

**DO IT
THE SAFE WAY
— OR DON'T DO IT**

TERMINAL SUPERINTENDENTS

J. H. BACHAR Oakland
J. F. BAYS San Francisco
W. B. BLEVINS San Jose

ASST. TERMINAL SUPERINTENDENTS

D. J. PAYNE Oakland
D. E. TORREY Oakland
E. C. FRIEND Oakland
H. C. BALLANCE Oakland
D. R. ANDERSON San Francisco
C. E. PEACOCK San Jose
G. A. JORDAN San Jose

TRAINMASTERS

M. H. HOWARD Martinez
H. F. FULKERSON Watsonville Jct.

ASSISTANT TRAINMASTERS

L. M. LAWSON Martinez
R. L. O'NEAL Martinez
C. S. HUNTER Oakland
J. P. RECEND Oakland
C. E. ISON Oakland
C. H. STROM Oakland
E. S. JOHNSON Mulford
R. J. MOWREY Warm Springs
J. J. DRAKE Warm Springs
J. F. GUERIN Warm Springs
R. B. GUTENBERGER San Jose
J. F. BURRIS Salinas
L. M. GORMAN Salinas
F. MAGAS San Francisco

ROAD FOREMEN OF ENGINES

W. D. BROADBENT Oakland
F. J. BROWN San Francisco
R. S. BAKER San Jose
A. E. JESS San Luis Obispo

ASSISTANT ROAD FOREMAN OF ENGINES

J. D. SLADE Oakland

CHIEF TRAIN DISPATCHERS

C. L. KENNEDY Roseville
D. E. SORENSON Roseville

**OPERATIONS ASSISTANTS TO
SUPERINTENDENT**

J. B. HARWELL Oakland
G. E. MYERS Oakland

GENERAL YARDMASTERS

G. H. ELLINGER Oakland
L. V. WILSON San Jose
F. A. BRUNZELL San Francisco

**SOUTHERN PACIFIC
TRANSPORTATION
COMPANY**



**WESTERN DIVISION
TIMETABLE**

8

**EFFECTIVE SUNDAY, APRIL 24, 1977
AT 12:01 A. M.**

PACIFIC STANDARD TIME

**FOR THE GOVERNMENT AND INFORMATION
OF EMPLOYEES ONLY**

R. L. KING,
Vice President and General Manager.

**W. J. LACY,
J. D. RAMSEY,**
Regional Operations Managers.

C. T. BABERS,
Assistant General Manager.

J. J. WILLIS,
Asst. Vice President - Transportation.

J. W. BREEN,
Manager Operations Planning & Control.

W. M. JONES,
Superintendent.

**O. D. GOODWILL,
D. M. MOHAN,
E. J. SEIL,**
Assistant Superintendents.

Timetable 7 eff 31 Oct 1976
9 30 Oct 1977

SAN FRANCISCO SUBDIVISION

WESTWARD

FIRST CLASS

Mile Post Location

Distance from Watsonville Jct.

STATIONS
SIDING CAPACITIES AND FACILITIES

0.0	TO-R SAN FRANCISCO	BIKYPQ
1.9	23rd STREET	
4.1	PAUL AVE.	
5.2	R BAYSHORE	BIKP
8.6	BUTLER ROAD	P
9.3	SO. SAN FRANCISCO	KPQ
11.6	SAN BRUNO	P
13.7	M-2150 MILLBRAE	P
15.2	BROADWAY	P
16.3	BURLINGAME	P
17.9	SAN MATEO	P
18.9	M-2750 HAYWARD PARK	P
20.3	HILLSDALE	P
21.9	BELMONT	P
23.2	M-2105 SAN CARLOS	P
25.4	REDWOOD CITY	KP
26.2	TO REDWOOD JCT.	BIKPYQ
27.8	ATHERTON	
28.9	MENLO PARK	
30.1	PALO ALTO	P
31.8	M-2150 CALIFORNIA AVE.	PY
34.8	CASTRO	
36.1	MOUNTAIN VIEW	
38.8	Yd. Lmts. SUNNYVALE	P
44.3	TO-R SANTA CLARA	IKPQ
45.2	SAN JOSE YARD	BKP
45.7	TO-R COLLEGE PARK	IPQ
46.9	TO-R SAN JOSE	BIKPQY
51.4	LICK	IP
55.3	COYOTE	P
63.1	6125 PERRY	P
66.3	6125 RUCKER	P
77.0	TO-R GILROY	BKPQ
80.7	CARNADERO	P
83.2	CORPORAL	P
86.4	Yd. Lmts. LOGAN	P
93.2	Yd. Lmts. TO-R WATSONVILLE JCT.	BKPQY
100.4		

Double Track

Automatic Block Signal System

	113	161	115	163	117	119	121	123	165
	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger
	Arrive Daily Ex. Sunday and Holidays	Arrive Sunday and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays	Ar. Saturday Ex. Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays
	AM	AM	AM	AM	AM	AM	AM	AM	AM
96.5	s 6.25	s 6.45	s 7.15	s 7.25	s 7.35	s 7.45	s 7.55	s 8.00	s 8.05
94.6	s	s	s	s	s	s	s		
92.4					s 7.21	s 7.32	s 7.39		s 7.55
91.3	s 6.13	s 6.31	s 7.00	s 7.12		s 7.28	s 7.36	s 7.47	s 7.53
87.9			s 6.55		s 7.14	s 7.23			s 7.48
87.2	s 6.08	s 6.25	s 6.52	s 7.06		s 7.20		s 7.41	s 7.46
84.9	s 6.05	s 6.22	s 6.47	s 7.02	s 7.09		s 7.28	s 7.36	s 7.42
82.8	s 6.02	s 6.19	s 6.43	s 6.59	s 7.05	s 7.13			s 7.39
81.3	s 5.59	s 6.16	s 6.40	s 6.56	s 7.01	s 7.09			s 7.36
80.2	s 5.56	s 6.14	s 6.37	s 6.53	s 6.58		s 7.22		s 7.34
78.6	s 5.53	s 6.11	s 6.34	s 6.50	s 6.55	s 7.04		s 7.28	s 7.31
77.6	s 5.50	s 6.09	s 6.31	s 6.48			s 7.17		s 7.28
76.2	s 5.48	s 6.07	s 6.28	s 6.46		s 6.59		s 7.23	s 7.26
74.6	s 5.45	s 6.05	s 6.25	s 6.44	s 6.49			s 7.19	s 7.23
73.3	s 5.42	s 6.03	s 6.22	s 6.42		s 6.54	s 7.10		s 7.20
71.1	s 5.38	s 6.00	s 6.18	s 6.39		s 6.50	s 7.06		s 7.16
70.3	s 5.36	s 5.58	s 6.16	s 6.37	s 6.43	s 6.47	s 7.03	s 7.13	s 7.14
68.7	s 5.34	s 5.56	s 6.14	s 6.35	s 6.41		s 7.01		s 7.12
67.6	s 5.31	s 5.54	s 6.11	s 6.33		s 6.44			s 7.10
66.4	s 5.28	s 5.52	s 6.08	s 6.31		s 6.41		s 7.08	s 7.07
64.7	s 5.25	s 5.49	s 6.05	s 6.29	s 6.35			s 7.04	s 7.04
61.7							s 6.52		
60.4	s 5.20	s 5.44	s 5.58	s 6.24	s 6.28	s 6.33		s 6.57	s 6.59
57.7	s 5.15	s 5.40	s 5.54	s 6.20		s 6.29	s 6.45		s 6.55
52.2	s 5.09	s 5.34	s 5.47	s 6.14	s 6.18	s 6.22	s 6.39	s 6.47	s 6.49
51.3									
50.8									
49.6	5.05 AM	5.30 AM	5.43 AM	6.10 AM	6.13 AM	6.18 AM	6.34 AM	6.43 AM	6.45 AM
45.1									
37.3									
34.1									
23.4									
19.7									
17.2									
14.0									
7.2									
0.0									
	Leave Daily Ex. Sunday and Holidays	Leave Sunday and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Lv. Saturday Ex. Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Sat. Sunday and Holidays
	113	161	115	163	117	119	121	123	165

RULE 5. Time applies at the location of station sign at stations between San Francisco and San Jose.
Time applies at the end of double track at Coyote and Gilroy, except that of eastward trains at Gilroy will apply at train-order signal.

RULE S-72. Exception: No. 12 is superior to No. 13.

(96.5)

SAN FRANCISCO SUBDIVISION

EASTWARD

FIRST CLASS

148	146	144	142	140	170	138	136	134	132	Mile Post Location
Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	
Leave Daily Ex. Sat., Sun. and Holidays	Leave Daily Ex. Saturday	Leave Daily Ex. Sunday and Holidays	Leave Daily Ex. Sat., Sun. and Holidays	Leave Daily Ex. Sat., Sun. and Holidays	Lr. Saturday Ex. Holidays	Leave Daily Ex. Sat., Sun. and Holidays	Leave Daily Ex. Sat., Sun. and Holidays	Leave Daily Ex. Sat., Sun. and Holidays	Leave Daily Ex. Sat., Sun. and Holidays	
PM 8.35	PM 7.10	PM 6.30	PM 6.00	PM 5.45	PM 5.20	PM 5.26	PM 5.23	PM 5.20	PM 5.17	0.0
				s 5.49	s 5.23					1.9
										4.1
s 8.43										5.2
										8.6
s 8.48		s 6.44	s 6.13		s 5.33	s 5.40				9.3
s 8.51	s 7.24	s 6.47	s 6.17	s 6.04	s 5.36	s 5.45				11.6
s 8.54	s 7.26	s 6.49	s 6.20	s 6.08	s 5.39	s 5.50				13.7
s 8.57	s 7.29	s 6.52	s 6.23	s 6.11	s 5.42	s 5.54				15.2
s 9.00	s 7.32	s 6.55	s 6.26	s 6.14	s 5.44		s 5.47			16.3
s 9.03	s 7.35	s 6.58	s 6.29	s 6.17	s 5.47		s 5.51			17.9
s 9.06	s 7.37	s 7.00	s 6.32	s 6.20	s 5.50	s 6.00				18.9
s 9.09	s 7.40	s 7.03	s 6.35	s 6.23	s 5.53		s 5.55			20.3
s 9.12	s 7.43	s 7.06	s 6.39	s 6.26	s 5.56			s 5.47		21.9
s 9.15	s 7.46	s 7.09	s 6.42	s 6.29	s 5.59			s 5.51		23.2
s 9.19	s 7.50	s 7.12	s 6.46	s 6.33	s 6.02	s 6.09			s 5.46	25.4
9.20	7.51	7.13	6.47	6.34	6.03	6.10	6.02	5.56	5.47	26.2
s 9.22	s 7.53	s 7.16	s 6.50	s 6.38	s 6.05	s 6.14		s 5.59		27.8
s 9.25	s 7.56	s 7.19	s 6.53	s 6.41	s 6.07		s 6.07		s 5.53	28.9
s 9.28	s 7.59	s 7.22	s 6.56	s 6.44	s 6.10		s 6.10		s 5.57	30.1
s 9.31	s 8.02	s 7.25	s 6.58	s 6.47	s 6.13	s 6.20		s 6.06	s 6.00	31.8
								s 6.10		34.8
s 9.37	s 8.08	s 7.31	s 7.04	s 6.54	s 6.19	s 6.27	s 6.18		s 6.07	36.1
s 9.41	s 8.12	s 7.35	s 7.08	s 6.59	s 6.22	s 6.31	s 6.22		s 6.12	38.8
s 9.48	s 8.18	s 7.41	7.14	s 7.06	s 6.29	s 6.38	6.28	s 6.22	s 6.19	44.3
										45.2
										45.7
s 9.55 PM	s 8.25 PM	s 7.47 PM	s 7.21 PM	s 7.14 PM	s 6.35 PM	s 6.46 PM	s 6.36 PM	s 6.30 PM	s 6.27 PM	46.9
										51.4
										55.3
										63.1
										66.3
										77.0
										80.7
										83.2
										86.4
										93.2
										100.4
Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Saturday	Arrive Daily Ex. Sunday and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Ar. Saturday Ex. Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	Arrive Daily Ex. Sat., Sun. and Holidays	
148	146	144	142	140	170	138	136	134	132	

RULE 5. Time applies at the location of station sign at stations between San Francisco and San Jose.
Time applies at the end of double track at Coyote and Gilroy, except that of eastward trains at Gilroy will apply at train-order signal.

STATIONS SIDING CAPACITIES AND FACILITIES

Yard Limits	TO-R SAN FRANCISCO	BIKPYQ	96.5
	1.9		
	23rd STREET		94.6
	2.2		
	PAUL AVE.		92.4
	1.1	BIKP	
	BAYSHORE		91.3
	3.4	P	
	BUTLER ROAD		87.9
	0.7	KPG	
SO. SAN FRANCISCO		87.2	
2.3	P		
SAN BRUNO		84.9	
M-2150	2.1	P	
MILLBRAE		82.8	
1.5	P		
BROADWAY		81.3	
1.1	P		
BURLINGAME		80.2	
1.6	P		
SAN MATEO		78.6	
M-2750	1.0	P	
HAYWARD PARK		77.6	
1.4	P		
HILLSDALE		76.2	
1.6	P		
BELMONT		74.6	
M-2105	1.3	P	
SAN CARLOS		73.3	
2.2	KP		
REDWOOD CITY		71.1	
0.8	BIKPYQ		
TO REDWOOD JCT.		70.3	
1.6			
ATHERTON		68.7	
1.1			
MENLO PARK		67.6	
1.2	P		
PALO ALTO		66.4	
M-2150	1.7	PY	
CALIFORNIA AVE.		64.7	
3.0			
CASTRO		61.7	
1.3			
MOUNTAIN VIEW		60.4	
Yd. Lmts. 2.7	P		
SUNNYVALE		57.7	
5.5	IKPQ		
TO-R SANTA CLARA		52.2	
0.9	BKPKQ		
SAN JOSE YARD		51.3	
0.5	IPQ		
TO-R COLLEGE PARK		50.8	
1.2	BIKPYQ		
TO-R SAN JOSE		49.6	
4.5	IP		
LICK		45.1	
7.8	P		
COYOTE		37.3	
6125	3.2	P	
PERRY		34.1	
6125	10.7	P	
RUCKER		23.4	
3.7	BKPKQ		
TO-R GILROY		19.7	
2.5	P		
CARNADERO		17.2	
3.2	P		
CORPORAL		14.0	
Yd. Lmts. 6.8	P		
LOGAN		7.2	
Yd. Lmts. 7.2	BKPYQ		
TO-R WATSONVILLE JCT.		0.0	

(96.5)

SAN FRANCISCO SUBDIVISION

WESTWARD

FIRST CLASS

125	127	129	131	133	135	137	167	139	141	169	143	145	171	147
Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger
Arrive Daily Ex. Sat. Sun. and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays	Ar. Saturday Ex. Holidays	Arrive Daily Ex. Sunday and Holidays	Arrive Daily	Arrive Sunday and Holidays	Arrive Daily Ex. Sunday and Holidays	Arrive Daily Ex. Sunday and Holidays	Arrive Sunday and Holidays	Arrive Daily Ex. Sat. Sun. and Holidays
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM
s 8.05	s 8.09	s 8.13	s 8.20	s 8.40	s 8.50	s 9.18	s 9.35	s 10.05	s 11.30	s 11.55	s 12.50	s 2.05	s 3.05	s 4.15
			s 8.11											
										s 11.40		s 1.50	s 2.53	s 4.04
s 7.49				s 8.24	s 8.35	s 9.02	s 9.15			s 11.35		s 1.45	s 2.47	s 3.59
				s 8.20	s 8.30	s 8.58	s 9.11		s 11.10	s 11.30	s 12.30	s 1.42	s 2.42	s 3.54
s 7.42			s 7.58		s 8.26	s 8.55	s 9.08		s 11.07	s 11.28	s 12.27	s 1.39	s 2.39	s 3.51
s 7.38				s 8.14	s 8.23	s 8.52	s 9.06	s 9.43	s 11.04	s 11.25	s 12.24	s 1.37	s 2.36	s 3.48
	s 7.45			s 8.11		s 8.50	s 9.04	s 9.40	s 11.02	s 11.23	s 12.22	s 1.35	s 2.34	s 3.46
	s 7.41			s 8.07	s 8.19	s 8.47	s 9.01	s 9.37	s 10.59	s 11.20	s 12.19	s 1.32	s 2.31	s 3.43
	s 7.38			s 8.05			s 8.59							
		s 7.46		s 8.02	s 8.15	s 8.43	s 8.57	s 9.31	s 10.55	s 11.17	s 12.15	s 1.27	s 2.27	s 3.40
		s 7.43		s 7.59	s 8.12	s 8.40	s 8.55		s 10.52	s 11.15	s 12.12	s 1.24	s 2.25	s 3.37
s 7.27			s 7.45	s 7.56	s 8.09	s 8.37	s 8.53	s 9.26	s 10.49	s 11.13	s 12.09	s 1.21	s 2.23	s 3.34
	s 7.29		s 7.41	s 7.52	s 8.06	s 8.34	s 8.50	s 9.23	s 10.45	s 11.10	s 12.05	s 1.18	s 2.20	s 3.31
7.21	7.27	7.36	7.39	7.49	8.04	8.32	8.48	9.20	10.43	11.08	12.03	1.15	2.18	3.29
s 7.19		s 7.34		s 7.47	s 8.02	s 8.30	s 8.46	s 9.18	s 10.41	s 11.06	s 12.01	s 1.13	s 2.16	s 3.27
s 7.16				s 7.44	s 8.00	s 8.27	s 8.44	s 9.15	s 10.38	s 11.04	s 11.58	s 1.10	s 2.14	s 3.24
		s 7.29		s 7.41	s 7.57	s 8.24	s 8.42	s 9.12	s 10.35	s 11.02	s 11.55	s 1.07	s 2.12	s 3.21
	s 7.18		s 7.29	s 7.38		s 8.21	s 8.39	s 9.10	s 10.32	s 10.59	s 11.52	s 1.04	s 2.09	s 3.18
		s 7.17												
	s 7.11		s 7.23	s 7.32	s 7.48	s 8.16	s 8.34	s 9.05	s 10.26	s 10.54	s 11.46	s 12.59	s 2.04	s 3.12
s 7.02		s 7.11	s 7.17	s 7.27		s 8.11	s 8.30	s 9.01	s 10.22	s 10.50	s 11.42	s 12.55	s 2.00	s 3.08
6.54	s 7.00	7.04	s 7.10	s 7.21	7.39	s 8.05	s 8.24	8.56	s 10.15	s 10.44	s 11.35	s 12.49	s 1.55	s 3.01
6.50	6.55	7.00	7.04	7.17	7.35	8.00	8.20	8.52	10.10	10.40	11.30	12.45	1.50	2.57
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM

RULE 5. Time applies at the location of station sign at stations between San Francisco and San Jose.

Time applies at the end of double track at Coyote and Gilroy, except that of eastward trains at Gilroy will apply at train-order signal.

Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Leave Daily Ex. Sat. Sun. and Holidays	Lv. Saturday Ex. Holidays	Leave Daily Ex. Sunday and Holidays	Leave Daily	Leave Sunday and Holidays	Leave Daily Ex. Sunday and Holidays	Leave Daily Ex. Sunday and Holidays	Leave Sunday and Holidays	Leave Daily Ex. Sat. Sun. and Holidays
125	127	129	131	133	135	137	167	139	141	169	143	145	171	147

WESTERN DIVISION TIMETABLE No. 8, APRIL 24, 1977

6

SAN FRANCISCO SUBDIVISION

EASTWARD

WESTWARD

FIRST CLASS 150 Passenger	Station Number	Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Distance from Watsonville Jct.	FIRST CLASS						
					149 Passenger	173 Passenger	13 Passenger	151 Passenger	153 Passenger	175 Passenger	155 Passenger
Leave Daily					Arrive Daily Ex. Sat. Sun. and Holidays	Ar. Saturday Ex. Holidays	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Sunday and Holidays	Arrive Daily
PM 10.00	31000	0.0	TO-R SAN FRANCISCO ^{BKIPYQ}	96.5	PM 5.10	PM 5.50		PM 6.45	PM 8.40	PM 9.45	PM 11.20
	31050	1.9	1.9 23rd STREET	94.6							
	31055	4.1	2.2 PAUL AVE.	92.4							
s 10.08	31060	5.2	1.1 R BAYSHORE ^{BIKP}	91.3	s 4.58			s 6.35		s 9.33	s 11.07
	31070	8.6	3.4 BUTLER ROAD ^P	87.9							
s 10.13	31075	9.3	0.7 SO. SAN FRANCISCO ^{KPQ}	87.2	s 4.53	s 5.32		s 6.30	s 8.21	s 9.27	s 11.02
s 10.16	31085	11.6	2.3 SAN BRUNO ^P	84.9	s 4.48	s 5.27		s 6.25	s 8.17	s 9.21	s 10.57
s 10.19	31205	13.7	M-2150 2.1 MILLBRAE ^P	82.8	s 4.45	s 5.24		s 6.22	s 8.14	s 9.18	s 10.54
s 10.22	31209	15.2	1.5 BROADWAY ^P	81.3	s 4.42	s 5.21		s 6.19	s 8.11	s 9.15	s 10.51
s 10.25	31211	16.3	1.1 BURLINGAME ^P	80.2	s 4.39	s 5.19		s 6.17	s 8.09	s 9.13	s 10.49
s 10.28	31218	17.9	1.6 SAN MATEO ^P	78.6	s 4.36	s 5.16		s 6.13	s 8.06	s 9.10	s 10.46
s 10.31	31222	18.9	M-2750 1.0 HAYWARD PARK ^P	77.6	s 4.33			s 6.09			
s 10.34	31229	20.3	1.4 HILLSDALE ^P	76.2	s 4.30	s 5.12		s 6.07	s 8.01	s 9.07	s 10.42
s 10.37	31233	21.9	1.6 BELMONT ^P	74.6	s 4.27	s 5.10		s 6.04	s 7.58	s 9.05	s 10.39
s 10.40	31237	23.2	M-2105 1.3 SAN CARLOS ^P	73.3	s 4.24	s 5.08		s 6.01	s 7.55	s 9.03	s 10.36
s 10.44	31240	25.4	2.2 REDWOOD CITY ^{KP}	71.1	s 4.21	s 5.05		s 5.57	s 7.51	s 9.00	s 10.33
10.45	31250	26.2	0.8 TO REDWOOD JCT. ^{BIKPYQ}	70.3	4.19	5.03		5.55	7.49	8.58	10.31
s 10.47	31305	27.8	1.6 ATHERTON	68.7	s 4.17	s 5.01		s 5.53	s 7.47	s 8.56	s 10.29
s 10.50	31310	28.9	1.1 MENLO PARK	67.6	s 4.14	s 4.59		s 5.50	s 7.45	s 8.54	s 10.27
s 10.53	31315	30.1	1.2 PALO ALTO ^P	66.4	s 4.12	s 4.57		s 5.47	s 7.42	s 8.52	s 10.24
s 10.56	31320	31.8	M-2150 1.7 CALIFORNIA AVE. ^{PY}	64.7	s 4.09	s 4.54		s 5.44	s 7.39	s 8.49	s 10.21
	31325	34.8	3.0 CASTRO	61.7							
s 11.02	31330	36.1	1.3 MOUNTAIN VIEW	60.4	s 4.03	s 4.49		s 5.38	s 7.34	s 8.44	s 10.15
s 11.06	31335	38.8	Yd. Lmts. 2.7 SUNNYVALE ^P	57.7	s 3.59	s 4.45		s 5.32	s 7.30	s 8.40	s 10.11
s 11.13	32000	44.3	5.5 TO-R SANTA CLARA ^{IKPQ}	52.2	s 3.53	s 4.39	PM 7.26	s 5.25	s 7.24	s 8.34	s 10.05
	32010	45.2	0.9 SAN JOSE YARD ^{BKPQ}	51.3							
	32015	45.7	0.5 TO-R COLLEGE PARK ^{IPQ}	50.8	s 3.50			s 5.22			
s 11.20 PM	32020	46.9	1.2 TO-R SAN JOSE ^{BIKPYQ}	49.6	3.48 PM	4.35 PM	s 7.20	5.20 PM	7.20 PM	8.30 PM	10.00 PM
	32115	51.4 55.3	4.5 LICK ^{IP}	45.1							
	32140	63.1	7.8 COYOTE ^P	37.3							
	32145	66.3	6125 3.2 PERRY ^P	34.1							
	32160	77.0	6125 10.7 RUCKER ^P	23.4							
	32170	80.7	3.7 TO-R GILROY ^{BKPQ}	19.7							
	32180	83.2	2.5 CARNADERO ^P	17.2							
	32310	86.4	3.2 CORPORAL ^P	14.0							
	32330	93.2	Yd. Lmts. 6.8 LOGAN ^P	7.2							
	32350	100.4	Yd. Lmts. 7.2 TO-R WATSONVILLE JCT. ^{BKPYQ}	0.0							
Arrive Daily			(96.5)		Leave Daily Ex. Sat. Sun. and Holidays	Lv. Saturday Ex. Holidays	Leave Daily	Leave Daily	Leave Daily	Leave Sunday and Holidays	Leave Daily
150					149	173	13	151	153	175	155

RULE 5. Time applies at the location of station sign at stations between San Francisco and San Jose. Time applies at the end of double track at Coyote and Gilroy, except that of Eastward trains at Gilroy will apply at train-order signal.
 RULE S-72. Exception: No. 12 is superior to No. 13.

SAN FRANCISCO SUBDIVISION

EAST-WARD		Station Number	WEST-WARD	
Mile Post Location			Distance from San Jose	
Vasona Branch				
STATIONS				
SIDING CAPACITIES AND FACILITIES				
46.9	Yd. Lmts. { TO-R 2000	SAN JOSE BIKPYQ P	32020	0.0
50.7			CAMPBELL P	32040
52.9	830	VASONA P	32045	6.0
48.2			CHAMPAGNE FOUNTAIN	32050
45.2			32055	10.4
43.8			32060	13.2
41.0			32070	16.2
38.0				
41.6				
(16.2)				

EAST-WARD		Station Number	WEST-WARD		
Mile Post Location			Distance from So. San Francisco		
San Bruno Branch					
STATIONS					
SIDING CAPACITIES AND FACILITIES					
9.3	Yard Limits {	SO. SAN FRANCISCO KPQ	31075	0.0	
14.1			5.6	31120	5.6
8.5			1.1	31125	6.7
7.4					
(6.7)					

EAST-WARD		Station Number	WEST-WARD		
Mile Post Location			Distance from Alamo		
Lick Branch					
STATIONS					
SIDING CAPACITIES AND FACILITIES					
51.4	Yd. Lmts. {	LICK IP	32115	3.6	
55.3			3.6	32120	0.0
58.9					
(3.6)					

EAST-WARD		Station Number	WEST-WARD	
Mile Post Location			Distance from Olympia	
Santa Cruz Branch				
STATIONS				
SIDING CAPACITIES AND FACILITIES				
100.4	Yard Limits { TO-R	WATSONVILLE BKPQ	32350	28.9
100.5			WATSONVILLE JCT.	32400
102.0			32450	8.8
120.6	340	FELTON P	32480	2.0
127.4			OLYMPIA	32490
129.4				
(28.9)				

EAST-WARD		Station Number	WEST-WARD	
Mile Post Location			Distance from Hollister	
Hollister Branch				
STATIONS				
SIDING CAPACITIES AND FACILITIES				
83.2	580 Yd. Lmts.	CARNADERO P	32180	11.7
94.9			11.7	32220
(11.7)				

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
San Bruno Branch			
.. ..	13.0	Tanforan	31105
.. ..	11.4	Baden	31110
.. ..	10.0	Carroll	31115
Santa Cruz Branch			
.. ..	112.8	Aptos	32415
340E	P 115.9	Capitola	32420
.. ..	119.4	Stauffer	32435
.. ..	120.1	Casino	32440
785	.. 121.8	Eblis	32470
Hollister Branch			
1080	.. 86.0	Bolsa	32205

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
.. ..	P 6.9	Brisbane	31065
720W	.. 16.8	Howest	31214
60W	.. 19.7	Romac	31225
.. E	.. 27.3	Stauffer	31243
.. E	.. 28.7	Redwood Harbor ..	31247
.. E	P 49.3	Luther Jet	32105
.. 51.0	Luther (on spur 1.7 mile from Luther Jet.) ..	32110
820E	P 59.0	Oak Grove	32135
1600	P 70.8	Morgan Hill	32150
1750	P 74.6	San Martin	32155
4395E	P 87.1	Sargent	32320
525W	P 97.1	Eaton	32340

EAST-WARD		Station Number	WEST-WARD	
Mile Post Location			Distance from Davenport	
Davenport Branch				
STATIONS				
SIDING CAPACITIES AND FACILITIES				
120.6	Yd. Lmts. {	SANTA CRUZ YP	32450	11.5
79.2			11.5	32460
90.7				
(11.5)				

WESTERN DIVISION TIMETABLE No. 8, APRIL 24, 1977

8

SALINAS SUBDIVISION

EASTWARD		Mile Post Location	Station Number	Distance from San Luis Obispo	WESTWARD	
FIRST CLASS					FIRST CLASS	
12	Passenger				13	Passenger
Leave Daily					Arrive Daily	
AM 10.25		100.4		151.7	PM 6.12	
		110.4		141.7		
s 10.51		118.2		133.9	s 5.52	
10.56		120.3		131.8	5.41	
11.05		129.1		123.0	5.33	
11.10		135.1		117.0	5.27	
11.16		143.6		108.5	5.20	
11.20		148.3		103.8	5.15	
11.38		163.7		88.4	4.58	
11.46		172.4		79.7	4.49	
AM 11.56		182.9		69.2	4.38	
PM 12.07		189.7		62.4	4.30	
12.16		195.9		56.2	4.23	
12.25		203.8		48.3	4.13	
		207.0		45.1		
12.33		210.9		41.2	4.04	
12.39		216.3		35.8	3.58	
12.46		221.8		30.3	3.51	
12.53		228.0		24.1	3.43	
1.00		235.5		16.6	3.34	
		238.9		13.2		
		243.4		8.7		
		246.3		5.8		
		248.0		4.1		
		250.6		1.5		
s 1.40		252.1		0.0	2.56	
					PM	
Arrive Daily					Leave Daily	
12					13	

STATIONS		SIDING CAPACITIES AND FACILITIES	
Yd. Lmts.	TO-R	BKPQ	
WATSONVILLE JCT.			
6300	10.0	P	
CASTROVILLE			
No. 1-6615 No. 2-3280 BKPQ			
TO-R SALINAS 7.8			
6300	2.1	PY	
SPRECKELS JCT.			
5780	8.8	P	
CHUALAR			
5635 Yd. Lmts. 6.0			
GONZALES			
No. 1-7450 Yd. Lmts. 8.5			
No. 2-2500 SOLEDAD			
4800	4.7		
HARLEM			
6300 Yd. Lmts. 15.4			
TO KING CITY KPQ			
4975	8.7		
SAN LUCAS			
5780	10.5		
SAN ARDO			
4700	6.8		
WUNPOST			
5150	6.2		
BRADLEY			
No. 1-5000 7.9			
No. 2-3770 McKAY			
1620	3.2		
SAN MIGUEL			
4750	3.9		
WELLSONA			
2650 Yd. Lmts. 5.4			
TO PASO ROBLES KPQ			
4700	5.5		
TEMPLETON			
5585	6.2		
HENRY			
W-19015 Yd. Lmts. 7.5			
SANTA MARGARITA			
5830	3.4		
CUESTA			
5750	4.5		
SERRANO			
5100	2.9		
CHORRO			
1760	1.7	Y	
GOLDTREE			
2.6			
HATHAWAY			
Yd. Lmts. 1.5			
TO-R SAN LUIS OBISPO BKPQ			
(151.7)			

Automatic Block Signal System

Centralized Traffic Control

EASTWARD	Mile Post Location	STATIONS	Station Number	Distance from Lake Majella	WESTWARD
Monterey Branch					
SIDING CAPACITIES AND FACILITIES					
	Yd. Lmts.	TO-R	P		
110.4	3430	CASTROVILLE		32520	19.6
119.2	8.8	ORD		32620	10.8
123.3	4.1	SEASIDE		32635	6.7
124.9	1.6	DEL MONTE		32645	5.1
125.7	1470 0.8	MONTEREY		32650	4.3
128.3	2.6	PACIFIC GROVE		32660	1.7
130.0	1.7	LAKE MAJELLA		32670	0.0
	(19.6)				

RULE 5. Time applies for westward trains at Monterey at west switch of storage track.

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
Monterey Branch			
5635E ..	114.8	Lapis..... (Spur)	32610
..	117.3	Marina.....	32615
640E ..	122.1	Pratto..... (Spur)	32630
1325E ..	129.9	Asilomar.....	32665

RULE 5. Salinas. Time applies for first-class trains at No. 2 siding, for other westward trains at west end No. 1 siding, and for other eastward trains at east end No. 2 siding.
Soledad. Time applies at No. 1 siding.
McKay. Time applies at No. 1 siding.

RULE S-72. Exception: No. 12 is superior to No. 13.

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
3770	107.7	Moss Landing.....	32513
5290	113.9	Cooper.....	32710
980	125.3	Spence.....	33005
1290E	138.8	Molus..... (Spur)	33021
1910	140.6	Camphora.....	33024
1910	152.3	Metz.....	33043
4165E	161.0	Elsa..... (Spur)	33055
1765	167.1	Welby.....	33105
2840E	226.5	Atascadero..... (Spurs)	33215
500W	226.8		

EASTWARD	Mile Post Location	STATIONS	Station Number	Distance from Spreckels	WESTWARD
Spreckels Branch					
SIDING CAPACITIES AND FACILITIES					
120.3	Yd. Lmts.	PY			
	SPRECKELS JCT.		32730	2.5	
122.8	2.5	P			
	SPRECKELS		32740	0.0	
	(2.5)				

NILES SUBDIVISION

EAST-WARD	Mile Post Location	MULFORD LINE	Station Number	Distance from Oakland (16th Street)	WEST-WARD
FIRST CLASS		STATIONS			FIRST CLASS
12		SIDING CAPACITIES AND FACILITIES			13
Passenger					Passenger
Leave Daily					Arrive Daily
AM					PM
8.05	3.9	OAKLAND (16th Street) KIPQ	30145	0.0	S 8.45
8.09	4.9	TO-R WEST OAKLAND 1.0 BKIYPQ	30200	1.0	8.27
	5.9	MAGNOLIA TOWER 1.0 KIP		2.0	
	9.7	TO FRUITVALE 3.8 KIYPQ	30245	5.8	
8.32	13.4	ELMHURST 3.7 P	30260	9.5	8.06
8.36	15.5	Yd. Lmts. 2.1 BKPQ	30304	11.6	8.02
8.43	20.2	MULFORD 4.7 P	30309	16.3	7.56
8.47	25.3	RUSSELL 3725 Yd. Lmts. 5.1 P	30319	21.4	7.52
8.55	30.6	ALVARADO 5440 TO-R 5.3 IYPQ	30530	26.7	7.45
8.59	34.1	3920 ALBRAE 3.5 P	30605	30.2	7.40
	39.1	5.0 ALVISO P	30612	35.2	
9.06	41.7	2570 AGNEW 2.6 P	30620	37.8	7.32
9.12 AM	44.8	Yd. Lmts. 3.1 KIPQ	32000	40.9	7.26 PM
Arrive Daily		TO-R SANTA CLARA (40.9)			Leave Daily
12					13

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
.. P	8.3	Santa Clara Line	
.. ..	10.3	East Oakland.....	30240
.. ..	11.8	Alameda ... (On Spur)	30250
.. ..	17.8	Melrose ... (On Spur)	30255
1130 P	21.5	Robert.....	30307
.. P	23.0	Mt. Eden.....	30312
.. P	36.5	Baumberg.....	30315
.. P	29.5	Drawbridge.....	30609
.. ..	30.9	Tracy Line	
6370W P	30.9	Henderson.....	30510
1000E P	40.35	Ravenswood... (Spur)	30515
940W ..	30.9	Centerville... (Spur)	30535
4175 ..	46.9	Dresser..... (Spur)	25105
420E P	63.1	Livermore.....	25130
.. P	16.5	Midway..... (Spur)	25155
.. P	32.8	Hayward Line	
980 P	34.3	Estudillo.....	30407
460 P	43.3	Milpitas Line	
.. ..	44.9	Irvington.....	30706
.. ..	45.0	Snoyboy.....	30711
.. ..		Wayne..... (Spur)	30731
.. ..		North San Jose.....	30735
.. ..		Maybury.....	30740

RULE 5. Newark. Time on Elmhurst-Santa Clara line applies at siding east of station building.

Santa Clara-Newark line time will apply at junction switch, Santa Clara.

RULE S-72. Exception: No. 12 is superior to No. 13.

EAST-WARD	Mile Post Location	TRACY LINE	Station Number	Distance from Tracy	WEST-WARD
		STATIONS			
		SIDING CAPACITIES AND FACILITIES			
	26.2	Yd. Lmts. TO-R REDWOOD JCT. 2.4 KIYPQ	31250	58.7	
	28.6	BELLE HAVEN 3.9 P	30505	56.3	
	32.5	S. F. BAY DRAWBRIDGE 5100 Yd. Lmts. 4.7 IP	30520	52.4	
	37.2	TO-R NEWARK 3870 4.5 P	30530	47.7	
	41.7	SHINN 0.7 KIYPQ	30540	43.2	
	42.4	TO-R NILES TOWER 0.6 KIYPQ	30550	42.5	
	43.0	NILES JCT. 4645 6.0 P	30555	41.9	
	29.6	SUNOL 5.3 P	25114	35.9	
	35.6	PLEASANTON 1.1 IYP	25121	30.6	
	40.9	RADUM 5100 TO-R 1.0 BKQP	25124	29.5	
	42.0	TO-R EAST PLEASANTON 4225 Yd. Lmts. 5.4 P	25126	28.5	
	43.0	TREVARNO 4613 Yd. Lmts. 6.6 P	25138	23.1	
	48.4	ALTAMONT 16.5 BKIYPQ	25142	16.5	
	55.0	TO-R TRACY (58.7)	25300	0.0	
	71.5				

EAST-WARD	Mile Post Location	HAYWARD LINE	Station Number	Distance	WEST-WARD
		STATIONS			
		SIDING CAPACITIES AND FACILITIES			
	13.4	ELMHURST P	30260	16.2	
	14.8	1.4 SAN LEANDRO P	30403	14.8	
	17.5	2.7 SAN LORENZO	30409	12.1	
	20.1	5005 TO 2.6 HAYWARD BKQP	30414	9.5	
	26.5	1630 6.4 DECOTO P	30425	3.1	
	29.2	3450 2.7 NILES Y	30555	0.4	
	29.6	0.4 NILES JCT.	30555	0.0	
	43.0	(16.2)			
		MILPITAS LINE			
	29.2	NILES Y	30555	18.5	
	29.8	0.6 TO-R NILES TOWER KIYPQ	30550	17.9	
	36.3	4030 TO 6.5 WARM SPRINGS KPQ	30720	11.4	
	40.7	6820 TO 4.4 MILPITAS KPQ	30727	7.0	
	47.7	Yd. Lmts. 7.0 SAN JOSE YARD BKIYPQ	32010	0.0	
	45.2	(18.5)			
		Stonehurst Branch			
	13.4	ELMHURST P	30260	0.9	
	14.3	0.9 STONEHURST	30270	0.0	
		(0.9)			

RULE 5. Tracy. Time to and from Niles and Martinez Subdivisions, applies at Crossover MP 72 on Stockton Subdivision.

Belle Haven. Time applies at end of double track.
San Jose Yard. Time applies at Junction switch for Milpitas Line.

Niles. Time for westward trains via Decoto applies at Junction switch located 550 feet west of station building.

MARTINEZ SUBDIVISION

EASTWARD						Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	Distance from Sacramento	WESTWARD
FIRST CLASS										711
			14	710	6				Passenger	
			Passenger	Passenger	Passenger				Arrive Daily	
			Leave Daily	Leave Daily	Leave Daily					
						4.4		87.0		
						4.9		87.1		
			PM 9.10	AM 9.30	PM 1.00	5.5	TO-R WEST OAKLAND	30200	PM 6.00	
						7.0	OAKLAND (16th St.)	30145		
						9.2	SHELLMOUND	30139		
						15.0	BERKELEY	30128		
						23.0	RICHMOND	30100		
						28.9	W-5440 PINOLE	30035		
						29.0	E-4590 CROCKETT	30015		
						33.1	M-5720 OZOL	30002		
			s 9.54	s 10.15 AM	s 1.45	34.7	TO MARTINEZ	23820	5.05 PM	
						31.7	M E-7545 6.3 W-5625 BAHIA	23813		
						38.0	W-2390 Yd. Lmts. 10.9 BKYPQ	23513		
			10.10		2.01	48.9	TO-R SUISUN-FAIRFIELD	23345		
						59.4	M-4370 Yd. Lmts. 10.5 P	23345		
						67.5	ELMIRA	23335		
						75.6	M-3750 Yd. Lmts. 8.1 P	23335		
			s 10.39 PM		2.24	75.6	DIXON	23323		
						89.0	E-3890 W-6205 Yd. Lmts. BKYPQ	23323		
							TO-R N-3351 DAVIS 8.1	23050		
			Arrive Daily	Arrive Daily	Arrive Daily		Yd. Lmts. 13.4 BKIYPQ			
							TO-R SACRAMENTO		Leave Daily	
							(87.0)			
			14	710	6				711	

RULE 5. Suisun-Fairfield. Time applies for trains en route to Schellville Branch at east switch of north siding.

Davis. Time applies at station sign except time applies for No. 14 at east switch north siding.

EASTWARD	Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	Distance from Tracy	WESTWARD
FIRST CLASS					FIRST CLASS
710					711
Passenger					Passenger
Leave Daily					Arrive Daily
AM 10.15	34.7	TO MARTINEZ IPQ	23820	48.2	PM 5.05
	36.0	1.3 MOCOCO	25005	46.9	
	38.1	2.1 AVON YP	25010	44.8	
10.35 AM	41.3	4915 R PORT CHICAGO Y	25200	41.6	4.50 PM
	48.9	4995 Yd. Lmts. 7.6 TO-R PITTSBURG KPQ	25250	34.0	
	50.8	1.9 LOS MEDANOS Y	25273	32.1	
	61.7	2250 Yd. Lmts. 10.9 BRENTWOOD	25287	21.2	
	66.9	4155 5.2 BYRON P	25291	16.0	
	82.9	Yd. Lmts. 16.0 TO-R TRACY BKIYPQ	25300	0.0	
71.5		(48.2)			
Arrive Daily					Leave Daily
710					711

ADDITIONAL STATIONS				
Capacity and Direction of entry into spurs	Mile Post	NAME	Station Number	
Sacramento Line				
..	3.5	Oakland Pier.....	30147	
..	6.6	Emeryville.....	30142	
..	7.4	Pabco.....	30135	
..	7.8	Stockyards.....	30131	
..	13.1	Steger.....	30122	
..	16.6	San Pablo.....	30045	
1225E	18.9	Giant..... (Spur)	30043	
..	23.8	Hercules.....	30031	
1700E	25.5	Rodeo..... (Spur)	30027	
3655E	26.3	Oleum..... (Spur)	30025	
2990W	27.1	Tormey..... (Spur)	30021	
3650W	27.5	Selby..... (Spur)	30017	
..	33.8	Army Point.. (on Spur)	23817	
..	32.4	Benicia..... (on Spur)	23819	
..	51.9	Tolenas.....	23509	
..	55.4	Cannon.....	23505	
2105E	69.6	Sucro..... (Spur)	23331	
340E	71.8	Tremont..... (Spur)	23328	
880W	79.1	Swingle..... (Spur)	23315	
..	80.4	Webster.....	23312	
..	86.3	Mikon.....	23305	
..	88.1	West Sacramento.....	23095	
Tracy Line				
1935W	43.0	Nichols..... (Spur)	25225	
..	44.8	McAvoy.....	25230	
2350W	46.8	Shell Point.....	25240	
657E	53.5	Antioch.....	25277	
..	55.8	Newlove.....	25281	
..	79.1	Janney..... (Yd. Lmts.)	25298	

RULE 5. Tracy. Time to and from Niles and Martinez Subdivisions, applies at crossover MP 72 on Stockton Subdivision.

Port Chicago. Time for Nos. 710 and 711 applies at ATSF interchange conn. MP 40.8.

Mococo. Time applies at end of double track.

MARTINEZ SUBDIVISION

WESTWARD

FIRST CLASS

11	5								
Passenger	Passenger								
Arrive Daily	Arrive Daily								
AM 7.40	PM 3.30								
6.50	2.20								
6.21	1.38								
5.58 AM	1.15 PM								
	1.00 PM								
Leave Daily	Leave Daily								
11	5								

Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	WEST-WARD Distance
Schellville Branch			
48.9	N-4855 Yd. Lmts. BKYPQ		
48.5	TO-R SUISUN-FAIRFIELD	23513	24.8
61.4	Yd. Lmts. { 1920 12.9 Y		
61.0		NAPA JCT.	23540
62.0	TO-R { 4950 1.0 KPQ		
		LOMBARD	23710
64.7	Yd. Lmts. { 2.7 I		
		BRAZOS	23715
72.5	R { 7.8 Y		
72.8		SCHELLVILLE	23730
(24.4)			

Vallejo Branch					
Yard Limits {	1920	NAPA JCT.	YP	23540	7.1
	1030	2.8			
		FLOSDEN		23660	4.3
		4.3			
		VALLEJO	K	23680	0.0
(7.1)					

Napa Branch					
Yard Limits {	1920	NAFA JCT.	Y	23540	27.5
	2535	8.3			
		NAPA		23611	19.2
		2.3			
		UNION		23614	16.9
	325	16.9			
		KRUG		23637	0.0
(27.5)					

San Ramon Branch						
Yd. Lmts. {	38.1	R	Yd. Lmts. { 19.6 Y	AVON	25010	29.7
	57.7			SAN RAMON	25054	10.1
	63.6		1030 { 5.9	DOUGHERTY	25061	4.2
	67.8		4.2 IYP	RADUM	25124	0.0
(29.7)						

Winters Branch							
Yd. Lmts. {	59.4			ELMIRA	P	23345	8.4
	59.6			8.4			
	68.0			END OF BRANCH			0.0
(8.4)							

Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
Schellville Branch			
2800 Y	51.1	Busch.....	23516
1985 ..	54.2	Cordelia.....	23522
Napa Branch			
2105 ..	66.8	Rocktram.....	23607
..	74.2	Oak Knoll.....	23617
305E ..	78.0	Yountville..... (Spur)	23622
..	81.5	Oakville.....	23627
..	83.4	Rutherford.....	23629
440E ..	86.1	Thomann..... (Spur)	23632
900 ..	87.6	St. Helena.....	23635
Winters Branch			
315E ..	63.7	Vacaville.....	23405
..	67.5	Vaca Valley.....	23412
San Ramon Branch			
..	41.0	Galindo.....	25020
1160 ..	42.5	Concord.....	25030
940 ..	45.1	Hookston.....	25034
..	45.8	Las Juntas.....	25037
325 ..	48.2	Walnut Creek.....	25041
..	52.6	Alamo.....	25047
..	54.8	Danville.....	25051
..	66.4	Asco.....	25070

RULE 5. Suisun-Fairfield.
Time applies for trains enroute to Schellville Branch at east switch of north siding.

Davis. Time applies at station sign except time applies for No. 14 at east switch north siding.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS**DEFINITIONS****Holidays:**

New Year's Day, January 1,
 Washington's Birthday, third Monday in February,
 Decoration Day, last Monday in May,
 Independence Day, July 4,
 Labor Day, first Monday in September,
 Veteran's Day, November 11,
 Thanksgiving Day, fourth Thursday in November,
 Christmas Day, December 25.

Note. ADD:

Flammable Compressed Gas (FCG): also applies to Flammable Gas (FG).

RULE A. Current Rules and Regulations of the Transportation Department were effective October 31, 1976.

RULE C. First paragraph will not become effective until further notice.

RULE 1. Until further advised that equipment has been installed for purpose of setting "Standard Clocks", standard time will temporarily continue to be obtained, as in the past, from authorized observatory through time checks.

RULE 7-C. Trains or engines entering or leaving yard tracks, and engines on engine tracks, San Francisco, Bayshore, San Jose, Watsonville Jct., West Oakland and Magnolia Tower must not proceed unless proceed signal is received, green flag by day, green light by night, or engineer is orally authorized by yardmaster or his representative, except trains departing in either direction from Main Tracks 3 and 4, Freight leads 1 and 2 and Desert Unit Oakland will be governed by signal indication.

RULE 21. Trains handling loads of excess dimensions covered by train order must be identified within CTC, Interlocking limits and on double track.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction.

RULE 81-A. Item (f) is revised to read:

(f) View of track for entire length of block to be occupied and to end of adjoining block in both directions.

RULE 81-A. Where electric or mechanical switch locks are installed, be governed by instructions posted in telephone booths, on doors or on housings of electric or mechanical switch lock.

RULE 98. At interlocked railroad crossings at grade, cars or engines must not be cut off nor left within interlocking limits in such a way as to foul any part of the crossing frogs.

RULE 102. Should a passenger train break in two or an emergency application of brakes occur while in motion on grade, head brakeman will immediately go toward rear, close angle cock at opening if train has parted, apply hand brakes,

and turn up retaining valves on detached portion. After train is coupled air must be applied from engine before hand brakes and retaining valves are released.

If necessary to leave detached portion on main track, rear truck of detached portion on ascending grade or lead truck of detached portion on descending grade must be blocked or chained in such manner as to derail car should there be an uncontrolled movement.

RULE 103. Except as otherwise provided in this rule or by other Special Instructions or timetable bulletins, a public grade crossing which is blocked by a stopped train, other than a passenger train, must be opened within 10 minutes, unless no vehicle or pedestrian is waiting at the crossing. Such a cleared crossing must be left open until it is known that trains are ready to depart. When recoupling at public crossings trains shall be moved promptly consistent with safety.

Switching movements over public grade crossings should be avoided whenever reasonably possible. If not reasonably possible, such crossings must be cleared frequently to allow a vehicle or pedestrian to pass and must not be occupied continuously for longer than 10 minutes unless no vehicle or pedestrian is waiting at the crossing.

In the event of any uncontrolled blockage involving more than one grade crossing and a peace officer is on the scene, primary consideration shall be given to the clearing of that crossing which, in the peace officer's judgment, will result in minimum delay to vehicular traffic.

Train or yard crew member of a train blocking a public crossing shall immediately take all reasonable steps, consistent with the safe operation of such train, to clear the crossing upon receiving information from a peace officer, member of any fire department, or operator of an emergency vehicle, that emergency circumstances require the clearing of the crossing.

In the event of any uncontrolled blocking not otherwise provided for in this rule, crossing shall be cleared with reasonable dispatch.

RULE 104-D. Running switches will be made only when in the judgment of the conductor it is necessary and with his personal supervision.

RULES 201 and 221-A. Train orders will be issued by authority and over initials of Chief Train Dispatcher C. L. Kennedy and OK'd clearances must bear initials of Chief Train Dispatcher C. L. Kennedy.

RULE S-244. At locations where movement of extra trains or engines are authorized by use of train register, all lines of each page of the train register must be used and filled in before turning and starting a new page.

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. Where signal protection is provided for movements from an adjacent track to main track, push buttons and lights are installed in box near each of the two signals, with time-release feature, to clear signals on one track when the control circuit on the other track is occupied.

Train on main track to let train on siding pass may clear signal on siding by pressing button bearing number of signal on siding. Train on siding to let train on main track pass should not pass APPROACH CIRCUIT sign, but when necessary to do so, may clear signal on main track by pressing button bearing number of signal on main track.

Further instructions posted inside push-button box.

RULE 508. Is revised to read:

Expect as provided in Rules 509, 663 or 744, when an automatic block signal governing movement ON SINGLE TRACK WITHIN YARD LIMITS displays stop indication, train or engine, after stopping, may proceed at RESTRICTED SPEED under one of the following conditions:

- (a) When a preceding train is seen in the block and intervening track is seen to be clear.
- (b) When view of track is clear to end of second block.
- (c) When no movement is seen or heard approaching, train or engine must be moved forward until leading wheels are past insulated joints at the signal and wait five minutes at that point.

RESTRICTED SPEED must not be exceeded until rear of train or engine has passed out of block.

LETTER-TYPE INDICATORS

RULE 705. For information concerning letter-type indicators in connection with Hot Box Detectors and their appurtenances refer to Rule 827, All Subdivisions.

GENERAL REGULATIONS

RULE 812. Section entitled "Safety Rules", pages II-1 through II-12, and portion of section entitled "Emergency Procedures" on pages III-4 through III-6, contained in Amtrak's Manual of Instructions for Conductors and Trainmen in Amtrak Service, do not apply to employees of Southern Pacific Transportation Company.

RULE 825. At terminals where instructions require application of hand brakes on freight trains, outgoing crews must not release hand brakes until road engine is coupled and brake system charged.

Many new cars are equipped with truck mounted brakes. The hand brake is effective on these cars on "B" end only. It will be necessary to check "B" end of these cars to determine that hand brake has been released.

Rail skids are hung on posts at locations listed under subdivisions. When using rail skid it must be placed on rail and leading wheel of first car in descending direction run onto rail skid and hand brakes applied, if brakes are operative, before engine is detached. Train crews picking up cars from these locations must remove rail skid, return to proper location and lock in place where lock is provided.

RULE 827. Engines running light on descending grade without dynamic brake in operation must stop a sufficient length of time to permit wheel heat radiation if there is INDICATION OF OVERHEATING.

When trains are stopped by hot box detectors, dragging and/or derailed equipment detectors at locations where bridges, trestles, etc. are not provided with walkways train may be moved slowly ahead a sufficient distance to permit inspection.

DRAGGING AND/OR DERAILED EQUIPMENT DETECTORS

Where dragging and/or derailed equipment detectors are installed as listed under subdivisions, revolving red beacon will be mounted on hot box detector house, on post or relay case adjacent to detector and will be normally dark. When dragging and/or derailed equipment detector is activated, the revolving red light will be displayed.

Unless otherwise provided revolving red beacon will apply to trains in both directions, and when activated enginemen or trainmen must stop train promptly in accordance with Air Brake Rule 5. Sec.D. and make inspection of train and track, advising train dispatcher of conditions found.

**ROLLER BEARINGS
LOOSE OR MISSING CAP SCREWS**

During inspection by trainmen, if any roller bearing is found with one cap screw loose or missing and hot box detector has not been activated and check with tempilstick reveals no overheated condition, train may proceed to the next terminal where car must be set out.

Under the same circumstances, when two or more roller bearing cap screws are found loose or missing, train may proceed with caution to the first available track where car must be set out.

HOT BOX DETECTORS

Four basic types of Hot Box Detectors are utilized. Crew members are to be familiar with the types and locations of these detectors.

Hot box detector scanner sites have a white light continuously displayed on track side of instrument house, except when a hot bearing is detected, at which time light will start flashing. Crew members must be alert for the light and, when flashing, conductor and engineer must immediately orally compare observation when means of communication is available.

Absence of white light must be promptly reported to train dispatcher and does not require train inspection.

TYPE A. LETTER "H" INDICATOR WITH DIGITAL READ-OUT.

When letter "H" is illuminated or it is known hot bearing has been detected by crew member observing the flashing white light at scanner site, train must be brought to immediate stop and inspection made to determine that it is safe to proceed. Where possible, inspection must be made before passing over switches or structures. After inspection, train must not exceed 15 MPH from point of inspection until stop is made at location of readout locator and be governed by instructions posted inside case.

Member of crew must make a physical count of axles from rear of train to axle indicated by digital readout and when hot bearing is not located then all journals of car indicated by detector as well as five cars on either side of the car involved must be inspected.

Unless entire train has previously been inspected after stopping for detector, all journals of train must be inspected when "H" is illuminated provided any of the following conditions exist:

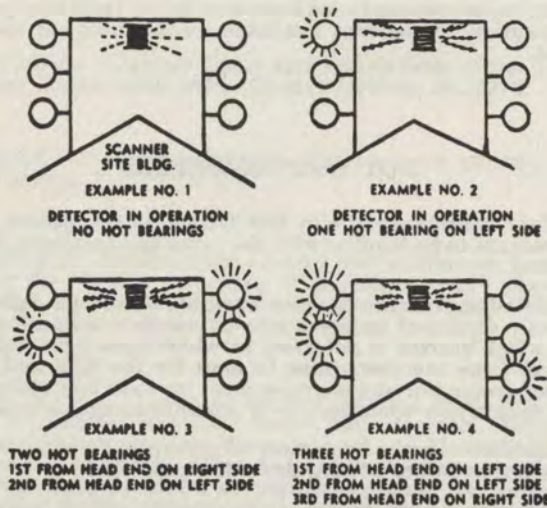
1. No count shown on readout locator.
2. Red light below readout mark "Locator Out of Service" is illuminated.
3. Digital readout locator displays erroneous indication such as a duplication of numbers.
4. Numbers displayed exceed the number of axles in train.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

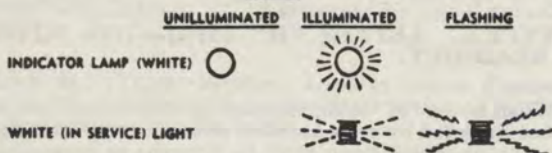
After inspection has been completed train dispatcher must be notified of condition found. When it is safe to proceed, member of crew must push button below indicator panel to cancel numbers on the indicator. Case door must be closed and secured with switch lock.

When letter "W" is displayed it is an indication that preceding train has stopped due to a hot bearing indication but has not cancelled out system. Following trains must stop and not proceed until light is extinguished or permission is obtained from train dispatcher. After stopping, speed of 10 MPH or more should be obtained if possible before passing over detector provided restrictions permit.

TYPE B. LIGHT INDICATOR ARRAY & WHEEL SPRAY.



LEGEND



Detector instrument house is equipped with indicator array consisting of white lights as shown in diagram.

White light at top center of indicator array will be continuously displayed except when a hot bearing has been detected, at which time light will start flashing. Absence of white light must be promptly reported to train dispatcher.

Three vertical white lights are located on each side of indicator array. Lights on right side will be displayed for hot bearings on right side of train, and lights on left side will indicate hot bearings on left side of train, in direction of movement. Top light indicates first hot bearing, second light indicates second hot bearing, and third light indicates third hot bearing. Lights will indicate a maximum of three hot bearings on each train.

Truck of car with hot bearing will be sprayed with fluorescent dye marker for identification.

Crew members must be alert when passing these locations, and if hot bearing is detected, train must be stopped promptly, and inspection made to locate car with hot bearing.

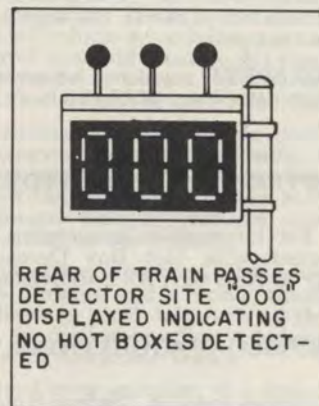
All bearings on car marked, as well as car ahead, must be inspected.

When indicator array indicates hot bearings on train, and no dye marker is observed, all bearings of train must be inspected.

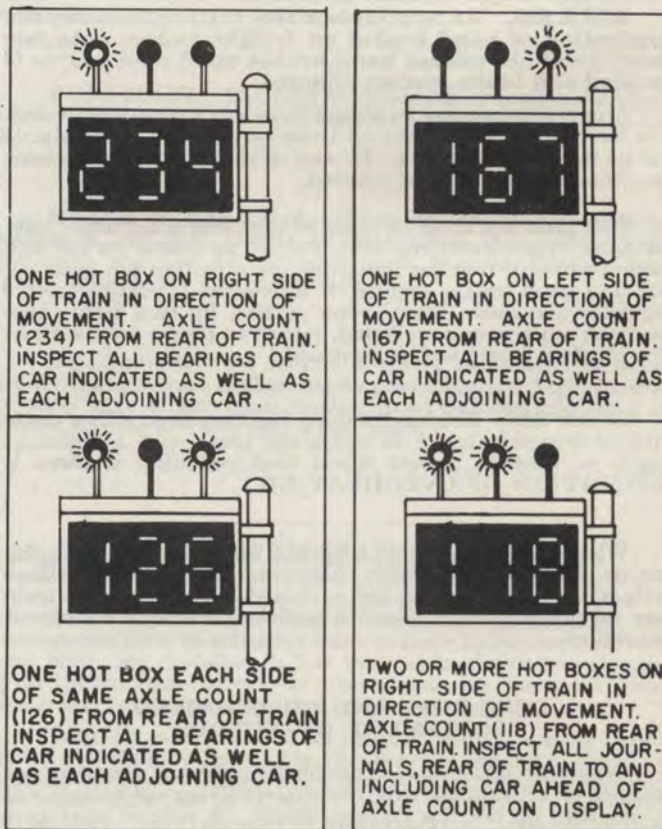
TYPE C. MONITOR DISPLAY BOARD WITH INDICATOR LIGHTS.

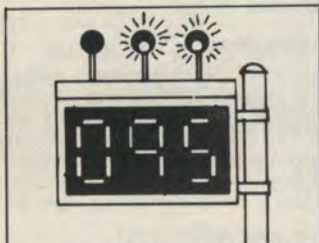
A Monitor Display Board and hot box indicator lights, as shown in diagram, are mounted on a signal mast at side of track. The display board is illuminated as train passes and will display zeros in the absence of a hot bearing. Two seconds after the train passes the detector, the display board will display numerals indicating the accumulated axle count from the hot bearing to the rear of the train.

Absence of any numerical display after passage of a train must be promptly reported to train dispatcher.

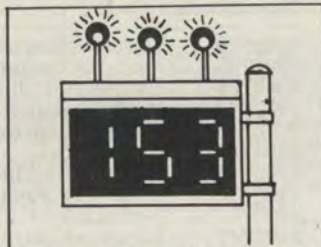


The indicator lights are normally dark, but when hot bearing is detected, will display flashing white aspect as illustrated below:





TWO OR MORE HOT BOXES ON LEFT SIDE OF TRAIN IN DIRECTION OF MOVEMENT. AXLE COUNT (095) FROM REAR OF TRAIN. INSPECT ALL JOURNALS, REAR OF TRAIN TO AND INCLUDING CAR AHEAD OF AXLE COUNT ON DISPLAY.



ONE OR MORE HOT BOXES ON EACH SIDE OF TRAIN. AXLE COUNT (153) FROM REAR OF TRAIN. INSPECT ALL JOURNALS ON BOTH SIDES, REAR OF TRAIN TO AND INCLUDING CAR AHEAD OF AXLE COUNT ON DISPLAY.

LEGEND

UNILLUMINATED

FLASHING

INDICATOR LAMP



As the train passes the detector, the right or left hot box indicator light on top of the board starts to flash immediately upon detection of a hot journal, indicating the side of the train having the overheated journal.

A flashing indicator light in the center indicates that another hot bearing (or bearings) was detected subsequent to the hot bearing which is numerically indicated on the display board.

When any indicator light displays flashing white aspect, train must be stopped promptly and inspection made to locate car with hot bearing.

Lights and illuminated numerals will automatically cancel out 90 seconds after entire train passes detector.

When hot bearing is not located then all journals of car indicated by detector as well as five cars on either side of the car involved must be inspected.

When it is known hot bearing has been detected by crew member observing the flashing white light displayed on track side of instrument house, and a numerical readout is not displayed on the display board, then train must be stopped promptly and all bearings of train must be inspected.

TYPE D. REMOTE READOUT BY RECORDER AT TERMINAL.



Instrument House

Readout is by recorder located at nearby terminal as shown under Rule 827 on each subdivision.

When white light is flashing on instrument house, train must be stopped promptly and when means of communication is available, crew member must contact personnel at location of recorder to determine location of hot bearing. If location of hot bearing cannot be determined by personnel at recorder, inspection must be made of all bearings.

Terminal personnel at recorder will advise train crew of location of overheated journal, location will be given as number of cars from caboose and location of journals from trailing end of car right or left: 1, 2, 3, 4 such as "R-3."

If lead truck of lead locomotive does not appear on tape, train crew is to be advised to carefully hand feel this truck.

If location of journal is furnished by personnel at recorder, but defect cannot be found, inspect all bearings of indicated car as well as all bearings of five cars on either side.

CHECKING FOR JOURNALS SUSPECTED OF OVERHEATING

Whenever an overheated journal is suspected due to hot box detector activation, rolling inspection or visual symptoms, a walking inspection must be made to find the exact car and journal and to observe for other physical defects on the train.

For roller bearing cars special attention must be given to proper use of tempilstiks, loose or missing cap screws, temperature sensitive cap screws and loose or leaking seals.

For plain bearing cars, look for low oil; brass, pad or wedge defective or out of place, or water in journal box.

REPORTING OF HOT BOXES

When hot box detectors are actuated the following information is to be reported at next terminal in telegraph message form identified by symbol H.B. addressed jointly to **Superintendent, Division Engineer, Signal Supervisor, and Chief Train Dispatcher, also General Manager Amtrak, San Francisco** when an Amtrak passenger train is involved.

1. Date and time stopped and M.P. location.
2. Train identification.
3. Car number and location in train (whether or not defect found).
4. Box location (1, 2, 3 or 4 from hand brake end of car, right or left side facing hand brake).
5. Disposition of car: If set out, state where. If inspection shows that it was not necessary to set out even though bearing was warm enough to activate the detector, advise what corrective action was taken to permit movement of car. If roller bearing equipped, so state.

NOTE: Report all cases where train passes over the detector without an indication having been displayed, but develops a hot bearing between detector and a point 20 miles beyond detector.

Whenever a roller bearing car experiences two successive hot box detector actuations and overheated journal or other cause of actuation cannot be found after required inspections were made and five cars checked either side, car may be continued in train with provision that conductor must report same at next terminal and inspection is made by qualified maintenance personnel.

Train dispatcher to notify terminal of mandatory inspection when brought to his attention.

If a roller bearing car experiences three successive hot box detector actuations, it must be set out.

Train dispatcher must:

1. Notify Car Department of cars set out.
2. Notify Car Department of cars which are known to have had two successive hot box detector actuations.
3. Submit CS-7159A "Preliminary Report of Overheated Journals" whenever hot box is experienced except if on actuation of type "D" yard approach hot box detector.

Connecting crews, if any, must be notified by incoming crew of failure to locate hot bearing if indication is received on any hot box detector system and car is not set out.

CONTINUOUS WELDED RAIL (CWR) TRAINS

Continuous welded rail trains consist of a tiedown car and a number of roller-rack cars and may contain other cars, such as thresher cars and elevator cars to accompany movement. A steel-end box car, refrigerator car, or high-side gondola car must be positioned on each end of CWR train as a buffer car during all movements except preparatory to and during unloading.

In addition to other requirements of this rule, when a CWR train is stopped for any reason, inspection must immediately be made of as much of train as practicable and the following items checked if train is carrying a full or partial load:

- a. Check for undesired movement of rail. The tops of rails are painted adjacent to the tiedown rack on the tiedown car which is located near center of train. Paint marks on each tier of rail must be in line; otherwise, this is an indication of an undesired movement of rail.
- b. Check each rail end to make certain it overhangs the last supporting roller by at least 12 feet and is no closer than 12 feet from the next empty roller. Rails are marked 12 feet from each end.
- c. When a load contains continuous lengths of rail made up of more than one piece, check to see that rail joints are secured with at least four bolts, properly tightened, and that rail ends have not pulled apart.
- d. Check coupler operating levers to make certain they are in position to prevent uncoupling and that coupler operating lever locking devices are in position and locked.

When any of these conditions are not as required, train must not be moved until train dispatcher has been contacted and further instructions are received.

RULE 827-A. FLAMMABLE COMPRESSED GAS.

Following are shipping names of Flammable Compressed Gas.

Standard Transportation Classification Code	Shipping Name
4905705 . . .	Butadiene, inhibited (butadiene from alcohol)
4905704 . . .	Butadiene, inhibited (butadiene from petroleum)
4905703 . . .	Butadiene, inhibited (butadiene, impure, for further refining)
4905706 . . .	Butane
4905706 . . .	Liquefied petroleum gas (butane)
4905702 . . .	Butane (butane, impure, for further refining)
4905702 . . .	Liquefied petroleum gas (butane, impure, for further refining)
4905727 . . .	Compressed gases, n.o.s. (dispersant gases, nec. flammable)
4905748 . . .	Compressed gases, n.o.s. (iso-butene)
4905775 . . .	Compressed gases, n.o.s. (refrigerants, nec. liquid, flammable)
4905713 . . .	Cyclopropane
4905716 . . .	Difluoroethane
4905719 . . .	Difluoromonoethane

Standard Transportation Classification Code	Shipping Name
4905510 . . .	Dimethylamine, anhydrous
4905725 . . .	Dimethyl ether
4905734 . . .	Ethylene
4905749 . . .	Hydrocarbon gas, liquefied
4905749 . . .	Liquefied hydrocarbon gas
4905746 . . .	Hydrogen
4905745 . . .	Hydrogen, liquefied
4905410 . . .	Hydrogen sulfide
4905747 . . .	Isobutane
4905747 . . .	Liquefied petroleum gas (isobutane)
4905750 . . .	Isobutane (isobutane for further refinery processing)
4905750 . . .	Liquefied petroleum gas (isobutane for further refinery processing)
4905752 . . .	Liquefied petroleum gas
4905707 . . .	Liquefied petroleum gas (butene gas, liquefied)
4905711 . . .	Liquefied petroleum gas (butylene, impure for further refining)
4905780 . . .	Liquefied petroleum gas (pintsch gas)
4905758 . . .	Methylacetylene—propadiene, stabilized
4905761 . . .	Methyl chloride
4905764 . . .	Methyl chloride—methylene chloride mixture
4905520 . . .	Methyl mercaptan
4905530 . . .	Monomethylamine, anhydrous
4905781 . . .	Propane
4905781 . . .	Liquefied petroleum gas (propane)
4905785 . . .	Trifluorochloroethylene
4905540 . . .	Trimethylamine, anhydrous
4905792 . . .	Vinyl chloride
4905795 . . .	Vinyl methyl ether, inhibited

When necessary to provide helper engine for trains handling tank cars containing Flammable Compressed Gas, helper engine must be placed in accordance with helper service instructions and there must be a proper separation of the helper engine from tank cars containing Flammable Compressed Gas.

Unless specifically authorized by Superintendent, trains or cuts of cars containing Flammable Compressed Gas must not exceed 8,000 feet.

RULE 829. In addition to other train inspection requirements, when a train stops to be met or passed by a continuous welded rail train, the CWR train must also be inspected to determine rails are in position in the roller racks, that ends of continuous rail are not closer than 12 feet from the next empty roller and that they overhang the last supporting roller by at least 12 feet, and to see that cars are properly coupled with locking devices in place.

RULE 834. Loaded multi-level cars in other than solid trains must be entrained at least four cars behind working locomotives in road movement; also loaded multi-level cars must not be entrained next to hopper, gondola or tank cars loaded with stone, gravel, sand, lime, coal, soda ash, chemicals, etc., subject to wind, vapor, or fume action on adjacent cars, nor placed next to empty cars previously loaded with such commodities. Loaded multi-level cars must not be entrained next to open-top loads of lumber, poles, steel, etc., when lading extends beyond top of car.

Open-top cars with lading height exceeding 15 feet six inches, except cars transporting highway trucks or trailers, multi-level freight cars either loaded or unloaded, and automobile underframe cars, shall be entrained at least five cars distance from engine or caboose if length of train permits on train operating in or through the States of California, Nevada and Arizona.

Additionally, in California, wood chip cars transporting wood chips when loaded and covered in such a manner so as to preclude any material from being dislodged enroute, are exempted from restrictions above.

RULE 874. Forward brakeman on freight trains will ride the lead unit when a seat is available.

AIR BRAKE RULES

RULE 3. A full independent brake application on road engine classes EP636, GF628, EF630, EF636, EF642, GF630, GF633, and EF623 results in a brake cylinder pressure of 72 lbs. This brake cylinder pressure must be maintained to provide required braking power at very low speeds or when stopped. Under no circumstances must self-lapping portion of independent brake valve be changed except to obtain brake cylinder pressure of 72 lbs. from a full independent brake application.

RULE 9. The following series of cars are equipped with ABEL brake system which has automatic change-over feature to provide proper brake function when car is loaded and when empty:

- SSW 75700-75799 Gondolas
- SSW 78500-78599 Hoppers (Open Top)
- SP 333500-334399 Gondolas
- SP 337500-337599 Gondolas
- SP 345000-345669 Gondolas
- SP 354000-354749 Gondolas
- SP 463500-464899 Hoppers (Open Top)
- SP 467500-467549 Hoppers (Open Top)
- SP 480000-480193 Hoppers (Open Top)
- SP 491000-491059 Hoppers (Covered)
- SP 492000-492039 Hoppers (Covered)
- SP 500604 Flat Car
- SP 590000-590099 Flat Cars

The following series of cars are equipped with ABDEL brake system, which has automatic change-over feature to provide proper brake function when car is loaded and when empty. This feature is fully automatic on these series and requires no action on part of engineer:

- SP 337600-337699 Gondolas
- SP 354750-355299 Gondolas
- SP 463337-463486 Hoppers (Open Top)
- SP 464000-465699 Hoppers (Open Top)
- SP 590100-590131 Flat Cars (Anode)
- SP 595500-595624 Cradle Flats

RULE 17. When dynamic brakes are not used on helper engine(s), tonnage of such engine(s) must be added to that of train in determining the number of retaining valves required.

RULE 21. Coupling caboose and road engine to train will be considered as an indication that train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the road engine and caboose have been attached without instructions from the yardmaster, who will see that members of the crew are notified in advance.

RULE 27. First paragraph is revised to read:

Refer to Rule 102 of the Rules and Regulations of the Transportation Department regarding procedures when a train or engine with a cut of cars, in motion, on main track, or siding has an emergency application of air brakes.

RULE 33. When tonnage exceeds 80 tons per operative brake, the following trains: UPSFF, UPSFT, BROAT, OABRT, OAOGF when consisting of not more than 50% multi-level equipment may be authorized, by train order, to operate at maximum speed otherwise allowed but not exceeding speed shown in the following table:

Number of Cars	TONS PER OPERATIVE BRAKE	
	between 80 & 85	between 85 & 90
1 to 50.....	55 MPH*	55 MPH*
51 to 60.....	55 MPH*	55 MPH*
61 to 65.....	55 MPH*	55 MPH
65 to 70.....	55 MPH‡	
71 to 80.....	50 MPH	

*65 MPH for UPSFT only.
‡60 MPH for UPSFT only.

In all other cases not covered in the above table, Air Brake Rule 33 will apply.

Speed restrictions in grade territories in excess of 1.8% designated by Superintendent under subdivisions must be complied with.

MISCELLANEOUS

1. HELPER SERVICE

The following covers engine tractive effort in pounds:

Engine Model	Classification	Starting Tractive Effort
C 415	AS415.....	62,750
RS 11	AS418-1 to 6.....	65,000
RS 32	AS420.....	63,750
C 630	AS600-1.....	102,000
RSD 15	AS624-1.....	92,500
C 628	AS628-2.....	97,750
C 630	AS630-1.....	101,000
GP 9	EF418-1 to 9; EF418C-1-2; EF418E-1-2-3.....	64,200
GP 20	EF420-1-2; EF 420C-1-2.....	65,100
GP 30	EF423-1; EF423C-1.....	66,100
GP 35	EF425-1 to 4; EF425C-1-2-3.....	66,000
GP 40	EF430C-1.....	67,560
SD 9	EF618-1 to 5; EF618E-1-2.....	89,700
SD 39	EF623-1-2.....	104,150
SD 35	EF625-1.....	95,540
SD 40	EF630-1-2.....	102,750
SD 40-2	EF630-3-4.....	102,100
SD 45	EF636-1 to 6; EF636C-1 to 5.....	103,470
SD 45-2	EF636-7 to 10-12-15; EF636C-6 to 9.....	102,600
SD 45X	EF642-1-2.....	103,240
DD 35	EF850B-1.....	131,750
GP 40P-2	EF430-1.....	70,200
SDP 45	EP636-1.....	102,500
SW 1200	ES412.....	62,250
SW 1500	ES415-1 to 6.....	65,000
MP 15	ES415-7.....	65,400
SD 7	ES615-1 to 4.....	82,500
SD 38	ES620-1.....	104,000
U 25 B	GF425-1-2-3.....	67,800
U 28 B	GF428-1.....	67,890
U 28 C	GF628-1.....	103,120
U 30 C	GF630-1-2.....	104,850
U 33 C	GF633-1 to 10.....	104,710
U 50	GF850.....	139,250

NOTE: For classification of engines, see Item 3.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

A. Rule for entraining one helper engine:

- (1) On trains of less than 100 cars, helper engine consisting of not more than two six-axle operating units totaling 179,400 pounds tractive effort nor more than two four-axle operating units totaling 135,600 pounds tractive effort or a combination of one four-axle and one six-axle operating unit totaling 157,600 pounds tractive effort may be placed behind caboose.
- (2) On trains of 100 or more cars helper engine consisting of only one unit may be placed behind caboose.
- (3) Helper engine that does not qualify under (1) or (2) must be entrained as near as practicable to shove 1/3 and pull 2/3 of tonnage handled by helper engine.

B. Rule for entraining more than one helper engine:

- (1) Trains having more than one helper engine must have each engine entrained as near as practicable so that it will shove 1/3 and pull 2/3 of tonnage handled.
- (2) Trains powered with two helper engines, one of which qualifies to be placed behind caboose, must entrain the swing helper as near as practicable to shove 1/3 and pull 2/3 of tonnage handled by the swing helper.

C. Air must be cut in on all helper engines and helper engine must not be coupled nor uncoupled while train is in motion.

D. Road engineer and helper engineer must communicate any change affecting the operation of their train when means of communication is available. When speed is being held above 8 MPH on ascending grade, helper engineer must regulate amperage during speed reductions or speed increases to maintain the amperage indicated before speed change; if speed of train drops below 8 MPH or when coming to a stop on ascending grade, helper engineer must regulate amperage during speed reduction to maintain the amperage indicated before speed change, then close throttle just before train stops.

E. When speed of trains powered with 12,000 or more horsepower on the head end and with helper engine drops below 16 MPH, road engineer must reduce throttle to Run 6.

When train speed drops below 16 MPH, head end power being reduced to Run 6 may result in helper power working in short time rating. The short time rating must not be exceeded. If it appears that short time rating will be exceeded, assistance must be requested from train dispatcher. If assistance cannot be obtained, grade must be doubled.

F. Trailing tonnage must not exceed that amount of tonnage listed under column "Maximum Tonnage to be Handled by Road Engine With Helper Entrained" for territory over which helper will be used. Should the amount of tonnage computed exceed the maximum tonnage listed, it may be necessary to isolate road units or add helper power. If practical, isolate units behind the lead unit leaving operating units next to the train. Weight of those units isolated and separated from the train by operating units need not be added to train weight in computing location of helper.

If units have to be isolated next to the train, weight of these units must be added to the train when computing location of the helper.

If units are moved dead in consist, they should be placed next to the train and their weight added to the tonnage of the train.

UNLESS OTHERWISE RESTRICTED MAXIMUM TONNAGE TO BE HANDLED BY ROAD ENGINES WITH HELPERS ENTRAINED:

TERRITORY

San Luis Obispo (W)	4,250
Santa Margarita (E)	4,500
Niles-East Pleasanton (E)	8,500
Suisun-Fairfield-Lombard (E&W)	8,000

UNLESS OTHERWISE RESTRICTED MAXIMUM TONNAGE TO BE HANDLED BEHIND HELPER ENGINES:

TERRITORY

San Luis Obispo (W)	3,812
Santa Margarita (E)	4,500
Niles-East Pleasanton (E)	7,225
Suisun-Fairfield-Lombard (E&W)	6,800

G. In locating helper engine(s) in train, the following example of calculating tonnage for road engine and helper engine(s) will be used:

EXAMPLE:

Train: 42 loads, 87 empties = 5756 tons.
 Four-unit road engine (2-GF630, 1-EF623, 1-EF625).
 Three-unit helper engine (2-EF623, 1-EF630).

Total road horsepower	10800
Total helper horsepower	7600
Total horsepower	18400

(1) Divide total horsepower by tonnage =

$$\frac{18400}{5756} = 3.196 \text{ HP/T}$$

(2) Divide road horsepower by HP/T factor =

$$\frac{10800}{3.196} = 3379 \text{ tons}$$

 Road engine will handle 3379 tons

(3) Divide helper horsepower by HP/T factor =

$$\frac{7600}{3.196} = 2377 \text{ tons}$$

(4) To determine 1/3 of helper tonnage divide

$$\frac{2377}{3} = 792 \text{ tons}$$

 Helper engine will shove 792 tons.

(5) To determine 2/3 of helper tonnage multiply 792 x 2 = 1584 tons
 Helper engine will pull 1584 tons.

(6) Under no circumstances should the tonnage that will trail the helper engine exceed that amount indicated in the chart.

(7) Should tonnage trailing road or helper engine, as computed above, exceed the amount indicated in the chart it will be necessary to:

- (a) Reduce tonnage or
- (b) Relocate helper in compliance with instructions. (Item D under General) or,
- (c) Add additional helper(s) of sufficient horsepower to handle tonnage in excess of amounts indicated in chart. Additional helper(s) may be placed behind caboose if they meet requirements of item A 1., if not they are to be entrained as follows:

EXAMPLE:

Train: 170 loads, 2 empties = 13,980 tons
 Three-unit road engine (1-EF630, 1-EF636, 1-GF633).
 Four-unit swing helper (1-EF630, 2-EF636, 1-GF633).
 Two-unit rear helper (1-EF618, 1-EF630).

Total road horsepower	9900
Total swing helper horsepower	13500
Total rear helper horsepower	4800
Total horsepower	28200

(1) Divide total horsepower by tonnage =

$$\frac{28200}{13980} = 2.017 \text{ HP/T}$$

(2) Divide road horsepower by HP/T factor = $\frac{9900}{2.017} = 4908$ tons
Road engine will handle 4908 tons.

(3) Divide swing helper horsepower by HP/T factor = $\frac{13500}{2.017} = 6693$ tons
Swing helper will handle 6693 tons (total).

(4) To determine 1/3 of swing helper tonnage = $\frac{6693}{3} = 2231$ tons
Swing helper will shove 2231 tons.

(5) To determine 2/3 of swing helper tonnage = $2231 \times 2 = 4462$ tons
Swing helper will pull 4462 tons.

(6) Divide rear helper horsepower by HP/T factor = $\frac{4800}{2.017} = 2380$ tons
Rear helper will handle 2380 tons (total).

(7) To determine 1/3 of rear helper tonnage = $\frac{2380}{3} = 793$ tons
Rear helper will shove 793 tons.

(8) To determine 2/3 of rear helper tonnage = $793 \times 2 = 1586$ tons
Rear helper will pull 1586 tons.

GENERAL:

- A. At locations designated by the Superintendent, road power must not exceed 24 axles of operative power.
- B. Helper engine must not be placed on head end of train without authority being obtained from train dispatcher.
- C. AS415, AS420, ES412 and ES415 class, except ES415 class numbers 2680-2759 units must not be cut into train in helper service. ES415 class numbers 2400-2679 may be cut into train and used in helper service providing coupler stops are applied and locked on both ends of the engine. No more than two of these units may be placed behind the caboose.
- D. Should it become necessary to relocate the helper at other than the shove 1/3, pull 2/3 location in order to separate helper from restrictive cars or in compliance with maximum tonnage trailing helper limitations, the helper may be relocated, but under no circumstances in relocations may helper shove less than 30% nor more than 45% of the total tonnage to be handled by the helper.
- E. Train OALAT between Santa Margarita and San Luis Obispo is restricted to maximum tonnage of 4000 tons with a minimum horsepower per trailing ton of 2.75 with all power on the head end. If tonnage is exceeded or if there is less horsepower per trailing ton, helper engine, appropriately entrained, must be furnished in the above territory.
- F. Westward trains between San Luis Obispo and Santa Margarita must not exceed 24 axles of operating power on the head end of train. When powered with 24 axles of power on head end with helper engine(s) entrained, throttle must be reduced to Run 6 on road engine while any portion of the train is between MP 242 and 241. If calculation indicates road engine to pull more than 4250 tons or in the event a helper unit is not loading, for any reason, causing road engine to pull more than 4250 tons, train must stop and seek assistance or double the grade.

2. PLACEMENT OF RESTRICTED CARS IN TRAIN WITH OR WITHOUT HELPER:

(a) Between San Luis Obispo and Santa Margarita, Castroville and Lake Majella, Watsonville Jct. and Olympia, and Suisun-Fairfield and Lombard, empty 70-foot-long or longer equipment must be entrained 10 or more cars behind road engine and 10 or more cars ahead of helper engine. A flat car with one van or one container, whether loaded or empty, must be considered as an empty.

These instructions will not apply to train OALAT.

(b) When average weight of cars in train, other than locals or switchers, is more than 60 tons per car, do not handle any cars which weigh less than 50 tons within five cars of road engine. These instructions will not apply to continuous welded rail (CWR) trains nor to trains operating between Roseville and Oakland via Davis (except SFEUY (K), OAEUY (K) and OABRT) or between Oakland and San Francisco or San Jose via Decoto or Alvarado.

(c) Following series of USAX or DODX cars are restricted to movement on rear of train and behind any helper engines:

38016 thru 38666 and
39095 thru 39199

Restricted cars will be indicated on conductor's train list at terminals. When cars listed in above series are picked up at locations other than terminal, they must be entrained on rear of train and behind any helper engine, unless it is determined that cars are not restricted.

(d) Cars measuring less than 35 feet over coupler pulling faces must not be handled in train coupled to cars longer than 60 feet over coupler pulling faces.

In addition, empty tank cars under 35 feet outside length will be entrained within 20 rear cars of train.

Either the Train Mass Profile (graph), conductor's train list and/or switch list furnished crew members will identify a car measuring less than 35 feet over coupler pulling faces with letter "S", tank cars with the letters "TS". Cars measuring over 60 feet between coupler pulling faces will be identified by the letter "L".

3. CLASSIFICATIONS ARE DESCRIPTIVE OF ENGINES AS FOLLOWS:

E F 4 15 A C 01

Denotes Order of Purchase for Units of same Classification.

Denotes Ownership if other than SPT Co.:
C = SSW Ownership.

E = SP Equipment Co. owned, leased to SPT Co.

S = SP Equipment Co. owned, leased to SSW Ry.

Denotes Car Body Type with Control Cab;
B = Booster; No Letter = Road Switcher Type.

Denotes Horsepower in Hundreds: 00 = Not Powered;
18 = 1750-1800 HP, etc.

Denotes Number of Axles.

Denotes Service Assignment: F = Freight; M = Misc.;
P = Passenger; S = Switcher.

Denotes Builder: A = Alco; E = EMD; G = GE; S = SPT.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

4. SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restriction applicable to certain territories as shown in Speed Restrictions for Trains:

MAXIMUM SPEED AND LENGTH OF ENGINES
(Between pulling face of couplers)

CLASSIFICATION	ENGINE NUMBERS	MAXIMUM SPEED EXCEPT #	LENGTH (FEET)
AS600	1000-1002	70	70
ES406	1004	45	44
ES408	1100-1128	65	44
ES408B	1150-1153	65	44
ES409	1190-1199	65	44
AS409	1200-1281	60	45
ES410	1300-1337	65	44
ES615	1400-1442	70	61
ES412	2250-2316	65	44
AS415	2400-2409	65	54
ES415	2450-2689	65	45
ES415	2690-2759	65	48
AS418	2900-2903; 2905-2936	70	57
AS618	2951-2970	70	58
ES620	2971-2976	50	69
EP418	3001-3002; 3004-3010	70	56
AS624	3100-3102	25*	67
AS628	3110-3136	25*	69
AS630	3140-3153	25*	69
EP418	3186-3196	70	56
EP430	3197-3199	70	63
EP636	3200-3209	70	71
EF418	3300-3869	70	56
EF618	3870	70	61
EF418	3871-3872	70	56
EF618	3873-3875	70	61
EF418	3877-3879	70	56
EF618	3880-3964	70	61
AS420	4000-4009	70	57
EF420	4030-4153; 4500-4553; 4560-4576	70	56
EF618	4300-4451	70	61
EF620	4700-4724	70	61
EF423	5000-5037	70	56
GS407	5100-5109	55	37
EF623	5300-5325	70	66
EF425	6300-6303	70	56
EF425	6500-6681	70	56
GF425	6700-6767; 6800-6865	70	60
EF625	6900-6953	70	61
GF428	7025-7028	70	60
GF628	7150-7159	70	67
EF430	7600-7607	70	59
GF630	7900-7936	70	67
EF630	8300-8306; 8350-8356	50	71
EF630	8400-8488	70	66
GF633	8585-8796	70	67
EF636	8800-9156	70	66
EF636	9157-9404	50	71
EF642	9500-9505	50	71
EF850B	9900-9902	70	88
GF850	9950-9952	70	84
AMTRAK ENGINES:			
EP415A	Model F7, 110-123; 376-377	79	51
EP430A	Model F40PH, 200-229	70	56
EP630A	Model SDP40F, 500-649	70	72
GP630A	Model P30CH, 700-724	70	72
BN ENGINES:			
EF418	1700-1980	70	56
EF418	1990-1998	70	56
EF420	2001-2071	70	56
EF420	2072-2109	70	59
EF423	2200-2251	70	56
EF425	2500-2545	70	56
EF430	3000-3039	70	59
AF424	4240-4246	70	59
AF425	4252-4264	70	59
AF636	4360-4369	70	70

CLASSIFICATION	ENGINE NUMBERS	MAXIMUM SPEED EXCEPT #	LENGTH (FEET)
GF620	5200-5208	70	67
GF630	5300-5394	70	67
GF425	5400-5429	70	56
GF428	5450-5465	70	60
GF430	5470-5484	70	60
GF625	5600-5641	70	65
GF628	5650-5677	70	67
GF633	5700-5765	70	67
GF630	5800-5839	70	67
GF630	5900-5944	70	67
EF618	6100-6206	70	61
EF624	6240-6255	70	61
EF630	6300-6334	70	66
EF630	6376-6385	50	71
EP630	6394-6399	70	66
EF636	6400-6567	70	66
EF636	6592-6599	70	71
EF630	6700-6752	50	71
EF630	6800-6836	50	71
EF630	6900-6928	50	71
UP ENGINES:			
GF628	2800-2809	70	65
GF630	2810-2919	70	67
EF630	3000-3122	70	66
EF630	3123-3304	50	71
EF636	3600-3649	70	66
EF630	8000-8064	50	71

SN ENGINES:

SNRY engines will not exceed speed restrictions for engines shown in Table below and maximum speed is subject to further restrictions applicable to certain territories as shown in SPEED RESTRICTIONS FOR TRAINS.

CLASSIFICATION	ENGINE NUMBERS	MAXIMUM SPEED EXCEPT #	LENGTH (FEET)
SW-1	401-402	30	44
GP-7	711-712	65	56
NW-2	607	30	44
S-2	TS-745	35	44
RS-1	TS 746-747	50	..

Engines handled dead must not exceed speed shown in table.

#When operated in multiple unit control, on head end of train or running light and engineer is in other than the leading control cab in direction of movement, speed must not exceed 30 MPH. 'A' type units (indicated by letter 'A' following classification numerals) operating in reverse as lead unit in direction of movement must not exceed 30 MPH.

*May be handled isolated in multiple, dead in multiple, or dead in train at maximum speed of 70 MPH.

Any locomotive not listed in these tables is not to be operated in trains unless authorized by train order indicating maximum permissible speed for locomotive which is then subject to any further restrictions imposed by the timetable or otherwise.

5. MOVEMENT OF LOCOMOTIVES

RULES GOVERNING MOVEMENT OF ENGINES NOT EQUIPPED WITH ALIGNMENT CONTROL COUPLERS

- AS415, AS420, ES415, and following ES412 (2266, 2271, 2272, 2275, 2276, 2279, 2282, 2283, 2284, 2285, 2286, 2287, 2288) class engines must if practicable, be MU'd in accordance with rules. These engines are equipped with dynamic brake wire.
- When necessary to entrain the following class engines:

ES406	ES409	ES410	AS420
AS407	AS409	ES412	ES412E
ES408	ES410E	FS412	ES415*
ES408B	AS410	GS407	AS415

Placement in train will be as follows:

- a. Foreign line engines not equipped with alignment control are to be considered in above listings.
 - b. Engines moved dead in train must be prepared for such movement.
 - c. These engines may be moved on the head end of train, provided train does not exceed 800 tons.
 - d. On trains of more than 800 tons, these engines must be moved not less than five cars nor more than 10 cars ahead of rear of train and behind any helper engine.
 - e. Not more than two of these engines may be moved in a train and when two are moved they must be separated by a car no longer than 50 feet.
3. When only AS415, AS420, ES412 and ES415* units are used in engine consist, not more than two units may be on the line when making a reverse movement with cars or train and on line units must be located adjacent to the train.
 4. One AS415, AS420, ES412 and ES415* unit may be MU'd on the head end of one road unit.
 5. When a train being handled by a single unit road engine where no dynamic braking is required or reverse movements will be made, a single AS415, AS420, ES412 and ES415* unit may be placed next to the train.
 6. When operating with mixed engine consist, where dynamic braking is required, not more than two AS415, AS420, ES415* and following ES412 units will be used:

2266	2279	2286
2271	2282	2287
2272	2283	2288
2275	2284	
2276	2285	

- a. If one unit is used it will be placed as second unit in engine consist.
 - b. If two units are used, they will be placed as second unit and third units in engine consist.
 - c. A road unit must be coupled against the train.
 - d. If necessary to make a reverse move with cars or train, lead unit must be isolated.
7. If necessary to operate with more than two AS415, AS420, ES412 and ES415* class units in consist (including pick up of units from outlying points), these units must be placed in the lead. If reverse move is made with cars or train, all units ahead of the two rear units in these classes will be isolated.
 8. Extreme caution must be used during dynamic braking or when making reverse moves to prevent jackknifing and track damage.

ENGINES EQUIPPED WITH ALIGNMENT CONTROL COUPLERS

* Class ES415, Nos. 2680-2759 are equipped with alignment control couplers in buff and may be MU'd in Engine consist without regard to location. These engines may be moved dead on the head end of train.

Engines equipped with multiple unit controls (MU) and alignment control couplers, weighing 150,000 pounds or more, may be handled on head end of train; if weighing less than 150,000 pounds, must be placed near rear of train in accordance with Item 2.

INSTRUCTIONS FOR USE OF HINGED COUPLER STOPS

For use in switching service the coupler stops must be opened (swung back) against end of engine and locking pin secured in bracket provided.

For use in road service, MU service, or dead in train, the coupler stops must be closed (swung in) into coupler opening against coupler pocket side with locking pin secured behind coupler carrier on both ends of engine.

Locking pins must be in place (whether coupler stop is swung back or swung in) to insure securement of the coupler stop.

With the coupler stops in place, these engines may be MU'd in engine consist without regard to location, or may be moved dead on head of train.

Class ES415, Nos. 2450-2679 are equipped with hinged coupler stops.

PREPARATION OF AIR EQUIPMENT FOR MOVEMENT DEAD IN TRAIN

ALL UNITS: Reduce main reservoir pressure to 25 lbs. above zero.

Cut-in dead engine feature.

Remove automatic brake valve handle in running position or with 26-L equipment, remove in handle off position.

If brake valve handles cannot be removed, they must be blocked in running position.

IN ADDITION:

24 RL equipment:

Close brake pipe cut-out cock and place the dual ported cut-out cock in cut-in position.

Open the end cocks on actuating pipe and independent application and release pipe.

6 SL or 14 EL Equipment.

Close the brake pipe cut-out cock, or place the rotair valve or 3 position brake pipe cut-out cock in dead position.

26 L Equipment.

Place the brake pipe cut-off valve in cut-out position.

Place the dual ported cut-out cock in open or cut-in position, or place the MU 2a valve in lead or dead position.

Open the end cocks on actuating pipe and brake cylinder equalizing pipe.

6. Dead or disabled engines, and equipment listed in timetable which requires movement at reduced speed must first be reported as ready to move to the Chief Train Dispatcher, who will designate the train in which the engine or equipment is to be moved. Any such engine must not be handled in train until train order designating maximum speed is issued.

7. Engines operated with engineer in other than lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossing at grade, subject to further restrictions imposed by local conditions.

8. When unit or units in locomotive consist emit excessive smoke through exhaust stacks other than from cold start, prompt report must be made to train dispatcher who will arrange to notify roundhouse foreman or locomotive maintenance forces on duty at first maintenance facility where train is scheduled to stop. Unit number, time and location where excessive smoking of unit was first observed must be reported.

When a yard engine is observed emitting excessive smoke, report must be made to roundhouse foreman or locomotive maintenance forces on duty.

In addition, engineer must make appropriate entry on work report, Form CS 2326.

9. Not more than 10 diesel units in operation may be used on head end of any freight train.

10. Unless otherwise authorized, trains handling passenger cars with flat spots on wheels in excess of 3 1/4 inches in length must not exceed 10 MPH. When flat spots are not in excess of 3 1/4 inches long such cars may be operated at maximum authorized speeds.

11. Gross weight of SPMW 6400-6439 100-ton air dump cars cannot exceed the gross weight shown in Timetable or Line Clearance Circular for each branch line. Also, cars must not be dumped on curves of 25 degrees or more, or operated through curves of 35 degrees or more.

12. Except when handling cabooses on or near the head end in local or road switcher service when handling only a few cars, cabooses are not to be moved other than at rear of train, unless specifically authorized.

13. When setting out bad order cars enroute, head portion of train, together with bad order car, must be taken to the nearest set out point in direction of movement, bad order car set out, engine detached and head portion of train left at set out point, when practicable. Rear portion of train is then to be brought to set out point and head and rear portions of train coupled together.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

14. LOAD LIMIT

Where 315,000 pound load limit applies:

Gross weight of 315,000 pounds applies to uniformly loaded four-axle cars with minimum axle spacing of 6'-0" and minimum distance of 37'-0" center to center trucks; also wheels 38" or more in diameter.

Where 263,000 pound load limit applies:

Gross weight of 263,000 pounds or less applies to uniformly loaded four-axle cars having trucks spaced 23'-0" or more center to center and minimum axle spacing of 5'-6".

15. Units SSW 9052 through 9068 and 9090 through 9110 will have overspeed cut-out cocks blocked open and no attempt should be made to close them. In event overspeed device (or speedometer) malfunctions enroute, unit should be rearranged in the locomotive consist as a train-line unit to clear the condition.

16. The following Amtrak Passenger equipment must NOT BE COUPLED to other passenger equipment except those cars listed as follows:

1. Coaches ATK 21826 thru & incl. 21833
2. Dinettes ATK 20215, 20216, 20217
3. Baggage ATK 1350, 1351, 1352

17. MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT

	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or Multiple loads		25
Scale test cars	40**	30
except SPMW 2024, 2025, WO-3	65	49
Relief outfits with steam derrick, except:	45*	25*
Nos. 7070 and 7110 must not operate on any branch except Schellville Branch; Napa Branch between Napa Jet. and Napa River bridge 69.62 at Napa; on Vallejo Branch between Napa Jet. and MP 68.40; Vasona Branch and on Monterey Branch between Castroville and Monterey.		
Locomotive Crane/Pile Drivers		
SPMW 6603 & 6604		
With boom in place, either end forward ①	25*	15*
With boom disconnected, heavy end forward	45	25
boom end forward	20*	15*
With boom disconnected and removable counterweight properly positioned, either end forward	55	25
SPMW 4028, 4029, SSW 96405:		
With boom in place, either end forward ①	25*	15*
With boom disconnected, heavy end forward	40	25
boom end forward	20*	15*
With boom disconnected and removable counterweight properly positioned, either end forward	40	25
SPMW 4027 SPMW 5870		
4088 5874		
4091 5899		
5437 6601		
5479 6602		
5595 SSW 96404		
5852 NWPMW 31		
With boom in place, either end forward ①	25*	15*
With boom disconnected, heavy end forward	45	25
boom end forward	20*	15*
Steam pile driver SPMW 4053	35	25*
Jordan Spreaders:		
Running backward	25	20
Moving forward (prepared for travel)	35	35

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced to 5 MPH less than shown in timetable and on speed signs.

**Scale Test Car NBS-1 to be handled on trains not more than 20 cars ahead of caboose and speed of train handling NBS-1 not to exceed 60 MPH.

① When moving in train with boom in place, operator must be on board.

Unless specifically authorized, all relief outfit cranes and the following locomotive cranes and pile drivers; SPMW 4027, 4028, 4029, 4088, 5479, 5595, 5852, 5870, 5874, 5899, 6601, 6602, 6603, 6604, SSW 96404 and SSW 96405 must not operate over lines having maximum load limits of less than 263,000 lbs. and must observe all restrictions applying to cars weighing over 210,000 lbs.

SPMW 5479, 5499 and 5497 are restricted to 45 MPH.

18. OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT
Trains of deadhead passenger equipment, with caboose	65	
Passenger trains, with caboose	65	
Logs loaded on flat or logging cars, except:		35
On curves		25
Through truss bridges, tunnels and passing stations		15
Engine, flanger and caboose only, except:		40
On curves		30
PC 598500 to 598999 (Gondolas)		
Empty bulkhead flat cars (FB) except series SP 590000-590111, SP 591100-591124 and SSW 88050-88099 equipped with roller bearings		55
Empty NATX tank cars, series 10841-10865		55
Trains handling pipe loaded on 89 ft. cars		55

When moving against current of traffic, or when movement is not protected by block signals, speed of passenger trains and light engines must not exceed 59 MPH, and speed of freight trains must not exceed 49 MPH, nor may speed exceed that applying to normal operation.

NOTE: Light engines, or engine with caboose only, are authorized to operate at Column 1 speeds not exceeding 55 MPH, except on descending grade without dynamic brake in operation must not exceed Column 2 speeds.

19. REPEATER AIR CARS (RAC) SP 260 thru 266.

The repeater air car is utilized to increase efficiency of train air brakes on long trains and during cold weather. The purpose of repeater relay equipment is to accept pneumatic signals from the brake pipe of forward portion of a train, and by relay action, produce a corresponding response in the brake pipe of the rear section of the train.

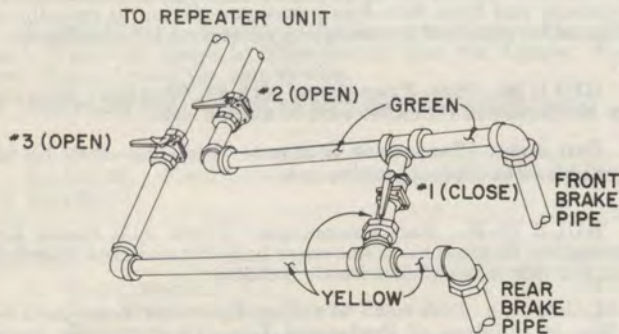
The repeater relay car has the ability to produce faster train charging time, reduce or eliminate brake pipe pressure gradient, more uniform braking forces, and faster brake application and release times.

A. Procedure for adding Repeater Air Car to a train to use Repeater Car Air Equipment.

1. Place as near to center of train as makeup will permit.
2. The RAC car is operational in either direction. The front brake pipe must be coupled to the portion of the train to which the road engine is attached. The rear brake pipe must be coupled to the other end of the train.

The angle cock on the unused brake pipe on each end of the car must be closed.

- Where repeater air car is positioned in train and front and rear brake pipes have been properly connected and opened, then close the brake pipe bypass cock No. 1 and open the two repeater relay cut-out cocks Nos. 2 and 3, all located inside of car.

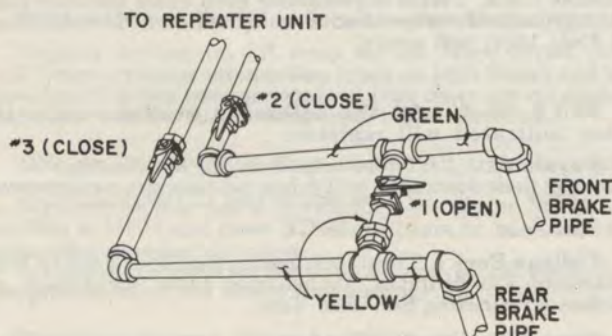


Note: If for any reason it becomes necessary to transfer control of air brakes to the helper engine located in the portion of the train behind the RAC car with the RAC air equipment in operation, the brake pipe hose connections must be changed. The forward brake pipe must be coupled to the portion of the train having the brake valve which is controlling the train. The rear brake pipe must be coupled to the other end of the train.

- The repeater relay valve No. 5 is a variable valve and is employed to reestablish a satisfactory brake pipe pressure on the rear portion of train. A regulator and gauge to indicate pounds of differential is provided. Trainline pressure on rear portion of train must not be increased above 90 PSI at RAC car. Preferred adjustment is to have the rear brake pipe 1.5 to 2 lbs. above the front brake pipe.

B. Procedure for cutting the RAC car out of train.

- Close the repeater relay cut-out cocks Nos. 2 and 3.
- Open the brake pipe bypass cock No. 1—All located inside the car.
- The car diesel engine and compressor are to remain running except during layover time.



C. Procedure for adding Repeater Air Car to a train when Repeater Car Air Equipment is not to be used.

- Close the repeater relay cut-out cocks Nos. 2 and 3.
- Open the brake pipe bypass cock No. 1—All located inside the car.
- Forward brake pipe must be coupled to portion of the train to which the road engine is attached.
Rear brake pipe must be coupled to the other end of the train. The angle cock on the unused brake pipe on each end of the car must be closed.

D. Train operation of Repeater Air Cars.

- With the repeater air car in operation, proceed with terminal air test as prescribed in the air brake rules and regulations.
- All rules outlined in the air brake rules and regulations governing train handling shall be adhered to while repeater air car is part of any train.
- If required, the repeater air car may be cut out by closing the repeater relay cut-out cocks Nos. 2 and 3 and opening the brake pipe bypass cock No. 1—All located inside car. This provides for normal train operation without the repeater relay equipment operating.
- If yard air is used to charge the train, it must be cut in ahead of the repeater air car.
- The RAC car must not be kicked, dropped, or humped and must be handled next to switch engine when being cut into or out of train and when being moved to caboose track.
- During a pickup or setout, or at any time the engine is separated from the train and the air car is in operation in the train, it is absolutely essential that the trainline angle cock be left open on the train.

E. Loss of main reservoir air on RAC car.

- The depletion of main reservoir air to below 100 lbs. will initiate a service brake pipe reduction in the forward and rear portions of the train. The rotating red light on top of car will operate.
- In addition to the red rotating light, a radio signal will be initiated and will transmit a series of short beeps for a period of approximately ten seconds and then cease. It will reset itself automatically upon an increase of main reservoir pressure above 110 pounds.
- If in power, throttle must be reduced to idle and automatic brake valve placed in full service zone until train stops.
- If in dynamic braking, automatic brake valve must be placed in full service zone and dynamic braking lever handled as prescribed by rules.
- Train must be immediately secured before determining reason for main reservoir air depletion.

F. Setting RAC car out of train.

- If it becomes necessary to set RAC car out of train, shut down compressor engine in car and secure car per rules.

Instructions for starting and shutting down compressor engine posted inside of car.

SPECIAL INSTRUCTIONS—SAN FRANCISCO SUBDIVISION

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description	Type
0.00	San Francisco	Station umbrella sheds	Side
0.00-1.30	"	Dwarf signals	Side
1.28	"	Mariposa St. bridge	Overhead
1.29	"	AT&SFRy bridge	Overhead
1.34-1.68	"	Tunnel No. 1	Overhead and side
1.73	"	22nd Street bridge	Overhead
1.91	"	23rd Street bridge	Overhead
1.93-2.14	"	Tunnel No. 2	Overhead and side
3.15	"	Oakdale Avenue bridge	Overhead and side
3.19-3.65	"	Tunnel No. 3	Overhead and side
4.15	"	Paul Ave. bridge	Overhead and side
4.26-4.95	Bayshore	Tunnel No. 4	Overhead and side
9.07	South San Francisco	Signal bridge	Overhead
25.58	Redwood City	Signal bridge	Overhead
26.10	"	Signal bridge	Overhead
29.69	Palo Alto	San Francisquito Creek bridge	Overhead and side
45.99	San Jose	Signal bridge	Overhead
46.90	"	Station umbrella sheds	Side
119.70	Santa Cruz	San Lorenzo River bridge	Side
121.45 to 121.68	Eblis	Tunnel No. 6	Overhead and side
125.60 to 125.66	Santa Cruz Br.	Tunnel No. 5	Overhead and side
126.35	"	San Lorenzo River bridge	Side
126.43	"	Redwood tree	Side
126.70	"	Redwood tree	Side
126.72	"	Redwood tree	Side

RULE 7-C. Watsonville Jct.: Eastward freight trains, except OALAT, must not pass Signal 984 and Westward freight trains must not pass Signal 1001 unless proceed signal received; green flag by day, green light by night, or engineer is orally authorized by yardmaster or his representative.

RULE 10-H. EXCEPTION:

San Bruno, Lick, Davenport, and Hollister Branches. When a yellow flag is required it will be displayed one-half mile from point of restriction.

RULES 10-H and 10-J. Between San Francisco and San Jose, speed signs may be displayed on a post below a yellow flag to indicate the maximum speed permitted two miles beyond the yellow flag. The number on such speed signs applies to all trains and should indicate the same speed as that designated by train order or timetable bulletin.

When speed signs are so displayed and the maximum speed indicated by the speed sign is in excess of that permitted by train order or timetable bulletin be governed by the train order or timetable bulletin. In the absence of such speed signs be governed by the speed designated in the train order, timetable bulletin or by Rule 10-H.

A green flag at the limit of the restriction will be displayed in accordance with Rule 10-H.

RULE 10-J. Westward speed sign at MP 45.86 reading 60-55 is to right of track with two tracks intervening.

RULE 14(I). Trains approaching Logan between 6:00 AM and 3:00 PM must sound whistle to warn people who may be working next to main track.

RULE 15. EXCEPTION:

San Bruno, Lick, Davenport, and Hollister Branches. The explosion of a torpedo requires movement at restricted speed for one mile from point where torpedo was exploded.

RULE 21. Train indicators will be used on commute trains operating between San Francisco and San Jose when engines are so equipped. These trains must not leave their initial station until train number is displayed. Enginemen must not put up, take down nor change indicators while engine is in motion.

Engines of passenger trains may display indicator between Seventh St. engine storage track and Fourth St. Station, San Francisco; and from San Jose passenger station to roundhouse but must be removed immediately on arrival at roundhouse.

RULE 26. San Francisco: (4th St. Station) Blue sign may be displayed on either side of engine cab.

San Jose: (Passenger Station) Blue sign may be displayed on either side of engine cab.

RULE 26-B. San Francisco: Track 212, South End Warehouse: Engines must not enter building and crew members must not ride sides of cars inside building.

California Avenue: Warning light has been installed on face of building of Preformed Lime Products. No movements will be permitted into building until green aspect is displayed on this warning light, which indicates that movable overhead crane has been retracted to lawful clearance.

RULE 81-A. San Francisco: Before making movements out of tracks between MP 1.23 and MP 7.07 onto westward main track or eastward main track, permission must be obtained from operator.

Redwood Junction: Before making movements out of east leg of wye at Redwood Junction to the eastward main track on the Newark Line, permission must be obtained from towerman.

RULE 82-A. Freight trains turning at Redwood Jct. must obtain clearance before leaving Redwood Jct.

Trains destined San Jose Yard need not obtain clearance at San Jose.

Train orders issued to No. 12 at West Oakland may apply on San Francisco Subdivision between Santa Clara and San Jose. No. 12 will assume corresponding schedule on the San Francisco Subdivision without obtaining a clearance at Santa Clara, but must obtain clearance at San Jose, bearing OK, time and initials of Chief Train Dispatcher which must be endorsed GREEN or NO SIGNALS as the case may be.

Train orders issued to No. 13 at San Jose may apply on the Niles Subdivision. No. 13 will assume corresponding schedule on the Niles Subdivision without obtaining a clearance at Santa Clara, but must obtain clearance at San Jose bearing OK, time and initials of Chief Train Dispatcher which must be endorsed GREEN or NO SIGNALS as the case may be.

RULE 83. Identification may be made at San Jose, or between Lick and Coyote; Gilroy and Corporal; Logan and Watsonville Jct.; and at Watsonville Jct.; to be applied at end of double track. Trains approaching each other between these stations must reduce speed sufficiently to permit identification, and Rule 14(k) will apply.

RULE 83-A. At the following stations only the trains indicated will register:

Bayshore Trains originating or terminating.

Gilroy Trains originating or terminating.

San Jose All trains.

College Park Trains originating San Jose Yard to Niles Subdivision via Milpitas. Trains from Niles Subdivision via Milpitas terminating San Jose Yard.

Santa Clara: Eastward trains terminating San Jose Yard. Westward trains to Niles Subdivision via Agnew, except No. 13. Westward extra trains via Sunnyvale, except trains consisting entirely of passenger equipment.

RULE 83-B. At open train-order offices, trains may register by ticket as follows:

San Jose Nos. 12, 13 and Extra trains.

College Park Trains originating San Jose Yard to Niles Subdivision via Milpitas. Trains from Niles Subdivision via Milpitas terminating San Jose Yard.

Santa Clara Eastward trains terminating San Jose Yard. Westward trains to Niles Subdivision via Agnew, Westward Extra trains via Sunnyvale.

Redwood Jct. Trains to or from Niles Subdivision.

RULE 93. Yard limits are established at the following locations:

West MP		East MP
.00	San Francisco	11.48
7.39	San Francisco (San Bruno Branch)	13.64
24.44	Redwood Jct.	27.17
	Redwood Jct. (Niles Subdivision)	28.20
37.40	Sunnyvale	41.50
43.47	San Jose	60.00
	San Jose (Lick Branch)	End of Branch
43.74	San Jose (Agnew line)	44.59
43.30	San Jose (Milpitas line)	47.39
51.47	San Jose (Vasona Branch)	47.21
70.50	Morgan Hill	72.50
76.73	Gilroy	82.41
93.20	C.T.C. Limit Logan	94.60
96.11	Watsonville Jct.	101.25
	Watsonville Jct. (Santa Cruz Branch)	103.60
119.30	Santa Cruz (Santa Cruz Branch)	End of Branch
	Santa Cruz (Davenport Branch)	End of Branch
85.00	Bolsa (Hollister Branch)	87.00
90.00	Hollister (Hollister Branch)	End of Branch

San Francisco Psgr. Station: First class trains enter and leave on yard tracks within Fourth St. interlocking limits.

San Jose Psgr. Station: First class trains enter and leave on yard tracks between MP 45.91 and MP 47.29.

RULE D-97. Applies between the following locations:

- San Francisco and San Jose.
- Lick and Coyote.
- Gilroy and Corporal.
- Logan and Watsonville Jct.

RULE 98. Ninth and Division Streets—San Francisco: WP crossing of SP tracks is not protected by interlocking. Trains and engines must stop before crossing WP and not proceed over crossing until it has been ascertained there are no trains or engines closely approaching the crossing from either direction. SP trains and engines have precedence over WP trains and engines when using this crossing.

Fifteenth and De Haro Streets—San Francisco:

Engines moving on SP track on De Haro Street must STOP before crossing intersection track at 15th Street and not proceed until it has been ascertained that there are no engines closely approaching the crossing from either direction.

Illinois Street—San Francisco: All train or engine movements on the joint SP and ATSF drill track shall approach the WP intersection track in vicinity of Marin Street not exceeding 6 MPH and must STOP if a train or engine is seen approaching in either direction.

All rail movements on the joint SP and ATSF track shall have precedence in the use of the crossing.

San Jose-Vasona Branch: WP crossing SP tracks at MP 47.9. "STOP" signs located in approach to crossing. Signs reading "RAILROAD CROSSING 2000 FT." located at MP 47.22 for eastward movement and MP 47.98 for westward movement.

American Can Spur at WP 5th St. Lead:

All movements must be stopped short of crossing and not proceed until member of crew has ascertained that there is no approaching movement on conflicting route. WP movement has precedence.

WP switching lead crossing at WP-SP Joint Drill Track, South Seventh Street:

All movements must be stopped within 50 feet of crossing and not proceed until member of crew has ascertained that there is no approaching movement on conflicting route. Movements on WP-SP Joint Drill have precedence.

RULE 99. EXCEPTION:

Hollister Branch. When protection by flagman is required by this rule, distances specified for placement of torpedoes and flag protection will be one-half and one mile from train being protected.

RULE 99-C. Will apply on Vasona, Hollister, and Santa Cruz Branches.

RULE 103. In Double Track territory—San Francisco to San Jose, Lick to Coyote, Gilroy to Corporal and Logan to Watsonville Jct., automatic crossing gates will operate for against current of traffic movements but such movements must not exceed 25 MPH approaching these crossings.

Sunnyvale—Sunnyvale Ave. May be operated for eastward movements from house track by operating key release on side of instrument case. Switch key may be removed but circuit must be occupied within one minute or gates will rise.

At the following stations there are crossings protected by gates which are not actuated when trains are stopping at station to receive or discharge traffic until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down:

Station	Location	Direction	Mile Post
★San Francisco	King St.	Eastward	0.62
★San Francisco	King St.	Westward	0.62
★San Francisco	Berry St.	Eastward	0.69
★San Francisco	Berry St.	Westward	0.69
†★So. San Francisco	Grand Ave.	Eastward	9.3
† San Bruno	Angus Ave.	Westward	11.4
★Millbrae	Millbrae Ave.	Westward	13.7
††† Burlingame	Oak Grove Ave.	Westward	15.9
† Burlingame	North Lane	Westward	16.2
†★Burlingame	South Lane	Eastward	16.3
†★Burlingame	Howard Ave.	Eastward	16.4
†★San Mateo	1st Ave.	Westward	17.7
†★San Mateo	2nd Ave.	Westward	17.8
†★San Mateo	3rd Ave.	Eastward	17.9
†★San Mateo	4th Ave.	Eastward	18.0
†★San Mateo	5th Ave.	Eastward	18.1
†★Belmont	Ralston Ave.	Eastward	22.0
†★San Carlos	Holly St.	Westward	23.2
†★Redwood City	Broadway	Westward	25.4
†★Redwood City	Jefferson Ave.	Eastward	25.6
★Menlo Park	Ravenswood Ave.	Eastward	29.0
★Palo Alto	Palo Alto Ave.	Westward	29.8
†★Mountain View	Castro St.	Westward	35.9
†★Sunnyvale	Sunnyvale Ave.	Eastward	38.9
†★Sunnyvale	Sunnyvale Ave.	Westward	38.9
†† San Jose	Virginia St.	Westward	47.6
† Gilroy	7th St.	Westward	80.7

★Equipped with unit for display of flashing white light. Display of flashing white light indicates gates are down. Trains or engines approaching these crossings after making station stop, entering main track from spurs or station tracks or moving at reduced speed must not enter crossing until flashing white light is displayed or it is known gates are down.

†Sound detector microphone located adjacent to track. Trains stopped at station to receive or discharge traffic, before starting in either direction, must sound whistle to lower or to keep crossing gates down.

SPECIAL INSTRUCTIONS—SAN FRANCISCO SUBDIVISION

††Sound detector microphone installed west of Virginia Street. Westward trains stopping east of Virginia Street will stop east of marker located 75 feet east of crossing. Before starting must sound whistle to lower or to keep crossing gates down.

†††Sound detector microphone located 600 feet west of North Lane. Westward trains stopped at the station to receive or discharge passengers, before starting must sound whistle to lower or to keep crossing gates down at Oak Grove Avenue.

San Francisco:

Lucky Lager Brewery: Tracks 1376, 1378, and 1380. Movements must not exceed 5 MPH. When passing over crossings crew member must provide warning for vehicular and pedestrian traffic.

King Street: "STOP" sign located just west of crossing on No. 3 lead. After stopping eastward movement must not proceed until crossing gates are down.

Berry Street: "STOP" signs located on No. 2 and 3 leads both sides of crossing. Movement in either direction must not proceed until crossing gates on both main tracks are down.

Movement over crossing on No. 4 lead must not be made until crossing gates on both main tracks are down. When movements are to be made over crossing on No. 4 lead crossing gates will be activated by inserting and turning switch key in control box located on signal box east side of crossing. Switch key must be left in slot to keep gates in down position.

Howard Street: "STOP" signs located on both sides of crossing on Beale Street lead. Crossing must not be occupied from either direction until vehicular traffic warning device is actuated. To actuate warning device movement must be stopped with wheels in control circuit, crew member must then push control button located in locked box on post either side of crossing. Control boxes must be left locked.

Thirteenth Street: "STOP" signs located both sides of crossing on 12th Street lead and track 803. Crossing must not be occupied until vehicular traffic warning device has been actuated. To actuate warning device movement must be stopped with wheels in control circuit, then crew member must push control button located on stop sign, either side of 12th Street.

Seventh Street: "STOP" sign installed on west side of crossing on leg of wye. Crossing must not be occupied by eastward movement until herder has provided warning against vehicular traffic.

Movements on designated tracks must not be made over following crossings until indicator located on vehicular traffic signals display green "X":

Third Street.....Track 448 and ATSF interchange lead.

Seventh Street.....Old main and coach lead.

Seventh & Townsend Sts....All yard tracks.

Eighth & Townsend Sts....All yard tracks.

Sixteenth Street.....800 lead on Harrison Street.

Seventeenth Street.....800 lead on Harrison Street.

Seventeenth Street.....Movements entering or departing 18th & Harrison St. Yard. Green "X" indicator activated by push-button located in box on post either side of 17th Street.

Sixteenth St.-Mission Bay Yard.....

Movements entering or leaving yard including movements to or from ATSF interchange automatically control crossing gates. Crossing gates may also be lowered by inserting and turning switch key in door of box located on gate pole and gates will remain down for approximately one minute unless track circuit is occupied for a distance of 50 feet west of crossing.

Twentieth & Illinois Sts.... Eastward and westward leads and when switching at Bethlehem Steel Company. When switching at Bethlehem Steel Company, green "X" indicator must be activated by inserting and turning switch key in box located north-east corner of intersection.

When indicators on vehicular traffic signals are inoperative movement may be made only after vehicular traffic is warned by member of crew.

Bayshore: PUC Order prohibits movements crossing Bayshore Boulevard between the hours of 11:00 P.M. and 9:00 A.M., and between 3:00 P.M. and 7:00 P.M. Movements over Bayshore Boulevard must not be made during these hours.

South San Francisco; Spruce Street at Railroad and Linden Avenues: Crew member must provide warning against vehicular traffic before crossing is occupied. Movement must come to complete stop before entering crossing.

Railroad Avenue: Movements must not be made between the hours of 9:00 P.M. and 4:00 A.M.

San Jose—Zone 3: Movement over Alma Avenue crossing into SP-WP interchange tracks 1 and 2 (tracks 371 and 372) must be made as follows: Amber colored indicator lights which operate in conjunction with vehicular traffic signals located on west side of crossing adjacent to interchange tracks. Amber colored lights displaying aspect indicates that movement has entered control circuit and traffic signals are being activated. Movement over crossing into interchange tracks must not be made until amber lights display flashing aspect which indicates vehicular traffic signals are activated. When amber lights are inoperative movement over Alma Avenue into interchange tracks must not be made until vehicular traffic is warned by member of crew.

Locations at which trains must stop to avoid unnecessary operation of crossing gates while trains are switching or receiving and discharging traffic:

Station	Location	Direction
South San Francisco	East of Signal 91	Westward
**Belmont	1400 ft. east of Harbor Blvd.	Westward
***San Carlos	400 ft. west of Holly St.	Eastward
Sunnyvale	255 ft. east of Sunnyvale Ave.	Westward

**Applies to trains switching Harbor spur when necessary to leave part of train east of Harbor Blvd.

***Applies to trains switching house track when necessary to leave part of train west of Holly St.

Millbrae: Eastward passenger trains stop to clear Millbrae Ave.

Broadway: Eastward passenger trains stop to clear Broadway crossing.

Belmont: Westward passenger trains stop to clear Ralston Rd. crossing.

Redwood City: Passenger trains, stopping at passenger station, should stop to clear Broadway crossing.

Vasona Branch: Westward freight trains must not leave cars between Approach Circuit sign and El Camino Real while switching.

Gilroy: Trains or engines making movement from westward main track through spring switch for reverse movement to eastward main track must pull westward to clear Signal 804 before wigwag signals will be actuated for eastward movement.

Cars must not be stored within 150 feet of all crossings of 9th Street, except spur track serving Filice Warehouse.

Watsonville Jct.: Cars must not be stored within 150 feet of crossings of Salinas Road.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must warn traffic on the following street or highway crossings before movement is made:

Location	Crossing Number	MP
San Francisco:		
Fourth St.	E-0.13	.13
Fourth St. (Bluxome St. Drill)	E-0.40	.40
Second St. near Harrison St.	ED-0.545-C	.545
Harrison St. near Hawthorne St.	ED-0.62-C	.62
Hawthorne St. near Harrison St.	ED-0.65-C	.65
Folsom St. at Hawthorne St.	ED-0.74-C	.74
Folsom St. at Beale St.	ED-0.97-C	.97
22nd and Harrison Sts.	E-2.72-C	2.72
Jerrold Avenue	E-3.11-C	3.11

Millbrae—Crossing Rollins Road on track Nos. 15, 23 and 77.
David Rd. Track 15.
Broderick Rd. Tracks 103 and 105.
Guttard Rd. Track 105.

Burlingame—Bayswater Ave. (Side Track) E-16.5 16.5

San Carlos—Old County Road crossing E-23.4-C 23.4

Luther—Martha Street E-51.8-C 51.8
Virginia Street E-51.9-C 51.9

Before movement is made by trains or engines over crossing, a member of train crew must warn traffic on the following street crossing:

California Avenue—Park Blvd. on east leg of wye.

RULE 104. The normal position of rigid switches at junctions is as follows:

San Jose Vasona Branch, for Gilroy line main track
 Permanente . . Permanente Corp., for track No. 1
 Lick Lick Branch, for eastward main track
 Carnadero . . . Hollister Branch, for westward main track
 Santa Cruz . . . Davenport Branch, for Santa Cruz Branch.

DERAILS ON MAIN TRACK:

Vasona Branch, San Jose, 222 feet east of Junction Switch.

Olympia at MP 129.23. Derail must be left lined in derailing position when cars are stored on main track east of derail.

RULE 107. Station train indicators are provided in approach to following stations:

Eastward	Eastward	Westward
South San Francisco		Santa Clara
San Bruno	San Carlos	Sunnyvale
Millbrae	Redwood City	Mountain View
Broadway	California Ave.	Hillsdale
Burlingame	Mountain View	San Bruno
San Mateo	Sunnyvale	
Hayward Park	Santa Clara	
Hillsdale	College Park	
Belmont		

When illuminated these indicators will convey the following information:

TRAIN—Train at platform on opposite track.

CLEAR—Indicator in service.

When neither TRAIN or CLEAR is illuminated, indicator is out of service and report must be made to Chief Train Dispatcher as soon as practicable.

In the morning all eastward passenger trains will favor westward commute trains. In evening all westward passenger trains will favor eastward commute trains.

Particular care must be exercised at such stations as Bayshore, Millbrae, Hillsdale, Belmont and Santa Clara where view of station is limited in both directions, also at 23rd St., Paul Ave. and Butler Rd., where passengers may attempt to cross tracks closely behind westward trains. Under such circumstances yard drags and engines on eastward track must stop and take necessary precautions to avoid injury to patrons.

RULE D-151. San Francisco: End of double track is at King St., east limit of Fourth St. interlocking.

San Jose: End of double track is at MP 45.91, College Park at east end of crossover just west of Taylor St. subway.

Gilroy: End of double track: Westward trains leaving end of double track from eastward main track will be governed by Signal 805.

RULE D-152. Crossovers between San Francisco and San Jose are located as follows:

West end Tunnel No. 3; MP 3.16; between Tunnels Nos. 3 and 4 San Francisco; South San Francisco; San Bruno; Millbrae; Burlingame; Belmont; San Carlos; Redwood Jct.; Menlo Park; California Ave.; Mountain View; Sunnyvale; MP 41.18 and MP 42.95.

RULE D-160. 23rd Street: Eastward signal on westward main track at MP 1.68 located at east end of Tunnel No. 1 displays permanent red aspect. Eastward movement on westward main track beyond this signal is prohibited except when flagman is located at this signal and at the location where westward main track is to be cleared and assurance received that all train and engine movements are clear of this track between those points.

Brisbane: Eastward dwarf signal on westward main track at MP 7.6 displays permanent red aspect. Eastward movement on westward main track beyond this signal is prohibited except when flagman is located at this signal and at the location where westward main track is to be cleared and assurance received that all train and engine movements are clear of this track between those two points.

San Jose: On double track within yard limits operator may arrange to move trains from one tower to another against current of traffic, after having understanding for each movement. Before moving trains against current of traffic operator must know that track to be used is clear of opposing trains and engines.

RULE 221. Train-order offices College Park and Santa Clara are located in tower.

Redwood Jct. is train-order office for trains originating.

Santa Clara is train-order office for Westward extra trains via Sunnyvale except trains consisting entirely of passenger equipment, and Westward trains to Niles Subdivision via Agnew except No. 13.

College Park is train-order office for Westward trains to Niles Subdivision via Milpitas unless train has obtained clearance at San Jose.

San Jose is train-order office for Eastward trains, No. 13, First Class trains via Sunnyvale, Westward trains to Niles Subdivision via Milpitas, and Westward extra trains consisting entirely of passenger equipment.

RULE D-251. Applies on both tracks between Watsonville Jct. and Logan; between Corporal and Gilroy; and between Coyote and Lick.

Applies on both tracks between San Francisco and San Jose, except when inferior trains moving on main track are delayed in this territory, they must clear time of following first-class schedules in accordance with Rule 86(b).

Commute Fleet Operations will be considered to be between Trains Nos. 113 and 137 and between Trains Nos. 122 and 142.

During Commute Fleet Operations there will be no train or engine movements except commute trains on main track or on tracks adjacent to main tracks between San Francisco and San Jose while a commute train passes.

During Commute Fleet Operations where it is not practicable to comply with these instructions, movements will stop and train dispatcher will be contacted through towerman at one of the following locations:

- 4th Street Tower
- Redwood Junction Tower
- Santa Clara Tower
- College Park Tower

who will issue instructions pertaining to further movement. If instructed by train dispatcher to proceed, movement must then be stopped while commute train passes.

Where practicable to do so, adjacent tracks to main tracks are to be kept clear of cars and engines during Commute Fleet Operations.

RULE 289. San Jose: When westward interlocking signal at MP 47.3 (San Carlos St. Overpass) displays red over lunar aspect, per Rule 289, Figure B, indication applies only to Train No. 13 for movement to Station Track No. 5.

RULE 306. The following home signals, equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device.

Eastward Signal	Protection	Westward Signal
P-172	Four collision detectors at Poplar, Santa Inez, Mt. Diablo and Tilton Ave., and underpasses, San Mateo Spring switch, east end station track No. 5, San Jose	P-179 P-I
P-SA	Vehicle barricade detectors Dumbarton St. E-26.8 and Berkshire St. E-26.9, Redwood City . .	P-275
P-514	Spring switch, end double track, Lick Spring switch, end double track, Coyote	P-635
P-660	Spring switch, west end siding, Perry Spring switch, east end siding, Perry	P-673
P-770	Spring switch, west end siding, Rucker Spring switch, east end siding, Rucker	P-783
P-804	Spring switch, end double track, Gilroy Spring switch, end double track, Corporal	P-SA P-A
P-924	Earthquake detector, Pajaro River bridge	
P-SA	Spring switch, end double track, Logan	

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. San Jose: Main track from signal 50 feet west of spring switch on wye to Signal 467 on Milpitas line not protected by block signals.

When Signals 463, 463.5, 464, 465, 466 or 467 display stop indication, trains and engines, after stopping, may proceed at restricted speed, provided proceed signal is received from switchman at The Alameda, green flag by day, green light by night, except No. 13 may pass Signal 463 displaying stop indication without stopping at restricted speed, provided proceed signal is received from switchman at The Alameda, green flag by day, green light by night, but must stop to clear crossover between station track Nos. 4 and 5 just west of The Alameda.

Signal 464 on Signal Bridge 466 is a diverging route signal governing entrance into station track Nos. 1, 2, 3 and 4 from station track No. 4. Lower unit on Signal 466 governs entrance into these tracks through crossover from station track No. 5.

When Signal 464 or lower unit of Signal 466 displays yellow aspect, movement into track Nos. 1, 2, 3 and 4 must not be made until proceed signal is received from switchman at The Alameda, green flag by day, green light by night, and then movement must not exceed 10 MPH. No signal protection beyond fouling point on these tracks.

When Signal 473 displays stop indication, trains and engines may proceed at restricted speed, provided proceed signal received from switchman at Park Ave., green flag by day, green light by night.

Station track No. 5 between Signal Bridge 466 and west limit of San Jose-Lick interlocking west of San Carlos St. overpass is not within interlocking limits, but signal indication will authorize movement of trains and engines between these points on this track.

Signal 463.5 governs westward movements from station track Nos. 6 to 11 inclusive.

Starting indicators for westward trains on station track Nos. 1, 2 and 3 are controlled by switchman at The Alameda, and when displaying red aspect must not be passed unless proceed signal received from switchman, green flag by day, green light by night, and when displaying yellow aspect permits movement with caution to Signal 465.

SPRING SWITCHES

RULE 538. Spring switches not equipped with facing point locks are located as follows:

Location	Normal Position
Mountain	
View	Moffett Field Spur Main track
San Jose	Milpitas wye switch Milpitas line main track

Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Lick	End double track Eastward track
Coyote	End double track Westward track
Perry	West end siding Main track
Perry	East end siding Main track
Rucker	West end siding Main track
Rucker	East end siding Main track
Gilroy	End double track Eastward track
Corporal	End double track Westward track
Logan	End double track Eastward track

INTERLOCKING

RULE 606. Fourth Street Tower limits—San Francisco: Fourth Street Zone—From dwarf signals on station tracks Nos. 1 to 12 near Fifth Street, to Westward signal on Eastward main track at MP 1.33 West end Tunnel No. 1 and Westward signal on Westward main track at MP 1.68 East end of Tunnel No. 1.

ONE SOUND OF SIREN REQUIRES THAT TRAINS AND ENGINES WITHIN LIMITS OF INTERLOCKING MUST STOP.

Potrero Zone—Eastward main track MP 1.23 to MP 1.33; Westward main track MP 1.68 to MP 1.26. Dual control switches are equipped with selector lever and hand-throw lever.

Bayshore Zone—Eastward main track MP 4.21 to MP 5.06; Westward main track MP 5.13 to MP 4.98. Dual control switches are hand operated by use of cranks and crank is located on instrument house south of track.

Brisbane Zone—Eastward main track MP 6.62 to MP 7.07; Westward main track MP 7.6 to MP 6.89. Dual control switches are hand operated by use of cranks and crank is located on instrument case at outbound lead on instrument house south of tracks.

When necessary to hand operate switches, permission must be obtained from operator, Fourth Street, and be governed by Rule 772. Instructions for hand operating power switches are mounted on instrument housing adjacent to crank holder.

Redwood Jct.: Limits extend from signal bridge 740 feet west of tower to signal 700 feet east of tower on San Francisco Subdivision, and to signal 950 feet east of tower on Niles Subdivision.

Santa Clara: Limits extend from signal 2150 feet east of tower on San Francisco Subdivision westward main track to signal 1675 feet west of tower on San Francisco Subdivision eastward main track, and on Newark line to signal 1650 feet west of tower.

College Park: Limits extend from signal 1200 feet west of tower to Signal Bridge 466, and on main track to Signal Bridge 465; and from dwarf signal located 800 feet east of Newhall St. to West Taylor St. subway on No. 1 lead; and from Signal Bridge 466 to signal just west of spring switch at the junction of Milpitas line main track and Milpitas wye.

Electric switch locks on derails and crossover switches within these limits are under control of operator. Permission must be obtained to unlock derail or switch. Derail must be lined first, then switch may be lined.

Engines to move from roundhouse engine track to San Jose passenger station must not foul No. 1 lead until interlocking signal at inside crossover switch displays indication as shown in Rule 283, Fig. D, or Rule 288, Fig. C for eastward movement to station track Nos. 4 or 5.

Bell cord communicating signal between San Jose roundhouse and operator to be used in lieu of telephone when requesting authority to make movements from roundhouse to station tracks Nos. 4 or 5. Following code of signals to be used:

- Roundhouse to passenger station One pull of cord
- Roundhouse to College Park Two pulls of cord
- For movement in roundhouse yard, when necessary to pass eastward interlocking signal Three pulls of cord

San Jose-Lick: Limits extend on main track from Signal Bridge 464, to light signal 700 feet east of end of double track at Lick on westward track, and to light signal 500 feet east of double track at Lick on eastward track; and on station tracks 4 and 5 from dwarf signal opposite Signal 473 to their connection with main track east of passenger station; and on Lick Branch to dwarf signal at fouling point; and on Vasona Branch from junction with main track to westward signal located 30 feet west of crossover.

Hand-throw switch to spur track No. 105 at MP 48.5, 500 feet east of Willow Street Subway is not equipped with electric switch lock and must not be operated without permission from the San Jose operator. Engines using this switch must occupy main track continuously or leave main track switch open while work is being performed. This spur track must not be used by trains or engines for the meeting or passing of trains.

AUTOMATIC INTERLOCKING

RULE 680. Twenty-Fifth and Illinois Streets:

WP Work Lead over Illinois Street:

Be governed by the following:

- (1) If signal fails to display proceed indication, after two minutes, crew member will proceed to crossing and, if no conflicting train or engine movement is seen or heard approaching or using crossing, train or engine will move into the interlocking, stopping clear of conflicting tracks.
- (2) Wait one minute.
- (3) After waiting one minute and upon receiving hand signal from crew member at crossing, train or engine may proceed through interlocking with caution, not exceeding 15 miles per hour.

San Jose-Lick Line (WP Crossing MP 49.1): Limits extend from signal located 700 feet west of crossing to signal 700 feet east of crossing.

When semi-automatic signals indicate STOP, Rule 663(c) will govern.

LETTER-TYPE INDICATORS

RULE 705. Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and requires movement as follows
W	273	Redwood Jct.	Westward trains via Dumbarton must stop short of Signal 273 and wait until indicator is extinguished.
W	7 ft. mast MP 44.20	Santa Clara	Eastward trains, except first-class, stop short of Reed St. and wait until indicator is extinguished and flashing white light is displayed. Display of flashing white light authorizes movement to interlocking limits Santa Clara.
W	821	Gilroy	Westward trains stop and not proceed until indicator is extinguished, except, after stopping, trains may proceed on verbal authority of Gilroy operator. <ol style="list-style-type: none"> a. Trains making pickup or set out will cut off and leave train east of Signal 821 taking only locomotive and those cars required for the operation. b. Through train not exceeding restricted speed to the next home signal.

CENTRALIZED TRAFFIC CONTROL

RULE 760. Limits extend from MP 86.4 Corporal to MP 93.2 Logan.

GENERAL REGULATIONS

RULE 824. Watsonville Junction: Before engine is detached, sufficient number of hand brakes must be applied on east end of train to hold cars.

Permanente: Before engine is detached all handbrakes must be applied to hold cars.

RULE 825. Belmont: Portable rail skid hung on post at Joseph George Spur.

Refer to Rule 825, All Subdivisions.

RULE 827. Dragging equipment and/or derailed equipment detectors installed at following locations:

MP	Location	Direction
11.3	San Bruno	West
23.7	San Carlos	East
28.2	Atherton	West
42.0	Santa Clara	East and West
68.0	Perry	East and West
90.0	Logan	East and West

HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
W	694		Morgan Hill
W	721		Morgan Hill
H	722		San Martin MP 74.6 San Martin
*H	MP 68.5		Perry West End of Perry

*Displays Flashing White Light when "H" illuminated.

SPECIAL INSTRUCTIONS—SAN FRANCISCO SUBDIVISION

SCANNER SITE

MP	Type	Direction	Location
70.3	A	East and West	Perry-Morgan Hill

(Refer to Rule 827, All Subdivisions.)

RULE 827-A. At following crew change points, trains handling tank cars containing Flammable Compressed Gas (FCG) must be given a rolling inspection by outbound train crew unless otherwise instructed:

- Watsonville Jct.
- San Jose
- San Francisco

Refer to Rule 827-A, All Subdivisions.

RULE 836. Cars must not be shoved ahead of engine on descending grade Permanente to Monta Vista.

RULE 872. Enginemen taking charge of road engines at 7th Street Diesel Terminal, Bayshore, San Jose, Watsonville Junction will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2. Taking Charge of Engines.

Section A, will apply at:

7th Street Diesel Terminal, Bayshore, San Jose, Watsonville Junction.

RULE 14. Disabled Commute Train Procedure.

When a commute train becomes disabled and a following train has been authorized to handle disabled train to a location where repairs may be made on trains combined to complete the schedule, the following procedures will apply if the train brake system is operative on the disabled train:

1. Approach the disabled train, stopping at least 100 feet from the rear of train.
2. Have oral understanding with conductor and engineer of disabled train concerning nature of trouble, movement to be made, and arrange to safely couple to disabled train.
3. After coupling is made the engineer of the following train will make a 15-pound brake pipe reduction and cut out his automatic brake cut-off valve or close double heading cock.
4. After being assured that brake valve on the engine of following train is cut out, engineer of the disabled train will release the train brakes. Air brake test must then be made in accordance with Air Brake Rule 38-D.
5. Radio communication, if available, should be used in coordinating the move.
6. Exercise good judgment in starting train by using the least possible amperage.
7. The movement of train must be made at RESTRICTED SPEED to location where either repairs can be made to disabled train or where trains can be properly combined.
8. If repairs to disabled engine cannot then be made at that point, the trains must be properly combined as follows:
 - (a) The engine of the following train must be switched to the head end of the disabled train and the trains combined.
 - (b) After trains are properly combined the engineer of lead engine will comply with Air Brake Rule 38-D.

If the train brake system of the disabled engine is inoperative due to air compressor or main reservoir failure, or diesel engine is dead, follow procedure in Items 1 and 2 of these instructions, after which the following additional procedures will apply:

- A. When trains are coupled the engineer of the disabled train will cut out the automatic brake valve.
- B. After the engineer on the following train has been assured that the brake valve on the disabled engine has been cut out, the brakes will be released and air test made in compliance with Air Brake Rule 38-D.
- C. The movement to the location where repairs can be made or trains properly combined must be made WITH CAUTION not exceeding 10 MPH.

RULE 17. On passenger trains, between Olympia and MP 127.60 and between MP 124.40 and MP 121.80, three retaining valves for six cars; four retaining valves for eight cars; five retaining valves for ten cars; and seven retaining valves for twelve cars must be turned up on head end of the train.

Retaining valves must be used on freight and mixed trains on descending grades as follows:
Felton to Santa Cruz, Permanente to Monta Vista.

WITHOUT DYNAMIC BRAKE IN OPERATION:

One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

Permissible Tons Per Unit Without Retaining Valves

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
WITH dynamic brake in operation but WITHOUT pressure maintaining system of braking	425	625	500	775	1025
WITH dynamic brake in operation and WITH pressure maintaining system of braking	1300	1950	1600	2400	3200

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Permanente to Monte Vista: All retaining valves must be turned in high pressure position on loaded cars and in low pressure position on empty cars.

Refer to Air Brake Rule 17, All Subdivisions.

FREIGHT TRAINS

RULE 21. Trainmen must not couple air hose on outgoing trains at Watsonville Junction until train is made up and caboose and road engine are on train.

RULE 24-C. Permanente to Monta Vista: Sufficient time, but not less than 20 minutes, must be allowed to fully charge air brake system on cars picked up at Permanente before making air test. Brakes must be operative on all cars.

Before making any switching moves at Permanente it must be known that air brake system on each car being handled is fully charged.

After fully charging air brake system, engineer will make a 20 pound brake pipe reduction, and conductor will see that a member of crew observes each car to see that brakes are properly working, then release brakes and wait five minutes before commencing any moves. In addition engineer will check brake pipe leakage as prescribed by Air Brake Rule 24-C.

Hand brakes will not be released on train until trainline is recharged.

RULE 24-G. Will apply at:

Watsonville Jct. and San Jose.

RULE 33. Should dynamic brake failure occur while handling in excess of 80 tons per operative brake, train may proceed at speed not exceeding 10 MPH if in the judgment of the conductor and engineer it is safe to do so, and provided retaining valves are used as prescribed by Air Brake Rule 17.

Permanent to Monta Vista: Maximum tonnage per operative brake—100 tons. All retaining valves will be used. Retainers will be used in high pressure position on loaded cars and low pressure position on empty cars, with dynamic brake and pressure maintaining system of braking, with not more than 20 cars for each six axles of dynamic brake, with speed not exceeding 10 MPH.

Not more than 40 cars will be handled in train.

Felton to Santa Cruz: Maximum tonnage per operative brake—80 tons, except with dynamic brake and pressure maintaining system of braking in operation; with not more than 20 cars for each six axles of dynamic brake; with speed not exceeding 15 MPH, and all retaining valves in high pressure position on loaded cars and in low pressure position on empty cars—90 tons.

The maximum tonnage per operative brake between Olympia and Santa Cruz is 90 tons.

Speed of freight trains, when tonnage per operative brake exceeds 60 tons, must not exceed 12 MPH, Olympia (MP 129.72) to Felton (MP 127.40), and MP 124.40 to MP 121.80.

Watsonville to Santa Cruz: When gross tonnage of freight train handling cars exceeds 85 tons per operative brake, speed must not exceed 20 MPH.

Descending grades where restrictions apply are designated below:

Watsonville Jct. to Olympia

MP	to	MP	Speed
107.5	to	108.8	20 MPH
110.1	to	110.4	20 MPH
111.1	to	111.4	20 MPH
112.3	to	112.7	20 MPH
113.7	to	114.1	25 MPH
115.7	to	116.0	20 MPH
117.4	to	117.6	20 MPH
118.8	to	119.1	20 MPH

Olympia to Watsonville Jct.

MP	to	MP	Speed
117.8	to	117.6	20 MPH
113.7	to	113.0	25 MPH
111.0	to	110.7	20 MPH
110.0	to	109.5	20 MPH

MISCELLANEOUS

1. Passengers may be allowed to take dogs in smoking cars of commute trains provided dogs are on leashes and owners control actions of the animals so that there is no complaint from other passengers.

2. Freight trains or engines with freight cars must not operate over station track Nos. 2, 3, 4 or 5 in San Jose Passenger station unless authorized by yardmaster or his representative.

3. AMTRAK Trains, stop at San Jose so that rear car is at platform.

4. No more than two diesel units may be handled in locomotive consists on the Santa Cruz Branch between Santa Cruz and Olympia and on the Davenport Branch between Santa Cruz and Davenport.

5. Engines listed must not operate on tracks shown below:

Class of Engine	Location	Restricted Tracks
All Engines	Santa Cruz	Cowell spur beyond street crossing.
" "	Logan	Granite Rock Co. bunker loading tracks; scale track; stock pile tracks and beyond engine restriction sign at west end of empty set-out track Nos. 1, 2 and 3.

6. LOAD LIMIT (car and contents):

*San Francisco-Watsonville Jct.	263,000 pounds
San Bruno-Daly City	240,000 pounds
Redwood Jct.-Redwood Harbor	240,000 pounds
San Jose-Permanente	263,000 pounds
Lick-Alamitos	240,000 pounds
Carnadero-Hollister	240,000 pounds
**Watsonville Jct.-Olympia	281,000 pounds
**Santa Cruz-Davenport	281,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four axle cars with minimum axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

**On cars having 23-foot or greater truck center.

Unless authorized by Superintendent, heavier loads must not be handled.

7. SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

With Caution Not Exceeding MPH

Through sidings, yard, and other tracks, wyes, balloon tracks, crossovers, turnouts, and slip switches	10
San Jose: Passenger trains on station track No. 5:	
Eastward, end of double track to Signal Bridge 464	45
Eastward, Signal Bridge 464 to passenger station	15
Westward, passenger station to end double track	20
Passenger trains on station track No. 4:	
Westward, passenger station to Signal Bridge 464	15
Westward, Signal Bridge 464 to end of double track	45
Eastward, end of double track to passenger station	20
Freight trains on station track Nos. 4 and 5:	
Between end of double track and crossover at Julian St.	20
Passenger trains on station track Nos. 4 and 5:	
In either direction between passenger station and connection with main track east of station	15

8. San Jose—Zone 8: Track 814, Del Monte No. 3: Burglar alarm system set to operate at 25-minute intervals. When necessary for industry gate to be in open position for longer than 25 minutes gate must be closed and re-opened to prevent alarm system from functioning. Alarm system operates during hours of darkness only.

SPECIAL INSTRUCTIONS—SAN FRANCISCO SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 20, and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 22 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
SAN FRANCISCO TO WATSONVILLE JCT:					WATSONVILLE JCT. TO SAN FRANCISCO:				
0.16 to 0.62	0.62		20	20	100.40 to 100.00			25	25
0.62 to 1.80	1.80		25	25	100.00 to 98.00			45	45
1.80 to 3.10	3.10		50	40	98.00 to 94.38			70	55
3.10 to 11.01	11.01		60	40	94.38 to 92.99			55	55
11.01 to 24.52	24.52		70	55	92.99 to 87.94				
24.52 to 26.40	26.40				(spring switch)			35	35
(Redwood City)			45	45	87.94 to 86.49			50	50
26.40 to 44.00	44.00		70	55	86.49 to 82.00			60	55
44.00 to 45.91	45.91				82.00 to 79.50			25	25
(End of Double Track)			60	55	79.50 to 78.60			50	50
45.91 to 46.90	46.90		15	15	78.60 to 73.96			70	55
46.90 to 47.29	47.29				73.96 to 73.78			60	55
(spring switch)			15	15	73.78 to 62.00			70	55
47.29 to 47.53	47.53		30	30	62.00 to 55.70				
47.53 to 49.12	49.12		35	35	(51.81)			65	55
49.12 to 51.81	51.81				51.81 to 51.32			35	35
(55.70)			50	50	51.32 to 51.30				
55.70 to 63.21	63.21		70	55	(spring switch)			35	35
63.21 to 63.23	63.23				51.30 to 49.12			50	50
(spring switch)			35	35	49.12 to 47.53			35	35
63.23 to 73.78	73.78		70	55	47.53 to 47.29				
73.78 to 73.96	73.96		60	55	(spring switch)			30	30
73.96 to 78.60	78.60		70	55	47.29 to 46.90			15	15
78.60 to 79.50	79.50		50	50	46.90 to 45.91				
79.50 to 82.00	82.00		35	35	(end of double track)			15	15
82.00 to 86.47	86.47		60	55	45.91 to 45.86			15	15
86.47 to 86.49	86.49				45.86 to 44.00			60	55
(spring switch)			25	25	44.00 to 26.40			70	55
86.49 to 92.97	92.97		35	35	26.40 to 24.52				
92.97 to 92.99	92.99				(Redwood City)			45	45
(spring switch)			25	25	24.52 to 11.01			70	55
92.99 to 94.38	94.38		55	55	11.01 to 3.10			60	50
94.38 to 98.00	98.00		70	55	3.10 to 1.80			50	40
98.00 to 100.00	100.00		45	45	1.80 to 0.62			25	25
100.00 to 100.40	100.40		25	25	0.62 to 0.16			20	20

EASTWARD		ALL TRAINS	WESTWARD		ALL TRAINS
MP	MP		MP	MP	
SAN JOSE TO PERMANENTE:					
47.21 to 47.66	47.66	10	PERMANENTE TO SAN JOSE:		
47.66 to 53.05 (48.06)	53.05	20	37.50 to 39.50 (Permanente)		10
48.06 to 47.86	47.86	10	39.50 to 47.86		25
47.86 to 39.50	39.50	25	47.86 to 48.06 (53.05)		10
39.50 to 37.50 (Permanente)	37.50	15	53.05 to 47.66		20
			47.66 to 47.21		10
SOUTH SAN FRANCISCO TO DALY CITY:					
13.55 to 7.39	7.39	10	DALY CITY TO SOUTH SAN FRANCISCO:		
			7.39 to 13.55		10
SOUTH SAN FRANCISCO TO BADEN:					
		10	BADEN TO SOUTH SAN FRANCISCO:		
					10
LICK TO ALAMITOS:					
55.34 to 58.99	58.99	10	ALAMITOS TO LICK:		
			58.99 to 55.34		10
CARNADERO TO HOLLISTER:					
82.99 to 83.01 (junction switch)	83.01	15	HOLLISTER TO CARNADERO:		
83.01 to 95.81	95.81	20	95.81 to 83.01		20
			83.01 to 82.99 (junction switch)		15
WATSONVILLE JCT. TO OLYMPIA:					
100.46 to 101.40	101.40	15	OLYMPIA TO WATSONVILLE JCT.:		
101.40 to 102.20	102.20	8	129.72 to 126.50		20
102.20 to 103.60	103.60	20	126.50 to 120.00		15
103.60 to 112.57	112.57	25	120.00 to 119.20		20
112.57 to 113.00	113.00	20	119.20 to 116.25		25
113.00 to 116.10	116.10	25	116.25 to 116.10		15
116.10 to 116.25	116.25	15	116.10 to 113.00		25
116.25 to 119.20	119.20	25	113.00 to 112.57		20
119.20 to 120.00	120.00	20	112.57 to 103.60		25
120.00 to 126.50	126.50	15	103.60 to 102.20		20
126.50 to 129.72	129.72	20	102.20 to 101.40		8
			101.40 to 100.46 (junction switch)		15
SANTA CRUZ TO DAVENPORT:					
79.35 to 81.36 (120.42 junction switch)	81.36	15	DAVENPORT TO SANTA CRUZ:		
81.36 to 91.08	91.08	20	91.08 to 81.36		20
			81.36 to 79.35 (junction switch)		15

Trains handling tank cars containing Flammable Compressed Gas must not exceed 55 MPH. Where maximum authorized speed is less than 55 MPH and more than 25 MPH, train must be operated at 5 MPH less than maximum authorized speed. Where maximum authorized speed is more than 35 MPH such trains are further restricted between the following locations where 30 MPH must not be exceeded:

Carnadero MP 83.2 and San Francisco MP 0.0

When tonnage exceeds 80 tons per operative brake, the following trains: UPSFF, UPSFT, BROAT, OABRT, OAOGF, refer to Air Brake Rule 33, All Subdivisions.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS See Item 7, page 31.

Maximum authorized speed for freight trains is 55 MPH except OALAT may be authorized by train order to operate at Column 1 speeds not exceeding 65 MPH, provided train contains no restricted cars or empties except cabooses and do not exceed requirements of tons per operative brake as shown below:

Number of Cars	Tons Per Operative Brake
1 to 70	70
71 to 75	69
76 to 80	68
81 to 85	67
86 to 90	66
91 to 95	65
96 to 100	64
101 to 105	63
106 to 110	62
111 to 115	61
116 to 120	60
121 to 125	58
126 to 130	56
131 to 135	54
136 to 140	52
141 to 145	50

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARING ON MAIN TRACK AND SIDINGS

MP	Location	Description	Type
113.46—			
113.60	Cooper	Salinas River bridge	Side
155.28—			
155.54	Metz	Tunnel No. 5½	Side
200.55—			
200.67	McKay	Salinas River bridge	Overhead and side
222.03	Templeton	Overhead crossing	Side
223.39	Templeton	Graves Creek bridge	Side
239.29—			
239.97	Cuesta	Tunnel No. 6	Overhead and side
240.11—			
240.37	Cuesta	Tunnel No. 7	Overhead and side
240.61—			
240.70	Cuesta	Tunnel No. 8	Overhead and side
240.86—			
240.97	Cuesta	Tunnel No. 9	Overhead and side
242.26	Serrano	Signal bridge	Overhead
245.85—			
245.99	Chorro	Tunnel No. 11	Overhead and side
248.26	Goldtree	Signal bridge	Overhead
251.16	Hathaway	Overgrade crossing	Overhead and side

RULE 7-C. Watsonville Jct.: Eastward freight trains, except OALAT, must not pass Signal 984 and Westward freight trains must not pass Signal 1001 unless proceed signal received; green flag by day, green light by night, or engineer is orally authorized by yardmaster or his representative.

RULE 10-H. EXCEPTION:

Monterey, and Spreckels Branches. When a yellow flag is required it will be displayed one-half mile from point of restriction.

RULE 10-J. Speed signs to left of track:

Eastward	Reading	Westward	Reading
MP 120.75	70-55	MP 118.37	70-55
		MP 163.10	70-55

RULE 15. EXCEPTION:

Monterey, and Spreckels Branches. The explosion of a torpedo requires movement at restricted speed for one mile from point where torpedo was exploded.

RULE 21. Identification of superior trains in CTC limits between Santa Margarita and San Luis Obispo must be made and such identification will apply at Santa Margarita or San Luis Obispo.

Identification of superior trains in CTC limits between Watsonville Jct. and Salinas must be made and such identification will apply at Salinas.

RULE 82-A. Castroville: Trains to Monterey Branch must obtain clearance bearing Chief Train Dispatcher's OK when train order operator on duty.

RULE 83-A. At the following stations, only the trains indicated will register:

Castroville	Trains to or from Monterey Branch.
Salinas	Trains originating or terminating.
San Luis Obispo	Registration of eastward light engines, terminating, may be telephoned on arrival at roundhouse to train order operator who must enter same on register and verify by repeating registration.

RULE 83-B. At open train-order offices, trains may register by ticket as follows:

Watsonville Jct.	Nos. 12 and 13.
Castroville	Trains to or from Monterey Branch.

RULE 85. A section must not pass and run ahead of another section of the same schedule in CTC limits, between Watsonville Jct. and Salinas and between San Luis Obispo and Santa Margarita, without first exchanging train orders with the section to be passed, each section to display signals if necessary.

RULE 93. Yard limits are established at the following locations:

West MP		East MP
96.11	Watsonville Jct.	101.25
110.04	Castroville (Monterey Branch)	112.09
CTC		
Limits	Salinas	130.00
	" (Spreckels Branch)	123.87
132.60	Gonzales	136.30
142.44	Soledad	144.65
160.50	King City	170.00
214.30	Paso Robles	218.00
232.50	Santa Margarita	236.75
251.80	San Luis Obispo	257.00
123.30	Monterey-Pacific Grove	129.88

RULE 99. EXCEPTION:

Monterey Branch: When protection by flagman is required by this rule, distance specified for placement of torpedoes and flag protection will be one-half and one mile from train being protected.

RULE 99-C. Will apply on Monterey Branch.

RULE 103. King City: Through freight trains picking up and/or setting out cars must not block Lonoak road crossing at MP 164.3.

Paso Robles: Westward trains, stopped at station, blocking 10th Street and westward trains or engines on siding, or trains delayed between 10th and 13th Streets must not exceed 10 MPH between 12th and 13th Streets and must not enter 13th Street until gates are down.

Eastward trains leaving train west of Signal 2158, stop 250 feet west of signal. When train ready to depart, gates must be lowered by member of crew inserting switch key in receptacle located on Signal 2158.

San Miguel: Private crossing opposite San Miguel Mission (near MP 208) must not be blocked while performing station switching.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must warn traffic on the following street or highway crossings before movement is made:

Castroville	Crossing on track No. 952.
King City	Crossing on track No. 2430.

RULE 104. The normal position of rigid switches at junctions is as follows:

Castroville	Monterey Branch, for Salinas line.
Spreckels Jct.	Spreckels Branch, for Salinas line.

RULE 105. Salinas: No. 1 siding extends from SA Signal at MP 116.4 to crossover just west of Signal 1178. No. 2 siding extends from crossover just east of Signal 1178 to crossover just west of Signal 1186.

Gonzales: Siding extends from west switch to crossover at station building.

SPECIAL INSTRUCTIONS—SALINAS SUBDIVISION

Soledad: Siding on ocean side of main track is designated as No. 1 siding, and siding on opposite side of main track is designated as No. 2 siding.

McKay: Siding on ocean side of main track is designated as No. 2 siding and siding on opposite side of main track is designated as No. 1 siding.

Santa Margarita: Siding extends from the end of CTC MP 236.6 to spring switch MP 232.92, capacity 19,015 feet, and will be used by westward trains only, unless otherwise directed by train dispatcher. Crossover switches between main track and siding MP 234.2 must not be used unless authorized by train dispatcher.

RULE 211. Salinas: Eastward trains receiving an eastward proceed "SA" signal at MP 116.4, are authorized to proceed on main track to train order office.

RULE 221. Castroville is train order office for trains via Monterey branch only.

Salinas is train order office for eastward trains and for westward trains originating. Westward trains originating will obtain clearance only when operator on duty.

RULE 306. The following home signals equipped with triangular plate displaying the letter "P" have included in their control limits some special protective device:

Eastward Signal	Protection	Westward Signal
	Spring switch, end of double track, Watsonville Jct.	P-SA
P-A	Spring switch, west end siding, Castroville, Spring switch, west switch, Monterey branch. Spring switch, east end siding, Castroville.	P-A
P-SA	Spring switch, west end No. 1 siding, Salinas.	
P-1214	Vehicle barricade detector Harris Rd. E-121.8.....	P-1225
P-1878	Fire and collision detector Sargent Creek Bridge, MP 188.15.....	P-1889
P-1950	Spring switch, west end siding, Bradley.	
P-2278	Flood detector, east end Henry Siding, MP 228.87.....	P-2289
P-2328	Spring switch, west end siding, Santa Margarita.	
P-A	Slide detector fence, Chorro.....	P-A
P-A	Fire detector, Steiner Creek Bridge, Goldtree	P-2493

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 516. Overlap Posts:

Spreckels Jct..... Westward trains.

SPRING SWITCHES

RULE 538. Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Watsonville Jct.	End double track..... Westward track
Castroville	West end siding..... Main track
Castroville	Switch to Monterey branch..... Main track
Castroville	East end siding..... Main track
Salinas	West end No. 1 siding..... Main track
Bradley	West end siding..... Main track
Santa Margarita....	West end siding..... Main track

LETTER-TYPE INDICATORS

RULE 705. Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows:
S....	Eastward "A" signal west end....	Castroville.	*Trains via Salinas enter siding. *Trains via Ord enter Monterey Branch.
S....	Westward "A" signal east end....	Castroville.	*Trains via Moss Landing enter siding.
S....	Eastward "SA" signal west end....	Salinas.....	*Enter siding No. 1.
M....	1191.....	Salinas.....	Proceed on main track to fouling point west end Siding No. 1, Salinas, MP 116.43.

*Illuminated letter "S" authorizes movement without contacting train dispatcher.

Refer to Rule 705, All Subdivisions.

CENTRALIZED TRAFFIC CONTROL

RULE 760. Limits extend from end of double track Watsonville Jct. to west switch No. 1 siding Salinas.

Limits extend from east end siding Santa Margarita to end of double track San Luis Obispo.

RULE 776. When letter "S" is illuminated on "A" Signal at East and West end Castroville and on "SA" Signal at West end Salinas authorizes movement from main track without contacting train dispatcher.

Refer to Rule 705, Salinas Subdivision.

GENERAL REGULATIONS

RULE 824. Watsonville Junction:

Before engine is detached, sufficient number of hand brakes must be applied on east end of train to hold cars.

RULE 825. San Luis Obispo: When freight trains stop on receiving track and road engine is detached, trainmen will apply sufficient hand brakes on the head end of eastward trains to hold cars.

Portable rail skids are hung on posts at lower end of sidings at:

- Santa Margarita
- Cuesta
- Serrano
- Chorro
- Goldtree

When necessary to leave cars on any of these sidings permission must first be obtained from Chief Train Dispatcher.

See Rule 825, All Subdivisions.

RULE 827. Dragging equipment and/or derailed equipment detectors installed at following locations:

MP	Location	Direction
128.9	Chualar	East and West
176.5	San Lucas	East and West
218.0	Paso Robles	East and West
236.6	Santa Margarita	East and West
249.0	Goldtree	East and West

HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
H.....	1365.....	Gonzales.....	MP 133.9 Gonzales
W.....	1388.....	Soledad.....	
W.....	1417.....	Gonzales.....	
H.....	1418.....	Soledad.....	MP 144.0 Soledad
H.....	1761.....	San Lucas.....	MP 172.5 San Lucas
W.....	1780.....	San Ardo.....	
H.....	1806.....	San Ardo.....	MP 182.8 San Ardo
W.....	1807.....	San Lucas.....	

SCANNER SITE

MP	Type	Direction	Location
139.6	A	East and West	Gonzales-Soledad
178.8	A	East and West	San Lucas-San Ardo
214.0	C	East and West	Paso Robles

Refer to Rule 827, All Subdivisions.

RULE 827-A. At following crew change points, trains handling tank cars containing Flammable Compressed Gas (FCG) must be given a rolling inspection by outbound train crew unless otherwise instructed:

San Luis Obispo
Watsonville Jct.

Trains handling tank cars containing Flammable Compressed Gas (FCG) must stop and inspect train at following location:

Santa Margarita.

Refer to Rule 827-A, All Subdivisions.

RULE 872. Enginemen taking charge of road engines at Watsonville Junction and San Luis Obispo, will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2. Taking Charge of Engines: Section A, will apply at:

Watsonville Junction and San Luis Obispo.

RULE 17.

PASSENGER TRAINS

San Luis Obispo to Santa Margarita: Without dynamic brake in operation turn up all retaining valves.

FREIGHT TRAINS

Retaining valves must be used on descending grades as follows:

Santa Margarita to San Luis Obispo.

WITHOUT DYNAMIC BRAKE IN OPERATION:

One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

Permissible Tons	Without Retaining Valves		Extended Range		
	Basic-Dynamic Brake		Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle

WITH dynamic brake in operation but WITHOUT pressure maintaining system of braking..... 525 775 625 950 1250

WITH dynamic brake in operation and WITH pressure maintaining system of braking..... 1500 2250 1800 2700 3600

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Eastward freight trains, Tunnel 6 to San Luis Obispo, without dynamic brake in operation, using retaining valves will stop at Serrano at least 10 minutes to permit wheel heat radiation.

Refer to Air Brake Rule 17, All Subdivisions.

FREIGHT TRAINS

RULE 21. Trainmen must not couple air hose on outgoing trains at Watsonville Junction and San Luis Obispo until train is made up and caboose and road engine are on train.

RULE 24-G. Will apply at:

San Luis Obispo and Watsonville Jct.

RULE 33. San Luis Obispo and Santa Margarita:

Maximum tonnage per operative brake—80 tons. Except with dynamic brake and pressure maintaining system of braking in operation with not more than 2500 tons for each six axles of dynamic brake and speed not exceeding 25 MPH—100 tons.

Should dynamic brake failure occur while handling in excess of 80 tons per operative brake, train may proceed at speed not exceeding 15 MPH if in judgment of conductor and engineer it is safe to do so, and provided retaining valves are used as prescribed by Air Brake Rule 17.

Castroville to Monterey: When gross tonnage of freight trains exceeds 85 tons per operative brake, speed must not exceed 20 MPH.

Descending grades where restrictions apply are designated below:

Eastward—Tunnel 6 to San Luis Obispo:

MP 239.65 to MP 252.10.....Speed 20 MPH

Castroville to Monterey:

MP 116.5 to MP 117.0.....Speed 20 MPH
MP 117.9 to MP 118.1.....Speed 20 MPH
MP 119.9 to MP 120.4.....Speed 20 MPH
MP 122.2 to MP 123.1.....Speed 20 MPH

Westward—Tunnel 6 to Santa Margarita:

MP 239.65 to MP 235.5.....Speed 20 MPH

Monterey to Castroville:

MP 121.3 to MP 120.9.....Speed 25 MPH
MP 119.9 to MP 119.1.....Speed 25 MPH
MP 117.9 to MP 117.0.....Speed 25 MPH

PASSENGER TRAINS

RULE 39. Running test must be made immediately after passing summit in Tunnel No. 6 in both directions.

MISCELLANEOUS

1. Load limit (car and contents):

*Watsonville Jct.-San Luis Obispo.....263,000 pounds
Castroville-Lake Majella.....240,000 pounds
Spreckels Jct.-Spreckels.....263,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four axle cars with minimum axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

Unless authorized by Superintendent, heavier loads must not be handled.

2. Ord: Train crews before entering or leaving the spur track into Fort Ord must open all four wire mesh gates across track at the bicycle trail crossing, MP 119.62, to block off bicycle traffic. After train clears crossing, train crew must return these wire mesh gates to position closed across track.

3. McKay: Gate across spur at East Garrison must be opened and closed by train crews. No lock on gates.

4. Salinas: Westward trains making set-out or pick-up on track 200 (No. 2 extension) must stop movement at any time movement is made in No. 1 siding.

5. San Ardo: Cars set-out for loading, unloading, or set-out bad order, must be placed on Beet Dump Track just east of Beet Dump.

SPECIAL INSTRUCTIONS—SALINAS SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 20 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 22 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT		
MP	MP	Column:	1	2	MP	MP	Column:	1	2		
WATSONVILLE					SAN LUIS						
JCT. TO SAN LUIS OBISPO:					OBISPO TO WATSONVILLE JCT.:						
100.40 to 100.70 (end double track).....					25	25	252.10 to 251.50... 25 25				
100.70 to 100.74 (spring switch)...					25	25	251.50 to 248.30... 40 40				
100.74 to 108.21...					50	50	248.30 to 236.75... 25 25				
108.21 to 118.37...					70	55	236.75 to 235.10... 35 35				
118.37 to 120.75...					25	25	235.10 to 231.36... 60 55				
120.75 to 125.60...					70	55	231.36 to 229.15... 40 40				
125.60 to 137.20...					65	55	229.15 to 227.20... 50 50				
137.20 to 147.68...					70	55	227.20 to 220.02... 55 55				
147.68 to 151.72...					40	40	220.02 to 216.80... 40 40				
151.72 to 154.00...					50	50	216.80 to 212.16... 60 55				
154.00 to 155.53...					65	55	212.16 to 211.90... 50 50				
155.53 to 163.10...					70	55	211.90 to 200.10... 60 55				
163.10 to 164.00...					60	55	200.10 to 197.80... 70 55				
164.00 to 167.43...					70	55	197.80 to 197.43... 60 55				
167.43 to 168.80...					40	40	197.43 to 194.35... 70 55				
168.80 to 185.50...					70	55	194.35 to 193.70... 30 30				
185.50 to 188.17...					60	55	193.70 to 188.17... 55 55				
188.17 to 193.70...					55	55	188.17 to 185.50... 60 55				
193.70 to 194.35...					30	30	185.50 to 168.80... 70 55				
194.35 to 197.43...					70	55	168.80 to 167.43... 40 40				
197.43 to 197.80...					60	55	167.43 to 164.00... 70 55				
197.80 to 200.10...					70	55	164.00 to 163.10... 60 55				
200.10 to 211.90...					60	55	163.10 to 155.53... 70 55				
211.90 to 212.16...					50	50	155.53 to 154.00... 65 55				
212.16 to 216.80...					60	55	154.00 to 151.72... 50 50				
216.80 to 220.02...					40	40	151.72 to 147.68... 40 40				
220.02 to 227.20...					55	55	147.68 to 137.20... 70 55				
227.20 to 229.15...					50	50	137.20 to 125.60... 65 55				
229.15 to 231.36...					40	40	125.60 to 120.75... 70 55				
231.36 to 235.10...					60	55	120.75 to 118.37... 25 25				
235.10 to 236.75...					35	35	118.37 to 108.21... 70 55				
236.75 to 249.35...					25	25	108.21 to 100.74 (end of double track).....				
249.35 to 251.50...					40	40	100.74 to 100.40... 35 35				
251.50 to 252.10...					25	25					

Maximum authorized speed for freight trains is 55 MPH except OALAT may be authorized by train order to operate at Column 1 speeds not exceeding 65 MPH, provided train contains no restricted cars or empties except cabooses and do not exceed requirements of tons per operative brake as shown below:

Number of Cars	Tons Per Operative Brake
1 to 70	70
71 to 75	69
76 to 80	68
81 to 85	67
86 to 90	66
91 to 95	65
96 to 100	64
101 to 105	63
106 to 110	62
111 to 115	61
116 to 120	60
121 to 125	58
126 to 130	56
131 to 135	54
136 to 140	52
141 to 145	50

SPEED RESTRICTIONS FOR TRAINS—Continued

EASTWARD		ALL TRAINS	WESTWARD		ALL TRAINS
MP	MP		MP	MP	
CASTROVILLE TO LAKE MAJELLA:			LAKE MAJELLA TO CASTROVILLE:		
110.10 to 110.70.....			15	130.23 to 127.30.....	15
110.70 to 112.09.....			20	127.30 to 123.30.....	20
112.09 to 123.30.....			25	123.30 to 112.09.....	25
123.30 to 127.30.....			20	112.09 to 110.70.....	20
127.30 to 130.23.....			15	110.70 to 110.10.....	15
SPRECKELS JCT. TO SPRECKELS.....			10	SPRECKELS TO SPRECKELS JCT.....	10

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS With Caution Not Exceeding MPH

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, slip switches.....	10
East and West legs of wye Spreckels Jct.....	5
Fat City Spur, Gonzales.....	5

Trains handling tank cars containing Flammable Compressed Gas must not exceed 55 MPH. Where maximum authorized speed is less than 55 MPH and more than 25 MPH, train must be operated at 5 MPH less than maximum authorized speed.

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description	Type
6.0	Magnolia Tower	Adeline Street overpass	Overhead
28.9	Henderson	Highway underpass	Side
32.5	Dumbarton	San Francisco Bay Drawbridge	Side
34.5	Dumbarton	Newark Slough drawbridge	Side
42.9	Niles Jct.	Highway underpass	Side
30.8	Dresser	Alameda Creek bridge	Side
31.5	Dresser	Alameda Creek bridge	Side
38.3	Pleasanton	WP overhead bridge	Overhead
55.4	Altamont	Highway overhead bridge	Overhead and side
57.9	Altamont	Tunnel	Side
18.2	San Lorenzo	San Lorenzo Creek bridge	Overhead and side
24.2	Decoto	WP overhead bridge	Overhead
29.4	Niles	Highway underpass	Side
36.2	Drawbridge	Warm Springs Slough bridge	Side
29.4	Niles Tower	Street underpass	Side

RULE 26. Warm Springs: Equipment may be placed in advance of derail and blue sign when derail is in derailing position on General Motors Plant Tracks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

RULE 26-B. Mulford: Elevated walkway constructed across Tracks 2 and 3, opposite Door 9, of the Kaiser Aluminum and Chemical Company. When red light is displayed above entrance to tracks movements must not be made beyond Door 8. When red light is not displayed elevated walkway is clear and movements may be made the entire length of the tracks.

Fruitvale: Tracks 1402, 1403 and 1404, Owens-Illinois Glass Plant: automatic switch on industry gate located on Alameda Avenue side of plant activates flashing red light and warning bells at private crossings inside plant when gate is opened. Gate must not be closed for any reason or warning devices deactivated while engine is inside plant. Should warning system fail while engine is in plant movement must be immediately stopped and yardmaster immediately notified. Subsequent movements over private crossings must be protected by member of crew.

Tracks 1455 and 1459, Learner Yard No. 2: operating limit sign located 160 feet inside industry gate on track 1455 and 135 feet inside gate on track 1459. Movement beyond these signs must not be made.

Elmhurst: Track 1843, American Brass and Iron Company: Operating limit sign reading "STOP—Trainmen must not operate beyond this point", located 150 feet inside industry gate. Movements beyond this sign must not be made.

Tracks 1867 and 1868, American Tractor Company: Sign reading "STOP—trainmen must not switch either track unless craneway is clear of both tracks", located at switch to tracks 1867 and 1868. Movements into these tracks must not be made when retractable cantilevered craneways are over tracks. Red light on craneways indicated craneways are over tracks.

Track 1884, Gerber Foods Products Company; at 98th Avenue: Electric lock on junction switch to platform track 1884. Pilot light on electric lock when illuminated indicates lift bridge is in full open position and electric lock may be unlocked and switch operated. After movements completed switch must be returned to normal position and electric lock locked with switch lock. When electric lock fails to operate with bridge in full open position, yardmaster must be immediately notified.

Ravenswood: Track 2212, West Coast Surfacing Company: operating limit sign "OL" posted on building. Engines and crew members must not go inside building.

RULE 81-A. Redwood Junction: Before making movements out of east leg of wye at Redwood Junction to the Eastward main track on the Newark Line, permission must be obtained from towerman.

RULE 82-A. Train orders issued to No. 12 at West Oakland may apply on San Francisco Subdivision between Santa Clara and San Jose. No. 12 will assume corresponding schedule on the San Francisco Subdivision without obtaining a clearance at Santa Clara, but must obtain clearance at San Jose bearing OK, time and initials of Chief Train Dispatcher which must be endorsed GREEN or NO SIGNALS as the case may be.

Train orders issued to No. 13 at San Jose may apply on the Niles Subdivision. No. 13 will assume corresponding schedule on the Niles Subdivision without obtaining a clearance at Santa Clara, but must obtain clearance at San Jose bearing OK, time and initials of Chief Train Dispatcher which must be endorsed GREEN or NO SIGNALS as the case may be.

RULE 83. Identification may be made by eastward trains between Magnolia Tower and Elmhurst to be applied at end of double track. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Identification may be made by eastward trains between Redwood Jct. and Belle Haven to be applied at end of double track. Reduce speed sufficiently to permit identification.

Train register check of superior trains obtained at West Oakland may be applied at end of double track, Elmhurst.

RULE 83-A. At the following stations only trains indicated will register:

West Oakland	Trains originating
Newark	or terminating.
East Pleasanton	
Niles Tower	All trains.
Santa Clara	All trains except Nos. 12 and 13.

RULE 83-B. At open train-order offices trains may register by ticket as follows:

Niles Tower	All trains.
Redwood Jct.	All trains.
Santa Clara	All trains.

RULE 93. Yard limits are established at the following locations:

West MP	East MP	
	Oakland (Martinez line)	17.35
	Oakland (Niles line)	15.82
	Oakland (Alvarado line)	14.01
14.02	Mulford	23.50
15.83	Hayward	21.69
24.44	Redwood Jct. (San Mateo-Newark line)	28.20
	Redwood Jct. (Palo Alto line)	27.17
35.20	Newark (Centerville-Redwood Jct. line)	40.50
24.00	Newark (Alvarado-Santa Clara line)	34.80
40.51	Niles (Tracy-Redwood Jct. line)	30.67
24.00	Niles (Hayward-Milpitas line)	30.95
41.70	East Pleasanton-Trevarno	51.20
54.03	Altamont	55.64
32.00	Milpitas	42.50
43.47	San Jose (Palo Alto-Coyote line)	56.00
43.30	San Jose (Milpitas line)	47.39
39.50	San Jose (Alviso line)	44.59
78.50	Tracy (Martinez-Los Banos line)	85.64
66.50	Tracy (Niles-Lathrop line)	74.37
13.40	Elmhurst (Stonehurst Branch)	End of Branch

RULE D-97. Will apply as follows: Between West Oakland and Elmhurst; Redwood Jct. and Belle Haven.

RULE 98. Oakland: (Third and Fallon Sts., WP Crossing) MP 7.27.

Before any movement is made the following procedure must be followed:

1. W.P. train dispatcher must be contacted to ascertain if any W.P. trains are closely approaching from either direction. (W.P. train dispatcher's phone is located in concrete phone booth located just west of Carlson Bakery Building. Phone booth is equipped with both S.P. and W.P. switch locks.)
2. When W.P. train dispatcher advises no trains closely approaching, reflectorized gates must then be swung across W.P. tracks to permit S.P. engine to cross W.P. tracks. Hayes "frog" type derails are in operation on S.P. drill tracks on both sides of W.P. crossing and must be attended to prior to movement across. Separate switch stands control these derails on each side of W.P. crossing. When switching movements are completed, gates and derails must be returned to normal position and secured with locks provided.

In foggy or inclement weather, additional protection must be provided by displaying lighted fuses.

If any delay is encountered, report must be promptly given to yardmaster.

RULE 103. On double track automatic crossing gates do not operate for against current of traffic movements.

Oakland: When moving against current of traffic flagman must provide warning at crossing before movement is made over Grove, Broadway, Franklin and Webster Streets.

Fruitvale: Automatic crossing gates at 29th Avenue, Fruitvale, MP 9.5, are inter-connected with the Western Pacific crossing gates and City traffic lights at East 12th Street.

The gates for SP tracks operate separately and are equipped with a flashing yellow beacon to indicate that both gates are down.

Movements that stop, approaching 29th Avenue, after stopping shall not enter the crossing unless yellow beacon is flashing or it is otherwise known that both gates are down and the crossing clear of vehicles.

Eastward trains or engines on Eastward Main Track, Westward Main Track, East Electric or West Electric tracks approaching Interlocking Signal at west end of Fruitvale Interlocking displaying "STOP" indication will stop not less than 150 feet west of 29th Avenue.

Westward movements shall not stop between Signal Bridge and 29th Avenue but continue not less than 150 feet west of crossing before reversing direction.

50 feet spotting circuits, marked by "STOP" signs are provided for movement on the 29th Avenue Drill (Track 5) each side of the crossing. Movement on 29th Avenue Drill will stop at "STOP" sign to initiate crossing protection. Gate on south side of track will be activated immediately as well as the traffic lights at E. 12th Street, about 30 seconds later the gate on the north side of the tracks will be lowered and the yellow beacon activated. An additional 30 second releasing circuit, following the lowering of the gate on north side of tracks, will release the gates and they will go back up if movement has not been made on the crossing. To re-establish protection if this occurs operate key control on post 50 feet from crossing, or back off the 50 foot circuit and again stop at the "STOP" sign.

Melrose: (Joint SP-WP Drill): Drill track approaches to crossing extend 400 feet west and 350 feet east. Occupancy of approaches for more than one minute without entering crossing will permit gates to raise for vehicular traffic.

Flashing white indicator light installed on mast north side of drill track. Display of flashing white light indicates gates are down. Trains or engines approaching this crossing on the drill track must not enter crossing until flashing white light is displayed indicating gates are down or warning afforded by a member of the crew.

Mulford: Eastward trains making pick-up or set-out or while switching will leave train 200 feet, or more if necessary to accommodate pick-up, west of Davis Street (MP 14.9), unless train, including pick-up, will clear between grade crossings sufficiently to prevent crossing gates remaining in down position.

Westward trains making pick-up or set-out or while switching will leave train 200 feet, or more east of Fallon Drive, (MP 16.87), unless train including pick-up, will clear between grade crossings sufficiently to prevent crossing gates remaining in down position.

Russell: White indicator light is installed on case, south side of Mack Street, PUC No. L-20.03-C, on Mack Truck Spur.

Trains or engines approaching this crossing must stop, and not enter the crossing until light is flashing, indicating crossing device is in operation (20 seconds), or until warning afforded by a member of the crew.

Albrae: Track No. 2548 serving Pabco Paint Co., rectangular signs, red background with white lettering reading STOP, have been installed on both sides of Albrae Street (Crossing No. L-35.25-C). Movements must be brought to a complete stop at these signs and not enter crossing until it is known automatic crossing device is in operation or until warning afforded by member of the crew.

Hayward: Crossing gate key control installed at "A" Street to operate crossing gates for movement on tracks other than main track.

Shinn: Trainmen must protect Ford Lane Underpass when switching on Blue Diamond Lead.

Milpitas: Westward trains not exceeding 3750 feet making pick-up or set-out will stop their train with rear end west of Curtis Way crossing, DA 41.1.

Westward trains exceeding 75 cars making set-out or meeting eastward trains will stop their train east of Capitol Avenue and wait until eastward train is in clear before proceeding.

Eastward trains having set-out or pick-up will leave their train west of State Highway Crossing at MP 40.0.

Redwood Junction: 5th Avenue MP 27.3 sound detector microphone located adjacent to signal 273.

Westward trains stopped, before starting must sound whistle to lower or to keep crossing gates down.

Warm Springs: MP 35.2 sound detector microphone located adjacent to switch east of Warm Springs Boulevard. Westward trains leaving from lower yard or from upper yard stopped must sound whistle to lower or to keep crossing gates down.

MP 35.1 crossing gate key control (switch key actuated) is located adjacent to switch west of Warm Springs Boulevard.

Eastward trains entering or leaving lower or upper yard stopped to normal or reverse switch must lower or keep crossing gates down by operating key control.

Public Utilities Commission orders prohibit operation of train, engine, or motor car over the following crossings unless first brought to a stop and traffic on the highway warned by a member of the crew.

Oakland-Market St. Pacific Pool Warehouse No. 7

Fruitvale-High St. on
Jensen St. Drill. D-10.64-C

Elmhurst-77th Avenue
on spur. D-12.2

Newark-Enterprise
Drive. DAB 36.71-C

Russell: Cabot Boulevard across lead serving J. C. Penney Co. (Track 540), Crossing No. L-21.44-C.

Robert: Public Utilities Commission order entitles movement over crossing L-18.38-C Railroad Avenue only between the hours of 6:30 AM and 8:00 PM daily and such rail operations at this time are restricted to providing rail service for warehouse served by tracks 402 and 404.

RULE 105. Hayward: Siding extends from MP 18.74 to MP 19.77.

Newark: Siding on Tracy-Redwood Jct. line is west of Elmhurst-Santa Clara line crossing extending from MP 37.27 to MP 36.19.

Siding on Elmhurst-Santa Clara line is east of Tracy-Redwood Jct. line crossing extending from MP 31.00 to MP 32.22.

East Pleasanton: Siding is first track north of main track extending from MP 42.91 to MP 44.02.

Niles: Unless otherwise instructed, eastward trains operating via Decoto enroute to Livermore line at Niles Junction, must take siding at Niles.

RULE D-160. Redwood Jct.-Belle Haven: Before making movement against the current of traffic between Redwood Jct., MP 26.2 and end of double track, Belle Haven, MP 28.41, permission must be obtained from towerman, and move must be protected under provisions of Rule 99-A.

Within Oakland Yard Limits: On double track, interlocking operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding for each movement. Before moving trains against current of traffic operator must know that track to be used is clear of opposing engines and trains.

RULE 221. West Oakland is a train-order office only for trains originating.

Fruitvale is a train-order office only for eastward trains.

Mulford is train-order office only for trains originating when operator is on duty.

Warm Springs is train-order office only for trains originating when operator is on duty.

Hayward is a train-order office for trains originating.

Santa Clara is train-order office for Westward trains to Niles Subdivision via Agnew except No. 13.

RULE D-251. Applies on both tracks between West Oakland and Elmhurst.

RULE 292. B. Oakland: When flashing white light is displayed on dwarf interlocking signals located at Adeline Street overpass, (Magnolia Interlocking controlling), eastward movements from work lead, 50 lead, 70 lead crossover and 70 lead authorizes yard engines to pass dwarf interlocking signal displaying stop indication after stopping and may continue reverse or forward movements past these signals until flashing white light is extinguished.

Operator will not extinguish white light until he has been informed by yardmaster that yard crew has been notified to clear interlocking limits.

RULE 306. Following home signals equipped with a triangular plate displaying the letter "P," have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
P-SA Elmhurst		
Spring switch to Stonehurst Line	Elmhurst	P-SA Niles Line
Spring switch, end of double track	Elmhurst	P-SA Santa Clara Line
Spring switch, Shinn		P-423
Spring switch, East Pleasanton		P-453
Spring switch, end double track, Redwood Jct.		P-285
P-290 Spring switch, Niles		
Spring switch, Milpitas wye, San Jose		P-I
P-710 Spring switch, junction to Los Banos Line, Tracy		
Spring switch to yard, Tracy		P-829

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. East Pleasanton: When movement by Signal 450 is desired and Signal displays Red aspect, refer to Rule 505, All Subdivisions.

Niles: Signal 291 governs movements, through junction switch, from Tracy line. Signal 293 governs movements through junction switch, from San Jose line. When westward movement by Signal 291 or 293 is desired and signal displays Red aspect, refer to Rule 505, All Subdivisions.

Top unit of Signal 290 governs movements to Tracy line and lower unit governs movements to San Jose line.

Refer to Rule 505, All Subdivisions.

Tracy: Top unit of Signal 710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of Signal 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 507 and 513 will apply.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

Trains moving on main track in either direction will move between junction switch, MP 70.62, and west switch of train yard by block signals whose indications will supersede the superiority of trains.

Shinn: Signal 420 governs movements through spring switch from siding. Signal 422 governs movements through spring switch on main track.

Refer to Rule 505, All Subdivisions.

RULE 516. Overlap posts:

Hayward (1200 feet west of Signal 199). Westward trains.
San Leandro (515 feet east of Davis Street)..... Eastward trains.

SPRING SWITCHES

RULE 538. Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Redwood Jct. End double track	Westward track
San Jose	Milpitas main track to track leading to East leg of Milpitas Wye, San Jose Yard MP 46.80
	Milpitas Line Main Track
East Pleasanton	Main Track

Spring switches not equipped with facing point locks are located as follows:

Location	Normal Position
West Oakland ... Stem of Wye	16th St. line
Elmhurst	Westward track to Stonehurst Line
	Stonehurst Line
Elmhurst	End of Double Track
	Westward track
Shinn	East end siding
	Main track
Niles	Junction switch west of station
	San Jose line

INTERLOCKING

RULE 606. West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 330 feet east of MP 5 on Martinez line; eastward signal

on west leg of wye 227 feet west of No. 1 freight lead crossing; eastward signal on washer track 144 feet west of No. 1 freight lead; eastward signal on east leg of wye at clear point 187 feet west of No. 1 freight lead switch; westward signals on diesel tracks, coach lead and yard leads 40, 50, and 60.

Three-unit "SA" interlocking signal 16L, located 490 feet west of West Oakland Interlocking Tower, governs as follows:

- Top unit Governs eastward movement to eastward main track.
- Middle unit Governs eastward movement on westward main track.
- Bottom unit Governs eastward movement to Fence Track (old main line).

Trains and engines departing westward limits, West Oakland Interlocking toward Bays are operating on yard tracks.

Magnolia Tower (First and Chestnut Sts.): Limits extend on eastward main track from signal 1750 feet west of WP crossing to dwarf signal 570 feet east of WP crossing, and on westward main track from signal 560 feet east of WP crossing to dwarf signal 1700 feet west of crossing.

Limits extend on Sunset Drill from eastward signal at MP 5.72 to westward signal at MP 5.77 and from eastward signal at MP 5.87 to westward signal at MP 6.00.

Two-unit dwarf interlocking signal 40R, located 260 feet west of Magnolia Tower, governs as follows:

- Top unit Governs westward movement on eastward main track.
- Bottom unit Governs westward movement to westward main track and Kirkham Street lead.

Fruitvale: Limits on main track extend from Signal Bridge 123 to Signal Bridge 126 at Fruitvale Avenue.

Melrose: Limits extend between interlocking signals on old electric line and on the drill track between interlocking signal on west side of San Leandro Blvd. and interlocking signal on east side of WP crossing and is under the control of WP train dispatcher.

When signals do not display proceed indication after approach circuit is occupied, a member of crew must contact WP train dispatcher by telephone for instructions and permission to operate push button time release.

When necessary to perform switching within the interlocking limits, a member of crew must obtain clock time limit from WP train dispatcher and be governed by signal indication. When Klaxon horn is sounded, SP movements must immediately clear interlocking limits.

Cars or engines must not be left on approach circuits located in advance of interlocking signals.

Telephones, push buttons and instructions for operation of push button time release and dual control switches located in boxes on interlocking signal governing eastward movements on old electric line, on side of Instrument House and on instrument case adjacent to crossing of drill track and WP track.

Elmhurst: Interlocking limits extend either side of Junction switches between eastward "SA" signals on eastward and westward tracks and westward "SA" signal on Stonehurst Line, westward "SA" signals on Niles and Santa Clara Lines. The Junction switch of Niles Line and Santa Clara Line at MP 13.65 is a dual control switch controlled by Fruitvale operator.

When necessary to hand throw dual control switch or when extensive switching is to be performed over the power switch permission must be obtained from Fruitvale operator.

Interlocking portion of "SA" signals controlled by Fruitvale operator.

Trains and engines desiring to make an eastward movement from the Westward Track over the crossover, will receive permission from the operator to hand operate the spring switch. Member of crew, after throwing the switch, will notify operator the switch is over and points in position before operator will clear the Signal (4R) for such movements.

When movement is completed switch must be returned to normal position.

Niles Tower: Limits extend from dwarf interlocking signal at MP 29.5 on Niles line and interlocking signal at MP 29.6 on Tracy line, 1685 feet west of WP crossing to Signal 298 on Milpitas line and to Signal 425 on Centerville line.

Eastward interlocking signal 650 feet west of WP crossing governs movements as follows:

- Top unit governs movements to Milpitas line.
- Lower unit governs movements to Centerville line.

When Signal 420 or Signal 422 display stop indication, train or engine must stop and not proceed until signal displays proceed indication or permission obtained from operator.

Junction switches are dual control switches and are under control of operator. When necessary to hand throw these switches, permission must be obtained from operator. Instructions for operation of dual control switch machines are posted in telephone booths.

Derail near east end of yard Track No. 1 at Niles is electrically locked and under control of operator at Niles Tower. Instructions for operation by hand when authorized by operator are posted inside of lock box.

Whistle signals:

- To San Jose, o — —,
- To Centerville, — o —,
- To Niles, o — o,
- To Tracy, — o — o.

Newark: Limits extend from signal 50 feet east of wye switch on Centerville line to signal 1150 feet east of wye switch on Santa Clara line, and to signal 650 feet west of wye switch on Elmhurst line, and to dwarf signals on Redwood Jct. line near Newark station building.

West Zone: Main track limits extend from eastward "SA" signal at MP 30.36 to westward dwarf signal at MP 30.43.

South Zone: Main track limits extend from eastward dwarf "SA" signal at MP 36.99 to westward dwarf "SA" signal at MP 37.01.

Interlocking limits on Oakland Wye extend from eastward "SA" signal at MP 30.36 in West Zone to eastward "SA" signal at MP 36.99 in South Zone.

Crossover from Santa Clara main track to Santa Clara siding is equipped with dual control switch machines under control of Operator.

Switch at west end of Newark Yard, MP 31.01, Elmhurst-Santa Clara Line, is power operated under control of Operator. Westward interlocking signal governing movement over this switch is a one unit signal and will display indications per Rule 281, Fig. F; Rule 285, Fig. G; and Rule 290, Fig. I.

San Francisco Bay Drawbridge: Limits extend from eastward "SA" Signal at MP 32.5 to westward "SA" Signal at MP 32.8.

Tracy: Limits extend from westward "SA" Signal at MP 70.68 to eastward "SA" Signal at MP 70.64 on the Niles line and from MP 70.68 to eastward "SA" Signal at MP 82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by switchman from control panel located at the base of the yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is a dual control switch. When necessary to hand throw this switch, permission must be obtained from the yardmaster, and be governed by Rules 765-A and 772.

Interlocking portion of the "SA" signal is controlled by Tracy Operator, who shall determine that switch has been lined for proper route before clearing a signal.

AUTOMATIC INTERLOCKING

RULE 680. Fruitvale Ave. Bridge MP 9.8: Interlocking limits extend between interlocking signals in approach to both ends of the bridge.

WP Crossing (Stonehurst Branch), MP 13.80: Limits extend between interlocking signals in approach to both sides of crossing.

Elmhurst: When handling automatic interlocking WP crossing at Stonehurst Branch at 105th Avenue, be governed by the following:

Movements over crossing governed by interlocking signals located 150 feet from each side of crossing. Approach to interlocking signals indicated by warning signs located 850 feet from interlocking signals.

When trains or yard movements are stopped by interlocking signals governing the use of automatic interlocking, Flagman must be sent to crossing to operate time release located in box marked "S.P.Co." at crossing.

Release must not be operated when trains are between interlocking signals or seen approaching on intersecting track.

After release has been operated, if interlocking signal does not indicate proceed, red light should be displayed above release indicating Interlocking Signals on WP are in stop position. Trains may then proceed as provided by Rule 663(c).

If red light is not displayed train may proceed only as provided by Rule 663(c).

Instructions for operating time release are posted inside of door of release box.

Radum, WP crossing MP 67.8 (San Ramon Branch): Limits extend between eastward "SA" signal just west of WP crossing and the westward interlocking signal just east of WP crossing on each leg of wye.

Limits extend between westward "SA" signal just east of WP crossing and the eastward interlocking signal just west of WP crossing on west leg of wye.

Eastward interlocking signal on east leg of wye is provided with time circuit, which will cause signal to display stop indication after expiration of four minutes.

Clearing circuit located 100 feet in advance of signal will clear signal for train to complete movement over crossing.

If after occupying clearing circuit the governing signal does not display proceed indication member of crew must wait four (4) minutes before actuating the time release. Instructions for operating time release are mounted in time release box. Member of crew will call WP train dispatcher on phone located at time release box for movement over crossing.

Signals governing movement from San Ramon Branch to main track will not display proceed indication until junction switch on main track is lined for movement.

LETTER-TYPE INDICATORS

RULE 705. Indicators located as follows:

Illum. On Letter Signal Approaching	Authorizes and Requires Movement as Follows:
W.....79....Oakland (5th Ave.)....	Westward trains stop short of Signal 79 and wait until indicator is extinguished.
W.....273...Redwood Jct.	Westward trains via Dumbarton must stop short of Signal 273 and wait until indicator is extinguished.
W.....7 ft. mast MP 44.20..Santa Clara..	Eastward trains, except first-class, stop short of Reed St. and wait until indicator is extinguished and flashing white light is displayed. Display of flashing white light authorizes movement to interlocking limits Santa Clara.

GENERAL REGULATIONS

RULE 812. SP crews operating on tracks of Alameda Belt Line will be governed by Rules and Regulations of the Transportation, Mechanical and Maintenance of Way Departments, Oakland Terminal Railway and Alameda Belt Line.

RULE 825. Altamont: Portable rail skids located at both ends of siding.

Tracy: All freight trains entering Tracy Yard will apply no less than three hand brakes on the east end unless instructed otherwise by yardmaster.

Train crews must not release hand brakes on outbound trains until engine is coupled and brake pipe is charged.

Refer to Rule 825, All Subdivisions.

RULE 827. Dragging and/or derailed equipment detector installed at the following locations:

MP	Location	Direction
29.5	Henderson	East and West
35.0	Dumbarton	East and West
23.6	Baumberg	East and West
32.2	Newark	East and West
28.0	Decoto	East and West
31.1	Niles	East and West
39.5	Centerville	East and West

HOT BOX DETECTORS

SCANNER SITE

MP	Type	Direction	Location	Location of readout
12.4...	D	West	Elmhurst	West Oakland
37.5...	C	East and West	Sunol	

Refer to Rule 827, All Subdivisions.

RULE 827-A. At following crew change points, trains handling tank cars containing Flammable Compressed Gas (FCG) must be given a rolling inspection by outbound train crew unless otherwise instructed:

- San Jose Yard
- Santa Clara
- Oakland

Unless authorized by Superintendent, tank cars containing Flammable Compressed Gas (FCG) will not be handled between Niles Jct. MP 29.6 and Tracy MP 66.5 (via Altamont).

Refer to Rule 827-A, All Subdivisions.

RULE 837. Agnew: Switching movements within Pittsburg—Des Moines Plant must not exceed 5 MPH under any circumstances. Engine bell must be sounded continuously and engine horn sounded frequently.

RULE 872. Enginemen taking charge of road engines at West Oakland, Tracy and San Jose will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2. Taking Charge of Engines.

Section A, will apply at:
West Oakland, Tracy, San Jose.

RULE 17. Retaining valves must be used on freight and mixed trains on descending grades as follows:

Westward, Altamont to MP 52; Eastward, Altamont to MP 63.

WITHOUT DYNAMIC BRAKE IN OPERATION

One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

WITH DYNAMIC BRAKE IN OPERATION

Permissible Tons Per Unit Without Retaining Valves

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle

WITH dynamic brake in operation but **without** pressure maintaining system of braking. 1000 1475 1250 1850 2475

WITH dynamic brake in operation and **with** pressure maintaining system of braking. 1600 2400 2000 3000 4000

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Refer to Air Brake Rule 17, All Subdivisions.

RULE 21. Warm Springs: Trainmen must not couple air hoses on pick-ups at Warm Springs until it is ascertained that all cars to be picked up are in the track, and trainmen on Warm Springs Switcher crew must not perform switching on, or couple other cars onto the pick-ups without instructions from tower employe who will see to it that members of pick-up crew are notified in advance.

Tracy: Trainmen must not couple air hose on outgoing trains until train is made up and caboose and road engine are on train.

RULE 24-C. Tracy: When cars are added to or removed from through trains, with consist otherwise remaining intact, outgoing crew will make air brake test in accordance with this rule.

RULE 24-F. Within Oakland Yard Limits applies only to direct movements between the following locations:

- East Oakland and West Oakland
- East Oakland and Oakland (16th Street—Desert Yard)
- West Oakland and Alameda Belt Line
- Oakland (16th Street—Desert Yard) and Alameda Belt Line
- East Oakland and Alameda Belt Line

When movement commences at either West Oakland or Oakland (16th Street—Desert Yard), where carmen are on duty, carmen will be responsible to couple air hoses and make test as prescribed by this Rule.

Responsibility to know that air test has been completed in all cases rests with yard engine foreman and yard engineer.

RULE 24-G. Will apply at:
San Jose, Oakland and Tracy.

RULE 38. Oakland (16th St.): Applies to Train No. 12.

MISCELLANEOUS

1. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
All Henderson	Bay Road Salvage spur beyond a point 400 feet from point of switch.
All Alvarado	Holly Sugar beyond east switch of interchange track from high line 150 feet west of beet unloading pit.
All six (6) axle Milpitas	Team Track No. 1156.

2. LOAD LIMIT (car and contents):

- *Redwood Jct.-Tracy 263,000 pounds
- *Oakland-San Jose via Niles 263,000 pounds
- *Elmhurst-Santa Clara 263,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four-axle cars with minimum axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

Exception: FMLX tank cars series 19000-19023 and GATX tank cars series 94050-94054, 94056-94092 which are equipped with 34-foot 8-inch truck centers may operate from Ogden to Newark with no more than two such cars coupled together.

Unless authorized by Superintendent heavier loads must not be handled.

3. Warm Springs: All movements must stop and trainmen detrain before entering General Motors Buildings.

4. Alviso: When switching Santa Clara-San Jose Pollution Control track, three gates must be closed and locked upon leaving Industry.

5. Hayward: Do not place 80 ft. or longer cars on track 4470.

6. Fruitvale—Track 1413, American Can Co.: Phone in box at industry gate. Crew member must call ADT (security) advising of impending switching on tracks 1413 thru 1417.

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the trains as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 20 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 22 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
WEST OAKLAND TO SANTA CLARA:					SANTA CLARA TO WEST OAKLAND:				
4.40 to 7.20	7.20 to 13.43	(jct. switch and crossover)	15	15	44.59 to 44.48	44.48 to 41.60		15	15
13.43 to 13.50	13.50 to 15.50	15.50 to 28.79	30	30	41.60 to 31.00	31.00 to 28.79		35	35
28.79 to 31.00	31.00 to 41.60	41.60 to 44.48	15	15	28.79 to 15.50	15.50 to 13.50		60	55
(Newark)	41.60 to 44.48	44.48 to 44.59	35	35	13.50 to 13.43	(jct. switch)		25	25
			60	55	13.43 to 7.20	7.20 to 4.40		15	15
			25	25				30	30
			15	15				15	15
			35	35				30	30
			35	35				15	15
			15	15				15	15
REDWOOD JUNCTION TO TRACY:					TRACY TO REDWOOD JUNCTION:				
26.23 to 26.25	26.25 to 28.35	28.35 to 28.41	20	35	71.16 to 70.66	(jct. Los Banos line)		35	
(junction switch)	28.41 to 31.51	31.51 to 33.00	25	45	70.66 to 63.00	63.00 to 52.00		40	25
33.00 to 37.00	37.00 to 37.51	37.51 to 42.23	45	15	52.00 to 41.43	41.43 to 40.57		40	25
(Newark)	42.23 to 43.00	43.00 (29.60)	15	30	40.57 to 37.10	37.10 to 29.60		35	
(Niles Jct.)	29.60 to 37.10	37.10 to 40.57	25	35	29.60 (43.00)	(Niles junction)		25	
	40.57 to 41.43	41.43 to 52.00	25	40	43.00 to 42.23	42.23 to 37.51		15	30
	52.00 to 63.00	63.00 to 70.66	40	25	37.51 to 37.00	37.00 to 33.00		30	20
	70.66 to 71.16	(junction Los Banos)	35	40	33.00 to 31.51	31.51 to 28.41		15	45
					28.41 to 26.25	26.25 to 26.23		20	35
					(jct. switch)			20	
NILES TO SAN JOSE YARD:					SAN JOSE YARD TO NILES:				
29.00 to 29.81	29.81 to 43.55	43.55 to 47.39	15	40	47.39 to 43.55	43.55 to 29.81		15	40
			15	15	29.81 to 29.00			15	15

Tracy: All freight trains entering Tracy Yard slow to 10 MPH passing Tracy Yard Office to allow visual verification of consist.

SPEED RESTRICTIONS FOR TRAINS—Continued

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
ELMHURST TO NILES JUNCTION:					NILES JUNCTION TO ELMHURST:				
13.43 to 13.50	13.50 to 29.00	(Jct. Switch)	15	15	29.60 to 29.00	29.00 to 13.50		15	15
13.50 to 29.00	29.00 to 29.60		30	30	Thru Jct. Switch	MP 13.43		30	30
			15	15				15	15
AGAINST CURRENT OF TRAFFIC:					AGAINST CURRENT OF TRAFFIC:				
West Oakland to Elmhurst					Elmhurst to West Oakland				
4.40 to 7.20	7.20 to 13.43	(Jct. Switch and crossover)	15	15	13.50 to 13.43	13.43 to 7.20		15	15
13.43 to 13.50	(Jct. Switch)		20	20	7.20 to 4.40			20	20
			15	15				15	15

Maximum authorized speed for freight trains is 55 MPH except OALAT may be authorized by train order to operate at Column 1 speeds not exceeding 65 MPH, provided train contains no restricted cars or empties except cabooses and do not exceed requirements of tons per operative brake as shown below:

Number of Cars	Tons Per Operative Brake
1 to 70	70
71 to 75	69
76 to 80	68
81 to 85	67
86 to 90	66
91 to 95	65
96 to 100	64
101 to 105	63
106 to 110	62
111 to 115	61
116 to 120	60
121 to 125	58
126 to 130	56
131 to 135	54
136 to 140	52
141 to 145	50

When tonnage exceeds 80 tons per operative brake, the following trains: UPSFF, UPSFT, BROAT, OABRT, OAGF, refer to Air Brake Rule 33, All Subdivisions.

Trains handling tank cars containing Flammable Compressed Gas must not exceed 55 MPH. Where maximum authorized speed is less than 55 MPH and more than 25 MPH, train must be operated at 5 MPH less than maximum authorized speed. Where maximum authorized speed is more than 35 MPH such trains are further restricted between the following locations where 30 MPH must not be exceeded:

- Redwood Jct. MP 26.20 and Niles Jct. MP 42.23
- San Jose Yard MP 47.39 and Niles MP 29.00
- Santa Clara MP 44.59 and West Oakland MP 4.40
- Niles Jct. MP 29.60 and Elmhurst MP 13.50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS With Caution Not Exceeding MPH

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts:	10
Except: on east and west legs of wyes at Newark, Niles Tower and Niles.	15

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description	Type
6.4	Emeryville	Key System underpass	Side
6.6	Emeryville	W.U. pole line, near Park Ave	Side
14.5	Richmond	ATSF overhead bridge	Overhead
16.0	San Pablo	ATSF overhead bridge	Overhead & side
34.7	Martinez	Alhambra slough bridge	Side
88.5	West Sacramento	Sacramento River drawbridge	Side
63.6	Vacaville	Ulatis Creek bridge	Side
52.5	Cordelia	Suisun Creek bridge	Side
53.0	Cordelia	Tunnel	Overhead
37.9	Avon	Pacheco slough bridge	Side
43.1	Nichols	Wagon bridge	Overhead & side
43.2	Nichols	ATSF overhead bridge	Overhead & side
64.7	Brazos	Drawbridge over Napa River	Side
44.6	Hookston	Walnut Creek bridge	Overhead & side
49.2	Walnut Creek	San Ramon Creek bridge	Overhead & side
57.0	San Ramon	San Ramon Creek bridge	Overhead & side

RULE 10-H. EXCEPTION:

Winters, San Ramon, Vallejo, and Napa Branches. When a yellow flag is required it will be displayed one-half mile from point of restriction.

RULE 10-J. Martinez-Tracy Line. Speed sign to left of track:

Westward	Reading
MP 51.68	25
*MP 48.55	40
MP 40.70	30

*To left of track with two tracks intervening.

RULE 14(1). Whistle must be sounded on westward trains immediately on emerging from Tunnel No. 1 at Oleum.

RULE 15. EXCEPTION:

Winters, San Ramon, Vallejo, and Napa Branches. The explosion of a torpedo requires movement at restricted speed for one mile from point where torpedo was exploded.

RULE 26. Stege: Tracks 1903, 1904, 1906, 1907, 1910, Stauffer Chemical Company: Derails equipped with private locks. Equipment may be placed in advance of derail and blue sign when derail is in derailing position and locked.

RULE 26-B. Richmond: Signal system is installed indicating position of overhead bridge on track No. 2149, Myers Drum Company. Light signal is located at west end of dock on south side of track. Red aspect indicates bridge is over track, clearance is impaired, and track must not be entered until bridge has been retracted. Green aspect indicates bridge is retracted. If signal light is out indication is the same as red aspect and track must not be entered until bridge is known to be retracted.

Oakland—West Grand & Kirkham Sts.: Track 576 Pacific Pipe Co. Operating limit sign located 100 feet inside industry gate. Movement and crew members must not proceed beyond this sign. Switch to track 576 must be left lined and locked for track 575.

Berkeley: Track 1522, Aircoc Vacuum Metals: Operating limit sign located 80 feet inside building reading "STOP Train men must not operate beyond this point." Movement and crew members must not proceed beyond this sign.

Stege: Track 1903, Stauffer Chemical Co.: Sign reading "Caution—Chlorine escape masks required in this area—located at spot 11." Movement beyond this sign must not be made.

Giant: "Operating limits" signs have been installed on Tracks 2715 and 2717 at Crown Cork and Seal Co. Signs are located inside their plant area.

RULE 81-A. Cannon: Electric locks installed on crossover switches and on switch for Sacramento Northern connection to the eastward track.

Before making crossover movement, westward trains must obtain permission from operator Davis.

On eastward trip before entering main track, Sacramento Northern trains must obtain permission from operator at Davis.

RULE 82-A. Trains terminating at Bays will register at West Oakland.

Trains originating Desert Unit, West Oakland, will obtain train orders and clearance at West Oakland.

Sacramento Northern trains originating at Sacramento 19th & B Streets, or Sacramento-Yolo Port District connection to Western Division will obtain clearance at Sacramento.

Trains to Martinez Subdivision at Sacramento originating at Roseville or Elvas and operating through with same conductor and engineer will be issued clearance and/or train orders at Roseville to apply on Martinez Subdivision and will not obtain clearance at Sacramento.

Trains to Roseville Subdivision at Sacramento and operating through with same conductor and engineer, EXCEPT TRAINS OF PASSENGER EQUIPMENT, may be issued clearance and/or train orders on Martinez Subdivision to apply on Roseville Subdivision and will not obtain clearance at Sacramento.

Port Chicago: Train No. 711 will assume schedule and operate to Martinez, but must obtain a clearance at Martinez which must bear the OK, time and initials of the Chief Train Dispatcher and be endorsed "GREEN" or "NO" signals as the case may be.

RULE 83-A. At the following stations trains indicated will register:

West Oakland	} Trains originating or terminating.
Schellville	
Ozol	
Davis	
Avon	
Pittsburg	

Suisun-Fairfield	Trains originating or terminating and trains to or from Schellville Branch.
------------------	---

Port Chicago..... Nos. 710 and 711.

Train register located in box on pole approximately 150 feet east of clear point of ATSF connection.

Sacramento: Trains originating or terminating, except extra trains passing Sacramento to or from Western Division.

RULE 83-B. At open train-order offices trains may register by ticket as follows:

Davis..... All trains to or from West Valley Subdivision, Sacramento Division.
All Sacramento Northern Trains.

Suisun-Fairfield... Trains to or from Schellville Branch, via east leg of wye.

Lombard..... All trains from Schellville to Suisun-Fairfield.
All trains from Suisun-Fairfield to Schellville.

Sacramento..... Nos. 5 and 6.

RULE 93. Yard limits are established at the following locations:

West MP	East MP
	Oakland (Martinez line)..... 19.00
	Oakland (Niles line)..... 15.82
	Oakland (Alvarado line)..... 14.01
20.00	Pinole-Bahia..... 39.24
	Martinez-Mococo (Tracy line)..... 37.08
47.05	Suisun-Fairfield..... 52.45
	Suisun-Fairfield (Schellville Branch)..... 53.25
58.00	Elmira..... 61.00
	Elmira (Winters Branch)..... End of Branch
66.00	Dixon..... 68.10
74.20	Davis..... 77.37
	Davis (Tehama line)..... 78.00
37.50	Avon-Port Chicago..... 42.93
	Avon (San Ramon Br.)..... 40.50
62.12	Radum (San Ramon Br.)..... 67.84
46.31	Pittsburg..... 52.20
61.00	Brentwood..... 62.70
78.50	Tracy (Martinez-Los Banos line)..... 85.64
66.50	Tracy (Niles-Lathrop line)..... 74.37
59.85	Napa Jct. (Cordelia-Schellville line)..... 64.56
	Napa Jct. (Napa Branch)..... End of Branch
	Napa Jct. (Vallejo line)..... End of track
71.72	Schellville (Lombard-Ignacio line)..... NWP 38.93
	Schellville (Sonoma line)..... NWP 41.70

RULE D-97. Will apply as follows: Between Oakland (16th Street) and Sacramento; Martinez and Mococo.

RULE 98. Railroad crossings at grade not interlocked:

Stop not less than 10 feet nor more than 50 feet from the following crossings and send flagman ahead who must ascertain that no movement is approaching on intersecting track before giving signal to proceed:

- Oakland ATSF, crossing of Surryne Drill Track, east of ATSF Interchange.
- ATSF, two crossings of S.P. Connection of OT Interchange at 34th and Wood Streets.
- Spur track serving Consolidated Freightways, Inc., at 26th and Wood Streets, crossing the ATSF Wye Track.
- Richmond ATSF, Shipyard Lead from ATSF 8th Street Yard, crossing to Seaver Avenue, Drill Tracks, near 14th Street.

Napa Jct.: Trains and engines must approach with caution, and may move over the following crossing without stopping, if crossing clear and no movement approaching on intersecting line.

Big Balloon Track crossing of Napa-Vallejo main track. Schellville line trains using Big Balloon Track need not stop. Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Napa-Vallejo main track crossing of Big Balloon Track. Napa-Vallejo line trains must stop.

RULE 99. EXCEPTION:

San Ramon Branch: When protection by flagman is required by this rule, distance specified for placement of torpedoes and flag protection will be one-half and one mile from train being protected.

RULE 99-C will apply on San Ramon Branch.

RULE 103. On double track automatic crossing devices do not operate for against current of traffic movements at territory speeds. Crews of trains and engines operating against current of traffic must know that crossing is clear of vehicular traffic before entering the following crossings:

Berkeley: Bancroft Way, MP 8.9
Addison Street, MP 9.1
Cedar Street, MP 9.7
Camedia Street, MP 9.9

Schellville: Highway No. 12 crossing will be cleared after each move is made to allow vehicular traffic to pass.

Martinez: Westward trains making station stop will stop with units clear of Ferry Street crossing. Eastward trains making station stop will make normal station stop blocking Ferry Street, but not to exceed 10 minutes.

West Oakland: "STOP" signs located both sides Universal Crossing (MP 4.7) on Bays No. 1 & 2, just west of mechanical car washer. After stopping movement may proceed when crossing is clear of vehicular traffic.

Before movement over crossings in passenger yard, warning must be provided by crew member.

Port Chicago: Gates are not actuated when trains are stopping at station until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down.

Pittsburg: Railroad Ave., MP 48.9, Sound Detector microphone located adjacent to siding just west of crossing. Eastward trains stopped in siding, before starting, must sound whistle to lower or to keep crossing gates down.

Lombard: Highway 29 MP-61.7 an illuminated advance warning sign is in service to advise northbound motorists of impending crossing gate operation. The warning sign is connected to controls of automatic crossing gates and is ILLUMINATED before crossing gates are activated.

The crossing gates on east side and west side of the crossing are equipped with flashing white lights to indicate that all gates are down.

Movements that stop approaching Highway 29 shall not enter the crossing unless white light is flashing or it is otherwise known that all gates are down and the crossing is clear of vehicles. Eastward movements shall stop west of instrument case approximately 225 feet west of crossing. Westward movements stop at "STOP" sign approximately 200 feet east of the crossing. Movements so stopped shall lower crossing gates by operating key control on gate each side of the crossing.

Sound detectors are installed at clear point of west siding switch and west yard switch. Westward trains entering the main track over these switches will sound whistle at these detectors before fouling main track.

Operation of key control or sound detector will illuminate highway warning sign immediately, crossing gates will function about 10 seconds later.

Napa: When switching on or across any street crossing, city ordinance requires that member of crew must provide warning at crossing.

Oak Knoll: Do not move across Oak Knoll Avenue, Crossing MP 74.29, until gates are down or until warning is afforded by member of crew.

Davis: 3rd Street, MP 75.7, sound detector microphone located adjacent to eastward signal 2LA, on east end of west leg of wye. Eastward trains stopped, before starting, must sound whistle to lower or to keep crossing gates down.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

Public Utilities Commission orders prohibit operation of train, engine or car over the following crossings unless first brought to a stop and traffic on the highway warned by a member of the crew:

Location	Crossing Number
Oakland	
Ferry St., Port of Oakland Track connecting to Oakland Terminal Railway	A-4.25-C
Dolphin & Maritime Sts. Port of Oakland, Army Postal Tracks	A-4.63-C
14th Street Tracks leading to Merchants Express	A-5.3-C
Seventh Street on Spur Serving Doran Co.	A-5.58-C
18th & Cypress Streets Drill Track	A-6.11-C
West Grand Ave. & Kirkham St.—Drill Track	A-6.83-C
Shellmound	
Crossing Hollis St., on Spur to Western Asbestos Co.	A-7.83-C
Berkeley	
Crossing Addison St. on Spur	A-9.1
Entering Virginia St. on Spur	A-9.6
Crossing 4th St., on Virginia St. Spur	A-9.72-C
Richmond	
Crossing 14th St., on Seaver Ave. Drill	A-14.91-C
Crossing 14th St., on Cannery Spur	A-15.07-C
Crossing 14th St., on Cannery Spur	A-15.11-C
Crossing 14th St. and Hall Ave., on Spur to Ford Motor Company	A-15.14-C
San Pablo	
Imperial Glass Co., Spur crossing Belmont Avenue	A-16.6
Suisun-Fairfield	
Crossing Union Ave. when moving against current of traffic	A-49.0
Port Chicago	
Crossing County road on leads to Naval Supply Base	B-40.8-C, B-41.0-C
Pittsburg	
Crossings on industry spurs	B-47.8-C, B-48.1-C
Los Medanos	
Crossing California Avenue on Antioch Building Materials Spur	B-50.6-C
Brentwood	
Crossing highway on Irrigated Farms spur	B-62.6-C
Vacaville	
Crossing on Standard Oil spur	AD-63.15-C
Vallejo	
Ryder St. Crossing on lead serving Kaiser Steel Corp.	AAB-68.31-C

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

- Avon San Ramon line, for siding.
- Suisun-Fairfield . Napa Jct. line for east leg of wye to Sacramento.
- Napa Jct. Suisun-Fairfield line, for Schellville line, at MP 61.60.
- Schellville. Schellville Branch, for NWP main track.

RULE 105. Suisun-Fairfield: Westward siding is first track north of westward main track extending from MP 48.65 to MP 48.10.

North siding is first track north of main track on Schellville Branch extending from MP 48.94 to MP 49.95, to be used by trains from Schellville Branch to Sacramento line. May be used by other trains only when instructed by dispatcher.

Davis: Eastward siding is first track south of eastward main track extending from MP 75.88 to MP 76.60.

Westward siding is first track north of westward main track extending from MP 77.03 to MP 75.73.

North siding is first track west of main track on Gerber line extending from MP 76.03 to MP 76.75.

RULE 107. Station train indicators are provided in approach to following stations:

EASTWARD

Martinez (at Signal 340)
When illuminated these indicators will convey the following information:
TRAIN—Train at platform on opposite track.
CLEAR—Indicator in service.

When neither TRAIN or CLEAR is illuminated, indicator is out of service and report must be made to Chief Train Dispatcher as soon as practicable.

Particular care must be exercised at such stations when passengers are entraining and detraining and when view of station is limited. Under such circumstances trains and engines on eastward track must stop and take necessary precautions to avoid injury to patrons.

RULE D-160. Within Oakland Yard Limits: On double track interlocking operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic operator must know that track to be used is clear of opposing engines and trains.

Trains and engines departing westward limits, West Oakland interlocker toward Bays are operated on yard tracks.

RULE 221. West Oakland and Avon are train-order offices only for trains originating.

RULE D-251. Will apply as follows:

On both main tracks between Oakland (16th St.), MP 6.55 and Sacramento.

RULE 306. The following home signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device:

Eastward Signal	Protection	Westward Signal
P-I	Collision detector, highway underpass west end of wye, Davis	P-I
P-510	Spring switch, end double track, Mococo	P-359
P-710	Collision detector, highway underpass, MP 50.97 (Los Medanos)	P-519
*P-SA	Spring switch, junction to Los Banos line, Tracy	P-829
	Spring switch to yard, Tracy	
	Dragging equipment detector, MP 31.81E	P-347
	Dragging equipment detector, MP 36.4W	

*A 2-indication, light type indicator installed just below interlocking signal P-SA located 550 feet west of draw span, and a 2-indication, light type indicator attached to the mast of signal P-347, are designated as dragging equipment indicators.

They will display red aspect with signal at "STOP" when actuated by dragging equipment detector, and lunar white aspect when not actuated by dragging equipment detector.

Crews of trains stopped by signals P-SA or P-347 with the red indicator light illuminated, will inspect their train for dragging equipment.

Signal may be cleared and indicator light changed to lunar white by pressing push button located on signals P-SA and P-347 after first complying with Rule 306.

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. Davis: Eastward trains originating at Davis via Tehama, are authorized to operate ahead of No. 14, from eastward "SA" signal at MP 75.7 which governs movement on Tehama Line to east switch of north siding, being governed by signal indication or Rule 663.

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600 ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of Signal 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rule 507 will govern.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

When Signal 816, approach signal to West End Tracy displays stop indication, eastward trains may proceed after receiving oral authority from operator at Tracy but must comply with Rule 507.

Trains moving on main track in either direction will move between junction switch, MP 70.62, and west switch of train yard by block signals whose indications will supersede the superiority of trains.

RULE 512. Cannon: Block indicators adjacent to east switch of crossover and switch to Sacramento Northern connection apply to the eastward main track only.

RULE 516. OVERLAP POSTS:

Los Medanos (250 feet west of Signal 509).....Westward trains.

SPRING SWITCHES

RULE 538. Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Mococo.....End double track.....	Westward track
Tracy.....Junction switch MP 71.16 to Los Banos line.....	Stockton Sub-division

Spring switches not equipped with facing point locks are located as follows:

*West Oakland.....	1st and 16th St. line.....	16th St. line
*Steger.....	Seaver wye.....	East leg of wye
*Ozol.....	East end siding.....	Main track
*Ozol.....	West end siding.....	Main track
Martinez.....	Junction switch.....	Bridge line
*Suisun-Fairfield.....	East end north siding.....	Main track
*Lombard.....	East end siding.....	Main track
Tracy.....	MP 82.98 Los Banos main to yard.....	Yard Track

*Equipped with switch-point indicator.

INTERLOCKING

RULE 606. Oakland, 16th St.: Limits extend from signals 330 feet east of MP 5 for track Nos. 1, 2, 3, and 4 on the Martinez line to westward signal bridge at MP 6.45 on No. 1 track, and to westward signals at MP 6.55 for Nos. 2, 3, and 4.

Limits extend from eastward signal at MP 6.51 to westward signal at MP 6.55 for track No. 5 and from eastward signal at MP 5.94 to westward signal at MP 6.04 for track No. 6.

Hand throw crossover from Desert Lead to No. 1 Freight Lead has been installed at MP 5.9, Desert Yard.

Crews making movement from Desert Lead to No. 1 Freight Lead, permission must be obtained from operator at 16th Street to pass signal located near west switch of the crossover into 16th Street interlocking.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 330 feet east of MP 5 on Martinez line; eastward signal on west leg of wye 227 feet west of No. 1 freight lead crossing; eastward signal on washer track 144 feet west of No. 1 freight lead; eastward signal on east leg of wye at clear point 187 feet west of No. 1 freight lead switch; westward signals on diesel tracks, coach lead and yard leads 40, 50, and 60.

Trains and engines departing westward limits, West Oakland interlocking toward Bays are operated on yard tracks.

Martinez: Limits extend on eastward main track from home signal 600 feet east of station building to westward dwarf signals 938 feet east of station building on Tracy line and 1138 feet east of station building on Suisun Bay bridge line.

Limits extend on westward main track from signals 2350 feet east of station building on Tracy line and on Suisun Bay bridge line, to interlocking signal 50 feet west of junction switch. Operator's permission must be obtained before fouling westward main track at crossover and switches from spurs to westward main track between Martinez and Ozol.

Suisun Bay Bridge MP 33.6. Martinez: Bridge zone limits extend on both tracks from home signals 800 feet east of draw span to home signals 550 feet west of draw span.

Davis: Limits extend on eastward and westward main tracks from interlocking signals at MP 75.25 to interlocking signal on signal bridge at MP 75.98 on westward main track, interlocking signals 325 feet west of MP 75.98 on eastward main track and eastward siding, interlocking signal at MP 75.97 on the westward siding and to westward interlocking signal at MP 75.80 on the Gerber line.

Switch machine cranks for hand operating dual control switches are mounted on signal instrument case on south side of track at west end of street underpass on the west end; on instrument case on south side of track opposite P.G.&E. switch on the Sacramento end; and on instrument case between 3rd Street and 4th Street on the Woodland end.

When necessary to hand operate dual control switches, permission must be obtained from the operator.

Instructions for hand operating dual control switches are mounted on cases above switch machine crank holders.

Sacramento River Drawbridge: Eastward trains stopped by interlocking signal at MP 87.94 must contact Sacramento Yardmaster and if authorized to enter yard, must then contact operator, Sacramento River Drawbridge, and be governed by Rules 662 and 663.

Schellville Branch: Brazos Draw Bridge over Napa River. Limits extend between MP 64.58 and MP 64.80. Movement over bridge not permitted unless operator on duty.

Tracy: Limits extend from westward "SA" Signal at MP 70.68 to eastward "SA" Signal at MP 70.64 on the Niles line and from MP 70.68 to eastward "SA" Signal at MP 82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by switchman from control panel located at the base of the yardmaster's tower.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is a dual control switch. When necessary to hand throw this switch, permission must be obtained from the yardmaster and be governed by Rules 765-A and 772.

Interlocking portion of the "SA" signal is controlled by Tracy Operator who shall determine that switch has been lined for proper route before clearing a signal.

AUTOMATIC INTERLOCKING

RULE 680. Mikon SNRy Crossing, MP 86.80: Limits extend between interlocking signals in approach to both sides of crossing.

LETTER-TYPE INDICATORS

RULE 705. Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows:
W.....	77.....	Oakland (16th St.)	Stop east of 67th St. Emeryville and wait until Signal 77 displays proceed indication.
M.....	767...	Davis (Tehama Line).....	Proceed on main track to interlocking signal at MP 75.80 being governed by signal indication.
S.....	783...	Davis (Martinez Line).....	Enter west siding.

GENERAL REGULATIONS

RULE 825. Elmira: Not less than three hand brakes must be applied on east end of cars left standing except with less than three hand brakes all brakes must be applied.

Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by yardmaster.

Train crews must not release hand brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 827. Dragging and/or derailed equipment detector and indicator installed at the following locations:

MP	Location	Direction
28.1	Selby	West
34.8	Martinez	East
45.0	Suisun-Fairfield	East
*63.2	Elmira-Dixon	West
70.1	Sucro	East and West
78.7	Swingle	East
82.3	Webster	West
39.7	Avon-Port Chicago	East and West
68.5	Brazos	East and West

*Rotating red beacon located on hot box detector instrument house.

HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
W.....	672.....	Dixon.....	
H.....	702.....	Tremont.....	MP 71.6 Tremont

SCANNER SITE

MP	Type	Direction	Location	Location of Readout
68.5	A.....	East and West	Dixon-Sucro	
17.0	D.....	West	San Pablo	West Oakland
†23.4	B.....	East	Pinole-Hercules	
63.2	C.....	West	Elmira-Dixon	
58.5	C.....	East and West	Antioch-Brentwood	

†Indicator array consisting of white lights is mounted on signal bridge to the right of Signal 234. Directly above the indicator array are mounted wheel count white lights displayed to the rear and to the front. Upon actuation and after rear of train passes Signal 234, wheel count lights will remain illuminated for 90 seconds.

Refer to Rule 827, All Subdivisions.

RULE 827-A. At following crew change points, trains handling tank cars containing Flammable Compressed Gas must be given a rolling inspection by outbound train crew unless otherwise instructed:

- Oakland
- Davis
- Tracy

Refer to Rule 827-A, All Subdivisions.

RULE 872. Enginemen taking charge of road engines at West Oakland and Tracy will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2. Taking Charge of Engines.

Section A, will apply at:
West Oakland and Tracy

RULE 17. Retaining valves must be used on freight and mixed trains on descending grades MP 58 to Napa Jct., and MP 58 to Cordelia as follows:

WITHOUT DYNAMIC BRAKE IN OPERATION:

One retaining valve for each 80 tons on train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

Permissible Tons Per Unit Without Retaining Valves

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
WITH dynamic brake in operation but without pressure maintaining system of braking:					
MP 58 to Napa Jct.	750	1125	950	1400	1875
MP 58 to Cordelia	525	800	650	975	1300
WITH dynamic brake in operation and with pressure maintaining system of braking:					
MP 58 to Napa Jct.	1600	2400	2000	3000	4000
MP 58 to Cordelia	1300	1950	1600	2400	3200

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Refer to Air Brake Rule 17, All Subdivisions.

RULE 21. Trainmen must not couple air hose on outgoing trains at Ozol and Tracy until train is made up and ca-booze and road engine are on train.

RULE 24-C. Tracy: When cars are added to or removed from through trains, with consist otherwise remaining intact, outgoing crew will make air brake test in accordance with this rule.

RULE 24-F. Applies only on direct movements between:

- Ozol and Benicia
- Ozol and Crockett
- Richmond and West Oakland
- Richmond and Oakland (16th Street—Desert Yard)
- Emeryville and West Oakland
- Emeryville and Oakland (16th Street—Desert Yard)

When movement commences at either West Oakland or Oakland (16th Street—Desert Yard), where carmen are on duty, carmen will be responsible to couple air hoses and make test as prescribed by this Rule.

Responsibility to know that air test has been completed in all cases rests with yard engine foreman and yard engineer.

RULE 24-G. Will apply at:

- Oakland, Davis, Schellville and Tracy.

RULE 33. Descending grades where restrictions apply are designated below:

EASTWARD

Suisun Bay Bridge—(Martinez) to Bahia

Eastbound Track		
MP	MP	Speed
33.8 to 36.0		20 MPH

SCHELLVILLE BRANCH

WESTWARD
MP 58 to Cordelia

MP	MP	Speed
58.0 to 55.0		25 MPH

RULE 38. Oakland (16th St.): Applies to Train No. 14.

RULE 39. Running test must be made as follows:

After departure Oakland (16th Street).

Eastward and westward trains at MP 58 between Suisun-Fairfield and Napa Junction.

MISCELLANEOUS

1. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
All, except: EF418	Pittsburg—all industry tracks.
All	Rocktram—Three spur tracks diverging from interchange tracks on river side of main track.
All, except EF 418	Brentwood—All Industry Tracks.

2. Load limit (car and contents):

*Oakland-Sacramento	263,000 pounds
Martinez-Tracy	263,000 pounds
Suisun-Fairfield-Napa Jct.	263,000 pounds
Napa Jct.-Schellville	263,000 pounds
Napa Jct.-Krug	240,000 pounds
Napa Jct.-Vallejo	263,000 pounds
Elmira-End of Branch	240,000 pounds
**Avon-San Ramon	210,000 pounds
San Ramon-Radum	240,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four axle cars with minimum axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

Exception: FMLX tank cars series 19000-19023 and GATX tank cars series 94050-94054, 94056-94092 which are equipped with 34-foot 8-inch truck centers may operate from Ogden to Newark with no more than two such cars coupled together.

**When notified that false bents are not in place on bridge 56.99 load limit between Avon and Radum will be 169,000 pounds.

Unless authorized by Superintendent, heavier loads must not be handled.

3. Rocktram: "STOP" signs located at MP 66.10 govern eastward and westward trains on main track. After stopping, trains may proceed when it is known that no off-track equipment is foul of main track at this location.

Rocktram: Gates installed across main track at MP 66.88. Gates are reflectorized and are equipped with both private and SP switch locks. Gates will be locked Mondays through Thursdays 8:00 P.M. to 7:00 A.M. and will be locked from 8:00 P.M. Fridays until 7:00 A.M. Mondays. If proceeding beyond Kaiser Steel Plant, it will be necessary to lock gate behind train and open and lock on return trip.

4. Avon: At 5:00 P.M. all switching movements in Phillips Oil Company Plant must stop for five minutes to permit passage of industry employes over crossing from Drum Shed to main gate in plant north of SP Main track.

5. West Oakland: Tracks 381 & 382, K Lines—Outer Harbor: Cars must not be left unattended on either track from switch to a point 209 feet from switch.

6. West Oakland: Employes must not ride outside of equipment when moving through Mechanical Washer located adjacent to Bays No. 2 just west of interlocking signal. Mechanical washer restricted to use on passenger cars and lite engines except when specifically authorized for other types of equipment.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the trains as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 20 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 22 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

Trains handling tank cars containing Flammable Compressed Gas must not exceed 55 MPH. Where maximum authorized speed is less than 55 MPH and more than 25 MPH, train must be operated at 5 MPH less than maximum authorized speed. Where maximum authorized speed is more than 35 MPH such trains are further restricted between the following locations where 30 MPH must not be exceeded:

- West Oakland MP 4.90 and Bahia MP 38.00
- Suisun-Fairfield between MP 48.00 and MP 49.50
- Dixon between MP 67.00 and MP 68.00
- Davis between MP 74.00 and MP 76.50
- Martinez MP 34.70 and Antioch MP 53.60

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
WEST OAKLAND TO SACRAMENTO:					SACRAMENTO TO WEST OAKLAND:				
4.90 to 4.25	4.25 to 5.10		15	15	89.00 to 88.54	88.54 to 76.00		10	10
5.10 to 7.75	7.75 to 16.31		45	45	76.00 to 75.20,	except:	45	45	
16.31 to 21.50	21.50 to 33.00		70	55	75.60 to 75.36	(West leg wye and jet. switch).	20	20	
33.00 to 34.78	(Martinez)		30	30	75.20 to 49.00	49.00 to 48.38	70	55	
31.76 (34.78) to 34.58 (Suisun Bay Bridge)	34.58 to 35.50		30	30	48.38 to 35.50	35.50 to 31.76	70	55	
34.58 to 35.50	35.50 to 48.38		60	55	(34.78 Martinez)	34.78 to 33.00	30	30	
48.38 to 49.00	49.00 to 75.20		55	55	(Martinez)	33.00 to 21.50	40	40	
75.20 to 76.00,	except:		45	45	21.50 to 16.31	16.31 to 7.75	70	55	
75.25 to 75.60 (crossover and west leg wye to Gerber line)	76.00 to 87.79		20	20	7.75 to 5.10	5.10 to 4.25	45	45	
87.79 to 88.54 (Spring Switch)	88.54 to 89.00		35	35	(crossing)	4.25 to 4.90	15	15	
			10	10			15	15	
AGAINST CURRENT OF TRAFFIC: Oakland (16th St.) to Sacramento					AGAINST CURRENT OF TRAFFIC: Sacramento to Oakland (16th St.)				
6.65 to 39.24	39.24 to 47.05		20	20	89.00 to 88.54	88.54 to 85.51		10	10
47.05 to 52.45	52.45 to 58.00		59	49	85.51 to 77.37	77.37 to 74.20		20	20
58.00 to 61.00	61.00 to 66.00		20	20	74.20 to 68.10	68.10 to 66.00		59	49
66.00 to 68.10	68.10 to 74.20		59	49	66.00 to 61.00	61.00 to 58.00		20	20
74.20 to 77.37	77.37 to 85.51		20	20	58.00 to 52.45	52.45 to 47.05		59	49
85.51 to 88.54	88.54 to 89.00		20	20	47.05 to 39.24	39.24 to 6.65		59	49
			10	10				20	20
MARTINEZ TO TRACY:					TRACY TO MARTINEZ:				
34.70 to 36.10	36.10 to 38.70		25	25	82.58 to 82.24 (jet. Los Banos line)		35	35	
38.70 to 48.55	48.55 to 49.68		40	40	82.24 to 81.83 (jet. Niles line)		20	20	
49.68 to 81.83	81.83 to 82.24 (jet. Niles line)		40	40	81.83 to 49.68	49.68 to 48.55		40	40
82.24 to 82.58 (jet. Los Banos line)			20	20	48.55 to 38.70	38.70 to 34.70		25	25
			35	35				40	40
								30	30

UPSFT may be authorized by train order to operate at Column 1 speed not exceeding 65 MPH, provided train contains no restricted cars or empties except cabooses and does not exceed requirements of tons per operative brake as shown below. 55 MPH must not be exceeded between MP 78.3 and MP 76.0, MP 52.7 and MP 49.0, and MP 21.5 and MP 16.31.

Number of Cars	Tons Per Operative Brake
1 to 70	70
71 to 75	69
76 to 80	68
81 to 85	67
86 to 90	66
91 to 95	65
96 to 100	64
101 to 105	63
106 to 110	62
111 to 115	61
116 to 120	60
121 to 125	58
126 to 130	56
131 to 135	54
136 to 140	52
141 to 145	50

When tonnage exceeds 80 tons per operative brake, the following trains: UPSFF, UPSFT, BROAT, OABRT, OAGF, refer to Air Brake Rule 33, All Subdivisions.

Tracy: All freight trains entering Tracy Yard slow to 10 MPH passing Tracy Yard Office to allow visual verification of consist.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS.....see page 51

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

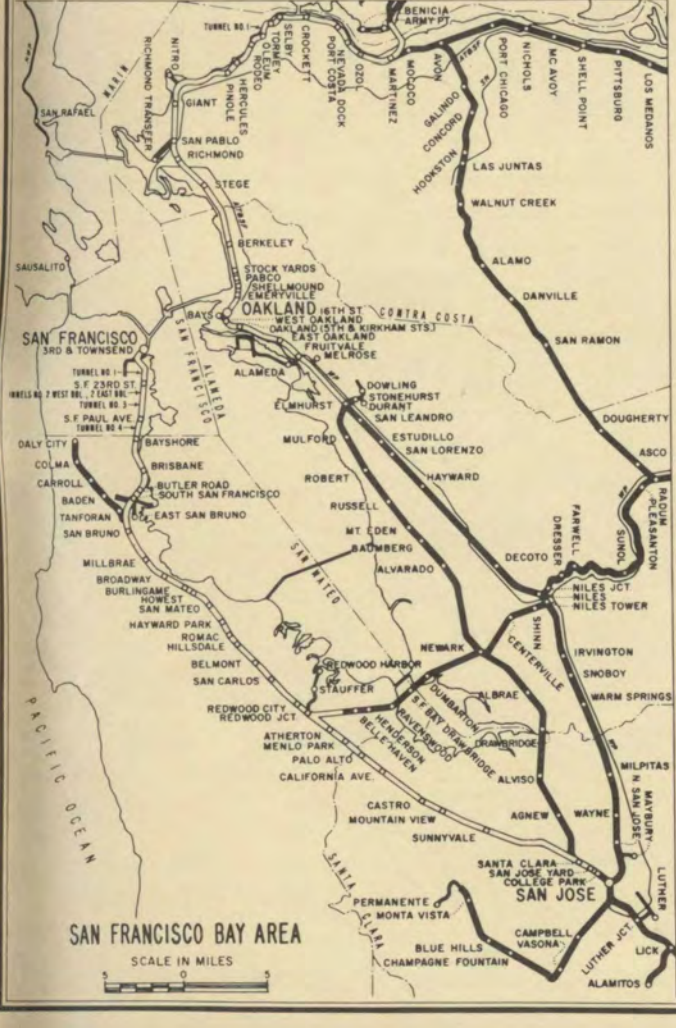
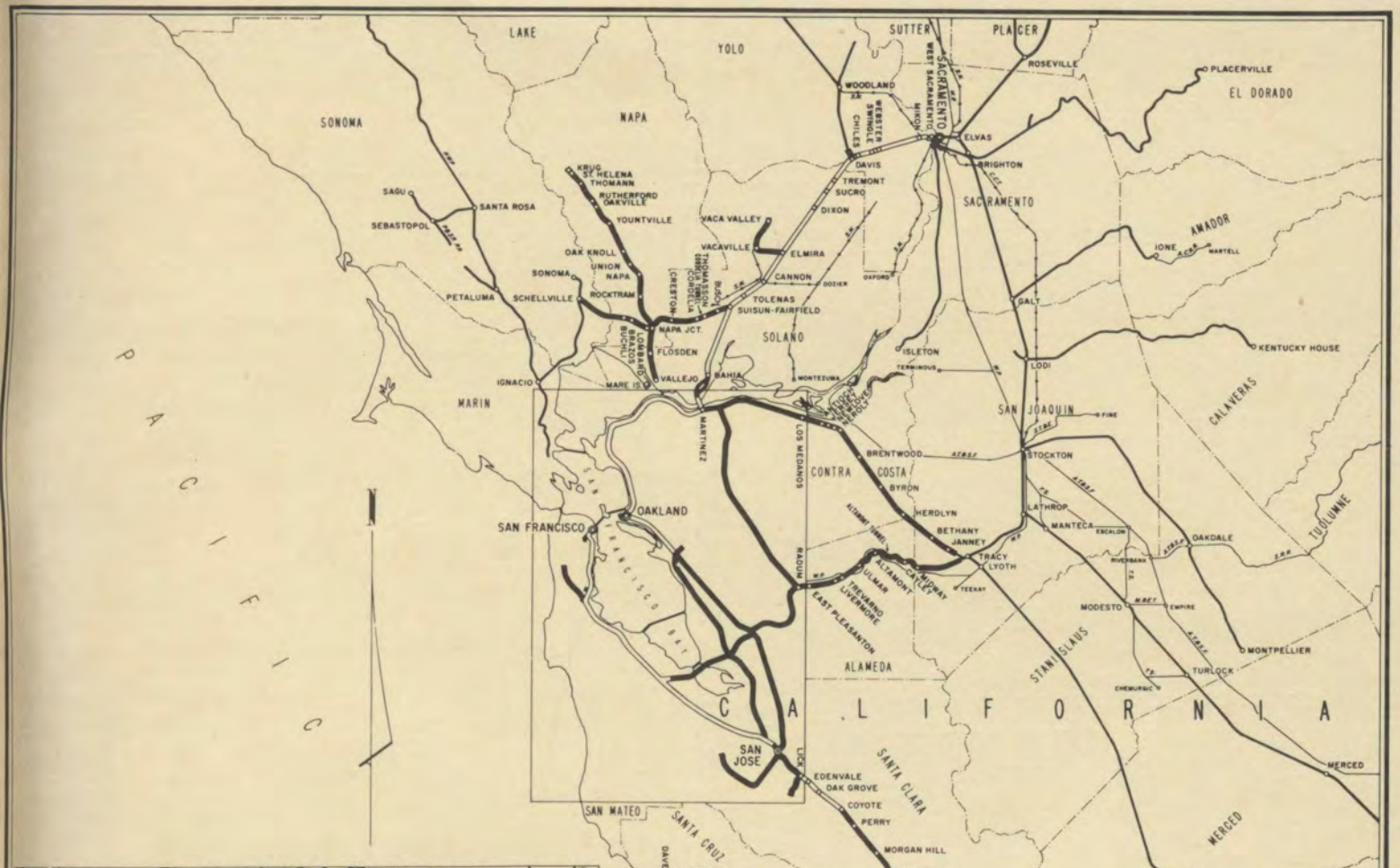
SPEED RESTRICTIONS FOR TRAINS—Continued

EASTWARD		ALL TRAINS	WESTWARD		ALL TRAINS
MP	MP		MP	MP	
AVON TO RADUM:			RADUM TO AVON:		
38.10 to 40.50		20	67.80 to 62.00		20
40.50 to 44.64		25	62.00 to 58.30		8
44.64 to 44.67 (bridge)		15	58.30 to 57.02		25
44.67 to 49.22		25	57.02 to 56.99 (bridge)		15
49.22 to 49.25 (bridge)		15	56.99 to 49.25		25
49.25 to 56.99		25	49.25 to 49.22 (bridge)		15
56.99 to 57.02 (bridge)		15	49.22 to 44.67		25
57.02 to 58.30		25	44.67 to 44.64 (bridge)		15
58.30 to 62.00		8	44.64 to 40.50		25
62.00 to 67.80		20	40.50 to 38.10		20
ELMIRA TO END OF BRANCH:			END OF BRANCH TO ELMIRA:		
59.60 to 68.00 (end of branch)		20	68.00 (end of branch) to 59.60		20
SUISUN-FAIRFIELD TO SCHELLVILLE:			SCHELLVILLE TO SUISUN-FAIRFIELD:		
48.93 to 49.30		15	NWPRR (on wye) to 72.60		10
49.30 to 53.25		20	72.60 to 71.72		20
53.25 to 59.85		35	71.72 to 65.25		35
59.85 to 61.47		20	65.25 to 64.15 (draw-bridge)		15
61.47 to 61.77		15	64.15 to 61.77		20
61.77 to 64.15		20	61.77 to 61.47		15
64.15 to 65.25 (draw-bridge)		15	61.47 to 59.85		20
65.25 to 71.72		35	59.85 to 53.25		35
71.72 to 72.60		20	53.25 to 49.30		20
72.60 to NWPRR (on wye)		10	49.30 to 48.93		15
NAPA JUNCTION TO VALLEJO:			VALLEJO TO NAPA JUNCTION:		
61.60 to 61.75		15	69.00 to 66.65		15
61.75 to 66.65		20	66.65 to 61.75		20
66.65 to 69.00		15	61.75 to 61.60		15
NAPA JUNCTION TO KRUG:			KRUG TO NAPA JUNCTION:		
61.25 to 61.30		15	88.75 to 78.92		10
61.30 to 66.10, except:		20	78.92 to 71.78 (highway crossing)		20
Thru turnout at MP 65.86		15	71.78 to 66.80		20
66.10 to 66.80		5	66.80 to 66.10		5
66.80 to 71.60		20	66.10 to 61.30, except:		20
71.60 to 71.78 (highway crossing)		15	Thru turnout at MP 65.86		15
71.78 to 78.56		20	61.30 to 61.25		15
78.56 to 88.75		10			

Speed Restrictions for trains handling tank cars containing Flammable Compressed Gas See Page 50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
--	---

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts	10
Freight leads Nos. 1 and 2 (between MP 5.1 and MP 6.55)	45



WESTERN DIVISION

SCALE IN MILES
 5 0 5 10 15 20
 REV. TO MAY 1, 1975

RULE 10-I

Oral authorization and acknowledgments between Foremen and Engineers for trains to pass "Red Conditional Stop" signs must be worded in the following forms:

"SP FOREMAN AT MP CALLING SP (Train No.)"

(After train answers giving his identification):
(i. e.) SP Train

Foreman's Response

"THIS IS SP FOREMAN . . . IN CHARGE OF THE WORK BETWEEN MP . . . AND MP SP TRAIN ORDER NO. . . . WE ARE IN THE CLEAR AND YOU MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER AT MPH, REPEAT MPH"*

Engineer's Response

"THIS IS ENGINEER SP TRAIN I MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER NO. . . . BETWEEN MP . . . AND MP . . . AT (Speed). REPEAT (Speed) MILES PER HOUR."

Foreman must acknowledge Engineer's response as follows:

"SP TRAIN ORDER NO. . . . , BETWEEN MP AND MP MPH* OK."

*When no speed restriction account above Form "Y" Train Order, tell train engineer "At Maximum Authorized Speed."

Oral authorization and acknowledgments between Foremen and Engineers for trains to pass "Red Conditional Stop" signs in multiple main track territory must be worded in following forms:

Foreman's Response

"THIS IS SP FOREMAN IN CHARGE OF THE WORK BETWEEN MP AND MP SP TRAIN ORDER NO. . . . WE ARE IN THE CLEAR OF TRACK . . . AND YOU MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN ON TRACK . . . AND THROUGH THE LIMITS OF ORDER AT MPH, REPEAT MPH."

Engineer's Response

"THIS IS ENGINEER SP TRAIN I MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER NO. . . . ON TRACK BETWEEN MP AND MP AT (Speed). REPEAT (Speed) MILES PER HOUR."

Foreman must acknowledge Engineer's response as follows:

"SP TRAIN ORDER NO. . . . ON TRACK , BETWEEN MP AND MP MPH OK."

SPEED TABLE

TIME PER MILE	MILES PER HOUR
36"	100
37"	97.3
38"	94.7
39"	92.3
40"	90
41"	87.8
42"	85.7
43"	83.7
44"	81.8
45"	80
46"	78.3
47"	76.6
48"	75
49"	73.5
50"	72
51"	70.6
52"	69.2
53"	67.9
54"	66.7
55"	65.5
56"	64.3
57"	63.2
58"	62.1
59"	61
1'00"	60
1'01"	59
1'02"	58.1
1'03"	57.1
1'04"	56.2
1'05"	55.4
1'06"	54.5
1'07"	53.7
1'08"	52.9
1'09"	52.2
1'10"	51.4
1'11"	50.7
1'12"	50
1'13"	49.3
1'14"	48.6
1'15"	48
1'16"	47.4
1'17"	46.8
1'18"	46.2
1'19"	45.6
1'20"	45
1'25"	42.4
1'30"	40
1'35"	37.9
1'40"	36
1'45"	34.3
1'50"	32.7
1'55"	31.3
2'00"	30
2'15"	26.7
2'30"	24
2'45"	21.8
3'00"	20
3'30"	17.1
4'00"	15
5'00"	12
6'00"	10
7'00"	8.6
7'30"	8
8'00"	7.5
10'00"	6