



3 (R). Referring to Rule 3(A). Watch comparison of conductors and engine foreman with their enginemen must be made on the ground.

5 (R). Unless otherwise directed, freight trains must enter and leave East Yard at Telegraph Road.

19 (R). Rules S-19, D-19 and 19(A) are modified to authorize the use of markers displaying red and yellow instead of red and green between Yermo and Daggett and between Riverside Jct. and Los Angeles.

26 (R). When a carman is accompanying equipment, or at points where work is of emergency character and Rule 26 cannot be complied with, protection must be arranged as follows: Before carman goes under or between cars, yard or trainman must give hand or lamp stop signal and receive whistle acknowledgment from engineman.

Train must not be moved, nor air brakes applied or released, until carman is out from under or from between cars and yard or trainman so indicates to engineman.

The yard or trainman must remain with the carman as long as carman works under or between cars, and the yard or trainman will be responsible for the carman's protection.

27 (R). Switch lights will not be used at night and trains must approach all facing point switches prepared to stop and must know that the switches are in proper position before passing over them at the following locations:

Pasadena Branch	Boulder City Branch	Crestmore Branch
Glendale Branch	St. Thomas Branch	Crestmore yard limits
Anaheim Branch		

30 (R). Within the corporate limits of towns and cities named below, the engine bell must be rung continuously while the train or engine is moving:

Riverside	Ontario	Pomona	Los Angeles
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83 (R). Clearance must be received as follows:

At Kelso	—all trains;
At Daggett	—all eastward trains;
At Riverside	—all westward trains.

Trains are not required to receive a clearance per Rule 83 (D) at initial stations which are not train order offices.

When a clearance is received at the following stations by the only section of the trains designated below, it will confer the same authority as when received at their initial stations:

At Daggett	—by all eastward trains;
At Riverside	—by all westward trains.

83 (S). Conductors of first class trains are not required to register at East Yard. The operator will register for the conductor, obtaining the information from the train dispatcher.

Information required by Rule 83 will be given by train order per Rule 83 (C) to the following trains:

At Kelso	—first class trains;
At Yermo	—streamline trains;
At Riverside	—westward trains.

Unless otherwise instructed, when a train is relieved by train order from checking a train register for overdue trains, the conductor will register by registering ticket, Form 2642, per Rule 83 (A), at that station.

83 (T). Trains moving between Los Angeles Union Station and Downey Road must identify trains between those stations. Trains displaying signals must sound one long and two short blasts of engine whistle to all trains and engines on both tracks between those stations.

86 (R). Trains and engines may move between Downey Road and Alhambra Avenue with the current of traffic, irrespective of time-table superiority, but must avoid delay to first class trains.

S-88 (R). At Moapa, trains entering or leaving east end of yard must use cross-over just west of Signals 3837 and 3838. Eastward trains restricted by train order at Moapa, must remain clear of this cross-over.

S-90 (R). At Bly, westward trains holding main track with orders to meet or wait for eastward trains, must stop to clear west cross-over switch near M.P. 48 and eastward trains holding main track with orders to meet or wait for westward trains, must stop to clear east switch of the east storage track at Block Signal 484.

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

Caliente	Riverside	Hynes including	Crestmore
Las Vegas	Ontario	Clearwater and	Whittier Jct.
Boulder City	Pomona	Douglas Jct.	including
Cima	Pico	East San Pedro	Whittier
Kelso	Los Angeles	including	Anaheim
Yermo		Wilmington	

Los Angeles yard limits include Glendale and Pasadena Branches and to M.P. 8.27 on San Pedro Branch.

Crestmore yard limits include tracks to Ormand and Bly quarries and to Bly.

## 98 (R). JUNCTIONS AND RAILROAD CROSSINGS.

Location	Railroad Crossed or Junction with	Trains Which have precedence	How Governed
Riverside Jct. (M.P. 58.2)	S. P. A. T. & S. F.		Interlocking.
Magnolia Ave. (M.P. 55.2)	P. E.	U.P.	Automatic Interlocking.
Ontario. (M.P. 38.1)	S. P.	U.P.	S. P. trains and engines stop and operate electrically locked derail before crossing.
W. O. Tower. (M.P. 33)	S. P.		Interlocking.
Soto St. Jct. (M.P. 2.2)	U. P.		Special Rule 98(U).
Ninth St. Jct.	U. P.		Remote Control Interlocking.
Pasadena Jct.	U. P.		Interlocking.
A. T. & S. F. Csg. (Mission Tower)	A. T. & S. F.		Interlocking.
Bridge Jct.	U. P.		Special Rule 98(U).
Redondo Jct.	A. T. & S. F.		Interlocking.
Violet Alley, Los Angeles (100 ft. east of Santa Fe Ave.)	U.P.-S.P.	U.P.	Flagman must protect when crossing U. P. old main track.
Santa Fe Ave., Los Angeles	L. A. Ry.	U.P.	L. A. Ry. cars stop and flagman protect crossing.
Santa Fe Ave., Los Angeles	A. T. & S. F.	A. T. & S. F.	U. P. trains and engines stop and flagmen protect two crossings unless given proceed signal by switchtender.

Location	Railroad Crossed or Junction with	Trains which have precedence	How Governed
<b>San Pedro Branch:</b>			
Hobart (M.P. 3.1)	A. T. & S. F.		Interlocking.
L. A. Jct. Ry. Crossing (M.P. 3.6)	L. A. Jct. Ry.	U. P.	L. A. Jct. Ry. trains and engines stop and operate electrically locked derail before crossing.
P. E. Crossing. (M.P. 5.1)	P. E.	U. P.	Automatic Interlocking.
South Gate. (M.P. 7.4)	S. P.	S. P.	Automatic Interlocking.
P. E. Crossing. (M.P. 11.2)	P. E.	U. P.	Automatic Interlocking.
Cota. (M.P. 17.4)	P. E.	P. E.	Remote Controlled Interlocking. See Rule 663 (R).
Thenard. (M.P. 21.7)	S. P. P. E.	S. P. P. E.	Remote Controlled interlocking. See Rule 663 (R).
Henry Ford Boulevard. (M.P. 23.2)	Drawbridge		Interlocking. Westward home signal located on left side of track.
<b>Pasadena Branch:</b>			
Alhambra Ave. (M.P. 1.0)	S. P.		Interlocking.
Main St. (M.P. 1.4)	L. A. Ry.	U. P.	L. A. Ry. cars stop and flagman protect crossing.
Ave. 20. (M.P. 2.1)	L. A. Ry.	U. P.	
Ave. 33 (M.P. 2.7)	A. T. & S. F.	A. T. & S. F.	U. P. trains and engines stop and throw target.
Highland Park. (M.P. 5.4)	A. T. & S. F.	A. T. & S. F.	
Fair Oaks Ave. (M.P. 8.5)	P. E.	U. P.	U. P. trains and engines stop and flagman protect crossing.
Lincoln Ave. (M.P. 11.0)	P. E.	U. P.	P. E. trains stop. U. P. trains and engines approach prepared to stop unless crossing is clear.
<b>Glendale Branch:</b>			
Broadway, Glendale.	P. E.	U. P.	U. P. trains and engines stop and flagman protect crossing.

Location	Railroad Crossed or Junction with	Trains which have precedence	How Governed
<b>Anaheim Branch:</b>			
M.P. 6.86.	P. E.	U. P.	P. E. trains stop and flagman protect crossing. U. P. trains and engines approach prepared to stop unless crossing is clear.
P. E. Crossing. (M.P. 10.5)	P. E.	P. E.	U. P. trains and engines stop and flagman protect crossing.
On Sunny Hills Spur. (M.P. 13.8)	A. T. & S. F. P. E.	A. T. & S. F. P. E.	U. P. trains and engines stop and flagman protect both crossings.
A. T. & S. F. Crossing. (M.P. 15.5)	A. T. & S. F.		Interlocking.
On Anaheim Sugar Spur. (M.P. 19.0)	A. T. & S. F.	U. P.	A. T. & S. F. trains and engines stop and flagman protect crossing. U. P. trains and engines approach prepared to stop unless crossing is clear.

98 (S). Eastward trains and engines moving from Santa Fe Ave. to Ninth St. Jct. must be governed by hand signals from switchtender at Bridge Jct.

98 (T). At Glendale Jct., trainmen of trains moving from Pasadena Branch must communicate with signalman at Mission Tower, who will release electric lock on switch; after lock has been released, trainmen must operate switches, including cross-over switches, and be governed by indication of signals.

At Glendale Jct., trainmen of trains moving to Pasadena Branch must operate switch at east end of cross-over.

98 (U). Trainmen of engines entering or leaving spur track at North Main Street or Golden State Creamery must communicate with signalman at Mission Tower, who will release electric lock on derails.

98 (W). For movement of U. P. trains or engines to and from Glendale Branch at Arroyo Jct., S. P. switchtender must be notified to handle switch.

99 (R). Referring to Rule 99 (K), trains may be relieved from protecting against following extra trains by the use of Example (7) of Form E on branch lines only.

99 (S). Except where protected by interlocking, trains and engines entering, leaving or occupying main track between Downey Road and Alhambra Avenue must be protected by flagman, and when such movements make it necessary to cross over on two or more tracks such movements must be protected in both directions. When stop is made, flagman must go back immediately a sufficient distance to insure full protection. Exception, at Downey Road, if signals indicate proceed, trains and engines may move through cross-over without flagging in either direction.

99 (T). Referring to Rule 99 (C), when a light engine or a motor train with only one trainman is stopped by a red flag or a red light under conditions requiring a flagman to precede the train, it may proceed at restricted speed without sending a flagman ahead, prepared to stop short of train, obstruction or switch not properly lined, keeping a close lookout for broken rail, flood-damaged track or bridge, or anything that may affect movement of train.

101 (R). Referring to Rules 101 and 101 (A). When a train is flagged by a track patrolman in case of storm or indication of storm or high water, patrolman must continue to patrol track ahead of train, if necessary, through the storm area.

102 (R). When a break-in-two occurs, after the train is coupled and ready to move, trainmen must make inspection as the train pulls by them, looking for draft rigging and coupler defects, and at next stop they must carefully inspect entire train.

104 (R). If a person is observed near a switch in violation of third paragraph of Rule 104 (A), the approaching train must be brought to a stop and wire report made to superintendent.

104 (S). Switches will be set normally,  
At Riverside—spring switch at west end of two main tracks, for eastward trains.

104 (T). Spring switches are located as follows:

Caliente	—east end;
Kelso	—east end;
Kelso	—end of wye track;
Yermo	—west end;
Yermo	—east end of passenger siding;
Riverside	—west end of two main tracks;
East Yard	—east end (Telegraph Road);
Soto St. Jct.	—eastward main track;
Soto St. Jct.	—west end of Alameda freight terminal lead;
Glendale Jct.	—west end of cross-over.

Spring point derail, located as follows:  
Boulder City —M.P. 21.16.

104 (U). In order to provide derail protection, switch at west end of run-around track near highway crossing, airport gunnery school, Las Vegas, must be left lined for run-around track.

D-151 (R). At Riverside, trains and engines may move against current of traffic within yard limits without being preceded by a flagman, except when on the time of a first class train or when view is obscured by weather or other conditions.

152 (R). THE SPEED SHOWN BELOW MUST NOT BE EXCEEDED:

Note: The designation "Str." includes all streamline trains.

The designation "Psgr." includes all other passenger, mail and express trains.

The designation "Frt." includes freight trains, mixed trains and light engines with or without cabooses.

When steam engines are used on streamline trains, unless otherwise provided, the speed specified under "Psgr." must not be exceeded.

When a freight engine is used in passenger service on branches, the speed specified under "Frt." must not be exceeded.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Psgr.	Frt.	
At any point.	90	70	45	
At any point.		60		With 3900 class or Mikado type engines.
At any point.		45	45	With 5000, 5400, 5500 and 8800 class engines.
At any point.		35	35	With 3500 class engines.
At any point.		30	30	With Consolidation type engines.
At any point.		20	20	Engines running backward, with or without cars.
Within yard limits.	40	40	25	Speed must be as much slower as rules or conditions may require.
Over spring switches.	15	15	15	When using turn-outs.
Over spring switches. (Except east switch at Kelso and east switch passenger siding at Yermo.)	20	20	20	When not using turn-outs, but where switch points will be caused to oscillate under such movement or where movement is over facing point switch.
When using cross-overs or turn-outs.	15	15	15	
On curves.			25	With steam derricks and roadway machines including ditchers, draglines, spreaders, cranes, hoists, derricks, pile drivers, steam shovels and snow plows, moving on their own wheels. Commercial shipments of such machines to be handled in accordance with instructions on waybills and A. A. R. loading rules.
On straight track.			30	With steam derricks and roadway machines including ditchers, draglines, spreaders, cranes, hoists, derricks, pile drivers, steam shovels and snow plows, moving on their own wheels. Commercial shipments of such machines to be handled in accordance with instructions on waybills and A. A. R. loading rules.
At any point on main line.			30	Trains handling scale test cars.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Pgr.	Frt.	
At any point on branches.			20	Trains handling scale test cars. Note: Scale test cars are not equipped with an air brake.
At any point on main line.			35	Trains handling wooden Hart convertible cars under load.
At any point on branches.			20	Trains handling wooden Hart convertible cars under load.
At any point on main line.			30	Trains handling rock from Bly.
At any point.	35	35	35	When necessary to pick up train orders or clearance.
Through interlocking.	30	30	30	Where no different speed is specified.
Railroad crossings where governed by automatic interlocking signals.	20	20	20	Between the two home signals governing movement over crossing.
Magnolia Ave. Eastward.	30	30	30	Between the two home signals governing movement over crossing.
At any point.			15	Jordan spreaders and other snow machines of spreader type, when in operation.
First Subdivision. Los Angeles.	15	15	15	Over steam and electric railroad crossings not protected by interlocking.
Los Angeles River Bridge.	15	15	15	Curve.
Between Pasadena Jct. and West M.P. 0.32.	15	15	15	
Between Mile Posts—0.32 and First St.	25	25	20	
First Street 0.00 and 1.7.	25	25	20	
Ninth St. Jct. 1.7 and 2.2.	15	15	15	
Soto St. Jct. 2.2 and 2.87.	25	25	20	
Downey Road 8.75 and 8.96.	85	65	45	Curve.
Pico 13.62 and 13.93.	70	65	45	Curve.
Clayton 15.06 and 15.28.	55	50	45	Curve.
Rowland 20.48 and 21.03.	85	60	45	Curve.
23.56 and 23.80.	70	60	45	Curve.
Walnut 25.07 and 25.28.	70	60	45	Curve.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Pgr.	Frt.	
First Subdivision. (Cont.) Between Mile Posts—				
Spadra 29.05 and 29.48.	70	60	45	Curve.
30.61 and 33.76.	30	30	25	Pomona city limits.
Ontario.	30	30	25	Over S. P. Chino Branch Crossing.
Collins 43.46 and 43.61.	85	65	45	Curve.
Mira Loma 47.91 and 48.75.	85	65	45	Curve.
Pedley 49.91 and 50.74.	70	60	45	Curve.
51.79 and 52.25.	65	60	45	Curve.
53.41 and 53.73.	60	50	45	Curve.
55.41 and 56.00.	55	45	45	Curves.
57.34 and 57.42.	50	30	25	Curve.
Riverside, west end of two main tracks.	10	10	10	Eastward, over spring switch.
Daggett 158.80 and 158.97.	15	15	15	Curve.
161.38 and 161.41.	70	55	45	Curve.
San Pedro Branch. At any point.		25	25	
M.P. 3.60.		10	10	Over L. A. Jct. Crossing.
M.P. 5.10.		20	20	Over P. E. Crossing.
M.P. 7.44.		20	20	Over S. P. Crossing.
M.P. 11.50.		20	20	Over P. E. Crossing.
Cota.		25	25	Over P. E. Crossing.
Thenard.		25	25	Over S. P. and P. E. Crossings.
Badger Ave. Draw-bridge.		15	15	
Pasadena Branch. Alhambra Ave.		20	20	Over S. P. Crossing.
Between M.P. 0.70 and M.P. 11.87.		12	12	
Fair Oaks Ave.		8	8	Over P. E. Crossing.
Lincoln Ave. (M.P. 11.0)		8	8	Over P. E. Crossing.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Psgr.	Fr.	
<b>Glendale Branch.</b> Between M.P. 0.70 and Ave. 18.		40	25	
Between Arroyo Jct. and M.P. 8.12.		12	12	
<b>Anaheim Branch.</b> At any point.		20	20	
Between M.P. 2 and 2.5.		15	15	
M.P. 6.86.		15	15	Over P. E. Crossing.
M.P. 10.5.		15	15	Over P. E. Crossing.
Between M.P. 12 and 13.		10	10	
M.P. 15.5.		15	15	Over A. T. & S. F. Crossing.
M.P. 17.3. (South Spadra Road)		5	5	Be prepared to stop in case of emergency.
<b>Crestmore Branch.</b> At any point.			25	
Between M.P. 0.0 and M.P. 0.59.			15	Yard limits.
Bridge 1.86.			20	Over Santa Ana River.
Bly to Crestmore.			15	
<b>Second Subdivision.</b> Between Mile Posts—				
<b>Yermo</b>	25			Passing station.
164.48 and 164.60.	85	60	40	Curve.
<b>Toomey</b> 168.84 and 169.38.	85	60	45	Curve.
<b>Manix</b> 179.12 and 179.77.	85	60	45	Curve.
180.84 and 181.66.	85	60	45	Curve.
<b>Field</b> 184.06 and 184.41.	85	60	45	Curve.
184.60 and 184.79.	85	60	45	Curve.
186.16 and 186.36.	70	60	45	Curve.
186.79 and 187.03.	70	60	45	Curve.
<b>Dunn</b> 188.43 and 188.99.	65	50	45	Curve.
189.08 and 189.44.	55	50	45	Curve.
189.51 and 190.07.	60	50	45	Curve.
190.58 and 190.85.	60	50	45	Curve.
191.18 and 191.55	80	50	45	Curve.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Psgr.	Fr.	
<b>Second Subdivision. (Cont.)</b> Between Mile Posts—				
<b>Afton</b> 191.78 and 191.98.	60	50	45	Curve.
192.08 and 192.26.	45	40	30	Curve.
192.35.	40	30	30	Curve. Tunnel No. 1.
192.84 and 193.19.	45	40	30	Curve.
193.38 and 193.66.	55	50	45	Curve.
193.83 and 194.05.	60	50	45	Curve.
194.38 and 194.71.	70	50	45	Curve.
194.88 and 195.24.	60	50	45	Curve.
195.29 and 195.70.	65	50	45	Curve.
195.79 and 196.15.	60	50	45	Curve.
<b>Balch</b> 213.30 and 213.80.	85	65	45	Curve.
<b>Sands</b> 221.32 and 221.66.	85	65	45	Curve.
<b>Glasgow</b> 222.53 and 223.02.	85	65	45	Curve.
223.48 and 223.88.	75	65	45	Curve.
224.96 and 225.30.	85	65	45	Curve.
<b>Kerens</b> 226.24 and 226.51.	85	65	45	Curve.
227.69 and 227.96.	85	65	45	Curve.
229.07 and 229.19.	85	65	45	Curve.
229.81 and 230.14.	85	65	45	Curve.
<b>Flynn</b> 230.61 and 230.82.	85	65	45	Curve.
230.94 and 231.21.	70	60	45	Curve.
232.12 and 232.57.	85	65	45	Curve.
<b>Kelso</b>	25			Passing station.
<b>Chase</b> 252.04 and 252.47.	90	65	45	Eastward on curve.
252.68 and 253.03.	90	65	45	Eastward on curve.
Cima to Kelso.	60	40	20	Westward freight trains must consume three minutes for each mile run except that they must consume four minutes for each mile run when 75% of their lading is rock or other heavy material.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Psg.	Fr.	
<b>Second Subdivision. (Cont.)</b> Between Mile Posts— Cima to Kelso		30		Any train handling four or more tourist cars.
Cima to Desert			35	2800 and 3100 class engines running light.
<b>Cima</b> 256.61 and 256.95.	85	65	45	Curve.
<b>Joshua</b> 258.98 and 259.18.	85	65	45	Curve.
260.34 and 260.74.	85	65	45	Curve.
260.98 and 261.41.	85	65	45	Curve.
262.52 and 263.51.	85	65	45	Curve.
<b>Brant</b> 265.30 and 265.56.	85	65	45	Curve.
266.08 and 266.60.	85	65	45	Curve.
267.05 and 267.47.	85	65	45	Curve.
<b>Ivanpah</b> 269.19 and 269.50.	85	65	45	Curve.
270.11 and 270.72.	85	65	45	Curve.
270.98 and 271.48.	85	65	45	Curve.
271.88 and 272.88.	85	65	45	Curve.
<b>Moore</b> 274.49 and 274.65.	85	65	45	Curve.
275.99 and 276.73.	85	65	45	Curve.
<b>Nipton</b> 278.53 and 278.67.	85	65	45	Curve.
279.88 and 280.68.	85	65	45	Curve.
281.76 and 282.23.	85	65	45	Curve.
<b>Desert</b> 284.67 and 284.81.	85	65	45	Curve.
286.30 and 286.95.	85	65	45	Curve.
<b>Calada</b> 287.94 and 288.23.	85	65	45	Curve.
<b>Roach</b> 295.82 and 296.21.	85	65	45	Curve.
<b>Borax</b> 297.53 and 297.93.	85	65	45	Curve.
298.35 and 298.81.	85	65	45	Curve.
<b>Jean</b> 301.98 and 302.25.	85	65	45	Curve.
302.55 and 303.00.	85	65	45	Curve.
303.43 and 303.83.	85	65	45	Curve.
305.04 and 305.34.	85	65	45	Curve.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Psg.	Fr.	
<b>Second Subdivision. (Cont.)</b> Between Mile Posts— <b>Sutor</b> 308.23 and 308.71.	85	65	45	Curve.
<b>Erie</b> 309.31 and 309.83.	70	50	45	Curve.
310.06 and 310.56.	85	65	45	Curve.
310.88 and 311.01.	85	65	45	Curve.
311.66 and 311.89.	70	60	45	Curve.
312.10 and 312.50.	45	40	30	Curve.
312.63 and 313.14.	80	60	45	Curve.
313.31 and 313.61.	85	65	45	Curve.
314.55 and 315.00.	40	40	30	Curve.
<b>Sloan</b> 315.51 and 315.69.	40	40	30	Curve.
315.84 and 316.19.	40	30	30	Curve; Tunnel No. 2.
316.30 and 316.46.	45	40	30	Curve.
316.48 and 317.07.	60	40	30	Curve.
317.83 and 317.97.	60	40	30	Curve.
318.50 and 318.70.	45	40	30	Curve.
319.13 and 319.37.	40	40	30	Curve.
319.44 and 319.72.	40	40	30	Curve.
<b>Bard</b> 320.59 and 321.04.	65	60	45	Curve.
<b>Pierce</b> 326.57 and 327.09.	85	65	45	Curve.
<b>Boulder Jct.</b> 328.04 and 329.38.	85	65	45	Curve.
<b>Boulder City Branch.</b> At any point.		25	25	
Between M.P. 11.17 and 11.54.			20	
Between M.P. 17.78 and 19.04.			20	
<b>Third Subdivision.</b> Between Mile Posts— <b>Las Vegas</b>				
335.79 and 336.08.	70	60	45	Curve.
<b>Wann</b> 339.03 and 339.22.	85	65	45	Curve.
<b>Valley</b> Airport spur.		25	25	
342.97 and 343.31.	85	65	45	Curve.
345.37 and 345.90.	85	65	40	Curve.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Psgr.	Frt.	
<b>Third Subdivision. (Cont.) Between Mile Posts—</b>				
<b>Dike</b>				
347.39 and 347.63.	85	65	40	Curve.
348.39 and 348.54.	40	40	30	Curve.
348.63 and 348.73.	40	40	30	Curve.
349.58 and 349.84.	40	40	30	Curve.
349.93 and 350.29.	40	40	30	Curve.
350.34 and 350.72.	40	40	30	Curve.
350.94 and 351.08.	60	50	40	Curve.
351.25 and 351.34.	80	60	40	Curve.
<b>Apex</b>				
352.09 and 352.30.	85	60	40	Curve.
355.21 and 355.39.	85	60	40	Curve.
356.11 and 356.39.	45	40	30	Curve.
356.61 and 356.76.	45	40	30	Curve.
357.34 and 357.75.	75	60	40	Curve.
<b>Garnett</b>				
358.18 and 358.44.	45	40	30	Curve.
358.82 and 359.42.	50	40	30	Curve.
360.15 and 360.26.	80	65	40	Curve.
362.25 and 362.48.	50	50	40	Curve.
<b>Dry Lake</b>				
363.88 and 364.25.	65	60	40	Curve.
365.12 and 365.33.	80	65	40	Curve.
<b>Crystal</b>				
369.10 and 369.39.	65	60	40	Curve.
<b>Ute</b>				
376.72 and 377.24.	80	65	40	Curve.
<b>Byron</b>				
379.17 and 379.58.	50	50	40	Curve.
380.38 and 380.86.	65	60	40	Curve.
381.13 and 381.28.	80	65	40	Curve.
382.65 and 383.73.	60	40	25	Curve.
<b>Moapa</b>				
387.55 and 387.65.	50			Between depot and 200 feet east of stand pipe.
	85	65	40	Curve.
<b>Acton</b>				
391.67 and 391.83.	55	40	30	Curve.
391.97 and 392.09.	50	40	30	Curve.
<b>Farrier</b>				
393.4 and 459.5.				Streamline trains must not exceed schedule speed.
393.4 and 459.5.		50		
394.67 and 394.81.	30	30	24	Curve.
394.85 and 395.34.	40	30	24	Three curves.
395.34 and 395.85.	65	30	24	Curves.

Location	Maximum Speed Miles Per Hour			Remarks
	Str.	Psgr.	Frt.	
<b>Third Subdivision. (Cont.) Between Mile Posts—</b>				
<b>Farrier (Cont.)</b>				
396.25 and 396.42.	80	50	40	Curves.
397.12 and 397.29.	65	50	40	Curve.
397.56 and 397.76.	50	30	24	Curve.
<b>Rox</b>				
398.08 and 398.24.	35	30	24	Curve.
398.38 and 398.56.	35	30	24	Curve.
399.89 and 400.19.	65	50	40	Curve.
400.35 and 400.54.	65	50	40	Curve.
401.67 and 402.09.	80	50	40	Curve.
<b>Hoya</b>				
403.80 and 419.64.	36	36	24	Series of curves.
<b>Carp</b>				
420.40 and 420.53.	65	50	40	Curve.
421.08 and 421.25.	65	50	40	Curve.
422.03 and 422.19.	65	50	40	Curve.
422.60 and 422.80.	80	50	40	Curve.
423.22 and 423.33.	65	50	40	Curve.
423.55 and 423.65.	65	50	40	Curve.
423.97 and 424.11.	70	50	40	Curve.
<b>Cloud</b>				
424.28 and 424.55.	85	50	40	Curve.
424.96 and 425.11.	70	50	40	Curve.
425.46 and 425.63.	60	50	40	Curve.
425.93 and 426.18.	55	45	40	Curve.
426.44 and 426.77.	75	50	40	Curve.
427.35 and 427.57.	70	50	40	Curve.
427.96 and 428.17.	55	40	30	Curve.
428.33 and 428.40.	85	50	40	Curve.
429.07 and 429.18.	70	50	40	Curve.
<b>Leith</b>				
430.11 and 455.13.	36	36	24	Series of curves.
430.40.	40	30	30	Curve. Tunnel No. 3.
<b>Etna</b>				
455.80 and 455.90.	85	50	40	Curve.
457.11 and 457.23.	85	50	40	Curve.
<b>St. Thomas Branch.</b>				
At any point.		12	12	
Between M.P. 5.4 and 6.1.		10	10	

300 (R). Staff system is in effect between Santa Fe Avenue and Bridge Jct. Possession of staff is authority for a train or engine to proceed to the next staff station, complying with Rule 93 and the indications of interlocking signals at Redondo Tower.

If staff cannot be removed from machine, train or engine must communicate with switchtenders at Bridge Jct. and Santa Fe Avenue; after which a flagman must be sent ahead and after a wait of five minutes after departure of flagman, train or engine may follow at a safe distance through the block.

Between Bridge Jct. and east derail at Redondo Tower and between Santa Fe Avenue and west derail at Redondo Tower movements may be made without possession of staff, complying with Rule 93.

506 (B). On a color light permissive signal, if the lights are not burning, trains may proceed at restricted speed without stopping for it, prepared to stop short of train, obstruction, or switch not properly lined, and be on lookout for broken rail, or anything that may affect movement of train. See Rule 509 (D).

S-508 (R). Block signal overlaps are located at King, Bard, Pierce, and Bracken. Train holding main track whose superiority has been restricted must not pass the overlap sign at these stations until the opposing train has arrived or waiting time has expired.

509 (R). Home signal at east end Los Angeles River Bridge governs movements over A. T. & S. F. spur track crossing at west end of bridge.

Color light dwarf signal at west end of Los Angeles River Bridge governs movements over A. T. & S. F. crossing at Redondo Tower.

509 (S). When a train is stopped by a home block signal or dwarf signal governing movement over remote controlled switches at Moapa, Cima, Kelso or Crucero, it may proceed in accordance with Rule 509, but when proceeding from a stop signal, after stop has been made, movement must not begin until the person in charge of the train or engine has verbal understanding with the operator at the remote control station that it is proper for the train to proceed and that the switch will not be changed by the operator until the train has passed over the switch.

When necessary to perform switching over a remote controlled switch, verbal understanding must be had with the operator and the switch must be operated by a member of the crew performing such switching, being governed by instructions posted at the switch.

When an operator is not on duty, posted instructions for performing switching over remote controlled switches under such circumstances will govern.

509 (T). At Whittier Jct., electric remote controlled switch lock is in use for movement of trains and engines from Anaheim Branch, and instructions for operation of switch are posted at the switch.

509 (U). At Soto St. Jct., when a train or engine is stopped by Signals 20, 22 or B-23, a flagman must be sent ahead and train must follow flagman at restricted speed to the next signal.

605 (R). To indicate the route to be used through interlocking limits, the following engine whistle signals will be used: (The signals prescribed are illustrated by "o" for short sounds; "—" for longer sounds.)

W. O. Tower:

For siding .....	—————o
Riverside Jct.:	
From A. T. & S. F. westward main track to U. P. eastward main track.....	—————o
From U. P. westward main track to A. T. & S. F. eastward main track.....	—————o
From U. P. westward main track to A. T. & S. F. westward main track.....	—————o o o o
To transfer track.....	o o o ———

Downey Road:

For main track.....	—————
For San Pedro Branch.....	—————o
For Bridge Jct.....	o ———o
For middle track.....	o o ———

Hobart:

For siding .....	—————o
For east wye.....	—————o
From San Pedro main track to A. T. & S. F. siding	—————o
From A. T. & S. F. siding to San Pedro main track	o ———
From U. P. transfer to A. T. & S. F. siding.....	o o o ———
From A. T. & S. F. siding to U. P. transfer.....	o o o ———
Pasadena Jct., passing microphone at First St.:	
For Union Station.....	o ———
To and from Glendale Jct.....	—————
For Alhambra S. P. coach yard or to turn equipment or engine.....	o o ———o
For S. P. coach yard.....	o o o ———
Ninth St. Jct., passing microphone between 4th and 6th Streets:	
For main track.....	—————
For Bridge Jct.....	—————o

Mission Tower:

One long blast of emergency air whistle is a signal for all trains or engines moving within interlocking limits to stop at once and not move until proper signal or definite information is received from signalman.

663 (R). At Thenard and Cota, when a train or engine is stopped by an interlocking signal displaying a stop indication, a trainman must communicate with the signalman and be governed by instructions posted in box.

663 (S). When a train or engine is stopped by a stop indication of an interlocking signal at Signal Bridges 3, 4 or 6, and signal does not change to proceed indication, a member of the crew must communicate with the signalman at Dayton Avenue or Mission Tower.

663 (T). When a train or engine is stopped by a stop indication of an interlocking signal at Ninth St. Jct., and signal does not change to proceed indication, a member of the crew must communicate with the switchtender who may authorize movement. If movement is authorized by switchtender, switches must be operated by hand and a member of the crew must precede to the crossing to signal the train over the crossing if no conflicting movement is evident.

The switches at Ninth St. Jct. are equipped with two levers and switch locks. To operate the switches by hand, both levers must be unlocked and small lever marked "Power" must be moved to reverse position. Levers must be returned to normal position when movement is completed.

663 (U). Trains moving to Chamberlin spur must communicate with switchtender at Bridge Jct. and be governed by the indication of signals.

Trains moving from Chamberlin spur or from Griffith spur to Soto St. Jct., must communicate with switchtender at Bridge Jct. and movement must be made through cross-over between Ninth St. Viaduct and Ninth St. Jct.

663 (V). At Bell, in performing switching between the home and the approach signals, cars must not be left standing on clearing section of track located between a point 330 feet west of the eastward home signal and a point 330 feet east of the westward home signal. Switching movements may be made between these points and the approach signals without interfering with operation of the P. E. Ry.

When making movements from siding or Bethlehem Steel Corporation spur to main track, trainmen must be governed by switch indicator at the switch. If switch indicator displays proceed indication, switch may be thrown, at which time dwarf signal will indicate proceed at restricted speed. When performing switching at these points, flag protection must be afforded for cars left on main track between the home signals, since indicators or dwarf signals will not give proceed indication when cars are in such locations.

When making movements to and from Bethlehem Steel Corporation spur to siding, the switch nearest to train must be thrown first to afford contact for the governing signal.

725 (R). When using water standpipe at Desert, leave spout pointing east.

746 (R). Jordan spreaders or other spreaders of that class, when handled in freight trains, must be headed in the direction the train is moving. When handled in work train, the wings must be properly secured.

746 (S). The standard guard rail on turnout side of switches is about  $\frac{3}{4}$  inches higher than the running rail, and in operating snow clearing equipment such as wedge plows, Fuller plows, etc., there is a hazard of the shoe casting on these machines catching on these high guard rails.

To guard against damage to snow plows by shoe casting striking the end of high guard rails, extreme caution must be used by trainmen and enginemen when they enter or leave sidings with this equipment.

802 (R). At Lincoln Avenue highway crossing Pasadena, at Colorado Street, Pasadena, and at Philadelphia Avenue, Whittier, trains and engines must stop and follow flagman over crossings.

At Ontario, when eastward freight trains stop west of Euclid Avenue, they must be preceded by a flagman over crossing.

804 (R). At Caliente, if engine is cut off from passenger train for the purpose of changing engines or otherwise, sufficient hand brakes must be set on head end of westward trains and on rear end of eastward trains, to secure cars until engine is again attached.

804 (S). In Caliente yard, whenever switching is being done, any cars switched into tracks must have hand brakes set to secure them. This applies in all cases, whether cars are cut off in a switching movement, or shoved into any track.

807 (R). When possible, freight conductor must notify engineman leaving terminals makeup of train, including location of loads and empties.

807 (S). Steel underframe outfit cars may be handled on head end of train when cars are to be set out or picked up between terminals.

808 (R). In helper districts, engine must not be backed down hill where wye tracks or turn-tables are available for turning engine, except in emergency. When such back-up movement is necessary, engineman must first secure authority from train dispatcher.

809 (R). When handling cars placarded "Explosives" in yards or on sidings, such cars must be coupled to engine, electric locomotive, or motor car, protected by a car between. (BE 678-a.)

809 (S). Cars placarded "Explosives" must not be cut off while in motion, and must be coupled carefully and all unnecessary shocks must be avoided. Other cars must not be cut off and allowed to strike a car containing explosives. Cars placarded "Explosives" must be so placed in yards or on sidings that they will be subject to as little handling as possible and be removed from all danger of fire. Such cars must not be placed on tracks under bridges and should not be placed in or alongside passenger sheds or stations; and, when avoidable, engines on parallel tracks must not be allowed to stand opposite or near them.

809 (T). U. P. flat cars 55519, 56000, 56052 and 56228, equipped with gas cylinders (high pressured flasks), to transport compressed gas, have been assigned and operate between Wilmington and Pocatello-Council Bluffs.

This gas is highly inflammable and extreme care must be exercised switching in yards and handling in trains. In case of leakage, no open flame should be permitted in the vicinity of the cars, and cars handled in accordance with Bureau of Explosives.

814 (R). Referring to Rule 814 (A):

Enginemen must familiarize themselves with the handling of valves of fire fighting equipment on different classes of engines and must know where these valves are located before departure from terminals.

Engines equipped with feed water pumps: Fire fighting pipe line from right injector to steam heat pipe on left side under cab.

Engines equipped with injectors of the non-lifting type on left side of engine: Fire fighting pipe line located just ahead of injector going into steam heat pipe under cab, left side of engine.

Engines equipped with injector ahead of cab over running board: Fire fighting pipe line from branch pipe just ahead of injector.

Engines equipped with steam heat: Fire fighting pipe line enters steam heat line just under left side of cab.

820 (R). Allowance for empty and underloaded cars as indicated below must be reported as required by Instruction 8 on Form 1216 "Conductor's Car and Tonnage Report."

	For each empty or loaded car weighing less than 40,000 pounds (including light weight of car)	For each empty or loaded car weighing between 40,000 and 50,000 pounds (including light weight of car)
Between Caliente and Los Angeles .....	6000 lbs.	3000 lbs.

824 (R). In addition to making inspection of train as often as practicable, as per Rule 824, freight trains must stop and be inspected at the following points:

- Kelso —Eastward and westward, remain 10 minutes;
- Cima —Westward;
- Chase —Westward, remain 10 minutes;
- Dawes —Westward, remain 10 minutes;
- Desert —Eastward and westward;
- M.P. 6 Blue } —Eastward, remain 10 minutes;
- Diamond Spur (Arden) }
- Rox —Westward;
- Rox or Carp —Eastward.

825 (R). Cars must not be set on sidings on which remote control switches are installed. If, on account of accident or other emergency, the setting out of cars on such sidings cannot be avoided, before doing so, written authority must be received from the train dispatcher.

825 (S). Scale test cars are equipped with brake pipe and hose but are not equipped with an air brake.

837 (R). Streamline trains must not be moved at any time until all coach, Pullman and dining car doors have been closed.

When picking up train orders from the side door of engine rooms on streamline trains, safety bar must be placed in down position as soon as door is opened.

837 (S). When coupling tite-lock couplers to either a conventional coupler or tite-lock coupler, it must be seen that knuckle is securely locked in closed position. When knuckle is locked, a tell-tale hole in the rotary lock lifter link is visible just below the bottom of coupler head and when cars are coupled, tite-lock couplers must be inspected to see that this tell-tale hole is visible and knuckle locked.

Where conventional couplers are coupled to tite-lock couplers, the knuckle on the tite-lock coupler must be closed and conventional couplers be closed by impact of moving car.

837 (T). The vestibule curtains must be drawn across the diaphragms on dead-head or occupied passenger equipment while being handled in passenger, mail and express trains.

877 (R). Use of locomotive boiler running board when going between cab and front end of locomotive to put up or take down signals or indicators is prohibited.

887 (R). Westward passenger trains must make running air test as per Rules 1051 and 1051 (A) between "S" post east of Cima and east switch.

Air test as required by Special Rule 887 (S) must be made by all eastward and westward freight trains at Cima.

All engines operating from Cima to Kelso must maintain brake pipe pressure of not less than ninety pounds.

Retaining valves must be used on all trains as required by Air Brake Rule 1077 (A) as follows:

Cima to Kelso;

On Blue Diamond Spur (Arden) from end of track to Arden.

On other grades, conductor and engineman must have understanding as to number of retaining valves to be used.

On passenger trains, retainers must not be turned down until train passes east mile board at Kelso.

When possible, the use of retainers on live poultry cars must be avoided.

887 (S). Before descending heavy grades designated in Special Rule 887 (R), train must be brought to a stop and while standing engineman will apply brakes with a ten-pound brake pipe reduction, then sound one blast of engine whistle. Rear trainman must observe that brake on rear car applies, then make a further brake pipe reduction by gradually opening rear angle cock on rear car sufficiently to register on brake pipe gauge on engine. When engineman observes the reduction in pressure on the brake pipe gauge, he must sound two long blasts of engine whistle. Rear trainman must then close angle cock and give signal to release brakes; observing that brake on rear car releases.

Failure of brake on rear car to release promptly indicates there is an obstruction in the brake pipe, which must be promptly corrected.

After this test has been properly made and maximum pressure is again restored, the train may proceed.

If the train does not depart within 30 minutes after this test is completed, the test must be repeated before proceeding.

887 (T). Maximum tonnage per operative brake in freight service, Cima to Kelso, is sixty-five tons.

888 (R). All trains and engines must approach and pass over Santa Fe Ave., Los Angeles, very carefully and enginemen must keep sharp lookout for street traffic.

896 (R). 2200, 2700, 3500, 3900, 5000, 5400, 5500, 7000, 7800 and 8800 class engines must not go on the following tracks, except as shown:

Caliente	—Dike track, except 2200 and 2700 class;
Dike	—Set-out track, except 2200 and 2700 class;
Garnett	—Set-out track, except 2200 and 2700 class;
Pierce	—Set-out spur, except 2200 and 2700 class;
Arden	—Blue Diamond spur;
Bard	—Set-out spur, except 2200 and 2700 class;
Jean	—Yellow Pine Mining Co. warehouse spur, except 2200 and 2700 class;
Crucero	—Beyond ice house on interchange track;
Harvey & Brown spur (M.P. 39)	—Spur track, beyond a point 75 feet east of point of frog, except 2200, 2700 and 6000 class;
St. Thomas Branch	—All tracks west of M.P. 0.23.

2800, 3100 and 6000 class engines must not go on the following tracks, except as shown:

St. Thomas Branch	—All tracks, except 6000 class;
Boulder City	—Machine Shop Track 7;
Arden	—Blue Diamond spur, except 6000 class, not exceeding 12 miles per hour.

2200, 2700, 2800, 3100, 3500, 3900, 5000, 5400, 5500, 7000, 7800 and 8800 class engines must not go on the following tracks except as shown:

Crestmore tracks	—All tracks, except 2200 and 2700 class engines may operate between Bly and Ormand quarry;
Bly Quarry	—All tracks;
Crestmore Branch	—All tracks;
Glendale Branch	—All tracks;
Pomona	—250 feet eastwardly of Pomona Fruit Growers' Exchange spur track located east side of Exchange Growers' Building;
Anaheim Branch	—All tracks, except light Pacific type engines;
Pasadena Branch	—All tracks, except light Pacific type engines;
South Gate	—F. W. Braun Co.;
Workman	—2 L. A. Co. Flood Control spurs;
Clearwater	—Macco Lumber Co.;
Hynes	—Southern California Edison Co.;
Rioco	—2 Richfield Oil Co. spurs;
Long Beach	—Tank spur.

896 (R). Continued.

3500, 3900, 5000, 5400, 5500, 7000, 7800 and 8800 class engines must not go on the following tracks:

Bell	—Storage track;
Bartolo	—Spur;
Clayton	—Spur;
Hudson	—Spur;
Fallon	—Spur;
Ontario	—Spur, Packing House at Cypress Ave.;
Ontario	—United Canneries;
Ontario	—Cutler-Lobinger Packing Co.;
Ontario	—Edison Appliance Co.;
Magnolia Ave.	—Spur;
Riverside	—City oil spur.

3500, 3900, 5000, 5400, 5500, 7000, 7800 and 8800 class engines must not go beyond west switch at North Long Beach.

All classes of engines and Diesel locomotives must not go on the following tracks:

Whittier	—Whittier Ass'n lemon spur;
South Gate	—3 Fibreboard Products Co. spurs;
Riverside	—Mission spur serving A. F. G. Co., engines must not go beyond east end of packing house;
Baxter	—Trestle bridge on lime quarry spur;
Chase Water Track	—Over unloading flume;
Carp	—Over oil sump on oil spur.

900 (R). There are close clearances above and at the side of main tracks as shown below, and in addition thereto, at platforms and other structures above and at the side of industry, stock and other tracks:

Location	Structure or Obstruction	Clearance of engine or car is close at—
At all stations.....	Mail cranes .....	Side.
<b>First Subdivision.</b>		
Los Angeles River.....	Bridge .....	Side.
M.P. 1.89 (Butte St.).....	Bridge .....	Side.
Soto St. ....	Semaphore Signal 24.....	Side.
M.P. 8.90 .....	Highway bridge .....	Top.
M.P. 9.04 .....	Hand rail of water barrel platform .....	Side.
M.P. 10.80 .....	Bridge .....	Top and side.
M.P. 11.1 .....	Highway bridge .....	Top.
M.P. 15.05 .....	Bridge .....	Top and side.
M.P. 15.39 .....	Bridge .....	Top and side.
M.P. 15.72 .....	Bridge .....	Top and side.
M.P. 30.65 .....	Telegraph poles .....	Side.
M.P. 31.95 (Thomas St.)....	Iron post barricade.....	Side.
Pomona .....	Signal 319 .....	Side.
Pomona .....	Signal 320 .....	Side.
Pomona .....	Signal 320 (Case).....	Side.
W. O. Tower.....	Lever rod for train order signal .....	Side.
M.P. 33.0 to 34.2.....	Telegraph pole line.....	Side.
Ontario .....	Water column .....	Side.
M.P. 39.1 .....	Relay post and box.....	Side.
Bly—West Crossover Switch	Switch indicator .....	Side.
M.P. 50.7 .....	Relay box and post.....	Side.
M.P. 52.3 .....	Relay box and post.....	Side.
M.P. 52.40 .....	Bridge .....	Side.
M.P. 55.74 .....	Canal syphon wall.....	Side.
M.P. 55.90 .....	Highway bridge .....	Side.

Location	Structure or Obstruction	Clearance of engine or car is close at—
<b>First Subdivision (Cont'd).</b>		
M.P. 56.2 .....	Relay post and box.....	Side.
M.P. 56.23 .....	Fence .....	Side.
M.P. 56.49 .....	Fence .....	Side.
M.P. 56.9 .....	Fence .....	Side.
M.P. 57.1 .....	Relay post and box.....	Side.
<b>Second Subdivision.</b>		
Harvard .....	Water tank spout.....	Side and top.
M.P. 179.6 .....	Color light signal.....	Side.
M.P. 182.09 .....	Bridge .....	Side.
M.P. 186.95 .....	Bridge .....	Side.
M.P. 187.0 .....	Color light signal.....	Side.
M.P. 189.2 .....	Signal case .....	Side.
M.P. 192.34 .....	Tunnel No. 1.....	Top.
M.P. 195.8 .....	Color light signal.....	Side.
Sands .....	Water tank spout.....	Side.
Kelso .....	Water tank spout.....	Side and top.
M.P. 243.8 .....	Color light signal.....	Side.
M.P. 243.9 .....	Color light signal.....	Side.
M.P. 243.96 .....	Bridge .....	Side.
Chase .....	Water tank spout.....	Top and side.
M.P. 250.8 .....	Color light signal.....	Side.
M.P. 250.69 .....	Bridge .....	Side.
M.P. 262.4 .....	Color light signal.....	Side.
M.P. 267.25 .....	Bridge .....	Side.
Ivanpah .....	Water column .....	Side.
M.P. 270.3 .....	Color light signal.....	Side.
M.P. 272.9 .....	Color light signal.....	Side.
M.P. 282.1 .....	Color light signal.....	Side.
Desert .....	Water tank spout.....	Top and side.
Desert .....	Water column .....	Side.
M.P. 295.9 .....	Color light signal.....	Side.
M.P. 296.0 .....	Color light signal.....	Side.
M.P. 298.6 .....	Color light signal.....	Side.
M.P. 315.88 .....	Tunnel No. 2.....	Top.
M.P. 316.1 .....	Color light signal.....	Side.
Arden .....	Water tank spout.....	Top and side.
Blue Diamond .....	Loading tippie .....	Top.
M.P. 328.7 .....	Color light signal.....	Side.
<b>Third Subdivision.</b>		
M.P. 382.6 .....	Color light signal No. 2 RA..	Side.
Moapa .....	Water column .....	Side when on siding.
M.P. 395.2 .....	Color light signal.....	Side.
M.P. 395.42 .....	Bridge .....	Side.
M.P. 397.04 .....	Bridge .....	Side.
M.P. 397.32 .....	Bridge .....	Side.
M.P. 397.85 .....	Rock cut .....	Side.
M.P. 406.55 .....	Bridge .....	Side.
M.P. 407.09 .....	Bridge .....	Side.
M.P. 408.24 .....	Bridge .....	Side.
M.P. 408.97 .....	Bridge .....	Side.
M.P. 409.10-409.15 .....	Rock cuts .....	Side.
M.P. 409.16 .....	Bridge .....	Side.
M.P. 409.25 .....	Signal poles slide fence.....	Side.
M.P. 419.30 .....	Bridge .....	Side.
M.P. 422.6 .....	Relay post and box.....	Side.

Location	Structure or Obstruction	Clearance of engine or car is close at—
<b>Third Subdivision (Cont'd).</b>		
M.P. 430.20 .....	Cross arm guy wire.....	Side.
M.P. 430.51 .....	Tunnel No. 3.....	Top.
M.P. 430.68 .....	Bridge .....	Side.
M.P. 437.21 .....	Rock cut .....	Side.
M.P. 431.82 .....	Bridge .....	Side.
M.P. 433.47 .....	Bridge .....	Side.
M.P. 437.22 .....	Rock point, west end bridge..	Side.
M.P. 437.22 .....	Bridge .....	Side.
M.P. 440.20 .....	Guy pole for horizontal slide fence .....	Side.
M.P. 444.49 .....	Rock point .....	Side.
M.P. 444.56 .....	Bridge .....	Side.
M.P. 447.89 .....	Bridge .....	Side.
M.P. 452.03 .....	Bridge .....	Side.
M.P. 452.3-452.4 .....	Rock point .....	Side.
M.P. 454.1 .....	Rock point .....	Side.
M.P. 458.56 .....	Bridge .....	Side.
<b>St. Thomas Branch.</b>		
M.P. 5.49 .....	Rock cut .....	Side.
M.P. 5.52 .....	Rock cut .....	Side.
M.P. 5.61 .....	Rock cut .....	Side.
M.P. 5.73 .....	Rock cut .....	Side.
M.P. 6.05 .....	Dirt cut .....	Side.
M.P. 6.34 .....	Earth cut .....	Side.
M.P. 6.61 .....	Earth cut .....	Side.
M.P. 7.09 to 7.13 .....	Earth cut .....	Side.
M.P. 7.40 .....	Earth cut .....	Side.
M.P. 7.75 .....	Rock cut .....	Side.
M.P. 9.67 .....	Cattle guard posts .....	Side.
<b>Pasadena Branch.</b>		
Ave. 21 to Ave. 22 .....	Brick building, pipe & eaves..	Side.
6130-44 Pasadena Ave. ....	Retaining wall .....	Side.
M.P. 6.10 .....	Fence, concrete railing, lights at bridge .....	Side.
M.P. 6.2 .....	Guy wire .....	Side.
M.P. 8.7 .....	Brick retaining wall .....	Side.
M.P. 8.09 .....	Highway bridge .....	Top.
M.P. 8.09 .....	2 Western Union crossarms..	Side.
M.P. 8.16 .....	Highway bridge .....	Top.
<b>Glendale Branch.</b>		
Forest Lawn Cemetery .....		
M.P. 6.3 .....	Gates .....	Side.
<b>San Pedro Branch.</b>		
M.P. 5.10 Randolph St.....	Trolley wires .....	Top.
M.P. 8.52 .....	Bridge .....	Side.
Hollydale-Dayton Waldrip Co. ....		
Clearwater-PE Crossing ...	Overhead crane .....	Top.
Thenard .....	Trolley wire .....	Top.
	Trolley wire .....	Top.
<b>Crestmore Branch.</b>		
M.P. 1.01 .....	Concrete girders on bridge ..	Side.
M.P. 5.17—M.P. 5.40.....	Wire fence .....	Side.

900 (S). In moving cars on tracks under overhead trolley wires, employes are warned that overhead clearances to such wires and side clearances to supporting trolley poles are close. Trolley wires must not be touched and careful lookout must be kept for low and broken wires.

900 (T). Ore dock at Lovell is equipped with apron that cannot be raised nor lowered to normal position alongside of dock when high cars are spotted at dock. It is necessary that apron be lifted before high cars are spotted under it, and if no one is there to lift apron, cars should be left clear of apron. When there are cars to be set in or taken out of dock, it must be known that apron will clear cars. Apron in raised position over track will not clear high cars or locomotive.

1014 (A). When a streamline train is helped or towed by a steam engine, the feed valve on the steam engine must be adjusted to 110 pounds pressure.

1040 (A). When electrical portion of straight air brake on a streamline train fails to function, change over to automatic brake operation must immediately be made by operating the change-over lever. A running test of brakes must then be made to determine that brakes apply and release properly.

1051 (B). On streamline trains, when running air test is made as required by Air Brake Rules 1051 and 1051 (A), the rear brakeman must know that the brakes apply and release properly, and after it is known that the brakes on the rear car have been released, he must signal the engineman with one sound of the communicating signal.

If the engineman does not receive this signal, a second test must be made, and if signal is not received after second test, the train must be stopped, cause ascertained and corrected.

1056 (R). Referring to Rule 1056 (A):

Following for information and government in connection with use of communicating signal on passenger trains:

1st—Car discharge valve must be held fully open, or if electric pneumatic, push button must be held in contact, two seconds for each intended sound of the signal whistle.

2nd—At least one second per car time interval must be allowed from time of closing discharge valve, or releasing push button, before operating again for the next intended sound of the signal whistle.

The signal system must be allowed sufficient time to fully charge at terminal before attempting to operate.

1057 (R). In backing equipment or trains into Los Angeles Union Station, standing air test and running air test as prescribed in fourth paragraph of Air Brake Rule 1057 (A) must be made in all cases.

1063 (B). Air Brake Rule 1063 (A) is modified as follows: If the train has not more than 12 cars and stop is being made with slack completely stretched, except on a downward grade of one per cent or more, the brakes should be released so that they will be about off when the stop is completed.

With longer trains, and when the slack is controlled by being bunched, the brakes should be held applied on the second application until the train is stopped.

1085 (B). Steam actuated or carrier system air-conditioned cars will not operate with less than 70 pounds steam pressure. In complying with Air Brake Rule 1085 (A), steam heat must not be shut off or valve opened on rear of train until engine is closely approaching, and it is known that the train will not be delayed getting into, station grounds.

### SIDINGS AND SPURS NOT ON TIME-TABLE

Location	Miles from Los Angeles	Car Capacity	Switch Connections	Flag Stops for Trains
<b>First Subdivision:</b>				
St. Helens Spur .....	11.1	17	West	Freight only.
Bartolo .....	12.6	12	West	Freight only.
Hudson .....	17.9	6	East	Freight only.
Fallon .....	21.7	9	West	Freight only.
Industrial Spur .....	27.1		East	Freight only.
San Antonio Meat Co. ....	34.1	22	East	Freight only.
Harvey & Brown Spur ....	39.1	12	West	Freight only.
Champagne .....	43.5	36	East	Freight only.
Guasti Spur .....	43.6	71	East	Freight only.
Winery Spur, Mira Loma ..	45.8	267	East	Freight only.
Magnolia Ave. ....	55.2	15	East	Freight only.
<b>Second Subdivision:</b>				
Dunn .....	188.4	31	Both	
Water Track .....	251.2	15	Both	
Blue Diamond .....	321.8		West	
<b>Third Subdivision:</b>				
Lovell .....	344.5	18	Both	
Hoya Gravel Pit .....	401.5	73	Both	
Quarry Spur .....	432.6	10	East	Freight only.
<b>Boulder City Branch:</b>				
	Miles from Boulder Jct.			
Magnesium .....	12.1	14	Both	
McNeil Construction Co. . .	12.1	16	East	
McNeil Construction Co. . .	12.7	34	Both	
Engineers Limited .....	13.4	12	Both	
<b>St. Thomas Branch:</b>				
	Miles from Moapa			
Doty Spur .....	3.1	1	West	
Amber .....	9.5	4	East	
Glassand .....	13.7	9	West	
<b>San Pedro Branch:</b>				
	Miles from Los Angeles			
Vernon Spur .....	3.7		West	Freight only.
Los Angeles Syndicate. . .	3.7		Both	Un. Stk. Yds.
Fruitland Industrial Spur ..	4.6		West	
Fairchild-Gilmore Spur ...	5.9		West	Freight only.
F. W. Braun Co. ....	6.8		East	Freight only.
Calif. Clay Products Co. . .	6.9	6	East	
Calif. Cyanide Co. ....	7.0	25	East	
A. R. Maas Chemical Co. . .	7.3	4	West	
Team Track .....	7.3	9	East	
Blue & Mason Indus. Spur. .	7.6		West	
Purex Spur .....	8.0	12	East	
Grassi Co. Spur .....	8.2	12	East	
Rock Spur .....	8.5	18	East	
Vernon Foundry Co. ....	10.2	6	West	
Hollydale Spur .....	10.4	18	West	
Macco Lumber Co. ....	11.5	15	West	
Artesia Street Spur .....	13.3	12	East	
Export Petroleum Spur. . .	13.5	20	West	
Richfield Oil Co. ....	13.8	36	East	Freight only.
Exter Refining Co. ....	14.1	20	East	
Brown Process Co. ....	14.3	12	East	
Champion Gasoline Co. . . .	14.4	19	West	Freight only.

**SIDINGS AND SPURS NOT ON TIME-TABLE**

Location	Miles from Los Angeles	Car Capacity	Switch Connections	Flag Stops For Trains
<b>North Long Beach:</b>				
Siding, Industrial Spur and Wye .....	16.5		Both	
Montana Ranch Spur .....	17.1	98	West	
C. N. White .....	17.1	8	East	
Hancock Refining Co. ....	17.2	26	East	
Calif. National Supply Co..	17.3	11	East	
<b>Pasadena Branch:</b>				
Baker Spur .....	5.3	5	West	Freight only.
Team Track .....	5.4	1	East	Freight only.
Standard Bakeries Corp. ..	9.4	5	East	
<b>Glendale Branch:</b>				
Taylor Milling Co. ....	3.9	6	East	
Interchange Track .....	5.1	13	Both	
Dohrmann-Walker Spur ..	5.4	2	East	Freight only.
Clifford Spur .....	5.5	9	East	
<b>Anaheim Branch:</b>				
	Miles from Whittier Jct.			
Gladding McBean Spur ...	0.1	6	West	Freight only.
Fertil Spur .....	10.9	8	East	Freight only.
Seviers Spur .....	11.2	3	East	Freight only.
Sunny Hills Spur .....	13.8	118	East	Freight only.
Fullerton Industrial Lead No. 7 .....	15.4		East	Freight only.
Newton Process Mfg. Co. Spur .....	15.4	7	West	Freight only.
Fullerton Industrial Lead No. 13 .....	15.4		East	Freight only.
Rollo .....	15.4	18	East	Freight only.
<b>Crestmore Tracks:</b>				
	Miles from Bly			
Setout Track .....	0.2	25	Both	
Hamilton Spur .....	1.9	3	West	
Ennis .....	3.1	15	Both	
Ormand .....	3.9	14	West	
Ormand Quarry Track ...	3.9			
Forage .....	6.1	2	West	
Crestmore .....	6.5	Yard		
<b>Bly Tracks:</b>				
Burkett Spur .....	2.5	5	East	
Bly Quarry .....	3.1	18		

**SET OUT TRACKS**

Location	MILE POST	CAR CAPACITY	SWITCH CONNECTIONS	GRADE DESCENDING
<b>Second Subdivision:</b>				
Toomey .....	168.6	5	East	East
Harvard .....	173.3	16	Both	East
Manix .....	177.6	19	East	East
Field .....	182.4	16	Both	Level
Afton .....	191.6	10	West	East
King .....	201.7	13	West	East
Crucero .....	204.6	7	Both	East
Cork .....	207.1	13	East	Level
Balch .....	212.0	16	Both	West
Sands .....	217.4	12	Both	Level
Glasgow .....	222.0	16	Both	West
Kerens .....	225.8	18	Both	West
Flynn .....	230.8	16	Both	West
Hayden .....	238.9	12	Both	West
Dawes .....	243.4	16	Both	West
Elora .....	246.8	12	Both	West
Chase .....	250.3	12	Both	West
Cima .....	254.2	20	Both	East
Joshua .....	258.0	12	Both	East
Brant .....	262.8	12	Both	East
Ivanpah .....	267.2	12	Both	East
Nipton .....	277.7	12	Both	East
Desert .....	282.2	13	Both	East
Calada .....	287.2	16	Both	Level
Roach .....	291.5	11	Both	East
Borax .....	296.8	16	Both	West
Jean .....	300.8	10	East	West
Sutor .....	305.4	10	East	West
Erie .....	309.1	12	Both	West
Sloan .....	315.3	10	West	East
Bard .....	320.4	9	West	East
Arden .....	322.6	9	East	East
Pierce .....	324.8	10	West	East
Bracken .....	328.2	12	Both	East
<b>Third Subdivision:</b>				
Wann .....	338.8	16	Both	Level
Valley .....	342.7	13	East	West
Dike .....	347.3	8	East	West
Apex .....	352.0	8	Both	East
Garnet .....	357.3	6	West	East
Dry Lake .....	362.8	13	East	East
Crystal .....	368.3	24	Both	Level
Byron .....	377.9	13	West	East
Rox .....	397.5	13	West	West
Hoya .....	402.7	7	East	West
Galt .....	408.8	13	East	West
Vigo .....	413.6	12	Both	West
Carp .....	418.9	16	East	Level
Cloud .....	423.7	13	East	West
Leith .....	428.9	13	West	West
Elgin .....	438.5	17	West	West
Boyd .....	445.0	12	Both	West
Stine .....	449.5	13	East	West
Etna .....	454.3	18	East	West

### RATING OF ENGINES IN FREIGHT SERVICE IN TONS OF 2,000 POUNDS

Total weight of trains, exclusive of engine and tender, which the different classes of engines will haul in each direction between stations named, under favorable weather conditions. A deduction of ten per cent may be made for fast trains.

Type of Engine	Numbers (Inclusive)	Los Angeles to Riverside	Riverside to San Bernardino	San Bernardino to Summit	Sands to Kelso	Kelso to Cima	Cima to Leith	Leith to Caliente	Moapa to Las Vegas	Las Vegas to Yermo	Yermo to Victorville	Victorville to Summit	San Bernardino to Los Angeles	
P 77	$\frac{22}{28}$ 150	3160	1030	1030	360	1030	360	1030	640	1030	1030	1030	580	1210
P 77	$\frac{25}{28}$ 165	2885, 2886, 2887 3128 to 3133 3176 to 3181	1220	1170	500	1170	500	1170	780	1170	1170	1170	720	1350
C 57	$\frac{22}{30}$ 198	6010 to 6085	1700	1450	575	1350	575	1450	900	1450	1450	1780	925	2000
MK 63	$\frac{26}{28}$ 212 214 218	2700 to 2715 2726 to 2735	2000	1800	700	1600	700	1720	1150	1720	1720	2000	1075	2300
MK 63	$\frac{26}{28}$ 212 214	2208, 2253, 2261, 2264 2293	2000	1800	735	1650	735	1800	1210	1800	1800	2050	1180	2400
MT 73	$\frac{29}{28}$ 230	7018 to 7024 7850 to 7869	2050	1850	800	1690	800	1850	1240	1850	1850	2050	1160	2450
TTT 63	$\frac{287}{290}$ 291 $\frac{291\frac{1}{2}}{30}$ 298	5000 to 5026 5070, 5400 to 5408 5410, 5414 5500 to 5529	2520	2520	1000	2520	1000	2520	1600	2520	2450	2520	1625	2800
FTT 63	$\frac{25}{28-30}$ 302	8800 to 8809	2800	2800	1200	2800	1200	2800	1900	2800	2750	3000	1825	3100
SA-C-59	$\frac{23-23}{30}$ 471	3529 to 3554	3600	3500	1650	3500	1650	3460	2450	3460	3500	3500	2250	4200
CSA-69	$\frac{22-22}{32}$ 400	3935, 3938, 3939	3490	3350	1500	3070	1500	3350	2380	3350	3350	3350	2120	3880

Note: Rating, Caliente to Moapa, Summit to San Bernardino, Summit to Sands, and Los Angeles to East San Pedro, car limit.

Note: Rating, 6010 to 6085 class engines East San Pedro to Rioco 3000 tons, Rioco to Los Angeles 3500 tons.

33-3900's  
30-5000's-  
10-5090's } 8/21/43-Bailey

**EXPLANATION:**

P—Pacific Type  
C—Consolidation  
MK—Mikado  
TTT—Two-Ten-Two

MT—Mountain Type  
FTT—Four-Ten-Two  
SA-C—Simple Articulated-Consolidation  
CSA—Challenger Simple Articulated

**Example:**—Consolidation Engine having 57 inch drivers, cylinders 22 inch diameter and 30 inch stroke, and weighing 198,000 pounds on drivers:

$$C-57 \frac{22}{30} 198$$