Update on Proposed Implementation of a Wayside Horn System Along the San Clemente Beach Trail

Staff Report

OCTA

May 27, 2010

To: Transit Committee

From: Will Kempton, Chief Executive Officer

Subject: Update on Proposed Implementation of a Wayside Horn System Along the San Clemente Beach Trail

Overview

The Orange County Transportation Authority and City of San Clemente have been working collaboratively to develop a wayside horn system pilot program to offer relief from train horn noise. The wayside horn system is a stationary horn that warns drivers and pedestrians of oncoming trains. The program is being analyzed for possible implementation in San Clemente along the coastal beach trail. This report provides an update on progress made to date.

Recommendations

A. Direct staff to continue to work with the City of San Clemente and other stakeholders on project development activities for the implementation of a wayside horn system at seven pedestrian grade crossings along the San Clemente beach trail.

B. Direct staff to develop a funding plan for the implementation of a wayside horn system along the San Clemente Beach Trail.

Background

The City of San Clemente (City) has a license to construct and maintain a beach trail along the Orange County Transportation Authority (OCTA)-owned railroad right-of-way within the City limits. The beach trail serves to control and channel the many pedestrians and bicyclists who use the existing railroad corridor as a pathway. The implementation of the beach trail has reduced the amount of trespassing and unsafe passage that occurred along this corridor by fencing the trail and creating formal pedestrian at-grade railroad crossings at various locations along the trail. The formal pedestrian crossings include warning bells and grade crossing arms which close the path when trains are approaching. Federal Railroad Administration (FRA) and California Public

Utilities Commission (CPUC) regulations require train locomotive horns be sounded as trains approach grade crossings. Consequently, the new pedestrian grade crossings that were constructed as part of the beach trail require trains to sound their horns when traversing this area.

Over the past few years the City has pursued several measures aimed at reducing or eliminating train horn noise along this beach trail corridor. Such measures have included:

- Efforts to establish a quiet zone through this area
- Grade separation of pedestrian crossings
- Implementation of a wayside horn system (WSH)

Quiet Zone

On November 9, 2007, the City issued a Notice of Intent to create a quiet zone along the San Clemente beach trail. However, due to FRA regulations a majority of the pedestrian grade crossings are not eligible for inclusion in the proposed quiet zone. The City also completed a memorandum of understanding with the City of Oceanside to pursue a multi-jurisdictional quiet zone extending from San Clemente through the Marine Corps Base Camp Pendleton into the City of Oceanside. This multi-jurisdictional quiet zone would meet FRA regulations, but requires significant safety improvements at grade crossings in the City of Oceanside. The City of Oceanside does not currently have adequate funding to pursue these safety improvements.

Grade Separation

The City has also evaluated grade separating several of the pedestrian grade crossings to eliminate the need for trains to sound their horns. Concerns with environmental impacts, cost, trail maintenance, and the trail becoming impassable during high tides due to flooding have ruled out the possibility of grade separating the pedestrian grade crossings. The City has concluded that the grade separation option is not cost effective and has a considerable environmental impact.

Wayside Horn

The City and OCTA are currently working together to evaluate the possibility of installing an automated WHS as a measure to reduce train horn noise until it is possible to implement a quiet zone. The WHS is a stationary audible system, which warns vehicles and pedestrians of approaching trains at grade crossings. The WHS is mounted at the grade crossing rather than on the

locomotive and is activated by the grade crossing warning system. The FRA considers the WHS to be a one-for-one substitute for the train horn.

On September 3, 2009, the City performed site demonstrations of a WHS at two pedestrian grade crossings on the San Clemente beach trail. The horns were sounded per FRA requirements for grade crossings, which dictate a minimum horn volume of 92 decibels (dBA) at a distance of 100 feet. Based on the feedback received by the City, community acceptance of a WHS is unlikely unless the horn volumes are significantly lower than 92 dBA at 100 feet from the horn.

The City, in cooperation with OCTA, has been in discussions with the CPUC to get a determination if a reduced volume (potentially between 75 and 92 dBA) would be acceptable for a WHS at pedestrian and private grade crossings along the beach trail. The FRA has indicated that since it only requires the sounding of a horn at public grade crossings, sounding of horns at pedestrian-only and private grade crossings in California is regulated by the CPUC.

A formal CPUC site diagnostic meeting was held on September 24, 2009, to review the pedestrian and private grade crossings along the San Clemente beach trail. Recommendations for further safety enhancements were noted by CPUC, these recommendations conform to the Southern California Regional Rail Authority (SCRRA) Grade Crossing Design Criteria Manual and include installation of emergency exit pedestrian swing gates, pedestrian channelization and fencing, additional tactile warning tiles, and widening the crossing surface and walkway approaches. The recommended improvements are consistent with those being constructed under the current grade crossing safety enhancement program. It is SCRRA's policy to upgrade grade crossings to current standards when other grade crossing modifications are performed. The CPUC has indicated that these additional safety enhancements will be required if a WHS is constructed at each pedestrian crossing.

In an effort to gain approval of reduced wayside horn volumes, two additional wayside horn demonstrations, sponsored and coordinated by OCTA, were conducted on December 15, 2009 and February 2, 2010. The horns were sounded at three noise levels; 75 dBA, 85 dBA, and 95 dBA, measured 12 feet from the face of the horn. During these demonstrations dBA readings were recorded at multiple locations; at the grade crossing approximately 12 feet from the horn, on the beach trail 100 feet from the face of the horn, and in a residential area on the bluff top above the vicinity of the horn. These sound measurements were used to complete a three-dimensional noise model along the entire railroad corridor through San Clemente. The model depicts the sound affects along the beach trail and in the surrounding community. A technical noise study report, which included the results of the noise model

was completed on March 31, 2010, and distributed to all stakeholders for review and comment.

Discussion

On March 24, 2010, the CPUC sent a letter to OCTA and all the affected railroad agencies identifying a formal application process for the review and approval of the use of a WHS at reduced volumes at the pedestrian and private grade crossings in San Clemente. The letter stated that since the FRA has indicated it only requires the sounding of the train horn at public grade crossings, and state law (Public Utilities Code 7604) requires sounding an audible device at pedestrian-only and private grade crossings, the matter is a state issue. Therefore, since these grade crossings do not meet FRA criteria for consideration of inclusion in a FRA quiet zone, under Title 49 Code of Federal Regulations, Part 222, the review and approval will come from the CPUC.

The CPUC has since recommended that the City and OCTA work to assure all involved parties are in agreement to the use of a WHS at reduced volumes prior to filing the application so as to avoid any protests or interventions in the proceeding, which would cause the case to be assigned to an administrative law judge, possibly resulting in hearings and a more lengthy process. In an effort to gauge each stakeholder's position on the CPUC letter, a kick off meeting was held on March 31, 2010, with representatives from the Burlington Northern and Santa Fe (BNSF) Railway, City, CPUC, FRA, OCTA, and SCRRA in attendance. The approval process, criteria, and timeline for implementation of a WHS were discussed.

On April 21, 2010, the FRA issued a letter stating that the FRA does not regulate the use of a WHS at pedestrian and private grade crossings outside of quiet zones. However, the FRA did recommend that, unless State law provides otherwise, the FRA standards for a WHS should be followed unless data analysis has determined that a variation does not reduce safety.

This issue is currently being addressed through meetings between legal counsel representatives. Pending the outcome of these meetings, the City and OCTA will collaboratively develop a plan to address the reduction of train horn noise along the beach trail at the pedestrian grade crossings. In anticipation of resolution on the issues, staff will also work to devlop a funding plan for implementation of the wayside horns along the beach trail. This funding plan will be consistent with the existing Rail-Highway Grade Crossing Safety Enhancement and Quiet Zone Program, including a requirement for City participation of 12 percent and OCTA participation of 88 percent, and is anticipated to be funded with Measure M2.

Next Steps

OCTA will continue working with all involved agencies to coordinate and gain consensus on the appropriate path to implement a WHS along the San Clemente beach trail.

Summary

OCTA staff is in the process of assisting the City obtain relief from train horn noise at the pedestrian and private grade crossings along the San Clemente beach trail. OCTA will continue to lead the coordination efforts of all stakeholders in order to galvanize support for the implementation of a wayside horn system at reduced volumes at these grade crossings.

Attachment

None.

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