

RAILROAD-HIGHWAY CROSSINGS; GENERAL

741-100-0010

Measurements

Unless otherwise specified, measurements used in these rules refer to the distance from the centerline of the nearest track or roadway to the centerline of the nearest signal mast, post or other structure.

Stat. Auth.: ORS 184.616, 184.619, 823.011, 824.202 and 824.220

Stat. Implemented: ORS 824.212

741-100-0020

Definitions

As used in Divisions 741-100 through 200 and 741-600 of these rules, the following definitions apply:

- (1) "Alter" means any change to the roadway or tracks at a crossing that materially affects use of the crossing by railroad equipment, vehicles, or pedestrians. Alterations include, but are not limited to: adding or removing tracks; changing the width of the roadway; installing or removing protective devices; creating an additional travel lane; changing the direction of traffic flow; installing curbs, sidewalks, or bicycle facilities; or changing grade, including superelevation, if sufficient to necessitate a change of the grade of the railroad or highway being crossed.
- (2) "AASHTO" means the American Association of State Highway and Transportation Officials, 2001, A Policy on Geometric Design of Highways and Streets, Fourth Edition.
- (3) "Bicycle Facilities" is a general term denoting improvements and provisions made to accommodate or encourage bicycling, including shared roadway not specifically designed for bicycle use.
- (4) "Bicycle Lane" has the meaning given in Section 1A.13 of the MUTCD.
- (5) "Crossing" means the area affecting or affected by the intersection of a highway with a track or tracks of a railroad or a rail-fixed guideway system.
- (6) "Curb" means standard curb as per Oregon Standard Drawing No. ERD700.
- (7) "Grade Crossing" means a highway-rail grade crossing as defined in Section 1A.13 of the MUTCD.
- (8) "Guardrail" means a device as depicted in Oregon Standard Drawing No. ERD445.
- (9) "Highway" has the meaning given that term in ORS 824.200 (2).
- (10) "Illumination" means a system of luminaires arranged in a unique pattern (see Figure 8) to provide direct lighting on the side of railroad equipment occupying a grade crossing during hours of darkness.
- (11) "Interconnection" is as defined in Section 8A.01 of the MUTCD.
 - (a) "Preemption" is as defined in Section 8A.01 of the MUTCD.
 - (b) "Advance Preemption" is as defined in Section 8A.01 of the MUTCD.
 - (c) "Simultaneous Preemption" is as defined in Section 8A.01 of the MUTCD.
- (12) "Maintenance" includes but is not limited to the repair, replacement, alignment, cleaning of protective devices and other actions necessary to assure the proper warning is conveyed to users of the crossing. It also includes the required power to properly activate and operate the protective devices. Minor changes resulting from the maintenance of surface, grade, and alignment, or the replacement in kind of existing signs and signals are not alterations. See OAR 741-120-0020 regarding maintenance of grade crossing surfaces.

- (13) "MUTCD" means the Manual on Uniform Traffic Control Devices 2000 Millennium Edition, December 2000, incorporating Revision No. 1 dated December 28, 2001, and Errata No. 1 dated June 14, 2001, as adopted by the State of Oregon (Oregon Supplements March 2002).
- (14) "Multi-use path" means shared-use path as defined in Section 1A.13 of the MUTCD.
- (15) "Public authority" has the meaning given to the term "public authority in interest" in ORS 824.200 (7).
- (16) "Rail-Fixed Guideway System" means any light, heavy or rapid rail system, monorail, inclined plane, funicular, trolley or automated guideway used primarily for carrying passengers.
- (17) "Railroad" has the meaning given that term in ORS 824.020 (2) and 824.200 (8).
- (18) "Roadway" has the meaning given in Section 1A.13 of the MUTCD.
- (19) "Safe Stopping Distance" (SSD) means the design stopping sight distance as set forth in AASHTO 2001, Exhibit 3-1 (see Table 1).
- (20) "Separated Crossing" means a crossing where the highway and railroad are not at common grade. There are two types of separated crossings:
- (a) "Overcrossing" means the highway is above the railroad.
 - (b) "Undercrossing" means the railroad is above the highway.
- (21) "Shoulder" means that portion of the roadway contiguous with the traveled way that accommodates stopped vehicles, emergency use, and lateral support of subbase, base, and surface courses.
- (22) "Sidewalk" means that portion of a grade crossing set aside for use by pedestrians. A sidewalk is part of a grade crossing, if its nearest edge is within 25 feet of the edge of the roadway.
- (23) "Sight Distance" means the distance from the railroad-highway grade crossing, measured along the railroad, that a train must become visible to a motorist who is at the SSD.
- (24) "Traffic Signal Preemption Control" is as defined in Section 4A.02, 20 and 39 of the MUTCD.

Stat. Auth.: ORS 184.616, 184.619, 823.011, 824.202 and 824.220

Stat. Implemented: ORS 824.200

741-100-0030

Adoption of Tables and Figures Related to Railroad-Highway Crossings

For the purposes of OAR Chapter 741, Division 100 through Division 200, Tables 1 through 3 and Figures 1 through 10 are hereby adopted and made a part of these rules.

Stat. Auth.: ORS 184.616, 184.619, 823.011, 824.202 and 824.220

Stat. Implemented: ORS 824.212

TABLE 1
SAFE STOPPING DISTANCES (SSD)
(The SSD is measured 15 feet from nearest rail)
(OAR 741-100-0020)

Vehicle Approach Speed	SSD
15 mph	80 feet
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet

Source: Based on an equation from A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation officials, 2001, Fourth Edition, pg 112.

TABLE 2
METHOD OF ASSIGNING NUMBERS
(OAR 741-105-0020)

List of Numbers and Letters Assigned to Railroads in State of Oregon for the Purpose of Identifying Highway Grade Crossings - Revised as of April 2001.

Assigned Prefix	Route	From MP	From Station Name	To MP	To Station Name
ALBANY & EASTERN RAILROAD COMPANY (AERC)					
CLA	Mill City Branch (West End)	689.50	Page	697.30	Tallman
CLB	Mill City Branch (East End)	684.80	Tallman	725.80	Mill City
3S	Santiam Branch	0.00	OE Albany Yard	0.90	Albany
		14.50	Lebanon	31.90	Foster
THE BURLINGTON NORTHERN & SANTA FE RAILWAY COMPANY (BNSF)					
3S	Santiam Branch	0.00	OE Albany Yard	0.90	Albany
28T	Oregon Trunk Branch	0.70	OR-WA State Line	151.90	Bend
5D	Seattle Main Line	0.00	NW 10th & Hoyt	9.85	OR-WA State Ln.
8P	Pettygrove St. Line.	0.00	NW 12th & Kearney	4.00	NW Yeon Ave.
10A	Bieber Line	0.00	Bend	67.80	Chemult
10B	Bieber Line	0.00	Bieber Line Jct. (S. Klamath)	25.20	OR-CA State Line.
CENTRAL OREGON & PACIFIC RAILROAD (CORP)					
C	Siskiyou Sub	403.25	OR-CA St. Line	441.80	Medford.
C	Roseburg Sub	441.80	Medford	642.00	Springfield Jct.
CO	Coos Bay Sub	651.60	Danebo	786.50	Coquille
CR	White City Branch	450.50	Tolo	456.30	White City
CITY OF ASTORIA (COA)					
5A	Astoria Line	97.10	Tongue Point	101.80	Port of Astoria
BLUE MOUNTAIN RAILROAD COMPANY (BLMR)					
2H	Dayton Branch	20.80	Weston	41.69	OR-WA St. Line
CITY OF LEBANON (PRIVATE) (LEB)					
49A	Main Track	687.90	Near 5 th at Olive	688.61	Mill Site

CITY OF PRINEVILLE RAILWAY (COP)

16A	Main Track	0.00	Prineville Jct.	19.40	Prineville
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HAMPTON RAILWAY INC. (HLSC)

35A	Main Track	0.00	Willamina	9.00	Grand Ronde
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IDAHO NORTHERN & PACIFIC RAILWAY COMPANY (INPR)

2G	Joseph Branch	0.00	La Grande	83.30	Joseph
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KLAMATH NORTHERN RAILWAY COMPANY (KNOR)

36A	Main Track	0.00	Gilchrist Jct.	10.57	Gilchrist
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LAKE COUNTY RAILROAD (LCR)

44A	Main Track	498.35	OR-CA St. Line	512.30	Lakeview
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LONGVIEW, PORTLAND & NORTHERN RAILWAY COMPANY (LPN)

35B	Main Track	0.00	Gardiner Jct.	3.20	Gardiner
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MOUNT HOOD RAILWAY COMPANY (MH)

24A	Main Line	0.00	Hood River	21.13	Parkdale
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OREGON PACIFIC RAILROAD COMPANY (OPR)

46A	Main Track.	0.0	East Portland	4.60	Milwaukie
CJ	Molalla Branch	747.40	Canby	757.60	Molalla

PENINSULA TERMINAL COMPANY (PT)

29A	Yard Tracks in Portland				
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PORT OF TILLAMOOK BAY RAILROAD (POTB)

38A	Yard Tracks	0.00	Tillamook Yard	1.40	Tillamook Ind Park
38B	Main Track	770.50	Schefflin	855.80	Tillamook

PORTLAND TERMINAL RAILROAD COMPANY (PTO)

7A	Main Line	Yard Tracks in Portland
7B	Front Ave. Line	Yard Tracks in Portland
7C	13th Ave. Line	Yard Tracks in Portland
7D	15th Ave. Line	Yard Tracks in Portland
7E	York Street Line	Yard Tracks in Portland
7F	Yeon Ave. Line	Yard Tracks in Portland

PORTLAND & WESTERN RAILROAD INC. (PNWR)

3E	Oregon Electric District	10.00	United Junction.	141.80	Eugene
3F	Forest Grove District	4.60	Hillsboro	10.30	Forest Grove
5A	Astoria District	4.30	Willbridge	97.00	Tongue Point
8U	United Railways District	17.10	Bowers Jct.	28.30	Banks
FAA	Seghers District.	757.00	Stimson Timber	765.30	Hillsboro
FD	Tillamook District	741.60	Milwaukie	774.00	Banks
F	West Side District	671.70	Monroe	764.90	Hillsboro
P	Westside District	738.00	St. Joseph	764.00	Cook

SP NEWSPRINT (PRIVATE) (PUB)

40A	Main Track	0.00	Newberg	1.80	Mill Site
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SUMPTER VALLEY RAILROAD RESTORATION

31A	Main Track	22.00	McEwen	25.00	End of Line
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SUPERIOR LUMBER COMPANY (PRIVATE)

41A	Main Track	0.00	Glendale	1.50	Mill Site
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TRI-MET

43A	Banfield LRT Line
TMW	West Side LRT Line
TMA	Airport LRT Extension

UNION PACIFIC RAILROAD COMPANY (UP)

2A	Main Line (via Graham)	0.00	Portland	389.80	Huntington
2AB	SE 2 nd Ave. Line	0.00	Portland	0.80	SE Market & 2nd
2AC	SE 3rd Ave. Line	0.00	Portland	1.03	SE Portland
2AD	Seattle Main Line	0.60	East Portland	6.80	W. Portland Jct.
2AE	Kenton Line	5.60	Peninsula Jct.	22.00	Troutdale
2AH	Spokane Main Line	184.20	Hinkle	206.42	OR-WA St. Line
2B	St. Johns Branch	0.00	St. Johns Jct.	7.70	Peninsula St.
2E	Condon Branch	0.00	Arlington	44.50	Condon
2F	Heppner Branch	0.00	Heppner Jct.	45.20	Heppner
2I	Pilot Rock Branch	0.00	Rieth	14.00	Pilot Rock
2J	Main Line	488.50	Nyssa	538.80	Huntington
2K	Homedale Branch	0.00	Nyssa	18.50	OR-ID St. Line
2O	Umatilla Branch	0.00	Hinkle	10.20	Umatilla
C	Brooklyn Sub	644.30	Springfield Jct.	771.00	Portland
CE	Marcola Branch	646.60	Mohawk Jct.	649.40	Hendricks
CF	Cascade Main Line	411.10	OR-CA St. Line	621.60	Springfield Jct.
CFA	Modoc Line.	533.38	OR-CA St. Line	555.00	Klamath Falls
CM	West Salem	720.00	West Salem	720.50	West Salem
CO	Coos Bay Line	648.50	Eugene Yard	651.50	Danebo

UNION RAILROAD OF OREGON (UO)

33A	Main Track	0.00	UP Jct.	2.30	Union
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WHITE CITY RAILROAD & UTILITY COMPANY (WCTU)

37W	Yard tracks in White City				
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WILLAMETTE & PACIFIC RAILROAD INC. (WPRR)

CK	Toledo District	690.90	Albany	766.70	Toledo
CM	Dallas District	728.50	Thielsen	733.80	Dallas
F	West Side District	671.60	Monroe	738.00	St Joseph
FCA	Willamina District	730.60	Whiteson	749.50	Willamina
FE	Bailey District	673.00	Alpine Jct.	680.00	Dawson
P	Newberg District	738.00	St. Joseph	749.70	Newberg

WILLAMETTE SHORE TROLLEY LINE (PSL)

47A	Main Track	768.21	Wilsonia	774.00	Moody Street
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WILLAMETTE VALLEY RAILWAY (WVRD)

34A	Main Track	0.00	Independence	3.00	S. Independence
CC	W. Stayton Branch	708.10	W. Stayton	737.80	Woodburn
CG	Geer Branch	719.40	Geer	723.60	Lancaster Drive

WYOMING & COLORADO RAILROAD COMPANY (WYCO)

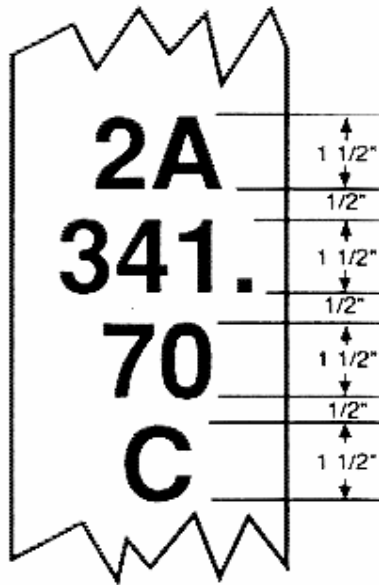
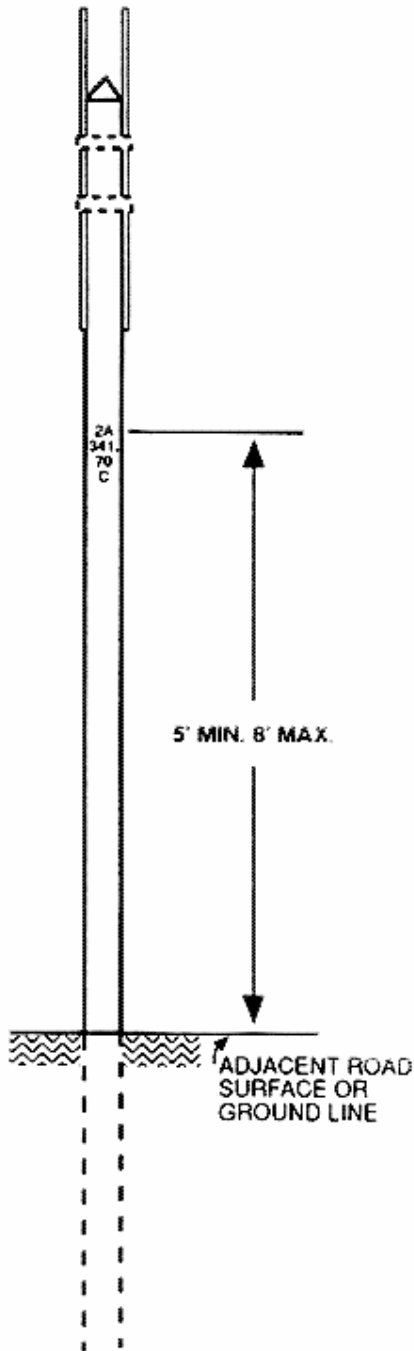
45A	Main Track	0.00	Ontario-Malheur Jct	24.10	Celatom
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TABLE 3
MAINTENANCE RESPONSIBILITIES
(OAR 741-115-0030)

Protective Device	Party Responsible for Installation and Maintenance	MUTCD Reference	Rule Reference
Standard No. 1 Crossbuck	Railroad	Sign R15-1 Section 8B.02	741-110-0030(2)(a) 741-110-0040(1)
Standard No. 1S Vehicle STOP sign	Public Authority	Sign R1-1 Section 2B.04	741-110-0030(2)(b) 741-110-0040(1)
Standard No. 1T Railroad STOP sign	Railroad		741-110-0030(2)(c) 741-110-0040(3) Figure 2
Standard No. 1M Multiple track sign	Railroad	Sign R15-2 Section 8B.02	741-110-0030(2)(d)
Standard No. 2 Flashing light signal	Railroad	Section 8B.02	741-110-0030(3)(a) 741-110-0040(1)
Standard No. 2B Cantilevered flashing light signal	Railroad	Section 8B.03	741-110-0030(3)(b) 741-110-0040(1)
Standard No. 2P Multi-use Path flashing light signal	Railroad		741-110-0030(3)(c) 741-110-0040(2) Figure 3
Standard No. 4 Automatic gate signal	Railroad	Section 8B.04	741-110-0030(3)(d) 741-110-0040(1)
Traffic Signal Preemption Control	Public Authority and Railroad	Section 8D.04	741-110-0030(3)(g) 741-115-0040
Train-activated Advance Warning Device	Public Authority and Utility Companies		741-110-0030(5)(e) 741-110-0040(6) Figure 6
Illumination	Public Authority and Utility Companies		741-110-0030(2)(f) 741-110-0040(9) Figure 8
Turn Restriction Devices During Preemption	Public Authority and Railroad	Sign R10-11a, 11b or 11c in Section 2B.40 and Section 8B.05	741-110-0030 (4)(c)
Stop Clearance Line	Public Authority	Stop Line Section 3B.16	741-110-0030(2)(e) 741-110-0040(4) Figure 5
Advance Warning Sign	Public Authority	W10 series signs Section 8B.03	741-110-0030(5)(a) 741-110-0040(5)
Advance Warning Pavement Markings	Public Authority	Section 8B.16	741-110-0030(5)(d) 741-110-0040(5) Figure 5
STOP AHEAD Sign	Public Authority	Sign W3-1 or 1a Section 2C.26	741-110-0030(5)(c) 741-110-0040(6)
DO NOT STOP ON TRACKS Sign	Public Authority and Railroad	Sign R8-8 Section 8B.06	741-110-0030(4)(d) 741-110-0040(10)(c)
Standard Curb	Public Authority		741-110-0030(7)

			741-110-0040(8) Oregon Standard Drawing ERD700 Figure 7
Guardrail	Public Authority		741-110-0030(6) 741-110-0040(7) Oregon Standard Drawing ERD445
EXEMPT sign	Public Authority and Railroad	Sign R15-3 Section 8B.04	741-110-0030(4)(a) 741-110-0040(10)(a)
Advance EXEMPT sign	Public Authority	Sign W10-1a Section 8B.04	741-110-0030(4)(b) 741-110-0040(10)(b)
STOP HERE ON RED sign	Public Authority	Sign R10-6 Section 2B.40	741-110-0030(4)(f) 741-110-0040(10)(e)
NO TURN ON RED sign	Public Authority	Signs 11a, 11b or 11c Section 2B.40	741-110-0030(4)(e) 741-110-0040(10)(d)
Multi-use Path Advance Warning Sign	Public Authority	Sign W10-1 (18 ") Section 8B.03	741-110-0030(5)(b)

ODOT CROSSING NUMBER



DETAIL FOR DISPLAYING CROSSING NUMBERS

COLOR OF LETTERS AND NUMBERS MUST CONTRAST WITH BACKGROUND

CROSSING NUMBERS SHOULD BE DISPLAYED ON SIDE FACING HIGHWAY

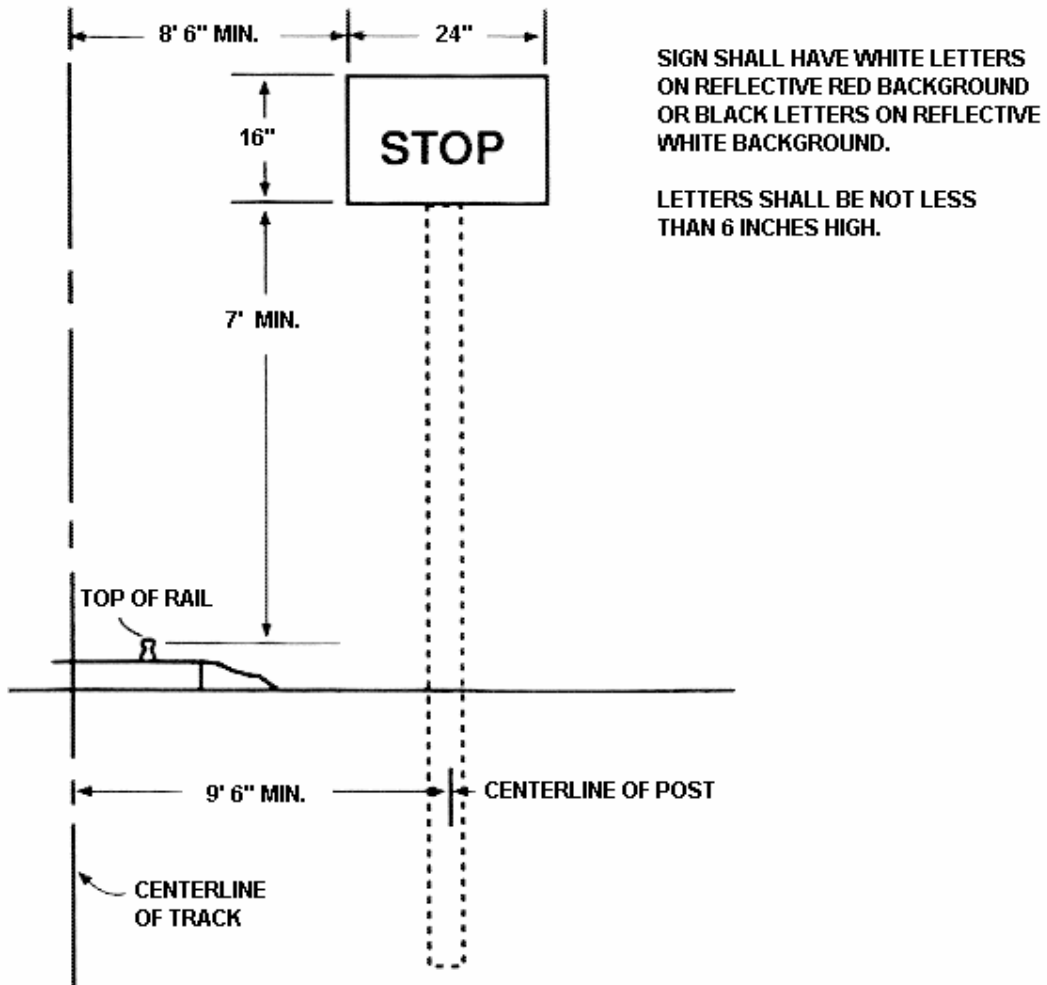
THE NUMBER SHALL BE PLACED ON THE SIGNAL HOUSE AT ALL CROSSINGS EQUIPPED WITH AUTOMATIC PROTECTIVE DEVICES.

OTHER CROSSING IDENTIFICATION AND EMERGENCY NOTIFICATION NUMBERS MAY ALSO BE DISPLAYED AT CROSSING

OAR 741-105-0030

**FIGURE 1
AUGUST 2003**

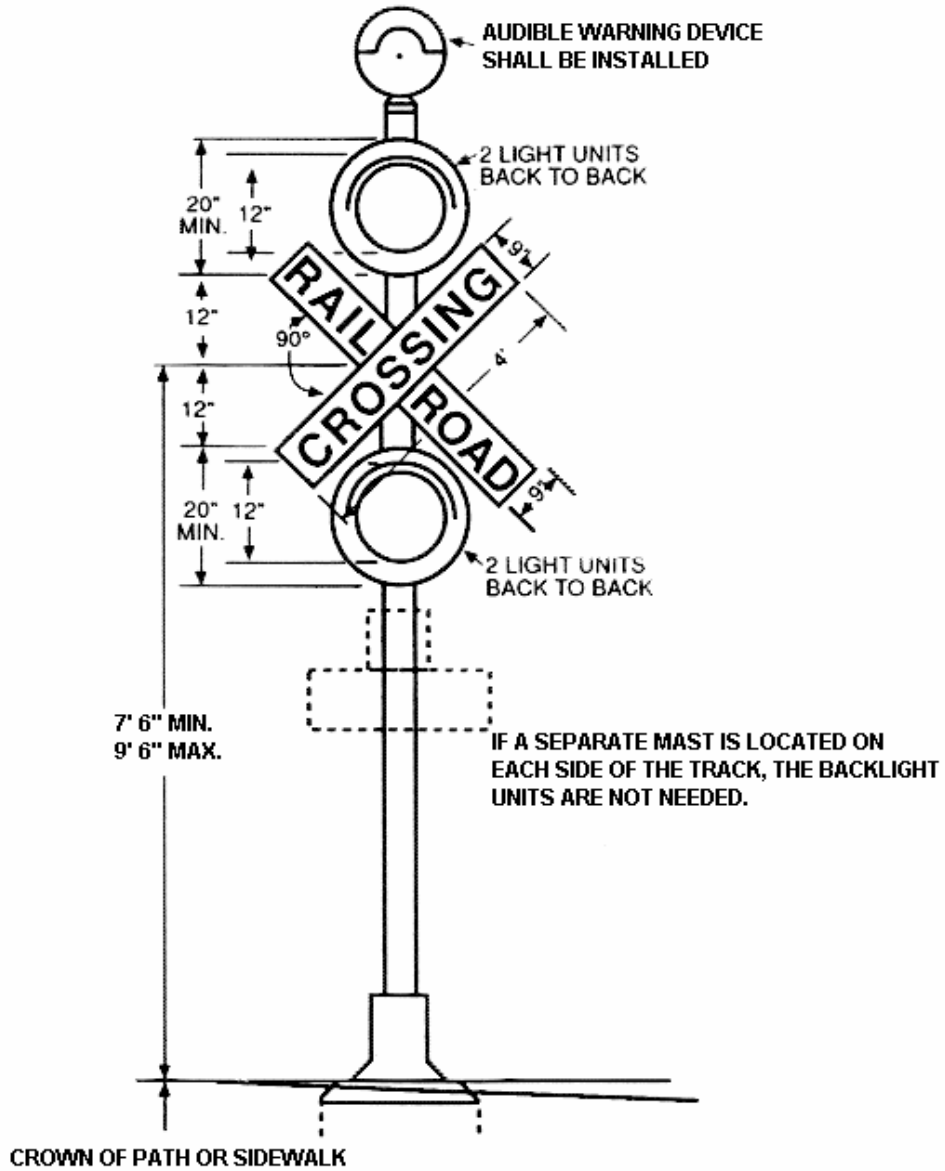
STANDARD NO. 1T
RAILROAD STOP SIGN



OAR 741-110-0030(2)(c)
OAR 741-110-0040(3)

FIGURE 2
AUGUST 2003

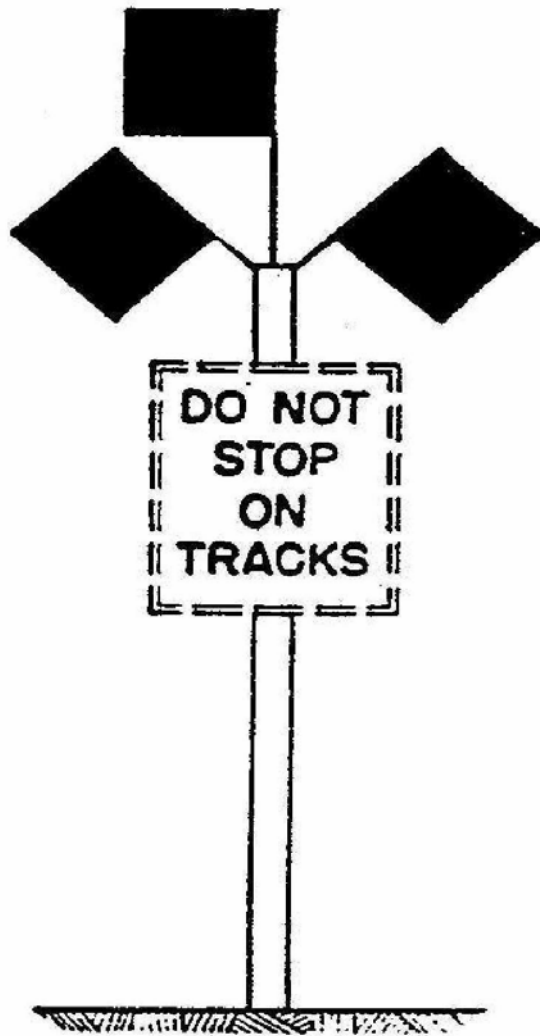
STANDARD NO. 2P
MULTI-USE PATH FLASHING LIGHT SIGNAL



OAR 741-110-0030(3)(c)
 OAR 741-110-0040(2)

FIGURE 3
 AUGUST 2003

HIGH LEVEL WARNING DEVICE

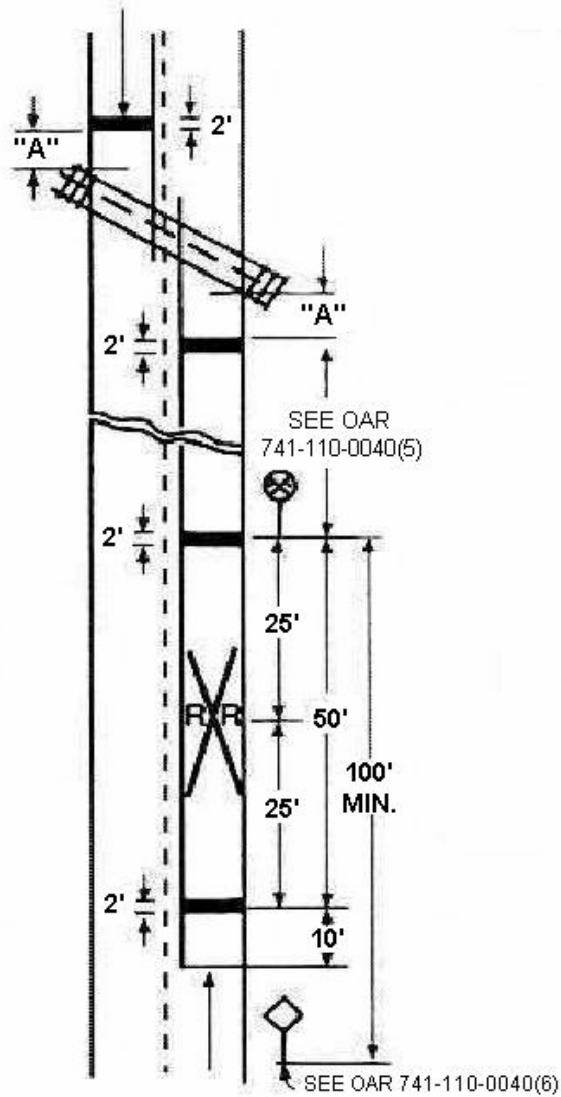


When the flags are displayed, they shall be mounted in a conspicuous place until the vehicle traffic signals are returned to normal service.

OAR 741-115-0040(1)(b)

**FIGURE 4
AUGUST 2003**

LOCATION OF ADVANCE WARNING SIGNS AND PAVEMENT MARKINGS



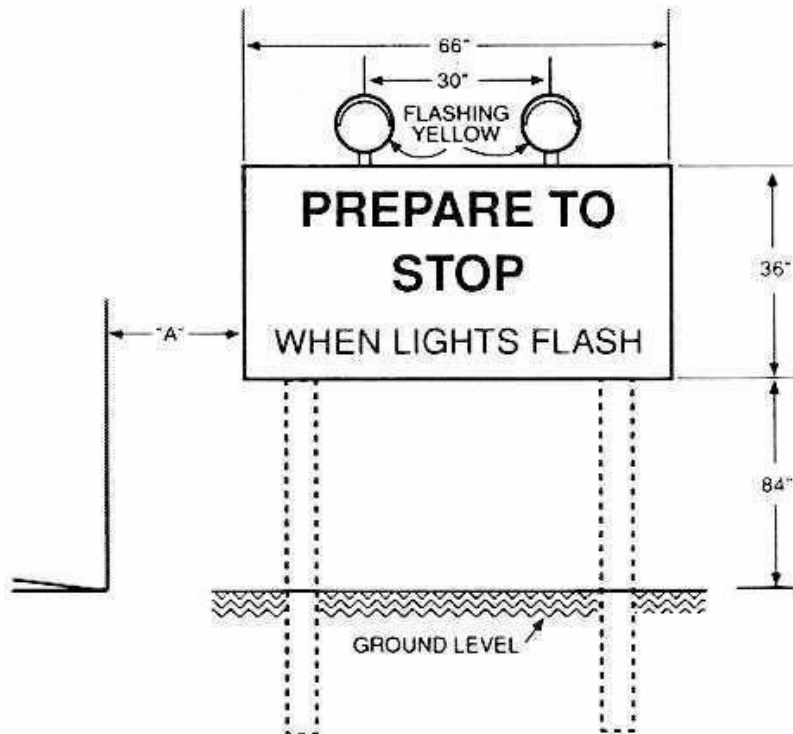
SAFE STOPPING DISTANCES BASED ON VEHICLE SPEED APPROACHING GRADE CROSSINGS

OAR 741-110-0040(4)(5)(6)

FIGURE 5
AUGUST 2003

TRAIN-ACTIVATED ADVANCE WARNING DEVICE

FOR SIGN DETAILS, SEE DRAWING NO. OW15-14 IN
THE DEPARTMENT'S SIGN POLICY AND GUIDELINES
FOR THE STATE HIGHWAY SYSTEM

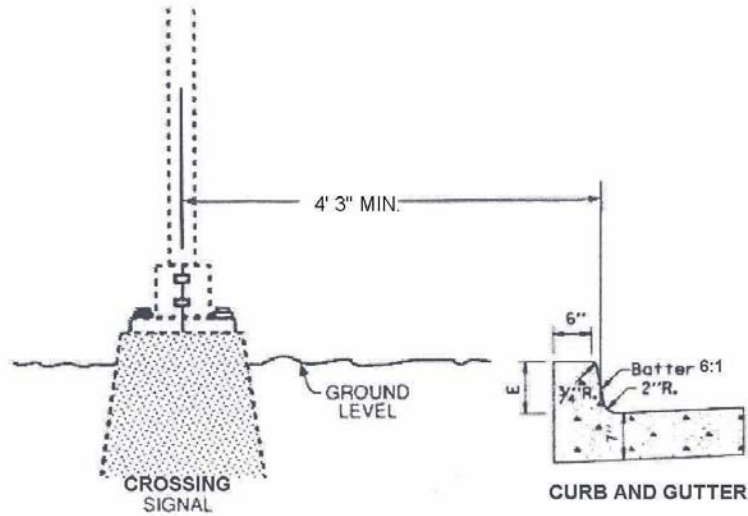


"A" = NOT LESS THAN 2 FEET NOR MORE THAN 3 FEET
FROM CURB FACE OR NOT LESS THAN 6 FEET NOR
MORE THAN 7 FEET FROM THE OUTER EDGE OF SHOULDER.

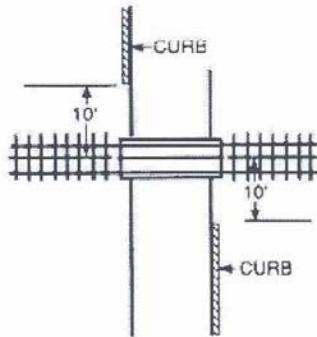
OAR 741-110-0030(5) (e)
OAR 741-110-0040(6)

FIGURE 6
AUGUST 2003

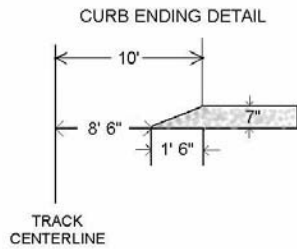
CURB



RECOMMENDED CURB EXPOSURE ("E" VALUE IN OREGON STANDARD DRAWING NO. ERD700) IS EQUAL TO OR GREATER THAN 7 INCHES.



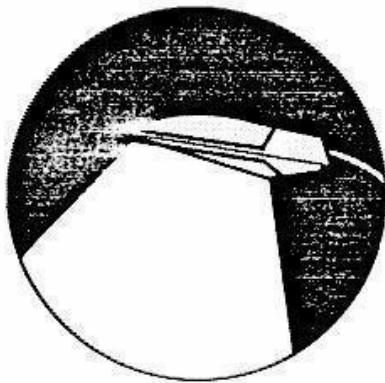
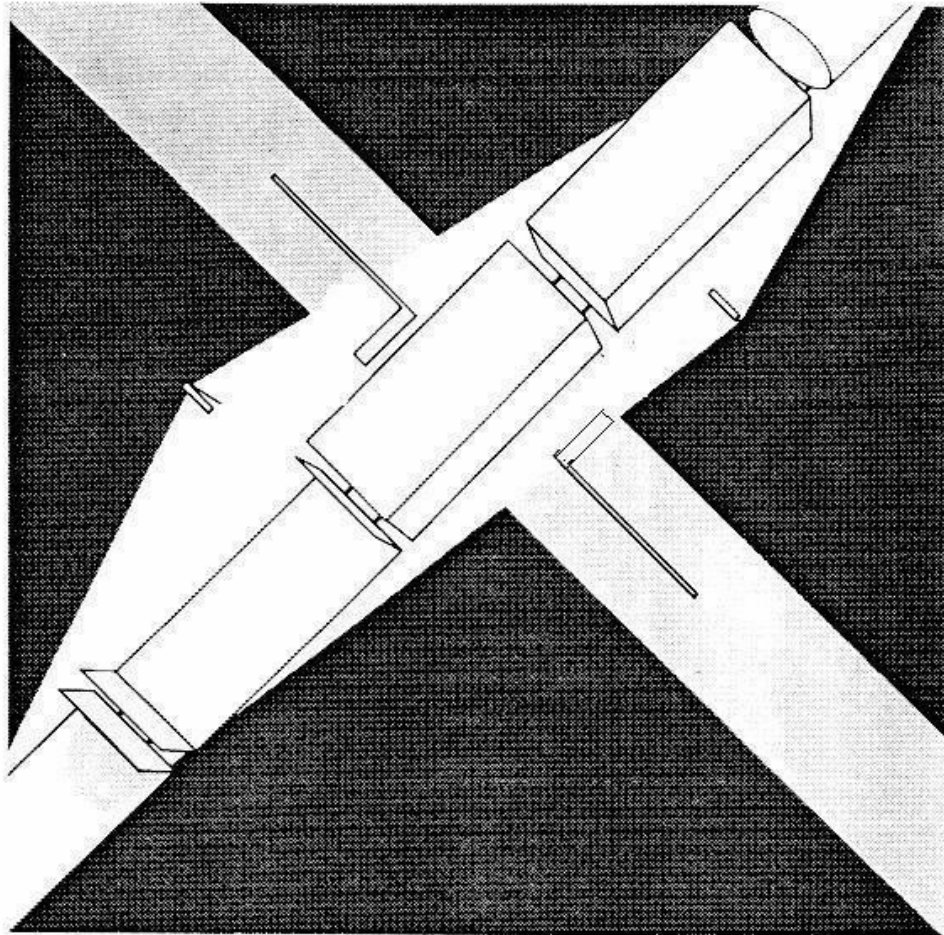
CURB SHALL NOT BE CLOSER THAN 10 FEET FROM THE CENTERLINE OF NEAREST TRACK
NO CURB EXPOSURE (ABOVE THE LEVEL OF TRACK TIES) IS ALLOWED WITHIN 8 FEET 6 INCHES OF TRACK CENTERLINE



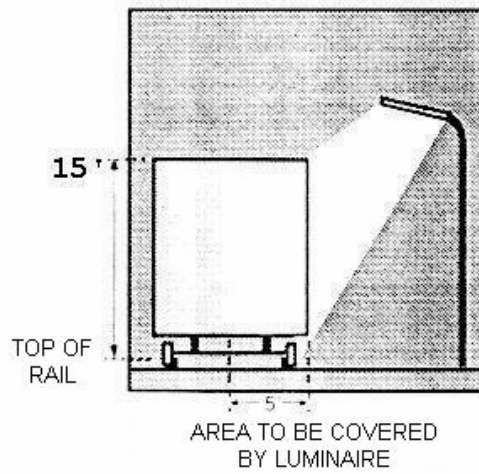
OAR 741-110-0030(7)
OAR 741-110-0040(8)

FIGURE 7
AUGUST 2003

ILLUMINATION



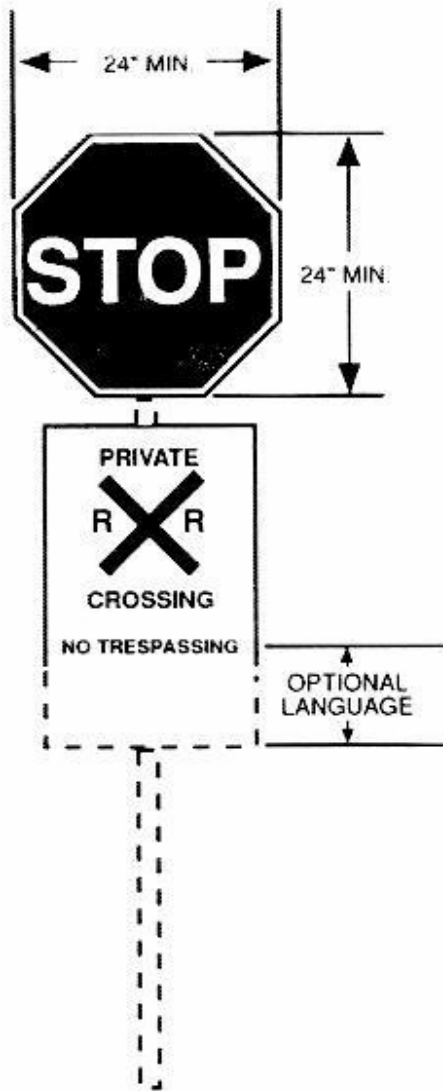
CUT-OFF LUMINAIRE



OAR 741-110-0030(2)(f)
OAR 741-110-0040(9)

FIGURE 8
AUGUST 2003

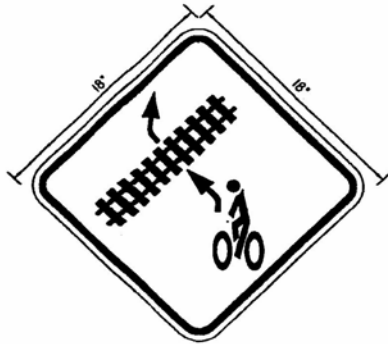
PRIVATE CROSSING STOP SIGN DETAIL



OAR 741-115-0060

FIGURE 9
AUGUST 2003

**SKEWED ANGLE
BICYCLE WARNING SIGN**



* SIGN NO. OBW8-19L



* SIGN NO. OBW8-19R

* SEE ODOT SIGN POLICY AND GUIDELINES
FOR THE STATE HIGHWAY SYSTEM

SEE OREGON BICYCLE AND PEDESTRIAN
PLAN FOR LOCATION OF SIGNS

OAR 741-115-0070(2)

FIGURE 10
AUGUST 2003