

SACRAMENTO NORTHERN RAILWAY

TIME 20 TABLE

In Effect 12:01 A. M. "Pacific" Time

SUNDAY, APRIL 23, 1939

This Time Table is for the exclusive use and guidance of the employes concerned. The Company reserves the right to vary from it at pleasure.

Always have the revised Book of Rules of the Transportation Department at hand for reference.

J. B. ROWRAY,
General Manager

W. W. NELSON,
Superintendent of Transportation

Fone, Scales Wyes, Bulletin, Register Station, Standard Clocks, Interlocking Plant	SECOND CLASS		FIRST CLASS														Distance from San Francisco	Time Table No. 20 April 23, 1939		
	292	40	DH-11	10	DH-7	36	32	8	28	DH-3	6	18	DH-1	DH-17	16	2		12	STATIONS	
	Sacramento Local Freight	Pittsburg Passenger	Leave Daily	Sacramento Passenger	Leave Daily	Pittsburg Passenger	Concord Passenger	The Meteor	Concord Passenger	Leave Daily	Chico Passenger	Sacramento Passenger	Leave Daily	Leave Daily	Pittsburg Passenger	The Comet		Concord Passenger		
Leave Daily EX. SUNDAY	Lv. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily	Leave Daily	Lv. SUNDAY & HOLIDAYS	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily	Lv. SUNDAY & HOLIDAYS	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily EX. SUNDAY & HOLIDAYS	Lv. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS				
PIK		10.30 PM	10.27 PM	8.10 PM	6.03 PM	6.00 PM	5.23 PM	4.43 PM	3.57 PM	1.47 PM	1.20 PM	10.40 AM	10.11 AM	8.42 AM	8.15 AM	8.03 AM		0.00	SAN FRANCISCO	
I																		6.20	EAST JCT.	
I																		7.36	EMERYVILLE JCT.	
I																		7.81	SAN PABLO AVE.	
PRBK	6.30 PM	10.51 s 10.54	10.48 PM	8.31 s 8.40	6.24 PM	6.21 s 6.24	5.45 s 5.48	5.04 s 5.07	4.19 s 4.21	2.08 PM	1.41 s 1.47	11.01 s 11.05	10.32 AM	9.03 AM	8.36 s 8.39	8.24 s 8.26	7.27 AM	8.90	2S OAKLAND (40th & Shafter)	
P		11.00		8.46		6.30	5.54	5.13	4.27		1.53	11.11			8.45	8.32	7.34	10.69	ROCKRIDGE	
P		f 11.03		f 8.48		f 6.33	f 5.57	5.15	f 4.30		f 1.56	f 11.14			f 8.47	8.34	f 7.37	11.90	TEMESCAL	
P		f 11.09		f 8.53		f 6.38	f 6.02	5.21	f 4.36		f 2.00	f 11.18			f 8.52	8.38	f 7.42	14.40	HAVENS	
P		f 11.15		f 8.59		f 6.45	f 6.09	5.27	f 4.42		f 2.06	f 11.24			f 8.58	8.44	f 7.50	17.70	PINEHURST	
P		f 11.18		f 9.02		f 6.49	f 6.13	5.30	f 4.46		f 2.10	f 11.27			f 9.02	8.47	f 7.55	19.83	MORAGA	
P		f 11.21		f 9.04		f 6.51	f 6.15	5.32	f 4.49		f 2.13	f 11.29			f 9.05	8.50	f 7.57	20.74	ST. MARYS	
P		f 11.24		f 9.07		f 6.55	f 6.18	5.35	f 4.52		f 2.16	f 11.32			f 9.09	8.53	f 8.00	22.64	BURTON	
P		f 11.28		f 9.10		f 6.59	f 6.24	5.38	f 4.56		f 2.19	f 11.36			f 9.14	8.56	f 8.04	25.09	LAFAYETTE	
P		f 11.31		f 9.13		f 7.02	f 6.27	5.40	f 5.00		f 2.22	f 11.39			f 9.17	8.58	f 8.08	26.71	SARANAP	
P		f 11.34		f 9.19		f 7.05	f 6.31	5.42	f 5.04		f 2.26	f 11.43			f 9.22	9.00	f 8.13	28.44	D WALNUT CREEK	
P		11.37		9.22		7.08	6.35	5.45	5.07		2.30	11.47			9.26	9.04	8.18	30.46	SPARKLE	
		f 11.38		f 9.23		f 7.09	f 6.36	5.46	f 5.08		f 2.31	f 11.48			f 9.27	9.05	f 8.19	30.56	LAS JUNTAS (S.P.R.R. Crsg.)	
P		f 11.39		f 9.24		f 7.11	f 6.37	5.47	f 5.10		f 2.32	f 11.50			f 9.29	9.06	f 8.21	31.11	BANCROFT	
P		f 11.41		f 9.26		f 7.14	f 6.39	5.48	f 5.12		f 2.34	f 11.52			f 9.30	9.08	f 8.24	32.02	MEINERT	
PRBK		f 11.45		f 9.30		f 7.18	s 6.45 PM	5.51	s 5.15 PM		f 2.39	f 11.56			s 9.35	f 9.12	s 8.30 AM	34.74	D CONCORD	
P		f 11.48		f 9.33		f 7.22		5.54			f 2.43	f 11.59 AM			f 9.39	9.16		37.04	OHMER	
P		f 11.50		f 9.35		f 7.25		5.56			f 2.46	f 12.03 PM			f 9.42	f 9.18		38.21	CLYDE (B.P.&C.R.R. Crsg.)	
P		f 11.54		f 9.38		f 7.29		6.00			f 2.50	f 12.07			f 9.46	f 9.21		40.03	DN PORT CHICAGO	
P		f 11.59 PM		s 9.42		f 7.33		6.04			f 2.54	f 12.11			f 9.51	9.25		43.46	McAVOY	
P		f 12.01 AM		f 9.44		f 7.35		6.06			f 2.56	f 12.14			f 9.53	9.26		44.59	SHELL POINT	
PRY		s 12.03 AM		f 9.47		s 7.38 PM		6.09			s 2.59	s 12.17			s 9.55 AM	s 9.29		45.78	WEST PITTSBURG	
P	2.00 AM			s 9.50 PM				6.12 PM			s 3.02 PM	s 12.20 PM			s 9.32 AM			46.59	Suisun Bay Car Ferry MALLARD	
	Arrive Daily Ex. Monday		Arrive Daily	Arrive Daily	Arrive Daily	Ar. SUNDAY & HOLIDAYS	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily	Ar. SUNDAY & HOLIDAYS	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily EX. SUNDAY & HOLIDAYS	Ar. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily EX. SUNDAY & HOLIDAYS		(46.59)	
		1.33 29.5		1.40 28.0		1.38 28.0	1.22 25.4	1.29 31.4	1.18 26.7		1.42 27.4	1.40 28.0			1.40 27.5	1.29 31.4	1.03 24.6		Time Over District Average Speed Per Hour	

Schedule meeting points are ACTUAL meeting points unless changed by train order. See Rules S-72, 83, S-88 to S-90B, inclusive.

EXCEPTIONS TO—AND ADDITIONAL—FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

TRAINS	STATIONS	Receive or Discharge	Passengers to (or Beyond)
All Trains	College Ave., Oakland	Receive or Discharge	
All Trains	All Stations (Through Tickets only)	Receive	(Rail or Stage Points East of Sacramento.)
8	Walnut Creek and Concord	Receive	(Stage Points East of Rio Vista Jct.)
8	Clyde	Discharge	Sacramento—Revenue Passengers Only
2 Sundays and Holidays	San Francisco and intermediate stations to West Pittsburg	No Local Passengers	
2 (Sundays and Holidays only)	Walnut Creek, Concord, Clyde, Port Chicago and West Pittsburg	Receive	Pittsburg
2 Daily	Walnut Creek	Receive	Rio Vista Jct., Sacramento
2 (Daily—except Saturday, Sunday, } and Holidays	St. Marys	Receive	Sacramento—Revenue Passengers Only
12	Oakland to Concord	Receive or Discharge	
6-10-12-16-18-28-32-36-40	Terrace, Thornhill, Montclair, Eastport, Wilcox, Sequoia, Canyon, Valle Vista, West Lafayette, Ralies, Walden, Pleasant Hill, Kilgore	Receive	Concord for No. 2
6-10-16-18-36-40	Adeline, Nichols	Receive or Discharge	
12-28	Heimboldt Crossing	Receive or Discharge	
12-16-28-32—(6 Saturday only)	Glenside	Receive or Discharge	
10 Daily (Except Sundays and Holidays)	McAvoy (Stage Connection)	Receive or Discharge	To or from Pittsburg

Within train control territory time-table schedules are informative only. Trains will enter and operate through train control territory in accordance with applicable Interlocking and Cab Signal Rules, irrespective of time-table superiority or schedules, except that a train must not leave San Francisco in advance of its scheduled leaving time. Eastward trains will not register or receive a clearance card at San Francisco.

All trains must get a clearance card at Oakland.

- Nos. 12-28 and 32 only will register at Concord.
- Nos. 16-36 and 40 only will register at West Pittsburg.
- No. 292 has no time-table superiority.
- Nos. 2-18-6-8 must get a clearance card at West Pittsburg.
- No. 10 must get a clearance card at West Pittsburg Sundays and Holidays only.
- No. 40 arrives Mondays and days following Holidays.
- Abbreviations: T.C.—Train Control. N.S.—Non Signal.

HOLIDAYS INDICATED ARE:

New Year's, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas.

Sched

All Trains
All Trains
1-3-11-15-17
7
1-3-11-19
15-17-19-27
27
1 (School I
11 Daily (E

FIRST SUBDIVISION

Westward 3

Time Table No. 20 April 23, 1939		Distance from Mallard	FIRST CLASS													SECOND CLASS	Capacity of Sidings in Freight Cars
STATIONS			15 San Fran. Passenger	DH-16	17 San Fran. Passenger	1 San Fran. Passenger	DH-6	3 The Meteor	29 San Fran. Passenger	DH-8	27 San Fran. Passenger	7 The Comet	19 San Fran. Passenger	DH-10	11 San Fran. Passenger	293 Oakland Local Freight	
		Arrive Daily	Arrive SUNDAY & HOLIDAYS	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily EX. SAT., SUN & HOLIDAYS	Arrive Daily	Arrive Daily	Arrive Daily	Ar. SUNDAY & HOLIDAYS	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily Ex. Sunday		
T.C. Double Track	SAN FRANCISCO	46.59	s 7.44 AM	8.08 AM	s 8.37 AM	s 10.06 AM	1.09 PM	s 1.44 PM	s 3.52 PM	4.33 PM	s 5.18 PM	s 5.58 PM	s 7.55 PM	8.04 PM	s 10.25 PM		
	WEST JOT	41.12															
	EMERYVILLE JOT	39.23														Yard	
	SAN PABLO AVE.	38.78															
N.S.	2S OAKLAND (40th & Shafter)	37.69	s 7.22 7.20	7.46 AM	s 8.14 8.12	s 9.43 9.39	12.48 PM	s 1.21 1.17	s 3.28 3.26	4.10 PM	s 4.54 4.50	s 5.36 5.33	s 7.31 7.27	7.43 PM	s 10.01 9.58	8.00 AM Yard	
Block Automatic	ROCKRIDGE	35.90	7.14		8.06	9.32		1.11	3.19		4.44	5.27	7.20	9.51		38 (Spurs)	
	TEMESCAL	34.69	f 7.11		f 8.03	f 9.30		f 1.08	3.16		f 4.41	5.25	f 7.17	f 9.48		16 (Spur)	
	HAVENS	32.19	f 7.07		f 7.57	f 9.26		f 1.04	3.12		f 4.36 28	5.21 8	f 7.13	f 9.44		10 11 (Spur)	
	PINEHURST	28.89	f 7.00		f 7.50 12	f 9.19		f 12.57	3.06		f 4.29	5.15	f 7.05	f 9.37		17	
	MORAGA	26.78	f 6.56		f 7.46	f 9.14		f 12.53	3.02		f 4.24	5.11	f 7.00	f 9.33		7 30 (Spurs)	
	ST. MARYS	25.85	f 6.53		f 7.44	f 9.12		f 12.51	3.00 PM		f 4.22	5.09	f 6.58	f 9.31		17 (Spur)	
	BURTON	23.95	f 6.50		f 7.41	f 9.09 16		f 12.48			f 4.19	5.06	f 6.55 36	f 9.28		35	
	LAFAYETTE	21.50	f 6.46		f 7.36	f 9.05		f 12.44			f 4.14	5.02	f 6.51	f 9.24		11 8 (Spur)	
	SARANAP	19.88	f 6.42		f 7.32	f 9.03		f 12.41			f 4.10	5.00 28	f 6.49	f 9.21		42	
	D WALNUT CREEK	18.15	f 6.39		f 7.29	f 9.00 2		f 12.38			f 4.06	4.58	f 6.46	f 9.19 10		12 68 (Spurs)	
	SPARKLE	16.13	6.35		7.25	8.54		12.34			4.01	4.54	6.42	9.14		10 (Spur)	
	LAS JUNTAS (S.P.R.R. Crsg.)	16.03	f 6.34		f 7.24	f 8.53		f 12.33			f 4.00	4.53	f 6.41	f 9.13		15 (Spur)	
	BANCROFT	15.48	f 6.32		f 7.23	f 8.52		f 12.32			f 3.58	4.52	f 6.40	f 9.12		16 (Spurs)	
	MEINERT	14.57	f 6.30		f 7.21	f 8.50		f 12.30			f 3.56	4.51	f 6.39	f 9.10		20 (Spurs)	
	D CONCORD	11.85	6.27 AM		7.17 AM	f 8.46		f 12.27			3.52 PM	4.48	f 6.34	f 9.07		6 68 (Spurs)	
	OEMER	9.55				f 8.38		f 12.22				4.44	f 6.30	f 9.02		7 (Spur)	
	CLYDE (B.P. & O.R.R. Crsg.)	8.38				f 8.35		f 12.19				f 4.42	f 6.27	f 9.00		26 (Spurs)	
	DN PORT CHICAGO	6.56				f 8.30		f 12.16				f 4.39	f 6.23	f 8.56		50 47 (Spurs)	
	McAVOY	3.13				f 8.25		f 12.11 18				4.35	f 6.18	s 8.51		19 16 (Spurs)	
	SHELL POINT	2.00				f 8.23		f 12.08				4.33	f 6.16	f 8.48		2 (Spur)	
WEST PITTSBURG	0.81				s 8.20		s 12.05				s 4.31	s 6.14	f 8.46		Yard		
Suisun Bay Car Ferry MALLARD	0.00				f 8.17 AM		f 12.02 PM				4.28 PM	f 6.12 8	f 8.43 PM		11.30 PM 4 13 (Spur)		
(46.59)		Leave Daily	Lv. SUNDAY & HOLIDAYS	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily	Leave Daily	Leave Daily EX. SAT., SUN & HOLIDAYS	Leave Daily	Leave Daily	Leave Daily	Lv. SUNDAY & HOLIDAYS	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily Ex. Saturday		
Time Over District		1.17		1.20	1.49		1.42	0.52		1.26	1.30	1.43		1.42			
Average Speed Per Hour		27.1		26.1	25.6		27.4	23.9		24.2	31.1	27.1		27.4			

Schedule meeting points are ACTUAL meeting points unless changed by train order. See Rules S-72, 83, S-88 to S-90B, inclusive.

EXCEPTIONS TO—AND ADDITIONAL—FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

TRAINS	STATIONS	Receive or Discharge	Passengers from (or Beyond)
All Trains	College Ave., Oakland	Receive or Discharge	
All Trains	All Stations (Through Tickets only)	Discharge	
1-3-11-15-17-19-27	{Kilgore, Pleasant Hill, Walden, Ralier, West Lafayette, Valle Vista, Canyon, Sequoia, Wilcox, Eastport, Montclair, Thornhill, Terrace}	Receive or Discharge	{Rail or Stage Points East of Sacramento. Stage Points East of Rio Vista Jct.
7	Concord and Walnut Creek	Discharge	Sacramento-Revenue Passengers Only
1-3-11-19	Nichols, Adeline	Receive or Discharge	
15-17-19-27	Glenside	Receive or Discharge	
27	Heimboldt Crossing	Receive or Discharge	
1 (School Days only)	Bacon St., Concord	Discharge	
11 Daily (Except Sunday and Holidays)	McAvoy (Stage Connection)	Receive or Discharge	To or from Pittsburg

Within train control territory time-table schedules are informative only. Trains will enter and operate through train control territory in accordance with applicable Interlocking and Cab Signal Rules, irrespective of time-table superiority or schedules. Westward trains will not register at San Francisco.

Nos. 15-17-27 only will register at Concord.
 No. 293 has no time-table superiority.
 Nos. 1-3-7-19 must get a clearance card at West Pittsburg.
 No. 11 must get a clearance card at West Pittsburg Sundays and Holidays only.
 Westward trains when taking siding at Havens will use the spur.
 Abbreviations: T.C.—Train Control. N.S.—Non Signal.

HOLIDAYS INDICATED ARE:
 New Year's, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas.

Eastward

FIRST SUBDIVISION

Eastward FIRST SUBDIVISION--HOLLAND BRANCH Westward

Table with columns: Time Table No. 20, April 23, 1939, STATIONS, Distance from San Francisco, Distance from Oxford, Capacity of Sidings in Freight Cars. Includes stations like RIVERVIEW, ARGENTA, BERMUDA, TASCO, WILLOW POINT, CONISTON, NEWTOWN, CENTRAL, GREENDALE, SILVERDALE, SORROCA, VALDEZ, OXFORD.

Phone, Scales, Weigh, Bulletin, Register Station, Standard Clocks, Interlocking Plant

Table with columns: SECOND CLASS (292 Sacramento Local Freight), FIRST CLASS (10 Sacramento Passenger, 8 The Meteor, 6 Chico Passenger, 18 Sacramento Passenger, 2 The Comet), Distance from San Francisco. Includes departure and arrival times for various stations.

Table with columns: Time Table No. 20, April 23, 1939, STATIONS, Distance from San Francisco. Includes stations like Suisun Bay Car Ferry, CHIPPS, SPOONBILL, DUTTON, MONTEZUMA, MOLENA, GARFIELD, RIO VISTA JCT., CREED, OLCOTT, DOZIER, VALE, BUNKER, BELLEAIR, LIBFARM, YOLANO, SAXON, ARCADE, RIVERVIEW, JEFFERSON, WESTGATE, BRODERICK, SAC Front & M S, P, R, R, Orsg, Union Station, SACRAMENTO.

Schedule meeting points are ACTUAL meeting points unless changed by train order. See Rules S-72, 83, S-88 to S-90B, inclusive.

EXCEPTIONS TO--AND ADDITIONAL--FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Table with columns: TRAINS, STATIONS, Receive or Discharge, Passengers to (or Beyond). Details stop locations and passenger handling instructions.

Nos. 292 and 294 have no time table superiority. Nos. 16-36 and 40 must get a clearance card at West Pittsburg. No. 40 leaves West Pittsburg and arrives Pittsburg Mondays and days following Holidays.

HOLIDAYS INDICATED ARE: New Year's, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas

Eastward FIRST SUBDIVISION--PITTSBURG BRANCH

Table with columns: SECOND CLASS (294 Pittsburg Local Freight), FIRST CLASS (40, 120, 118, 36, 116, 114, 112, 110, 108, 106, 16, 104, 102), Distance from San Francisco. Includes departure and arrival times for various stations.

Table with columns: Time Table No. 20, April 23, 1939, STATIONS, Distance from San Francisco. Includes stations WEST PITTSBURG, PITTSBURG.

FIRST SUBDIVISION

Westward

Time Table No. 20 April 23, 1939	Distance from Sacramento	FIRST CLASS					SECOND CLASS	Capacity of Siding in Freight Cars
		1	3	7	19	11	293	
		San Fran. Passenger	The Meteor	The Comet	San Fran. Passenger	San Fran. Passenger	Oakland Local Freight	
STATIONS		Arrive Daily	Arrive Daily	Arrive Daily	Ar. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily Ex. Saturday	
Suisun Bay Car Ferry OHIPPS 1.06	47.86	s 8.05 AM	s 11.50 AM	s 4.16 PM	s 6.00 PM	s 8.32 PM	11.00 PM	48 (Spur)
SPOONBILL 1.35	46.80	f 8.02	f 11.48	4.14	f 5.58	f 8.30		5 (Spur)
DUTTON 1.54	45.45	f 7.59	f 11.44	4.12	f 5.56	f 8.27		10 (Spur)
MONTEZUMA 1.99	43.91	f 7.57	f 11.42	4.10	f 5.54	f 8.25		26 (Spur)
MOLENA 4.45	41.92	f 7.53	f 11.38	4.08	f 5.51	f 8.21		69
GARFIELD 1.36	37.47	7.48	f 11.33	4.02	5.45	f 8.16		9 (Spur)
RIO VISTA JCT. 3.00	36.11	s 7.46	f 11.31	f 4.00	s 5.43	f 8.14		24 (Spur)
CREED 2.91	33.11	7.43	f 11.28	3.57	5.39	f 8.10		71
OLCOTT 0.86	30.20	7.40	11.25	3.54	5.36	8.07		13 (Spur)
DOZIER 2.94	29.34	7.39	f 11.24	3.53	5.35	f 8.06		11 (Spur)
VALE 2.61	26.40	7.36	f 11.21	3.50	5.32	f 8.03		16
BUNKER 0.94	23.79	7.33	f 11.18	3.46	5.29	f 8.00		7 (Spur)
BELLEAIR 3.08	22.85	7.32	11.17	3.45	5.28	7.59		47
LIBFARM 1.11	19.77	f 7.28	f 11.13	3.41	5.24	f 7.54		22 (Spur)
YOLANO 4.48	18.66	f 7.27	f 11.12	3.40	5.23	f 7.53		46
SAXON 4.32	14.18	7.22	f 11.07	3.36	5.18	f 7.48		13 (Spurs)
ARCADE 2.92	9.86	7.15	f 11.00	3.30	5.11	f 7.41		8 (Spur)
RIVERVIEW 1.70	6.94	7.11	f 10.56	3.26	5.07	f 7.37		15 (Spur)
JEFFERSON 2.91	5.24	7.09	f 10.54	3.24	5.05	f 7.33		15 (Spur)
WESTGATE 0.81	2.33	f 7.06	f 10.51	3.21	5.02	f 7.30		Yard
BRODERICK 0.30	1.52	f 7.03	f 10.48	f 3.18	f 4.59	f 7.28		Yard
SAC. Front & M (S.P.R.R. Crsg.) 1.22	1.22	7.01	10.46	3.16	4.57	7.26	5.15 PM	Yard
UNION STATION D.S. SACRAMENTO	0.00	6.55 AM	10.40 AM	3.10 PM	4.50 PM	7.20 PM		Yard
(47.86)		Leave Daily	Leave Daily	Leave Daily	Lv. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily Ex. Saturday	
Time Over District		1.10	1.10	1.06	1.10	1.12		
Average Speed Per Hour		41.0	41.0	43.5	41.0	39.9		

Eastward		FIRST SUBDIVISION--VACAVILLE BRANCH		Westward	
Fones, Scales, Wyes, Bulletins, Register Stations, Standard Clocks	Distance from San Francisco	Time Table No. 20 April 23, 1939		Distance from Vacaville	Capacity of Siding in Freight Cars
		STATIONS			
Y.P.	69.38	VACAVILLE JCT. 4.58	4.58		
	73.96	VACAVILLE (4.58)	0.00	24 (Spurs)	
		Time Over District			
		Average Speed Per Hour			

Eastward		FIRST SUBDIVISION--WILLOTTA BRANCH		Westward	
Fones, Scales, Wyes, Bulletins, Register Stations, Standard Clocks	Distance from San Francisco	Time Table No. 20 April 23, 1939		Distance from Willotta	Capacity of Siding in Freight Cars
		STATIONS			
Y.P.	61.78	CREED 5.34	17.16	71	
P.	67.12	CORDERO 2.26	11.82	20	
Y.P.	69.38	VACAVILLE JCT. 2.60	9.56		
	71.98	ARMIJO 3.11	6.96	18 (Spur)	
	75.09	FAIRFIELD 2.14	4.65	9	
	76.43	CLIMA 0.18	2.51	18 (Spur)	
	76.61	SUVAL 0.36	2.33	12 (Spur)	
	76.97	CHADBOURNE 0.70	1.97	21 (Spurs)	
	77.67	RUSSELL 0.96	1.27	15 (Spurs)	
	78.63	DANIELSON 0.31	0.31	4 (Spur)	
	78.94	WILLOTTA	0.00	21 (Spur)	
		(17.16)			
		Time Over District			
		Average Speed Per Hour			

Schedule meeting points are ACTUAL meeting points unless changed by train order. See Rules S-72, 83, S-88 to S-90B, inclusive.

EXCEPTIONS TO—AND ADDITIONAL—FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

TRAINS	STATIONS	Receive or Discharge	Passengers from (or Beyond)
All Trains All Trains 3-11 7	Third & M St., 8th & K St., Sacramento All Stations (Through Tickets only) Bovan, Delhi, Norris, Denver, Honker Libfarm	Receive Discharge Receive or Discharge Receive or Discharge	Stage Points East of Rio Vista Jct. Rail or Stage Points East of Sacramento Revenue passengers only

Nos. 293 and 295 have no time table superiority.

HOLIDAYS INDICATED ARE:
New Year's, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas

FIRST SUBDIVISION--PITTSBURG BRANCH

Westward

Time Table No. 20 April 23, 1939	Distance from Pittsburg	FIRST CLASS								SECOND CLASS	Capacity of Siding in Freight Cars
		101 ¹	103 ²	105 ³ ₁₈	109 ⁶	111 ⁷	113 ⁸ ₁₉	115 ¹¹	117 ¹⁰	295	
		San Fran. Passenger	Sacramento Passenger	San Fran. Sacramento Passenger	Sacramento Passenger	San Fran. Passenger	San Fran. Sacramento Passenger	San Fran. Passenger	Sacramento Passenger	Oakland Local Freight	
STATIONS		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Ar. SUNDAY & HOLIDAYS	Ar. SUNDAY & HOLIDAYS	Arrive Daily Ex. Sunday	
WEST PITTSBURG 2.17	2.17	s 8.17 AM	s 9.25 AM	s 12.02 PM	s 2.55 PM	s 4.28 PM	s 6.05 PM	s 8.43 PM	s 9.43 PM	12.30 AM	
PITTSBURG	0.00	8.12 AM	9.20 AM	11.57 AM	2.50 PM	4.23 PM	6.00 PM	8.38 PM	9.38 PM	12.15 AM	
(2.17)		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Lv. SUNDAY & HOLIDAYS	Lv. SUNDAY & HOLIDAYS	Leave Daily Ex. Sunday	

Font, Scales, Wyes, Pulletin, Register Station, Standard Clocks, Interlocking Plant	FIRST CLASS										Distance from San Francisco	FIRST CLASS										Capacity of Sidings in Freight Cars																
	SECOND CLASS		56		54		52		50			48		46		44		42		41			43		45		47		49		51		53		55		SECOND CLASS	
	196	Woodland Local Freight	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger		Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Woodland Passenger	Sacramento Passenger		Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	Sacramento Passenger	197	Sacramento Local Freight
	Leave Daily Ex. Sunday	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Lv. Daily EX. SUN. & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Lv. Daily EX. SUN. & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Lv. Daily EX. SUN. & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Lv. Daily EX. SUN. & HOLIDAYS	Leave Daily	Arrive Daily EX. SUN. & HOLIDAYS	Arrive Daily	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Ar. Daily EX. SUN. & HOLIDAYS	Arrive Daily	Arrive See Note	Arrive Daily EX. SUNDAY	Ar. Daily Ex. Sunday							
P. R. B. Y. K.		11.10 PM	6.15 PM	5.20 PM	4.40 PM	2.15 PM	12.35 PM	10.30 AM	7.20 AM	94.89	DS SACRAMENTO	18.48	7.15 AM	8.55 AM	12.05 PM	1.55 PM	4.35 PM	6.05 PM	7.35 PM	12.25 AM																		
I.	9.00 AM	11.17	6.23	5.28	4.48	2.22	12.42	10.38	7.28	93.67	Sacramento, Front & M Sts., S.P.R.R. Cross.	17.26	7.06	8.46	11.58 AM	1.48	4.26	5.57	7.28	12.18															4.00 PM			
P.		11.18	6.25	5.30	4.50	2.24	12.43	10.40	7.30	93.37	BRODERICK	16.96	7.03	8.44	11.56	1.47	4.24	5.55	7.26	12.16															Yard			
I.		11.20	6.27	5.32	4.52	2.26	12.45	10.42	7.32	94.89	MIKON. S. P. R. R. Cross.	15.44	7.01	8.41	11.54	1.45	4.21	5.53	7.24	12.14															8 (Spur)			
P.		11.21	6.28	5.34	4.53	2.27	12.46	10.43	7.33	95.52	ROSE ORCHARD	14.81	6.59	8.39	11.53	1.43	4.19	5.52	7.23	12.13															7 (Spur)			
P.		11.22	6.29	5.35	4.54	2.28	12.47	10.44	7.34	95.93	LOVDAL	14.40	6.58	8.38	11.52	1.42	4.18	5.51	7.22	12.12														17				
P.		11.24	6.31	5.38	4.56	2.30	12.49	10.46	7.36	97.91	FOURNESS	12.42	6.56	8.36	11.50	1.40	4.16	5.49	7.20	12.10														17 (Spur)				
P.		11.25	6.32	5.39	4.57	2.31	12.50	10.47	7.37	98.54	MARTY	11.79	6.55	8.35	11.49	1.39	4.15	5.47	7.19	12.09														9 (Spur)				
P.		11.26	6.34	5.41	4.59	2.33	12.51	10.49	7.39	99.62	BEATRICE	10.71	6.53	8.33	11.47	1.37	4.13	5.45	7.17	12.07														33 (Spurs)				
P.		11.27	6.35	5.42	4.51	2.34	12.52	10.50	7.40	100.37	VIN	9.96	6.52	8.32	11.46	1.36	4.12	5.42	7.16	12.06														8 (Spur)				
P.		11.29	6.37	5.44	4.52	2.36	12.54	10.52	7.42	101.42	KIESEL	8.91	6.50	8.30	11.45	1.35	4.10	5.40	7.15	12.05														22 (Spur)				
P.		11.31	6.40	5.46	4.55	2.38	12.56	10.55	7.45	102.89	FREMONT	7.44	6.48	8.28	11.43	1.33	4.08	5.38	7.13	12.03 AM														17				
P.		11.36	6.45	5.51	4.59	2.43	1.01	11.00	7.50	105.02	CONAWAY	5.31	6.43	8.23	11.38	1.28	4.03	5.33	7.08	11.58 PM														28 (Spur)				
P.		11.40	6.49	5.55	4.59	2.46	1.05	11.04	7.54	108.01	HEBRON	2.32	6.39	8.19	11.34	1.24	3.59	5.29	7.04	11.54														6 (Spur)				
I.		f	f	f	f	f	f	f	f	109.96	Woodland, S. P. R. R. Cross.	0.37	f	f	f	f	f	f	f	f																		
P. R. Y.	11.50 AM	11.45 PM	6.55 PM	6.00 PM	5.20 PM	2.50 PM	1.10 PM	11.10 AM	8.00 AM	110.33	WOODLAND	0.00	6.35 AM	8.15 AM	11.30 AM	1.20 PM	3.55 PM	5.25 PM	7.00 PM	11.50 PM															1.30 PM			
	Arrive Daily Ex. Sunday	Arrive Daily	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily	Ar. Daily EX. SUN. & HOLIDAYS	Arrive Daily	Arrive Daily EX. SUNDAY & HOLIDAYS	Arrive Daily	Arrive Daily EX. SUN. & HOLIDAYS			Leave Daily EX. SUN. & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily	Leave Daily EX. SUN. & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily	Leave Daily EX. SUN. & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Leave Daily EX. SUNDAY & HOLIDAYS	Leave Daily	Lv. Daily Ex. Sunday						
		0.35	0.40	0.40	0.40	0.35	0.35	0.40	0.40			0.40	0.40	0.35	0.35	0.40	0.40	0.35	0.35	0.35	0.35	0.40	0.40	0.35	0.35	0.40	0.35	0.35	0.40	0.40	0.35	0.35						
		31.7	27.7	27.7	27.7	31.7	31.7	27.7	27.7			27.7	27.7	31.7	31.7	27.7	27.7	31.7	31.7	31.7	31.7	27.7	27.7	31.7	31.7	27.7	27.7	31.7	31.7	27.7	27.7	31.7						

Schedule meeting points are ACTUAL meeting points unless changed by train order. See Rules S-72, 83, S-88 to S-90B, inclusive.

Nos. 196 and 197 have no time table superiority.

No. 51 will take siding at Vin for No. 52.

EXCEPTIONS TO—AND ADDITIONAL—FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

HOLIDAYS INDICATED ARE:

New Year's, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas

No. 55 arrives daily except Monday and days following Holidays.

Trains	Stations	Receive or Discharge	Passengers to (or Beyond)
All Trains	{ Bryte, Silva Crossing, Beardslee, Leeman, Birch, Harbinson, Deaner, 3rd & M, 8th & K Sts., Sacramento }	Receive or Discharge	

RULES AND REGULATIONS GOVERNING OPERATION OVER JOINTLY OPERATED TRACKS OF THE KEY SYSTEM AND BRIDGE RAILWAY

Except as the Rules and Regulations of the Transportation Department effective January 1, 1929 and the Rules and Instructions for Continuous Cab Signal and Speed Control Operation effective August 21, 1938 may be modified, amended or superseded, those rules, regulations and instructions remain in full force and effect, and govern the operation over jointly operated tracks of the Key System and Bridge Railway.

The operation of that portion of the railroad comprising the Westward main track from West Junction to San Francisco, the Eastward main track from San Francisco to East Junction, crossovers between main tracks within those limits, and all tracks within San Francisco Terminal is assigned to the supervision of the Superintendent, Bridge Railway, at San Francisco.

Main Tracks: Main tracks on Key System are numbering from the North, No. 1 Westward track and No. 2 Eastward track.

(a) Main tracks between catenary bridge No. 52 and San Francisco are lettered and used as follows:

Track "A-1"—Westward trains catenary bridge No. 52 to switch No. 19 East switch of Westbound set-out tracks. Used jointly with Key System.

Track "C"—Westward trains switch No. 19 to West Junction thence to West switch of Interurban set-out tracks. Used jointly with Interurban and Key System.

Track "A"—Westward trains West switch of Interurban Westbound set-out tracks to San Francisco. Used jointly with Interurban and Key System.

Track "B"—Eastward trains San Francisco to East Junction. Used jointly with Interurban and Key System.

Track "M"—Eastward trains East Junction to catenary bridge No. 52. Used jointly with Key System.

(b) Tracks in San Francisco Terminal, numbering from the North (Mission Street) are designated 1, 2, 3, 4, 5 and 6. Nos. 1, 2 and 3—trains of Interurban Electric Railway Co. Nos. 4, 5 and 6—trains of Key System and Sacramento Northern Railway.

Set-out Tracks:

Set-out Track—a track auxiliary to the main track for the purpose of pick-up or set-out over which schedule trains may be operated as directed.

(a) Westbound set-out tracks lettered and from the North are designated "A-1" and "G".

(b) Eastbound set-out tracks lettered and from the South are designated "L" and "K".

Cross-overs on the San Francisco-Oakland Bay Bridge:

There are five pair of emergency cross-overs on the Bridge structure. Each pair consists of one left and one right hand turn-out. They are identified and located as follows:

(a) Rincon Located at the West end of the Bridge where it passes over Rincon Hill.

(b) Anchorage Located immediately East and West of the center anchorage.

(c) Island Located on Yerba Buena Island.

(d) Cantilever Located on the East bay crossing approximately 1500 feet East of the Cantilever span.

(e) Mole Located on the East end of bridge.

Switches of these cross-overs are manually operated and must not be thrown or the cross-over used except under direction of the proper official.

If it becomes necessary to use these cross-overs, the switch taking out of the track, upon which the train to be crossed over is standing, must be thrown first and at least one minute must elapse before switch in the opposite track is thrown and cross-over movement commenced.

Special Signals:

Two indication dwarf signals are located between main tracks at each end of each pair of cross-overs comprising Rincon, Island and Cantilever cross-overs, and at each end of each cross-over comprising the Anchorage and Mole cross-overs. The signals indicate the position of cross-over switches.

A green indication will be displayed when all switches in both main tracks and located between each pair of signals are lined for movement on main track.

A red indication will be displayed when one or more switches in either or both main tracks is lined for cross-over movement, or some other condition exists which might affect safe movement on main track.

A train operating either with or against the current of traffic and finding a signal displaying a red indication, unless otherwise provided, must stop before passing the signal and careful inspection made of the cross-over switches. It must be known that they are lined for proper route before proceeding.

When light fails in signal, train may proceed without stopping, provided Cab Signal indication is more favorable than "Red 11" but report must be made from first convenient point of communication. If Cab Signal indication is "Red 11" the special signal must be regarded as displaying its most restrictive indication.

Train Control Territory:

Limits of Train Control Territory on Westward main tracks extend from fixed Signal No. 199 near San Pablo Avenue and from fixed Signal No. 40 at Tower 2, thence via Tracks "A-1", "C" and "A" to San Francisco.

Limits of Train Control Territory on Eastward main track extend from San Francisco via Tracks "B" and "M" to Signal No. 200 near San Pablo Avenue, and to Signal No. 2 at Tower 2.

Limits of Train Control Territory include all tracks in San Francisco Terminal, Westbound yard track "G" to first switch, and Westbound set-out tracks "A-1" and "G", and Eastbound set-out tracks "K" and "L".

Interlocking:

San Francisco Tower: Limits extend from Signal No. 80, located to the right of Westward track at initial switch at San Francisco, through all tracks in Terminal to Signal No. 72 governing movements on reverse traffic route on Eastward track midway between Folsom and Harrison Street viaducts. Equipped with Klaxon.

Bridge Yard Tower: Limits extend from catenary bridge No. 52 on Westward track to Signal No. 124 governing movement on reverse traffic route on Westward track located to the left of that track at West switch of Westbound Interurban set-out track and from Signal No. 98 located to the right of Eastward track at switch of Eastbound Interurban set-out tracks to catenary bridge No. 52. Equipped with Klaxon.

Tower No. 2: Emeryville Junction. Limits extend from Signal No. 3, 60 feet west of subway, to Louise Street and to Hollis Street. Equipped with siren.

Tower No. 3: Adeline and Spring Street: Limits extend from San Pablo Avenue to 42nd Street and to 40th Street. Equipped with siren.

Sacramento Northern Tower: 40th Street and Shafter Avenue Junction with Key System. Limits extend from Webster Street to 41st Street and Piedmont Avenue.

Klaxon and Siren Signals:

Sound	Indication
— — — — —	All trains stop immediately.
— — — — —	All trains resume normal movement after receiving proper signal or permission from the signalman.
— — — — —	Trains back up.
— — — — —	Call Maintainer.
— — — — —	Horn or whistle test.

When "STOP" siren is sounded, all trains within Interlocking limits must stop immediately and await proper signal.

Eastward trains shall use the following whistle signals in the event the route is not properly lined:

0 — 0	East Junction
0 0 —	Towers 2 and 3

Yerba Buena Yard:

Tracks numbered from North at Subway are 10A, 10B, 10C, 10D, 3, 6, 7, 8, 9, Lower 11, 12, 13 and 14. At Yard Office 4, 10, 11, 13, 5, (Lead) 14, 15, 16, 17, 18, 19, 19A and 20.

Between Tower 2 and Hollis Street Santa Fe Transfer, Main Tracks 1 and 2, Shop Track 1A, 2A, 3A, 5 (Lead) team track, house track, 16L and 16. Shop track extends from Hollis Street to Line E Main Track No. 2 North of Tower 3 and may be used in either direction with caution.

Derail must not be lined for movement from 10A, 10B, 10C, 10D or Track 3 until Interlocking signal governing the route indicates other than stop. Immediately after such movement, derail shall be lined to derail. Derail No. 28 on Track 10 is operated from Tower 2. The switch to 16L must be unlocked by Towerman and then operated manually. Normal position for 16L.

Rule 93:

All tracks between 42nd and Shafter Avenue, Oakland, and San Francisco Terminal are within Yard Limits.

First paragraph of Rule 93 reading "Within Yard Limits the main track may be used, protecting against first-class trains", will not apply to main tracks between Oakland and San Francisco.

Speed Restrictions:

- (a) Within train control limits governed by T. C. Rule 108.
 - (b) Through subway.....20 m.p.h.
 - (c) Through Interlocking—outside Train Control.20 m.p.h.
 - (d) Through cross-overs and turn-outs.....10 m.p.h.
 - (e) Splitting spring switches.....10 m.p.h.
 - (f) Street railway crossings: approaching Sacramento Northern trains must reduce speed to 15 m.p.h. 60 feet from crossing and speed must not exceed 8 m.p.h. when head end of train moves upon or over the crossing..... 8 m.p.h.
 - (g) Short radius curves..... 5 m.p.h.
 - (h) Rounding all curves (unless restricted to less)..25 m.p.h.
 - (i) City of Oakland (ordinance).....22 m.p.h.
- 40th and Market Streets..... 8 m.p.h.

Interconnected Traffic Signals are located at:

40th and Grove Street.
40th and Telegraph.

Traffic signals are controlled by trains in either direction. Track circuits extend approximately 400 feet each way and trains entering the approach circuit set traffic signals to Green (proceed) for the approaching train and Red (stop) for transverse traffic at the intersection.

Upon display of green signals, trains will proceed—being governed by speed restrictions.

If traffic signal does not display green signal indication with train in approach circuit, train must make a safety stop before entering the intersection.

Rule 103 (a) (Amended):

In general, highway crossing signals are so designed that they will not operate for trains or cars making a reverse movement after having passed over the crossing or when running against the current of traffic on double track. Trains or cars making such movements must protect the crossing, unless it is known that signals are operating.

Telephones:

Telephones are located in Bridge Railway Superintendent's Office at San Francisco, at each set of cross-overs on Bridge, at both ends of Eastbound and Westbound set-out tracks, Inspector's Shed in Bridge Yard, YB Yard Office, in Towers 2 and 3, and Sacramento Northern Tower.

Impaired Clearances:

San Francisco-Oakland Bay Bridge.....Overhead and side (Trolley 19 ft. 7 in.)

All concerned are warned that insufficient clearance exists on the San Francisco-Oakland Bay Bridge to clear a man between the side of the train on Westward track and the collision wall separating the railroad right-of-way from vehicular roadway. Under no condition should a person attempt to stand between the collision wall and the Westward track to permit passage of train on that track. Motormen operating Westward trains and observing a person standing between collision wall and the westward track must bring train to stop before reaching the point where the person is standing. Persons whose duties require their working on or about the railroad or attendant facilities on the Bridge must take position on planked walk at the south side of the Bridge, standing close against girders during the passage of train on either track.

Key System Subway.....Overhead and side (Maximum clearance—15 ft. 2 in.)

Yerba Buena Yard:

Span pole on north side of track leading into Store No. 3.	7' 11 1/2"
Span poles on south side of Track No. 3.	6' 5 1/4"
Office building on north side of Track No. 4.	6' 11 1/2"
Fence east of office, Track No. 4.	7' 10 1/2"
Poles for Track No. 5.	7' 0"
Poles for Track No. 10-B.	6' 3 1/4"
Poles for Track No. 10-C.	6' 6 1/4"
Signal box, Track No. 10-A.	6' 7 3/4"
Poles between Tracks Nos. 16 and 17.	7' 0"
Poles north of Track No. 10.	7' 6" to 8' 6"
Pole, Track No. 16L—2nd east of P. S.	7' 3 1/4"
Pole, 1st track north of No. 20.	7' 9"

Employees must guard against coming in contact with overhead wires or their connections, or when riding on side or top of cars, against striking automatic or interlocking signals.

Third Rail Territory:

Jointly operated portions of the railroad in Bridge Yard, on the San Francisco-Oakland Bay Bridge and Tracks 1 to 6 in San Francisco Terminal are equipped with power rail. Employees must exercise care to avoid contacting it. Should a train become disabled within power rail limits and, in order to proceed, require motorman or trainmen to go beneath car, great care must be exercised to avoid contacting the power rail.

When, in the judgment of motorman or trainmen the situation respecting proximity of power rail precludes the possibility of his going beneath car with safety to himself, he must not go beneath it or attempt to do so. In such circumstances, conductor must immediately report to proper official from nearest point of communication.

When anyone suffers from electric shock, the Prone method of resuscitation should be started at once, as any delay in starting may prove fatal. Get the mouth open, remove false teeth or anything in the mouth, pull the tongue out. Support the patient's head on one of his arms, turn face down and start artificial respiration using about 12 to 15 movements per minute. Send for a doctor at once, but keep up treatment for hours, if necessary.

Detraining on Bay Bridge:

Doors on all equipment must be closed at all times while train is moving on San Francisco-Oakland Bay Bridge. If, for any reason it becomes necessary to open doors while train is standing on the Bridge, they must be opened only by the conductor or under his direction and the following will govern:

- (a) Doors must not be opened to permit detraining between tracks, except in case of accident or other cause which would make it impossible to do otherwise. Should it become necessary to permit detraining between tracks, flag protection must first be provided and train movements on the opposite track stopped short of the point of detraining.
- (b) Under all other conditions, except as specified in Paragraph (a), doors on trains standing on Eastward track must be opened on the South side only and, when standing on Westward track, on the North side only. In the case of a train standing on either track, employees may detrain over the end of the car at head end or rear end of the train, but in doing so must alight on the track upon which train is standing.
- (c) If door is opened to detrain an employee, it must be closed promptly after he has alighted to prevent detraining of passengers.

Telephone Report of Delays or Accidents:

In case of serious delays or accidents, conductors should when possible, notify the office of the proper official by telephone.

In cases involving movement on joint track between West Junction and San Francisco and between San Francisco and East Junction, communicate with Superintendent, Bridge Railway, at San Francisco.

MISCELLANEOUS RULES

Rule 11 (Amended):

Within Train Control limits, a train finding an unattended fusee burning on or near its track may proceed without stopping, but must run with caution not exceeding 11 m.p.h. for a distance of 1,000 feet.

Rule 14 (Amended)—Motor Whistle Signals:

— 0	When running against the current of traffic where view may be obscured.
— 0 — 0 0 0	Flagman protect rear of train on both tracks.
— 0 0 0 0 —	Flagman protect front of train on opposite track.
— 0 — — — — —	Flagman discontinue protection of rear on Eastward track, but continue protection on Westward track.
— 0 — — — — —	Flagman discontinue protection of rear on Westward track, but continue protection on Eastward track.
— — — — —	Approaching stations, junctions, railroad crossings at grade and subways.

Rule 17 (c) (Amended):

Electric headlights will be dimmed when approaching stations where other trains are receiving or discharging passengers, except when nearing street or highway crossings.

Rule 30 (Amended):

The gong must be sounded before equipment is moved. Motormen must at all times place themselves in a position which will assure them the best vision of the track ahead and of the approach of pedestrians and vehicles.

Rule 99 (Modified):

Rule 99 will not apply to trains moving with the current of traffic within Train Control Territory, except:

- (a) Before a train crosses over to or obstructs another track, unless otherwise provided, it must first be protected, as prescribed by Rule 99, in both directions on that track (Rule D-152).
- (b) In event of derailment within Train Control Territory, the train must be protected in accordance with Rule 99.
- (c) That, motors or engines not equipped with Cab Signal and Speed Control Apparatus must be protected in accordance with Rule 99 at all times, while operating within limits of Train Control Territory and will enter and operate through Train Control Territory with caution, not exceeding 11 m.p.h.

Rule 108 (Cab Signal Rules):

Movement against current of traffic within that portion of train control territory assigned to supervision of Superintendent—Bridge Railway must not be made except on receipt of written instructions, on prescribed form, issued by authority and over the signature of Superintendent—Bridge Railway; this form to be made in triplicate, copy to be given to conductor and motorman of each train so authorized to move against current of traffic, third copy to be returned to Superintendent—Bridge Railway by the employe issuing same.

Rule 108 (A) (Cab Signal Rules):

In that portion of Train Control Territory between the easterly interlocking limits of San Francisco Tower and westerly limits of Bridge Yard Tower Rule 108 (A) is modified as follows:

Red 11—After required speed reduction and after acknowledgment, train may proceed at or under 11 m.p.h. prepared to stop at least 400 feet back of the rear end of a standing preceding train but must stop before passing the entrance switch to a crossover even though the distance be greater than 400 feet, so that a movement against the current of traffic could be made if necessary. A train so stopped by a preceding train may proceed upon receipt of a Yellow 17 Cab Signal Indication or upon receipt of proper hand signal.

Consolidation of Trains:

When required by schedule or by proper authority, trains will be consolidated.

On all consolidated trains, conductor on leading section is in charge, and must know that train is at all times protected in accordance with Rule 99.

Conductors of all trains will advise the dispatcher from the first convenient point of communication, time of arrival at and departure from San Francisco Terminal.

Trainmen will note if all motor cars in service in their train are operating, and notify motorman in case of failure.

Except in emergency or foggy weather, torpedoes must not be placed on improved public streets.

Trains leaving San Francisco Terminal:

A clock equipped with sweepband registering seconds, a push button type electric switch, and a telephone, all mounted together are located at the west end of each platform and at approximately midpoint of each platform in the train shed at San Francisco. These facilities are for the purpose of starting trains from the Terminal and will be referred to as "Starting Stations". The push button switches, when depressed, illuminate an indicator light in the Interlocking Tower and those at the west end only simultaneously illuminate a yellow starting light located above the platform at the west end of the train shed. On platform serving Tracks 4 and 5, there are two push button switches at each location—the one nearest Track 4 applying to trains on that track, the one nearest Track 5 applying to trains on that track. On platform serving Track 6 there is one push button switch at each location. The telephone is for communicating with the Interlocking Tower.

At least one minute before schedule departure time of a train, conductor will station himself at starting station nearest the head end of his train and, when the sweepband on the clock at that location indicates fifteen seconds in advance of departure time, he will depress the proper push button switch and at the same time raise his hand vertically over his head. Brakemen will station themselves on station platform immediately adjacent to door of car to which assigned being alert to observe yellow starting light or hand signal and, when that light becomes illuminated or hand signal given, brakeman nearest him will repeat the signal which will be relayed by each succeeding brakeman toward the rear of train. Immediately the signal has been relayed, each succeeding brakeman will board the train and close train doors, excepting the doors of cars to which conductor is assigned. After doors have once been closed, they must not again be opened except on direction of conductor. After having depressed push button switch, conductor will board train at his car and close the doors. Upon receipt of proceed signal from conductor, the train shall start to move out of train shed, being governed by signal indication of the first interlocking signal. Lamp signal given by holding lamp at arms' length above the head, may be used instead of corresponding hand signal, if necessary.

Exceptions: Only between the hours of 7:30 A.M. and 9:00 A.M. daily except Sun. and Holi. and between the hours of 4:30 P.M. and 6:30 P.M. daily except Sat., Sun. and Holi., conductors of regular trains shall operate the starting buttons.

Success of the operation on close headways out of San Francisco during peak periods depends on utmost alertness of all concerned.

Every effort must be made to depart from San Francisco exactly on time.

When trains or cars are moved into or out of set-out tracks, an employee must be stationed on the front end of leading car in direction of movement and remain there until the movement is completed.

Motormen and trainmen must observe Rule 122 of "Rules and Instructions for Continuous Cab Signal and Speed Control Operation" before leaving Bridge Yard on deadhead equipment originating at that point.

Running air brake test must be made on Westward trains and deadhead equipment immediately after leaving 40th and Shafter Avenue, Oakland. Eastward trains and deadhead equipment from San Francisco must make running test immediately after passing Rincon cross-overs on the San Francisco-Oakland Bay Bridge.

Deadhead equipment originating at Bridge Yard must make running test while moving on set-out tracks and before entering the main track.

In Non-Signal Territory trains in the same direction shall keep not less than 1200 feet apart, except when closing up at stations.

To reduce automobile accidents, special care should be used when approaching grade crossings known to be obscured or hazardous. Where vehicles are moving in public streets in the same direction as the train and are not clear of the track on which train is operating, speed should be so controlled as to permit train being stopped in case vehicle makes a sudden or unexpected stop or turn. When about to pass a vehicle moving in the same direction as train, the motorman should satisfy himself that the driver is aware of approach of the train.

When opposing trains approach on double track located in a public street, speed of both trains must be reduced and gongs must be sounded until the head end of each passes the rear end of the other.

Under normal conditions, yard cuts and extra trains may operate on double track with the current of traffic without orders.

Work extras may operate on single track, clearing regular trains and protecting against other extras.

Trains entering terminals must move with caution, as tracks may be occupied. Responsibility for accident rests with train entering terminal.

All switching movements at any point must be made with caution.

In case of power interruption, signal operator may display "S" sign in which case trains must not exceed series position of controller. When signs are removed, normal speed may be resumed.

When necessary to lower pantographs to coast under line breaks, etc., the following procedure should be followed:

When stopped, all pantographs should be promptly tested to ascertain if in proper working order. On trains of three cars or less leave all pantographs down except on car with control. If lowering valve is located at other than in cab from which motorman is operating, a trainman must be stationed at valve and when signalled by one long blast of the alarm whistle, lowering valve must be held down until train has again been brought to a stop and motorman sounds two long blasts of the alarm whistle.

In raising pantographs, care must be taken to see that they are not directly under trolley cross-arms and they must not be raised until train has stopped.

Care should be used while operating electric equipment during hot weather to observe the condition of trolley wires, especially in the vicinity of curves and cross-overs. When there is any unusual amount of slack in the trolley wire, speed of train should be reduced to a point where pantographs or overhead structure will not be damaged. Any unsafe condition should be promptly reported.

In power rail territory, the catenary carries 1200 volts.

When the power leaves the line, the controller should be thrown to "off" position and the train stopped clear of all crossings, if possible. Light circuit switch should be turned on and the train should not be started until lights burn brightly. Westward trains will start first and Eastward trains, after waiting thirty seconds, may proceed if lights continue to burn brightly.

Towermen and switchtenders will notify each other of regular trains passing their stations late or out of regular place and of extra trains or freight movements, giving their destination.

Towermen and switchtenders will let all extras and freight movements out onto main tracks to proceed to any point, when such movements can be made without delay to regular trains. Responsibility for delay to regular trains, after clearing interlocker or district under switchtenders' control, rests with the conductor in charge of such movement.

Crossing Watchmen:

When crossing watchman is not on duty or is absent from his post (as indicated by a yellow flag displayed on the front of his cabin), if required by rule or if such crossing is an arterial stop, make safety stop and proceed with caution.

Where required by law or police regulations, all trains must stop.

Crossing watchmen will provide themselves with a red flag, a yellow flag, a red lantern, a yellow lantern and a disc "Stop" sign.

Flags and disc shall be used by day and lights of prescribed color by night. When weather conditions obscure day signals, night signals must be used.

The disc signal by day and the red light by night shall be used to stop vehicular and pedestrian traffic when a train is approaching. If necessary to stop a train, red signals must be used. The yellow flag by day and the yellow light by night shall be used, when no trains are approaching, to give proceed signals to the street cars and motor coaches of other companies, after such cars or coaches have come to a complete stop.

Under no circumstances may proceed signals be given to vehicles or pedestrians.

Upon approach of trains, crossing watchmen must station themselves near the crossing in a position to obtain an unobstructed view of the intersection with disc stop sign or red lantern displayed against vehicular and pedestrian traffic. Care should be exercised to so display the red lantern that it may not be accepted as a stop signal by the train motorman.

When crossing watchmen are compelled to leave their post for a short time, a yellow flag by day and a yellow light by night shall be displayed on the front corner of their cabin to indicate that the crossing is unprotected.

MISCELLANEOUS

Westward freight and work trains must make air brake inspection and test at Pinehurst before train is moved over any portion of descending grade between Havens and Rockridge, comply with instructions on Test Card Form 182, and be governed by tonnage rating and car limit as shown in schedule of locomotive ratings. Stop must be made at Havens for the purpose of turning up the retainers on all cars and placing the test card in the box.

Locomotives 603 and 604 are equipped with transfer valves, power and control connections so that these two locomotives

when coupled can be handled as a single unit by one Motorman.

Locomotives 660 and 661 are equipped with transfer valves but no power nor control connections so that these two locomotives when coupled will require two motormen for power operation but the motorman on the head locomotive will control the air brakes. This same method of operation will apply to locomotives 603 and 660 coupled, 604 and 660 coupled, 603 and 661 coupled and 604 and 661 coupled.

When two locomotives coupled are used in handling trains, not less than 3 air compressors must be in service.

When single locomotives are used both compressors must be in service.

Ninety (90) pounds brake pipe pressure must be carried at all times with main reservoir pressure setting of 110-130 pounds.

The A. A. R. recommended practice for air brake test and inspection must be observed, namely: that the cylinder condition and retaining valve be such that the brake would remain applied at least three minutes and that the piston travel on all cars be adjusted to nominally 7 inches.

Havens to Temescal.—Rock, Sand and Construction Material Service:

Trains not in excess of 10 cars with an average gross load not in excess of 85 tons per car may be handled by two locomotives coupled and equipped with transfer valves. Speed must not exceed 10 miles per hour, and the brake on each car in the train must be properly adjusted and in operative condition.

No attempt should be made to handle any cars down this grade in these heavy tonnage trains with the brake inoperative, either from the air brake failure or foundation rigging failure.

Retaining valves must be in service on all cars.

Havens to Rockridge:

Trains having not less than 85% of the air brakes operative and whose total tonnage does not exceed 50 tons per operative brake may be handled by either two locomotives coupled or by one locomotive, provided they do not exceed the car limit.

Speed must not exceed 20 miles per hour, Havens to Temescal, and 10 miles per hour, Temescal to Rockridge. Retaining valves must be used on all cars having operative brakes.

Trainmen on all westward freight and work trains, between Havens and Rockridge, must ride the cars when leaving Havens until it is known that the Motorman has control of the train, and when leaving Temescal must ride the front platform of the caboose and the rear end of the motor and be ready with their brake clubs to set hand brakes in case of an emergency.

No westward freight nor work train heavier than 50 tons per operative air brake will operate between Temescal and Rockridge unless permission is obtained from the proper officer.

Helper engine must be used on rear of all eastward freight and work trains between Oakland Yard and the summit of the grade east of Havens, except that when no helper is provided for an eastward freight or work train originating at Havens the Conductor must, after pulling out of the siding, see that the east switch of the siding is left open until rear of train passes the spur switch when it must be opened before lining the east switch of the siding back for the main track. The spur switch will then be left open until the rear of the train passes the summit of the grade. Motorman must then stop and sound the required whistle signal calling his flagman in from the west. The brakeman will then line the spur track switch for the main track and return to his train.

The same rule will apply when pulling off the spur instead of the siding.

Work trains in this territory not originating at Havens must not go west of the summit of the grade unless the locomotive is on the west end of the train.

The trolley or pantograph must be down before removing any jumpers, handling 600-1200 volt switches, when picking up or setting out passenger equipment, when cutting trains at the Ferry or when the motorman is repairing electrical equipment.

The old type whistle must be blown approaching each street intersection in Oakland and blasts must be so spaced that the last blast will continue to the intersection. The air gong may be used, but the engine bell should be used only in an emergency.

The use of the pneumatic air horn between Terrace and Hollis Street, Oakland, is prohibited. It should be used between Hollis Street, Oakland, and San Francisco when needed.

Within the city limits of Pittsburg the use of the pneumatic air horn is prohibited. The old type whistle must be used and, if inoperative, the air gong shall be used.

Conductor or Brakeman must ride in cab with the Motorman on all westward trains between Rockridge and College Ave., and all eastward trains between 40th and Shafter and College Ave., to assist in checking clearances between trains and parked automobiles.

Motormen of Eastward trains approaching Walnut Creek will sound signal 14 (L) for the Main Highway crossing and use signal 14 (J) for the second crossing and train-order signal, combined, and omit signal 14 (G) when operator is on duty. When train order office is closed use signal 14 (L) for the second crossing.

High cars when placed on the old Ice House spur at Concord must be left west of the sand bins, so that motormen will have a clear view of the highway crossing, switches and signals.

Cars must not be left standing on Willow Pass road crossing just east of Concord station.

Cars set out at Clyde for loading or unloading must be spotted back from the West Road crossing as far as possible. Not more than six cars are to be spotted on the delivery track for the B. P. & C. R. R. at any one time.

Controls operated by selectors in the dispatcher's office have been installed on block signals 218-H and 219-H at Burton and block signals 646-H and 647-H at Dozier and are used to stop trains for train orders. After the train has been cleared by the dispatcher, the conductor shall clear the signals by pressing a button which is located by the side of the telephone and must see that the signals are clear before leaving the station.

Signs reading—Cars must not be switched beyond this point by S. P. Co.-S. N. Ry.—are located on tracks 1 and 7 at the Shell Chemical Plant, Shell Point. A derail is located 30 feet east of the cement house on track 7 and is locked with a Shell Chemical Co. lock. When necessary to spot cars beyond the derail secure the key from the Yardmaster at the Plant.

Trains approaching West Pittsburg must not stop foul of Branch track unless Branch train has arrived.

Cars must not be stored on wye at West Pittsburg.

The yard limits of Pittsburg include all tracks in Pittsburg, and between Pittsburg and the yard limit signs at West Pittsburg and Mallard. All movements between Pittsburg and West Pittsburg will be made in accordance with Rule 93. Scheduled and Extra trains must receive a clearance from the Dispatcher for all movements between West Pittsburg and Pittsburg, and in the reverse direction.

Loaded cars in excess of 169,000 pounds, gross weight, must not be accepted from connecting lines nor handled in trains, unless permission is obtained from the proper officer.

Motormen shall sound signal 14 (m) while approaching and before passing the Train Ferry Signs located one-half mile on either side of the ferry at Chippis and Mallard, and shall immediately reduce to 25 miles per hour preparatory to making the stop before moving onto the Ferry.

Should the motorman fail to give signal 14 (m) and reduce as herein prescribed, the conductor must take immediate action to stop the train.

All freight engine pantographs should be lowered and mechanical lever left in down position before going on apron of boat and kept in that position during any operation over aprons at the Chippis and Mallard slips. When tying up freight engine the pantograph must be securely locked in the down position.

Motormen must shut off power at all sectional insulators both in trolley and third rail except at places where insulators have been designed for pantograph operation.

The Captain, or his pilot, will have direct charge of train crews in loading and unloading the Ferry, and movements must be made in accordance with his instructions. 700 gross tons is the maximum load limit. Heavy and light cars must be placed on the Ferry so as to keep the load well balanced. Each track on the Ferry is approximately 220 feet long, but, only 210 track feet may be used. When shoving cars on the Ferry ahead of Motor, no cars are to be coupled on to, or handled behind the motor.

Hand and air brakes must be set on all freight cars—air brakes set on freight engines; wheels must be blocked on passenger cars (using 4 blocks to each track)—air brakes set and all vestibule and trap doors of passenger cars must be opened while train is on Ferry Ramon except that when it is necessary to cut a passenger train and move it on the Ferry in two cuts, then the vestibule doors facing the opposite track shall be left closed. At night, all marker and classification lamps must be removed.

When necessary to barge freight cars on the Ferry with passenger trains, not more than four (4) freight cars or one (1) locomotive and three (3) freight cars will be permitted on the Ferry at the same time with a passenger train. The freight cars must be loaded on the Ferry so that there will be room at each end for passengers to walk around the freight cars in order to get to the life-boats in case of an emergency.

Blocks must not be removed until Ferry is against apron. Motorman must observe Rule 1006 and remain in cab while train is on Ferry.

Motormen must move slowly and watch to the rear until entire train is moved off the Ferry.

Cars containing explosives or inflammables must not be handled on Ferry Ramon with cars carrying passengers.

The spur track which serves the packing house at Chadbourne crosses a State Highway. All trains, engines, motors or cars must come to a stop and no movement made over the crossing until a member of the train crew or other competent employee acting as a flagman has protected traffic on the highway.

The siding at Cordero and the siding at Belleair are crossed by County Roads. At such times as cars are allowed to stand on these sidings within a distance of one hundred (100) feet of either side of these county roads, a member of the train crew or other competent employee shall protect the traffic on said roads by acting as a human flagman for all trains, engines, motors or cars operating over the adjacent main line track. Cars which are stored on these sidings must not be left standing within 100 feet of either side of the road crossing.

Inside switches of both crossovers at Riverview must be left lined and locked for Holland Branch.

East switch of crossover, located just west of Westgate crossing, must be left lined and locked for storage track.

The W. P. tracks on Front and R Streets leading to the C. P. C. Plant and P Street Dock may be used by S. N. yard crews under yard rules. W. P. yard engines have preference on these tracks.

The three way switch in the eastward track at C Street is lined for the street car track and must be thrown by all trains.

All switches serving the Union Station are spring switches and must be lined as follows: Switch on I 11th Street leading to I Street lined as last used. Switches on I Street leading to 12th Street lined for I St. All inside yard switches lined as last used.

Yard Engines, Street Cars, and dead head equipment moving east on I Street, must come to a stop before crossing 11th Street. All trains and dead head equipment moving out of the Union Station and going east on I Street must stop before reaching I Street. Trains moving east on I Street have the preference at 11th Street junction. Westward trains have the preference at 12th Street junction. Eastward trains must not cross 12th Street junction while westward trains are moving over switch leading to 12th Street.

Trains, dead head equipment, yard engines, and street cars making continuous westward movements on I Street must stop 75 feet from the curb line at 11th Street. Westward trains leaving Union Station at 11th Street, have the preference.

Should two trains leave the Union Station simultaneously, the train on the right hand track will have the preference.

All switching movements at the Union Station, Sacramento, must be made in west end of yard. No switching movements are to be made from the yard on to 12th Street.

City Ordinances require all street cars, trains and yard engines within one hundred feet of an intersection to stop immediately on the approach of any police, ambulance, or fire apparatus sounding siren or signal gong except they be at the time on, or crossing an intersection, in which event crossing must be cleared and then stop.

Civil, Military or Funeral processions must not be obstructed.

When trains, street cars, yard engines or dead head equipment approach a street intersection simultaneously, except where traffic is controlled by traffic signals in service or traffic officer, the train, car, yard engine, or dead head equipment moving eastward must reduce speed, stopping if necessary, and must not enter the intersection until the train, car, yard engine, or dead head equipment, moving in the westward direction has passed entirely out of the intersection and the motorman has a clear and unobstructed view; except that regular scheduled trains moving in either direction will have the preference at all

street intersections over street cars, yard engines, and dead head equipment.

Street Cars of the C. C. T. Co. operating over the tracks used jointly between 8th and J and 8th and M Sts. have the same time table directions as S. N. trains.

Trains and Yard Engines operating on X St. will assume time table directions of C. C. T. Co. trains as follows:
Eastward—Alhambra Blvd. to Front St.
Westward—Front St. to Alhambra Blvd.

Interurban trains, yard engines and street cars operated on tracks in Sacramento running Easterly and Westerly have precedence in the use of the crossing over other interurban trains, yard engines and street cars operated on tracks running Northerly and Southerly except that trains or yard engines in whatever direction they may be running, have the precedence in the use of such crossings over street cars operated in street railway service.

Street cars of the P. G. & E. Co. after stopping at any crossing with the S.N. Ry. will not move over the crossing if a train or yard engine of the S.N. Ry. is approaching within the distance of one city block, but as soon as the train or yard engine comes to a stop at the crossing the street car or cars of the P. G. & E. Co. may start to move over the crossing until such time as the motorman on the train or yard engine sounds his gong or whistle indicating that his train is to move over the crossing.

Motormen must not give a proceed signal to street car men to cross ahead of their trains while the train is standing to receive or discharge passengers or stopped at the street car crossing for other reasons.

At crossings protected by traffic light signals or traffic officers all movements will be governed by signal indication or traffic officer signal.

The tracks in Haggin Yard are used by Western Pacific yard engines and crews when switching their cars to and from the Southern Pacific interchange. Crew must obtain a lineup of S.N. trains from the S.N. dispatcher before using the main track and obey yardmaster's instructions.

Yard engines when switching at Plant 11, C. P. C., must avoid delay to trains and street cars.

Freight trains must not go west of 15th and D Sts., Sacramento.

Spring Switches, except tongue switches, are indicated by yellow lenses and targets on Sacramento Northern tracks. On the joint track at Marysville, all inside switches on the Western Pacific have yellow lenses and targets, but are not spring switches.

The tracks on "X" Street, Sacramento, are operated jointly with the C. C. T. Company.

Street cars of the C. C. T. Company have preference over Sacramento Northern yard engines.

Trains entering or leaving the Swanston Branch, at Globe, must not stand on the Western Pacific crossing.

Switch point locking devices are installed on switch leading to American Packing Shed Meinert, switch leading to Standard Oil Plant Walnut Creek, west switch old siding Westgate, west switch siding at Pease and east switch siding at Encinal. To operate these devices, push down on footlever when throwing the switch.

When throwing oil Buffer switches by hand, sufficient time must be allowed for the point to fit the traffic rail before movement is made over the switch.

Freight trains must not go west of 5th and G Streets, Marysville.

Opposing trains must not move around the double track curve at Fifth and "D" Streets, Marysville, at the same time as the clearance between the two trains is not sufficient. Westward trains have the preference at this curve.

Trains and yard engines must not block Plumas Street, Yuba City.

Back up movements from the west end of the yard at Yuba City on to Bridge Street must be protected by a member of the train or yard crew acting as a flagman. Back up movements over other street intersections or around sharp curves in switching service where the motorman's view is obstructed must be protected in the same manner. The conductor or foreman on the crew is jointly responsible with the motorman for this protection being given.

Back-up hose must be used by yard crews in Sacramento yard and Pittsburg yard when shoving cars ahead of motor over city streets.

Yard crews must be cleared by Dispatcher for movements between Haggin and Globe, and between Mulberry and Stirling Jct.

Cars of gasoline when spotted for unloading at any oil spur must be left between the insulated joints and the end of the spur. No cars are to be left standing over the insulated joints or coupled to cars spotted between the insulated joints and end of spur.

Where power switches are installed on gasoline unloading tracks, they must not be closed until it has first been ascertained by a member of the crew that all cars have been disconnected and are ready to move. The power switches must be left open after switching has been completed.

There is no third rail on the Diamond Match Spur at Live Oak, therefore when spotting or picking up cars it will be necessary to hold on to several cars so that the motor will not lose contact with the third rail on the main track.

Freight trains are limited to engine and three cars on Main Street, Chico.

Freight motors, but not freight cars may be moved around the North leg of the wye at 1st and Main Sts., Chico.

Passenger trains will discharge passengers at First and Main Streets, Chico, before going around the wye.

Color light signals which indicate red are installed on the train order masts at East Nicolaus and East Gridley, and are used for stopping trains for train orders when no operator is on duty. After receiving train order Conductor will clear the signal by pressing a button located near the telephone.

Rule 10 (H). When a yellow signal is required it will be displayed to the right of track in the direction of approach, one-quarter mile from structure or track over which speed of trains must be restricted. Where two or more main tracks are affected the signal will be displayed on each track the same as if it were a single track.

A green signal will be displayed similarly on each track immediately beyond the structure or track affected.

Trains must not exceed the speed specified by train order or bulletin, or fifteen miles an hour if no different speed is specified, while passing over the structure or track affected, until the rear of train clears the limit, which shall be indicated by a green signal.

Slow boards, where used, will be similarly placed and observed.

Rule 14-L. Motormen will sound signal 14 (L) in such a manner so as to prolong the last blast of the whistle until the train enters the road crossing. On slow speed movements the signal 14 (L) should be repeated if necessary.

Rule 17 amended. The headlight will be displayed at the front of every train when the visibility is such that a dark object as large as a man of average size can not be seen at a distance of 1500 feet. The headlight must be concealed when a train turns out to meet another and has stopped clear of main track, or is standing to meet trains at the end of two or more tracks or at junctions.

Rule 17-C. Head lights must be dimmed while moving within city limits of Sacramento.

Rule 18—Modified. Yard engines when making a continuous movement along city streets will not display the headlight at the rear by night. A red light must be displayed to the rear.

Rule 84—Amended. A passenger train must not be started from its initial station or any intermediate station, where trucks or mail carts are used in the handling of Baggage, Express or Mail or where destination signs are displayed, until the truck, mail cart, or destination sign has been moved at least six feet away from the train on the side used to receive or discharge passengers.

Rule S-88—Fourth paragraph modified as follows: At meeting point when it is necessary for train which takes siding to back in, train will be brought to a stop before it proceeds over the switch, and in obscure places, or when other conditions require, flagman must precede train at least 350 feet, or a sufficient distance to insure full protection before going over the switch to back in.

Rule S-88. At following stations the designated switches and tracks are the points where trains take siding. Train holding

main track will remain clear until opposing train shall have cleared.

Havens—Eastward trains use the siding.
Westward trains use the spur.

Meinert—Siding.

Concord—Westward trains use the field track.

Eastward trains use sub-station spur.

Westgate—All trains use west end long siding.

Woodland—All trains use wye switch passenger depot.

Sacramento—

Eastward passenger trains use switch west end double track "M" Street.

Eastward freight trains use switch leading to Front Street.

Westward freight trains use Haggin switch west of American River Bridge.

Westward passenger trains use switch east end double track under subway.

North Sacramento—Siding.

Arboga—West spur.

Marysville—

Eastward passenger trains use switch west end double track passenger depot.

Eastward freight trains use west switch joint track siding.

Westward trains use switch east end double track Yuba City.

Colusa Jct.—West switch of wye.

Colusa—All trains use switch west end double track.

Live-Oak—Siding west of depot.

Oroville Jct.—West switch of big wye.

Mulberry—Shop siding.

Chico—Eastward passenger trains use switch west end double track Main Street.

Rule S-90A.—When a trainman of the opposing train opens a switch he should stay there, signal to the motorman of the other train with a slow down signal and then a slow proceed signal to apprise the motorman of the fact that the switch has been opened and also receive answer from the motorman that his signal is understood before he leaves the switch.

Rule 93. Second paragraph of Rule 93 is abrogated, and the following will govern:

Second and inferior class trains, extra trains and engines must approach and move with caution within yard limits.

When not protected by block signals or when moving against the current of traffic, first-class trains must approach and move with caution within yard limits.

Rule 99-A. The interpretation of this rule is that when a flagman is either sent to hold a train or is left at a point to hold a train, that his instructions must be in writing on Flagman's Hold Order, form 27.

Rule 104 (C). The interpretation of this rule is that the switch must be locked after a train takes siding when meeting another train or when train is standing on the main track and the switch is lined for the passing track for the opposing train to take siding.

After the train to be met has passed and it is necessary to back the train on the siding in returning to the main track there must be a man in the rear, either on the ground preceding the movement, or on the rear step or platform, stationing himself in such a position that the motorman will be able to see him and his signals at all times. The signal to back the train shall not be given until the switch is lined for the siding and trainman has determined the train that has passed has cleared the switch a sufficient length so that there will be no possibility of a collision between the train backing out of the siding and train that has passed in the event the latter train would come to a sudden stop. If the train on the siding consisted of three cars no signal should be given to the motorman of that train to back out of the siding until the train that has passed is five car lengths past the switch point.

Rule 219—Amended. A Conductor taking a train order over the telephone circuit must not repeat or give the "X" response to a train order if the train has been cleared or of which the engine has passed the telephone booth or other point where the order is being received until he has obtained the signature of the Motorman.

Rule 509—Amended. On single track when a preceding train is seen in the block in which the signals are actuated by track circuits, and the intervening track is seen to be clear, train after stopping, will proceed at once with caution not exceeding 12 miles per hour.

Rule 509. The sending of a flagman ahead as prescribed by this rule does not apply to the operators of one-man street cars.

Rule 838. Cars must not be left standing on any spur or siding within 200 ft. of any highway crossing, if possible to avoid it.

Rule 890 is amended as follows:

A member of the train crew must ride in the last car of each passenger train at all times when his duty does not require his presence elsewhere, when such train consists of two or more cars, except on trains carrying parlor cars, in which case the trainman will ride in the next car ahead.

When passing over long trestles in third rail territory conductor or brakeman must observe trestle from rear of train and be on lookout for fires which may start from third rail arcs.

When approaching and while passing over facing point spring switches on either a passenger or freight train, trainmen must be distributed over the train so as to observe the movement of the entire train over the spring switch and be prepared to stop it promptly in event of derailment.

The Conductor and Motorman are jointly responsible for the speed of trains which must not exceed six miles per hour during the movement of the entire train over a facing point spring switch.

Motormen must not apply any power while going over spring switches unless it be to maintain the speed allowed.

Rule 970 must be observed by train crews before passing through tunnel No. 1, over ferry slips, and all long trestles and bridges.

Rule 1011. When wigwags or bells are found inoperative, train or engine must stop and be preceded over the crossing by a flagman. When a reverse movement is made on Main track or on siding or spur which is not in wigwag circuit a flagman must protect the crossing before the movement is made.

Some wigwag signals are set into operation by third rail shoe contacts and others by trolley contacts. Motormen must slow down at points where trolley and third rail overlap, and where wigwags are operated by trolley contacts so that the trolley can be put on the wire before reaching the "Brush Contacts."

When one train is following another closely in yard limits or closing up at stations where wigwag circuits are maintained the train in the rear must not enter the wigwag circuit before the leading train has passed the wigwag cutout when such circuit is not a track circuit.

Flasher signals which operate in conjunction with wigwag signals are installed in advance of all wigwags which swing parallel with the tracks.

Rule 1070. Applies to two or more freight motors coupled and operated as one unit. Air-brake test must be made before the unit is moved and when motorman changes his operating position from one motor to the other.

Rule 1072 must be observed, air cut in all cars on all yard or train movements over City streets, "M" St. bridge and when switching on any track on a heavy grade.

Rule 1089—Amended. In case of power or air brake failure and there exists the possibility of not being able to hold the train with the air brakes, sufficient hand brakes must be set to hold the train.

INTERLOCKING AND BLOCK SIGNALS

The Interlocking Plant at 40th and Shafter, governs all movements to and from the Key System tracks on 40th Street. Dwarf semaphore signals govern movements from tracks in Oakland Yards to 40th Street.

The standard color of the masts supporting home signals is white, and the masts supporting distant signals is yellow.

Trains finding a Home Block Signal Dark will make a test and if the Red Signal is working may proceed. In making this test train must be backed out of circuit after getting "Red" indication before proceeding.

At meeting points, the train taking the siding, may back out after the train has been met without waiting for the switch indicator to clear and if the facing Home Block Signal is clear may proceed.

Key System crossing College Avenue.

All cars, trains and yard engines must stop at College Avenue and no car, train or yard engine of either line shall proceed over this crossing if there is a car or train approaching on the other line at a distance, from same, that would not permit of safe passage.

Southern Pacific Crossing at Las Juntas is protected by Stop Boards. All trains, engines, motors and cars must stop at stop boards and signal 14-B sounded before proceeding over the crossing, providing that there is no locomotive, motor, train or

car of the Southern Pacific approaching the crossing from either direction.

When view is obscured by fog or inclement weather, a member of the crew must go forward to the crossing and ascertain that no train is approaching on the Southern Pacific Railway before proceeding over the crossing.

Bay Point & Clayton Railroad crossing at Clyde, no signals. All trains, engines, motors, and cars, must stop at stop boards and signal 14 (b) sounded before proceeding over the crossing. When view is obscured by fog or inclement weather a member of the crew must go forward to the crossing and ascertain that no train is approaching on the B. P. & C. R. R. before proceeding over the crossing.

When trains, engines, motors, or cars of both companies approach the crossing simultaneously the train, engine, motor, or car of the B. P. & C. R. R. will have the right to pass first over the crossing.

The tracks at the Shell Chemical Company's plant at Shell Point are used jointly by the Sacramento Northern and Southern Pacific. All movements over these tracks must be made with caution. The tracks leading from the Sacramento Northern and from the Southern Pacific cross at grade. All trains, motors, engines or cars of the Sacramento Northern shall stop at the "STOP" signs located at each approach to the crossing, and shall not proceed over the crossing until it has been ascertained that it is safe to do so. Several derails, properly signed, are installed on the various tracks.

A. T. & S. Fe R. R., crossing at Pittsburg is protected by stop boards. All engines, trains, motors and cars must come to a stop at the "STOP" boards located on either side of the crossing and no movement made over this crossing until a flagman has preceded over the crossing and ascertained that it is safe to proceed. A. T. & S. Fe R. R. have the preference at this crossing.

Southern Pacific Railroad crossing at Front and M Streets, Sacramento, is protected by flagman.

Southern Pacific trains moving on Front Street, Sacramento, and yard engines switching on Front Street, shall stop before reaching the crossing at Front, and M Streets, and will proceed on hand signals from flagman on the ground at the crossing, flagman using a green flag by day and green light by night.

Sacramento Northern trains and yard engines moving over the crossing shall stop before reaching the crossing at Front and M Streets, and will proceed on hand signals from the flagman stationed on the platform of Watchman's Shelter, flagman using a yellow flag by day and a yellow light by night.

All single track curves at 19th and C, 15th and D, 15th and I, 8th and I and 8th and M Streets are protected by block signals operated by trolley contacts. The block signals are located on poles in advance of the curves. The normal indication of the signals is dark. Trains entering the block limit will receive a yellow signal and will be protected by a red signal on the opposite end. Trains entering the block simultaneously will cause the signals to indicate both yellow and red, in which case both trains must stop and the train or car moving in the westward direction will proceed.

Track between 30th and C Sts., and Alhambra Blvd. and F Sts., Sacramento, is protected by block signals. All yard engine and street car movements must be governed by signal indication.

AUTOMATIC INTERLOCKER C & X STREETS, SACRAMENTO

Automatic Interlocking Color Light Signals governing movements of Western Pacific trains and Sacramento Northern trains are located at the crossings on "C" and "X" Streets, Sacramento.

MOVEMENT OF TRAINS OVER "C" STREET CROSSING, SACRAMENTO

WESTERN PACIFIC—Home signal located 480 feet east of crossing governs movement of trains over the crossing westward; Home signal located 450 feet west of crossing governs movement of trains over the crossing eastward. No distant signals.

MOVEMENT OF TRAINS OVER "X" STREET CROSSING, SACRAMENTO

WESTERN PACIFIC—Home signal located 450 feet east of crossing governs movement of trains over the crossing westward; Home signal located 450 feet west of crossing governs movement of trains over the crossing eastward. One distant signal 1480 feet west of home signal.

MOVEMENT OF TRAINS OVER "C" STREET CROSSING, SACRAMENTO

SACRAMENTO NORTHERN—Home signals governing movement of trains with the current of traffic over the crossing located at the curb line 72.5 feet on either side of crossing. Back-up signals governing reverse train movements over the crossing are located at the curb line 72.5 feet on either side of crossing. No distant signals.

Operators of street cars after passing the signal in PROCEED position will make a safety stop 25 feet from the crossing before moving over it. Cars must not be left standing between the home signals unless coupled to another car or an engine which is standing outside of the home signals.

MOVEMENT OF TRAINS OVER "X" STREET CROSSING, SACRAMENTO

CENTRAL CALIFORNIA TRACTION COMPANY - SACRAMENTO NORTHERN—Home signals governing movement of trains with the current of traffic over the crossing located at the curb line 72.5 feet on either side of crossing; back-up signals governing reverse train movements over the crossing are located at the curb line 72.5 feet on either side of crossing. No distant signals.

Cars must not be left standing between the home signals unless coupled to another car or an engine which is standing outside of the home signals.

Cars or trains finding the home signals at "STOP," will stop clear of signal to permit it to change to "PROCEED" position when train on the Western Pacific has passed out of home signal limits.

CLOCK WORK TIME RELEASE

If no cause for signals being at "STOP" is seen, or if there is a train on the Western Pacific tracks standing outside of the home signals with no indication that it is to immediately proceed, operator must be sent ahead to operate a release located in a wooden box attached to the outside of signals governing reverse train movements, one release for each track. Box is provided with standard switch locks. Instructions for the operation of release are posted inside box. The instructions follow:

To operate clock work time release, turn knob to right about one-quarter (¼) turn; hold knob to right about two (2) seconds, and then let go of knob, allowing release mechanism to run down, which will require sixty (60) seconds at "C" Street and forty-five (45) seconds at "X" Street.

After release has run down, a red pilot light located inside of the release box should light up. This pilot light indicates home signals on intersecting tracks are in "STOP" position. Sacramento Northern signal should then change to "PROCEED."

The release must not be operated when Western Pacific trains or engines are between the home signals, or seen to be approaching.

In case the operation of the release does not clear the signal, the car or train will then proceed slowly to a point within fifteen (15) feet of the crossing, and, after stopping, operator must again proceed, on foot, to the center of the crossing, and, after making sure that no Western Pacific trains are approaching within the limits of the home signals, may then proceed over the crossing.

Speed of cars or trains over automatic interlocker must not exceed ten (10) miles per hour.

AUTOMATIC INTERLOCKER, SANKEY

Sankey automatic interlocking plant crossing the Western Pacific tracks is located one-half mile west of Sankey.

Interlocking limits on the W. P. track extend from home light signal 600 feet east of crossing to home light signal 600 feet west of crossing, and on S. N. Ry. track between home light signals located 600 feet on both sides of crossing.

The distant signals are located 3000 feet in advance of the home signals, and the preliminary circuits extend 3000 feet in advance of the distant signals.

The instructions governing the operation of signals and the movement of trains through the interlocking plant at Live Oak will apply at Sankey interlocker.

AUTOMATIC INTERLOCKER, LIVE OAK

Live Oak automatic interlocking plant crossing the Southern Pacific tracks is located one-half mile east of Live Oak.

Interlocking limits on the S. P. track extend from home light signal SA-1522, 517 feet west of crossing, to home light signal SA-1523, 523 feet east of crossing, and on S. N. Railway track between home light signals located 600 feet on both sides of crossing.

The westbound distant signal is located 3000 feet in advance of the home signal and the preliminary circuit begins at a point 4800 feet east of the home signal. The eastbound distant signal is located 1300 feet in advance of the home signal, and the preliminary circuit begins at a point 2500 feet west of the home signal.

Normal Indication of Interlocking Home Signals—"STOP":

When train approaches the crossing and enters approach circuit, the home and distant signals should change to "PROCEED."

Motormen operating single truck Birney cars, after receiving clear indication at home signal will bring the car to a stop not closer than 30 feet from the crossing. The Conductor will then close the Shunt Switch located in a box on the west side of the crossing. Closing this switch holds the signals on the intersecting track at stop. After the movement over the crossing has been made the Conductor will open the Shunt Switch and leave it open. The box must be left locked.

When home signal indicates "PROCEED" or "PROCEED WITH CAUTION" the speed of engine must not exceed thirty (30) miles per hour between the home signal and the crossing.

If no cause for signals being at "STOP" is seen or if there is a train on intersecting tracks standing outside of the home signals, with no indication that it is to immediately proceed, flagman must be sent ahead to operate a release located in box at the crossing. Box is provided with standard switch lock. Instructions for the operation of release will be posted inside box. The instructions follow:

CLOCK WORK TIME RELEASE

To Operate Clockwork Time Release:

(a) The release must not be operated when trains or engines are between the home signals or seen to be approaching on the intersecting tracks.

(b) To operate clockwork time release, turn knob to right to extreme position about one-quarter turn, then let go of knob and allow automatic release mechanism to run down, which will require four minutes. When knob is turned to extreme position and release mechanism has completed its operation, a red indicator light located near this clock release should light up immediately indicating that home signals on intersecting track are in "STOP" position. The home signal on S. N. Ry. should then change from "STOP" to "PROCEED WITH CAUTION."

Note: Where home signals are involved in automatic block signal territory, flagman, upon receiving a red indicator light, must lock box and proceed in accordance with automatic block system rules and where no automatic block signals are involved, flagman will remain at the crossing until train arrives.

In case indicator light fails to appear, the movement must be protected in each direction on the intersecting line.

(c) In case operation of release does not change the home signal indication from "STOP" to "PROCEED WITH CAUTION" after predetermined time has elapsed, a repeater red indicator light located at home signal should then light up, indicating that home signals on intersecting line are in "STOP" position.

JOINT TRACK MARYSVILLE

Sacramento Northern trains operate over Western Pacific track between Sacramento Northern connection with Western Pacific main track, located 356 feet east and 355 feet west of bridge 178.18, Yuba River, Marysville. Sacramento Northern freight trains operate over Western Pacific passing siding between the west switch and the switch leading to the Sacramento Northern track opposite the Western Pacific passenger station at Marysville. These tracks are designated as Joint Tracks.

AUTOMATIC INTERLOCKING Signals governing the Joint Track are located as follows:

THE WESTERN PACIFIC RAILROAD COMPANY

EASTWARD—Home Signal 789 feet west of bridge 178.18; Normal position stop.
Distant Signal 2,500 feet west of Home Signal; Normal position caution.
Home Signal 724 feet east of bridge 178.18; Normal position clear.
Distant Signal 789 feet west of bridge 178.18; Normal position caution.

WESTWARD—Home Signal east end of bridge 178.79; Normal position clear.
Home Signal 724 feet east of bridge 178.18; Normal position stop.

Eastward Signal located 789 feet west of bridge 178.18, will give clear indication when approaching train reaches a point

within 3,500 feet from the signal, provided the block is clear, and will go to stop position when the forward wheels of an engine or car pass the signal.

Westward Signal located 724 feet east of bridge 178.18, will give a clear indication when approaching train reaches a point within 500 feet from the signal, provided the block is clear, and will go to stop position when the forward wheels of an engine or car pass the signal.

SWITCH INDICATORS are located as follows:

Switch west end of passing siding.
West end of main track switch leading to interchange tracks.
East end of main track switch leading to interchange tracks.
West end of cross-over leading from main track to passing siding.
Switch east end of High Line Track, located 1,400 feet west of Mile Post 180.

SACRAMENTO NORTHERN RAILWAY

EASTWARD—Home Signal 542 feet west of bridge 178.18, located at left of track; Normal position stop.

WESTWARD—Home Signal 525 feet east of bridge 178.18; Normal position stop.

Home Signals located 542 feet west of bridge 178.18, and 525 feet east of bridge 178.18, will go to clear position when the junction switch and derails are lined up for the Sacramento Northern track, provided the block is clear, and will go to stop position when the forward wheels of an engine or car pass the signal.

SWITCH INDICATORS are located as follows:

Main track junction switches east and west of Bridge 178.18. All trains and engines must have a clear indication by switch indicator before throwing the switch to enter the W. P. main track.

No engine, car or train of the Western Pacific or Sacramento Northern shall be operated over the railroad crossing located 752 feet east of bridge 178.18 where the Western Pacific house track crosses the Sacramento Northern track, without being brought to a stop at the stop board and preceded over the crossing by a member of its crew who shall determine first that it is safe to proceed. The Stop Boards are located on each side of this crossing 100 feet from the crossing. Sacramento Northern trains and yard engines must approach this crossing with caution and not move onto or over the crossing until it shall be determined first that it is safe to proceed.

DERAILS: Derailing switches, pipe connected and operated with the main track switches are located as follows:

On Western Pacific passing siding 193 feet east of west switch.
On Sacramento Northern track 182 feet west of Junction Switch west of bridge 178.18 and 157 feet east of Junction Switch east of bridge 178.18.

Care must be used in the handling of switches which are pipe connected to the derails to avoid a derailment. Employee opening main track switch that is pipe connected to derails, must lock the switch open and it must remain locked until train has cleared derailing switch.

Motorman must not start his train until home signal clears and brakeman has crossed over track to opposite side of switch stand.

NORMAL POSITION OF SWITCHES—Junction switches must be locked for Western Pacific main track when not in use.

MOVEMENT OF TRAINS—Movement of trains over the Joint Track will be made in accordance with the indication of signals, regardless of right or class. All trains of both companies must approach and pass through the limits of the Joint Track with caution, not exceeding a speed of fifteen (15) miles per hour.

If no cause for signals being at stop is seen or if there is a train on W. P. track outside of home signals with no indication that it is to immediately proceed, be governed by Rule 663.

In using the Joint Track, freight trains should avoid delays to other trains of either company.

Note: WITH CAUTION, means—To run at restricted speed, according to conditions, prepared to stop short of a train, engine, car, misplaced switch or other obstruction, or before reaching a stop signal. Where circumstances require, train must be preceded by a flagman.

W. P.-S. P. crossing 9th Street, Marysville, interlocked. All movements over this crossing will be made in accordance with the rules in Western Pacific current time table.

The single track between Marysville and Yuba City is protected by Automatic Block Signals. Movement of Trains, Yard Engines, Deadhead equipment, and street cars will be made

over this track in accordance with the indication of signals regardless of right or class.

The single track between 9th Street, Chico, and Mulberry is protected by block signals operated as follows: Light signals are installed on poles at 9th Street, 16th Street and at Mulberry, the color indications being yellow and red. The track between 9th Street and 16th Street is protected by one set of signals and the track between 16th St. and Mulberry is protected by another set of signals. When the blocks are not occupied the signals will indicate dark. Trains entering the block will receive a yellow signal and will be protected by a red signal on the opposite end. Only one train is permitted within the block limits at a time.

S. P. Crossing—Mikon. Interlocked. Home signals and derails 300 feet east and west of crossing. No distant signals.

S. P. Crossing—Woodland. Interlocked. Home signals and derails 300 feet east and west of crossing. No distant signals.

DRAWBRIDGE SIGNALS

Montezuma Slough Drawbridge has train stop arms. Home Signals located 659 feet east and 840 feet west indicate position of draw. Distant Signals 2119 feet east and 1740 feet west of Home Signals.

M STREET BRIDGE

Bridge Interlocking Signals and Derails:

Note: Directions used are those applicable to the Main Track to Oakland.

Signals and derails are located 413 feet east of Bridge on M Street, 235 feet east of Bridge on Front Street, and 350 feet west of Bridge. Back up derail is located in east bound track on M Street. The switch leading to the River Spur serves as a derail west of the Bridge.

The interlocking home signal at River Spur derailing switch is a three-unit signal; the upper signal governs movements to M Street, the middle signal governs movements to Front Street, and the lower signal governs movements to the River Spur.

Signal No. 2 located at the east end of the Bridge governing eastward movements is a three-indication light signal. Green indication governs movements to M Street. Yellow indication governs movements to Front Street. The red indication is a stop signal.

The switch at the east end of the Bridge is electrically operated from the tower.

Broderick Junction Interlocking Plant:

Interlocking home signals are located 163 feet east of Junction switch on Woodland Branch, 712 feet west of Junction Switch on main track, and 13 feet east of Junction Switch on main track. The interlocking home signal located 13 feet east of Junction Switch is a two-unit light signal. The upper signal governs movements to Oakland main track, and the lower signal governs movements to Woodland Branch. These interlocking signals are operated by remote control from the tower.

Dual Control Switch:

The dual control switch at Broderick Junction is operated by remote control from the tower and is so equipped that it may be operated by trainmen, when authorized to do so by the towerman. When trainmen are authorized by towerman to operate this dual control switch by hand, the selector lever must be kept in hand-throw position until all movements over the switch have been completed. All movements within the working limits must be made with caution and upon completion notify towerman.

Trainmen must notify motorman when the selector lever is in hand-throw position, and also notify him when it is returned to motor position, so he may know when to be governed by the interlocking signals governing movements over the switch.

The selector and hand-throw levers must not be forced. They will move easily when properly in mesh, although some manipulation of first one and then the other may be necessary to get them in proper mesh. If the switch was lined for Woodland Branch when dual control use was started it must be again lined for Woodland Branch before selector lever is restored to motor position.

Block Signal System:

The automatic block signal system on the First Subdivision begins and ends at the home block signal located 350 feet west of the M Street Bridge.

Switch Indicators:

The switches leading into the main track from Westside Spur and the drill track are protected by switch indicators. The switch leading from the River Spur to the main track is protected by light signals operated from the tower.

Movements of Trains and Yard Motors:

Movements through and between these two interlocking plants shall be made in accordance with signal indication. In case of signal failure at M Street Bridge Interlocking Plant, be governed by Rule 663 and failure at Broderick Junction Interlocking Plant, be governed by Rules 663 and 509.

Trains and yard motors must not exceed a speed of 15 miles per hour over the bridge and 10 miles per hour over the highway crossing west of the bridge.

Eastward trains and yard motors entering the main track from the drill track at east switch Westgate must have clear indication by switch indicator before opening the switch.

When the switch is opened an indicator light in the tower will light, indicating to the towerman that a train is approaching. When the interlocking home signal clears, train or yard motor may proceed.

When the interlocking home signal at east switch Westgate indicates "STOP" eastward trains of more than three cars on either the main track or drill track shall remain back of the County Road crossing until the signal clears.

Telephones:

Telephones are installed in the tower, at Interlocking Home Signal on M Street, Front Street, in the shelter house at Broderick Junction, and on a post half way between River Spur and Westside Spur for trainmen to communicate with the towerman. The telephones on Front Street and Broderick Junction have a double-throw switch to connect the phone on the dispatcher's line.

Whenever there is switching to be done on the River Spur or Westside Spur, which requires several movements from the main track to these spurs, or movements on the main track through or into the limits of the Interlocking Plant at Broderick Junction, the conductor shall communicate with the towerman and advise him so that there shall be no delay in the operation of signals or switches.

There is a signal box located on the interlocking home signal on Front Street which is operated by using a switch key. Operation of this signal box gives the towerman an indication in the tower that a train is on Front Street, and ready to move through the plant. This signal box is to be used when whistle signal cannot be heard.

Route Whistle Signals:

- From M or Front Street to Oakland..... o
- From M or Front Street to Woodland..... o o
- From M to Front or in reverse direction..... o o o o
- From Oakland or Woodland to M Street..... o
- From Oakland or Woodland to Front Street..... o o o
- From Oakland or Woodland to River Spur..... o o
- From River Spur to Main Track..... o o
- From Oakland to Woodland or in reverse direction..... o o o o
- From main track between interlocking plants to Oakland..... o
- From main track between interlocking plants to Woodland.... o o

Regular passenger trains leaving Sacramento will not sound the route whistle signals if the interlocking signals are clear, indicating that the route desired is lined.

Meridian Bridge. Interlocked. Home signals and derails 300 feet east and west of the bridge.

HOSPITALS

- Chico.....Enloe Hospital
- Oroville.....Oroville-Curran Hospital
- Marysville.....Rideout Hospital
- Colusa.....Pay ward at County Hospital
- Sacramento.....Sisters Hospital
- Pittsburg.....Pittsburg Emergency Hospital
- Oakland.....Providence Hospital
- San Francisco.....St. Joseph's Hospital
- Suisun.....Pay ward at County Hospital

FIRST AID STATIONS

- (Supplied with First Aid Cabinets and Stretchers)
- Oakland Baggage Room.....Riverview
- Eastport.....Sacramento Baggage Room
- Concord.....East Nicolaus
- Ferry Ramon.....Vacaville Jct.
- Drawbridge.....Colusa Jct.
- Dozier.....Oroville Jct.

The following is a list of all Steam and Electric Railroad crossings and Junctions, protection provided for movements over them, and the name of the Railroad having prior right in the use of the crossing or Junction not protected by signals or flagman:

LOCATION	NAME OF RR.	PROTECTION	RESTRICTION	RIGHT
Oakland—40th & Shafter.....	Key System.....	Interlocking Signals.....	5 mi. per hr.....	Governed by Signal
Oakland—College Ave.....	Key System.....	Crossing Signals.....	Stop.....	S. N. Ry.
Las Juntas.....	S. P. Co.....	No Signals.....	Stop.....	S. P. Co.
Clyde.....	B. P. & C. R. R.....	No Signals.....	Stop.....	B. P. & C. R. R.
Shell Point				
Shell Chem. Co.....	S. P. Co.....	No Signals.....	Stop.....	S. N. Ry.
Sacramento:				
Front & "M" Sts.....	S. P. Co.....	Flagman.....	Stop.....	Governed by Flagman
7th & "M" Sts.....	P. G. & E.....	No Signals.....	5 mi. per hr.....	S. N. Ry.
8th & "M" Sts.....	C. C. T. Co.....	Block Signals.....	5 mi. per hr.....	Governed by Signal
8th & "K" Sts.....	P. G. & E.....	Traffic Signals.....	{ Trains—Yd. Motors DH Equip. 5 mi. per hr. Street Cars—Stop.....	{ S. N. Ry. P. G. & E.
8th & "J" Sts.....	P. G. & E.....	Traffic Signals.....	{ Trains—Yd. Motors DH Equip. 5 mi. per hr. Street Cars—Stop.....	{ S. N. Ry. P. G. & E.
Globe.....	W. P. R. R.....	No Signals.....	Stop.....	W. P. R. R.
Sankey.....	W. P. R. R.....	Automatic Interlocking Signals	30 mi. per hr.....	Governed by Signal
Marysville—Joint Track.....	W. P. R. R.....	Interlocking Signals.....	15 mi. per hr.....	Governed by Signal
Marysville—House Track.....	W. P. R. R.....	No Signals.....	5 mi. per hr.....	S. N. Ry.
Yuba City.....	S. P. Co.....	No Signals.....	Stop—Except when proceed signal is received from flagman.....	S. P. Co.
Live Oak.....	S. P. Co.....	Automatic Interlocking Signals	30 mi. per hr.....	Governed by Signal
Stirling Jct.....	S. P. Co.....	No Signals.....	Stop.....	S. P. Co.
PITTSBURG BRANCH				
Pittsburg.....	A. T. & S. F. R. R.....	No Signals.....	Stop and Flag.....	A. T. & S. F. R. R.
SACRAMENTO BELT LINE				
Front St. N. to "Q" Inc.....	{ S.P.Co.&W.P.R.R. Industrial Tracks }	No Signals.....	Caution.....	S. P. Co. & W. P. R. R.
Front & "R" Sts.....	S.P.Co. & W.P.R.R.	No Signals.....	Stop and Flag—Except when proceed signal is received from flagman.....	S. P. Co. & W. P. R. R.
Front & "X" Sts.....	C. C. T. Co.....	No Signals.....	Caution.....	Caution
8th & "X" Sts. Jct. Joint Track	C. C. T. Co.....	No Signals.....	Stop.....	C. C. T. Co.
10th & "X" Sts.....	P. G. & E.....	No Signals.....	5 mi. per hr.....	S. N. Ry.
19th & "X" Sts.....	W. P. R. R.....	Automatic Interlocking Signals	10 mi. per hr.....	Governed by Signal
21st & "X" Sts.....	P. G. & E.....	Arterial Stop Sign.....	Stop—5 mi. per hr.....	S. N. Ry.
28th & "X" Sts.....	P. G. & E.....	No Signals.....	5 mi. per hr.....	S. N. Ry.
Alhambra Blvd. & "X" St. Jct. Joint Track.....	C. C. T. Co.....	No Signals.....	Stop.....	C. C. T. Co.
Alhambra Blvd. & "R" St.....	S. P. Co.....	No Signals.....	Stop and Flag—Except when proceed signal is received from flagman.....	S. P. Co.
Alhambra Blvd. & "J" St.....	P. G. & E.....	No Signals.....	5 mi. per hr.....	S. N. Ry.
19th & "C" Sts.....	W. P. R. R.....	Automatic Interlocking Signals	10 mi. per hr.....	Governed by Signal
WOODLAND BRANCH				
Mikon.....	S. P. Co.....	Interlocking Signals.....	20 mi. per hr.....	Governed by Signal
Woodland.....	S. P. Co.....	Interlocking Signals.....	10 mi. per hr.....	Governed by Signal
OROVILLE YARD				
Swayne Lumber Co.....	W. P. R. R.....	No Signals.....	Stop.....	W. P. R. R.
CHICO YARD				
9th & Orange Sts.....	S. P. Co.....	No Signals.....	Stop and Flag.....	S. P. Co.
D. M. Yard, all crossings.....	D. M. Co.....	No Signals.....	Stop.....	D. M. Co.

LOCOMOTIVE RATING IN TONS

Engine	Working Voltage	Sacramento Yard	Car Limit	Tons Per Operative Brake	Oakland to Temescal	Temescal to Havens	Havens to Concord	Concord to Las Juntas	Las Juntas to Havens	Concord and P. Chicago	P. Chicago and Sacramento	W. Pitts. to Pittsburg	Pittsburg to W. Pitts.	Riverview and Oxford	Front St. to Broderick	Creed and Cordero	Cordero and Vaca Jct.	Vacaville and Willotta	Sacramento to Chico	Chico to Yuba City	Yuba City to Alicia	Alicia to Sacramento	Summit to Oro. Jct.	Oro. Jct. to Oroville	Colusa Branch	Sycamore and Beet Spur
402	600	300																450	720	720	360	720	720	720	720	300
403	600	300																450	720	720	360	720	720	720	720	300
404	600	300																450	720	720	360	720	720	720	720	300
405	600	300																450	720	720	360	720	720	720	720	300
410	600	700																900	1400	1400	780	1400	1400	1400	1200	700
420	600	700																900	1400	1400	780	1400	1400	1400	1200	700
430	600	600																850	1300	1300	680	1300	1300	1300	1100	600
440	600	425																620	950	950	475	950	950	950	850	425
441	600	630																900	1365	1365	715	1365	1365	1365	1155	630
442	600	600																850	1300	1300	680	1300	1300	1300	1100	600
601	600 1200	225	6	50	75	75	225	450	150	150	450	225	150	450	150	450	225	400	450	450	225	450	450	450	360	225
602	600 1200	225	6	50	75	75	225	450	150	150	450	225	150	450	150	450	225	400	450	450	225	450	450	450	360	225
603	600 1200	500	10	50	150	200	500	1000	340	340	1000	500	340	1000	340	1000	500	670	1000	1000	500	1000	1000	1000	800	500
604	600 1200	500	10	50	150	200	500	1000	340	340	1000	500	340	1000	340	1000	500	670	1000	1000	500	1000	1000	1000	800	500
605	600 1200	500	8	50	200	200	500	1000	340	340	1000	500	340	1000	340	1000	500	670	1000	1000	500	1000	1000	1000	800	500
606	600 1200	400	8	50	170	170	400	800	275	275	800	400	275	800	275	800	400	540	800	800	400	800	800	800	640	400
607	600 1200	225	6	50	75	75	225	450	150	150	450	225	150	450	150	450	225	400								
650	600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750
651	600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750
652	600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750
653	600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750
654	600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750
660	600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750
661	600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750

NOTE: Between Havens and Oakland Engines 603 & 604 coupled, and Engines 660 & 661 coupled, car limit 20 cars. Engines 601 & 602 or 607 coupled, car limit 12 cars.

YARD LIMITS DEFINED BY YARD LIMIT SIGNS

Oakland	South Yuba	} Marysville Yard
Walnut Creek	Marysville	
Concord	Yuba City	
Port Chicago	Paloro Harter	
Pittsburg	Colusa Jct.	} Colusa Yard
West Pittsburg	Colusa	
Mallard	Arbee	
Chippis	Live Oak	} Oroville Yard
Creed	East Gridley	
Riverview	Oroville Jct.	
Woodland	Oroville	
Westgate	Marysville Road	} Chico Yard
Broderick		
Sacramento	Stirling Jct.	
Haggin	Mulberry	
Globe	Chico	
N. Sacramento		

STOCK CORRALS

Moraga	Molena	Olcott
Concord	Garfield	Vale
Dutton	Rio Vista Jct.	Bunker
Montezuma	Saxon	Libfarm
Cordero		
Woodland	Meridian	Durham
Sankey	Colusa	Chico
Arboga	Sutter	Shippee
Sycamore	Peethill	Swanston

SIDE AND OVERHEAD OBSTRUCTIONS
(Not Standard Clearance)

Tunnel No. 1—Side and overhead. Protected by Signal Bell Tell Tale.

Walnut Creek—Field track—warehouse—sides.

Meinert—Pole. Stewart Spur—Side.

Concord—Hay Warehouse side and overhead.

Clyde—Building—side.

Ferry Ramon—End towers outside tracks—side and overhead.

General—All loading platforms—side.

Chico—Chico Vecino, Trees, side.

Crane Spur—Marysville Road.

All Stock Corrals—side.

Marysville—Westn. Sts. Groc. Co. Warehouse, side and overhead.

" Sand Bunkers Yuba River—side.

Haggin—Sand Bunkers.

Sacramento—Subway, side and overhead.

" Tracks serving Freight House, 2nd and M Sts.—Side (when cars are standing on tracks which are adjacent.)

Woodland—West Valley Lumber Spur, side.

Trainmen will at all times look out for low hanging trolley and span wires.

SPURS AND COMMERCIAL TRACKS

Stations	Distance from San Francisco	Capacity in Freight Cars
Greenspot	43.54	2
Peethill	93.90	15
Swanston	99.06	9
Pearson	131.44	38
Reed	132.15	26

INTERCHANGE TRACKS

Oakland —Key System.—40th and Shafter.

Las Juntas —S. P. R. R.

Clyde —B. P. & C. R. R.

Port Chicago—A. T. & S. Fe R. R.

McAvoy —S. P. R. R.

Sacramento—W. P. R. R., Haggin, and 19th & X Streets.

S. P. R. R., B Street, and Front & X Streets.

C. C. T. Co., Front & X Streets.

Chico —S. P. R. R., 9th & Orange Streets.

Oroville —W. P. R. R.

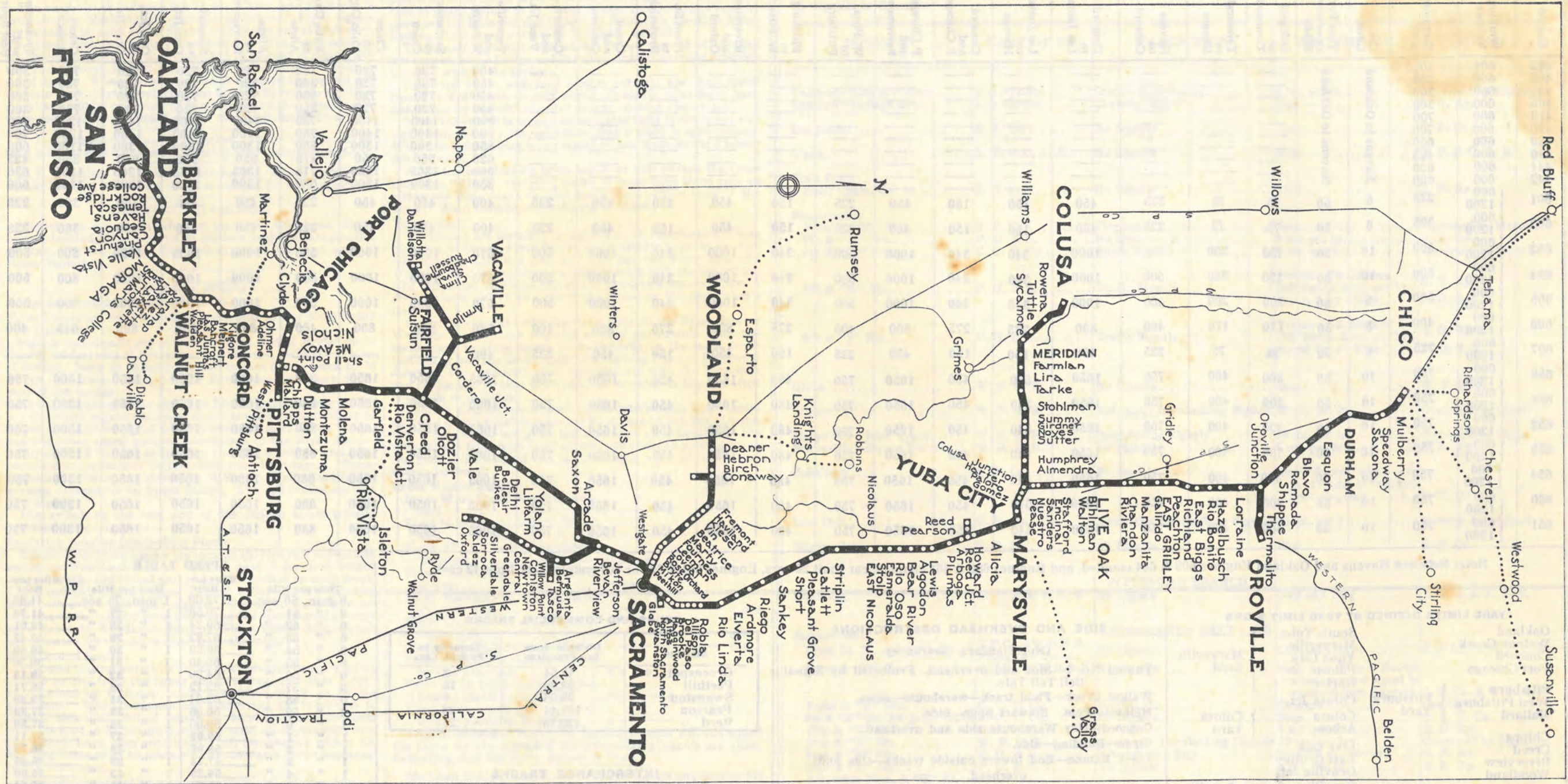
Marysville —W. P. R. R.

S. P. R. R.

SPEED TABLE

Time per Mile		Miles per Hour	Time per Mile		Miles per Hour
0 min.	50 sec.	72.00	1 min.	26 sec.	41.86
0	" 51	70.56	1	" 27	41.38
0	" 52	69.24	1	" 28	40.91
0	" 53	67.92	1	" 29	40.45
0	" 54	66.60	1	" 30	40.00
0	" 55	65.40	1	" 31	39.56
0	" 56	64.20	1	" 32	39.13
0	" 57	63.12	1	" 33	38.71
0	" 58	62.04	1	" 34	38.30
0	" 59	60.96	1	" 35	37.89
1	" 0	60.00	1	" 36	37.50
1	" 1	59.02	1	" 37	37.11
1	" 2	58.06	1	" 38	36.73
1	" 3	57.14	1	" 39	36.36
1	" 4	56.25	1	" 40	36.00
1	" 5	55.38	1	" 41	35.64
1	" 6	54.55	1	" 42	35.29
1	" 7	53.73	1	" 43	34.95
1	" 8	52.94	1	" 44	34.62
1	" 9	52.17	1	" 45	34.29
1	" 10	51.43	1	" 46	33.96
1	" 11	50.70	1	" 47	33.64
1	" 12	50.00	1	" 48	33.33
1	" 13	49.31	1	" 49	33.03
1	" 14	48.65	1	" 50	32.73
1	" 15	48.00	1	" 51	32.43
1	" 16	47.37	1	" 52	32.14
1	" 17	46.75	1	" 53	31.86
1	" 18	46.15	1	" 54	31.58
1	" 19	45.57	1	" 55	31.30
1	" 20	45.00	1	" 56	31.03
1	" 21	44.44	1	" 57	30.77
1	" 22	43.90	1	" 58	30.51
1	" 23	43.37	1	" 59	30.25
1	" 24	42.86	2	" 0	30.00
1	" 25	42.35			

Map of Sacramento Northern Railway and Connections



RAILROAD SURGEONS

DR. D. H. MOULTON, Chief Surgeon.....	Chico
DR. N. T. ENLOE, Consultant, Assistant Surgeon.....	Chico
DR. P. L. HAMILTON, Assistant Surgeon.....	Chico
DR. J. O. CHIAPELLA, Eye, Ear, Nose and Throat.....	Chico
DR. V. E. GREER, Assistant Surgeon.....	Chico
DR. EUGENE KILGORE, Consultant.....	San Francisco
DR. ALSON R. KILGORE, Consultant.....	San Francisco
DR. C. E. SMITH, Consultant.....	San Francisco
DR. T. E. GIBSON, Consultant.....	San Francisco
DR. E. C. BULL, Consultant.....	San Francisco
DR. HOWARD FLEMING, Consultant.....	San Francisco
DR. W. B. PALAMOUNTAIN, Assistant Surgeon.....	Oakland
DR. T. C. LAWSON, Assistant Surgeon.....	Oakland
DR. ALBERT BOLES, Assistant Surgeon, Eye, Ear, Nose and Throat.....	Oakland
DR. EDWARD B. RADFORD, Assistant Surgeon.....	Walnut Creek
DR. ARTHUR H. BEEDE, Assistant Surgeon.....	Walnut Creek
DR. H. W. STIREWALT, Assistant Surgeon.....	Concord
DR. E. B. TODD, Consultant, Eye, Ear, Nose and Throat.....	Concord
DR. H. D. NEUFELD, Assistant Surgeon.....	Concord
DR. H. B. FLANDERS, Assistant Surgeon.....	Port Chicago
DR. L. C. GREGORY, Assistant Surgeon.....	Pittsburg
DR. DAVID C. WISE, Assistant Surgeon.....	Pittsburg
DR. M. P. STANSBURY, Assistant Surgeon.....	Vacaville
DR. A. P. FINAN, Assistant Surgeon.....	Suisun
DR. C. H. McDONNELL, Assistant Surgeon.....	Sacramento
DR. BERT S. THOMAS, Assistant Surgeon.....	Sacramento

DR. MAX C. ISOARD, Assistant Surgeon.....	Sacramento
DR. GUSTAVE WILSON, Assistant Surgeon.....	Sacramento
DR. G. A. SPENCER, Consultant, Eye, Ear, Nose and Throat.....	Sacramento
DR. MICHAEL J. LIPP, Assistant Surgeon.....	Sacramento
DR. HARRY H. BEAUCHAMP, Assistant Surgeon.....	Sacramento
DR. JOHN L. FANNING, Consultant, Skin Diseases.....	Woodland
DR. FRED FAIRCILL, Assistant Surgeon.....	Woodland
DR. W. J. BLEVINS, Assistant Surgeon.....	Woodland
DR. HOMER WOOLSEY, Assistant Surgeon.....	Woodland
DR. JOHN SCOTT, Assistant Surgeon.....	Colusa
DR. E. V. JACOBS, Assistant Surgeon.....	Meridian
DR. W. L. STEPHENS, Assistant Surgeon.....	Meridian
DR. G. W. STRATTON, Consultant.....	Marysville
DR. WM. L. CRUTCHETT, Assistant Surgeon.....	Marysville
DR. E. E. GRAY, Assistant Surgeon.....	Marysville
DR. PHILLIP B. HOFFMAN, Assistant Surgeon.....	Marysville
DR. STANLEY R. PARKINSON, Assistant Surgeon.....	Marysville
DR. F. B. LAWTON, Assistant Surgeon.....	Marysville
DR. B. F. MILLER, Assistant Surgeon.....	Yuba City
DR. E. A. KUSEL, Assistant Surgeon.....	Oroville
DR. F. M. WHITING, Assistant Surgeon.....	Oroville
DR. G. A. FROST, Assistant Surgeon.....	Oroville
DR. I. W. HIGGINS, Assistant Surgeon.....	Live Oak
DR. J. D. COULTER, Assistant Surgeon.....	Portola
DR. W. B. MCKNIGHT, Assistant Surgeon.....	Portola
DR. JOHN W. MOORE, Assistant Surgeon.....	Quincy

WATCH INSPECTORS

S. A. POPE, Manager of Time Service, San Francisco	
J. R. CHILDRESS.....	Oakland
A. C. GRIFFIN.....	Walnut Creek
H. A. MINASIAN.....	Pittsburg
H. T. HARGER.....	Sacramento
T. B. MONK.....	Sacramento
JAS. R. DUPEN.....	Chico
O. D. PAYNE.....	Woodland
J. D. POOLE.....	Marysville
R. A. WILLIAMS.....	Oroville
J. A. McMILLAN.....	Colusa
C. J. WIENER.....	Fairfield

TRAIN DISPATCHERS

G. A. Rogers	T. C. Morebeck	W. M. Bugbey
Relief Dispatcher: J. E. Chapman		
Chief Dispatcher: H. J. Prickett		

TRAINMASTER

W. R. PARKS.....	Sacramento
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SUPT. BRIDGE RAILWAY

F. E. SULLIVAN.....	San Francisco
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