## Washington State <br> Department of Transportation

Lynn Peterson
Secretary of Transportation

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March 20, 2015

Kathy Hunter
Deputy Assistant Director, Trans. Safety
Washington Utilities and Transportation Commission
1300 S Evergreen Park Dr. SW
Olympia, WA 98504-7250
Re: Petition for Reconstruction and Installation of an Inter-Tie at the $41^{\text {st }}$ Division Drive Crossing (085830N) in Joint Base Lewis-McChord within Pierce County, WA

Dear Ms. Hunter,
This letter is in support of the aforementioned WUTC petition on behalf of WSDOT for the highway-rail grade crossing upgrades at $41^{\text {st }}$ Division Drive (USDOT Crossing \# 085830 N) within Pierce County, WA. The following supplemental information is a summary of the proposed improvements to the highway-rail grade crossing at $41^{\text {st }}$ Division Drive.

The Washington State Department of Transportation (WSDOT) is implementing a program of infrastructure improvement projects along the Pacific Northwest Rail Corridor (PNWRC) also known as the PNWRC Improvement Program. This program is comprised of approximately 17 component projects that when combined will; provide two additional roundtrips for the Cascades intercity passenger rail service between Seattle, WA and Portland, OR; improve on time reliability to $88 \%$; and provide a 10 minute reduction in travel time between the aforementioned termini. One of the 17 PNWRC Improvement projects is the Point Defiance Bypass project. In addition to the Cascades service, the Amtrak long distance service, the Coast Starlight, will also utilize the Point Defiance Bypass alignment.

The Point Defiance Bypass project includes five highway-rail grade crossings that will be reconstructed to support the above mentioned passenger rail services between Lakewood, WA and DuPont, WA. Those highway-rail grade crossings are Clover Creek Drive SW, North Thorne Lane SW, Berkeley Street SW, $41^{\text {st }}$ Division Drive, and Barksdale Avenue. The Berkeley Street SW highway-rail grade crossing improvements are being constructed by the city of Lakewood as part of their Madigan Access Improvement project. The city of Lakewood project will incorporate the necessary highway-rail grade crossing improvements to support the intercity and long distance passenger rail services.

In January of 2010, WSDOT filed a petition with the WUTC to modify the $41^{\text {st }}$ Division Drive at-grade crossing to support the Amtrak Cascades intercity passenger

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rail service under WSDOT state funding. The WUTC granted this petition in March of 2010 for the improvements detailed in the petition with signature to the Waiver of Hearing from Sound Transit, United States Army, and Tacoma Rail. During this same timeframe, WSDOT had applied for American Recovery and Reimbursement Act (ARRA) funding administered through the federal lead agency, Federal Railroad Administration (FRA), for the delivery of the PNWRC Program. This Program is to deliver approximately 17 individual projects with the purpose and intent of providing more reliable, increased frequency, and a reduction in running time for the Amtrak Cascades intercity passenger rail service. Additionally, accommodations for the Amtrak long distance passenger rail service, the Coast Starlight, also fall within the scope of work under the PNWRC Program.

One of the aforementioned 17 projects is the Task 2 - Tacoma - Point Defiance Bypass which will reroute Amtrak passenger rail trains from the existing Point Defiance route to a more inland route extending from Tacoma, Lakewood, DuPont and Nisqually, WA. The scope of work under the FRA ARRA funding included the need to complete a project level Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) prior to the reimbursement of any portion of construction. Due to this prerequisite requirement under the FRA ARRA funding, the construction for the $41^{\text {st }}$ Division Drive at-grade crossing improvements was postponed until FRA approval was achieved for both environmental and design.

The improvements at the $41^{\text {st }}$ Division Drive highway-rail grade crossing include new flashing light masts and gates, a constant warning-time grade crossing warning device and a new concrete crossing panel with rubber flange way fillers. The off connection from southbound Interstate 5 will be realigned slightly near the mouth of the ramp termini to improve the right turn radius. Raised median will be installed on the north and south sides of the crossing to prevent vehicles from circumventing the new gates. Queue cutter signals will also be installed in both directions at this location and coordinated with the advanced preemption sequence and queue detector loops. This configuration will assist in managing the potential traffic queues resulting from the $41^{\text {st }}$ Division Drive Joint Base Lewis-McChord military base entrance.

In conjunction with the attached petition, WSDOT is working closely with the Joint Base Lewis-McChord, Sound Transit, BNSF, and Tacoma Rail on the proposed improvements for $41^{\text {st }}$ Division Drive. In addition, please find the signed Waiver of Hearing by Respondent found in Section 13 of this petition from each of the applicable project stakeholders as consent without a hearing.

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If you should have any questions, please contact myself at (360)905-1578.
Sincerely,


Casey Liles, MSCE, PE
WSDOT Rail Division
Point Defiance Bypass Project Lead
CL.ts

Enclosure: WUTC Petition for Reconstruction and Installation of an Inter-Tie at the $41^{\text {st }}$ Division Drive Highway-Rail Grade Crossing, No. 085830 N
cc: David Smelser
Michael Williams
Chris Dunster
Devin Reck
Jason Dao
Thomas Slimak
Document Controls

## WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

| WSDOT Rail | ) | DOCKET NO. TR- |  |
| :---: | :---: | :---: | :---: |
|  | ) |  |  |
|  | ) | PETITION TO CONSTRUCT OR |  |
| Petitioner, | ) | RECONSTRUCT A HIGHWAY-RAIL |  |
|  | , |  |  |
|  | ) | AN INTER-TIE BETWEEN A |  |
| vs. | ) | HIGHWAY SIGNAL AND A |  |
| Central Puget Sound Regional | ) | RAILROAD CROSSING SIGNAL SYSTEM |  |
| Transportation Authority; | ) |  |  |
| BNSF Railway Company; | ) |  |  |
| Tacoma Rail |  |  |  |
| Joint Base Lewis-McChord | ) | USDOT CROSSING \# | 085830N |
| Respondent | ) |  |  |

Prior to submitting a Petition to Construct a highway-rail grade crossing and install an inter-tie between a Highway Signal and a Railroad Crossing Signal System to the Washington Utilities and Transportation Commission (UTC), State Environmental Protection Act (SEPA) requirements must be met. Washington Administrative Code (WAC) 197-11-865 (2) requires:

All actions of the utilities and transportation commission under statutes administered as of December 12, 1975, are exempted, except the following:
(2) Authorization of the openings or closing of any highway/railroad grade crossing, or the direction of physical connection of the line of one railroad with that of another;

Please attach sufficient documentation to demonstrate that the SEPA requirement has been fulfilled. For additional information on SEPA requirements contact the Department of Ecology.

The Petitioner asks the Washington Utilities and Transportation Commission to approve installation of an inter-tie between a highway signal and a railroad crossing signal system.


## Project Summary:

The $41^{\text {st }}$ Division Drive highway-rail grade crossing is part of the Point Defiance Bypass Project that has been proposed to respond to deficiencies in the existing rail operations around Point Defiance between Tacoma and Nisqually in Washington State. As part of the Pacific Northwest Rail Corridor (PNWRC) Improvement Program, when combined with the other component projects, this Project would allow for two additional round trips of the Amtrak Cascades service between Seattle, Washington, and Portland, Oregon with improved reliability and reduced travel time. This Project would also support Amtrak's longer-distance Pacific Northwest passenger rail service, the Coast Starlight.

The improvements at the $41^{\text {st }}$ Division Drive highway-rail grade crossing include:

- Flashing light masts and gates are set between 5 feet and 7 feet from face of curb.
- The crossing will have a constant warning-time grade crossing warning device.
- Crossing surface will be concrete panels with attached rubber flange way fillers.
- The off ramp from Southbound Interstate 5 will be realigned slightly near the intersection with 41 st Division in order to accommodate WB-67 size design vehicles. The current off ramp does not accommodate such vehicles.
- The existing channelization configuration has one northbound lane across the tracks closed with delineators to allow a free-flow right off the freeway. This will be "formalized" with curb and gutter. This will allow a median wide enough for a crossing gate on the north side of the tracks. Mr. Bill Velez of the military has reviewed this design and has indicated that Joint Base Lewis-McChord has "no comments" on the design.
- New medians will be installed on the south side of the tracks, and the median on the north side of the tracks will be lengthened and will be wide enough for a center crossing gate.
- Queue-cutter signals will be installed in both directions, coordinated with advance preemption sequence and queue detector loops, will assist with the mitigation of vehicles queuing onto the tracks.
- The Interstate 5 southbound off ramp onto northbound 41st Division Drive is proposed to be widened at the connection with 41 st and incorporates new curb and gutter. The curb and gutter has been moved away from the edge line to accommodate the turning movements of the larger WB-67 design vehicle.


## Section I- Petitioner's Information

WSDOT Rail Division
$\overline{\text { Petitioner }}$
Street Address

Olympia, WA 98504
City, State and Zip Code
P.O. Box 47407

Mailing Address, if different than the street address
David Smelser
Contact Person Name
360-705-6916; David.Smelser@wsdot.wa.gov
Contact Phone Number and E-mail Address

Section 2 - Respondent's Information

Central Puget Sound Regional Transportation Authority ("Sound Transit")
Respondent
401 South Jackson Street
Street Address
Seattle, WA 98104-2826
City, State and Zip Code

Mailing Address, if different than the street address
Jodi Mitchell
Contact Person Name
206-398-5080; Jodi.Mitchell@SoundTransit.org
Contact Phone Number and E-mail Address

BNSF Railway Company
Respondent
2454 Occidental Avenue S; Suite 2D
Street Address
Seattle, WA 98134
City, State and Zip Code

Mailing Address, if different than the street address
Richard Wagner
Contact Person Name
206-625-6152; Richard.Wagner@BNSF.com
Contact Phone Number and E-mail Address

Tacoma Rail
Respondent
2601 SR 509 North Frontage Road
Street Address
Tacoma, WA 98421
City, State and Zip Code

Mailing Address, if different than the street address
Kyle Kellem
Contact Person Name
253-377-3554; kkellem@cityoftacoma.org
Contact Phone Number and E-mail Address

## Joint Base Lewis-McChord

Respondent
Bldg 2012 Liggett Avenue
Street Address
Joint Base Lewis-McChord, WA 98433
City, State and Zip Code
PO Box 33950
Mailing Address, if different than the street address
Sallie K. Donahue, PE, DPW, BOID
Contact Person Name
(253) 967 7992; sallie.k.donahue.civ@mail.mil

Contact Phone Number and E-mail Address

1. Existing highway/roadway $\quad 41^{\text {st }}$ Division Dr
2. Existing railroad Tacoma Municipal Belt Line
3. USDOT Crossing No. $\qquad$
4. Located in the $\qquad$ $1 / 4$ of the $\quad 1 / 4$ of Sec. $\qquad$ , Twp. 19N Range 2E W.M.
5. GPS location, if known 47.105602, - $\mathbf{- 1 2 2 . 5 8 9 2 1 5}$
6. Railroad mile post (nearest tenth) $\mathbf{5 . 7}$
7. City $\qquad$ County
Pierce

## Section 4 - Proposed or Existing Crossing Information

1. Railroad company Sound Transit

Note: Sound Transit owns crossing property while Tacoma Rail and BNSF Railway Company share a franchising agreement of the rail.
2. Type of railroad at crossing: $\begin{aligned} & \text { Common Carrier } \square \text { Logging } \square \text { Industrial }\end{aligned}$
$\square$ Passenger $\quad$ Excursion
3. Type of tracks at crossing: $\square$ Main Line $\square$ Siding or Spur
4. Number of tracks at crossing $\qquad$ 1
5. Average daily train traffic, freight $\qquad$
Authorized freight train speed $\quad \mathbf{4 0 m p h}$ Operated freight train speed $\mathbf{4 0} \mathbf{~ m p h}$
6. Average daily train traffic, passenger $\qquad$
Authorized passenger train speed $\quad \mathbf{7 9} \mathbf{~ m p h}$ Operated passenger train speed $\quad \mathbf{7 9} \mathbf{~ m p h}$
7. Will the proposed crossing eliminate the need for one or more existing crossings?

Yes $\quad$ No $\checkmark$
8. If so, state the distance and direction from the proposed crossing.
$\square$
Section 5 - Temporary Crossing

1. Is the crossing proposed to be temporary? $\quad$ Yes $\quad$ No $\checkmark$
2. If so, describe the purpose of the crossing and the estimated time it will be needed
3. Will the petitioner remove the crossing at completion of the activity requiring the temporary crossing? Yes $\qquad$ No $\qquad$ N/A

Approximate date of removal
Section 6 - Current Highway Traffic Information

1. Name of roadway/highway 41 ${ }^{\text {st }}$ Division Dr
2. Roadway classification $\qquad$
3. Road authority $\qquad$
4. Average annual daily traffic (AADT) 7,300 (2013)
5. Number of lanes 4 ( 2 in each direction)
6. Roadway speed $\quad \mathbf{3 0} \mathbf{m p h}$
7. Is the crossing part of an established truck route?

Yes $\qquad$ No $\qquad$
8. If so, trucks are what percent of total daily traffic? $\qquad$
9. Is the crossing part of an established school bus route?

Yes $\qquad$ No $\qquad$
10. If so, how many school buses travel over the crossing each day? $\qquad$
11.Describe any changes to the information in 1 through 7 , above, expected within ten years:

## Section 7 - Alternatives to the Proposal

1. Does a safer location for a crossing exist within a reasonable distance of the proposed location? Yes $\qquad$
No $\qquad$
2. If a safer location exists, explain why the crossing should not be located at that site.
3. Are there any hillsides, embankments, buildings, trees, railroad loading platforms or other barriers in the vicinity which may obstruct a motorist's view of the crossing?

Yes $\qquad$ No $\qquad$
4. If a barrier exists, describe:

- Whether petitioner can relocate the crossing to avoid the obstruction and if not, why not.
- How the barrier can be removed.
- How the petitioner or another party can mitigate the hazard caused by the barrier.

Stopping sight distances are maintained but due to curves in $41^{\text {st }}$ Division Dr views of the crossing are obstructed further away by trees and shrubs in both directions. See Section 8.
5. Is it feasible to construct an over-crossing or under-crossing at the proposed location as an alternative to an at-grade crossing?

Yes $\qquad$ No $\quad \checkmark$
6. If an over-crossing or under-crossing is not feasible, explain why.

The existing site is surrounded by Interstate 5, on-ramps and off-ramps, and two military base entrances. Constructing an overcrossing or undercrossing would require elimination, reconstruction and/or relocation of these facilities.
7. Does the railway line, at any point in the vicinity of the proposed crossing, pass over a fill area or trestle or through a cut where it is feasible to construct an over-crossing or an under-crossing, even though it may be necessary to relocate a portion of the roadway to reach that point?

Yes
No $\qquad$
8. If such a location exists, state:

- The distance and direction from the proposed crossing.
- The approximate cost of construction.
- Any reasons that exist to prevent locating the crossing at this site.

9. Is there an existing public or private crossing in the vicinity of the proposed crossing?

Yes $\quad$ No $\checkmark$
10. If a crossing exists, state:

- The distance and direction from the proposed crossing.
-Whether it is feasible to divert traffic from the proposed to the existing crossing.
$\qquad$


## Section 8 - Sight Distance



| a. Approaching the crossing from theSOUTHEAST <br> view as follows: <br> (North, South, East, West) <br> Number of feet from <br> proposed crossing <br> Direction of sight (left or right)$\quad$Provides an unobstructed <br> view for how many feet |  |  |
| :--- | ---: | :--- |
| Right | 300 | 370 (obscured by trees) |
| Right | 200 | 640 (obscured by trees) |
| Right | 100 | 2040 (obscured by trees) |
| Right | 50 | 1040 (obscured by trees) |
| Right | 25 | 540 (obscured by trees) |
| Left | 300 | 480 (obscured by trees) |
| Left | 200 | 580 (obscured by trees) |
| Left | 100 | $3000+$ |
| Left | 50 | $3000+$ |
| Left | 25 | $3000+$ |

b. Approaching the crossing from the NORTH, the current approach provides an unobstructed view as follows: (Opposite direction-North, South, East, West)

| Direction of sight (left or right) | Number of feet from <br> proposed crossing | Provides an unobstructed <br> view for how many feet |
| :--- | :---: | :--- |
| Right | 300 | 80 (obscured by trees) |
| Right | 200 | 90 (obscured by trees) |
| Right | 100 | 110 (obscured by trees) |
| Right | 50 | 140 (obscured by trees) |
| Right | 25 | 170 (obscured by trees) |
| Left | 300 | 110 (obscured by trees) |
| Left | 200 | 120 (obscured by trees) |
| Left | 100 | 140 (obscured by trees) |
| Left | 50 | 210 (obscured by trees) |
| Left | 25 | 270 (obscured by trees) |

2. Will the new crossing provide a level approach measuring 25 feet from the center of the railway on both approaches to the crossing?

Yes $\quad$ No $\checkmark$
3. If not, state in feet the length of level grade from the center of the railway on both approaches to the crossing. Looking north along the track: Right $\mathbf{0 . 1 3 \%}$ for 50 '; Left $\mathbf{0 . 7 8 \%}$ for $\mathbf{3 0}$ '.
4. Will the new crossing provide an approach grade of not more than five percent prior to the level grade?

Yes $\checkmark$ No
5. If not, state the percentage of grade prior to the level grade and explain why the grade exceeds five percent.

Attach a detailed diagram, drawing, map or other illustration showing the following:

- The vicinity of the proposed crossing.
- Layout of the railway and highway 500 feet adjacent to the crossing in all directions.
- Percent of grade.
- Obstructions of view as described in Section 7 or identified in Section 8.
- Traffic control layout showing the location of the existing and proposed signage.


## Section 10 - Sidewalks

1. Provide the following information:
a. Provide a description of the type of sidewalks proposed.
b. Describe who will maintain the sidewalks.
c. Attach a proposed diagram or design of the crossing including the sidewalks.

No sidewalk exists and none is proposed.

## Section 11-Proposed Warning Signals or Devices

1. Explain in detail the number and type of automatic signals or other warning devices planned at the proposed crossing, including a cost estimate for each. If requesting pre-emption include the type of train detection circuitry, sequencing and advanced preemption time, justification for the changes and its effects on current warning devices and warning times for drivers.

The crossing will have active warning devices, including crossing gates, controlled by constant motion predictors. The warning lights are mounted on the crossing gates structures.

The railroad control equipment for the crossing is interconnected with the traffic signal controller using a 6-wire connection. Upon a preemption signal from the railroad control equipment the traffic signal controller will transfer right-of-way by stopping all vehicles moving towards the crossing and provide green lights for track clearance before the gates start to drop. The I-5 ramp meters are independently connected to the railroad bungalow and preempted by the railroad.

The traffic signal system will have a generator for backup power.
2. Provide an estimate for maintaining the signals for 12 months.
3. Is the petitioner prepared to pay to the respondent railroad company its share of installing the warning devices as provided by law?
$\qquad$

Complete the attached Guide for Determining Time Requirements for Traffic Signal Preemption at Highway-Rail Grade Crossings.

1. Specify simultaneous or advance preemption requested.

Advanced preemption
If advance preemption, what is the preemption time.
5 seconds. A queue-cutter signal will be implemented at this crossing. Traffic signal indications on both sides of the railroad crossing will change to red for vehicles approaching the crossing anytime a queue develops. The advanced preemption time is based on the cycle time of yellow ( $\sim 4$ seconds) and all-red ( $\sim 1$ second) traffic signal indications.

The UTC Advance Preemption Calculation sheet is not applicable, as advanced preemption is not being integrated at this crossing location

## Waiver of Hearing

The undersigned represents the Respondent in the petition to install an inter-tie between the highway signal and the railroad crossing signal system at the following crossing.

USDOT Crossing No. $\qquad$

We have investigated the conditions at the crossing. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the inter-tire should be installed and consent to a decision by the commission without a hearing.

Dated at JBLM , Washington, on the 3 day of
FEBRUARY, 2015.
Joint BASE LEWIS. MCCHORD

## Printed name of Respondent



Signature of Respondent's Representative
$\qquad$
Title
253-967-7992 Sallie.k.donahue avemarl.mil
Phone number and e-mail address


Waiver of Hearing
The undersigned represents the Respondent in the petition to install an inter-tie between the highway signal and the railroad crossing signal system at the following crossing.

USDOT Crossing No. $\qquad$ 085830 N

We have investigated the conditions at the crossing. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the inter-tire should be installed and consent to a decision by the commission without a hearing.


Printed name of Respondent


2069037363
Phone number and e-mail address


## Section 13 - Waiver of Hearing by Respondent

## Waiver of Hearing

The undersigned represents the Respondent in the petition to install an inter-tie between the highway signal and the railroad crossing signal system at the following crossing.

USDOT Crossing No. 085830 N

We have investigated the conditions at the crossing. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the inter-tire should be installed and consent to a decision by the commission without a hearing.
+ic

Dated at Tacoma , Washington, on the $19^{\text {th }}$ day of


Title

## 253-377.3554 KKcllemecity of tacoma. org

Phone number and e-mail address


Waiver of Hearing
The undersigned represents the Respondent in the petition to install an inter-tie between the highway signal and the railroad crossing signal system at the following crossing.

USDOT Crossing No. $\qquad$ 085830 N

We have investigated the conditions at the crossing. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the inter-tire should be installed and consent to a decision by the commission without a hearing.

Dated at SECTRE , Washington, on the 16 些 day of Monet, 2015

Ricitans W WIener
Printed name of Respondent

$206.625,6152$, Ricitars.h/aunçe BNSE
Phone number and e-mail address
$\qquad$





