

Decision No. 32202

ORIGINAL

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Investigation on the Commission's own motion into the adequacy of existing protection at certain grade crossings of Alameda Street and the tracks of Southern Pacific Company and Pacific Electric Railway Company, the necessity for additional protection or synchronization of signals, and the apportionment or assessment of construction and maintenance costs of such protection as public safety may require.

Case No. 4389

- C. W. CORNELL, for Southern Pacific Company.
- E. L. H. BISSINGER, for Southern Pacific Company.
- J. L. CHESEBRO and FREDERICK VON SCHRADER, for City of Los Angeles.
- K. CHAS. BEAN and STANLEY LANHAM, for Board of Public Utilities and Transportation of Los Angeles.
- E. L. SEARLE and THOMAS V. CASSIDY, for City of Vernon.
- WALLACE K. DOWNEY, for Pacific Freight Lines, Interested Party.
- B. F. BOLLING, for Pioneer Flint Cote Company.
- T. T. MILLER, for California Milling Corporation.
- W. J. TANNAHILL, for W. J. Tannahill & Sons.
- E. N. BENNETT, for Utility Trailer Sales Company.

BY THE COMMISSION:

O P I N I O N

The purposes of this investigation are to determine whether existing protective devices at certain grade crossings in Los Angeles and Vernon adequately protect the public, or whether public safety requires the installation or synchronization of additional devices, and to apportion the construction and maintenance costs of

such protection as may be found necessary to or between the carriers and the Cities affected. The investigation was instituted following a number of informal discussions between the interested parties, primarily the Cities of Los Angeles and Vernon and the Southern Pacific Company, looking toward a solution of the problems hereinafter considered. These discussions were held at various times over a period of several years. After hearings on this investigation before Examiner Hall at Los Angeles, the matter was submitted for decision.

Southern Pacific Company's San Pedro branch occupies a private right of way in the center of Alameda Street, running southerly from 25th Street through and beyond Slauson Avenue, and is crossed by the following streets at grade: 25th Street, 38th Street, Vernon Avenue, and 55th Street.

Alameda Street is paved on each side of the railroad right of way, the right of way itself being unpaved. Each roadway accommodates two-way vehicular traffic. The boundary line between Los Angeles and Vernon is parallel to the right of way line, and is located approximately 20 feet west of the easterly curb line in the westerly driveway. Thus, the adequacy of the protection at each of the crossings affects each of the Cities as well as the railroad.

It should be stated that throughout this proceeding the parties have evinced keen interest and cooperation in attempting to find a satisfactory solution to the somewhat unusual and serious protective problems involved. Conferences were had, following the first hearing, between engineers for the railroads, the Cities, and the Commission, and at a later hearing these experts presented and recommended a program which, in their opinion, is the one most

likely to give safe and adequate protection to the public. Preferring to rely upon the Commission's judgment regarding apportionment of costs, none of the parties advocated any specific plan of apportionment. We shall now describe the physical situation and the program suggested, which program appears to represent the concurrence of opinion of the engineers who participated in the conferences and who testified regarding what they thought was feasible and adequate. The matter of allocation of costs will be discussed later.

The two Cities agree as to the necessity for installation of traffic signals at all of the above intersections and crossings, and the synchronization of such signals with rail movements. Southern Pacific Company takes the position that the installation of traffic signals will not entirely solve the crossing protection problem, but that wigwag signals are also necessary. Due to the narrowness of the railroad right of way it is impossible to place either traffic or wigwag signals within the right of way line and comply with the horizontal clearance regulations set forth in this Commission's General Order No. 26-C. In order to provide a location for the signals at certain of these crossings adjacent to the right of way, a plan was submitted for flaring the curbs so as to provide approximately three feet of additional space, thereby permitting the installation of the signals with proper clearances. The engineers suggested that the flares should commence at a point approximately 150 feet from the actual crossings, which would result in diverting vehicles prior to reaching the crossings, and would tend to eliminate the possibility of the signals being struck.

Immediately south of the south line of the 25th Street intersection Southern Pacific Company's tracks enter private unpaved right

of way from paved street. This results in northbound traffic on the westerly roadway of Alameda Street and southbound traffic desiring to proceed on the easterly roadway of Alameda Street, crossing Southern Pacific Company's tracks at or approximately at the actual intersection of 25th Street with Alameda Street. This adds to an already serious traffic problem at this location, and in order to eliminate the condition in so far as possible, the engineers' proposal calls for the paving of an additional 250 feet of Southern Pacific track on the right of way south of the south line of 25th Street. It is also contemplated that an automatic wigwag signal will be installed on the flared easterly curb of the westerly roadway of Alameda Street. This will afford protection to northbound vehicles in this roadway, as well as to southbound vehicles desiring to travel southerly on the easterly roadway. Such a plan will result in an elongation of the 25th Street crossing and eliminate these cross movements from the intersection of 25th and Alameda Streets.

The Pacific Electric tracks to and from its Butte Street yard cross Alameda Street and Southern Pacific Company's tracks about 250 feet north of the 25th Street crossing. (Crossing No. 6A-2.76-C.) The Pacific Electric crossing over Alameda Street is protected by manually operated gates, and the crossing of Southern Pacific Company's tracks is protected by a manually operated interlocking plant.

The record shows that at times when Pacific Electric trains are crossing Alameda Street, vehicular traffic is "backed up" over 25th Street, thus blocking traffic in all four directions, not only on the street, but also on the crossing. If the gates at the Pacific Electric crossing are interconnected with the contemplated

traffic signals at the 25th Street crossing, when Pacific Electric trains are crossing Alameda Street the 25th Street signals would be set against Alameda Street traffic, and would permit 25th Street traffic to proceed through the intersection and over the 25th Street crossing.

At this point it may be well to summarize and set forth the existing protection, which is as follows:

TABULATION SHOWING EXISTING PROTECTION

I t e m	L o c a t i o n			
	25th Street	38th - 41st Street	Vernon Ave.	55th St.
Crossing number	BG-485.6	BG-486.0	BG-486.3	BG-487.1
Number of tracks	2 br. 1 spur	2 branch	2 br. 1 spur	2 br., 1 side, 2 spur
Existing protection(1)	2 #1 & 1#2 xing signs	1 #1 xing sign 1 #3 wigwag sign	2 #3 wigwags 1 #1 xing sign	1 #1 xing sign

Alameda Street is a main through industrial artery, carrying a heavy flow of commercial vehicles and automobiles. (2) A large per-

(1) Boulevard stop signs are in place at all intersections, requiring all traffic on east or west streets to stop before entering Alameda Street.

Insufficient width of the Southern Pacific right of way required installation of existing Standard No. 1 crossing signs and Standard No. 3 wigwags on the opposite sides of the respective roadways of Alameda Street from their proper location.

(2) Vehicular traffic checks taken from 7:00 to 10:00 a.m. and from 3:00 to 6:00 p.m. show the following:

Exhibit: Number	Location	Date of Check	T r a f f i c		
			Total	No. & So.	East & West
9	25th Street	2/ 9/39	10,710	9,118	1,592
12	38th Street (41st)	2/10/39	14,569	9,834	4,735
15	Vernon Avenue	2/ 3/39	15,095	10,384	4,711
18	55th Street	2/ 6/39	14,836	10,191	4,645

centage of this traffic crosses the tracks while traveling through on the cross streets or making right and left turns from Alameda Street. Throughout the territory involved both sides of the street are built up with large industrial plants. The majority of these concerns are served by spur tracks taking off from the San Pedro branch, all of which spurs cross one or the other of the two roadways of Alameda Street.

The train movements along the San Pedro branch consist of through freight trains between Los Angeles and the Los Angeles Harbor area, and switching movements to and from the various industries. While this switching is being performed, trains are left standing on one of the main tracks at almost any point between 25th Street and 55th Street. When switching is completed at one point, the train moves on and switches at another point, and so on until that particular train's work is completed. Often it is necessary to leave the train standing near one of the crossings. If the usual track circuits are installed to actuate traffic signals and wigwag signals and a train remains standing within the limits of a track circuit, the signals will remain set against the cross streets and crossings until the train moves out of the circuit. If, however, directional track circuits are installed and a train stops within the circuit, the traffic signals will automatically return to normal operation after a predetermined time. When the train starts to move toward and over the crossing it again sets the signals against cross traffic until it has cleared the crossing, whereupon the signals return to normal operation.

During night hours, or hours of light traffic, when signals are not operating, they should be arranged so that they will op-

erate when a train is approaching and crossing over any one of these crossings.

Tabulations of the accident records prepared from the files of the Police Department of the City of Los Angeles show that the crossings involved in this proceeding are exceptionally hazardous. Vehicular traffic consists largely of high-speed truck operation to and from the Los Angeles Harbor area or the manufacturing district located in the City of Vernon, and when no protection is provided other than boulevard stop signs requiring traffic entering Alameda Street to stop, frequent collisions between vehicles occur. The crossings of the streets involved with the railroad tracks are likewise the scene of many accidents. Witnesses for the City of Los Angeles testified that the lack of suitable signals at these locations is largely responsible for these instances of traffic interference, which inevitably result in delay to both rail and vehicular traffic.

Installation of traffic signals at these various locations would not in itself be a solution to the problem because such signals, even though synchronized with rail movements, would fail to eliminate all delays resulting in the "slowing up" of rail service, and would also leave certain vehicular movements over Southern Pacific Company's tracks entirely without protection. Thus, any program for signal installation along Alameda Street should include some type of automatic wigwag signal in addition to traffic signals. These signals (traffic and wigwag) should be so tied together as to afford the occupants of vehicles, either on Alameda Street or the cross streets, warning of approaching trains.

The connection of the traffic signals by ordinary track circuits would not accomplish the desired result, for the reason that

should it be necessary for a train to stop within the area of the circuit, the traffic signals would continue to be set so as to prohibit cross traffic from entering or crossing Alameda Street and the crossings, and therefore it is necessary that so-called directional track circuits be installed. These are so arranged that when a train stops near the crossing, the traffic signals return to normal operation. When the train starts again, it immediately assumes control of the signals, setting the signals on Alameda Street in the "Go" position, the signals on the cross street to the "Stop" position, and starting the wigwags.

The record clearly shows that existing conditions along Alameda Street are intolerable, that present protection is inadequate, and that public safety requires additional protection in the form of wigwag and traffic signals to be installed at the crossings and intersections of 25th Street, 38th Street, Vernon Avenue and 55th Street in the Cities of Vernon and Los Angeles, and that the signals at the 25th Street crossing and intersection should be tied in with the Pacific Electric gates about 250 feet north of 25th Street. (3)

Under the plan suggested the following traffic signals should be installed.

(3) One of the expert witnesses suggested that in order to obtain the maximum benefit from the various signal installations, all parking of automobiles along the curbs on the rail sides of the two roadways of Alameda Street should be prohibited for the entire distance between 25th Street and Slauson Avenue. Elimination of parked vehicles would make available for moving traffic the maximum usable width of Alameda Street, and would tend to provide more unrestricted views of the signals. This suggestion appears to merit serious consideration by the appropriate local authorities.

<u>25th Street</u>	<u>38th - 41st Street</u>	<u>Vernon Avenue</u>	<u>55th Street</u>
1 2-way, 3 light 1 3-way, 3 light	6 3-way, 3 light	2 2-way, 3 light and 4 3-way, 3 light	6 3-way, 3 light

Wigwag signals of the type known as Standard No. 3 (G. O. 75-A) should be installed or relocated, as shown in the following tabulation:

<u>Street</u>	<u>Crossing Number</u>	<u>Protection</u>
25th Street	BG-485.6	Install one wigwag signal about 250 feet south of 25th Street where track will leave pavement and enter open track on private right of way.
38th Street (41st St.)	BG-486.0	Relocate existing wigwag. Install additional wigwag.
Vernon Avenue	BG-486.3	Relocate existing wigwag.
55th Street	BG-487.1	Install two wigwags.

Engineers who participated in the conferences estimated the installation costs of various portions of the suggested program, and these estimates may be summarized as follows:

<u>Item</u>	<u>25th St.</u>	<u>38th-41st St.</u>	<u>Vernon Ave.</u>	<u>55th St.</u>	<u>Total</u>
Traffic Signals:					
Equipment	\$ 642	\$1,081	\$1,204	\$1,274	\$ 4,201
Materials	103	262	247	236	848
Labor	138	332	311	307	1,088
Truck hire	20	38	36	35	129
Total	\$ 903	\$1,713	\$1,798	\$1,852	\$6,266
Installation of wigwags only - no circuits	\$ 951	\$ 691	\$ 310	\$1,340	\$3,292
Signal control by directional track circuit control with wigwags	\$7,733	\$4,438	\$7,085	\$7,947	\$27,203
Paving in tracks from 25th St. to a point 250 feet south:					
Rail signal re-location	\$ 615				\$ 615
Track work	4,080				4,080
Paving	1,500				1,500
Total	\$6,195				\$ 6,195

<u>Item</u>	<u>25th St.</u>	<u>38th-41st St.</u>	<u>Vernon Ave.</u>	<u>55th St.</u>	<u>Total</u>
Connect signals at 25th St. with P.E.	\$ 300				\$ 300
Offset curbs - all locations					\$1,100

In arriving at an equitable apportionment of costs as between the several parties affected, it must be recognized that there is no satisfactory formula which is applicable to all crossing problems. Apportionments heretofore made in other proceedings are not particularly helpful here in view of the unique physical aspects already described. The following discussion of cost allocations of the various features of the suggested plan, which we find to be necessary for the adequate protection of the public, is predicated upon installation of the plan as a whole. The specific allocations mentioned would not necessarily be the same were we considering particular portions of the program as separate and unrelated projects.

We believe that the installation of wigwag and traffic signals, interconnected with the tracks through directional track circuits, would greatly reduce the hazard and congestion now existing at the crossings and along Alameda Street, with beneficial results to the railroad and both the City of Los Angeles and the City of Vernon, and that the responsibility for, and benefits to be derived by, each of the interested parties should be primary considerations in cost allocation.

The necessity for the installation of traffic signals at the intersections of 25th Street, 38th Street, Vernon Avenue and 55th Street with Alameda Street is created by the volume of traffic flowing to and through the Cities of Vernon and Los Angeles. While the major portions of the actual intersections and crossings are within

the city limits of the City of Vernon, a substantial volume of traffic, particularly along Alameda Street, is Los Angeles traffic flowing to and from the manufacturing district and the harbor area. It therefore appears to the Commission that the City of Los Angeles should share in the cost of these signal installations, and that fifty per cent of the cost should be borne by each of the two Cities involved.

The mere installation of the traffic signals, without synchronization with Southern Pacific Company's tracks, would entirely fail as a solution to the problem. It therefore appears essential that, as a part of this program, the synchronization should be made. The benefits to be derived therefrom appear to be equal as to each of the three parties affected, inasmuch as it would permit the free flow of rail traffic on Southern Pacific rails, and would go a long way toward eliminating the hazards which would be attendant if the signals were not tied in with rail movements. The cost of synchronization, therefore, should be borne on a basis of one-third to each of the three parties, namely, Southern Pacific Company, the City of Vernon and the City of Los Angeles. Maintenance of these synchronized circuits should be assumed by Southern Pacific Company.

Southern Pacific Company, as stated above, advocated the installation and relocation of wigwags at the four locations involved. The principal benefits to be derived from these installations would redound to Southern Pacific Company, and the entire cost of installing, relocating and thereafter maintaining these wigwags should be borne by that company.

It was generally agreed that the Southern Pacific tracks south of the south line of 25th Street should be paved in for a distance of approximately 250 feet. Southern Pacific Company agreed

to donate the necessary easement for this purpose, but felt that any additional costs should be borne by the Cities. Estimates submitted by the carrier, covering the cost of preparing the tracks to receive the pavement, included new ties, new ballast and 141-pound grooved girder rail, etc., at an estimated cost of \$4,080. Such paving will render it necessary to relocate existing railroad signals at an estimated additional cost of \$615. These estimated costs are in addition to the actual cost of placing the pavement, which adds approximately \$1,500 more. It appears to the Commission that all of the benefits to be derived from the track improvement, as distinguished from the paving and the relocation of existing railroad signals, would accrue to Southern Pacific Company and that, if it feels that this track betterment is essential, then those costs should be borne by that company. The pavement will be used solely by vehicular traffic originating in and destined to the Cities of Vernon and Los Angeles, and, therefore, this portion of the cost should be borne equally by the two municipalities. Relocation of the signals becomes necessary solely because of the paving, and this cost should also be borne equally by the two municipalities.

The crossing gates protecting the crossing at grade of Pacific Electric Railway Company's tracks over Alameda Street (Crossing No. 6A-2.76-C), located about 250 feet north of 25th Street, should be connected with the traffic signals at 25th Street, so that traffic along Alameda Street would be stopped at 25th Street when these crossing gates are in a "down" or "stop" position. Such a plan would permit the passage of vehicles on 25th Street, whereas otherwise both 25th Street and Alameda Street vehicular traffic might be "tied up." It appears to us that the chief beneficiaries of this feature of the integrated program will be the Cities of Vernon and Los Angeles, and that the cost thereof should be borne equally by the

two Cities.

Necessity for the installation of flared curbs is created by reason of the fact that there is insufficient room on the private right of way of Southern Pacific Company to install the necessary signals and maintain standard clearances as prescribed by General Order No. 26-C. All of these flares will be within the city limits of the City of Vernon but are being placed for the protection of signals, portions of the cost of which are being allocated to the City of Los Angeles. The existing right of way is of ample width to care for railroad needs and there appears to be no reason why Southern Pacific Company should be assessed any of the costs of constructing this portion of the improvement. We believe that the City of Vernon and the City of Los Angeles should join equally in paying for this portion of the project, but that the maintenance of the flared curbs should be borne by the City of Vernon.

The apportionments discussed above and set forth in the order are believed to be just and reasonable as to all parties. While the physical location of the streets and tracks renders the original cost of adequate protection somewhat higher than in the average crossing situation, such cost is amply justified by the permanent benefits and increased safety which will be afforded to the public by the installation and operation of these necessary improvements.

In view of the commendable attitude of cooperation manifested by the political subdivisions and the carriers affected, we believe that the parties will have no difficulty in quickly arriving at a joint understanding concerning the manner in which the work shall proceed, as well as the details involving payment of the sums apportioned and the responsibility of the respective parties in con-

nection with the construction of the various phases of the program. Under the circumstances there appears to be no present occasion for the issuance of a mandatory order directed to each of the parties affected, but they will be authorized to proceed with the work, the details of which shall be in substantial accordance with the program herein found to be feasible and necessary. The particular allocations, as already indicated, are found reasonable in view of the unusual physical situation and in contemplation of the completion of the specific program discussed, in its entirety, and are not to be considered as precedents applicable to any different or lesser program. The Commission reserves jurisdiction to take such further procedural steps and to issue such additional orders in connection with this matter as may be appropriate and necessary in the light of future developments.

O R D E R

The Commission having instituted the above investigation, due notice thereof having been given to all parties affected, public hearings having been had for the taking of evidence, the matter having been submitted for decision upon the record, and based upon the record and upon the factual findings contained in the above opinion,

IT IS HEREBY FURTHER FOUND that the existing protective, safety and signal devices now located at each of the several grade crossings and intersections more particularly described in the above opinion do not afford adequate protection to the public; that each of said crossings and intersections is unduly hazardous; and that public safety, necessity and convenience require the installation

and synchronization of additional protective, safety and traffic signal devices. Now, therefore, good cause appearing,

IT IS HEREBY ORDERED that Southern Pacific Company, the City of Vernon, and the City of Los Angeles be and they are hereby authorized to construct and maintain a grade crossing protective program substantially in accordance with that discussed in the opinion, and to bear the costs of such program in the proportions hereinafter set forth, which apportionments are hereby found to be reasonable and just as to all parties affected, the authorization herein granted being summarized as follows:

1. To install or relocate No. 3 wigwag signals as follows:

<u>Street</u>	<u>Crossing Number</u>	<u>Protection</u>
25th Street	BG-485.6	Install one wigwag signal about 250 feet south of 25th Street where track will leave pavement and enter open track on private right of way.
38th Street (41st St.)	BG-486.0	Relocate existing wigwag and install additional wigwag.
Vernon Avenue	BG-486.3	Relocate existing wigwag.
55th Street	BG-487.1	Install two wigwags.

The above signals shall not be installed until Southern Pacific Company shall have filed plans showing the location of such signals, and such plans shall have been approved by supplemental order.

2. To widen and elongate the 25th Street crossing (Crossing No. BG-485.6) by paving over the tracks of Southern Pacific Company from the south line of 25th Street to a point approximately 250 feet south thereof.

3. To install and place in operation traffic signals at the various crossing locations referred to in the above opinion and as indicated in Exhibits Numbers 23, 24, 25 and 26. Said signals

and synchronization of additional protective, safety and traffic signal devices. Now, therefore, good cause appearing,

IT IS HEREBY ORDERED that Southern Pacific Company, the City of Vernon, and the City of Los Angeles be and they are hereby authorized to construct and maintain a grade crossing protective program substantially in accordance with that discussed in the opinion, and to bear the costs of such program in the proportions hereinafter set forth, which apportionments are hereby found to be reasonable and just as to all parties affected, the authorization herein granted being summarized as follows:

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3. To install and place in operation traffic signals at the various crossing locations referred to in the above opinion and as indicated in Exhibits Numbers 23, 24, 25 and 26. Said signals

are to be synchronized with the tracks of Southern Pacific Company in the manner outlined in the opinion. The crossing gates at Crossing No. 6A-2.76-C are to be synchronized with the signals to be installed at 25th Street. Flared or offset curbs for the installation of signals are to be installed as indicated in Exhibit No. 21.

The cost apportionments found to be reasonable are as follows:

1. The costs of installation, relocation and maintenance of wigwag signals are to be borne by Southern Pacific Company.

2. The cost of preparing the tracks to receive pavement in connection with the widening of the 25th Street crossing is to be borne by Southern Pacific Company, and the costs of paving and of relocating existing railroad signals are to be borne equally by the City of Los Angeles and the City of Vernon.

3. The cost of installing traffic signals is to be borne equally by the City of Los Angeles and the City of Vernon.

4. The cost of installing the necessary synchronized circuits in connecting the crossing gates at Crossing No. 6A-2.76-C with the traffic signals at 25th Street is to be borne equally by the City of Los Angeles and the City of Vernon. The cost of maintenance is to be borne by Pacific Electric Railway Company.

5. The cost of installing the balance of the synchronized circuits is to be borne $33\frac{1}{3}$ per cent by Southern Pacific Company, $33\frac{1}{3}$ per cent by the City of Los Angeles, and $33\frac{1}{3}$ per cent by the City of Vernon. The cost of maintenance is to be borne by Southern Pacific Company.

6. The cost of installing the necessary flared curbs is

to be borne equally by the City of Los Angeles and the City of Vernon.
The cost of maintenance is to be borne by the City of Vernon.

The Secretary is directed to cause certified copies of this order to be served by registered mail upon Southern Pacific Company, Pacific Electric Railway Company, the President of the Council of the City of Los Angeles, the Mayor of the City of Los Angeles, and the Mayor of the City of Vernon.

Dated, San Francisco, California, this 1st day of August, 1939.

Rafael...
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Justus J. Casner
Commissioners.