

CITY OF SANTA ROSA  
CITY COUNCIL

TO: MAYOR AND CITY COUNCIL  
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TRANSPORTATION AND PUBLIC WORKS - TRAFFIC

SUBJECT: SMART PREPAREDNESS UPDATE AND QUIET ZONES IN  
SANTA ROSA

AGENDA ACTION: RESOLUTION

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RECOMMENDATION

It is recommended by the Transportation and Public Works Department, Fire Department and Police Department that the Council accept the update and by resolution, file a Notice of Intent with the Federal Railroad Administration; the railroads that operate within the Quiet Zones; and with the State agencies responsible for highway and grade crossing safety to establish 24-hour Quiet Zones through the City of Santa Rosa, from Bellevue Avenue to San Miguel Road, including all grade crossings between these limits.

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EXECUTIVE SUMMARY

The Transportation and Public Works, Fire and Police Departments will provide an update on the state of preparedness for the initiation of SMART fare service through Santa Rosa. In addition to physical improvements and significant coordination efforts, staff has been researching and preparing the necessary documentation relating to the establishment of Quiet Zones. Staff has prepared a resolution for Council to consider that would direct staff to submit a Notice of Intent to establish a rail Quiet Zone at all fourteen highway-rail grade crossings throughout Santa Rosa, the Railroad Square pedestrian-rail grade crossing plus the new pedestrian-rail grade crossing at Jennings Avenue. This does not prohibit trains from using their horns in the event of emergencies or in the exercise of discretion by the train operator as deemed necessary.

### PRIOR CITY COUNCIL REVIEW

During a study session in September 2009, staff provided the Council with a description, process for establishing and discussion about the pros and cons of Quiet Zones. As discussed, the positive outcome of a Quiet Zone is that the train horn does not regularly sound and impact residents and businesses along the rail. The negative is that one of the railroad's primary proven safety measure, regularly sounding the horn, has been reduced.

On August 14, 2012, the City Council, by Resolution No. 28181, unanimously authorized a funding agreement with Sonoma Marin Area Rail Transit (SMART) to complete the environmental review and design alternatives of a grade separated pedestrian and bicycle crossing the SMART railroad corridor and Jennings Avenue.

On November 13, 2012, City staff presented the results of the feasibility study to the Council, including that California Public Utilities Commission (CPUC) staff had stated that approval of an at-grade crossing at Jennings Avenue would be unlikely unless at least one existing at-grade crossing was eliminated at either W. Sixth, W. Seventh or W. Eighth Streets, near the West End Preservation District. At that meeting, the Council expressed a preference to study an at-grade pedestrian and bicycle crossing as the preferred project. The item was then continued to a future Council meeting to allow staff additional time to ascertain potential costs of environmental review.

On May 21, 2013, the Council, by Resolution No. 28284, unanimously directed City staff to complete environmental review in compliance with the California Environmental Quality Act (CEQA) for an at-grade pedestrian and bicycle crossing of the SMART railroad corridor and Jennings Avenue, including an ADA compliant pedestrian and bicycle rail overcrossing alternative and possible removal of an existing crossing at W. Sixth, W. Seventh or W. Eighth Street.

On November 18, 2014 the Council held a public hearing on the Draft EIR

Council certified the Jennings Avenue Pedestrian and Bicycle Rail Crossing Final Environmental Impact Report on March 17, 2015, and directed staff to apply for an at-grade crossing without closure of an existing crossing. A Quiet Zone was included as a potential mitigation measure if that crossing was installed. Noise was identified as one of the significant impacts that would affect the adjacent community.

On May 3, 2016, staff presented a potential structure for a downtown circulator shuttle that would connect the Santa Rosa Downtown SMART station and Garage 1. The intent of this shuttle would be to connect a designated commuter parking field with the regional transit system.

### ANALYSIS

#### **Police Department**

The Police Department has been preparing for passenger rail service through the City

since freight serviced returned to the tracks in 2011. Staff in the Traffic Bureau have been collaborating with SMART officials, City departments, and other law enforcement agencies in the region to coordinate emergency responses. Staff has identified high volume intersections with assistance from Traffic Engineering and provided this information to SMART to develop proper safety measures for crossings.

Staff has attended training specific to railway safety and obtained documents from SMART regarding operations, coordination, and further training. Training plans for Accident Investigators and Field Technicians have been updated in preparation for rail service. Equipment has been purchased to assist in critical investigations related to collisions. In 2015, staff in the Patrol Division, Dispatch, SWAT and HNT participated in training at the SMART maintenance facility. Staff were trained on familiarization of the trains and emergency response in the event of a critical incident.

Beat officers and the Downtown Enforcement Team are educating the public along the railway regarding safety. Officers have worked with the Homeless Outreach Services Team (HOST) to contact people in encampments along the railway to offer services, provide safety information and clear areas to increase safety. Police Personnel are also working with SMART and Transportation & Public Works on future public awareness notifications through pamphlets, school notifications, and social media.

The Police Department is collaborating with other law enforcement agencies throughout the region to develop a multi-agency rail collision response team. The Police Department will be responding to calls for service for incidents that occur within our jurisdiction. Additionally, the Sonoma County Public Safety Consortium is working with SMART to display train location information on the CAD map to minimize response times in the event of an emergency.

### **Fire Department Update**

The Fire Department has been preparing for rail service to return through the City since freight serviced returned to the tracks in 2011. Burlington Northern and Santa Fe Railway (BNSF) who is the holding corporation for Northwestern Pacific (NWP) instructed all Fire Department personnel on general railway and train safety. Fire Department Management has been working cooperatively with SMART and regional first responder agencies to coordinate response planning for several years bringing several training components back to the workforce. SMART has supplied several documents that outline first responder planning, proper mitigation of various emergencies and SMART Diesel Multiple Unit (DMU) operations that have been published as mandatory reading for all suppression personnel. In February 2016, Fire Department employees participated in a regional training exercise with SMART that took a first-hand look at DMU construction, safety features and rescue components. Fire Department personnel have been comprehensively trained on how to handle a large variety of emergency events that could take place with the return of rail service to the City of Santa Rosa and the region.

### **Transportation and Public Works**

The Transportation and Public Works Department has been actively engaged with SMART since 2008 to review and comment on the overall project to reconstruct the rail

line, improve crossing equipment, locate and construct station platforms, research and evaluate Quiet Zone implementation, develop and construct segments of the multi-use path as well as coordinate signal timing and bus transit with the anticipated train schedule.

#### Transit Division

Transit staff has been actively involved with the coordination and integration of CityBus and SMART service. The Reimagining CityBus project resulted in the restructuring of both service routes and frequency to increase service options for both the Santa Rosa Downtown and Santa Rosa North SMART stations. This has resulted in two new bus stops adjacent to the stations, one of which requires the construction of a new pullout that is being constructed this Fall. Staff has also been actively engaged with SMART, the Chamber of Commerce and business community to consider options for connecting large employers with SMART service. This has resulted in some route modifications as part of the Reimagining CityBus project, but also a conversation among employers about establishing an employer shuttle system.

Transit Division staff participate in ongoing meetings with SMART and other transit operators to coordinate marketing efforts and public information. Staff is also working with Clipper and SMART staff to extend Sonoma County's multi-operator reciprocal transfer agreement to SMART in order to reduce the cost for riders transferring between systems and to further develop the Clipper retail network in Sonoma County.

In addition, Transit staff lead a series of stakeholder meetings to determine what services should be accommodated at the Santa Rosa Depot parking lot to support SMART's operation and intermodal connections. The stakeholder's developed a lengthy list of short- and long-term changes and services that should be added both within and in the vicinity of the Depot lot. This work has recently been transferred to the Parking Division which has hired a consultant to help develop an implementable plan to support Day 1 SMART operations.

Transit has also been working closely with the Parking Division to evaluate and develop a potential downtown circulator shuttle that would primarily service SMART riders by developing a convenient shuttle connection between Garage 1, located on Seventh Street and the Santa Rosa Downtown SMART station.

#### Traffic Engineering and Capital Projects Engineering

The Traffic Engineering team attends and actively participates in monthly SMART Technical Advisory Committee meetings. Their attendance has provided the City with timely information and a forum to discuss key issues that arisen with the construction activity.

Working closely with SMART, Capital Projects Engineering staff was able to utilize SMART's contractor to design and construct a multi-use path connecting Third Street, Fourth Street and the Santa Rosa Downtown station platform. With the development on the west side of the tracks still in discussions, it was critical to get this point of access open. Most of the transit service supporting SMART will exist on Third Street, which

makes this pathway connection important. This work is very nearly complete and will be fully open prior to SMART initiates fare service.

The Traffic Engineering has been busy ensuring that the safety equipment near the railroad crossings are in good condition, compliant with both State and Federal standards and coordinated with adjacent signalized intersections. Over the past decade, the team has been reviewing the Manual of Uniform Traffic Control Devices and meeting with staff from the California Public Utilities Commission (CPUC) and SMART to determine what signage and striping improvements must be made prior to the various stages of operation.

Staff is in the process of completing, what we anticipate is, the last round of improvements and modifications to the signing and striping approaching each of the rail grade crossings. In addition, staff has invested significant resources to physically interconnect the railroad signal house that controls the gate arms with the adjacent traffic signals. It is critical that these safety features work in concert with one another to limit the potential for significant vehicle queues both across the tracks and through the adjacent intersections. To ensure that these safety features continue to work through disasters and power outages, staff added battery backup devices to all of the adjacent signalized intersections.

Lastly, staff has spent significant time coordinating the timing associated with when the gate arms are activated and the mode of operation for adjacent traffic signals. This is a very complicated process that requires some trial and error. Teams from both Traffic Engineering and SMART have been making adjustments to this coordination throughout SMART's initial testing period.

Capital Projects Engineering staff is also actively designing a new bus pullout adjacent to the Santa Rosa North station to provide improved and convenient transit service to SMART riders. This work is anticipated to be completed before SMART fare service begins. Staff has also been actively involved in evaluating and designing a new pedestrian grade crossing at the location of Jennings Avenue. On September 15, 2016, the CPUC ruled in favor of establishing this pedestrian grade crossing.

### **Quiet Zones**

The Federal Railroad Administration (FRA) is the governing agency responsible for the approval and enforcement of train horn use throughout the United States. In 2005, the FRA published the Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings (49 CFR Part 222) which requires locomotive horns to be sounded at all public grade crossings not less than 15 seconds and no more than 20 seconds before the lead locomotive enters the intersection and blocks traffic. The pattern for blowing the horn remains two long, one short, and one long sounding to be repeated as necessary until the locomotive clears the crossing. The horn must sound at loudness intensity of from 96 to 110 decibels. Locomotive engineers retain the authority to vary the pattern as necessary for crossings in close proximity and in emergency circumstances.

The Final Rule preempts any state or local laws regarding the use of the train's horn at public crossings. The Final Rule provides public authorities such as the City of Santa Rosa the option to establish a Quiet Zone provided certain Supplemental Safety Measures (SSM) or Alternative Safety Measures (ASM) are in place and the Quiet Zone Risk Index for the subject grade crossing is at or below the Nationwide Significant Risk Threshold.

A Quiet Zone is a segment of rail line at least one half mile in length that contains one or more consecutive highway-rail crossings where the train horn is not routinely sounded.

Quiet Zones have been established along various rail corridors throughout the United States in an effort to reduce the noise impacts of train horns adjacent residential properties. The premise of a Quiet Zone is to restrict the use of rail operator's horns and not sound the engine's horn on approaches to rail crossings, unless absolutely necessary to avoid an incident.

There are two types of Quiet Zones that may be applicable in Santa Rosa, a new full Quiet Zone where the horn is silenced 24 hours a day or a new partial Quiet Zone where the horn is silenced for a portion of the day (between 10:00pm and 7:00am).

The process for establishing a Quiet Zone is comprised of several steps:

- Hold diagnostic review with FRA, California Public Utility Commission (CPUC), Sonoma-Marín Area Rail Transit (SMART) and City of Santa Rosa (completed on 8/12/16)
- File a Notice of Intent with FRA; the railroads that operate within the Quiet Zones; and with the State agencies responsible for highway and grade crossing safety (pending Council action)
  - Include updated crossing inventory
  - Supplemental Safety Measure Verification
  - Alternative Safety Measure justification of effectiveness
  - Construct any needed enhancements
  - Open 60-day comment period
- File a Notice of Establishment
  - Identifies enhancements made
  - 21-day waiting period
- Post signs indicating No Train Horn

The warning equipment at each crossing would continue to operate if a Quiet Zone is established. This includes the gate arms, flashing lights and bells located at each crossing. A Quiet Zone only reduces the use of the train horn at the crossings. The train operator is still required to sound the horn while departing each station, even within a Quiet Zone.

A diagnostic team of City Transportation and Public Works, Sonoma Marin Area Rail Transit (SMART), the Federal Railroad Administration (FRA) and the California Public Utilities Commission (CPUC) staff have reviewed each crossing in Santa Rosa from

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Bellevue Avenue to San Miguel Road. During this review, the FRA identified crossings that qualified for Quiet Zones with Supplemental Safety Measures (SSMs) and those that had Alternative Safety Measures (ASMs).

Supplemental Safety Measures are a specific list of approved enhancements at rail-highway crossings that qualify a crossing to be Quiet Zone ready. In addition to having gate arms, lights, and bells activated, the SSMs include:

- Four quadrant gates
- gates with medians of channelization devices
- one-way street with gates fully blocking access
- permanent closures

Alternative safety measures include:

- modified SSMs (non-complying medians)
- engineering ASMs (address geometric or sight distance issues)
- non-engineering ASMs (photo enforcement, traffic enforcement and public education programs)

When SSMs are implemented, the FRA allows a Quiet Zone calculator to be used to assess the Risk Index with Train Horns versus the Quiet Zone Risk Index. The Quiet Zone Risk Index must be lower than the Risk Index with Horns or lower than the Nationwide Significant Risk threshold in order for the desired segment of rail to qualify of a Quiet Zone status. When running the Quiet Zone calculator for the grade crossings in Santa Rosa, the implemented SSMs met the minimum thresholds. This allows Santa Rosa to follow the Public Authority Designation process in accordance with 49 CFR 222.39(a)(3) to establish a Quiet Zone.

Since SMART has initiated train and signal system testing there has been an increase in the number of residents contacting the City and SMART regarding the train horn noise. Traffic Engineering has received approximately a dozen inquiries within the last 2 months regarding the horn noise and some have specifically requested establishing Quiet Zones. Fourteen highway-rail grade crossings, the Railroad Square pedestrian grade crossing and Jennings Avenue pedestrian grade crossings in Santa Rosa, all have residential units adjacent to either the crossing or the approach in which horns are sounded.

The CPUC has determined that, while Quiet Zones are legal to establish, local agencies must be very cautious about developing policy that reduces the use of proven and effective safety measures such as horn sounding.

Quiet Zone grade crossing inventories must also be reviewed and updated every 2.5 to 3 years with the FRA and could potentially be rescinded.

### FISCAL IMPACT

No additional funds are requested for items described in the departmental updates.

#### Quiet Zones

- 1) Minor improvements at Barham Avenue crossing including striping and some median modifications would be required. This cost is estimated at less than \$10,000.
- 2) Median modifications at Hearn Avenue, West Steele Lane and at Piner Road would be constructed in conjunction with the associated path construction projects and would include the installation of bollards within the median at the pedestrian crossing.

### ENVIRONMENTAL IMPACT

Operations of the railroad, including noise impacts, were identified in SMART Environmental Impact Report. Reducing the train horn noise would be less of an impact and would not require mitigation.

**It is important to recognize that establishing a Quiet Zone does not prohibit trains from using their horns. The Federal Train Horn Rule mandates train operators to sound horns in the event of emergencies or under their discretion as they determine necessary to facilitate safety of the train or general public.**

### BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not Applicable

### NOTIFICATION

The FRA, CPUC, and SMART have been notified of the City's potential interest in establishing a Quiet Zone.

### ATTACHMENTS

- Attachment 1 – Median with pedestrian access break to be modified
- Resolution

### CONTACT

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