



**FOR COUNCIL MEETING OF:
AGENDA ITEM NO.:
PUBLIC WORKS FILE NO.:**

November 9, 2009
6 (a)

TO: MAYOR AND CITY COUNCIL
THROUGH:  LINDA NORRIS, CITY MANAGER
FROM:  PETER FERNANDEZ, P.E., PUBLIC WORKS DIRECTOR
SUBJECT: RAILROAD CROSSING SAFETY IMPROVEMENT PROJECTS

ISSUE:

Staff has completed the data collection and analysis necessary to identify the locations for proposed Railroad Crossing Safety Improvement projects that have the greatest potential to improve safety and achieve a railroad horn-free or "quiet zone". Staff can now begin the process of working with the Oregon Department of Transportation (ODOT) Railroad Division, Union Pacific Railroad, Federal Railroad Administration, and affected neighborhood associations in the design and approval of the safety improvement projects and implementation of a Quiet Zone along a segment of railroad line in Salem.

RECOMMENDATION:

Information only.

BACKGROUND:

On November 4, 2008, Salem voters approved the City's \$99.8 million Streets and Bridges General Obligation Bond Measure. Of that amount, the measure funds a total of \$38.4 million in safety improvement projects. The bond resolution further allocates \$1,212,000 in bond proceeds for improving railroad crossing safety. ODOT Rail Division has discussed with City staff the possibility of obtaining Federal Railroad Administration safety grants to augment the City bond proceeds allocated to this category.

On February 2, 2009, Council approved the criteria listed below to be used to determine the location of individual railroad crossing safety improvement projects. Within each criterion, priority should be given to projects that have identified commitments of federal or state grant funds that can be leveraged with bond proceeds.

1. Projects that would improve vehicular and pedestrian safety to the extent that it would help a segment of railroad line to qualify for a horn-free or Quiet Zone

2. Projects that would improve pedestrian crossing safety, as well as reduce pedestrian trespassing along a rail line in the core area
3. Projects that would generally improve vehicular and pedestrian safety and the physical condition of street railroad crossings throughout the city

Staff advised the Council that most of the crossing improvement projects might require several years to design and construct due to the regulatory nature of the projects, lengthy lead time needed to obtain railroad safety equipment, desired public outreach, and coordination needed with the railroad companies. However, the time requirements for each of the projects will be specific to its location and scope.

At the September 28, 2009, Council meeting, Council requested that staff move the design phase of the Railroad Crossing Safety Improvement Projects forward in the Capital Improvement Program schedule into the current fiscal year budget. The design work will begin in the current fiscal year using existing budget authority.

FACTS AND FINDINGS:

There are currently two active rail lines that run through Salem; the Union Pacific (UP) and the Portland and Western (P&W).

The P&W line generally follows the Willamette River from the south then turns eastward near Shipping Avenue N and continues northerly through the Grant, Highland, and Northgate Neighborhoods, then continues northward along the west side of Interstate 5. The analysis area for potential crossing safety improvements on the P&W line is between Minto Road S and Claxter Road NE.

The UP line enters Salem from the south from the City of Turner and travels northerly along the 12th Street SE corridor, travels through the SESNA, NEN (bordering CANDO), and Northgate Neighborhoods, crosses under Interstate 5, and continues northerly along the east side of the Interstate 5. The analysis area for potential crossing safety improvements on the UP line begins at Madrona Avenue SE and ends at Claxter Road NE.

Table 1: General Information on Railroads through Salem

	Union Pacific	Portland and Western
Analysis Begin Point	Claxter Road NE (RR MP 722.05)	Claxter Road NE (RR MP 67.62)
Analysis End Point	Madrona Avenue SE (RR MP 716.20)	Minto Road SE (RR MP 73.03)
Average Daily Trains	18	5
Maximum Speed	35 MPH	35 MPH
Public At-Grade Crossings	17	22*
Major Arterial Streets Crossings	9	4

	Union Pacific	Portland and Western
Minor Arterial Streets Crossings	3	4
Collector Streets Crossings	4	2
Local Streets Crossings	1	12

* Seven of the intersections are along Front Street NE where the track is concurrent with the street.

Table 2: Recent Rail Safety Information

Rail Safety Information	Union Pacific	Portland and Western
Vehicular Crashes 2004-2009	2	6*
Pedestrian Crashes 2004-2009	2**	0

*All of the P&W incidents occurred along the Front Street NE corridor where the tracks and the street occupy the same space.

**Both pedestrian crashes were fatalities.

Analysis

Staff has collected crash data, vehicle traffic volume data, and inventoried the geometric design of the individual rail crossings within Salem in order to evaluate where the bond proceeds would be best utilized. Given the number of crashes within the City, there are two railroad segments that warranted further evaluation to determine if it is reasonable for the City to use Railroad Crossing Safety bond funding to make improvements to reduce the number of crashes.

Segment 1: Portland and Western

There were six (6) crashes between 2004 and 2009 along the P&W line between Division Street N and Shipping Street N, all involving vehicles and no fatalities. Although this is relatively high number given the number of daily trains, the improvements that would be required to eliminate these conflicts would exceed the amount of bond funding available. However, City staff and representatives from the P&W line have begun discussions regarding undertaking a study of how to relocate the existing rail line from the middle of Front Street N in the future.

Segment 2: Union Pacific

The section of the UP line that experiences the majority of crashes, including two (2) pedestrian fatalities, is between Mill Street SE and Market Street NE. The UP line currently carries an average of 18 trains per day and has the greatest concentration of pedestrian activities. There are a significant number of pedestrians that utilize the 12th Street Promenade between Mill Street SE and Marion Street NE as well as pedestrians crossing the tracks near Parrish Middle School and North Salem High School at D Street NE.

This segment between Mill Street SE and Market Street NE has eight (8) at-grade crossings where half of the crossings are one-way streets (State Street, Court Street NE, Center Street NE, and Marion Street NE). Focusing the Railroad Crossing Safety Improvement Project funding in this vicinity will greatly increase the likelihood of achieving a railroad "quiet zone" through a portion of the City that will have the greatest impact on surrounding neighborhoods. And if funding allows, we would propose continuing the improvements to the north and include Madison Street NE.

Next Steps

Staff will set up a Diagnostic Team that includes City Staff, ODOT Railroad Division, Union Pacific Railroad, and Federal Rail Administration, to address potential improvements along the Union Pacific rail line beginning at Mill Street SE and ending at Market Street NE.

The potential Supplemental Safety Measures (SSM) that must be considered at each crossing include one or more of the following:

- Four Quadrant Gates (gates on both sides of the railroad tracks)
- Channelization with delineators (raised median with reflectorized markers)
- One-way streets (already have four one-way crossings)
- Street Closures

There are Alternative Safety Measures that may be considered with approval from the Federal Rail Administration in lieu of the SSMs listed above.

- Wayside Horns (a stationary, focused horn mounted at the crossing to warn drivers and pedestrians of the oncoming train)

If, through these improvements, the corridor qualifies for a "quiet zone" designation, the whistle ban should not take effect until all of the Supplemental Safety Measures or Alternative Safety Measures are in place and operational. A nationwide study showed that gated crossings where train whistles were banned saw a 62 percent increase in collisions versus crossings where the trains sound their horns. The Federal Rail Administration Quiet Zone Risk Index assumes the risk of a crash increases by 66.8 percent without the train horn. There could be a significant increase in liability to the City if the train horns are silenced before the mitigation measures are in place.

Public Involvement

As the Diagnostic Review Team meets and establishes appropriate mitigation measures, staff will meet with the effected Neighborhood Associations (NEN, CANDO, SESNA, Northgate, Grant, and Highland) to discuss the Rail Road Crossing Safety Improvement projects and the likely "quiet zone" area.

There has already been a meeting with NEN and several telephone and e-mail conversations with NEN board members discussing the "quiet zone" and the steps necessary to achieve their desired result.

A link on the City of Salem website will be created to keep Neighborhood Associations and citizens apprised of the progress. The webpage will be a central repository of information and will include status reports, links to other pertinent sites regarding rail crossings and quiet zones, and may include a link to allow for citizen input and feedback regarding the proposals.

There will be subsequent informational reports to City Council to provide updates of the progress of the Railroad Crossing Safety Improvement Projects and the progress toward a "quiet zone."

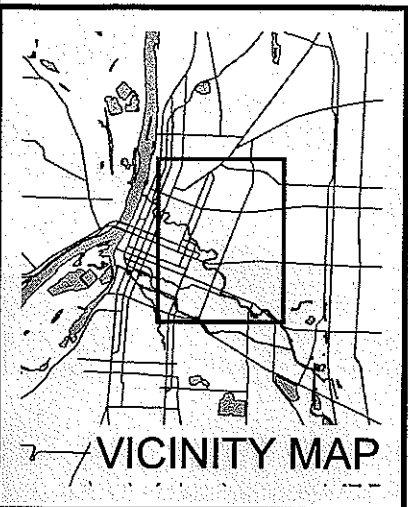


Mark Becketl, AICP
Parks and Transportation Services Manager

Attachment: Railroad Crossing Safety Improvements Potential "Quiet Zone"
Wards: All
October 28, 2009
Prepared by: Tony Martin, P.E., Assistant City Traffic Engineer



RAILROAD CROSSING SAFETY IMPROVEMENTS POTENTIAL "QUIET ZONE"



VICINITY MAP

MADISON STREET NE
(IF FUNDING ALLOWS)

MARKET STREET NE

D STREET NE

MARION STREET NE

CENTER STREET NE

CHEMEKETA STREET NE

COURT STREET NE

STATE STREET

MILL STREET SE

Legend

- Tax Lots
- UP

