

PUBLIC UTILITIES COMMISSION

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June 16, 2006

Exposition Metro Line
Construction Authority
File Number 18749784S-General
Executive Office

Richard Thorpe, Chief Executive Officer
Exposition Metro Line Construction Authority
One Gateway Plaza
Los Angeles, CA 90012

Re: Metro Expo Line At-Grade Crossings

Dear Mr. Thorpe:

This is in regards to the Preliminary Rail Crossing Hazard Analysis Report (PRCHAR), revision 3, for the proposed Exposition Light Rail Transit Project (Expo Line). We reviewed the PRCHAR, and offer the comments attached to this letter.

On May 31, 2006, Anton Garabetian of our Rail Transit Safety Section attended LACMTA/FTA New Start Projects Quarterly Review meeting. Mr. Garabetian reported that during this meeting it was announced that the preliminary construction for Expo line is planned to start in summer 2006. We are concerned with such a time line considering that diagnostic review meetings for the crossings have not been held with cities, no applications have been filed with the Commission requesting authorization for the crossings (which include public comment periods of at least 30 days), and the time for processing uncontested applications (assuming no protests). This process may take six to 12 months.

After reviewing the comments herein, please contact us to arrange diagnostic review meetings or to discuss any of our questions and recommendations. In order to expedite the process, I suggest your staff forward a draft of proposed applications as soon as possible to Varoujan Jinbachian, in our Rail Crossings Engineering Section, for review and comments.

If you have any questions, please contact Varoujan Jinbachian at vsj@cpuc.ca.gov or 213-576-7081.

Very truly yours,

Vahak Petrossian, Manager
Rail Transit and Crossings Branch

Comments on PRHCAR, rev 3
For Proposed Exposition Light Rail Transit Project
June 16, 2006

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Comments On
Preliminary Rail Crossing Hazard Analysis Report, rev. 3
Proposed Exposition Light Rail Transit Project

The following are the comments of the Commission's Rail Transit and Crossings Branch on the Preliminary Rail Crossing Hazard Analysis Report (PRCHAR), revision 3, for the proposed Exposition Light Rail Transit Project (Expo Line).

- A. On pages 9 and 10 of the PRCHAR, a summary of the crossings and their traffic counts is provided; for 14 of the 35 proposed at-grade crossings traffic counts are not provided. Please provide traffic counts for all the proposed at-grade crossings. If counts are not available and the traffic count is very low, then we will accept a statement indicating the traffic count is estimated.
- B. The following traffic counts per lane are provided:
- Buckingham Road - 680
 - Arlington Avenue - 672
 - Crenshaw Boulevard - 641
 - Normandie Avenue - 757

Crenshaw Boulevard is an arterial, while Buckingham Road and Arlington Avenue are local collectors. Therefore, we would expect the traffic count for Crenshaw Boulevard to be much higher than the other two streets. Normandie Avenue has the second highest traffic count on the list, but it is smaller than other streets on the list. Please verify the accuracy of these traffic counts.

- C. On pages 12 and 13, in Table 3.2, a list of hazards is provided along with criteria for determining the hazard probability.
- i. The first item is "Automobile driven around crossing gates." The criteria used for determining the probability of this hazard is the vehicle count. The vehicle count is provided only as "x automobiles"; we assume this refers to x automobiles per hour per lane during peak traffic periods. Please verify if this is correct.
 - ii. The list shows that the probability of "automobile driven around crossing gates" is "Probable" if the traffic count is under 100 automobiles, "Occasional" if the number is between 100 and 699, and "Remote" if the number is above 700 or "crossing is already full-closure". What is the basis for selecting these numbers as thresholds?

In our opinion vehicle count is not a good indicator of the probability of this hazard. Other indicators which are more appropriate are roadway geometrics that allow easy access to circumvent the gate, length of time crossing is blocked, frequency of trains, Level of Service (LOS) rating of the road, etc.

- iii. The second item is **"Automobile enters ungated crossing with train approaching."** The criteria used for determining the probability of this hazard is also vehicle count. As with the previous item, vehicle count is represented as "x automobiles", instead of x automobiles per hour per lane during peak traffic periods. The list shows that the probability of "automobile enters ungated crossing with train approaching" is "Probable" if the traffic count is above 100 and "Occasional" if the traffic count is under 100 or "private crossing". What is the basis for selecting these numbers as thresholds?

In our opinion vehicle count is not a good indicator of the probability of this hazard. Other indicators which are more appropriate are the presence of traffic signals or presignals, sightlines, distance between nearby intersection and railroad tracks, frequency of trains, LOS rating of the road, etc.

- iv. The third item is **"Pedestrian crosses tracks with train approaching."** The criteria used for determining the probability of this hazard is the presence of pedestrian/swing gates.

In our opinion a more important factor is the amount of pedestrian traffic at the crossing, which can be estimated by the presence of a nearby pedestrian traffic generators (such as train stations, schools, parks, etc.). Another important factor is the sightlines to the crossing.

- v. The fourth item is **"Automobile traffic queue from nearby controlled intersection backs up across grade crossing."** The criteria used for determining the probability of this is the distance from the intersection to the crossing.

While we agree this distance is an important measure, in our opinion other important criteria include queuing analysis and LOS rating.

- D. On Page 14, the second paragraph states that "The intersection of Halldale Road and Exposition Boulevard is currently not signalized. The pedestrian volume crossing Exposition Boulevard is high in both directions." Yet during our two visits to the Halldale Road crossing we have not observed any pedestrians, and furthermore we observed the absence of a pedestrian crosswalk. We assume if pedestrian traffic is indeed significant, the City would have provided a pedestrian crosswalk at this location. Please verify the accuracy of this statement.
- E. On page 14, Section 3.4 provides a discussion on the usage of **photo enforcement to deter illegal left turns against traffic**. LACMTA has informed us that at other locations where photo enforcement cameras were installed, they were eventually taken out for a variety of reasons. We are concerned that cameras may be initially

installed at these locations and then taken out. Therefore, we do not have confidence in the usage of photo enforcement cameras as a long-term measure for deterring illegal left turns.

- F. On page 28, **Farmdale Ave** crossing hazard analysis is provided. This crossing is located next to a high school. We are concerned with vehicular traffic queuing on the tracks during school commute hours. We are also concerned with young inexperienced drivers (students) ignoring warning devices and disobeying traffic laws as they travel over the crossing. We recommend an analysis of the traffic circulation during peak traffic hours in order to determine where drivers enter and leave the school, where do parents stop to drop off and pick-up students, where do buses stop, and other relevant factors.
- G. On pages 32 and 33, crossing hazard analysis is provided for **10th Avenue/Private Driveway and Private Driveway into Commercial Property Approx. 100 feet West of 9th**. There is notation for both of these crossings that states "Crossing could be closed, the business access could be provided at another location." Yet these two crossing are shown as at-grade crossings. Please confirm that these two crossings will be closed.
- H. On page 39, **Gramercy Place/Rodeo Road** crossing hazard analysis is provided. The analysis omits discussion of the fact that this crossing is at a skew angle and includes a proposed bike path. During our field meeting with LACMTA in November 2005 we expressed our concerns with this crossing. If this at-grade crossing cannot be eliminated, further discussions regarding the design of this crossing with City of Los Angeles and LACMTA are necessary.
- I. On page 44, **Denker Avenue** crossing hazard analysis is provided. Unlike the other crossings, the analysis does not provide justification for keeping this at-grade crossing. Also, a traffic count is not provided for this crossing. In the absence of justification for keeping this crossing at-grade, we recommend it be eliminated.
- J. On page 45, **Halldale Avenue** crossing hazard analysis is provided. The analysis also does not provide justification for keeping this crossing at-grade. A traffic count is also not provided for this crossing. Furthermore, the intersection is not signalized, which indicates very low traffic. In the absence of justification for keeping this crossing at-grade, we recommend it be eliminated.
- K. On page 47, **Raymond Avenue** crossing hazard analysis is provided. The analysis also does not provide justification for keeping this crossing at-grade. A traffic count is also not provided for this crossing. Furthermore, the intersection is not signalized, which indicates very low traffic. In the absence of justification for keeping this crossing at-grade, we recommend it be eliminated.

- L. On page 51, Vermont Avenue crossing hazard analysis is provided. We are very concerned with at-grade crossings from Vermont to Trousdale Parkway. There are major traffic generators on both sides of the track at these locations. At the northwest quadrant of the intersection of Vermont and Exposition there is a large mosque. Exposition Park is on the south side of the proposed tracks, which includes the Natural History Museum, California Science Museum, Coliseum, and Los Angeles Sports Arena. On the north side of the tracks is the University of Southern California, which has approximately 33,000 students, 3,000 full-time faculty members, and 8,000 other employees. Also, currently under construction is the new Galen Center which is a 10,258 seat arena, with 225,000-square foot arena and 45,000-square foot practice facility. It is scheduled to open on September 12, 2006. The Galen Center, in addition to sporting events, will also be used for concerts, pageants, etc. We are concerned with surges in traffic on days with major events at these facilities. As common with other major entertainment venues, we assume traffic will be heavily congested during these periods. Even the best designed crossing hazard mitigation measures will not be effective in such cases. The PRCHAR states that the Expo Line will be grade-separated from Exposition/Flower crossing (milepost 101.20) and return to at-grade at Trousdale crossing (milepost 101.60). The Vermont Avenue crossing is at milepost 101.90. Therefore, we recommend extending the grade-separation another 0.30 miles to Vermont Avenue. This will result in eliminating four proposed at-grade crossings (Vermont, Menlo, Watt and Trousdale), and eliminate hazards associated with severe traffic congestion and traffic surges expected during venue use.
- M. On pages 52 and 53, Menlo Avenue and Watt Way crossing hazard analyses are provided. These two crossings are only 0.1 miles apart. If the grade-separation is not extended as discussed under the Vermont Avenue crossing, we recommend consolidating these two crossings. Traffic counts are not provided for either of these two crossings. We assume the traffic on Menlo Avenue is less than on Watt Way, because Menlo Avenue is not signalized while Watt Way is. The PRCHAR provides the following justification for keeping Menlo Avenue crossing at-grade "Crossing cannot be closed as it is a main access to Exposition Park, for emergency vehicle". Considering the short distance (0.1 miles between the two crossings), in our opinion emergency vehicle response times will not be significantly increased if Menlo Avenue is closed. Therefore, we recommend eliminating Menlo Avenue crossing.
- N. On page 55, Trousdale Parkway pedestrian crossing hazard analysis is provided. Unlike other crossings, justification is not provided for keeping this crossing at-grade. In case the grade-separation is not extended as described under the Vermont Avenue crossing, in the absence of a justification for keeping this crossing at-grade, we recommend eliminating it.
- O. On pages 65 to 72, crossing hazard analyses is provided for eight Driveways to Los Angeles Trade Tech College (LATTTC) crossings. The distance between the first and last of these crossings is reported to be 0.2 mile. The following justification is

provided for keeping six of the eight crossings at-grade "Crossing cannot be closed as it is the primary means of access to business." There is no justification provided for the seventh crossing, and the following justification is provided for the eighth crossing "Crossing cannot be closed as it is primary means of access to the rooftop parking at LATTC." Considering that LATTC is a large institution with several entrances on other streets, in addition to the eight on Flower Street, we question the justification that all eight crossings are the primary access to the business. Further supporting information (such as location of other entrances to the property, negative impact of closure of driveways, traffic circulation within LATTC property) to justify keeping all eight driveway crossings at-grade is required for Staff's recommendations on the driveway crossings.