

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Consumer Protection and Safety Division  
Rail Transit and Crossings Branch  
Rail Crossings Engineering Section

RESOLUTION SX-100  
Date: November 10, 2011

**RESOLUTION**

RESOLUTION GRANTING THE EXPOSITION METRO LINE CONSTRUCTION AUTHORITY AUTHORIZATION PURSUANT TO COMMISSION GENERAL ORDER 164-D TO CONSTRUCT 16 NEW AT-GRADE AND 11 GRADE-SEPARATED HIGHWAY-LIGHT RAIL TRANSIT CROSSINGS AS PART OF THE EXPOSITION CORRIDOR LIGHT RAIL TRANSIT PROJECT-PHASE 2 LOCATED IN THE CITIES OF LOS ANGELES AND SANTA MONICA, LOS ANGELES COUNTY.

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**SUMMARY**

This resolution grants Exposition Metro Line Construction Authority authorization pursuant to Commission General Order 164-D to construct 16 new at-grade and 11 grade-separated highway-light rail transit crossings as part of the Exposition Corridor Light Rail Transit Project-Phase 2 located in the Cities of Los Angeles and Santa Monica, Los Angeles County.

**BACKGROUND**

The Exposition Metro Line Construction Authority (Expo Authority), acting for and on behalf of the Los Angeles County Metropolitan Transportation Authority (LACMTA), is charged with planning and constructing the Exposition Corridor Light Rail Transit Project. The project is a light rail transit extension that, when complete, will provide public transit service between downtown Los Angeles and the City of Santa Monica. Phase 1 of the project, an 8.5-mile segment from

downtown Los Angeles to Culver City, has received Commission approval and is under construction.

The Exposition Corridor Light Rail Transit Project-Phase 2 (Expo Phase 2) will extend approximately 6.7 miles from the terminus of Phase 1, at the Venice/Robertson/Washington aerial station in Culver City, to the downtown area of City of Santa Monica.

In lieu of filing a Formal Application for Commission authority for the subject crossings, Expo Authority is seeking authorization under the provisions of Commission General Order (GO) 164-D, titled "Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems." GO 164-D Section 10, Requirements for At Grade Rail Crossings, provides rules for authorizing grade crossings on fixed guideway systems.

Expo Authority, per the requirements of Section 10 of GO 164-D, provided a Final Draft Rail Crossing Hazard Analysis Report (RCHAR). The RCHAR identified potential hazards at each of the proposed crossings and proposed mitigation measures to address each hazard. The proposed mitigation measures include modifications to traffic signals, installation of automatic warning devices for vehicles and pedestrians, signage, pavement markings, fencing and railings to channelize pedestrians along the appropriate paths of travel, and vehicle lane and median configuration, among other items. The RCHAR contains preliminary engineering designs and, identified potential hazards and corresponding mitigation measures for each proposed crossing location. The submitted RCHAR upon which the Staff recommendations are based can be found at the following link:

<http://docs.cpuc.ca.gov/PUBLISHED/Graphics/144459.pdf>

The RCHAR and preliminary final engineering designs submitted by Expo Authority were developed in consultation with the Commission's Rail Crossings Engineering Section (RCES) staff and representatives from the City of Los Angeles' Department of Transportation, and the City of Santa Monica, after field diagnostics of each location and further exchanges of data and information.

## **DISCUSSION**

By Letter of Transmittal dated March 11, 2011, the Expo Authority provided finalized conceptual engineering plans and a hazard analysis report requesting Commission authorization to construct 27 highway-light rail transit crossings (crossings) as part of its Expo Phase 2 project.

Expo Phase 2 will extend westward to the City of Santa Monica from the Culver City Station (Phase 1) and run along the old Pacific Electric Railway Exposition right-of-way until it reaches the intersection of Colorado Avenue and 17<sup>th</sup> Street, where it will transition into a street-running alignment. The street-running alignment will continue down the center of Colorado Avenue to the terminus just west of the 4<sup>th</sup> Street and Colorado Avenue intersection in downtown Santa Monica.

The Expo Phase 2 project will operate light rail vehicles at a maximum frequency of 2.5-minute intervals during morning and evening peak hours with train operations commencing at approximately 4 AM and continuing until approximately 2 AM seven days a week, consistent with LACMTA light rail system hours of operation.

The Expo Phase 2 project requires construction of 27 new crossings of which 11 are grade separated, while the remaining 16 are proposed at-grade. Nine of the at-grade crossings are located on exclusive right-of-way and will cross existing roadways. These crossings will be equipped with the following warning devices:

- Commission Standard 9 (flashing light signal assembly with automatic gate arm) installed in advance of the crossing;
- Commission Standard 9E (Standard 9 used as an exit gate) installed on the departure side of the crossing;
- Pedestrian gate (Standard 9 with shortened automatic gate arm) installed on all sidewalk approaches to the crossings; and
- Swing gates and fencing to channelize pedestrians to the crossing locations.

The remaining 7 at-grade crossings are located on semi-exclusive right-of-way. They are oriented in a street-running alignment down the center of Colorado Avenue in downtown Santa Monica. Each of these crossings is an existing street

intersection through which the light rail system will pass. These crossings will be equipped with the following warning devices:

- Traffic signals at each intersection to control vehicular and pedestrian traffic;
- Dedicated train signals at each intersection to control the light rail train movements;
- Active “TRAIN” Light Emitting Diode warning signs to warn of approaching light rail trains.

Table 1 below contains a summary of the proposed crossings with relevant information for each.

**Table 1: Expo Phase 2 Crossing Information**

	<b>Street/Crossing</b>	<b>City</b>	<b>Proposed CPUC Crossing No.</b>	<b>Orientation</b>	<b>Warning Devices **</b>
1	Venice/Robertson	Los Angeles	84S-107.50-B	Grade-Separated	
2	Bagely Ave	Los Angeles	84S-107.90	At-Grade	9, 9E, Ped Gates
3	National/Palms	Los Angeles	84S-108.30-B	Grade-Separated	
4	Motor Ave	Los Angeles	84S-108.70-B	Grade-Separated	
5	I-10 Freeway	Los Angeles	84S-108.90-A	Grade-Separated	
6	Overland Ave	Los Angeles	84S-109.50	At-Grade	9, 9E, Ped Gates
7	Westwood Blvd	Los Angeles	84S-109.80	At-Grade	9, 9E, Ped Gates
8	Military Ave	Los Angeles	84S-110.10	At-Grade	9, 9E, Ped Gates
9	Sepulveda Blvd	Los Angeles	84S-110.30-B	Grade-Separated	
10	Sawtelle Blvd	Los Angeles	84S-110.50-B	Grade-Separated	
11	Pico Blvd	Los Angeles	84S-110.70-B	Grade-Separated	
12	Barrington Ave	Los Angeles	84S-111.10	At-Grade	9, 9E, Ped Gates
13	Bundy Dr	Los Angeles	84S-111.40-B	Grade-Separated	
14	Centinela Ave	Santa Monica	84S-111.60-B	Grade-Separated	
15	Stewart St	Santa Monica	84S-112.10	At-grade	9, 9E, Ped Gates
16	26 <sup>th</sup> St	Santa Monica	84S-112.40	At-grade	9, 9E, Ped Gates
17	Cloverfield Blvd	Santa Monica	84S-112.50-B	Grade-Separated	
18	Olympic Blvd	Santa Monica	84S-112.60-B	Grade-Separated	
19	20 <sup>th</sup> St	Santa Monica	84S-112.80	At-Grade	9, 9E, Ped Gates
20	19 <sup>th</sup> St	Santa Monica	84S-112.90	At-Grade	9, 9E, Ped Gates
21	17 <sup>th</sup> St/Colorado	Santa Monica	84S-113.00	At-Grade	Traffic Signals

22	14 <sup>th</sup> St/Colorado	Santa Monica	84S-113.20	At-Grade	Traffic Signals
23	11 <sup>th</sup> St/Colorado	Santa Monica	84S-113.50	At-Grade	Traffic Signals
24	Lincoln/Colorado	Santa Monica	84S-113.70	At-Grade	Traffic Signals
25	7 <sup>th</sup> St/Colorado	Santa Monica	84S-113.80	At-Grade	Traffic Signals
26	6 <sup>th</sup> St/Colorado	Santa Monica	84S-113.85	At-Grade	Traffic Signals
27	5 <sup>th</sup> St/Colorado	Santa Monica	84S-113.90	At-Grade	Traffic Signals

\*\* 9 = Commission Standard 9 (flashing light signal assembly with automatic gate arm); 9E = Commission Standard 9 used as an exit gate; Ped Gate = Commission Standard 9 with shortened gate arm for Pedestrians on sidewalks; Traffic Signals = Used at intersections on street-running segment.

### Commission's Rail Crossings Engineering Section Staff Review

RCES staff worked very closely with Expo Authority to review the locations of the proposed crossings and any safety concerns relating to at-grade crossing designs. The following serves as a project timeline as it relates to development of the RCHAR, preliminary engineering designs, and RCES staff safety concerns:

- 09/13/2007: Project Briefing Meeting - Expo Authority presented RCES & Rail Transit Safety Section (RTSS) staff with a Project overview and alternative alignments under consideration in its Draft Environmental Impact Report (EIR).
- 07/14/2008: Technical Advisory Committee Meeting - RCES & RTSS staff attended meeting with other stakeholder agencies where Expo Authority briefed attendees on status of its Draft EIR preparation.
- 01/27/2009: Expo Authority's Draft EIR for its Expo Phase 2 Project is circulated for public comment.
- 03/27/2009: RCES staff submitted comments to Expo Authority's Draft EIR noting safety concerns related to at-grade crossings.
- 07/02/2009: RCHAR Scoping Meeting - RCES & RTSS staff met with Expo Authority and its consultants to discuss: (1) RCES staff safety concerns in its comments to Draft EIR; (2) Expo Authority's desire to comply with the RCHAR option in GO 164-D to obtain Commission approval for crossings in the Expo Phase 2 project; and (3) Discuss development of the RCHAR to address potential hazards and possible mitigations.
- 09/30/2009: Office Meeting/Workshop #1 - RCES staff, Expo Authority, LACMTA, and City of Los Angeles Department of Transportation (LADOT) met to review initial draft of RCHAR and assist in identifying additional potential hazards and possible

- mitigation measures. Preliminary engineering crossing designs were also reviewed and RCES staff provided comments on potential design changes.
- 11/16/2009: Expo Authority provided written response to RCES staff comments to the Expo Phase 2 Draft EIR. Comments consisted of a briefing on project changes and status of ongoing hazards analysis. Expo Authority requested continued RCES participation and guidance in development of RCHAR and preliminary engineering designs.
- 12/02/2009: RCES staff responded to Expo Authority's letter dated 11/16/2009, affirming its commitment to continued consultation as part of our regulatory safety oversight responsibilities, and assisting in the analysis of identifying potential hazards and possible mitigations.
- 12/10/2009: Office Meeting/Workshop #2 - RCES staff, Expo Authority, LACMTA, and LADOT met to review draft RCHAR and engineering designs for crossings in City of Los Angeles.
- 12/11/2009: Office Meeting/Workshop #3 - RCES staff, Expo Authority, LACMTA and City of Santa Monica met to review draft RCHAR and engineering designs for crossings in City of Santa Monica.
- 02/05/2010: Expo Authority adopted a Notice Of Determination in certifying its Final EIR, including a Statement of Overriding Considerations.
- 06/09/2010: Expo Authority submitted Draft RCHAR to RCES staff for review and preparation of field diagnostic meetings.
- 07/27/2010: Pre-Diagnostic Meeting #1, RCES staff, Expo Authority and LADOT met to review the designs for proposed grade crossings in City of Los Angeles.
- 07/29/2010: Pre-Diagnostic Meeting #2, RCES staff, Expo Authority and City of Santa Monica met to review the designs for proposed grade crossings in City of Santa Monica.
- 08/02/2010: Field Diagnostic Meeting #1, RCES staff, Expo Authority and LADOT conducted a field evaluation of each proposed crossing in City of Los Angeles.
- 08/04/2010: Field Diagnostic Meeting #2, RCES staff, Expo Authority and City of Santa Monica conducted a field evaluation of each proposed crossing in City of Santa Monica.
- 11/12/2010: RCES staff provided Preliminary Recommendations, in accordance with the requirements of GO 164-D, to Expo Authority's RCHAR and engineering designs. RCES did not object to 10 proposed grade-separated, and 14 proposed at-grade crossings. RCES did

- ask that 3 proposed at-grade crossings be evaluated further for either closure or grade-separation.
- 01/07/2011: Expo Authority responded to RCES staff accepting the Preliminary Recommendations on the 10 grade-separated and 14 at-grade crossings. Expo Authority agreed to investigate the 3 crossings identified by RCES staff for closure or grade-separation by following up with the respective Cities.
- 03/11/2011: Expo Authority submitted Final Draft RCHAR incorporating changes to the 3 at-grade crossings that satisfactorily address RCES staff's safety concerns.
- 04/01/2011: Expo Authority submitted revisions to its Final Draft RCHAR indicating a change to grade-separate the Sepulveda Blvd. crossing in City of Los Angeles.
- 04/22/2011: RCES staff & Expo Authority discussed I-10 Freeway crossing preliminary engineering design and failure to meet GO 143-B clearance requirements. Expo Authority requested removal of crossing from consideration for approval. RCES staff informed Expo Authority that approval for the I-10 Freeway crossing can be made by formal application once the design complies with applicable Commission General Orders.
- 05/06/2011: Consumer Protection and Safety Division sent a letter summarizing RCES staff teleconference of April 22, 2011 with Expo Authority regarding the I-10 Freeway crossing preliminary engineering design not meeting GO 143-B clearance requirements which was discovered as part of Commission's RTSS staff's review of the Expo Phase 2 System Safety Certification. RTSS staff reviewed the current configurations of the I-10 Box Structure and the proposed design drawings, given to LACMTA by Expo Authority and confirmed the current I-10 Box Structure cannot accommodate dual tracks and meet the GO 143-B clearance requirements. All designs included in the RCHAR must conform to engineering designs included and comply with all applicable Commission General Orders.
- 05/20/2011: Expo Authority responded to the Consumer Protection and Safety Division letter regarding the I-10 Box Structure not meeting the GO 143-B clearance requirements, since the Expo Authority is still working out the detailed design of the structure and will request, pursuant to Go 164-D, Section 10.9 to file a formal application for this one crossings. Expo Authority intends to work closed with

LACMTA, and RCES staff in developing a design that meets all necessary clearance requirements for the I-10 Box Structure.

08/17/2011: Expo Authority submits revised I-10 Freeway crossing preliminary engineering design that complies with GO 143-B clearance requirements and all other applicable Commission General Orders. Expo Authority requests that the I-10 Freeway crossing be once again included for authorization.

As preliminary final designs, minor adjustments may be necessary for actual field construction and installation, and therefore RCES is recommending the Commission require final design plans be submitted to RCES by Expo Authority prior to construction at that location.

### Environmental Review

As a responsible agency under the California Environmental Quality Act (CEQA), the Commission must consider the lead agency's environmental documents and findings in regards to safety, transportation and noise before acting on or approving this project. The Expo Authority is the lead agency for this project.

In accordance with CEQA, the Expo Authority prepared an environmental document titled *Exposition Corridor Transit Project Phase 2 Final Environmental Impact Report (FEIR)*, dated December 2009. The FEIR identified environmental impacts and associated mitigation measures related to the Expo Phase 2 Project.

Expo Authority adopted a Notice of Determination (NOD) in certifying the FEIR, State Clearinghouse No. 2007021109. The NOD and FEIR were received by the State Clearinghouse on February 5, 2010, and indicated that the project will have a significant effect on the environment. As a consequence, mitigation measures were made a part of the approval. Because there were several impacts that could not be fully mitigated, a Statement of Overriding Considerations (SOC) was adopted in approving the project. The FEIR indicated that impacts to safety, transportation, and noise can be mitigated to less-than-significant levels through the implementation of the mitigation measures. Other impacts which could not be mitigated to less-than-significant levels relate to temporary impacts to air quality during the construction period, and permanent visual impacts relating to the grade-separation structures.



The Commission reviewed and considered the lead agency's FEIR and finds, where feasible, Expo Authority adopted mitigations to reduce the impacts to less-than-significant levels, and that remaining significant impacts were lessened to the extent possible through adoption of additional mitigations. The Commission finds the FEIR, NOD, and SOC adequate for our decision-making purposes.

## **NOTICE**

On September 30, 2011, this Resolution was published on the Commission's Daily Calendar.

## **COMMENTS**

The draft resolution of the Consumer Protection and Safety Division in this matter was mailed in accordance with Section 311 of the Public Utilities Code and Rule 14.5 of the Commission's Rules of Practice and Procedure. \_\_\_\_\_ comments were received.

## **FINDINGS**

1. Section 10 of GO 164-D provides rules for authorizing at-grade crossings of fixed guideway systems, such as the Expo Authority's Expo Phase 2 Project.
2. Expo Authority, by letter dated March 11, 2011, requested authorization, pursuant to GO 164-D, to construct 17 at-grade and 10 grade-separated highway-light rail transit crossings as part of its light rail extension project.
3. Expo Authority, by letter dated April 1, 2011, revised its requested authorization, pursuant to GO 164-D, to grade-separate an additional crossing resulting in a request to construct 16 at-grade and 11 grade-separated highway-light rail transit crossings as part of its light rail extension project.
4. RCES staff has reviewed the Final Draft Rail Crossing Hazard Analysis Report and preliminary final engineering designs for the crossings submitted by Expo Authority. RCES staff recommends the Commission approve the project crossings, including 16 at-grade and 11 grade-separated crossings.

5. As preliminary final designs, minor adjustments to the exact location and placement of the various warning devices and other crossing treatments for the at-grade crossings are to be expected, and the Expo Authority should be required to submit the final crossing design plans to the Commission's RCES prior to beginning construction at that location.
6. RCES staff recommends that this resolution be adopted.

**THEREFORE, IT IS ORDERED THAT:**

1. Pursuant to Commission General Order 164-D, Section 10.6, the Exposition Metro Line Construction Authority is authorized to construct the 11 grade-separated and 16 at-grade crossings, as identified in Table 1 of this Resolution.
2. The traffic control devices at the 9 at-grade crossings located on exclusive right-of-way shall be Commission Standard 9 warning devices (flashing light signal assembly with automatic gate arm), pedestrian gates with swing gates, and fencing to channelize pedestrians. The traffic control devices at the 7 at-grade crossings located on the semi-exclusive right-of-way (street-running) at existing street intersections shall be traffic signals, dedicated train signals, and active "TRAIN" Light Emitting Diodes (LED) warning signs.
3. The designs and further treatments at the crossings and along the exclusive and semi-exclusive rights-of-way shall be in accordance with the Final Draft Rail Crossing Hazard Analysis Report submitted March 11, 2011, and supplemented on April 1, 2011.
4. The Exposition Metro Line Construction Authority shall provide the Commission's Consumer Protection and Safety Division - Rail Crossings Engineering Section finalized engineering crossing designs prior to commencement of construction activities. The Commission's Rail Crossings Engineering Section will evaluate conformance with crossing designs approved by this Resolution.
5. The Exposition Metro Line Construction Authority shall comply with all applicable rules, including Commission General Orders and the California Manual on Uniform Traffic Control Devices.

6. The Exposition Metro Line Construction Authority shall notify the Commission's Consumer Protection and Safety Division - Rail Crossings Engineering Section at least 30 days prior to opening the crossings. Notification should be made to [rces@cpuc.ca.gov](mailto:rces@cpuc.ca.gov).
7. Within 30 days after completion of the work under this order, the Exposition Metro Line Construction Authority shall notify the Commission's Consumer Protection and Safety Division - Rail Crossings Engineering Section in writing, by submitting a completed Commission Standard Form G (Report of Changes at Highway Grade Crossings and Separations), of the completion of the authorized work. Form G requirements and forms can be obtained at the CPUC web site Form G page at <http://www.cpuc.ca.gov/formg>. This report may be submitted electronically to [rces@cpuc.ca.gov](mailto:rces@cpuc.ca.gov) as outlined on the web page.
8. This authorization shall expire if not exercised within three years unless time is extended or if the above conditions are not satisfied. Authorization may be revoked or modified if public convenience, necessity, or safety so require.
9. A request for extension of the three-year authorization must be submitted to the Commission's Consumer Protection and Safety Division - Rail Crossings Engineering Section at least 30 days before the expiration of that period.

This resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted by the Commission at its regularly scheduled meeting on November 10, 2011. The following Commissioners voted favorably thereon:

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PAUL CLANON  
Executive Director

[Cover Letter/Cert. of Service to Res. SX-100](#)