The Company will be asked to make monthly reports to the Commission showing what additional equipment is purchased, delivered, and placed in service each month and what has been done to carry out the other recommendations. With the betterments already accomplished through the recommendations of the City's and the Commission's engineers, and after the changes and improvements are made that are contemplated in this decision, street railway service in Los Angeles should be adequate and satisfactory.

O R D E R

Original and supplemental applications having been filed by the Los Angeles Railway Corporation for an investigation of its service and of its financial condition, and for an order granting authority to increase its rates of fare so that the income would pay the cost of the service; an investiga-

tion having been made jointly by the City of Los Angeles and this Commission, public hearings having been held, and the Commission being advised of the facts set forth in the foregoing Opinion,

IT IS HEREBY ORDERED:

(1) In the Matter of Service and Operation:

That applicant use all diligence to continue to put into effect, to the fullest extent and as early as possible, all of the recommendations contained in the foregoing Opinion dealing with matters of service and operation;

(2) In the Matter of Organization and Management:

That applicant adopt and keep in effect a system of organization and management substantially in accordance with recommendations made to it and referred to in the foregoing Opinion;

(3) In the Matter of Franchises:

That applicant enter into negotiations with the City of Los Angeles for the purpose of exchanging on reasonable terms its present limited franchises for a form of indeterminate re-settlement franchise covering all of the lines in operation within the city limits of Los Angeles;

(4) In the Matter of a Depreciation Fund:

That applicant set aside into a separate depreciation fund monthly the sum of \$60,000.00 (\$720,000.00 per annum) to insure against the depreciation of property in existence on December 31, 1918. Insurance against depreciation of property built or acquired subsequent to that date shall be accomplished by setting aside additional amounts on such basis as may be indicated in the rules to govern the depreciation fund hereinafter referred to. All earnings of the fund from whatever source, and to what-

ever amount, shall be added to the fund. The fund shall be held and accounted for under the direction, and shall not be used without the authority, of this Commission.

Applicant is ordered to submit to the Commission within thirty (30) days from the date of this order such rules for the accounting and use of this fund as will embody the suggestions of applicant in this matter. Such rules shall not become effective until approved by the Commission;

(5) In the Matter of Rates:

That applicant is hereby authorized to file with the Commission and put into effect within thirty (30) days from the date of this order a schedule of rates increasing the present basic 5-cent fare to 6 cents, provided that tickets or tokens be put on sale at the Company's offices, on the Company's cars, and at such other points as the Company may select, in blocks of ten (10) tickets or tokens at a total cost of 50 cents for each block; and provided further that the single 6-cent fare, as also the reduced rate ticket or token fare, shall retain transfer privileges as at present in existence. The reduced ticket or token fare shall be transferable and good at any time, but the Company shall not be required to redeem unused tickets or tokens.

In order to enable the Commission to keep a check on the carrying out of the provisions contained in this Opinion and Order,

IT IS FURTHER ORDERED, That applicant submit to the Commission periodically, and in such form as may be specified by

the Commission, the following information:

(1) Monthly schedules of the adopted recommendations and of the manner and the time within which they have been, or will be, put into effect;

(2) Monthly statements comparing the financial and operating results between the old system of operation and the system as revised in accordance with recommendations in this decision, together with monthly operating reports;

(3) The adopted chart of organization with the names of the heads of departments and their responsibilities and hereafter monthly reports showing changes in the organization.

The Commission reserves the right to make such further orders in this proceeding as may seem necessary and desirable.

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 31st day of M a y, 1921.

H. B. Brundage
H. D. Loveland
Irving Martin
Charles H. Powell
J. O. Benedict

Commissioners.