

# EUGENE CITY COUNCIL

## AGENDA ITEM SUMMARY



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### Work Session: Railroad Quiet Zone

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Meeting Date: October 8, 2014  
Department: Public Works Maintenance  
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Agenda Item Number: B  
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#### **ISSUE STATEMENT**

The City Council has asked for an update on the status of a Downtown Railroad Quiet Zone. In the last decade, following council direction, staff has analyzed the requirements, costs and public support for various options related to establishing a railroad quiet zone. The purpose of the Quiet Zone (QZ) is to eliminate the routine sounding of train horns at 10 downtown railroad crossings to increase neighborhood livability and downtown redevelopment potential. Regional experience has demonstrated that a Quiet Zone is possible; previous cost estimates are significantly less than actual construction and operations costs will be, and funding has come from local, not state or federal sources.

#### **BACKGROUND**

In 2005, the Department of Transportation passed rules which codified the use of train horns at rail crossings and allowed for the creation of a Quiet Zone where horns would not be sounded based on alternative safety measures reducing the risk of crashes. The Federal Railroad Administration (FRA) Risk Index is a statistical calculation based on FRA analysis based on the existing conditions and the FRA Risk Calculator modifies the Index based on proposed supplemental safety measures (SSM). FRA uses the term "Risk Index with horns" to reflect current conditions in Eugene. FRA annually calculates a National Risk Threshold reflecting the nationwide crash experience with crossings.

There are three ways the city could add SSMs in order to obtain a Quiet Zone:

1. Add SSMs at each crossing;
2. Add sufficient SSMs to reduce the Risk Index below the current Risk Index with horns, or
3. Add sufficient SSMs to reduce the Risk Index below the National Risk Threshold.

The first alternative must be recertified on a five-year cycle, the second alternative recertified on a two- to three-year cycle and the last alternative must be recertified annually. The existing Risk Index with horns and the National Risk Threshold vary as the crash or incident history, automobile crossing volume and train frequency changes. The National Threshold has fallen from 19,347 in 2007, to 14,347 this year. Locally the Risk index with Horns has increased from 14,849 in 2007, to a current value of 16,762.

The council held railroad quiet zone work sessions on July 20, 2005, June 26, 2006, and February 25, 2008. The agenda item summaries from each of the work sessions are attached. The analysis was focused on specific supplemental safety measures (SSM) designed to reduce the statistical risk levels sufficiently to obtain a quiet zone designation from the Federal Rail Administration (FRA). Among the measures considered were closing streets, converting two-way streets to one-way operation, constructing "quad" gates and installing other apparatus to warn people of approaching trains and/or keep them off the tracks.

At the first work session, staff presented information about the Federal Railroad Administration rules allowing local jurisdictions to obtain a Quiet Zone designation. At that session, the council directed the City Manager to further refine cost estimates for specific construction of several of the supplemental safety measures required to obtain a Quiet Zone and to monitor the quiet zone process and evaluate the progress made by other jurisdictions. The proposed Quiet Zone includes the ten railroad crossings from 8<sup>th</sup> and Hilyard on the east to Van Buren on the west. A map is attached. Seven potential scenarios using a mixture of different crossing supplemental safety measures (SSM) treatments was presented. The FRA rules describe Quiet Zones as local community improvements and federal funds were not made available for the express purpose of obtaining a Quiet Zone.

At the second work session, staff presented options for obtaining a QZ with federal and state funding. Based on the safest crossing being one that was closed, eliminating the possibility of a crash, the Federal Secretary of Transportation announced an initiative to close redundant or unnecessary crossings. ODOT Rail Division offered to partner with the City using federal funds, if the City would agree to closing crossings. The City Council directed staff to study the necessary steps to close up to four railroad crossings and convert streets to one-way at railroad crossings in order to obtain federal Title 23 Section 130 funding for crossing safety improvements at the remaining crossings and conduct a public process to gage support for potential street closures.

The third work session presented the outcome of the public process and focused on the development of SSM alternatives needed to obtain a QZ. Community support for a Quiet Zone was high, but support for closing any of the street crossings almost non-existent. At the conclusion of the meeting, the council adopted a motion directing staff to pursue funding for a Quiet Zone based on a design using all quad gates at all ten crossings. In 2008, the cost for quad gates was estimated by the Federal Railroad Administration at about \$400,000 each.

### **Regional QZ Experience**

Since 2008, many jurisdictions have designed and funded the improvements necessary to obtain Quiet Zones. Salem, Oregon is the closest city to do so. The Salem QZ was obtained by using a number of what FRA considers lower cost SSMs. Salem funded its QZ as a specific project included in a large local street repair bond measure. No state or federal funds were used.

The Salem QZ project was similar in size to the Eugene study area and included SSM work at 10 crossings. Salem used a combination of non-traversable curbs, median islands and conversion of a two-way street to one-way to obtain its QZ. Salem chose to install SSMs at every crossing lengthening the interval until required FRA recertification of the QZ.

Salem conducted a wayside horn demonstration. Wayside horns are a form of SSM that uses remote-activated, permanently mounted horns, placed to sound directly down the streets

approaching the RR crossing to provide the audible warning of an approaching train. The duration is the same as train-mounted horns, but due to the location and directionality the loudest volume is less than that of a train-mounted horn. On the other hand, the volume is constant and does not rise and fall as a stationary observer would notice when the train moves. While the demonstration is described as well-received by the public, the estimated \$200,000 cost per crossing was higher in cost than the other SSMs used in Salem and would not eliminate routine horn sounding.

### **Updating Alternatives and Cost Estimates**

The original Salem proposal was estimated at \$1.2 million for these lower cost safety improvements. Ultimately Salem QZ improvements to 10 RR crossings cost \$2.6 million, more than twice the original estimate. Both Salem staff and ODOT staff report actual construction costs to be in excess of FRA estimates. The Americans with Disabilities Act mandates enhancement of pedestrian facilities at rail crossings when other work is done, but the largest part of the increased cost is simply the difference between the FRA estimates and real world construction costs.

Salem is currently working on adding two additional crossings to its QZ. One crossing will include its first quad gate. Staff estimates the work on these two crossings will cost \$1.7 million. Salem staff recommends using \$1 million as a reasonable construction estimate for quad gate installation. Quad gates are maintained by the railroad at local road authority expense, currently \$9,000 per year per crossing with quad gates.

Re-location and reconstruction of the Hilyard /8<sup>th</sup> railroad crossing and associated redevelopment of the Eugene Water & Electric Board (EWEB) site will increase the traffic using the crossing and the Risk Index of that crossing. A recent fatality at the crossing already increased its Risk Index significantly. The geometric constraints of this crossing will make a quad gate the SSM of choice.

The safest railroad crossings are grade-separated or closed, eliminating the potential for a crash. Proposed enhancements at the Amtrak station in the City's long-range plans for improving passenger rail service include a new siding for keeping passenger trains overnight at the Eugene Station. The new switch to serve the new siding will require closure of the Lincoln Street crossing.

To make quad gate improvements at the nine remaining crossings will cost about \$9,000,000 and require an annual railroad maintenance cost of \$81,000.

Based on the Salem experience, quad gates at 8<sup>th</sup>/Hilyard and 5<sup>th</sup> streets coupled with average-priced alternative SSMs at the seven remaining crossings would cost about \$3,820,000 and require an annual railroad maintenance cost of \$18,000.

### **Funding**

In Eugene no local funding source, of sufficient magnitude to make all the improvements needed for a QZ, has been identified or programmed. Potential sources of local funding include the General Fund, Community Development Block Grants, urban renewal funds, and assessments levied through a local improvement district. Staff is not aware of any non-local sources of funding that could pay for creation of a quiet zone.

### **Impact**

Creating a quiet zone will have the immediate impact of enhancing neighborhood livability for those residential areas impacted by train noise. As the Lane Livability Consortium report notes, impacts from noise due to trains result in negative consequences for health and wellbeing. While the train horns are audible many miles from the tracks, those areas closest to the tracks are hardest hit. A railroad quiet zone would benefit residents in these areas in a significant way, and enhance livability throughout the community.

Downtown development scenarios, particularly housing, are also negatively impacted by the sounding of rail horns. The noise from the horns is considered an environmental impediment for redevelopment, typically increasing the costs and impacting the type of use envisioned. The prospective developers of the EWEB riverfront property stated that a quiet zone is critical to their development scenarios, as have other developers of private property in the Fifth Street Market and northeast downtown areas. Since downtown development has a significant role in the implementation of Envision Eugene as well as the Regional Prosperity Plan, the importance of a quiet zone cannot be overstated.

## **RELATED CITY POLICIES**

### City Council Goals:

- Neighborhood Empowerment
  - Redesign the neighborhood initiative to support the neighborhoods which includes public participation in the livability and protection of neighborhoods
- Sustainable Development
  - Increased downtown development

### Adopted Growth Management Policies:

- Policy 1: Support the existing Eugene Urban Growth Boundary by taking actions to increase density and use existing vacant land and under-used land within the boundary more efficiently.

### Envision Eugene Pillars:

- Promote compact urban development and efficient transportation options.
  - Integrate new development and redevelopment in the downtown, in key transit corridors and in core commercial areas.
  - Meet the 20-year multi-family housing need within the existing Urban Growth Boundary.
  - Make compact urban development easier in the downtown, on key transit corridors, and in core commercial areas.
- Protect, repair, and enhance neighborhood livability.

### Regional Prosperity Economic Development Plan:

- Strategy 5: Identify as a Place to Thrive - Priority Next Step - Urban Vitality
  - As a creative economy is fostered, dynamic urban centers are an important asset. Eugene, Springfield and many of the smaller communities in the region recognize the importance of supporting and enhancing vitality in their city centers. Building downtowns as places to live, work and play will support the retention and expansion of the existing business community and be a significant asset to attract new investment. The Cities of Eugene and Springfield will

## ATTACHMENT A

continue to enhance their efforts to promote downtown vitality through development and redevelopment.

### Eugene Climate & Energy Action Plan:

- Increase density around the urban core and along high-capacity transit corridors

### Eugene Downtown Plan:

- Facilitate dense development in the courthouse area and other sites between the core of downtown and the river.
- Stimulate multi-unit housing in the downtown core and on the edges of downtown for a variety of income levels and ownership opportunities.
- Downtown development shall support the urban qualities of density, vitality, livability and diversity to create a downtown, urban environment.
- Facilitate dense development in the courthouse area and other sites between the core of downtown and the river.

## COUNCIL OPTIONS

Staff has identified options for the council to consider in providing direction on this issue:

- A. Continue to monitor Quiet Zone experience in other jurisdictions.
- B. Direct staff to evaluate alternative scenarios and local funding options for a QZ.

## CITY MANAGER'S RECOMMENDATION

Direct staff to explore options for use of alternatives to obtain a Downtown QZ, investigate options for local funding and bring a proposed QZ back to the council.

## SUGGESTED MOTION

Move to direct the City Manager to explore optional scenarios to obtain a downtown Quiet Zone, investigate options for local funding and bring a Quiet Zone proposal back to the council.

## ATTACHMENTS

- A. February 25, 2008, Agenda Item Summary and map of study area
- B. June 26, 2006, Agenda Item Summary
- C. July 20, 2005, Agenda Item Summary

## FOR MORE INFORMATION

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