



STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

1300 S. Evergreen Park Dr. S.W., P.O. Box 47250 • Olympia, Washington 98504-7250
(360) 664-1160 • TTY (360) 586-8203

February 2, 2010

Jodi Mitchell
Sound Transit
401 South Jackson Street
Seattle, WA 98104-2826

Steve Perrenot, Director
Larry Mickel, Engineering Technician
United States Army – I Corps - Public Works
Box 339500, Mailstop 17
Fort Lewis, WA 98433

Dale King, Superintendent
Tacoma Rail
2601 SR 509
North Frontage Road
Tacoma, WA 98421

**RE: TR-100130 - Petition from the Washington State Department of
Transportation to Modify the 41st Division Drive Highway-Rail Grade
Crossing**

Dear Ms. Mitchell, Mr. Perrenot, Mr. Mickel, and Mr. King:

On January 19, 2010, the Washington State Department of Transportation filed a petition with the Washington Utilities and Transportation Commission (Commission), seeking approval to modify an at-grade railroad crossing at 41st Division Drive near Fort Lewis, Washington. The petition also seeks to interconnect the railroad warning devices with the nearby traffic light. The Commission assigned Docket No. TR-100130 to this petition.

Please review the attached petition and respond by February 22, 2010. Your response options include:

- Support the petition – Complete the Respondent's Waiver of Hearing form, which serves as your consent for the Commission to issue an order without further notice or hearing.



Jodi Mitchell
Steve Perrenot
Larry Mickel
Dale King
February 2, 2010
Page 2

- Do not support the petition – Reply with your position and include whether you feel a hearing is necessary to resolve the issues or suggest other courses of action, such as further discussion prior to going to hearing.

If you do not respond within 20 days of the date of this letter, we will assume you do not support the petition and will set the matter for hearing. You will be required to attend the hearing and respond to the Commission.

If you have any questions, please contact Kathy Hunter at (360) 664-1257 or khunter@utc.wa.gov.

Sincerely,



David Pratt
Assistant Director, Transportation Safety

Enclosure

cc: Kevin Jeffers, WSDOT (without attachment)
Bill Velez, United States Army (without attachment)

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Washington State Department of
 Transportation**

 Petitioner,

vs.

**Central Puget Sound Regional
 Transportation Authority and the United
 States Army (Fort Lewis)**

 Respondent

) DOCKET NO. TR- 100130
)
)
) PETITION TO MODIFY A
) HIGHWAY-RAIL GRADE
) CROSSING
) 41st Division Drive
)
) USDOT CROSSING # 085830N
) UTC CROSSING #
)
)
)

RECEIVED
 PROJECT MANAGEMENT
 2010 JAN 19 AM 10:25
 STATE OF WASHINGTON
 UTILITIES AND TRANSPORTATION
 COMMISSION

.....
 The Petitioner asks the Washington Utilities and Transportation Commission to approve modification of a highway-rail grade crossing.

Section 1 – Petitioner’s Information

Washington State Department of Transportation
_____ Petitioner 310 North Maple Park Ave SE
_____ Street Address Olympia, WA 98504
_____ City, State and Zip Code PO Box 47307, Olympia, WA 98504-7407
_____ Mailing Address, if different than the street address Kevin Jeffers
_____ Contact Person Name 360-705-7982; JefferK@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

United States Army – I Corps, Fort Lewis, ATTN: Public Works

Respondent

Box 339500, Mail Stop 17

Street Address

Fort Lewis, WA 98433

City, State and Zip Code

Mailing Address, if different than the street address

Mr. Steve Perrenot, Director

Contact Person Name

(253) 967-4713

Contact Phone Number and E-mail Address

Section 3 – Current Crossing Information

1. Railroad company(ies) _____
• Tracks owned by: Sound Transit
• Operating railroad: Tacoma Rail, BNSF, Amtrak
2. Type of railroad at crossing Common Carrier Logging Industrial
 Passenger Excursion
3. Type of tracks at crossing Main Line, number of tracks 1
 Siding or Spur, number of tracks _____
4. Average daily train traffic, freight 2 per day (trains typically operate 4-5 days/week, max.)
Authorized freight train speed 10 mph Operated freight train speed 10 mph
5. Average daily train traffic, passenger 0
Authorized passenger train speed N/A Operated passenger train speed N/A
6. Describe current crossing configuration including type of train detection, active warning devices, preemption, etc.:
This is currently a single track crossing with cantilever-mounted flashing lights (no gates).

The existing detection circuitry is either a “C Style” or “Ring 10” relay-based track circuit.

There are no existing medians or crossing gates.

Section 4 – Expected Crossing Characteristics After Modification

1. Type of railroad operations at crossing Common Carrier Logging Industrial

Passenger Excursion

2. Type of tracks at crossing Main Line, number of tracks 1

Siding or Spur, number of tracks

3. Average daily train traffic, freight 2

 Authorized freight train speed 40 mph Operated freight train speed 40 mph

4. Average daily train traffic, passenger 16

 Authorized passenger train speed 79 mph Operated passenger train speed 79 mph

5. Will the modified crossing eliminate the need for one or more existing crossings?

 Yes No X

6. If so, state the distance and direction from the modified crossing.

7. Does the petitioner propose to close any existing crossings and if yes, which crossings?

 Yes No X

Section 5 – Proposed Temporary Crossing

1. Will a temporary crossing be installed? Yes ____ No X

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 ____ No ____ N/A

Approximate date of removal _____

Section 6 – Current Highway Traffic Information

1. Name of roadway/highway 41st Division Drive

2. Roadway classification Arterial connecting US Military Installations on both sides of I-5 US Military / WSDOT

3. Road authority _____

4. Average annual daily traffic (AADT) 13090 (in year 2006)

5. Number of lanes 2 NB lanes (one off ramp, one through), 2.5 SB lanes at crossing (an exit lane begins diverging from the two through lanes in the crossing).

6. Roadway speed 35mph

7. Is the crossing part of an established truck route? Yes ____ No X

8. If so, trucks are what percent of total daily traffic? 1% (PM peak)

9. Is the crossing part of an established school bus route? Yes X No ____

10. If so, how many school buses travel over the crossing each day? 60

11. Describe any changes to the information in 1 through 7, above, expected within ten years: **AADT estimated to grow to 18020 (in year 2020); as part of the project, a new median will be added to the south side of the crossing. Median on the north side will be extended to accommodate a new crossing gate in the median. The current channelization on the south side of the crossing, which employs traffic cones to narrow from two lanes to one on the Northbound approach, will be “formalized” with a new curb and gutter.**

Section 7 – Alternatives to the Proposed Modifications

1. Does a safer location for a crossing exist within a reasonable distance of the current or proposed location? Yes _____ No X

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 X No _____

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.

Views are obstructed by trees on military property and by the roadway geometry, which curves away from the track on the Southbound approach. Trees in a motorist's line-of-sight on the railroad R/W will be removed.

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 _____ No X

6. If an over-crossing or under-crossing is not feasible, explain why.

The existing site is bounded by Interstate 5 and a military installation (and associated checkpoint). Constructing an overcrossing or undercrossing would require elimination or relocation of some or all of these facilities.

7. Does the railway line, at any point in the vicinity of the modified 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 X

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 modified crossing?

Yes _____ No X

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.

Section 8 – Sight Distance

1. Complete the following table, describing the sight distance for motorists when approaching the tracks from either direction after modification. “Number of feet from proposed crossing” is measured from the crossing gate along the centerline of the “outside” lane. Sight distance is measured from the edge of traveled way (edge of fog line or curb line) along the CL of track at the crossing. NOTE - for “Left” sight distances, the edge of traveled way is on the *opposite* side of the roadway.

Note that sight distances from the I-5 Southbound Off Ramp are NOT reflected in the tables below at those locations where vehicles are traveling roughly parallel to the railroad. The I-5 Off Ramp is both parallel and very close to the tracks. Motorists on the Off-Ramp may have their forward visibility along the track, at certain angles, obstructed somewhat by the railroad crossing cantilever mast and gate mechanism. Since the tracks also extend behind motorists on the Off-Ramp, rearward visibility is likely to be zero, based on motorists’ tendency to not look behind them. At specific locations, the most conservative distance is shown along the I-5 Off Ramp, where it curves toward the tracks. Where the distance is measured based on the Off-Ramp sight distance, an asterisk (*) has been included.

a. Approaching the crossing from SOUTH , the current approach provides an unobstructed view as follows:

(North, South, East, West)

Direction of sight (left or right)	Number of feet from proposed crossing	Provides an unobstructed view for how many feet
Right	300	30 (obscured by trees)
Right	200	30 (obscured by trees)
Right	100	80 *
Right	50	130 *
Right	25	55 *
Left	300	20 (obscured by trees)
Left	200	20 (obscured by trees)
Left	100	130
Left	50	130
Left	25	130

b. Approaching the crossing from 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 proposed crossing	Provides an unobstructed view for how many feet
Right	300	0 (obscured by topography)
Right	200	70 (obscured by topography)
Right	100	250
Right	50	250
Right	25	225
Left	300	0 (obscured by topography)
Left	200	165
Left	100	225
Left	50	225
Left	25	165

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

Yes No

3. If not, state in feet the length of level grade from the center of the railway on both approaches to the crossing.

At the South side of the crossing, the roadway slopes down from the crossing at approximately 0.8%. The slope begins approximately 2' from the edge of the crossing panels. The roadway grade to the North of the crossing is nearly level, sloping downward toward the crossing at 0.12%

4. Will the modified crossing provide an approach grade of not more than five percent prior to the level grade?

Yes No

3. If not, state the percentage of grade prior to the level grade and explain why the grade exceeds five percent.

Section 9 – Illustration of Modified Crossing Configuration

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

- ◆ The vicinity of the modified 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.

Existing features (buildings, trees, etc) that are obstructions are shown on the accompanying plan in “screened” or “grayscale” lines.

Section 10 – Proposed Warning Signals or Devices

1. Explain in detail the number and type of proposed automatic signals or other warning devices planned at the crossing, including a cost estimate for each. If the proposed modifications include adding or modifying preemption, contact UTC for the additional worksheets.

Modifications to the existing warning devices include removal of the existing cantilevers. New crossing gates will be provided; a gate and flashing lights will be provided for each lane, with some gates located in median strips to provide better visibility to motorists.

The control equipment for the railroad warning devices will be upgraded to modern constant warning time units, replacing the existing case and hardware. The interconnection between the grade crossing control equipment and the roadway signal traffic controller will be upgraded to a 6-wire supervisory configuration. The roadway authority can use 2 or 6 of these wires, depending upon their interconnection wiring preferences.

A traffic signal will be installed on the Southbound Off-Ramp from Interstate 5 and on the Northbound roadway approach to the crossing on 41st Division Drive; at both locations, the traffic signals will be positioned to stop traffic before traffic gets to the grade crossing. The traffic signals will be interconnected to the grade crossing warning devices and simultaneous pre-emption will be provided. In addition, the traffic signals will be connected to queue-detector loops placed north of the tracks. The intent of the loop detection is to cycle the signal to “red” when stopped traffic is detected on the loops before the queue reaches the tracks. In so doing, the signal will deter additional traffic from stopping on the tracks. Note that this form of loop detection is not a “fail-safe” system.

A “Signal Ahead” sign will be used to warn motorists on the Southbound I-5 Off-Ramp of the new traffic signal on the Off-Ramp.

A similar traffic signal and queue detector loop configuration will be installed in the Southbound lanes of 41st Division, with the traffic signal located north of the tracks (to stop traffic before the traffic reaches the tracks) and the detector loops located south of the tracks (to detect queues before they reach the tracks) in both lanes of 41st Division Drive, as well as in the Southbound Interstate 5 On-Ramp.

The military checkpoints at Fort Lewis have the potential to impact traffic in the vicinity of the crossing. At high national security alert levels, vehicle movement times through the checkpoint queues may lengthen significantly, with potential impacts on the overall traffic operations, and potentially prevent the “track clearance” features of the traffic signal phasing from operating as intended.

The approximate cost for railroad crossing signal improvements at 41st Division Drive is \$500,000.

Section 11 – Justification of Installation of Wayside Horn (if applicable)

1. Describe in detail why this crossing should have a wayside horn installed. Also include a description of where the wayside horns and indicator lights will be installed at the crossing.

Section 12 – Additional Information

Provide any additional information supporting the proposal, including information such as the public benefits that would be derived from modifying the crossing as proposed.

New concrete crossing panel crossing surfaces will be installed, and the roadway repaved to match the elevation of the panels. New median will be added on the south side of the crossing.

Waiver of Hearing - *Sound Transit*

The undersigned represents the Respondent in the petition to modify a highway-railroad grade crossing.

We have investigated the conditions at the crossing proposed for modification. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the crossing be modified and consent to a decision by the commission without a hearing.

Dated at _____, Washington, on the _____ day of _____, 20 ____.

Printed name of Respondent

Signature of Respondent's Representative

Title

Phone number and e-mail address

Mailing address

Waiver of Hearing - *United States Army*

The undersigned represents the Respondent in the petition to modify a highway-railroad grade crossing.

We have investigated the conditions at the crossing proposed for modification. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the crossing be modified and consent to a decision by the commission without a hearing.

Dated at _____, Washington, on the _____ day of _____, 20 ____.

Printed name of Respondent

Signature of Respondent's Representative

Title

Phone number and e-mail address

Mailing address

Waiver of Hearing - Tacoma Rail

The undersigned represents the Respondent in the petition to modify a highway-railroad grade crossing.

We have investigated the conditions at the crossing proposed for modification. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the crossing be modified and consent to a decision by the commission without a hearing.

Dated at Tacoma, Washington, on the 12th day of February, 20 10.

Tacoma Rail

Printed name of Respondent

Dale W. King

Signature of Respondent's Representative

Superintendent

Title

(253) 396-3327 dale.king@cityoftacoma.org

Phone number and e-mail address

2601 SR 509 N. Frontage Road

Tacoma, WA 98421

Mailing address

STATE OF WASHINGTON
JULY 16 2010
10 FEB 16 AM 8:05

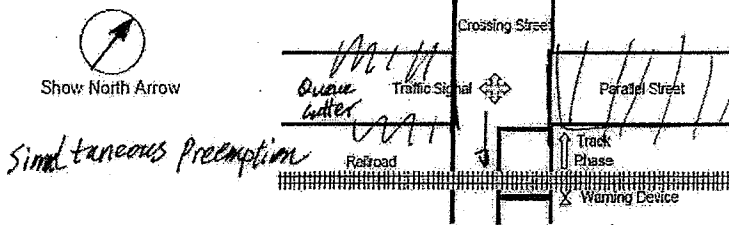
GUIDE FOR DETERMINING TIME REQUIREMENTS FOR TRAFFIC SIGNAL PREEMPTION AT HIGHWAY-RAIL GRADE CROSSINGS



GUIDE FOR DETERMINING TIME REQUIREMENTS FOR TRAFFIC SIGNAL PREEMPTION AT HIGHWAY-RAIL GRADE CROSSINGS

City _____
 County Pierce
 District _____

Date 6/3/2008
 Completed by Tony Wang
 District Approval _____



Parallel Street Name None
 Crossing Street Name 1st Division Dr

Railroad SOUND TRADSK
 Crossing DOT# DBS 830N

Railroad Contact JODI MITCHELL
 Phone 206-398-5000

~~SECTION 1: RIGHT-OF-WAY TRANSFER TIME CALCULATION~~

Preempt verification and response time

1. Preempt delay time (seconds)	1.	<input type="text"/>	Remarks
2. Controller response time to preempt (seconds)	2.	<input type="text"/>	Controller type: _____
3. Preempt verification and response time (seconds): add lines 1 and 2	3.	<input type="text"/>	

Worst-case conflicting vehicle time

4. Worst-case conflicting vehicle phase number	4.	<input type="text"/>	Remarks
5. Minimum green time during right-of-way transfer (seconds)	5.	<input type="text"/>	
6. Other green time during right-of-way transfer (seconds)	6.	<input type="text"/>	
7. Yellow change time (seconds)	7.	<input type="text"/>	
8. Red clearance time (seconds)	8.	<input type="text"/>	
9. Worst-case conflicting vehicle time (seconds): add lines 5 through 8	9.	<input type="text"/>	

Worst-case conflicting pedestrian time

10. Worst-case conflicting pedestrian phase number	10.	<input type="text"/>	Remarks
11. Minimum walk time during right-of-way transfer (seconds)	11.	<input type="text"/>	
12. Pedestrian clearance time during right-of-way transfer (seconds)	12.	<input type="text"/>	
13. Vehicle yellow change time, if not included on line 12 (seconds)	13.	<input type="text"/>	
14. Vehicle red clearance time, if not included on line 12 (seconds)	14.	<input type="text"/>	
15. Worst-case conflicting pedestrian time (seconds): add lines 11 through 14	15.	<input type="text"/>	

Worst-case conflicting vehicle or pedestrian time

16. Worst-case conflicting vehicle or pedestrian time (seconds): maximum of lines 9 and 15	16.	<input type="text"/>
17. Right-of-way transfer time (seconds): add lines 3 and 16	17.	<input type="text"/>

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER C.O.T. STD. PLAN NO. SU-03.
2. MODIFIED WSDOT CEMENT CONC. SIDEWALK FOR MEDIAN (PER DETAIL DRAWING RODET113).
3. CEMENT CONCRETE SIDEWALK (PER C.O.T. STD. PLAN SU-04).
4. CONCRETE CROSSING PANELS WITH ELASTOMERIC FLANGE FILTER. SEE TRACK PLAN AND PROFILE DRAWINGS.
5. CROSSING SIGNAL EQUIPMENT. SEE GRADE CROSSING SIGNAL PLANS.
6. CEMENT CONCRETE TRAFFIC BARRIER CURB PER CITY OF LAKEWOOD STD. PLAN S-2F.
7. CEMENT CONCRETE SIDEWALK (PER CITY OF LAKEWOOD STD. PLAN S-2A).
8. TYPE D MOUNTABLE CEMENT CONCRETE CURB AND GUTTER PER C.O.T. STD. PLAN NO. SU-03. (NOT USED)
9. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 2 PER C.O.T. STD. PLAN SU-08 MODIFIED WITH CURB AT BACK OF S/W. (SEE TYPICAL SECTIONS)
10. CRUSHED SURFACING BASE COURSE (ACCESS PAD TO RAILROAD SIGNAL EQUIPMENT: 6" CSBC COMPACTED DEPTH OVER GRAVEL BORROW SUBGRADE).
11. 8" REINFORCED HEAVY DUTY SIDEWALK AND / OR DRIVEWAY PER DRAWING NO. RODET01. (NOT USED)
12. REPLACE EXISTING CROSSING WITH 115# WOOD TIES. (NOT USED)
13. TYPE C PRECAST TRAFFIC CURB (PER WSDOT STD. PLAN F-2).
14. CEMENT CONCRETE TRAFFIC CURB PER C.O.T. STD. PLAN NO. SU-03.
15. CHAINLINK FENCE TYPE 3 (PER WSDOT STD. PLAN L-20.10-00). (NOT USED)
16. BEAM GUARDRAIL TYPE 1 PER WSDOT STD. PLAN NO. C-1.
17. (NOT USED)
18. (NOT USED)
19. (NOT USED)
20. CEMENT CONC. DRIVEWAY ENTRANCE—MODIFIED (PER DETAIL DRAWING RODET114).
21. STATION/OFFSET LOCATION FOR DETECTABLE WARNING PATTERN. SEE DRAWINGS RODET110 AND RODET111.
22. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER CITY OF LAKEWOOD STD. PLAN S-2F.
23. ADJUST UTILITY TO GRADE.
24. TYPICAL CURB AND GUTTER/SIDEWALK TRANSITION AT RAIL CROSSING (PER DETAIL DRAWING RODET110).
25. CONSTRUCT A 3' WIDE DETECTABLE WARNING STRIP WITH TRUNCATED DOMES PER C.O.T. DEPT. OF PUBLIC WORKS STANDARD PLAN SU-05A. SEE DRAWING NO. RODET01. (NOT USED)
26. CONSTRUCT SIDEWALK RAMP TYPE 2 PER C.O.T. STD. PLAN SU-05. (NOT USED)
27. CEMENT CONC. TRAFFIC CURB AND GUTTER PER WSDOT STD. PLAN F-10.12-00.
28. CEMENT CONC. SIDEWALK (PER WSDOT STD. PLAN F-30.10-00).
29. (NOT USED)
30. RECONSTRUCT DRIVEWAY IN KIND AS NOTED TO MATCH EXISTING. (NOT USED)
31. CEMENT CONC. SIDEWALK (PER CITY OF LAKEWOOD STD. PLAN S-29).
32. CEMENT CONC. SIDEWALK RAMP TYPE 5 PER WSDOT STD. PLAN F-42.10-00.
33. (NOT USED)
34. (NOT USED)
35. TYPICAL CURB AND GUTTER TRANSITION AT RAIL CROSSING (PER DETAIL DRAWING RODET110).
36. (NOT USED)
37. (NOT USED)
38. TYPICAL CURB AND GUTTER/PLANTER/SIDEWALK TRANSITION AT RAIL CROSSING (PER DETAIL DRAWING RODET111).
39. REPLACE CONCENTRIC CONE WITH ECCENTRIC CONE. ADJUST TO GRADE AND ORIENT 1/4 AWAY FROM CURB. (NOT USED)
40. TYPICAL DEPRESSED SIDEWALK AT RAIL CROSSING (PER DETAIL DRAWING RODET111).
41. CONCRETE PAD FOR BUS STOP (PER DETAIL DRAWING RODET112).

ROADWAY CONSTRUCTION NOTES (CONT.)

42. DUAL FACED CEMENT CONC. TRAFFIC CURB (PER WSDOT STD. PLAN F-10.12-00).
43. (NOT USED)
44. (NOT USED)
45. (NOT USED)
46. HMA CURB (PER DETAIL DRAWING RODET113).
47. (NOT USED)
48. SIDEWALK RAMP TYPE 2 PER CITY OF LAKEWOOD STD. PLAN S-3B.
49. (NOT USED)
50. HMA SIDEWALK RAMP (PER DETAIL DRAWING RODET113).
51. CURB AND GUTTER TRANSITION TO HMA CURB (PER DETAIL DRAWING RODET113).
52. CEMENT CONCRETE SIDEWALK RAMP TYPE 2 MODIFIED (PER DETAIL DRAWING RODET110).
53. (NOT USED)
54. MOUNTABLE CEMENT CONCRETE TRAFFIC CURB AND GUTTER (PER DETAIL DRAWING RODET114).
55. (NOT USED)
56. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1 (PER C.O.T. STD. PLAN NO. SU-07).
57. (NOT USED)
58. CEMENT CONC. SIDEWALK RAMP TYPE 3B PER WSDOT STD. PLAN F-40.15-00.
59. STORMWATER CURB BREAK (PER DETAIL DRAWING RODET112).
60. (NOT USED)
61. CEMENT CONC. TRAFFIC CURB (PER WSDOT STD. PLAN F-10.12-00)
62. PRECAST DUAL FACED SLOPED MOUNTABLE CURB (PER WSDOT STD. PLAN F-10.64-01).
63. (NOT USED)
64. BEAM GUARDRAIL ANCHOR TYPE 1 (PER WSDOT STD. PLAN C-6 WITH END SECTION DESIGN C PER WSDOT STD. PLAN C-7).
65. CHAIN LINK FENCE TYPE 4 (PER WSDOT STD. PLAN L-20.10-00) WITH VINYL COATING.

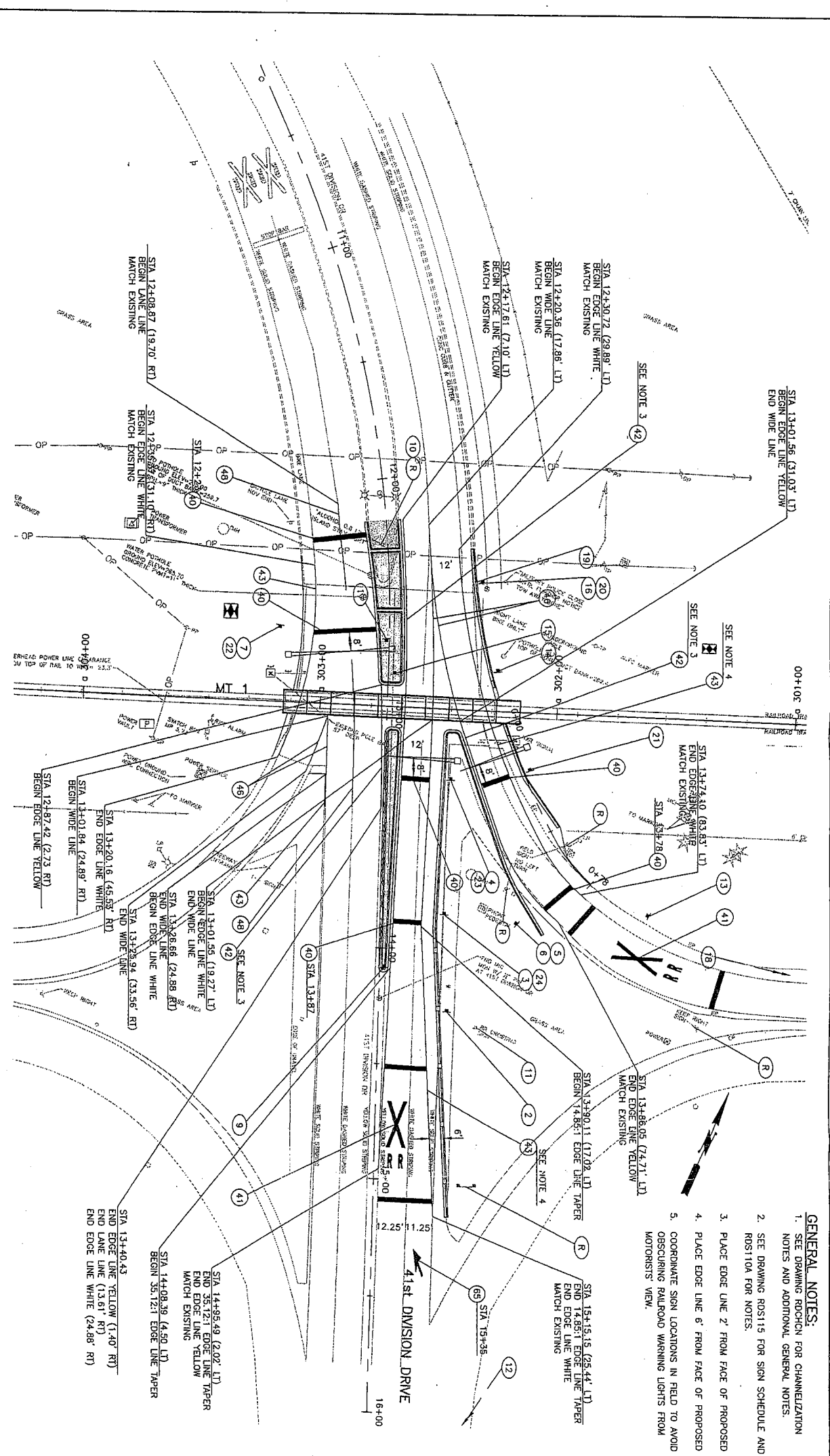
GENERAL NOTES — ROADWAY CONSTRUCTION

1. SEE UTILITY RELOCATION AND PROTECTION PLANS FOR STORM DRAINAGE, MISC. CONDUIT AND CABLE INSTALLATION.
2. SEE SHEETS R0A121-R0A125 FOR ROADWAY MEDIAN DETAILS.
3. SEE SHEETS R0T5110-R0T5128 FOR PAVEMENT SECTIONS.
4. CURB AND GUTTER DEFINED BY FACE OF CURB UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE PROVIDED AT TOP OF CURB UNLESS OTHERWISE NOTED AND DO NOT REFLECT CURB CUTS OR SIDEWALK RAMPS.
5. ALL CURB RETURN ELEVATIONS ARE TO TOP OF CURB UNLESS OTHERWISE NOTED. AT CURB CUT RAMPS, CURB RETURN ELEVATIONS ARE INDICATED AT A POINT 6" ABOVE GUTTER FLOWLINE UNLESS OTHERWISE NOTED.
6. ALL UNITS ARE IN FEET UNLESS OTHERWISE SPECIFIED.
7. DRIVEWAYS ARE STATIONED AT CENTERLINE OF DRIVEWAY.
8. STORMWATER CURB BREAKS ARE STATIONED AT CENTERLINE OF STORMWATER CURB BREAK.

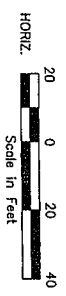
FILE NAME	RD_CN.dwg	REGION NO.	STATE
TITLE	RD_CN.dwg	10	WASH
DATE	Jan 07, 2009	JOB NUMBER	4300
DESIGNED BY	eberger	CONTRACT NO.	
ENTERED BY	RDH	REVISED BY	
CHECKED BY	XXX	DATE	
PROJ. ENGR.		BY	
REGIONAL ADM.			



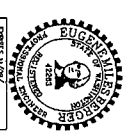
SOUNDER COMMUTER RAIL, M STREET TO LAKEWOOD TRACK AND SIGNAL IMPROVEMENTS
ROADWAY CONSTRUCTION NOTES
 ROADWAY CONSTRUCTION NOTES



- GENERAL NOTES:**
1. SEE DRAWING SECTION FOR CHANNELIZATION NOTES AND ADDITIONAL GENERAL NOTES.
 2. SEE DRAWING RDS119 FOR SIGN SCHEDULE AND RDS110A FOR NOTES.
 3. PLACE EDGE LINE 2' FROM FACE OF PROPOSED CURB.
 4. PLACE EDGE LINE 6' FROM FACE OF PROPOSED CURB.
 5. COORDINATE SIGN LOCATIONS IN FIELD TO AVOID OBSCURING RAILROAD WARNING LIGHTS FROM MOTORISTS' VIEW.



FILE NAME	PD_ROCH117.dwg	REGION NO.	10	STATE	WASH
DATE	Jun 07, 2009	JOB NUMBER	4008	CONTRACT NO.	RA/09-14-08
DESIGNED BY	CLG	CHECKED BY	CR	PROJ. ENGR.	BB
DESIGNED BY	ebberger	CHECKED BY	BWH	PROJ. ENGR.	BB
ENTERED BY	BWH	PROJ. ENGR.	BB	REGIONAL ADM.	
REVISION		DATE		BY	



Washington State
Department of Transportation

SOUNDER COMMUTER RAIL, M STREET TO LAKEWOOD
TRACK AND SIGNAL IMPROVEMENTS
41st DIVISION DRIVE
CHANNELIZATION AND SIGNING PLAN


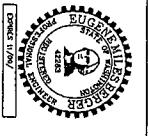


RDCH117
SHEET
OF
SHEETS

ROADWAY CHANNELIZATION NOTES

14. PAINTED TWO WAY LEFT TURN STRIP WITH RAISED PAVEMENT MARKERS PER C.O.T. CHANNELIZATION DETAILS. RAISED PAVEMENT MARKERS AND PAINT STRIPING STD. PLAN.
15. PAINTED 4" LANE STRIPE WITH RAISED PAVEMENT MARKERS PER C.O.T. CHANNELIZATION DETAILS. RAISED PAVEMENT MARKERS AND PAVEMENT STRIPING STD. PLAN.
21. PLASTIC PAVEMENT "ONLY" PER C.O.T. PLASTIC PAVEMENT "ONLY" STD. PLAN.
22. THERMOPLASTIC TRAFFIC ARROW PER C.O.T. TYPICAL THERMOPLASTIC TRAFFIC ARROW STD. PLAN.
40. PLASTIC TYPE D STOP BAR PER WSDOT STD. PLAN M-11.10-01.
41. PLASTIC TYPE D RAILROAD CROSSING SYMBOL PER WSDOT STD. PLAN M-11.10-01, WITH EXCEPTIONS TO STANDARD LAYOUT DIMENSIONS AS NOTED IN PLAN VIEW.
42. PLASTIC TYPE D EDGE LINE YELLOW PER WSDOT STD. SPECIFICATIONS.
43. PLASTIC TYPE D EDGE LINE WHITE PER WSDOT STD. SPECIFICATIONS.
44. CITY OF LAKEWOOD DURABLE MARKING TRAFFIC ARROW TYPE 2SR PER WSDOT STD. PLAN M-24.40-01.
45. PLASTIC TYPE D CROSSWALK LINE PER WSDOT STD. PLAN M-15.10-01.
46. PLASTIC TYPE D WIDE LINE PER WSDOT STD. SPECIFICATIONS.
47. PLASTIC TYPE D DOUBLE YELLOW CENTER LINE PER WSDOT STD. SPECIFICATIONS.
48. PLASTIC TYPE D LANE LINE PER WSDOT STD. SPECIFICATIONS.
49. CITY OF LAKEWOOD DURABLE MARKING RAILROAD CROSSING SYMBOL PER WSDOT STD. PLAN M-11.10-01, WITH EXCEPTIONS TO STANDARD LAYOUT DIMENSIONS AS NOTED IN PLAN VIEW.
50. CITY OF LAKEWOOD DURABLE MARKING STOP BAR PER WSDOT STD. PLAN M-11.10-01.
51. CITY OF LAKEWOOD DURABLE MARKING TRAFFIC ARROW TYPE 2SL PER WSDOT STD. PLAN M-24.40-01.
52. CITY OF LAKEWOOD DURABLE MARKING TRAFFIC LETTERS "ONLY", DIMENSIONS PER WSDOT STD. SPECIFICATIONS.
53. CITY OF LAKEWOOD DURABLE MARKING EDGE LINE YELLOW, DIMENSIONS PER WSDOT STD. SPECIFICATIONS.
54. CITY OF LAKEWOOD DURABLE MARKING 24" STOP BAR PER CITY OF LAKEWOOD STD. PLAN CH-1.
55. (NOT USED)
56. PLASTIC TYPE D TRAFFIC LETTERS "ONLY" PER WSDOT STD. SPECIFICATIONS.
57. CITY OF LAKEWOOD DURABLE MARKING BICYCLE LANE SYMBOL PER WSDOT STD. PLAN M-9.50-01.
58. CITY OF LAKEWOOD DURABLE MARKING EDGE LINE WHITE, DIMENSIONS PER WSDOT STD. SPECIFICATIONS.
59. CITY OF LAKEWOOD DURABLE MARKING WIDE LINE, DIMENSIONS PER WSDOT STD. SPECIFICATIONS.
60. CITY OF LAKEWOOD DURABLE MARKING DOUBLE YELLOW CENTER LINE, DIMENSIONS PER WSDOT STD. SPECIFICATIONS.
61. (NOT USED)
62. RAISED PAVEMENT MARKER TYPE 1Y DOUBLE YELLOW CENTER LINE PER WSDOT STD. PLAN M-20.50-01.
63. RAISED PAVEMENT MARKER TYPE 1W AND LANE LINE PER DETAIL SHEET RODET112.
64. RAISED PAVEMENT MARKER TYPE 1Y AND TWO WAY LEFT TURN LINE PER DETAIL SHEET RODET112.
65. PLASTIC TYPE D TRAFFIC ARROW TYPE 6SL, DIMENSIONS PER WSDOT STD. PLAN M-24.40.01.
66. PLASTIC TYPE D TRAFFIC ARROW TYPE 2SR PER WSDOT STD. PLAN M-24.40-01.
67. CITY OF LAKEWOOD DURABLE MARKING CROSSWALK PER CITY OF LAKEWOOD STD. PLAN CH-1.
68. CITY OF LAKEWOOD DURABLE MARKING LANE LINE PER SPECIFICATION SECTION 01900, REVISIONS TO WSDOT STD. SPECIFICATION 8-22 AND 9-24, DIMENSIONS PER WSDOT STD. SPECIFICATIONS.
69. PLASTIC TYPE D STOP LINE PER WSDOT STD. PLAN M-15.10-01.
70. PAINT TOP AND EXPOSED SIDES CURB YELLOW, WITH GLASS BEADS, PER SPECIFICATION SECTION 01900.
71. PAINTED ACCESS PARKING SPACE SYMBOL PER WSDOT STD. SPECIFICATIONS.
72. PAINT LINE EDGE LINE WHITE PER WSDOT STD. SPECIFICATIONS.
73. WHEEL STOP (PER WSDOT STD. PLAN M-17.10-00).

GENERAL NOTES - ROADWAY CHANNELIZATION

1. ALL UNITS ARE IN FEET UNLESS OTHERWISE SPECIFIED.

FILE NAME	PD_RDCHCN.dwg	REGION NO.	10	STATE	WASH					SOUNDER COMMUTER RAIL, M STREET TO LAKEWOOD TRACK AND SIGNAL IMPROVEMENTS ROADWAY CHANNELIZATION NOTES	ROADWAY CHANNELIZATION NOTES	RDCHCN SHEET OF SHEETS
TIME	11:46am	CONTRACT NO.	42008	DATE	10/01/08							
DATE	Jan 07, 2009	DATE		BY								
DESIGNED BY	abarger	DATE		BY								
ENTERED BY	RJH	DATE		BY								
CHECKED BY	XXX	DATE		BY								
PROJ. ENGR.		DATE		BY								
REGIONAL ADM.		DATE		BY								