

UNION PACIFIC SYSTEM

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY

First Division

EMPLOYEES' TIME TABLE



To Take Effect Sunday, February 17, 1929

at 12:01 A. M. "Pacific Time"

For the government and information of employees only, and not intended for the use of the public.
The right is reserved to vary from this time-table at pleasure.

J. P. O'BRIEN,
GENERAL MANAGER.

F. N. FINCH,
GENERAL SUPERINTENDENT.

G. L. WHIPPLE.
GENERAL SUPERINTENDENT TRANSPORTATION.

FIRST DIVISION

A. BUCKLEY,
Superintendent, PORTLAND, OREGON.

J. F. CORBETT,
Assistant Superintendent, PORTLAND, OREGON.

J. C. ALBRIGHT,
Assistant Superintendent, PORTLAND, OREGON

H. M. TURNER, CHIEF DISPATCHER, Portland, Oregon

B. B. JOHNSON, NIGHT CHIEF DISPATCHER, " "

E. M. RINGER, DISPATCHER, " "

C. E. SHEPPARD, " " "

W. A. MILNER, " " "

W. W. SMITH, " " "

L. L. RUDD, " " "

P. T. MCCARTHY, " " "

O. H. NEWMAN, " " "

MILES OF ROAD

FIRST DIVISION	Main Line.....	385.83		
	Branches.....		410.88	
	Total.....			796.71
		%66		
SECOND DIVISION	Main Line.....	233.26		
	Branches.....		97.84	
	Total.....			331.10
THIRD DIVISION	Main Line.....	183.64		
	Branches.....		740.25	
	Total.....			923.89
	Total, Main Line.....	802.73		
	Total, Branches.....		1248.97	
	Total.....			2051.70

Time per Mile	Miles per Hour
51"	70.6
52"	69.2
53"	67.9
54"	66.6
55"	65.4
56"	64.2
57"	63.1
58"	62
59"	61
1'	60
1' 1"	59
1' 2"	58
1' 3"	57.1
1' 4"	56.2
1' 5"	55.3
1' 6"	54.5
1' 7"	53.7
1' 8"	52.9
1' 9"	52.1
1'10"	51.4
1'12"	50
1'15"	48
1'20"	45
1'25"	42.3
1'30"	40
1'40"	36
1'45"	34.3
1'50"	32.7
2'	30
2'10"	27.6
2'15"	26.6
2'20"	25.7
2'30"	24
2'40"	22.5
2'45"	21.8
2'50"	21.2
3'	20
3' 9"	19
3'20"	18
3'31"	17
3'45"	16
4'	15
5'	12
6'	10
7'30"	8
10'	6

FOURTH SUBDIVISION—Umatilla and The Dalles—EASTWARD

Time-Table No. 70

February 17, 1929

STATIONS	Distance from Portland	FIRST CLASS						SECOND CLASS									
		24	30	18	26	6	12	256	258								
		Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Time Freight	Time Freight								
Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily									
DN-R UMATILLA Ce	183.0	5.05AM				2.20AM	1.40AM	8.00AM									
BAILEY	178.8	4.54				2.10	1.33	7.45									
IRRIGON	175.6	4.45				2.03	1.29	7.30									
JUDSON	171.9	4.35				1.57	1.24	7.15									
DN-R MESSNER Fe	165.6	4.20		4.10PM	11.00PM	1.45	1.16	6.50	3.50AM								
BOARDMAN Bd	163.8	4.15		4.05	10.55	1.37	1.13	6.40	3.40								
PETERS	162.0	4.10		4.01	10.51	1.35	1.10	6.35	3.16								
CASTLE	158.1	4.04		3.56	10.46	1.27	1.06	6.20	2.30								
BOULDER	152.3	3.52		3.48	10.38	1.18	12.58	6.04	2.10								
N HEPPNER JCT. Wi	148.3	3.44		3.42	10.32	1.11	12.53	5.50	1.57								
WILLOWS	146.8	3.38		3.40	10.30	1.08	12.51	5.45	1.54								
SILICA	142.4	3.31		3.34	10.24	1.01	12.45	5.32	1.25								
DN ARLINGTON Mx	137.8	3.12		3.26	10.16	12.53	12.38	5.20	12.53								
GILMORE	134.1	3.00		3.20	10.11	12.47	12.33	5.01	11.50PM								
BLALOCK	129.6	2.53		3.14	10.04	12.40	12.27	4.50	11.39								
RAMSAY	125.6	2.47		3.08	9.58	12.33	12.22	4.40	11.30								
N QUINTON Qn	123.2	2.44		3.04	9.54	12.30	12.19	4.33	11.23								
HOOK	118.9	2.38		2.58	9.48	12.23	12.14	4.21	11.12								
GOFF	114.9	2.29		2.52	9.42	12.16	12.09	3.30	11.03								
DAY	112.1	2.25		2.47	9.37	12.11	12.05	3.15	10.55								
RUFUS	109.4	2.21		2.43	9.33	12.07	12.02AM	3.05	10.48								
GRANT	106.8	2.17		2.39	9.29	12.03AM	11.59PM	2.54	10.42								
DN BIGGS Bx	103.9	2.11		2.35	9.25	11.55PM	11.55	2.40	10.35								
D SHERMAN Vo	101.8	2.05	12.30PM	2.30	9.20	11.40	11.52	2.33	10.30								
MILLER	100.3	2.03	12.25	2.28	9.18	11.38	11.49	2.30	10.27								
CELLO	96.4	1.57	12.18	2.21	9.11	11.31	11.44	2.20	10.18								
OREGON TRUNK JCT.	95.2	1.54	12.14	2.19	9.09	11.29	11.42	2.16	10.15								
DUNE	91.7	1.49	12.08PM	2.14	9.04	11.24	11.38	2.05	10.05								
DN-R THE DALLES Dk-Wh	84.2	1.35AM	11.50AM	2.00PM	8.50PM	11.10PM	11.25PM	1.45AM	9.45PM								
(98.8)		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily								

Time	(3.30)	(0.40)	(2.10)	(2.10)	(3.10)	(2.15)	(6.15)	(6.05)
Average Speed per Hour	28.2	26.4	37.6	37.6	31.2	43.9	15.8	13.4

Westward trains are superior to trains of the same class in the opposite direction—See Rule 72.

FIFTH SUBDIVISION—The Dalles and Portland—WESTWARD.

Length of Sidings in feet and location of water, fuel, interlocking plants, turning stations, scales and tele-phones.	SECOND CLASS						FIRST CLASS								Distance from Huntington	STATIONS									
	977			691			561		29		17		25				11		23		5		563		
	Way Freight	Time Freight	Time Freight	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger			Mail	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	
	Leave Daily Ex. Sunday	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily			
WFTOP																							305.3	DN-R THE DALLES Dk-Wh	
P																								2.5	CRATES
3350 P																								5.6	ROWENA
3200 P																								3.6	CHATFIELD
3250 P																								3.3	MOSIER
3929 West 5650 East WP																								6.0	HOOD RIVER
4040 P																								4.1	MENO
3255 P																								1.6	SONNY
4900 P																								4.6	LINDSEY
5110 WTP																								3.2	WYETH
4900 P																								2.9	FARLEY
4900 FP																								3.9	CASCADE LOCKS
3837 West 3546 East WTP																								4.2	BONNEVILLE
3315 P																								4.6	DODSON
3108 P																								2.7	ONEONTA
3479 OP																								5.1	BRIDAL VEIL
4900 P																								3.9	ROOSTER ROCK
3050 P																								3.3	TAYLOR
5875 WTP																								3.5	TROUTDALE
2700 P																								2.4	FAIRVIEW
2720 P																								5.5	CLARNIE
1560 P																								3.3	GRAHAM
1085																								2.5	BRUN
3215 P																								1.3	HEMLOCK
3315 P																								5.0	FIR
P																								4.7	KENTON
1415 YP																								5.5	PENINSULA JCT.
P																								1.2	NORTH PORTLAND JCT.
1415 YP																								1.2	PENINSULA JCT.
1415 YP																								1.5	PENINSULA JCT.
P																								1.2	ST. JOHNS JCT.
P																								1.2	MILLROAD
WFTYOP																								1.3	ALBINA
IP																								0.1	HARDING ST.
IP																								0.9	EAST PORTLAND
																								0.6	PORTLAND
																								Dispr X P-So-Ve	
																								(84.2)	

(0.40) 7.8 (0.40) 7.8 (6.30) 13.6 (0.23) 17.7 (2.35) 32.5 (2.40) 31.6 (2.55) 28.9 (2.35) 32.5 (2.45) 30.6 (2.25) 34.8 (0.33) 12.4 Time Average Speed per Hour

Westward trains are superior to trains of the same class in the opposite direction.—See Rule 72.
 Between Peninsula Jct. and St. Johns Jct. trains will be governed by Train Staff Rules. See Rules 409 (A) to 409 (S) inclusive.
 Trains and engines will be governed by Northern Pacific Terminal Company's Rules and Regulations while in their yard at Portland.

FIFTH SUBDIVISION—The Dalles and Portland—EASTWARD

Time-Table No. 70

February 17, 1929

FIRST CLASS

SECOND CLASS

STATIONS	Distance from Portland	FIRST CLASS								SECOND CLASS			
		30 Passenger	562 Passenger	18 Passenger	26 Passenger	6 Passenger	12 Passenger	24 Passenger	564 Passenger	978 Way Freight	692 Time Freight	258 Time Freight	256 Time Freight
Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily
DN-R THE DALLES Dk-Wh	84.2	11.20AM		1.50PM	8.45PM	11.05PM	11.20PM	1.30AM				9.25PM	12.30AM
CRATES	81.7	11.10		1.41	8.36	10.56	11.11	1.21				9.14	12.19
ROWENA	76.1	11.01		1.33	8.26	10.47	11.02	1.12				9.04	12.04AM
CHATFIELD	72.5	10.56		1.24	8.19	10.41	10.56	1.05				8.54	11.53PM
D MOSIER H	69.2	10.50		1.15	8.12	10.34	10.49	12.58				8.47	11.45
DN HOOD RIVER Ki	63.2	10.36		1.05	8.00	10.23	10.38	12.48				8.33	11.25
MENO	59.1	10.29		12.56	7.49	10.13	10.29	12.40				8.23	11.13
SONNY	57.5	10.27		12.54	7.47	10.11	10.27	12.38				8.20	11.10
LINDSEY	52.9	10.20		12.47	7.39	10.03	10.19	12.30				8.11	10.59
WYETH	49.7	10.15		12.41	7.34	9.58	10.14	12.24				8.04	10.50
FARLEY	46.8	10.11		12.36	7.29	9.53	10.10	12.19				7.57	10.42
DN CASCADE LOCKS Cj	42.9	10.05		12.29	7.23	9.47	10.04	12.12				7.50	10.33
D BONNEVILLE Mu	38.7	9.55		12.19	7.15	9.39	9.57	12.05AM				7.38	10.25
DODSON	34.1	9.47		12.10	7.06	9.32	9.50	11.58PM				7.30	10.16
ONEONTA	31.4	9.42		12.06PM	7.01	9.29	9.46	11.54				7.24	10.10
D BRIDAL VEIL Ju	26.3	9.35		11.58AM	6.53	9.22	9.40	11.46				7.15	10.00
ROOSTER ROCK	22.4	9.26		11.52	6.47	9.17	9.35	11.40				7.08	9.51
TAYLOR	19.1	9.20		11.46	6.41	9.12	9.30	11.35				7.02	9.45
DN TROUTDALE Sn	15.6	9.12		11.40	6.35	9.07	9.26	11.30				6.55	9.37
FAIRVIEW Fa	13.2	9.07		11.35	6.30	9.03	9.22	11.26					
CLARNIE	7.7	8.59		11.25	6.22	8.56	9.16	11.17					
GRAHAM	4.4	8.53		11.17	6.17	8.51	9.11	11.12					
BRUN	1.9	8.48		11.12	6.12	8.46	9.06	11.07					
HEMLOCK	17.0											6.42	9.12
FIR	12.3											6.32	9.02
KENTON	6.8											6.20	8.50
PENINSULA JCT.	5.6											6.15	8.45
NORTH PORTLAND JCT.	6.8											6.55AM	8.00PM
PENINSULA JCT.	5.6											6.50	7.55
PENINSULA JCT.	5.6											6.50	7.55
ST. JOHNS JCT.	4.1											6.40	7.50
MILLROAD	2.9											6.35	7.40
DN-R ALBINA B	1.6											6.30AM	7.30PM
HARDING ST.	1.5											6.00PM	8.30PM
EAST PORTLAND	0.6	8.43	11.03	11.08	6.08	8.43	9.03	11.03	11.18				
DN-R PORTLAND Dispr X P-So-Ve	0.0	8.40AM	11.00AM	11.05AM	6.05PM	8.40PM	9.00PM	11.00PM	11.15PM				
(84.2)		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily			Leave Daily	Leave Daily

Time.....	(2.40)	(0.19)	(2.45)	(2.40)	(2.25)	(2.20)	(2.30)	(0.23)				(0.25)	(0.30)	(3.25)	(4.00)
Average Speed per Hour.....	31.6	21.4	30.6	31.6	34.8	36.1	33.7	17.7				12.5	10.4	26.0	22.2

Westward trains are superior to trains of the same class in the opposite direction.—See Rule 72.
 Between Peninsula Jct. and St. Johns Jct. trains will be governed by train staff rules. See Rules 409 (A) to 409 (S) inclusive.
 Trains and engines will be governed by Northern Pacific Terminal Company's rules and regulations while in their yard at Portland.

SIXTH SUBDIVISION—North Portland Jct. and Seattle—WESTWARD

Length of Sidings in feet and location of water, fuel, interlocking plants, turning stations, scales and tele-phones.	SECOND CLASS				FIRST CLASS						Distance from Seattle	Time-Table No. 70	
	977		691		563	43	41	561	37	35		February 17, 1929	
	Way Freight	Time Freight	Passenger	C. M. St. P. & P. Passenger (18)	C. M. St. P. & P. Passenger (15)	Passenger	C. M. St. P. & P. Passenger (16)	C. M. St. P. & P. Passenger (17)					
	Leave Daily Ex. Sun.	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily			
P				11.15PM	9.45PM	5.45PM	11.10AM	11.00AM	8.05AM	0.0	DN-R SEATTLE	Ow	
Yard IWFTOYP		6.25PM		11.24	9.54PM	5.54PM	11.19	11.09AM	8.14AM	3.1	DN-R ARGO	Bi	
1354 3401	IP	6.45PM		11.32PM			11.30AM			9.4	DN-R BLACK RIVER	Bi	

BETWEEN TACOMA JCT. AND BLACK RIVER, TRAINS WILL BE GOVERNED BY TIME-TABLE RULES AND REGULATIONS OF CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC RY.

P		8.20PM								12.16AM			12.20PM	35.7	DN TACOMA JCT.	Jn
		8.30PM								12.19AM			12.23PM	36.5	DN RESERVATION	Rn

BETWEEN VANCOUVER AND RESERVATION, TRAINS WILL BE GOVERNED BY TIME-TABLE, RULES AND REGULATIONS OF NORTHERN PACIFIC RY.

BETWEEN NORTH PORTLAND JCT. AND VANCOUVER, TRAINS WILL BE GOVERNED BY TIME-TABLE, RULES AND REGULATIONS OF SPOKANE, PORTLAND & SEATTLE RY.

P		12.15PM	6.00AM							5.42AM			4.47PM	176.4	NORTH PORTLAND JCT.	
1415	YP													177.6	PENINSULA JCT.	
	P													179.1	ST. JOHNS JCT.	
	P													180.3	MILLROAD	
	P	12.55PM	7.35AM											181.6	ALBINA	
														181.7	HARDING ST.	
	IP													182.6	EAST PORTLAND	
	I									6.15AM			5.10PM	183.2	PORTLAND	
		Arrive Daily Ex. Sun.	Arrive Daily							Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily
		(0.40) 7.8	(13.10) 13.9							(7.00) 26.2	(0.09) 20.6	(0.09) 20.6	(6.00) 30.5	(0.09) 20.6	(0.09) 20.6	

Westward trains are superior to trains of the same class in the opposite direction.—See Rule 72.

Time shown between Portland and North Portland Jct. is for information only. Trains will be governed by Fifth Subdivision time-table between Portland and North Portland Jct.

SIXTH SUBDIVISION—North Portland Jct. and Seattle—EASTWARD

Time-Table No. 70 February 17, 1929		Distance from Portland	FIRST CLASS						SECOND CLASS				
			32 C. M. St. P. & P. Passenger (17)	34 C. M. St. P. & P. Passenger (16)	38 C. M. St. P. & P. Passenger (15)	562 Passenger	42 C. M. St. P. & P. Passenger (18)	564 Passenger	692 Time Freight	978 Way Freight			
STATIONS			Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Ex. Sun.
Black Signals DN-R SEATTLE 3.1 DN-R ARGO 6.3 DN-R BLACK RIVER	Ow Double Track Bi	183.2	7.45AM	10.45AM	5.30PM	5.00PM	9.00PM	6.30AM					
		180.1	7.36AM	10.36AM	5.21PM	4.51	8.51PM	6.20				6.45AM	
		173.8				4.35PM		6.00AM				6.25AM	

BETWEEN TACOMA JCT. AND BLACK RIVER, TRAINS WILL BE GOVERNED BY TIME-TABLE, RULES AND REGULATIONS OF CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC RY.

Black Signals DN TACOMA JCT. 0.8 DN RESERVATION	Jn	147.5				3.45PM		5.10AM					5.15AM
	Rn	146.7				3.42PM		5.06AM					5.10AM

BETWEEN VANCOUVER AND RESERVATION, TRAINS WILL BE GOVERNED BY TIME-TABLE, RULES AND REGULATIONS OF NORTHERN PACIFIC RY.

BETWEEN NORTH PORTLAND JCT. AND VANCOUVER, TRAINS WILL BE GOVERNED BY TIME-TABLE, RULES AND REGULATIONS OF SPOKANE, PORTLAND & SEATTLE RY.

Staff Black System Signal	NORTH PORTLAND JCT. 1.2	6.8				11.20AM		11.38PM						8.00PM	6.55AM
	PENINSULA JCT. 1.5	5.6													
Black Signals	ST. JOHNS JCT. 1.2	4.1													
	MILLROAD 1.3	2.9													
	ALBINA 0.1	1.6											7.30PM	6.30AM	
	HARDING ST. 0.9	1.5													
	EAST PORTLAND 0.6	0.6													
	PORTLAND (183.2)	0.0				11.00AM		11.15PM							
			Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily					Leave Daily	Leave Daily Ex. Sun.	

Time.....	(0.09)	(0.09)	(0.09)	(6.00)	(0.09)	(7.15)								(11.15)	(0.25)
Average Speed per Hour.....	20.6	20.6	20.6	30.5	20.6	25.2								16.3	12.5

Westward trains are superior to trains of the same class in the opposite direction.—See Rule 72.

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WESTWARD				BEND BRANCH				EASTWARD					
SECOND CLASS		FIRST CLASS		Distance from Bend	Time-Table No. 70 February 17, 1929			Distance from Sherman	FIRST CLASS		SECOND CLASS		
313 Time Freight	309 O. T. Ry. Local Freight	103 O. T. Ry. Passenger	29 Passenger		STATIONS				30 Passenger	102 O. T. Ry. Mixed	308 O. T. Ry. Local Freight	314 Time Freight	
Leave Daily	Leave Daily Ex. Monday	Leave Daily	Leave Daily						Arrive Daily	Arrive Daily	Arrive Daily Ex. Monday	Arrive Daily	
WY	11.45PM		8.20AM	0.0	DN-R	BEND	Nd	147.3	6.35PM		6.10AM		
BETWEEN METOLIUS AND BEND TRAINS WILL BE GOVERNED BY TIME-TABLE, RULES AND REGULATIONS OF THE OREGON TRUNK RAILWAY													
WFYT	3.10AM	3.50AM	10.10PM	9.45AM	41.3	DN-R	METOLIUS	Ms	106.0	5.00PM	5.45AM	2.00PM	3.50AM
2680 W	3.30	4.15	10.20	9.55	46.2	D	MADRAS	Md	101.1	4.45	5.25	1.35	3.30
2480	4.05	5.00	10.35	10.05	51.9		PAXTON		95.4	4.30	5.00	1.00	3.15
2000 W	4.40	5.35	10.50	10.20	57.4	D	GATEWAY	Gw	89.9	4.15	4.40	12.35	3.00
1280 WFP	5.15AM	6.20AM	11.15PM	10.40AM	65.6	R	SOUTH JUNCTION		81.7	3.53PM	4.15AM	12.10PM	2.35AM
BETWEEN NORTH JUNCTION AND SOUTH JUNCTION TRAINS WILL BE GOVERNED BY TIME-TABLE, RULES AND REGULATIONS OF THE OREGON TRUNK RAILWAY													
P	5.45AM		11.05AM		76.0	D-R	NORTH JUNCTION	Jn	71.3	3.33PM			2.05AM
1100	5.50		11.10		77.1		COVE CREEK		70.2	3.30			2.00
1160	6.00		11.15		80.0		TWO SPRINGS		67.4	3.25			1.52
475 P	6.25		11.35		88.1		McLENNAN		59.2	3.05			1.32
1150 WP	6.50		11.55AM		96.1	D	MAUPIN	Hf	51.2	2.45			1.12
	7.15		12.16PM		104.5		SHERARS BRIDGE		42.8	2.27			12.46
1290 WP	7.20		12.20		105.1		FARGHER		42.2	2.25			12.43
1200	7.50		12.45		115.5		TUNNEL ONE		31.8	2.01			12.13AM
1160 P	8.10		1.00		121.1		BLUFFS		26.2	1.50			11.55PM
2650 W	8.45		1.25		133.0		MAYS		14.3	1.25			11.22
310	8.55		1.40		137.4		FREE BRIDGE		9.9	1.05			11.10
WY	9.25AM		2.15PM		147.3	D-R	SHERMAN	Vo	0.0	12.45PM			10.40PM
	Arrive Daily	Arrive Daily Ex. Monday	Arrive Daily	Arrive Daily			(147.3)		Leave Daily	Leave Daily	Leave Daily Ex. Monday	Leave Daily	
	(9.40) 15.2	(2.30) 9.7	(1.05) 22.3	(5.55) 24.9					(5.50) 25.2	(1.30) 16.2	(1.50) 13.2	(7.30) 9.5	

Time shown at Bend is for information only. At this station trains will be governed by time-table of Oregon Trunk Ry.

WESTWARD				CONDON BRANCH				EASTWARD				
SECOND CLASS		FIRST CLASS		Distance from Condon	Time-Table No. 70 February 17, 1929			Distance from Arlington	SECOND CLASS		SECOND CLASS	
127 Mixed	107 Passenger	STATIONS			108 Passenger	128 Mixed						
Leave Daily Ex. Sunday	Leave Sunday				Arrive Monday	Arrive Daily Ex. Monday						
5260 WFP	10.00PM	11.15PM	0.0	D-R	CONDON	Cd	44.5	7.15AM	7.15AM			
1278	10.25	11.35	8.2		GWENDOLEN		36.3	6.35	6.35			
1485	10.40	11.50PM	12.2		SPEECE		32.3	6.20	6.20			
1518	10.55	12.05AM	15.9		CLEM		28.6	6.01	6.01			
1515 W	11.25	12.20	20.1		MIKKALO		24.4	5.40	5.40			
1400	11.50PM	12.35	24.8		BARNETT		19.7	5.20	5.20			
662 W	12.15AM	12.45	28.5		ROCK CREEK		16.0	5.01	5.01			
1480	12.45	1.10	37.2		SHUTLER		7.3	4.35	4.35			
6920 WFTP	1.30AM	1.30AM	44.5	DN-R	ARLINGTON	Mr	0.0	4.05AM	4.05AM			
	Arrive Daily Ex. Monday	Arrive Monday			(44.5)			Leave Monday	Leave Daily Ex. Monday			
	3.30 12.7	(2.15) 19.8						(3.10) 13.9	(3.10) 13.9			

Westward trains are superior to trains of the same class in the opposite direction.—See Rule 72.

WESTWARD				SHANIKO BRANCH				EASTWARD				
SECOND CLASS		FIRST CLASS		Distance from Shaniko	Time-Table No. 70 February 17, 1929			Distance from Biggs	SECOND CLASS		SECOND CLASS	
125 Mixed	105 Mixed	STATIONS			106 Mixed	126 Mixed						
Lv Sat Tues & Thurs	Lv Mon Wed Fri & Sun				Ar Sun Mon Wed & Fri	Ar Tue Thurs & Sat						
3385 WFP	7.45PM		0.0	D-R	SHANIKO	Sh	69.7				8.20AM	
620	8.20		12.6		WILCOX		57.1				7.40	
902	8.35		17.2		KENT		52.5				7.25	
571	8.55		23.9		BOURBON		45.8				7.15	
1350 WT	9.15	9.15PM	31.2	D-R	GRASS VALLEY	Vy	38.5	6.45AM	6.45			
338 Spur	9.40	9.40	38.4		ERSKINE		31.3	6.10	6.10			
2574 W	10.20	10.20	42.7	D	MORO	Mr	27.0	5.50	5.50			
820	10.35	10.35	45.8		DE MOSS		23.9	5.35	5.35			
393	10.50	10.50	49.7		NISH		20.0	5.20	5.20			
3030 Spur	11.00	11.00	50.5		HAY CANYON		19.2	5.15	5.15			
300	11.20	11.20	54.1		SANDON		15.6	5.00	5.00			
845	11.30PM	11.30PM	55.5		KLONDIKE		14.2	4.55	4.55			
1744 W	12.05AM	12.05AM	60.0	D	WASCO	Wa	9.7	4.30	4.30			
190 Spur	12.25	12.25	62.6		SINK		7.1	4.20	4.20			
565	12.35	12.35	64.5		THORNBERRY		5.2	4.10	4.10			
6656 WFP	1.15AM	1.15AM	69.7	DN-R	BIGGS	Bx	0.0	3.50AM	3.50AM			
	Arrive Sun. Wed. & Fri.	Ar Mon Tues Thurs & Sat			(69.7)			Lv Sun Mon Wed & Fri	Leave Tues Thurs & Sat			
	(5.30) 12.6	(4.00) 9.6						(2.55) 12.8	(4.30) 15.2			

WESTWARD				HEPPNER BRANCH				EASTWARD				
SECOND CLASS		FIRST CLASS		Distance from Heppner	Time-Table No. 70 February 17, 1929			Distance from Heppner Jct.	SECOND CLASS		SECOND CLASS	
129 Mixed	109 Passenger	STATIONS			110 Passenger	130 Mixed						
Leave Daily Ex. Sunday	Leave Sunday				Arrive Monday	Arrive Daily Ex. Monday						
2867 WFP	10.00PM	11.30PM	0.0	D-R	HEPPNER	Hr	45.2	6.30AM	6.30AM			
1029 P	10.30	11.50PM	8.9		LEXINGTON		36.3	6.00	6.00			
	10.45	12.05AM	14.2		JORDAN		31.0	5.45	5.45			
1150 W	11.20	12.15	16.9		IONE	On	28.3	5.30	5.30			
	11.35	12.25	20.0		McNAB		25.2	5.15	5.15			
835	11.55PM	12.38	25.4		MORGAN		19.8	5.02	5.02			
	12.15AM	12.43	27.5		MORSIL		17.7	4.55	4.55			
330 W	12.30	12.52	30.7		CECIL		14.5	4.45	4.45			
	12.40	1.00	34.3		EWING		10.9	4.35	4.35			
704	12.55	1.10	38.4		RHEA		6.8	4.25	4.25			
1780 TP	1.25AM	1.25AM	45.2	D-R	HEPPNER JCT.	Wi	0.0	4.00AM	4.00AM			
	Arrive Daily Ex. Monday	Arrive Monday			(45.2)			Leave Monday	Leave Daily Ex. Monday			
	(3.25) 13.2	(1.55) 23.5						(2.30) 18.1	(2.30) 18.1			

FIRST DIVISION

SPECIAL RULES

2 (R). Time Inspectors are located as shown below:

R. V. Owens, General Supervisor of Time Service, Omaha.

Portland	Belding & Saxton
Portland	N. L. Nielson
Portland	W. L. Young
The Dalles	Norman E. Potter
Seattle	Arnt Setter
Georgetown	W. C. Hudson
Tacoma	S. Grimstead
Centralia	C. R. Ahern
Heppner	J. O. Peterson
Hoquiam	F. W. Straub
Aberdeen	S. J. Stieglitz
Olympia	O. R. Simenson & Son
Bend	M. H. Symons

3 (R). Standard clocks are located at the points shown below:

Umatilla	Telegraph Office
Umatilla	Roundhouse
Heppner Junction	Telegraph Office
Arlington	Telegraph Office
Biggs	Telegraph Office
The Dalles	"WH" Telegraph Office
The Dalles	"DK" Telegraph Office
Portland (Joint)	N. P. T. Co. Telegraph Office
Portland	Dispatcher's Office
Albina	Telegraph Office
Seattle (Joint)	Union Station Telegraph Office
Argo	Yard Office
Centralia (Joint)	N. P. Ry. Telegraph Office
Olympia	Telegraph Office
Hoquiam (Joint)	N. P. Ry. Telegraph Office
Aberdeen	Telegraph Office
Cosmopolis	Telegraph Office
Bend (Joint)	O. T. Ry. Telegraph Office

10 (h). At night, a yellow light on a Dwarf Signal, or on a "Call-on" or "Short-arm" Signal of an interlocking plant, indicates "proceed at slow speed."

17 (C). When rules require headlight to be displayed, electric headlights will be dimmed under conditions outlined below, except in foggy or stormy weather or when other conditions make it inadvisable:

In yards where yard engines are employed and at stations where switching is being done;

At meeting points, until the train to be met is clear of the main track; When standing;

On two or more tracks when approaching trains running in opposite direction.

These instructions do not supersede or modify those contained in Rules 17 and D-17.

28 (A). A white indicator board displayed at a station will indicate to trains doing local work that there are cars or LCL freight to be moved.

28 (R). ADDITIONAL FLAG STOPS TO PICK UP REVENUE PASSENGERS.

TRAIN	STOPS	PASSENGERS FOR
6	Between Portland and Umatilla	Transfer to No. 76 at Umatilla enroute to destination served by that train.
12	Between Portland and Umatilla	Points north of Ayer Junction.
23	Between The Dalles and Troutdale	Portland.
23	Irrigon	The Dalles or west thereof.
23	Rufus	The Dalles or west thereof.
25	Between Messner and Sherman	Bend Branch.
26	Between Portland and Messner	Third Division.
29	Montavilla	Any point.
30	Montavilla	Any point.

ADDITIONAL FLAG STOPS TO DISCHARGE REVENUE PASSENGERS.

TRAIN	STOPS	PASSENGERS FROM
11	Any station	Third Division.
17	Any station	East of Green River.
17	Sherman	Points east of Bend Branch.
23	Any station	East of Pendleton and from Heppner, Shaniko and Condon Branches.
24	Any station	Shaniko, Condon and Heppner Branches.
24	Bridal Veil, on Saturday and Sunday only	Any station.
24	Multnomah Falls, on Saturday only	Any station.
25	Any station	East of Green River.
30	Viento	Any station.
563	Kalama	Grays Harbor Branch on Portland Sleeper.
29	Montavilla	Any station.
30	Montavilla	Any station.

ADDITIONAL FLAG STOPS FOR REVENUE PASSENGERS, MAIL AND EXPRESS

TRAIN	STOPS	TO AND FROM
29	Oak Springs	Any station.
29	Ketchum	Any station.
29	Harris	Any station.
30	Oak Springs	Any station.
30	Ketchum	Any station.
30	Harris	Any station.
102	Truman	Any station.
103	Truman	Any station.
29	Truman	Any station.
30	Truman	Any station.
29	Corbett	Any station.
29	Latourell	Any station.
29	Multnomah Falls	Any station.
29	Warrendale	Any station.
29	Eagle Creek	Any station.
30	Corbett	Any station.
30	Latourell	Any station.
30	Multnomah Falls	Any station.
30	Warrendale	Any station.
30	Eagle Creek	Any station.
29	Seufert	Any station.
29	Big Eddy	Any station.
29	Dillon	Any station.
29	Tumwater	Any station.
30	Seufert	Any station.
30	Big Eddy	Any station.
30	Dillon	Any station.
30	Tumwater	Any station.
417	Tingle	Any station.
417	South Aberdeen	Any station.
418	Tingle	Any station.
418	South Aberdeen	Any station.
577	Tingle	Any station.
578	Tingle	Any station.

Note.—No. 6 will stop on flag at any station to load or unload express and will slow down at Rufus to unload papers.
 No. 23 will stop at Irrigon and Boardman to load and unload mail and express.
 No. 24 will stop at Rufus, Blalock and Boardman to load and unload mail and will pick up mail at Rufus for points west of Rufus and leave at Arlington.
 No. 24 will stop at Irrigon for mail and express.
 No. 25 will stop at Rufus for express.
 No. 25 will stop at Blalock for mail and express.
 No. 30 will stop on flag at mail crane at Wyeth to load or unload bulky or fragile parcel post mail, when necessary.

83 (E). Train registers will not be used by train or enginemen as a means of identifying extra trains.

83 (F). Check of trains at Peninsula Jet. as prescribed by Rule 83 is not required for movement Peninsula Jet. to St. Johns Jet.

83 (G). Sixth Subdivision westward trains will receive clearance card at Vancouver for movement North Portland Jet. to Albina or Portland.

83 (H). Sixth Subdivision eastward trains will receive clearance card at Black River for movement Black River to Argo or Seattle.

83 (I). C. M. St. P. & P. eastward passenger trains are not required to receive clearance card or check of trains at Argo as per Rules 83 and 83(A), but may proceed Argo to Seattle on clear signal indication from interlocking tower at Argo and run with current of traffic, being governed by Rule 93.

83 (J). To enable westward trains originating at Seattle to comply with Rule 83 when passing from double to single track at Argo, train register at Seattle will also serve as train register for Argo, and conductors and enginemen must identify eastward trains which are superior or of the same class between Seattle and Argo. Trains displaying signals when moving between Seattle and Argo will whistle as per Rule 14(K).

83 (K). Westward second class and extra trains originating at Tacoma will obtain check of register and clearance card at Northern Pacific, Fifteenth Street, telegraph office. Westward second class and extra trains passing through Tacoma will receive check of register and clearance card at Northern Pacific telegraph office at Reservation.

83 (L). Trains westward from Blakeslee Junction will obtain clearance card before leaving Centralia.

83 (M). Trains for which Helsing Junction is initial station will receive clearance card at Independence. Movement of westward C. M. St. P. & P. trains or engines from Junction Switch at Helsing Junction to Independence station will be governed by Home Block signal 125. If this signal fails to change to proceed position when junction

switch is opened, Grays Harbor Branch main track must not be occupied until protected as required by Rule 509 against eastward trains and Rule 99 against westward trains on Grays Harbor Branch. Movement of westward O.-W. R. R. & N. trains or engines on Grays Harbor Branch main track from Junction Switch at Helsing Junction to Independence station will be governed by Home Block signal 127. When a train or engine is stopped by this signal Rule 509 will govern. Trains and engines moving eastward from Independence will be governed by Home Block signal 132 located just east of that point, complying with Block Signal Rules.

83 (N). Trains eastward from Wabash will obtain clearance card before leaving Centralia.

83 (O). Movement of westward Primo Branch trains or engines from Junction Switch, Cosmopolis, to Cosmopolis station, will be governed by Home Block signal 499. If this signal fails to change to proceed position when junction switch is opened, Grays Harbor Branch main track must not be occupied until protected as required by Rule 509 against eastward trains and Rule 99 against westward trains on Grays Harbor Branch. Trains and engines moving eastward from Cosmopolis will be governed by Home Block signal 508 located just east of that point, and westward Grays Harbor Branch trains and engines will be governed by Home Block signal 501, located just west of Blue Slough, complying with Block Signal Rules.

83 (R). Oregon Trunk Ry. trains eastward from South Jct. will obtain O.-W. R. R. & N. clearance card before leaving North Jct.

83 (S). Trains are not required to receive clearance card (Form 2643) as per Rule 83(A), as follows:

- At Primo, all westward trains;
- At Tono, all westward trains.

83 (U). Trains will register by registering ticket (Form 2642) as follows:
 At Black River, all first class trains and Nos. 691 and 692 or manifest extras.

83 (V). Train registering exceptions:
 At Albina, only trains which originate or terminate at that point will register.
 At Argo, only trains which originate or terminate in O.-W. R. R. & N. yard at that point will register.

At Wabash, Tono Branch trains originating or terminating at that point will register in O.-W. R. R. & N. train register located in N. P. Ry. telegraph office, Centralia.

At Blakeslee Junction, Grays Harbor Branch trains originating or terminating that point will register in O.-W. R. R. & N. train register located in N. P. Ry. telegraph office, Centralia.

At North Portland Jct., Fifth Subdivision trains originating or terminating that point will register in O.-W. R. R. & N. train register located in S. P. & S. Ry. telegraph office, Vancouver.

83 (W). To enable westward trains originating at The Dalles to comply with Rule 83 when passing from double to single track at Crates, train register at The Dalles will also serve as train register for Crates, and conductors and enginemen must identify eastward trains which are superior or of the same class between The Dalles and Crates. Trains displaying signals when moving between The Dalles and Crates will whistle as per Rule 14(K).

90 (R). When necessary to take siding at the following points, trains will use the tracks specified, unless otherwise instructed:

- Messner— Eastward passenger, mail, or express trains, use Umatilla-Messner line entering at junction switch;
- Hood River—All westward trains, use Siding No. 2 (South of main track); Eastward passenger, mail, and express trains, use cross-over from main track to Siding No. 1 (north of main track); Eastward freight trains, use Siding No. 1 (north of main track).

93 (R). Yard limits are established, and defined by yard limit signs, at the following stations:

Umatilla	Seattle	Shutler	Nish	South Jct.
Messner	Argo	Rock Creek	DeMoss	Gateway
Arlington	Black River	Barnett	Moro	Paxton
Biggs (for Shaniko Branch only)	Tacoma	Mikkalo	Erskine	Madras
	Rhea	Clem	Grass Valley	Tono
Sherman	Ewing	Speece	Bourbon	Chambers Prairie
The Dalles	Cecil	Gwendolen	Kent	Olympia
Hood River	Morsil	Condon	Wilcox	Helsing Jct.
Troutdale	Morgan	Thornberry	Shaniko	Independence
East Portland	McNab	Sink	Mays	South Montesano
Portland	Ione	Wasco	Tunnel One	Montesano
Kenton	Jordan	Klondike	Fargher	Preachers Slough
Peninsula Jct.	Lexington	Sandon	Maupin	Cosmopolis
North Portland Jct.	Heppner	Hay Canyon	North Jct.	Aberdeen
Albina	Heppner Jct. (for Heppner Branch only)			Primo

93 (S). On parallel tracks between Portland and East Portland or Harding St., and between Millroad and St. Johns Jct., trains and engines must keep to the right. Within yard limits at The Dalles and Seattle, trains and engines must keep to the right.

93 (T). In the absence of previous instructions trains heading in at east end of The Dalles yard will use telephone located at cross-over to secure instructions as to which track to be used.

98 (R). The Washington State Law governing movement of trains over railroad crossings at grade is as follows:

"Trains shall stop at railroad crossings:— All railroads and street railroads, operating in this State shall cause their trains and cars to come to a full stop at a distance not greater than five hundred (500) feet before crossing the tracks of another railroad crossing at grade, excepting at crossings where there are established signal towers and signal men, interlocking plants or gates."

After stop has been made for railroad crossings at grade engineer will sound proceed signal as per Rule 14 (b) before proceeding.

98 (S). RAILROAD CROSSINGS AND JUNCTIONS.

Location	Railroad Crossed, or Junction with	How Governed
Messner	Second Division	Junction Switch is located in front of depot. Westward trains will stop clear of junction switch, until it has been ascertained whether all trains due, which are superior, or of the same class, have arrived or left.
Peninsula Jct.	Seattle Line	Train Staff System.
Portland (Front St.)	United Ry.	All trains and engines must approach prepared to stop before passing over crossing, expecting to find crossing occupied.
East Portland	S. P.	Interlocking Plant.
East Portland (East 2nd St. and Hawthorne Ave.)	P. E. P.	All trains and engines stop before crossing.
East Portland (East 2nd St. and Morrison St.)	P. E. P.	All trains and engines stop before crossing.
East Portland (East 2nd St. between East Salmon and East Madison Sts.)	S. P. & S.	All trains and engines stop before crossing.
Albina (Larabee and Delay Sts.)	P. E. P.	All trains and engines stop before crossing.
Albina (Greeley St.)	P. E. P. Gate	All trains and engines stop before crossing.
North Portland Jct.	S. P. & S.	Interlocking Plant.
Blakeslee Jct.	C. M. St. P. & P.-N. P.	Interlocking Plant.
Saginaw	Schafer Bros. Logging Ry.	Cabin Interlocking Plant.
Craftdale Spur	Schafer Bros. Logging Ry. Gate	All trains and engines stop before crossing.
South Aberdeen (Boone St.)	G. H. L. & P.	All trains and engines stop before crossing.
South Aberdeen (Donovan Mill)	N. P.	All trains and engines stop before crossing.
Cosmopolis (Tail of Wye)	G. H. L. & P.	All trains and engines stop before crossing.
Olympia (Jefferson and 4th Sts.)	O. P. C.	All trains and engines stop before crossing.
Olympia (Jefferson and 6th Sts.)	N. P.	All trains and engines stop before crossing.
Tacoma (Dempsey Mill Spur)	N. P.	All trains and engines stop before crossing.
Tacoma (Fir Door Spur)	N. P.	All trains and engines stop before crossing.
Tacoma (11th St.)	City Ry.	All trains and engines stop before crossing.
Tacoma (St. Paul Av.)	City Ry.	All trains and engines stop before crossing.
Reservation	N. P. Drawbridge Line	All trains and engines stop before crossing.
Black River	C. M. St. P. & P.-P. C.	Interlocking Plant.
Argo	N.P.-C.M.St.P.&P.-P.C.	Interlocking Plant.
Seattle (8th Ave., South)	City Ry.	All trains and engines stop before crossing.
Seattle East Marginal Way)	City Ry.	All trains and engines stop before crossing.
Seattle (Spokane Ave. and 5th Ave.)	N. P.	All trains and engines stop before crossing.
Seattle (Spokane Ave. and Whatcom Ave.)	N. P.	All trains and engines stop before crossing.
Seattle (Whatcom Ave. and Holgate St.)	N. P.	All trains and engines stop before crossing.
Seattle (Whatcom Ave. and Massachusetts St.)	N. P.	All trains and engines stop before crossing.
Seattle (Railroad Ave. and Atlantic St.)	N. P.	All trains and engines stop before crossing.

SPECIAL RULES

98 (T). All trains and engines will stop at established stop boards and not proceed onto draw span of bridge between Montesano and South Montesano until they have called for, received and acknowledged proceed signal from bridge operator, and in addition will be governed by position of derail switch located 128 feet east and derail switch located 195 feet west of trestle leading to drawbridge. Between the hours of 5:30 P. M. and 8:30 A. M. drawbridge span will be left open for river traffic and derail switches will be set in derail position. If necessary for train or engine to use drawbridge between these hours, engineman will sound one long, one short and one long (— o —) blasts of engine whistle to call bridge operator on duty, and if bridge operator does not respond promptly person in charge of train or engine will send a member of train or engine crew to bridge operator's house to notify him that bridge is to be used.

98 (U). All trains and engines will stop at established stop boards and not proceed onto draw span of bridge at Tacoma until they have called for, received and acknowledged proceed signal from bridge tender.

101 (D). Trains will be handled with caution where sand is blowing, when weather is foggy or stormy and at points where there is liability of track being obstructed, losing time if necessary to insure safety.

D-102 (A). If a train is parted or is doubling from any cause and the front portion passes any switch of a cross-over, siding or other route via which it would then be possible for another train or engine to enter, it must not move against the current of traffic in returning to the rear portion, unless a flagman is protecting the return movement at any and all such switches, or unless the return movement has been authorized and protected by dispatcher.

103 (A). Engines must not be run under any coal mine tipple, nor through hopper tracks at coal chutes, and air must be working on all cars before starting to put up coal.

104 (R). Switches will be set normally,
 At Messner, junction switch, —for Second Division;
 At Crates, —for eastward trains (spring switch);
 At Troutdale, junction switch, —for line via Graham;
 At Reservation, junction switch, —for O.-W. R. R. & N. main track;
 At Tacoma Jct., junction switch, —for C. M. St. P. & P. track;
 At Moro, —for main track, when cars on house track;
 —for house track when house track clear;
 —for O.-W. R. R. & N. main track;
 At Helsing Jct., junction switch,
 At Aberdeen, double track switch, (250 feet east of depot) —for eastward trains;
 At South Montesano, wye switch on Montesano Branch, —for west leg of wye.

104 (S). Engines and trains trailing through spring switch at Crates must be careful to avoid making back-up movements until switch is properly lined by hand.

152 (R). THE SPEED SHOWN BELOW MUST NOT BE EXCEEDED:
 (The speed shown under heading of "Psgr." includes mail and express trains, and under heading of "Frt." includes mixed trains and light engines with or without cabooses.)

Location	Maximum Speed Miles Per Hour		Remarks
	Psg.	Frt.	
At any point.	60	35	
At any point.	50	35	With Mikado class engines with 63 inch drivers.
At any point.	45	35	With Mikado class engines with 57 inch drivers.
At any point.	45	35	With 2-10-2 class engines.
At any point.	35	35	With Consolidation class engines.
At any point.	35	35	Mallet engines.
At any point.	35		With C. M. St. P. & P. Class L engines.
At any point.	35		With C. M. St. P. & P. Class K 1 engines, equipped with swing motion trucks.
At any point.	25		With C. M. St. P. & P. Class K 1 engines, equipped with rigid trucks.
At any point.	35		With C.M.St.P.&P. freight engines with single trucks when handling or helping passenger trains.
At any point.	20	20	Engines backing up with or without cars.
At any point.		25	When handling steam derrick.
At any point.		20	Trains handling logs.
Through truss bridges.		6	Trains handling logs.
Within yard limits.	30	15	Speed must be as much slower as rules or conditions may require.
On sidings.	15	15	
Interlocking Plants.	15	15	
Railroad crossings at grade.	15	15	
On 5 and 6 degree curves.	40	30	

FIRST DIVISION

Location	Maximum Speed Miles Per Hour		Remarks
	Psg.	Frt.	
On 7 and 8 degree curves.	35	25	
On curves of 7 degrees and over.	25		With 2-10-2 class engines.
On 9 and 10 degree curves.	30	20	
The Dalles.	12	12	Over street crossings.
Crates.	45	35	Westward—over spring switch at end of double track.
Crates.	15	15	Eastward—over spring switch at end of double track.
Between Eagle Creek and Mile Post 42.5.	35	25	
Portland.	10	10	Over street crossings.
East Portland Hill.	20		With helper on rear of train.
East Portland.	15	15	Over frogs and crossings east end of Willamette River Bridge.
Tunnel between Peninsula Jct. and St. Johns Jct.	40	30	
Heppner Branch, except between M. P. 13 and 23.	30	25	
Heppner Branch, between Heppner Jct. and M. P. 23.	35	30	
Condon Branch, between Arlington and M. P. 2.	25	20	
Between M. P. 2 and Condon.	25	25	
Between Rock Creek and Barnett.		15	On descending grades.
Between Mikkalo and Speece.		15	On descending grades.
Shaniko Branch.	25	25	
Between Biggs and Thornberry.	20	10	On descending grade.
Between Thornberry and Wasco.	30	20	On descending grade.
Between Sandon and Hay Canyon.	30	20	On descending grade.
Between Moro and M. P. 33.	30	20	On descending grade.
Between Sherman and Bluffs.	35	30	
Between Bluffs and North Junction.	35	25	
Between South Junction and Paxton.	25	20	
Between Paxton and Metolius.	40	30	
Between Madras and Metolius.	15	15	Over Willow Creek Viaduct.
Between Centralia and Aberdeen.	40	35	
Between Aberdeen and Hoquiam.	40	30	
Preacher's Slough.		6	On Rollways.
Blue Slough.		6	On Rollways.
Cosmopolis.	20	15	Within city limits.
Cosmopolis.		8	With logs within city limits.
Aberdeen.	20	20	Within city limits.
Aberdeen.	10	10	Over street crossings.
Primo Branch.	25	20	
Tono Branch.	35	25	
Olympia Branch.	35	25	

152 (S). Figures on stake at beginning of curve indicate degree of curve. All trains must be under control through sidings, interlocking plants and yard limits. Under control means to be able to stop within one-half the distance track is seen to be clear. Permanent slow boards will indicate distance to track requiring restricted speed.

201 (R). Unless otherwise directed, between Troutdale and Portland or Albina all freight trains will run via Kenton and all passenger trains will run via Graham.

221 (R). Lights will not be kept burning at night in the train order signals on branch lines when operators are not on duty, and trains will be governed by the day indication.

Trains will be governed by indication of train order signal and will not sound whistle signal as required by Rule 221(A) as follows:

- Arlington —all trains;
- Hood River —all trains;
- Independence —all trains;
- Cosmopolis —all trains;
- Aberdeen —all eastward trains.

AUTOMATIC TRAIN CONTROL RULES COVERING AUTOMATIC TRAIN CONTROL OPERATION BETWEEN PORTLAND AND THE DALLES VIA GRAHAM

**Automatic Train Control Rules
Definition**

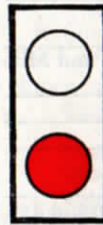
302. AUTOMATIC TRAIN CONTROL: A method of mechanically controlling train movements, independent of the engineman, should it become necessary.

CAB INDICATOR



302 (A).

INDICATION—
PROCEED:



INDICATION—
STOP OR REDUCE SPEED.

Enginemen and Trainmen

302 (B). Automatic train control cab indicators supplement automatic block signals in governing the use of blocks, and do not supersede the superiority of trains, nor dispense with the observance of rules governing the use of automatic block or interlocking signals or other signals whenever and wherever they may be required, except to the extent specifically authorized in Special Rule 302(G).

302 (C). The normal indication of automatic train control cab indicator is "Proceed."

302 (D). When the cab indicator shows red, engineman will acknowledge with acknowledging valve, and if speed is in excess of twenty (20) miles an hour, must immediately reduce speed to less than twenty (20) miles an hour.

302 (E). When cab indicator changes from green to red after having passed home block signal in "proceed" position, engineman must immediately reduce speed to six (6) miles an hour and not exceed that speed to the next signal in advance, expecting to find a train in the block, broken rail, obstruction, or switch not properly set.

302 (F). If cab indicator changes from green to red when within view of a distant block signal in advance, or after passing a distant block signal indicating "proceed", engineman will proceed at such speed below twenty (20) miles an hour as will enable him to stop before reaching the next home block signal in advance.

302 (G). When the speed of a train is restricted by automatic train control, or train is proceeding after having been stopped by automatic home block signal or automatic train control, if the cab indicator changes from red to green, the train may resume normal speed after engine has moved one train length beyond the point where the cab indicator changed from red to green.

302 (H). Within automatic train control territory, when moving over a track which is not equipped with automatic train control circuits, the train or engine must be kept below a speed of twenty (20) miles an hour.

302 (I). Trains entering automatic train control territory at Troutdale failing to receive green or red indication after passing off of cut-in circuit will pull down on the cut-out switch for thirty seconds and observe if black hand on duplex gauge starts downward. If cab indicator does not show a red indication or black hand on duplex gauge does not start downward when cut-out switch is down, automatic train control equipment on engine is inoperative and should be cut out. Train control must not be cut out until after consulting the train dispatcher.

302 (J). An engineman of a train entering a block as provided for by these rules, will be held responsible in case of accident caused by overtaking a preceding train. This does not relieve enginemen and trainmen from protecting their trains as required by the rules.

302 (K). When an engine is running backward, or is pushing cars, it must proceed at a speed less than twenty (20) miles an hour, to avoid an automatic brake application.

302 (L). If the indications of the cab indicator and the automatic block signal do not correspond, engineman must promptly report the fact to the train dispatcher from the first available point of communication, giving signal and engine number.

302 (M). When cab indicator displays continuous red indication passing two consecutive home block signals seen to be in proceed position, engineer may cut out pneumatic portion of the automatic train control equipment and proceed at normal speed, being governed by automatic block signals.

SPECIAL RULES

302 (N). At the first available telephone booth or telegraph office, engineer will consult with dispatcher to ascertain if dispatcher has knowledge as to trouble with train control circuit or track being blocked and if dispatcher has no knowledge as to track being blocked train may continue from that point at normal speed, being governed by automatic block signals.

302 (O). If after proceeding, cab indicator for a distance of five miles displays green indication continuously, engineer will cut in pneumatic equipment.

302 (P). When dispatcher has knowledge that train control power has failed he will so advise train and enginemen by train order; engineman will then cut out train control pneumatically. When cab indicator shows green, indicating that power is restored, engineman will then cut in train control pneumatically, and notify trainmen at first opportunity.

302 (Q). Train control equipment on an engine is locked in cut-in position. In case train control equipment on engine fails, or track circuits become inoperative, pneumatic portion should be cut out.

302 (R). Station baggagemen at The Dalles Passenger Depot on engines run through The Dalles will unlock and cut out pneumatic portion of automatic train control equipment on eastward engines, and will cut in and lock pneumatic portion of automatic train control equipment on westward engines. After the equipment has been cut in, engineman will pull down on cut out switch in cab, and allow an automatic brake application. Enginemen will be held responsible for proper cutting in and cutting out of train control equipment.

GENERAL TRAIN CONTROL RULES

302 (S). Train control wires are located on top cross arm of automatic block signal pole line between Portland and The Dalles and carry a current of 2300 volts.

This current would be fatal to anyone coming in contact with it, and these wires must not be touched by persons or portable telephone and telegraph poles, nor by any other rods, tools or wires, etc., nor struck by booms of steam derricks, locomotive cranes, pile drivers, ditchers, etc.

De-energizing Line

302 (T). When employes are to perform any work where they are liable to come in contact with wires, or when necessary to perform work around or near train control wires with any machinery or appliances, which are liable to come in contact with them, Dispatcher must be notified. Dispatcher will then notify Signal Maintainer and before such work is started, Signal Maintainer must de-energize the portion of line where work is to be performed. Person in charge must not start such work until he has received written instructions from the signal maintainer that he has de-energized the line.

Re-energizing Line

302 (U). The Signal Maintainer, after de-energizing line as above, must not re-energize the line until he has received written statement from the person in charge of the work that no more work will be performed where employes, machinery or appliances are liable to come in contact with train control wires. Maintainer, after re-energizing line, will so advise dispatcher.

Trouble on Wires

302 (V). All employes are to report to the Train Dispatcher, as soon as possible, any unusual appearances or conditions of any of the wires or their supports, including collection of sleet on wires, so that any needed attention may be given without delay.

In case high voltage train control wires come in contact with, or are liable to come in contact with, cars or structures, have line de-energized by communicating with train dispatcher or any operator and a signal maintainer, pull wires clear of cars or structures, with pole or any other non-conductor device, and use Pyrene extinguisher if available to extinguish fire.

Employes are reminded that any wire or wires may become crossed with the high voltage wires and great care must be exercised to avoid coming in contact with any wires whatsoever which might cause a hazard.

The circuits are located between Portland and Troutdale with power feeding line at Mile Post 6 and between Troutdale and The Dalles with power feeding line at Hood River.

Operator at Hood River can have circuits between Troutdale and The Dalles de-energized. Towerman at East Portland can have circuits between Portland and Troutdale de-energized.

TRAIN STAFF SYSTEM GOVERNING MOVEMENT OF TRAINS BETWEEN ST. JOHNS JUNCTION AND PENINSULA JUNCTION

409 (A). St. Johns Junction and Peninsula Junction are staff stations.

409 (B). Advance staff signal on North Portland line is located 2000 feet from east portal of tunnel.

Advance staff signal on Kenton line is located 2000 feet from east portal of tunnel. Advance staff signal on Albina-Portland line is located 2050 feet west of St. Johns Junction staff station.

409 (C). The possession of a staff is authority for a train or engine to proceed regardless of opposing trains or engines, providing the semaphore signal at staff station indicates "proceed." Normal indication of semaphore signal at staff station is "stop."

409 (D). Advance staff signals will indicate whether or not staff is ready for delivery. Normal indication of these signals is "stop." Approaching advance staff signals enginemen will call for signal indication by sounding four short blasts of whistle (Rule 14-j). When signal is changed from "stop" to "proceed," engineer will acknowledge same by sounding two short blasts of whistle (Rule 14-g) and may then proceed, obtaining staff at staff station. Trains or engines must not pass an advance staff signal or staff station semaphore indicating "stop," except by train order authority as provided in Special Rule 409 (R).

409 (E). Advance staff signal west of St. Johns Junction will govern movement of trains and engines approaching St. Johns Junction from the west on right-hand parallel track, and dwarf signal will govern on left-hand parallel track when authorized movements against current of traffic are made approaching St. Johns Junction.

409 (F). Approaching Peninsula Junction staff station from Barnes via "Wye 2" trains and engines will stop at established stop board and will not pass stop board until staff has been obtained from staff signalman at Peninsula Junction and staff station semaphore is changed to indicate "proceed."

409 (G). Engines approaching St. Johns Junction staff station from St. Johns industrial lead will stop at established stop board and not pass stop board for movement to Albina until proceed signal is received from signalman at St. Johns Junction staff station. For movement to Peninsula Junction Special Rule 409 (C) will govern, but engines must not pass stop board until staff has been obtained from staff signalman.

409 (H). Trains or engines on siding at St. Johns Junction or Peninsula Junction will not occupy or foul main track within staff limits until staff has been obtained.

409 (I). Delivery of the staff to the engineman will be either by staff crane, hand of block signalman or the conductor or head brakeman of his own train, and engineman must not accept delivery of the staff from any other person; signalman will not deliver staff to any other than these employes.

409 (J). When the staff has been obtained by the engineer he will announce the fact by sounding one short, one long and one short blast of the whistle (o — o).

409 (K). Signalmen will remain in view until the rear car has passed and will give proceed signal to trainmen to indicate that staff has been delivered to engineer.

409 (L). Engineer must either hand the staff to the signalman or throw it on the ground immediately in front of the staff station. A staff must not be transferred from one train or engine to another, but must be delivered to the signalman who will place it in the staff machine before delivery to another train or engine and must know that all of the train or cars clear the block before he inserts staff in the instrument.

409 (M). When two or more engines are coupled, the engineer of the leading engine will handle the staff but the engineer of the other engine or engines must know that engineer of leading engine has the staff before proceeding.

409 (N). In case a train parts or it is necessary to double, the staff must be retained by the engineer until rear portion of train is moving out of block.

409 (O). In case of delay to a train the staff must be surrendered upon request of signalman, which will cancel authority to proceed.

409 (P). Cars will not be shoved through the tunnel ahead of engine, except business cars equipped with headlight.

409 (Q). Headlights will be kept burning on all engines while between St. Johns Junction and Peninsula Junction both day and night.

409 (R). In case of failure of staff apparatus, trains and engines will be moved by 31 form of train order through the tunnel until apparatus has been repaired. This order must be given jointly to conductor and engineer of the train and signalmen at both ends of the block. Before issuing train orders substituting staff system, train dispatcher must ascertain that block is clear. In such event, a train order takes the place of the staff.

409 (S). If a train is held by staff signal to exceed ten minutes, the conductor must ascertain the cause.

509 (E). Relative to rule 509-B, the flagman must be sent ahead at night even though the next signal in advance is in plain view and the track can be seen to be clear.

509 (F). When a train is stopped by a block signal at "stop" position on double track when ready to proceed as per rule 509 (C), and on single track when the flagman is not to be sent ahead as per rule 509-B, two long sounds of the engine whistle (14 B) will be given before the train proceeds.

509 (R). Junction switch at Troutdale is electrically controlled from the depot by the Operator. Upper arm of Signal 157, located just east of junction switch, governs westward movement on The Dalles-Portland line and lower arm governs westward movement from The Dalles-Portland line to Kenton line. Clear indication of Signal 156 will authorize eastward trains from Kenton line to proceed to telegraph office without protecting against first class trains.

Sanders on engines must be kept closed while passing over this switch.

SPECIAL RULES

FIRST DIVISION

525. If a home block signal fails to indicate stop or a distant block signal fails to indicate caution when a block is entered, a member of the crew must be left at the signal, the train dispatcher must be notified from the first available point of communication and report must be sent to the Superintendent by wire. The employe left at the signal must stop and notify all trains moving in the direction governed by the signal and must remain there until relieved by an employe of the Signal Department or by official instructions.

674 (R). To indicate the route to be used through interlocking plants, the following engine and motor whistle signals will be used at East Portland:

- For Portland One long: —
- For Albina One long; one short: — o
- For Graham Two long: — —
- For S. P. Main Line One short; one long: o —
- For East Second St. Two short; one long: o o —
- For S. P. Yard One short; one long; one short: o — o
- For Transfer Track One long; one short; one long: — o —
- For East Side Freight Terminal Two short; two long: o o — —

720 (R). Passengers will not be carried on freight trains, except persons in charge of special freight, employes with annual passes, or employes with trip passes when traveling on company business, between stations at which the train stops.

802 (A). When one or more cars are being switched or pushed over a public crossing a man must go ahead of them, or must act as crossing watchman.

When a train has been opened to clear a public crossing a trainman must act as crossing watchman when a train or engine is passing on a siding or main track.

Where a crossing watchman is on duty trainmen must not give signal for highway traffic to come ahead.

802 (R). At 15th St., Tacoma, all trains and engines must stop and a member of the crew must be sent ahead to act as crossing watchman.

820 (R). Allowance for empty and underloaded cars as indicated below must be reported as required by Instruction 31 on Form 1216 "Conductor's Car and Tonnage Report."

	For each empty or loaded car weighing less than 40,000 lbs. (including light weight of car)	For each empty or loaded car weighing between 40,000 and 50,000 lbs. (including light weight of car)
Albina to Troutdale	6000	3000
East Portland to Montavilla	3000	
Bonneville to Cascade Locks	3000	
The Dalles to Seufert	6000	3000
Umatilla to Arlington	6000	3000
The Dalles to Dodson	6000	3000
Troutdale to Clarnie	6000	3000
Albina to Kalama	6000	3000
Kalama to Vader	6000	3000
Vader to Napavine	3000	
Centralia to Tacoma	6000	3000
Tacoma to Centralia	6000	3000
Centralia to Napavine	3000	
Napavine to Vancouver	6000	3000
Sherman to North Jct.	6000	3000
North Jct. to Bend	3000	
Biggs to Shaniko	3000	
Arlington to Condon	3000	
Heppner Jct. to Heppner	6000	3000
Hoquiam to Cosmopolis	3000	
Cosmopolis to Centralia	6000	3000
Cosmopolis to Primo	6000	3000
Primo to Cosmopolis	3000	
Centralia to Tono	6000	3000
Olympia to Chambers Prairie	6000	3000

826 (R). When employes, passengers, or others are injured, call the nearest Railroad Surgeon. If the persons injured are not employes, they should be sent to their homes or placed in charge of Local Relief Authorities, after immediate necessary attention has been given by the Railroad Surgeon.

When necessary to call Surgeons, other than those regularly employed by the Railroad, it should be with the distinct understanding that their services will not be required after arrival of the Railroad Surgeon.

Railroad Surgeons are located as shown below:

PLACE	NAME	TITLE
Portland.	Donald H. Jessop.	Chief Surgeon.
Portland.	M. K. Hall.	Assistant Chief Surgeon.
Portland.	Harry M. Bouvy.	Chief Oculist, Ear, Nose and Throat.
Portland.	John W. McCollom.	Eye, Ear, Nose and Throat.
Portland.	Archie C. Vancleve.	Assistant Surgeon.
Portland.	J. C. Ghormley.	Assistant Surgeons.
Portland.	Courtland L. Booth	Assistant Surgeon.
Portland.	C. H. Bastron.	Assistant Surgeon.
Portland.	R. N. Jacobs.	Assistant Surgeon.
Vancouver.	J. B. Blair.	District Surgeon.
Hood River.	H. L. Dumble.	District Surgeon.
The Dalles.	Reuter, Thompson, Coberth, Griffith & Taylor.	District Surgeons.
The Dalles.	French & Young.	Eye, Ear, Nose and Throat.
Umatilla.	Alexander Ried.	District Surgeon.
Bend.	J. C. Vandever & G. V. Vandervert.	District Surgeons.
Grass Valley.	C. L. Poley.	District Surgeon.
Arlington.	Donnelly & Gessner.	District Surgeons.
Condon.	J. V. Wilhelm.	District Surgeon.
Heppner.	A. D. McMurdo.	District Surgeons.
Seattle.	Montgomery Rusell	Division Surgeon.
Seattle.	F. R. Underwood.	District Surgeon.
Seattle.	S. M. Samuels.	Oculist and Aurist.
Tacoma.	C. P. Gammon.	District Surgeon.
Centralia.	W. R. Scott.	District Surgeon.
Hoquiam.	H. C. Watkins.	District Surgeon.
Aberdeen.	I. R. Watkins.	District Surgeon.
Cosmopolis.	Dr. L. R. Lightfoot.	District Surgeon.
Olympia.	W. L. Bridgford.	District Surgeon.

850. A buffer car (not to be occupied by passengers) will be used on passenger trains between locomotive and cars occupied by passengers.

888. (A). While passing through cities and towns, there must be no failure to keep sharp lookout ahead on both sides of the engine. Firemen must do this in preference to other duties, except that they must keep the fire in such condition that there will be no loss of efficiency of the engine.

898. (A). Enginemen will give two long and two short sounds of engine or motor whistle when approaching a train which is stopped on opposite track on double track, and when approaching a train which is on a siding on single or double track. On double track special care must be taken to sound warning signals, and particularly when trains or engines are approaching highway crossings from opposite directions at the same time.

Work trains unloading ballast on double track, must stop when a train is passing on the opposite track.

899. Employes must inform themselves as to the location of all structures or obstructions where clearances are close, and must exercise care to avoid injury therefrom to themselves or others.

899 (R). Trainmen must not ride on the side of cars or engines while moving in trains on Bend and Shaniko Branches as there are a number of places on these branches where, on account of narrow cuts, there is impaired clearance.

977 White bands painted on telegraph or signal line poles indicate car length distance from switch of siding as follows: One band, 45 cars; two bands, 60 cars; three bands, 75 cars; four bands, 100 cars.

AIR BRAKES

1014 (A). Passenger, freight and mixed trains will carry 90 pounds brake pipe pressure on Shaniko and Condon Branches and passenger and mixed trains will carry 90 pounds brake pipe pressure on Bend branch.

1044 (B). Whenever helper engine on any train is either attached or detached rear end air test will be made in the manner prescribed in Rule 1044 (A) of Operating Rules governing Air Brakes effective December 1, 1925.

1044 (C). Road train brake test as prescribed in Rule 1044 (A) will be made on all freight and mixed trains before descending grade Barnett to Rock Creek, Grass Valley to Hay Canyon, Klondike to Hay Canyon, Thornberry to Biggs, and Madras to South Jct., and this test will also be made at intermediate points on these grades either ascending or descending, whenever engine is changed, cars picked up or set out, air hose parted, angle cock turned or train has been standing for thirty minutes or more.

1048 (B). On freight and passenger trains when undesired quick or emergency action of brakes has occurred on service reduction, thereafter, before starting service reductions, enginemen will place brake valve in release position for two seconds then in running position for one second then in service position for the reduction. This to insure all triple valves being in release position at the time service reduction starts thereby tending to avoid quick action of the brakes when making service reduction.

1050 (H). Locomotive and tender brakes on engines helping or pushing trains will be operated in conjunction with the train brake.

1051 (B). Running test as prescribed in Rules 1051 and 1051 (A) will be made before descending heavy grades as follows:

- Fifth Subdivision, westward trains at Mile Post 6 east of Montavilla;
- Bend Branch, westward trains at Mile Post 100;
- Shaniko Branch, westward trains at Kent, Mile Post 34, Klondike and Wasco, and eastward trains at Sandon and Mile Post 35;
- Condon Branch, westward trains at Speece, Mikkalo and Shutler.

1057 (R). A trainman must be stationed on rear of train with hand on air valve of tail hose ready to apply emergency brake if it becomes necessary at the following points:

- Between Portland and East Portland —on all trains while passing over Willamette River Bridge;
- Between Montesano and South Montesano—on passenger trains backing up.

1059 (B). Westward freight and mixed trains must stop and trainmen will inspect and adjust piston travel at Barnett, Grass Valley, Thornberry and Madras.

1060 (B). Trainmen must know condition of hand brakes on freight cars that have air brakes cut out.

1066 (B). Freight trains consisting of more than twenty-five cars will cut off engine to take coal or water when stop must be made on descending grade, or where there is more than one engine on the train. Trains under similar conditions will also cut off way cars before making spot.

1077 (B). Retaining valves will be used on descending grades as follows: Shaniko Branch, on passenger trains Thornberry to Biggs, and on freight or mixed trains Mile Post 33 to Moro, Klondike to Biggs and Sandon to Hay Canyon, all retaining valves to be used;

Condon Branch, on all trains Mile Post 35 to Mikkalo, Barnett to Rock Creek and Mile Post 2 to Arlington, all retaining valves to be used.

Bend Branch, on freight and mixed trains on descending grades between Mile Post 100 and South Jct., one-half of all retaining valves to be used consecutively from engine back.

STATIONS AND TRACKS NOT SHOWN AS STATIONS IN THE TIME-TABLE SCHEDULE

Fourth Subdivision	Bend Branch
Seufert M. P. 87.7	Harris M. P. 13.1
Bigg Eddy " 88.6	Ketchum " 27.0
Dillon " 93.5	Oak Springs " 47.0
Tumwater " 96.0	Truman " 84.2
	Agency " 103.5
	Hensley " 135.2
Fifth Subdivision	Gray's Harbor Branch
Montavilla M. P. 5.4	Kern M. P. 18.9
Quarry Spur " 7.1	Spruceton " 20.2
Corbett " 20.4	Callow " 23.0
Latourell " 23.9	Craftdale " 23.6
Multnomah Falls " 29.6	Ballast " 28.2
Warrendale " 35.8	Damon " 33.2
Eagle Creek " 40.1	Hall " 40.6
Viento " 55.3	Tingle " 45.3
Adamsboro " 10.3	South Aberdeen " 52.8
Ward " 14.2	
Shaniko Branch	Primo Branch
Kelsey M. P. 63.0	Arctic M. P. 7.3
	Midson " 11.6
Condon Branch	Olympia Branch
Smythe M. P. 13.7	Knauer M. P. 1.8
Heppner Branch	
Harriett M. P. 3.0	

RATING OF LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS

MAIN LINE

Total weight of train exclusive of engine and tender, which the different classes of locomotives will haul in each direction between stations shown, under favorable weather conditions: (a deduction of ten (10) per cent may be made for time freight trains). Between stations for which no rating is shown maximum will apply.

CLASSIFICATION	ENGINE NUMBERS	PORTLAND AND THE DALLES									THE DALLES and UMATILLA				PORTLAND AND SEATTLE																	
		EASTWARD					WESTWARD				EASTWARD		WESTWARD		EASTWARD							WESTWARD										
		Portland to Troutdale via Graham	Albina to Bonneville via Kenton	Bonneville to Cascade Locks	Cascade Locks to Sonny	Sonny to The Dalles	The Dalles to Dodson	Dodson to Albina via Kenton	Troutdale to Portland via Graham	The Dalles to Seufert	Seufert to Umatilla	Umatilla to Arlington	Arlington to The Dalles	Albina to Vader	Vader to Winlock	Winlock to Napavine	Napavine to Centralia	Centralia to Tenino	Tenino to Tacoma	Tacoma to Argo	Argo to Centralia	Centralia to Napavine	Napavine to Albina									
A. 81	20 106 28 107 ^a	3500 to 3514									625	1660	1400	1445	1595	1400	2500	1295	1390	1645	1735	2115	1730	1060	815	2090	1670	2010	1670	1670	685	2090
P. 77	22 143 ^a 28	3200 to 3203																														
P. 77	22 135 ^a 28	3204 to 3207									795	2115	1800	1825	2040	1800	3185	1600	1730	2100	2220	2700	2200	1190	1035	2665	2125	2515	2125	2125	875	2665
P. 77	22 149 ^a 28	3208 to 3217																														
T. 69	22 159 28 161 ^a	1742 to 1754									890	2360	2000	2025	2265	2000	3555	1900	2010	2330	2460	3035	2460	1480	1155	2970	2375	2847	2375	2375	975	2970
T. 63	22 160 28 162 ^a	1755 to 1760									975	2585	2000	2225	2475	2000	3895	1900	2200	2555	2690	3285	2690	1560	1265	3255	2600	3130	2600	2600	1070	3255
P. 77	25 167 ^a 28	3218 to 3225									1030	2730	2100	2355	2625	2100	3185	2000	2320	2700	2850	3275	2845	1550	1340	3440	2745	3085	2745	1130	3440	
C. 57	15 1/2-26 167 30	710, 715 718, 724 719 to 723									1000	2395	2000	2060	2300	2000	3690	1900	2300	2275	2405	3040	2550	1475	1200	3085	2465	2880	2465	2465	1010	3085
C. 57	20 1/2 172 30	725 to 729																														
C. 57	22 179 30	730 to 768									1150	3060	2600	2650	2940	2600	4610	2400	2650	3030	3200	3900	3185	1860	1500	3850	3080	3740	3080	3080	1265	3850
MK. 57	23 1/2 207 ^a 30	2100, 2102 2104, 2147 2148, 2150 2151, 2152 2155 to 2165									1340	3600	3200	3300	3500	3200	5375	2700	3050	4000	4000	5000	3710	2175	1825	4500	3585	4360	3585	3585	1650	4950
MK. 57	23 1/2 207 ^{adb} 30	2103, 2138, 2147 2149, 2152, 2154									1340	3600	3200	3300	3500	3200	5375	2700	3500	4000	4000	5000	3710	2175	1825	4500	3585	4360	3585	3585	1650	4950

BRANCHES

CLASSIFICATION	ENGINE NUMBERS	CENTRALIA and HOQUIAM				CENTRALIA and TONO	COS-MOPOLIS and PRIMO	CHAMBERS PRAIRIE and OLYMPIA	SHERMAN and BEND					BIGGS and SHANIKO						ARLINGTON and CONDON				HEPPNER JCT. and HEPPNER			
		EASTWARD		WESTWARD					EASTWARD					WESTWARD		EASTWARD			WESTWARD			EASTWARD					
		Hoquiam to Cos-mopolis	Cos-mopolis to Centralia	Centralia to Cos-mopolis	Cos-mopolis to Hoquiam				Sherman to North Jet.	North Jet. to South Jet.	South Jet. to Madras	Madras to Bend	Bend to Sherman	Biggs to Thornberry	Thornberry to Sandon	Sandon to Grass Valley	Grass Valley to Shaniko	Shaniko to Grass Valley	Grass Valley to Hay Canyon	Hay Canyon to Sandon	Arlington to Rock Creek	Rock Creek to Condon	Condon to Rock Creek	Rock Creek to Arlington	Heppner Jct. to Ione	Ione to Lexington	Lexington to Heppner
T. 63	20 113 24	625	1930	2245	695	1340	660	800	690	987	555	745	1580	180	290	415	370	815	500	370	315	180	980	890	810	625	590
T. 57	20 119 26	740	2375	2765	855	1630	810	980	740	1120	685	920	1955	220	355	455	510	960	615	455	390	220	1210	1090	965	740	725
T. 64	15 1/2-26 145 26	710	2275	2560	820	1590	775	885	830	1070	655	880	1870	210	340	435	490	855	590	435	370	210	1200	1045	900	710	695
T. 57	20 125 26	710	2505	2920	905	1720	855	980	890	1180	720	970	2060	230	375	480	540	1030	650	480	420	240	1250	1155	1015	785	770
T. 69	22 159 28 161	1570	2840	3310	1020	1865	970	1170	1075	1335	815	1100	2330	265	425	545	610	1175	740	540	465	260	1550	1310	1100	900	870
T. 63	22 160 28 162 ^a	1650	3110	3625	1120	1975	1060	1280	1160	1465	900	1200	2555	290	465	600	670	1120	810	595	510	285	1465	1430	1200	1000	950
C. 55	19 149 30	900	2845	3315	1025	1975	970	1170	990	1340	820	1100	2340	265	445	545	610	1275	740	545	465	265	1530	1315	1170	970	870
C. 57	20 1/2 167 30	1490	2875	3355	1035	2200	985	1175	1350	1505	835	1350	2375	265	465	550	620	1305	750	550	480	275	1600	1330	1260	980	870
C. 57	15 1/2-26 172 30	710, 715 718, 724 719 to 723																									
C. 57	22 179 30	1700	3880	4290	1325	2520	1275	1515	1500	1730	1000	1500	3000	345	550	700	790	1460	960	700	600	340	1820	1700	1500	1150	1125
C. 57	22 187 30 190 ^a	725 to 729 730 to 768																									

CLASS

"E"—Eight Wheel.
 "A"—Atlantic.
 "P"—Pacific.
 "T"—Ten Wheel.
 "M"—Mogul.
 "C"—Consolidation.
 "TW"—Twelve Wheel.
 "S"—Switch.
 "MK"—Mikado.
 "MC"—Mallet Compound.
 "TTT"—Two-Ten-Two.

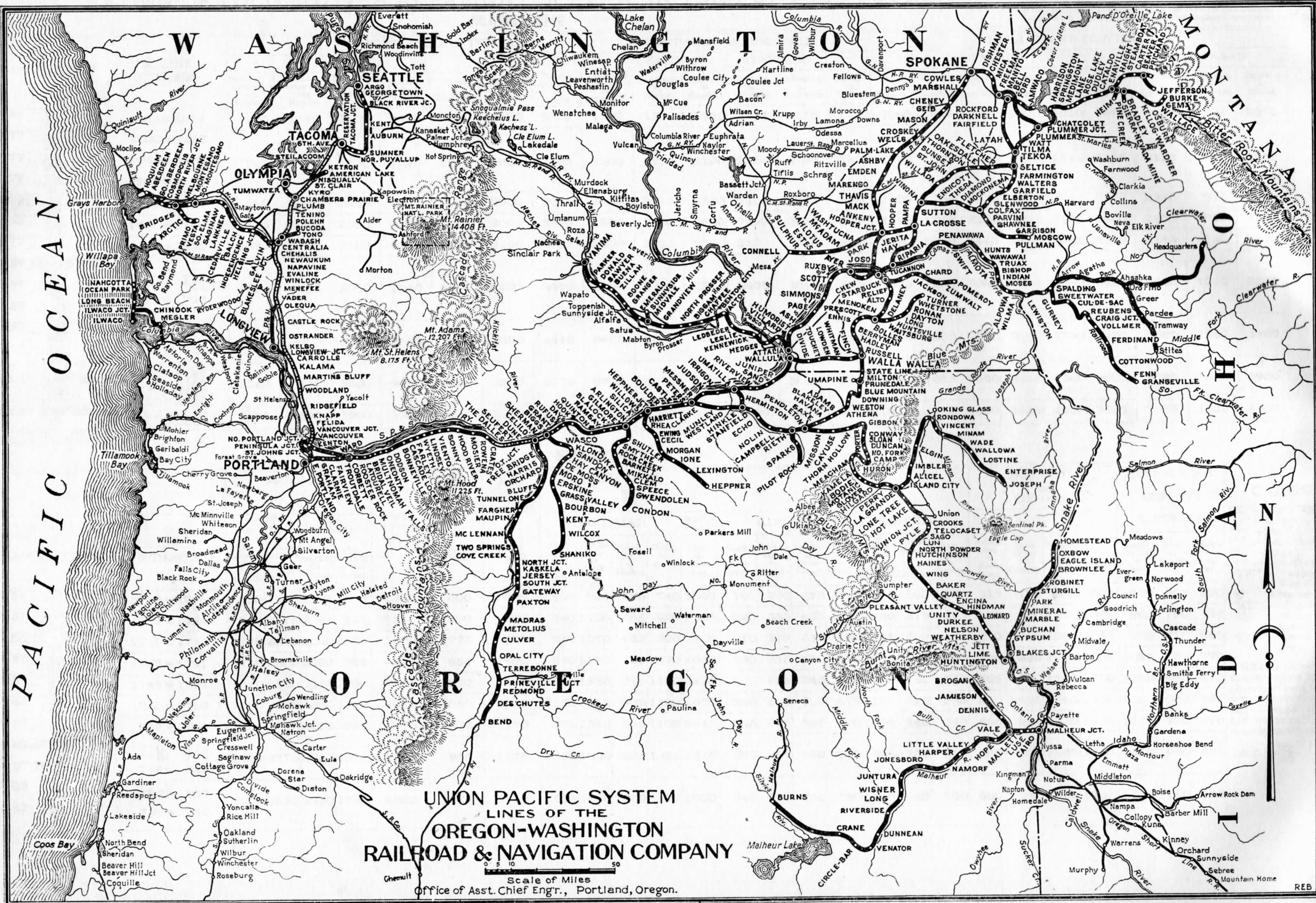
EXAMPLE:—Consolidation engine having 57-inch drivers, Cylinders 22-inch diameter and 30-inch stroke, and weighing 187,000 pounds on Drivers:

C. 57 22 187
30



RAILROAD & NAVIGATION COMPANY
OREGON-WASHINGTON
LINES OF THE
UNION PACIFIC SYSTEM
Scale of Miles

PACIFIC OCEAN



**UNION PACIFIC SYSTEM
LINES OF THE
OREGON-WASHINGTON
RAILROAD & NAVIGATION COMPANY**

Scale of Miles
Office of Asst. Chief Engr., Portland, Oregon.