



November 16, 2011

Federal Railroad Administration
1200 New Jersey Avenue
Washington, DC 20590

Attention: Jo Strang,
Associate Administrator for Safety

**Subject: Application for Quiet Zone Establishment
BNSF crossing at Cutting Blvd. and South 4th Street, Richmond CA
DOT Crossing No. 015323P**

Dear Ms. Jo Strang,

Please consider our application for establishment of Quiet Zone at the above-referenced crossing, in accordance with Title 49 of Code of Federal Regulations (FRA), Part 222.39(b).

The subject crossing currently possess a pre-existing Engineering Alternative Safety Measure (ASM) and the proposed improvements include at least one additional Engineering ASM, described on the attached plans.

The proposed Quiet Zone has been discussed in detail with Mr. Ron Ries (FRA Staff Director, Crossing Safety & Trespass Prevention Division) who has been very helpful and is quite familiar with the project.

Please let us know if the proposed improvements are sufficient to establish a Quiet Zone at this crossing and we will proceed to construction.

If you have any questions, please contact Joel Camacho, Associate Engineer at 510-620-6482 or joel_camacho@ci.richmond.ca.us.

for Stevens Lam
Edric Kwan P.E.
City Engineer

- Attachments:
- (i) Complete Grade Crossing Inventory Form.
 - (ii) Schematic plan of crossing showing present safety measures.
 - (iii) Diagnostic team reviews.
 - (iv) Statement describing efforts taken by City of Richmond to address diagnostic team reviews.
 - (v) Schematic plan of crossing showing proposed improvements.
 - (vi) Commitment to implement proposed safety improvements.
 - (vii) Data and analysis demonstration that proposed improvements will lower risk index to required levels.

Copy to: Carlos Privat, Assistant City Attorney

City of Richmond, CA
Application for Quiet Zone Establishment
BNSF crossing at Cutting Blvd. and South 4th Street, Richmond CA
DOT Crossing No. 015323P

ATTACHMENT (i)

COMPLETE GRADE CROSSING INVENTORY FORM

U.S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Control No. 2130-0017

A. Initiating Agency <input type="checkbox"/> Railroad <input checked="" type="checkbox"/> State	B. Crossing Number 015323P	C. Reason for Update <input checked="" type="checkbox"/> Changes in Existing Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed Crossing or Abandoned	D. Effective Date 11/16/2011
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Part I: Location and Classification Information

1. Railroad Operating Company (max 4 char.) BNSF		2. State (max 2 char.) CA		3. COUNTY (max 20 char.) Contra Costa	
4. Railroad Division or Region (max 14 char.) CALIFORNIA		5. Railroad Subdivision or District (max 14 char.) MARTINEZ		6. Branch or Line Name (max 15 char.) SIBERIA LEAD	
7. RR Milepost (nnnnn.nn) 1.15		8. RR I.D. No. (max 10 char.) 7258		9. Nearest RR Timetable Station (max 15 char.) (optional) RICHMOND	
10. Parent RR (max 4 char.) (if applicable) BNSF		11. Crossing Owner (RR or Company Name) BNSF			
12. City (max 16 char.) <input checked="" type="checkbox"/> IN <input type="checkbox"/> Near RICHMOND		13. Street or Road Name (max 17 char.) S. 4TH & CUTTING BLV		STATE SUPPLIED INFORMATION	
14. Highway Type & No. (max 7 char.) Local		15. ENS Sign Installed (1-800) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		16. Quiet Zone – FRA DETERMINED <input checked="" type="checkbox"/> No <input type="checkbox"/> Partial <input type="checkbox"/> 24 hr. <input type="checkbox"/> Unknown	
17. Crossing Type (choose one only) <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Pedestrian		18. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over		19. Type of Passenger Service <input type="checkbox"/> AMTRAK <input type="checkbox"/> AMTRAK & Other <input type="checkbox"/> Other <input checked="" type="checkbox"/> None	
20. Average Passenger Train Count Per Day 0		21. HSR Corridor ID (max 2 char.)		22. County Map Ref. No. (max 10 char.) 5K52	
23. Latitude (nn.nnnnnnnn) 37.925264		24. Longitude (nnn.nnnnnnnn) -122.365803		25. Lat/Long Source <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated	

26. Is There an Adjacent Crossing With a Separate Number?
 Yes No If Yes, Provide Number

27. PRIVATE CROSSING INFORMATION

27.A. Category (check one) <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input type="checkbox"/> Recreational <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial		27.B. Public Access <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		27.C. Signs/Signals <input type="checkbox"/> None <input type="checkbox"/> Signs Specify _____ <input type="checkbox"/> Signals Specify _____	
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28. A. Railroad Use (max 20 char.)		29. A. State Use (max 20 char.) 002K-1.15	
28. B. Railroad Use (max 20 char.)		29. B. State Use (max 20 char.)	
28. C. Railroad Use (max 20 char.)		29. C. State Use (max 20 char.)	
28. D. Railroad Use (max 20 char.)		29. D. State Use (max 20 char.)	

30. Narrative

31. Emergency Contact (Telephone No.) 888-832-5452	32. Railroad Contact (Telephone No.) 800-832-5452	33. State Contact (Telephone No.) 213-576-7078
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MUST COMPLETE REMAINDER OF FORM FOR PUBLIC VEHICLE CROSSINGS AT GRADE

Part II: Railroad Information

1. Number of Daily Train Movements			
1.A. Total Trains 12	1.B. Total Switching Trains 0	1.C. Total Daylight Thru Trains (6 AM to 6 PM) 6	1.D. Check if Less Than One Movement Per Day <input type="checkbox"/>
2. Speed of Train at Crossing			
2.A. Maximum Time Table Speed (mph) 10			
2.B. Typical Speed Range Over Crossing (mph) from 1 to 5			
3. Type and Number of Tracks			
Main Other 1 If Other, Specify IND LEAD			
4. Does Another RR Operate a Separate Track at Crossing? <input type="checkbox"/> Yes If Yes, Specify RR (max 16 char.) <input checked="" type="checkbox"/> No		5. Does Another RR Operate Over Your Track at Crossing? <input type="checkbox"/> Yes If Yes, Specify RR (max 16 char.) <input checked="" type="checkbox"/> No	

U.S. DOT CROSSING INVENTORY FORM

B. Crossing Number 015323P	PAGE 2	D. Effective Date 11/16/2011
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Part III: Traffic Control Device Information

1. No Signs or Signals <input type="checkbox"/> Check if Correct	2. Type of Warning Device at Crossing – Signs (specify number of each)			
	2.A. Crossbucks 0	2.B. Highway Stop Signs (R1-1) 0	2.C. RR Advance Warning Signs (W10-1) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.D. Hump Crossing Sign (W10-5) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
2.E. Pavement Markings <input checked="" type="checkbox"/> Stoplines <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None			2.F. Other Signs: (specify MUTCD type) Number <u>1</u> Specify Type <u>W10-12</u> Number <u>0</u> Specify Type _____	
3. Type of Warning Device at Crossing – Train Activated Devices (specify number of each)				
3.A. Gates 5	3.B. Four-Quadrant (or full barrier) Gates <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.C. Cantilevered (or Bridged) Flashing Lights Over Traffic Lane (number) <u>2</u> Not Over Traffic Lane (number) <u>0</u>	3.D. Mast Mounted Flashing Lights (number) 0	3.E. Number of Flashing Light Pairs 0
3.F. Other Flashing Lights: Number _____ Specify Type _____ (max 9 characters)		3.G. Highway Traffic Signals (number) 0	3.H. Wigwags (number)	3.J. Bells (number) 2
3.K. Other Train Activated Warning Devices: (specify) (max 9 characters)				

4. Specify Special Warning Device NOT Train Activated: DO NOT USE OR ENTER DATA	5. Channelization Devices With Gates <input checked="" type="checkbox"/> All Approaches <input type="checkbox"/> One Approach <input type="checkbox"/> None
6. Train Detection <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> DC/AFO <input type="checkbox"/> Motion Detectors <input type="checkbox"/> Other <input type="checkbox"/> None	7. Signaling for Train Operation: Is Train Equipped with Train Signal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8. Traffic Light Interconnection/Preemption <input type="checkbox"/> Not Interconnected <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Simultaneous Preemption <input type="checkbox"/> Advanced Preemption	
9. Reserved For Future Use	10. Reserved For Future Use
11. Reserved For Future Use	12. Reserved For Future Use

Part IV: Physical Characteristics

1. Type of Development <input type="checkbox"/> Open Space <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional		2. Smallest Crossing Angle <input checked="" type="checkbox"/> 0°-29° <input type="checkbox"/> 30°-59° <input type="checkbox"/> 60°-90°	
3. Number of Traffic Lanes Crossing Railroad 4		4. Are Truck Pullout Lanes Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Is Highway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		6. Crossing Surface (on main line) <input checked="" type="checkbox"/> 1. Timber <input type="checkbox"/> 2. Asphalt <input type="checkbox"/> 3. Asphalt and Flange <input type="checkbox"/> 4. Concrete <input checked="" type="checkbox"/> 5. Concrete and Rubber <input type="checkbox"/> 6. Rubber <input type="checkbox"/> 7. Metal <input type="checkbox"/> 8. Unconsolidated <input type="checkbox"/> 9. Other (Specify) _____	
7. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		8. Nearby Intersecting Highway <input checked="" type="checkbox"/> Less than 75 feet <input type="checkbox"/> 75 to 200 feet <input type="checkbox"/> 200 to 500 feet <input type="checkbox"/> N/A Is it Signalized? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
9. Is Crossing Illuminated? (street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		10. Is Commercial Power Available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11. Space Reserved For Future Use.			

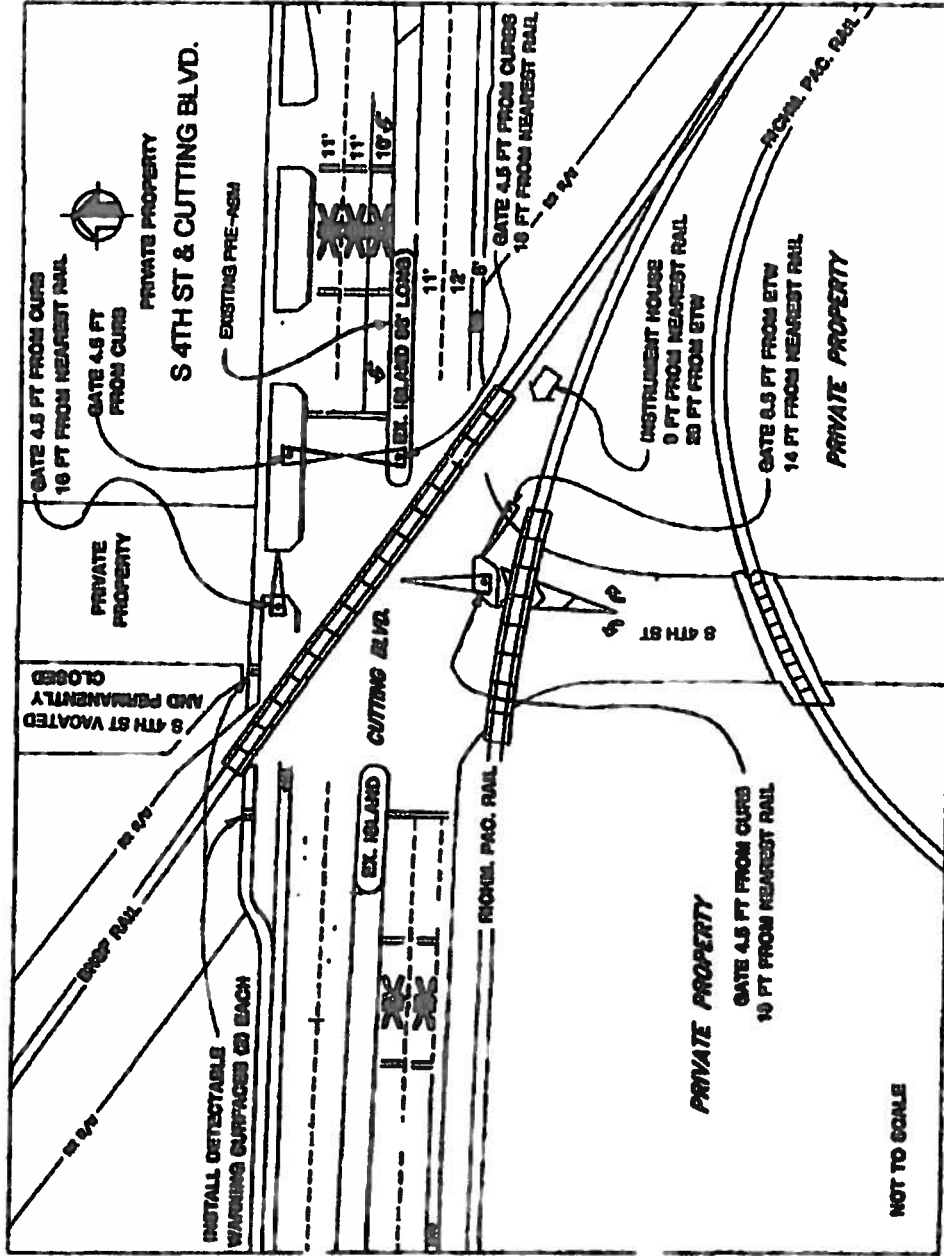
Part V: Highway Information

1. Highway System <input type="checkbox"/> Interstate <input type="checkbox"/> Federal Aid, Not NHS <input checked="" type="checkbox"/> Nat. Hwy System (NHS) <input type="checkbox"/> Non-Federal Aid		2. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3. Functional Classification of Road at Crossing 14 URBAN OTHER PRINCIPAL		4. Posted Highway Speed 40	
5. Annual Average Daily Traffic (AADT) Year 2011 AADT 5075			6. Estimate Percent Trucks 20.00		7. Average Number of School Buses Over Crossing per School Day 0		

City of Richmond, CA
Application for Quiet Zone Establishment
BNSF crossing at Cutting Blvd. and South 4th Street, Richmond CA
DOT Crossing No. 015323P

ATTACHMENT (ii)

Schematic plan of crossing showing present safety measures



CITY OF RICHMOND - RAILROAD CROSSING AT CUTTING BLVD/4TH STREET
 EXISTING CONFIGURATION
 1 OF 1

City of Richmond, CA
Application for Quiet Zone Establishment
BNSF crossing at Cutting Blvd. and South 4th Street, Richmond CA
DOT Crossing No. 015323P

ATTACHMENT (iii)

Diagnostic team reviews

PUBLIC UTILITIES COMMISSION

180 Promenade Circle Suite 115
SACRAMENTO CA 95834 2030

CITY ATTORNEY'S OFFICE
CITY OF RICHMOND

2011 APR -7 A 11: 06



April 5, 2011

File: Q.11-02-001

Carlos Privat
Assistant City Attorney
City of Richmond
450 Civic Center Plaza
Richmond, CA 94804-1630

RE: Notice of Intent dated February 4, 2011 to Create a New Quiet Zone in the City of Richmond – West Six

Dear Mr. Privat:

Relative to the above reference Notice, dated February 4, 2011, by the City of Richmond (City), we offer the following comments:

- The existing conditions at the South 4th St and Cutting Boulevard crossing do not qualify for a quiet zone with a risk index of 18267.71.

Summary	Existing	Proposed
Proposed Quiet Zone:	RICHMOND QZ WEST 6	RICHMOND QZ WEST 6
Type:	New 24-hour QZ	New 24-hour QZ
Nationwide Significant Risk Threshold:	14007 .00	14007 .00
Risk Index with Horns:	10951.87	10951.87
Quiet Zone Risk Index:	18267.71	3653.54

- The proposed modification of extending the median on the west approach does not appear to qualify as an SSM as the median can not extend to the gate arm and completely channelize motorists. The intersection at the crossing requires substantial space between the median and the gate arm, allowing motorists to bypass the gate.
- Any project should include installation of Americans with Disabilities Act (ADA) compliant detectable warning tactile strips on all sidewalk approaches. Placement: a minimum of 36 inches in the direction of travel over the full width of the sidewalk, 2 feet in front of the warning device (where present), but no closer than 12 feet from the centerline of the track
- The pavement markings require refurbishment. Please include restriping both Cutting Boulevard and the northbound 4th Street approaches, including RXR markings and lane and edge lines.

- Richmond Pacific owns two crossings immediately adjacent and south of the 4th Street crossing. Neither of these crossings are included in Quiet Zone 6. Trains will continue to sound the train horns at these two crossings.
- Should the City pursue a quiet zone for this crossing, placement of the No Train Horn signs will be problematic due to the Richmond Pacific tracks crossing immediately adjacent to the mainline tracks.
- Due to the geometry of the roadways and tracks at this location, we recommend the City reconsider its intention to create a quiet zone for this crossing.

RCES continues to offer the following general comments to the City intending to establish quiet zones under the FRA Horn Rule:

- A. RCES believes that in **all cases, the sounding of the locomotive horn results in a higher level of pedestrian and motorist safety compared to not sounding the locomotive horn**. Thus, RCES recommends the City carefully research its quiet zone initiative including investigating other possible solutions to reduce or limit the extent of the noise disruptions from locomotive horns.

In particular, the City should consider the establishment of a **“partial” quiet zone**, rather than a 24-hour per day restriction. This would allow the routine sounding a train horns during daytime hours when most vehicular and pedestrian traffic is present.

- B. **Pedestrian safety needs consideration**. In recent years a number of pedestrian-train collisions, most resulting in fatalities, have occurred within California. Pedestrian safety and associated treatments are not significantly addressed by FRA Horn Rule, but should not be ignored.
- C. To the extent feasible, RCES strongly recommends that the City implement **engineering improvements** that qualify as Supplementary Safety Measures (SSMs) under the FRA Horn Rule. SSMs should generally be preferred to Alternative Safety Measures (ASMs) in the development of the quiet zones. However, ASMs or other non-engineering measures such as **education and enforcement efforts** are recommended to be pursued along with appropriate engineering improvements.
- D. **Modifications to railroad crossings require authorization** pursuant to CPUC General Order (GO) 88-B. Additional information is available on our website at www.cpuc.ca.gov/crossings.
- E. RCES recommends that the City develop a community education and awareness program to **educate the public** regarding the railroad crossing safety and quiet zones. A common misperception is that with a 24-hour quiet zone the horn will never sound, when in fact the locomotive engineer may sound the train horn for various safety reasons (for example if cars are stopped on the tracks or trespassers are on the right-of-way).

If you have any questions, please contact Felix Ko at (415) 703-3722, or Rosa Munoz at (213) 576-7078.

Sincerely,



Daren Gilbert
Supervisor
Rail Crossings Engineering Section
Consumer Protection and Safety Division

CC:

Curtis Ballantyne
BNSF Railway Company
One California Plaza, 37th Floor
300 South Grand Ave.
Los Angeles, CA 90071-3147

Rich Davidson
City of Richmond
450 Civic Center Plaza
Richmond, CA 94804

Jim Cannon
Richmond Pacific Railroad
402 Wright Ave.
Richmond, CA 94804

John Stilley
BNSF Railway Company
740 East Carnegie Drive
San Bernardino, CA 92408

Union Pacific Railroad
Engineering Department
Re: Quiet Zone Establishment
1400 Douglas Street, STOP 0910
Omaha, NE 68179-0910

District 4, Public Affairs
California Dept of Transportation
PO Box 23660
Oakland, CA 94623-0660

LeeAnn Dickson
Federal Railroad Administration
801 I St, Suite 466
Sacramento, CA 95814

Associate Administrator
Federal Railroad Administration
RRS-1, Mail Stop 25
1120 Vermont Avenue, NW
Washington, DC 20590



Dustin Almaguer
Assistant General Attorney

BNSF Railway Company
P.O. Box 961039
Fort Worth, TX 76161-0039
2500 Lou Monk Drive
Fort Worth, TX 76131-2828
817-352-2312 Direct
817-352-2390 Fax
Dustin.almaguer@bnsf.com

April 5, 2011

Joel Camacho
Associate Civil Engineer
450 Civic Center Plaza
Richmond, CA 94804

Carlos Privat
Asst City Attorney
450 Civic Center Plaza
Richmond, CA 94804

Re: **Notice of Intent to Create a Quiet Zone: "West Six"**
USDOT Crossing Name
#015323P **S. 4th Street/Cutting Blvd**

Dear Sirs:

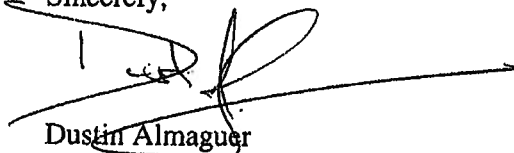
BNSF Railway is in receipt of the City of Richmond's ("City") Notice of Intent ("NOI") to create a new quiet zone ("Quiet Zone") dated February 4, 2011. In accordance with FRA's Final Horn Rule ("Rule"), BNSF is writing this letter to comment on the proposed quiet zone. The following comments are based upon the requirements set by FRA in their Rule.

In its current form, the NOI, and therefore the Quiet Zone, does not appear to meet the minimum requirements of the Rule. The City, through communications with the BNSF public projects manager, has stated that this proposed Quiet Zone does not meet the minimum risk threshold without installing a supplemental safety measure ("SSM") or alternative safety measure ("ASM") at the crossing. The NOI does mention some proposed installations, but these do not appear to meet the criteria for an SSM in accordance with Appendix A of the Rule. If the City plans to install these safety measures as an ASM, then the City would need to issue an application to the FRA in accordance with the Rule.

BNSF strongly believes that due to the unique characteristics of this intersection, the City should work closely with FRA, CPUC and all affected parties to identify appropriate safety measures to be implemented by the City in connection with the proposed Quiet Zone. BNSF understands that the City is pursuing direction from the FRA in this regard and we encourage the City to continue these efforts. BNSF looks forward to working with the City, FRA, CPUC and any affected parties on this project.

Please feel free to call me with any questions.

Sincerely,



Dustin Almaguer

cc: Associate Administrator
FRA
1200 New Jersey Ave., SE
Washington, D.C. 20590

CPUC
Attn: Daren Gilbert
180 Promenade Circle, Suite 115
Sacramento, CA 95834-2939

Caltrans
Attn: Public Affairs
1120 N. Street
Sacramento, CA 95814

FRA
LeeAnn Dickson
801 I Street, Suite 466
Sacramento, CA 95814

Union Pacific
Engineering Department
1400 Douglas Street, Stop 0910
Omaha, NE 68179

cc via electronic mail:

Nicole Hightower, BNSF RR
John Stilley, BNSF RR
John Shurson, BNSF RR
Lyn Hartley, BNSF RR

City of Richmond, CA
Application for Quiet Zone Establishment
BNSF crossing at Cutting Blvd. and South 4th Street, Richmond CA
DOT Crossing No. 015323P

ATTACHMENT (iv)

Statement describing efforts taken by City of Richmond to address diagnostic team reviews



STATEMENT

TO: FEDERAL RAILROAD ADMINISTRATION (FRA)

PREPARED BY: Joel Camacho, Associate Engineer

DATE: November 16, 2011

PROJECT: Quiet Zone West 6 – BNSF Crossing at Cutting Blvd. and South 4th Street.

RE: **Efforts taken by City of Richmond to address diagnostic meeting comments by California Public Utility Commission (PUC) and BNSF Railway.**

PUC comments as described on their letter dated April 5, 2011 (attached) are being addressed as follow:

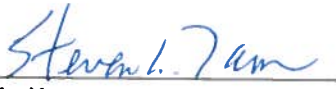
- 1. City will install "pork chop" island as an Alternative Safety Measure (ASM). Analysis indicates it will lower the risk index to levels below the current Risk Index with Horns (RIWH).
 - 2. The City will no longer extend the median on the west approach.
 - 3. The City will install ADA detectable warning surfaces as requested by PUC.
 - 4. The City will refurbish pavement markings as requested by PUC.
 - 5. The City does not intend to extend Quiet Zone West 6 to include adjacent Richmond Pacific crossings which have very low daily train crossing count.
 - 6. The City will install "No Train Horn" signs in conformance with the Manual of Uniform Traffic Control Devices (MUTCD). Train engineers shall continue sounding the horns at Richmond Pacific Rails in accordance with the Rule.
 - 7. The City has reconsidered its intention and approach to create a Quiet Zone at this crossing which has resulted in the proposed ASM "pork chop" island.
- A. The City is currently working on a "Train Noise Mitigation Plan" to address alternatives to mitigate train noise disruptions, including use of wayside horns.
- B. The City will install detectable warning surfaces in consideration of pedestrian safety.
- C. The City is currently working on a "Train Noise Mitigation Plan" which will evaluate education and enforcement efforts to reduce crossing accidents.

- D. The City will submit a (GO) 88-B application before proceeding with any modification of the subject crossing.
- E. The City is currently working on a "Train Noise Mitigation Plan" which will consider the implementation of a community education and awareness program to educate the public.

BNSF comments as described on their letter dated April 5, 2011 (attached) are being addressed as follow:

The City is planning to install the additional safety measure described on the attached plan "Quiet Zone West-6 Proposed Island (ASM) Signing and Striping", and is issuing an application to the FRA as proposed by BNSF.

If you have any questions, please contact Joel Camacho at (510)620-5482 or joel_camacho@ci.richmond.ca.us

for 
Edric Kwan
City Engineer
City of Richmond

City of Richmond, CA
Application for Quiet Zone Establishment
BNSF crossing at Cutting Blvd. and South 4th Street, Richmond CA
DOT Crossing No. 015323P

ATTACHMENT (v)

Schematic plan of crossing showing proposed improvements

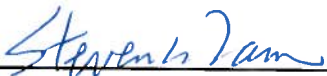


TO: FEDERAL RAILROAD ADMINISTRATION (FRA)
PREPARED BY: Joel Camacho, Associate Engineer
DATE: November 16, 2011
PROJECT: Quiet Zone West 6 – BNSF Crossing at Cutting Blvd. and South 4th Street.

**RE: Written summary of proposed safety improvements depicted on:
CITY OF RICHMOND – RAILROAD CROSSING AT CUTTING BLVD/S. 4TH STREET
QUIET ZONE WEST-6 PROPOSED ISLAND(ASM), SIGNING AND STRIPING**

- Install railroad crossing warning signs W10-1 and W10-9 on all three approaches.
- Install railroad crossing symbol thermoplastic on all lanes on each of the three approaches.
- Install "pork chop" island.
- Re-stripe all pavement markings and chevrons.
- Install yellow detectable warning surfaces.
- Install regulatory sign R61-19 (CA) on S. 4th Street approach.
- Vacate and permanently close portion of S. 4th Street north of the intersection.

If you have any questions, please contact Joel Camacho at (510)620-5482 or joel_camacho@ci.richmond.ca.us

for 
Edric Kwan
City Engineer
City of Richmond

City of Richmond, CA
Application for Quiet Zone Establishment
BNSF crossing at Cutting Blvd. and South 4th Street, Richmond CA
DOT Crossing No. 015323P

ATTACHMENT (vi)

Commitment to implement proposed safety improvements



November 16, 2011

Federal Railroad Administration
1200 New Jersey Avenue
Washington, DC 20590

Attention: Jo Strang,
Associate Administrator for Safety

Subject: Commitment to implement proposed safety improvements required to establish Quiet Zone on BNSF crossing at Cutting Blvd. and South 4th Street. (Quiet Zone West-6)

Dear Ms. Jo Strang,

On November 18, 2008 the City Council unanimously passed resolution No. 129-08 providing direction to staff to establish a Quiet Zone at the subject crossing.

The planned improvements will be implemented as soon as possible, once the City is notified that they are sufficient to establish the proposed Quiet Zone.

If you have any questions, please contact Joel Camacho, Associate Engineer at 510-620-6482 or Carlos Privat, Assistant City Attorney at 510-620-6848.

Sincerely,

William Lindsay
City Manager

ATTACHMENT (vii)

**Data and analysis
demonstration that
proposed improvements
will lower risk index to
required levels**



TO: FEDERAL RAILROAD ADMINISTRATION (FRA)
PREPARED BY: Joel Camacho, Associate Engineer
DATE: November 16, 2011
PROJECT: Quiet Zone West 6 – BNSF Crossing at Cutting Blvd. and South 4th Street.

RE: Data and analysis demonstrating that implementation of proposed measures will reduce the risk index to a level at, or below, either RIWH of NSRT

- The initial Quiet Zone Risk Index (18,248) was calculated on the FRA computerized Quiet Zone Calculator using the latest data and the current configuration and is the QZRI before taking into consideration any improvements (see attached QZRI calculator print-screen).
- The RIWH initially is calculated on the FRA computerized Quiet Zone Calculator as 10,940. However, the existing non-traversable curbed median is treated as a pre-existing Engineering ASM and given an effectiveness of 0.4 for the existing 86-foot median on the east side of the crossing (12-ft west and 74-ft east of the gate). Since the median extends beyond 60 feet to a commercial driveway (which is treated as an intersection in the rule) it is given the maximum amount of effectiveness for one approach of the crossing. No credit was given to the existing median on the west side of the crossing given the large space between the end of the median and the gate.
 - With this data we can calculate the **RIWH with pre-existing Engineering ASM.**
 $10,940 / (1 - 0.4) = 18,233$
- The "pork chop" island will be constructed with non-traversable 6" or 8" curb, measuring 11-ft wide by 23-long and 24 feet from the gate. A minimal amount of credit (0.05) is proposed for the "pork chop" island.
 - With this data and the QZRI generated by the computerized calculator we can calculate the **Final Risk Index.**
 $18,248 * (1 - 0.05) = 17,336$
- The Final Risk Index is lower than the RIWH with the pre-existing Engineering ASMs. **(Final Risk Index) 17,336 ≤ 18,233 (RIWH with the pre-existing ASMs)**
The proposed improvement qualifies the crossing for a Quiet Zone.

If you have any questions, please contact Joel Camacho at (510)620-5482 or joel_camacho@ci.richmond.ca.us

Print This Page

QUIET ZONE CALCULATOR



Home | Help | Contact | Logout | [joe.camacho@ci.tucsonaz.gov](#)

Change Scenario QZ v6 REV1_36009

Crossing Street Traffic Warning Device Pre SSM First

013323P 4TH & CUTTING BLV 3073 Calcas 0 0 18248.11

Summary

Proposed Quiet Zones	Type	No	24-hour QZ
Estimated Total Costs	Scenarios	QZv6 REV1_36009	50.00
Estimated Significant Risk Threshold	Estimated Significant Risk Threshold	1.4007 .00	
Risk Index with Noise	Risk Index with Noise	10940.11	
Quiet Zone Risk Index	Quiet Zone Risk Index	18248.11	

* Only Public At Grade Crossings are listed. Click for Summary of Safety Mitigation.

Click for ASM spreadsheet. ASM notes are used for ASMs requires an application approval from the FPA.

Step by Step Instructions

Step 1: To specify New Warning Device For Pre-Run Quiet Zone Only, and/or SSM click the **NOISE** button.

Step 2: Select proposed warning device or SSM. Then click the **NOISE** button. To generate a spreadsheet of the values on this page, click on **ASM** button. This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step 2 until the **SELECT** button is shown at the bottom right side of this page. Note that the **SELECT** button is shown **ONLY** when the Quiet Zone Risk Index falls below the **ASRT** or the Risk Index with **Noise**.

Step 4: To save the scenario and continue click the **SELECT** button.