



**UNION PACIFIC SYSTEM**  
LOS ANGELES & SALT LAKE RAILROAD

**Special Rules  
No. 1**

**Effective Sunday,  
October 15, 1933**

Superseding Consolidated Superintendent's Bulletin  
Orders No. 4 and Special Rules in Time-Table No. 4.

Employees whose duties are in any way affected  
thereby, must have a copy of these rules with them  
while on duty.

**A. L. COEY, Superintendent**

**F. H. KNICKERBOCKER,**  
General Manager

**G. L. WHIPPLE,**  
General Supt. Transpnt.

**MAP OF  
LOS ANGELES & SALT LAKE RAILROAD**

CHIEF ENGINEER'S OFFICE, OMAHA, NEBR., FEB. 1, 1933

4 (B). Rule 4 (A) of the Rules and Instructions of the Transportation Department is changed as follows:

"From 24 hours prior to, and for six days after a new time-table takes effect, train dispatchers must deliver to all conductors and enginemen, and at all times to conductors and enginemen of other railroads, newly employed or promoted men, and to men from other subdivisions, a '19' train order reading, 'Acceptance of this order is acknowledgment of receipt of time-table No. \_\_\_\_\_ taking effect —M— 19—.'"

4 (R). Time-table and rules of the Oregon Short Line Railroad will govern all trains within joint yard limits Salt Lake City.

5 (R). Time of trains shown at East Yard applies at siding located at M. P. 3.7.

Unless otherwise directed, freight trains will enter and leave East Yard at Telegraph Road located at M. P. 5.6.

7 (B). At points where there are close clearances, trainmen will work on the opposite side of train from them and, if necessary, the fireman will receive the signals and communicate them to the engineman.

8 (A). Electric lanterns may be used for displaying white light only. Their use for displaying colored lights for signaling purposes is not permitted.

9 (R). Lights will not be kept burning at night on switch stands on the Boulder City, St. Thomas, Pioche, Frisco, Cedar City, Fillmore, Delta, Hinckley, Eureka, Mammoth, Silver City, and Fairfield branches. On those branches trains must approach all facing point switches prepared to stop and must know that switches are in proper position before passing over them.

10 (h). At night, a yellow light on a dwarf signal, on a "call-on" signal, or on a "short-arm" signal of an interlocking plant, indicates "proceed at slow speed."

The "short-arm" or "call-on" arm on interlocking signal masts, when in proceed position, indicates "proceed at slow speed."

10 (j). Rule 10 (f) is hereby amended as follows:

Color	Indication
Purple.	Stop. (Night indication for derail switches on sidings.)

10 (K). That part of Rule 10 (G) of the Rules and Instructions of the Transportation, Maintenance of Way, and Signal Department, reading "unless a different speed is specified by train order, bulletin or time-table," is changed to read as follows: "unless a different speed is specified by train order, bulletin or special rules."

10 (r). By day and by night, a red, yellow or green light is displayed on color light block signals. See rule 526 (A).

The indication of these lights is as follows:

Color	Indication
Red. Yellow. Green.	Stop. Approach next signal prepared to stop. Proceed.

14 (w). Relative to Rules 14 (l) and 14 (u), instead of starting the first of the long sounds at the whistling post, as required by Rule 14 (u), the first of the long sounds will be started at such a point, depending on the speed of the train or engine, that the signal will be completed by ending the last sound immediately before reaching the crossing. The last sound may be prolonged, if necessary, and the duration of the complete signal must be not less than 10 seconds.

The sounds of the whistle should be no louder than necessary to give adequate warning to traffic in vicinity of the crossing, thus avoiding unnecessary annoyance to residents.

The engine-bell must be ringing continuously until the engine has passed over the crossing.

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

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

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

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

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

19 (F). When passenger trains are being switched, the markers must be removed to prevent obscuring the view of the engine men.

26 (A). Blue flag or blue light must in all cases be displayed on the same side of train at each end.

26 (B). When necessary to protect against the moving or coupling into, of certain bad order cars on repair tracks with other cars, some of which it may be necessary to move, a red flag by day and a red light by night must be displayed on such cars to indicate that they must not be moved or coupled into under any circumstances.

These instructions do not change or modify Rule 26 in any way.

27 (A). In block signal limits, trains will not be required to stop for a switch light not burning at night, when it can be seen that the switch is in proper position.

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:

Pomona; Ontario; Los Angeles.

82 (R). Unless otherwise directed, extra passenger trains will use passenger line and other extra trains will use freight line between Salt Lake City and Buena Vista.

82 (S). Freight line at Buena Vista ends at the switch of the east cross-over which leads from the siding to the passenger line.

83 (R). Clearance card (form 2643) must be received as follows:

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

Trains are not required to receive clearance card (form 2643) as per rule 83 (A) at initial stations which are not train order offices.

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

Salt Lake City—by 6th and Provo Subdivision westward trains;  
Daggett —by eastward trains;  
Riverside —by westward trains;  
Central Station—by eastward trains.

83 (S). Fairfield Branch trains only will register at Cutler.

Numbers 577, 578, 579, 580, 581, 582, 583 and 584 only will register at Wye. Nos. 419 and 420 only will register at Boulder Jct.

First class trains are not required to register at East Yard. Information called for by Rule 83 (B) will be obtained from train dispatcher by operator who will enter it on train register.

Trains must register by registering ticket (form 2642) as follows:

At Daggett —all trains;  
At Riverside —westward first class trains;  
At Downey Road —all first class trains;  
At Bridge Jct. —all first class trains;  
At Santa Fe Ave. —all S. P. extra trains;  
At Santa Fe Ave. —all first class trains;  
At Washington St. Jct.—all first class trains;  
At Provo —all trains except Nos. 573-574-575-576.

In regard to movement of Union Pacific trains between Washington Street Junction and Central Station, Southern Pacific Rule 83-D and Bulletin 1781, read as follows:

Rule 83-D—"A train must not leave its initial station on any division or subdivision without clearance card when such station is an open telegraph office."

Bulletin 1781—"In case Union Pacific dispatchers desire signals displayed by their trains between Los Angeles and Washington Street Junction, clearance card issued eastward trains at Los Angeles will be authority to display signals. Westward trains will display signals to Los Angeles when holding Union Pacific orders for signals."

84 (B). Rule 84 (A) of the "Rules and Instructions of the Transportation Department" is changed as follows:

"On freight trains approaching sidings, if everything is all right, the conductor will, if practicable, signal enginemen to proceed. This will be answered by 14 (b)."

90 (R). Passenger trains, when meeting at Milford, will use the siding which extends from the first cross-over east of the standpipe to the west switch, unless otherwise directed by train order.

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

North Yard	Boulder City	Sandy	Eureka Branch, Silver
Salt Lake City	Kelso	Cutler-Lehi	City Branch including
Garfield	Yermo	Provo	Tintic Wye, and, Mam-
Stockton-Bauer	Riverside	Nephi	moth Branch between
Lynndyl	Ontario	Topliff	Mammoth Junction and
Milford	Pomona	Fillmore	D. & R. G. W. crossing,
Lund	Pico	Iron Springs	will be operated under
Modena	Los Angeles	Cedar City	yard limit rules.
Crestline	Hynes	Pioche	
Caliente	East San Pedro		
Las Vegas	Crestmore		
Cima	Whittier Jct. (For Anaheim Branch)		

Los Angeles yard limits include Glendale and Pasadena Branches.

Stockton yard limits extend to M. P. 745.06, eight-tenths of a mile east of Bauer.

Cutler yard limits extend to one-fourth mile west of Lehi.

Hynes yard limits extend from 500 feet west of switch serving Long Beach cut-off west of Rioco to 1,000 feet east of east switch Clearwater.

93 (S). Rules 509, 509 (B) and 511 (B) govern movement of trains and engines on the single track between 210 feet west of Macy Street and 70 feet east of Macy Street, Los Angeles.

96 (R). Signals will not be taken down at Downey Road, Bridge Junction or Santa Fe Avenue.

98 (A). When pulling into a siding, rear end of train must be clear of main track, when practicable, before train is stopped.

Trainmen and enginemen will be held responsible for striking cars on sidings or for damage done in making emergency stop to avoid striking cars. If view is obstructed, brakeman must be sent ahead.

As an additional protection, when cars are set out on sidings where dispatcher cannot be notified so that train order may be immediately put out covering, one torpedo must be placed at each end of siding a sufficient distance to permit train heading in to stop. (See Transportation Department Rule 825.)

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

"All locomotives, with or without trains, before crossing the main track at grade of any other railroad, must come to a full stop at a distance not exceeding 400 feet from the crossing, and must not proceed until the way is known to be clear; two blasts of the whistle shall be sounded at the moment of starting; provided, that whenever interlocking signal apparatus and derauling switches or any other crossing protective device approved by the Public Utilities Commission is adopted such stop shall not be required. Every person in charge of a locomotive, for any neglect to observe the provisions of this section shall be deemed guilty of a misdemeanor, and the corporation shall be liable for all damage which any person may sustain by reason of such neglect."

The Utah State law governing the use of engine whistle and bell is as follows:

"Every locomotive shall be provided with a bell weighing not less than twenty pounds, which shall be rung continuously from a point not less than eighty rods from any street, road or highway crossing until such street, road or highway shall be crossed, but the sounding of the locomotive whistle at least one-fourth of a mile before reaching any such crossing shall be deemed equivalent to ringing the bell as aforesaid, except in towns and at terminal points; during the prevalence of fogs, snow, and dust storms, the locomotive whistle shall be sounded before each street crossing while passing

through cities and towns. Every person in charge of a locomotive, for any neglect to observe the provisions of this section shall be deemed guilty of a misdemeanor, and the corporation shall be liable for all damage which any person may sustain by reason of such neglect."

The Nevada State law governing the use of engine whistle and ringing of engine bell is as follows:

"Every engineer driving a locomotive on any railway who fails to ring the bell or sound the whistle upon such locomotive, or cause the same to be rung or sounded at least eighty rods from any place where such railway crosses a traveled road or street, where such road or street is customarily used by the public for the purpose of travel (except in cities where other regulations are required), or to continue the ringing of such bell or sounding of such whistle until such locomotive shall have crossed such road or street, shall be guilty of a misdemeanor."

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

Location	Railroad Crossed	Trains Which have precedence	How Governed
Salt Lake City. (M.P. 782.5)	D. & R. G. W.	O. S. L.	Stop.
Salt Lake City. (M.P. 782.4)	D. & R. G. W.	D. & R. G. W.	Interlocking Plant.
Salt Lake City. (M.P. 782.5 Freight Line)	S. L. G. & W.	O. S. L.	Stop.
Salt Lake City. (M.P. 782.4 Freight Line)	D. & R. G. W.	O. S. L.	Stop.
Salt Lake City. (M.P. 781.3 Freight Line)	W. P.	L. A. & S. L.	Stop.
Smelter. (M.P. 767.1)	B. & G.	L. A. & S. L.	Cabin Interlocking Plant.
American Fork. (M.P. 766.0)	S. L. & U.	L. A. & S. L.	Cabin Interlocking Plant.
Lake View. (M.P. 757.3)	D. & R. G. W.	L. A. & S. L.	Automatic Interlocking Plant.
Mammoth Br. (M.P. 2.41)	D. & R. G. W.	D. & R. G. W.	Stop.
Fairfield Br. (M.P. 1.85)	S. L. & U.	L. A. & S. L.	Stop.
Lehi. (M.P. 769.5 Sugar Factory Spur)	S. L. & U.	L. A. & S. L.	L. A. & S. L. stop and throw target.
Ironton. (M.P. 0.67)	D. & R. G. W.	D. & R. G. W.	Interlocking Plant.
Ironton. (M.P. 0.75)	S. L. & U.	S. L. & U.	Interlocking Plant.
Crucero.	T. & T.	L. A. & S. L.	Interlocking Plant.
Riverside Jct.	S. P. A. T. & S. F.	S. P. A. T. & S. F.	{ Interlocking Plant.
Magnolia Ave.	P. E.	L. A. & S. L.	Interlocking Plant.
Ontario. (0.5 mi. east of station)	S. P.	L. A. & S. L.	S. P. stop and flag crossing.
Ontario.	S. P.	S. P.	Automatic Interlocking Plant.
W. O. Tower.	S. P.	S. P.	Interlocking Plant.
Pomona Depot.	P. E.	L. A. & S. L.	P. E. stop and flag crossing.
Bridge Jct.	L. A. & S. L.		

Westward trains and engines from the direction of Pasadena, must stop at stop sign at Bridge Junction unless proceed signal given with yellow flag or light is received from the switchtender.

Westward trains and engines from the direction of Downey Road must stop at stop sign at Bridge Junction unless proceed signal given with green flag or light is received from the switchtender.

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Location	Railroad Crossed	Trains which have precedence	How Governed
Redondo Jct. Tower, Los Angeles.	A. T. & S. F.	A. T. & S. F.	Interlocking Plant.
Santa Fe Ave., Los Angeles.	L. A. Ry.	L. A. & S. L.	L. A. Ry. cars stop and flag crossing.
San Pedro Branch: M.P. 3.6.	L. A. Jct. Ry.	L. A. & S. L.	Interlocking Plant.
Hobart Tower.	A. T. & S. F.	A. T. & S. F.	Interlocking Plant.
Mile Post 5.1.	P. E.	L. A. & S. L.	Automatic Interlocking Plant.
South Gate Station.	S. P.	S. P.	Automatic Interlocking Plant.
Clearwater. (3,014 ft. east of East Switch)	P. E.	L. A. & S. L.	Automatic Interlocking Plant.
Cota.	P. E.	P. E.	Remote Control Interlocking Plant.
Thenard.	S. P.	S. P.	Stop and flag crossing.
Thenard.	P. E.	P. E.	L. A. & S. L. stop operate derail before crossing.
Badger Ave.	Drawbridge		Interlocking Plant.
Seaside Drawbridge.	Drawbridge		Interlocking Plant.
Pasadena Branch: Aliso St., Los Angeles.	P. E.	L. A. & S. L.	P. E. stop and proceed on signal from crossing flagman.
Alhambra Ave., Los Angeles.	S. P.	S. P.	(Mission Tower) Interlocking Plant.
Main St., Los Angeles.	L. A. Ry.	L. A. & S. L.	L. A. Ry. cars stop and flag crossing.
Ave. 20, Los Angeles.	L. A. Ry.	L. A. & S. L.	
Pasadena Ave. & Ave. 36.	P. E.	L. A. & S. L.	L. A. & S. L. stop. See note.
Highland Park.	A. T. & S. F.	A. T. & S. F.	L. A. & S. L. stop and throw target.
Marmion Way, Los Angeles.	P. E.	L. A. & S. L.	L. A. & S. L. stop. See note.
Fair Oaks Ave., Pasadena. (M.P. 8.5)	P. E.	L. A. & S. L.	L. A. & S. L. stop and flag crossing.
Lincoln Ave., Pasadena. (M.P. 11)	P. E.	L. A. & S. L.	P. E. stop. See note.
Glendale Branch: Rock Jct.	A. T. & S. F.	A. T. & S. F.	L. A. & S. L. stop and throw target.
North Figueroa St.	L. A. Ry.	L. A. & S. L.	L. A. & S. L. stop. See note.
Alice St. (M.P. 3.8)	L. A. Ry.	L. A. & S. L.	
Broadway, Glendale.	P. E.	L. A. & S. L.	L. A. & S. L. stop and flag crossing.

Location	Railroad Crossed	Trains which have precedence	How Governed
Anaheim Branch: Philadelphia Ave., Whittier.	P. E.	P. E.	L. A. & S. L. stop and flag crossing.
M.P. 6.86.	P. E.	L. A. & S. L.	P. E. stop and flag crossing. See note.
M.P. 10.5.	P. E.	P. E.	L. A. & S. L. stop and flag crossing.
Bastanchury Spur.	A. T. & S. F. P. E.	A. T. & S. F. P. E.	L. A. & S. L. stop and flag both crossings.
M.P. 15.5.		A. T. & S. F.	Interlocking Plant.
Anaheim Sugar Spur.	A. T. & S. F.	L. A. & S. L.	A. T. & S. F. stop and flag crossing. See note.

NOTE: At following crossings L. A. & S. L. trains and engines approach crossing prepared to stop unless crossing is seen or known to be clear:  
Pasadena Branch: Lincoln Ave.  
Anaheim Branch: M. P. 6.86, Anaheim Sugar Spur.

NOTE: At following crossings all cars and trains of the P. E. Ry. Co. to approach and proceed over each of these crossings at a speed not in excess of eight miles per hour; all engines and trains of the L. A. & S. L. R. R. Co. must stop before proceeding over said crossings and a member of the train crew must go forward and ascertain that no train is approaching on the opposing line of railroad in either direction that will interfere with the movement of the train of the L. A. & S. L. R. R. over said crossing.  
Pasadena Branch: Pasadena Ave. & Ave. 36, Marmion Way.

NOTE: At following crossings all street cars of the L. A. Ry. Corporation approach and proceed over each of these crossings at a speed that will enable them to stop if necessary before reaching crossing; all engines and trains of the L. A. & S. L. R. R. Co. must stop before proceeding over said crossings and a member of the train crew ascertain that no street car is approaching on the opposing line of railroad in either direction that will interfere with the movement of the train of the L. A. & S. L. R. R. over said crossings.  
Glendale Branch: North Figueroa St., Alice St. (M. P. 3.8).

98 (T). If home signals at cabin interlocking plants are in stop position, trains may proceed when crossing and signals are clear and if signals do not clear, flagman must go ahead over crossing and then be governed by Rule 509 to the next signal.

98 (U). Interlocking plant located on spur track serving Columbia Steel Plant between Provo and Ironton, crossing of D. & R. G. W. R. R. double track and single track on S. L. & U. R. R.

Movements of trains on L. A. & S. L. to Steel Plant will be governed by home signal located on right-hand side of track five hundred (500) feet from crossing.

Movements of trains from Steel Plant to L. A. & S. L. will be governed by two-arm home signal located on L. A. & S. L. five hundred (500) feet from S. L. & U. crossing on left-hand side of track. Upper arm will govern all movements from Steel Plant over L. A. & S. L. track to Provo Yard. Lower arm will govern all movements from Steel Plant to D. & R. G. W. westward main track.

One long sound of engine whistle should be used by L. A. & S. L. engines when calling for home signal.

98 (V). All trains and engines must operate over Seaside Drawbridge with caution, expecting to find the bridge occupied by pedestrians or push car.

99 (R). When a train order is received reading, "All eastward (or westward) extra trains wait at.....until.....", the train addressed is relieved from protecting its rear end against following extra trains until the time named in the order.

Use of this train order is authorized only on all branch lines.

101 (F). Trains must not pass over broken rails on curves until joint bars have been placed on both sides of the rail and securely fastened. In case of square break on tangent track, trains may proceed at slow speed after stopping at least 200 feet from the break.

101 (G). When a train encounters any dangerous defects in roadway or track, or is stopped by a block signal under circumstances which indicate a defect in track or signal apparatus (see Rules 101, 101 (A), 509, 510 and 808), the fact must be reported to the train dispatcher from the first point of communication, telephone booth, or telegraph office, except that permissive block signals in horizontal position will be reported at first stop, or open telegraph office, or summit of grade, if no previous opportunity for reporting.

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

103 (A). Cars must not be handled ahead of engine between stations, except as follows:

When necessary to take cars to or from a spur;  
On work trains.

When this is done, it must be for no greater distance than necessary and the movement must be at slow speed, with air brakes cut in and operative on cars ahead of the engine.

In switching with an engine equipped with footboards, when there are no cars ahead of the engine, a yardman or trainman (and not more than one) must ride on leading footboard of engine in direction the engine is moving, on either yard or main tracks, except as follows:

When the switches to be passed over can be plainly seen to be properly lined;

Where the movement is over a crossing protected by a crossing watchman on duty. See Rule 802 (A).

Employees are prohibited from riding on engines or cars as follows:

On engine footboard between engine and cars when cars are being pushed or pulled, except when necessary to make cut between engine and first car;

On leading footboard while coupling engine to cars;

On engine pilots;

On deadwood, drawbars, brake beams, journal boxes, or brake wheels;

On end of cars containing loads which may shift.

103 (B). Air must be working on all cars before starting up inclines leading to sugar beet trestles, or oil unloading facilities.

103 (C). A trainman, when one available, must ride rear of tank of a road engine backing up without cars while switching at stations or moving in yards.

104 (F). Spring switches are indicated by a letter "S" on switch target, and trains moving against the current of traffic must stop and examine the switch points before passing over them.

After a train or engine has started through a spring switch, the switch must be set by hand for tracks over which movement is being made before a reverse movement is made, or before backing to take up slack. See Rule 104 (J.)

104 (G). Roadway machines, such as ditchers, pile drivers, rail loaders, bridge derricks and the like, must not be dropped either alone or with other cars, but must be shoved to a stop.

Cars of any kind must not be "poled" or "staked" by yard or road crews.

104 (H). Relative to Transportation Department Rule 104 (A) and Maintenance of Way Department Rule 104 (E), on all cross-overs between a main track and any other track, both switches must be equipped with switch locks and they must be locked while trains are passing over them and must be left locked after they have been used.

104 (J). Spring switches, see Rule 104 (F), are located as follows:

Cedar City	—end of loop;
Islen	—east end;
Caliente	—east end;
Yermo	—west end;
Riverside	—west end double track;
East Yard	—east end (Telegraph Road);
Macy Street, 70 feet east	—west end of double track;
Macy Street, 210 feet east	—east end of double track;
Butte Street Junction;	
9th St. Junction;	
520 ft. west of Spring St. Viaduct on Pasadena Branch.	

See rule 152 (R) governing speed over spring switches.

104 (R). Switches will be set normally—

At east end Cedar City Loop, spring switch for westward trains; speed restrictions 10 miles per hour;

At Tintic Wye for Eureka Branch—Silver City main line;

At Pioche—Wye switch for Prince Con. R. R.;

At Crestline—Wye switch for east leg of wye;

At Provo—switch leading to Ironton for Ironton spur;

At Riverside—spring switch at west end double track, for eastward trains; speed restrictions 10 miles per hour, for eastward trains;

At Butte Street Junction—spring switch for Butte Street main track;

At 9th St. Jct.—for Bridge Jct.;

At 70 feet east of Macy Street—spring switch at west end of double track for eastward main track, speed restrictions ten (10) miles per hour;

At 210 feet west of Macy Street—spring switch at east end of double track for westward main track, speed restrictions ten (10) miles per hour;

At Rock Jct.—for Pasadena Branch;

At west end of crossover between main tracks, 520 ft. west of Spring St. Viaduct, on Pasadena Branch—for westward main track.

104 (S). All eastward trains leaving Caliente freight yard must head through drill track, using spring switch, instead of heading out through cross-over. All westward trains heading into yard at Caliente must use the first cross-over west of the east drill track switch.

104 (T). Between the hours of 6:30 A. M. and 3:30 P. M. and between 4:30 P. M. and 12:30 A. M., eastward L. A. & S. L. R. R. passenger trains entering Salt Lake City Passenger Stations must stop to clear Second South Street unless they receive proceed signal from switchtender. Westward L. A. & S. L. R. R. passenger trains leaving Salt Lake City Passenger Station between these times must stop to clear lead unless they receive proceed signal from switchtender. Proceed signal must be acknowledged.

104 (U). On all sidings equipped with a switch point for derail, such derails must be locked while being used.

D-151 (R). Trains must keep to the left between Bridge Junction and Downey Road. Westward trains and engines en route to Butte Street must use left hand track from Downey Road to Bridge Junction. Eastward trains and engines must use left hand track from Bridge Junction to Butte Street Junction, and use middle track from Butte Street Junction to Downey Road.

152 (C). Snow plows must not be operated through drifts when trains are seen approaching or are passing on an adjacent track. Flangers must be raised when passing over bridges, highway crossings, railroad crossings, frogs and switches, and through interlocking limits.

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

(The speed shown under heading of "Psgr." includes mail and express trains and under heading of "Frt." includes mixed trains and light engines with or without caboose. Freight engines used in passenger service on branches, must not exceed the speed specified for those engines in freight service.)

LOCATION	Maximum Speed Miles Per Hour		REMARKS
	Psg.	Frt.	
At any point.	60	40	
At any point.	20	20	Engines backing up, with or without cars.
At any point.	45		With Mikado type engine.
At any point.	40		With Consolidation type engine.
At any point.	15	15	Dead engines with side rods or main rods down.
At any point.	25	25	Dead engines with side rods and main rods in place, unless otherwise restricted.
Over spring switches.	15	15	When using turnouts.
Over spring switches.	20	20	When not using turnouts, but where switch points will be caused to oscillate under such movement.
Over spring switches.	20	20	When not using turnout, but when movement is over facing point switch.
At any point on curved track.		25	Steam derrick, cranes, hoists, ditchers and pile drivers.
At any point on tangent track.		30	Steam derrick, cranes, hoists, ditchers and pile drivers.
At any point on main line.		30	} Trains handling scale test cars.
At any point on branch lines.		20	
Passing open train order offices.		20	
Through interlocking plants.	30	30	Where no other speed restriction is designated.
Within yard limits.	40	25	Speed must be as much slower as rules or conditions may require.
Sand Territory.			Over sand territory designated on first and second subdivisions speed of passenger trains must be restricted sufficiently to avoid raising dust on observation end.
Los Angeles.	8	8	Over any steam railroad or electric line crossing not interlocked.
First Subdivision.			
Between Los Angeles & Pomona.	50	35	
Santa Fe Avenue.	8	8	Over L. A. Ry. crossing.
Redondo Jct. Tower.	8	8	Over A. T. & S. F. crossing.
Pomona.	15	15	Through city limits.
Pomona.	15	15	Over P. E. crossing.
Ontario.	15	15	Through city limits.
Between mile posts— 39.5 and 45.4	50		
Between mile posts— 39.5 and 46.5			Sand territory.

152 (R). Continued.

LOCATION	Maximum Speed Miles Per Hour		REMARKS
	Psg.	Frt.	
Riverside: spring switch west end of double track.	10	10	For eastward trains.
Between mile posts— 159.9 and 160.7			Sand territory.
Second Subdivision.			
Through tunnels.	20	20	
On curves as follows:			
Between mile posts— 188.4 and 192	50	40	
192 and 193.3	40	30	
193.3 and 196.3	50	40	
Crucero. (West end of yard)	30	30	Over remote controlled switch.
Between mile posts— 205 and 215 235.5 and 254.2	40	20	Sand territory.
Between Cima and Kelso.			} Freight trains must consume three minutes for each mile run except they must consume four minutes for each mile run when 75% of their lading is rock or other equally heavy material.
On curves as follows:			
Between mile posts— 312.25 and 312.5	40	30	
314.5 and 320	40	30	
Arden: Blue Diamond spur.		15	Bet. end of track and M.P. 6.
Arden: Blue Diamond spur.		20	Bet. M.P. 6 and Arden.
Third Subdivision.			
Between Farrier and Caliente.	50	40	
Through tunnel No. 3.	20	20	
On curves as follows:			
Between mile posts— 348 and 351	40	30	
356 and 359.5	40	30	
379 and 381	50	40	
Moapa. (West end of yard)	30	30	Over remote controlled switch.
On curves as follows:			
Between mile posts— 391.50 and 392.25	50	40	
394.50 and 395.50	30	24	
397.41 and 398.58	30	24	
403.67 and 419.64	36	24	
425.5 and 426.2	50	40	
428 and 428.15	40	30	
430 and 455.12	36	24	
Fourth Subdivision.			
Between Caliente and Uvada.	50	40	
Between Islen and Minto.	12	12	Light engines backing up.
On curves as follows:			
Between mile posts— 461 and 461.77	30	20	
461.77 and 464	36	24	
466 and 467	36	24	
469.14 and 477.25	25	20	
479 and 481.60	30	24	
486.85 and 488.72	30	24	
495 and 497.30	25	20	

Continued on page 7.



211 (C). Continued.

superiority at a point not protected by block signals; when moving trains against the current of traffic, as per train order Form D-R and when using a section of double track as single track, as per train order Form D-S."

**221 (R).** At all stations (except in block signal territory) where train order signal is located outside of siding switches, all trains that must pass the switch used by opposing trains in taking siding, must approach said switch with caution, and if train order signal is held in stop position, must stop clear of switch until cause of stop signal has been ascertained.

**350 (R).** Staff system between Santa Fe Avenue and Bridge Junction governs movement of all trains and engines. Exceptions: Switch crews and engines turning on wye may use main track between Bridge Junction and east derail at Redondo Tower without staff; crews switching Hammond Lumber Company or serving industries west of Redondo Tower may use main track between Santa Fe Avenue and west derail without staff; Rule 93 to apply.

**350 (S).** Possession of staff is authority for a train or engine to proceed to next staff station, but does not supersede the indication of interlocking signal at Redondo Tower, nor relieve yard, train and engineman from being on lookout for switch crews and engines using main track as referred to in exceptions to Special Rule 350 (R).

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

**509 (F).** When a train is stopped by a block signal, on double track when ready to proceed as per Rule 509 (C) and on single track when the flagman is not to be sent ahead as per Rule 509 (B), two long sounds of the engine whistle (14b) must be given before the train proceeds.

**509 (G).** On single track, when a light engine, or a motor train with only one trainman, is stopped by a block signal under conditions making it necessary to send a flagman ahead to comply with Rule 509 (A) or 509 (E), after placing one torpedo one-fourth mile from rear of train, it may proceed at slow speed, not exceeding six miles an hour, expecting to find a train in the block, broken rail, obstruction, or switch not properly set, without sending a flagman ahead.

**509 (H).** When a train is stopped by a block signal at a meeting or passing point on single track under conditions making it necessary to send a flagman ahead to comply with Rule 509 (A) or 509 (E), if the engineman of the train which is stopped is verbally informed by a trainman of the train on the siding that his train has more cars than the siding will hold, the train which is to use the main track may proceed at slow speed not exceeding six miles an hour to the next signal, expecting to find a train in the block, broken rail, obstruction, or switch not properly set, without sending a flagman ahead.

**509 (R).** When a block signal displays stop indication due to switch being set to permit a train to enter siding, and engineman of train to take siding can see that switch is properly set for his train, such train may proceed into siding with caution without stopping for block signal, upon receiving proper signal from trainman or switch tender.

**509 (S).** Home signal at east end Los Angeles River Bridge governs A. T. & S. F. spur track crossing at west end of bridge. Color light dwarf signal at west end of bridge governs A. T. & S. F. main track crossing at Redondo Tower.

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

**525 (A).** If a block signal fails to indicate "stop" or "caution" when a light engine, or a motor train with only one trainman, enters a block, the train dispatcher must be notified from the first available point of communication, and report must be sent to the superintendent by wire.

**526 (A).** By day or by night, if the light is not burning on a color light block signal, trains and engines must stop, and be governed by Rules 509 (A), 509 (B), and 509 (E), on single track, and by Rule 509 (C) on double track.

**613 (S).** If interlocking home signal at Mission Tower, Los Angeles, indicates proceed for the proper route, train or engine may proceed, running very carefully through limits of interlocking plant, looking out for train, obstruction or switch not properly set.

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

**Crucero:**  
 For main track, ———  
 For siding, ———o  
 For transfer track, o——o

**W. O. Tower (M.P. 33) Pomona:**  
 Siding, ———o

**Magnolia Ave. Tower:**  
 Main track to siding, ———o  
 Main track to back track, o——o  
 Back track to spur, o o——o

**Riverside Junction:**  
 Main track, ———o  
 To transfer track, o o o——

**Downey Road:**  
 For main track, ———  
 For San Pedro or Pasadena Branch, ———o

**Hobart:**  
 Siding, ———o  
 East wye, ———o

**Alhambra Ave.:**  
 For main track, ———  
 For S. P. connection, ———o o o o

**703 (A).** Each employe governed by Hours of Service law must notify superior officer of the time the law requires him to be off duty early enough that he may be relieved, if necessary, before exceeding the hours of service permitted by law.

**703 (B).** Train, yard and engine men (except regular assigned passenger engine men) must register on book provided for that purpose, on arrival at home terminal at completion of each trip or day's work, their accumulated mileage, or hours, including arbitraries and overtime, for the current month, including all mileage or hours to date and any over-run from the previous month.

**713 (A).** A member of the crew must be stationed on the rear end of trains in position to give or receive necessary signals when meeting trains on double track or when meeting or passing trains on sidings. At stations where there is a depot, to be on the rear end when passing depot and at blind sidings to be on rear end when passing station board, except that when the train has an observation or special car, he must be on front platform of the rear car or on platform of the car next ahead. On passenger trains, the vestibule door must be open so that hot boxes or other defects may be detected.

**713 (R).** Operators will arrange to be out in front of the office when trains are passing, using a white light at night and exchange signals with a member of the train crew so that if operator should discover anything wrong with the train, he will be in a position to signal crew to stop.

**714 (B).** The use of alcohol or oil lamps or other heating devices not a part of car equipment, by passengers or employes in passenger train cars, is strictly prohibited under all circumstances.

**714 (C).** In connection with application of fire fighting equipment to passenger locomotives, following instructions will govern:

1. Shut off steam heat on engine.
2. Shut off the steam heat train line at rear or front of the car that is on fire, depending on the direction of the wind, so as to be on the windward end, and disconnect the steam hose.
3. Couple up the fire hose that has been taken from the engine tank to the steam heat line on car towards the engine.
4. Fireman, on signal from trainmen that they are ready, will put on his injector and open the water line that connects the branch pipe to the steam heat line; in a short time water will be ejected from the fire hose.

720 (A). Stockmen must be given an opportunity to board cabooses without necessity of doing so while trains are in motion.

720 (B). When practicable, outfit cars should be moved on local or mixed trains, and women or children occupants thereof should ride in the place provided for passengers on those trains. When it is necessary to move occupied outfit cars on through freight trains, if there are women or children with those cars whom it is not practicable to move in any other way, they may remain in the outfit cars during such movement when requested by foreman and authorized by the superintendent.

720 (R). Passengers may be carried on freight trains between stations at which the trains stop, as follows:

Persons in charge of live stock or other freight when provided with proper transportation.

Employees with annual pass or with trip pass so endorsed.

Passengers holding revenue tickets with special permit issued by general manager.

Passengers must not be loaded on freight trains until work is completed and train ready to leave.

Agents and conductors must notify passengers that local freight or mixed trains will stop with caboose opposite platform for them to get on or off.

722 (A). Dead engines, disabled engines, or engines with one or more rods taken down must not be hauled in fast freight trains when it is possible to avoid it.

With side rods or main rods down, a speed of fifteen miles an hour must not be exceeded.

With side rods and main rods in place, the maximum speed may be increased to twenty-five miles an hour, unless otherwise restricted.

724 (A). When it is necessary to cross a track when going between their home and places of employment, or in going from one point to another at stations, employes must use regular street crossings or established foot crossings.

They must keep a sharp lookout for engines or cars when using such crossings and the crossing of tracks at any other point is prohibited.

802 (A). When one or more cars are being switched or pushed over a road crossing not protected by a watchman or employe assigned as such, or, when a road engine, with or without cars, is backing over such a crossing at a station, a member of the crew must precede the movement and act as crossing watchman, and he must not get on front end of the leading car or on rear of tank until it has passed over the crossing.

When a train is parted to clear a public crossing, or is standing near such crossing, a trainman must act as crossing watchman when a train or engine is approaching on a siding or main track.

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

Where there is ample room, crossing must be cut so as to leave an open space of one hundred feet each side of crossing.

802 (R). Trains must stop and flag over Lincoln Avenue highway crossing, Pasadena, M.P. 11, on account of building obstructing the view.

Trains must be preceded over Colorado Street, Pasadena, by flagman, unless crossing flagman on duty for protection of traffic.

803 (A). Before occupied outfit cars or drover cars are coupled into, the occupants must be notified. When such occupied cars are being switched, either in yards or on road, the air must be coupled through.

804 (R). If engine is cut off from passenger train for the purpose of changing engines or otherwise, at Caliente, sufficient hand brakes must be set on head end of westbound trains and on rear end of eastbound trains, to hold cars until engine is again attached.

804 (S). Whenever switching is being done in Caliente Yard, 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.

805 (A). Cars must not be left on, nor foul of, what are known as "Lead Tracks" in the various yards when it can be avoided. When it is necessary to do so, the yardmaster, agent, or operator, must be immediately advised and he will notify trains entering and leaving the yard. This does not relieve trainmen, yardmen, or enginemen, from proper observance of yard rules, and they

805 (A). Continued.

will be held strictly accountable for yard accidents on lead tracks, as well as on any other track in yard, whether such notice is received or not.

807 (A). When a train is delayed, trains following must be allowed to pass as promptly as possible, and the conductor and engineer of the delayed train will be held jointly responsible for delay resulting from failure to comply with these instructions.

820 (R). Allowance for empty and underloaded cars as indicated below must be reported as required by Instruction 24 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)
From Salt Lake City to Los Angeles .....	6000 lbs.	3000 lbs.
From Los Angeles to Salt Lake City .....	6000 "	3000 "
From Salt Lake City to Lynndyl, via Provo.....	6000 "	3000 "
From Lynndyl to Salt Lake City, via Provo....	6000 "	3000 "

824 (B). Trains setting out cars account hot box will remove packing from box which was running hot. Brasses and oil soaked waste removed from cars on road must be retained and exchanged for new, leaving old waste in bucket, and brasses on caboose platform.

824 (C). When necessary to remove keys from brake heads, or when working on brake rigging, cut-out cock in branch pipe must be closed and reservoirs bled. Where cut-out cock is located in cylinder pipe, the latter only need be closed. All keys must be replaced before brakes are cut in, to avoid personal injury.

824 (D). Conductors must report by wire to superintendent and trainmaster, from first open telegraph office where train stops, cases of brakes sticking, giving car numbers and initials.

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, 10 minutes;
- Cima —Westward;
- Chase —Westward, 10 minutes;
- Dawes —Westward, 10 minutes;
- Desert —Eastward and westward;
- M.P. 6 Blue
- Diamond Spur } —Eastward, 10 minutes;
- (Arden)
- Rox —Eastward and westward;
- Islen —Westward;
- Modena —Eastward and westward;
- Black Rock —Eastward;
- Delta —Westward;
- Tintic —Westward;
- Eastward—except when train is running properly and it is not necessary to stop for any other purpose, trains may run inspection at Tintic in which case stop will be made at Lofgreen and inspection made;
- Warner —Eastward;
- Nephi —Eastward and westward;
- Provo —Eastward and westward.

When pulling out of inspection points, freight trains must not exceed a speed of ten miles an hour until proceed signal has been received from rear end.

826 (A). When employes, passengers, or others are injured, call the nearest railroad surgeon. If the persons injured are not employes, they should be sent to their homes or placed in charge of local relief authorities, after immediate necessary attention has been given by the railroad surgeon.

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

835 (A). Passengers in coaches or chair cars are permitted to place packages, traveling bags, etc., in the racks provided for that purpose when they can be safely carried there, but when not, they must be placed on floor, but not in aisle of car where they might cause someone to fall. The reason for this requirement must be explained to the owner.

837 (A). Gate at front end of first coach car next to baggage or mail cars must be closed at all times in order to prevent possibility of personal injury to passengers, account buffers between these two cars not being protected by curtains.

When occupied passenger equipment is being switched, or while standing uncoupled, open ends of cars must be protected by closed gates. Also, rear gate must be closed on moving trains.

847 (A). When passenger train cannot be properly heated, wire report thereof must be made to superintendent.

During snow storm or extremely cold weather, engine must not be detached from passenger train if it can be avoided; if it becomes necessary to do so, or if train is separated for any reason, trainmen and enginemen must exercise care, drain steam line and disconnect steam hose between cars, if necessary, to prevent freezing.

Engine or detached portions of trains must be recoupled and steam line again connected as quickly as possible to avoid discomfort to passengers.

847 (B). As a precaution against personal injuries to passengers, trainmen will use the words "Please Watch Your Step", when passengers are boarding or alighting from train.

847 (C). When engines equipped with track sprinklers are used on trains carrying passengers, sprinklers are to be operated day or night when speed of train is in excess of 20 miles an hour, over and approximately 100 feet on each side of open road crossings at grade, entering and leaving station grounds, at known dusty locations, passing trains on adjacent tracks, and as indicated by sprinkler signs.

Sprinklers must not be operated when passing depots if there are any persons on the station platform, and are not to be operated on station platforms when train is making a station stop.

Enginemen must handle in such a way as to result in comfortable condition to passengers on observation platform.

849 (A). Trainmen must use every effort to keep unauthorized persons off their trains, and when unable to do so peaceably, chief dispatcher must be notified by wire so that officers may be called to assist.

865 (A). Trainmen, enginemen, yardmen, agents, and other employes, who in any way handle or care for explosives and other dangerous articles, must familiarize themselves with the regulations and instructions governing the handling of them.

Conductors must notify enginemen of the presence and location in the train of cars containing explosives and of loaded placarded tank cars before leaving the initial station or station where such cars are picked up.

Between points where separate trains are operated for freight service only, cars containing explosives must not be handled in a train that carries passengers. (BE 676).

Between points where only mixed train service is operated, or where passengers are carried in the caboose of a freight train, a car containing a freight shipment of explosives, or a tank car placarded "Inflammable" may (unless otherwise instructed) be hauled, but such cars must not be placed next to a car carrying passengers. (BE 676).

Cars placarded "Explosives" must be placed in through freight trains near the middle of the train and must be not nearer than the 16th car from the engine, electric locomotive, or motor car, nor the 11th car from the caboose, or other cars carrying passengers, if the length of the train will permit. (BE 677-a).

Cars placarded "Explosives" may be placed in local freight, local pick-up and local set-out trains not nearer than the second car from the engine, electric locomotive, motor car, caboose, or other cars carrying passengers, when plac-

865 (A). Continued.

ing them near the middle of the train would require additional switching at way stations. (BE 677-b).

Cars placarded "Explosives" must have hand and air brakes in service and must not be placed next to cars placarded "Inflammable" or "Corrosive Liquid", nor next to empty or loaded tank cars, wooden frame flat or gondola cars, nor next to carloads of pipe, lumber, poles, iron, steel, or similar articles liable to shift and break through end of placarded car; nor next to cars containing lighted heaters, stoves or lanterns, or occupied by attendants. (BE 676-677c-677d).

Placarded tank cars must not be placed in trains next to cars placarded "Explosives" nor next to cars containing lighted heaters, stoves or lanterns, nor next to gondola or flat cars with lading such as logs, lumber, rails or pipe that is likely to shift, and when practicable must be placed not nearer than the sixth car from the engine, electric locomotive, motor car, caboose, or other cars carrying passengers. (BE 677-e).

Empty tank cars must not be moved from stations unless dome cover and all outlet caps have been replaced and wrenched tight, shipping tags and cards removed from car, and "Inflammable" placards removed or replaced by "Dangerous Empty" placards.

When placards become detached in transit, conductor must see that they are replaced upon arrival at the next terminal, if in through trains, or at first station stop if in local freight trains. (BE 675).

BE numbers shown above refer to correspondingly numbered regulations of the Bureau of Explosives, Interstate Commerce Commission.

865 (B). Cars designated below must be handled in rear of train, and next to caboose in the order named:

- Drover cars, occupied or unoccupied;
- Scale test cars;
- Cars with emergency drawbars;
- Outfit cars;
- Emigrant movables (except steel underframe cars may be placed near head end when so requested by attendant in charge);
- All wooden underframe cars;
- Any car tagged with Form 4725 reading, "Handle only at rear end of train".

Trains containing drover cars must not be pushed by an engine at the rear. If it becomes necessary, in an emergency, to clear main track by use of an engine at rear of the train, the drover cars must first be vacated.

When a helper engine is used, it must be cut in ahead of drover cars. (See Special Rule 865-C.)

Switching must not be done with drover cars, except in handling to or from trains.

Live stock must be handled in head end of train when practicable, and stock cars loaded with scrap, boards, engine wood, long rods, bolts, or any commodity which might work out of openings in sides or ends of car, must not be moved until these openings are properly slatted.

Freight cars with bad order drawbars may be handled in trains under the following conditions:

- (a) When not containing live stock or perishables, may be chained up in train and handled to first available side track where must be set out to be repaired;
- (b) When containing live stock or perishables, may be chained up in train and handled to first repair point;
- (c) When containing any commodity or empty, may be handled behind the caboose to destination or to first terminal, provided the good drawbar can be coupled to the caboose and in addition is secured by chain, and has air and hand brakes operative. On ascending grades, a trainman must ride the car.

A red flag by day, or a red light at night, must be displayed on the rear of any car handled behind caboose.

865 (C). When not used on head end of train, helper engine must be cut in ahead of caboose, and when there are wooden underframe cars or drover cars on the rear end, the helper engine must be cut in ahead of them.

877 (A). Employes must not go out on exterior of cab of, nor hang out from gangway or steps of, a moving engine for any purpose. When this is necessary, the engine must be stopped.

881 (A). When engines under steam are standing, whether coupled to other equipment or not, the engineman must personally see that the throttle is closed and latched, cylinder cocks opened and reverse lever latched in center notch; and that straight air is applied on engines so equipped.

881 (R). Local freight trains arriving summit of grade, must release helpers before doing local work at such points. Train engine must be used to do station work.

882 (A). The engineman or fireman must not move the engine or any part of its machinery, unless he knows that it can be done without injury to anyone.

882 (B). Due to the extremely high temperatures developed in cylinders, superheated engines cannot be drifted with tightly closed throttle without serious damage to lubrication, cylinder packing, rod packing, building up carbon deposits, and seriously injuring the service of the engine. It is therefore necessary to keep a certain amount of steam in the cylinders of superheated engines while they are moving.

The following rules must be observed on all superheated engines:

On all drifting grades the main throttle of all engines must be partly opened or cracked a sufficient amount to prevent a vacuum in the cylinders. Mallet engines when descending heavy grades may be drifted with closed throttle after moving a sufficient distance with the drifting throttle to permit cylinders to cool below the flash point of the oil.

In approaching a stop, a small amount of steam should also be worked through the cylinders. The throttle should never be entirely closed but the pressure gradually reduced with the throttle until freight engines are down to approximately 4 miles an hour when throttle should be closed. On engines in passenger train service, the throttle may be closed approximately one train length before the stop when this is necessary in order to make a satisfactory stop. However, it is permissible when conditions are favorable, such as working slowly to a stop up heavy grades, to work steam to an entire stop.

While drifting, the reverse lever should be in the highest cut-off consistent with proper cushioning of the moving parts.

On engines approaching or stopping at passenger station and working a light throttle, the reverse lever should be moved towards the corner sufficiently so that the engine will drift smoothly and without pounding in the rods and boxes; the drifting pressure can be controlled in this way with the reverse lever as well as with throttle.

These rules do not apply to emergency stops.

Mallet engines must not be cut into simple except to assist in starting train.

883 (A). Blow-off cocks must not be opened on either side of engine at any point where liable to cause personal injury, or damage to property.

883 (B). Enginemen operating 3-cylinder locomotives must use special care to see that cylinder cocks are opened and cylinders thoroughly drained when starting out at terminals or at other times when engine is cold; must also exercise special caution in preventing high water in boilers which carries over into cylinders. Much damage has been done to 3-cylinder engines by neglecting these precautions. Enginemen must know positively that dope cups and oil cavities on inside main rod are properly filled and lubricating.

886 (A). Conductors must report promptly by wire to the proper officer, all cases of rough handling of trains in their charge between terminals; also all rough handling of trains by road or yard engines at terminals that may come to their attention, and all cases of excessive whistling or other noise made by trains going by or around passenger trains, or at passenger stations.

When a passenger train is roughly handled, the conductor must call the engineman's attention to the fact at the first stop and explain to him just what occurred.

Conductor will be held responsible for failure to make report of any improper handling of the train.

886 (B). Enginemen on passenger and freight trains, when making maximum speed, must make application of air brakes approaching curves and on heavy curves keep brakes applied sufficient length of time around curve to steady train.

887 (R). Air brake test as required by air brake rules 1040, 1041, 1042, 1043, will be made on all trains where conditions require road train brake test.

887 (R). Continued.

Westward passenger trains will make running air test as per rules 1051 and 1051 (A) between "S" post east of Cima and east switch.

Air brake test as required by special rule 887 (T) will be made on all freight trains at the following points:

Cima	—Westward;
Crestline	—Westward;
Tintic	—Eastward and westward where angle cock has been turned and hose separated;
Boulder	—Eastward and westward where angle cock has been turned and hose separated;
Mount	—Eastward and westward where angle cock has been turned and hose separated.

All engines operating on the Eureka, Mammoth, Silver City, Frisco, and Pioche branches must maintain brake pipe pressure of not less than ninety (90) pounds.

To properly control trains on descending grade from Mammoth Mine to Mammoth Station, you will be governed as follows:

All cars to be equipped with thirty pound retaining valves.

The combined leakage from the brake cylinder and retaining valve pipe must not exceed seven pounds per minute.

All brakes to be cut in and operated.

Piston travel to be adjusted to approximately seven inches on all cars. Speed shall not exceed six miles an hour at any point.

Limit of train descending shall be a maximum of three cars.

On descending grades from Mammoth, Eureka and Silver City, speed must not exceed eight miles an hour and limit of cars will be not to exceed ten. The rules as to the air brake inspection and test, with the exception of the application of the thirty pound retainers, are the same as they are on the High Line or between Mammoth Mine and Mammoth Station.

Empty cars for the Tintic District will be inspected at Tintic and on cars going to the Mammoth Mine, thirty pound retainers will be applied at Tintic by the Mechanical Department. Engine foremen will place a sufficient number of empties on the repair track each day so that the car forces may make the proper inspection and apply the stub retainer and will not take any cars into the district that have not been OK'd for service in the Tintic District. Until such time as other arrangements have been made, switch crew will leave the engine on the repair track in charge of roundhouse foreman for the purpose of pumping up and testing the air when so instructed by the roundhouse foreman. These instructions will not relieve trainmen from being properly distributed over the train, each man at a hand brake, in a position to control the train with the hand brakes if necessary.

887 (S). Retaining valves will be used on all westward freight trains between Islen and Minto in proportion to weight of train, exclusive of locomotive, as follows:

Less than 35 tons per car, use 5 head retaining valves and every third one throughout train.

More than 35 tons per car or less than 50 tons per car, use 5 head retaining valves and every other one throughout the train.

More than 50 tons per car, use all retaining valves.

Westward freight trains will turn up retaining valves at Islen and turn down retaining valves at Minto.

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

Pioche to M.P. 30;

M.P. 27 to M.P. 22 Pioche Branch;

Frisco to Milford;

Frisco to Newhouse;

Eureka to Tintic;

Mammoth to Tintic;

Silver City to Tintic;

Desert Mound to Iron Springs on at least 50% of all loads handled;

Cima to Kelso;

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

Continued on page 12.

On other grades conductors will see that as many retaining valves are used as are necessary to control their trains as required by Air Brake Rule 1077 (A).

887 (T). When standard brake pipe pressure is obtained, engineman will, upon proper request or signal, make a service reduction of 10 pounds on passenger and 20 pounds on freight train and sound one short blast of the whistle. When the trainman at the rear car sees rear brake apply, he will signal release, and the engineman will sound two short blasts of the whistle following release of brakes. The train must not proceed until the brakes are released on rear car and brake pressure charged to standard pressure. If the train has been delayed 30 minutes or more the above test will be repeated before leaving.

887 (U). Maximum tonnage per operative brake in freight service, Cima to Kelso, is seventy-five (75) tons.

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

888 (B). Train and engine men must not wash up or change clothes while on duty going into terminals. They must be ready to handle any emergency which might arise, and washing up and changing clothes must not be started until after the train has been tied up or they are relieved from duty.

888 (R). All engines must approach and pass over Aliso Street and Santa Fe Avenue, and run on Alameda Street, Los Angeles, cautiously, engineman and fireman keeping an especially sharp lookout for street traffic.

889 (A). Rule 889 of the "Rules and Instructions of the Transportation Department" is changed as follows:

"See that engine is supplied with twelve torpedoes, not less than three red fuses and equipment for proper hand and train signals. While running at night, have in cab, where it cannot be seen by passing trains, a red light, and, in case of danger, signal approaching trains."

894 (A). Except in making emergency stop, when sand is used in anticipation of reducing speed or stopping, sand must be under entire train before setting the brakes. Sand must not be used over spring switches.

894 (B). Enginemen, before starting each trip, must inspect ashpans and when pans are found to be defective, must not leave a point where repairs can be made, without written authority from district foreman regardless of delay to any train.

Before leaving any point where ashpan doors have been opened, enginemen must know that they have been tightly closed and securely fastened.

896 (R). 2700-3600-5500-7800-8800 class engines must not go on the following tracks, except as shown:

Enamel Spur	—Spur;
Buena Vista	—Old siding;
Wye	—Wye tracks, except 2700 class;
Lake Point	—A. S. & R. spur, except 2700 class;
Warner	—East leg of wye, except 2700 class;
Bauer	—Honerine Mill spur, except 2700 class;
Stockton	—Gravel pit tracks, except 2700 class;
Tintic	—Tracks 1 and 2 alongside Eureka branch, except 2700 class;
Lynnndyl	—Sand pit tracks;
Delta	—East leg of wye;
	—East lead sugar factory track 20 beyond switch to track 14 which is first switch beyond lead to beet trestle;
	—West lead to sugar factory beyond heel of frog to Standard Oil spur;
	—All tracks to beet trestle;
	—Hal Oil spur beyond a point 380 feet from switch;
M.P. 472.3	—Spur, except 2700 class;
Caliente	—Dike track, except 2700 class;
Dike	—Set-out track, except 2700 class;

Garnett	—Set-out track, except 2700 class;
Jean	—Depressed track;
	—Yellow Pine Mining Co. warehouse spur, except 2700 class;
Bard	—Set-out spur, except 2700 class;
Pierce	—Set-out spur, except 2700 class;
Draper	—Sand spur, except 2700 class;
M.P. 781.26	—Sand spur, except 2700 class beyond a point 540 feet from switch;
West of Draper }	
Mount	—Gravel pit tracks, including Heiselts spur;
Lehi	—Sugar factory tracks and beet trestles;
American Fork	—Chipman's spur;
	—Co-op spur;
	—Pulley spur, except 2700 class;
	—Thornton spur;
Pleasant Grove	—Lumber spur, except 2700 class;
Hardy	—Trestle track 4 except 2700 class;
	—No engine allowed on beet trestle;
	—Loading track 6, except 2700 class, which will not go beyond point opposite bulkhead of trestle;
Cutting Plant }	
M.P. 754.8 }	—Spur track, except 2700 class;
Provo	—Wye;
	—Texas Oil spur;
	—Gas Plant spur;
	—Bullock's spur;
Payson	—Sugar factory spurs, except 2700 class;
	—Sugar beet trestles;
	—West switch scale track;
	—Old coal track;
	—Wye;
	—Stock track;
York	—Gravel Pit spur;
Nephi	—East leg of wye;
	—West leg of wye, except 2700 class;
	—Mill and Oil spur;
	—East end team track;
Levan	—Spur, except 2700 class;
Parley Ice Plant	—Spur, except 2700 class, restricted beyond boiler house;
Delta Branch	—All tracks;
Hinckley Branch	—All tracks;
Fillmore Branch	—All tracks west of alfalfa mill spur;
Frisco Branch	—All tracks west of potato cellar, M.P. 0.82;
Cedar City	—Oil track No. 12;
	—Commissary spur;
	—Lead to freight house track No. 6, main track switch;
Pioche Branch	—All tracks west of bridge 0.68;
Fairfield Branch	—All tracks west of M.P. 1.00;
St. Thomas Branch	—All tracks west of M.P. 0.23;
Boulder City	—Machine shop track 7;
	—Six Companies warehouse track 36;
	—Mess Hall track 40.
3150-3176 and 6000 class engines must not go on the following tracks, except as shown:	
Buena Vista	—Old siding, except 6000 class;
Bauer	—Honerine Mill coal trestle;

Continued on page 13.

896 (R). Continued.

<b>Lynndyl Delta</b>	—Sand pit, except 6000 class; —East leg of wye, except 6000 class; —East lead to Sugar Factory Track 20, beyond switch to Track 14 which is first switch beyond lead to beet trestle; —All tracks to beet trestle; —West lead to sugar factory beyond heel of frog of turnout to Track 12 or sugar warehouse track; —Track 12 can be used by 6000 class engines; —Hal Oil spur beyond 380 feet from switch;
<b>M.P. 781.26 } West of Draper }</b>	—Sand spur beyond a point 540 feet from switch;
<b>Lehi</b>	—Sugar factory beet trestles;
<b>American Fork</b>	—Thornton spur;
<b>Hardy</b>	—Beet trestle;
<b>Cutting Plant } M.P. 754.8 }</b>	—Beet trestles;
<b>Provo</b>	—Texas Oil spur;
<b>Payson</b>	—Beet trestles, except 6000 class on south beet trestle only; —Scale track No. 17, west switch taking out of sugar factory lead, except 6000 class; —Old coal track, except 6000 class; —Gravel pit spur;
<b>York</b>	—East leg of wye, except 6000 class;
<b>Nephi</b>	—East end of team track, except 6000 class; —Spur, beyond boiler house;
<b>Parley Ice Plant</b>	—Spur track;
<b>Hickory</b>	—End of branch track. Engines must not go beyond old water column;
<b>Newhouse</b>	—Light Pacific and light Consolidated engines permitted. Heavy Pacific and heavy Consolidated engines not permitted west of bridge 0.68;
<b>Pioche Branch</b>	—All tracks, except 6000 class;
<b>St. Thomas Branch</b>	—Depressed track, except 6000 class;
<b>Jean</b>	—Machine Shop Track 7;
<b>Boulder City</b>	—Six Companies Warehouse Track 34, except 6000; —Mess Hall Track 20, except 6000.

2700, 3150-3181, 5500, 7800, and 8800 class engines must not go on the following tracks, except as shown:

<b>Crestmore Track</b>	—All tracks, except 2700 class engines may operate between Bly and Ormand quarry not exceeding 20 miles an hour;
<b>Bly Quarry</b>	—All tracks;
<b>Rialto Branch</b>	—All tracks;
<b>Glendale Branch</b>	—All tracks;
<b>Pomona</b>	—250 feet eastwardly of Pomona Fruit Growers' Exchange spur track located east side of Exchange Growers' Building;
<b>Anaheim Branch</b>	—All tracks, except light Pacific type;
<b>Pasadena Branch</b>	—All tracks, except light Pacific type;
<b>Bell</b>	—2 Fairchild-Gilmore spurs;
<b>South Gate</b>	—F. W. Braun Co.;
<b>South Gate</b>	—California Cyanide Co.;
<b>South Gate</b>	—Bent Concrete Pipe Co.;
<b>South Gate</b>	—Western States Chemical Co.;
<b>South Gate</b>	—Blue & Mason;
<b>South Gate</b>	—Benedict & Moorman;
<b>South Gate</b>	—2 Emsco Refractories Co. spurs;

<b>South Gate</b>	—2 Western Concrete Pipe Co. spurs;
<b>Workman</b>	—2 L. A. Co. Flood Control spurs;
<b>Clearwater</b>	—Macco Lumber Co.;
<b>Hynes</b>	—Southern California Edison Co.;
<b>Rioco</b>	—2 Richfield Oil Co. spurs;
<b>Long Beach</b>	—Tank spur.

5500, 7800 and 8800 class engines must not go on the following tracks:

<b>Bell</b>	—Storage track;
<b>Bartolo</b>	—Spur;
<b>Clayton</b>	—Spur;
<b>Hudson</b>	—Spur;
<b>Rowland</b>	—House track;
<b>Fallon</b>	—Spur;
<b>Ontario</b>	—Spur, Packing House at Cypress Ave.;
<b>Ontario</b>	—San Antonio Packing Co.;
<b>Ontario</b>	—United Canneries;
<b>Ontario</b>	—Cutler-Lobingier Packing Co.;
<b>Ontario</b>	—Edison Appliance Co.;
<b>Glenavon</b>	—Spur;
<b>Magnolia Ave.</b>	—Outer siding;
<b>Magnolia Ave.</b>	—Spur;
<b>Riverside</b>	—City oil spur.

5500 and 8800 class engines must not go on the following tracks:

<b>Colton</b>	—Over heavy curve connecting Southern Pacific and Santa Fe trackage.
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5500, 7800 and 8800 class engines must not go between west switch at Bixby and Burnett.

5500, 7800 and 8800 class engines must not exceed ten (10) miles an hour on house track at Pico.

6000, 2700, 3150-3181, 5500, 7800 and 8800 class engines must not go on the following tracks:

<b>Whittier</b>	—Whittier Ass'n lemon spur;
<b>South Gate</b>	—3 Fibreboard Products Co. spurs;
<b>Riverside</b>	—Mission spur serving A. F. G. Co. engines must not go beyond east end of packing house.

3150, 6000 and Shay class engines only, may go on Eureka, Mammoth and Silver City branches. All classes of engines may turn on Tintic wye.

Engines of any class must not be used over unloading flume on Chase water track.

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

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

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

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.
First Subdivision: West of Santa Fe Ave.....	Balance wt. Redondo Tower signal .....	Side.
Butte St. and Santa Fe Ave..	Light and phone wires to switch shanty .....	Top.
600 ft. W. Redondo Tower..	Balance weight on signal...	Side.
Los Angeles River .....	Bridge .....	Side.
M.P. 8.90 .....	Highway bridge .....	Top.
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.
Pomona .....	Signal 319 .....	Side.
Pomona .....	Signal 320 .....	Side.
W. O. Tower .....	Train order signal stand...	Side.
Ontario .....	Water column .....	Side.
M.P. 52.40 .....	Bridge .....	Side.
M.P. 55.74 .....	Canal siphon wall .....	Side.
M.P. 55.90 .....	Highway bridge .....	Top.
M.P. 56.23 .....	Fence .....	Side.
Second Subdivision:		
M.P. 182.09 .....	Bridge .....	Side.
Harvard .....	Water tank spout .....	Side.
M.P. 192.27 .....	Bridge .....	Side.
M.P. 192.34 .....	Tunnel No. 1 .....	Top.
M.P. 196.12 .....	Bridge .....	Side.
Kelso .....	Water tank spout—east .....	Top and side.
Chase .....	Water tank spout .....	Top and side.
Desert .....	Water tank spout—east .....	Top and side.
Desert .....	Water tank spout—west .....	Top and side.
M.P. 315.90 .....	Tunnel No. 2 .....	Top.
Arden .....	Water tank spout .....	Top and side.
Third Subdivision:		
Dry Lake .....	Water tank spout .....	Top and side.
M.P. 395.42 .....	Bridge .....	Side.
M.P. 397.04 .....	Bridge .....	Side.
M.P. 397.32 .....	Bridge .....	Side.
M.P. 406.55 .....	Bridge .....	Side.
M.P. 407.09 .....	Bridge .....	Side.
M.P. 408.97 .....	Bridge .....	Side.
M.P. 409.16 .....	Bridge .....	Side.
M.P. 419.30 .....	Bridge .....	Side.
M.P. 430.51 .....	Tunnel No. 3 .....	Top.
M.P. 430.68 .....	Bridge .....	Side.
M.P. 431.82 .....	Bridge .....	Side.

899. Continued.

Location	Structure or Obstruction	Clearance of engine or car is close at—
Third Subdivision—(Cont'd)		
M.P. 433.47 .....	Bridge .....	Side.
M.P. 437.22 .....	Bridge .....	Side.
M.P. 437.22 .....	Rock cut, east end bridge...	Side.
Elgin .....	Water tank spout .....	Top and side.
M.P. 440.20 .....	Signal pole .....	Side.
M.P. 444.56 .....	Bridge .....	Side.
M.P. 447.89 .....	Bridge .....	Side.
M.P. 452.40 .....	Rock cut .....	Side.
M.P. 458.56 .....	Bridge .....	Side.
Fourth Subdivision:		
M.P. 468.06 .....	Bridge .....	Side.
M.P. 469.07 .....	Bridge .....	Side.
M.P. 469.93 .....	Bridge .....	Side.
M.P. 469.95 .....	Bridge .....	Side.
Big Springs .....	Water column .....	Top and side.
M.P. 470.91 .....	Bridge .....	Side.
M.P. 471.28 .....	Bridge .....	Side.
M.P. 471.46 .....	Bridge .....	Side.
M.P. 471.74 .....	Bridge .....	Side.
Acoma .....	Water tank spout .....	Top and side.
Modena .....	Oil spouts .....	Top and side.
Beryl .....	Water tank spout .....	Top and side.
M.P. 527.60 .....	Bridge .....	Side.
Thermo .....	Water tank spout .....	Top and side.
Fifth Subdivision:		
M.P. 601.13 .....	Bridge .....	Side.
Sixth Subdivision:		
Jericho .....	Water tank spout .....	Top and side.
Tintic .....	Water tank spout .....	Top and side.
Garfield .....	Water tank spout .....	Top and side.
Provo Subdivision:		
M.P. 735.76 .....	D. & R. G. W. crossing.....	Top and side.
M.P. 754.42 .....	Bridge .....	Side.
Juab .....	Water tank spout .....	Top and side.
Nephi .....	Water tank spout .....	Top and side.
Starr .....	Water tank spout .....	Top and side.
Payson .....	Water tank spout .....	Top and side.
Provo .....	Water tank spout .....	Top and side.
Cutler .....	Water tank spout .....	Top and side.
Fairfield Branch:		
M.P. 1.60 .....	D. & R. G. W. crossing.....	Top.
Cedar Fort .....	Water tank spout .....	Top and side.
Topliff .....	Water tank spout .....	Top and side.
Fillmore Branch:		
Fillmore .....	Water tank spout .....	Top and side.
Pioche Branch:		
M.P. 0.68 .....	Bridge .....	Side.
Water Tank .....	Water tank spout .....	Top and side.
Pioche .....	Water tank spout .....	Top and side.

Continued on page 15.

Location	Structure or Obstruction	Clearance of engine or car is close at—
<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.
St. Thomas .....	Oil column .....	Side.
St. Thomas .....	Stock Yard platform .....	Side.
<b>Pasadena Branch:</b>		
300 ft. N. of Macy St. ....	Tie retaining wall .....	Side.
Alhambra Ave. ....	Switch tender shelter eaves. ....	Side.
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. 7 to M.P. 8. ....	W. U. pole line, guy wires and braces .....	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>		
M.P. 4.5 .....	Trolley Poles .....	Side.
M.P. 4.5 .....	Trolley wire .....	Top.
M.P. 6.3 .....	Gates, Forest Lawn Cemetery .....	Side.
Trolley wires and poles from Division St. to Monterey Road, on main line, Glendale Yard, and all spur tracks and sidings.		
<b>San Pedro Branch:</b>		
Workman .....	Eaves on depot. ....	Side.
Hynes .....	Water tank spout. ....	Top and side.
Thenard .....	Trolley wire .....	Top.
<b>Anaheim Branch:</b>		
M.P. 11.59 .....	Highway bridge .....	Side.
<b>Rialto Branch:</b>		
M.P. 1.01 .....	Concrete girders on bridge. ....	Side.
M.P. 5.17—M.P. 5.40. ....	Wire fence .....	Side.
Bloomington .....	Trolley pole at Orange St. (White) .....	Side.
Bloomington to Poole .....	Trolley poles .....	Side.

899 (R). Notice is hereby given that, in addition to impaired clearances shown in Special Rule No. 899, there is shown below certain other overhead and side impairments in connection with platforms and other structures served by industry, stock and other tracks. There are also high voltage wire installations upon or near the right of way, and slight obstructions which may not appear in this list. Employees must inform themselves as to location of all such impairments and wires, and exercise due care to avoid injury therefrom.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
<b>First Subdivision</b>		
<b>Los Angeles:</b>		
9th St. Freight Terminal. ....	Platforms .....	Side.
Inbound Frt. Tr. Weymouth	Building .....	Side.
Crowell Co., 15th St. ....	Buildings, Fences, Poles, Fire Escapes, Oil Loading Pipes, etc. ....	Side and top.
Santa Fe Alley Tracks and Connecting Spurs .....	Building and Hopper. ....	Side.
<b>Chamberlain Co. near 9th St. East Yard:</b>		
Reclaim Plant .....	Scale House .....	Side.
Spur serving Whitacre & Son Lbr. Co. ....	Lumber shed .....	Side.
<b>Pico:</b>		
House Track .....	Freight house platform .....	Side.
Depressed Track, Worley & Co. ....	Retaining walls .....	Side.
<b>Walnut:</b>		
House Track .....	Freight house platform. ....	Side.
<b>Diamond Bar Ranch:</b>		
Spur .....	Stock chute, fence, building. ....	Side.
<b>Pomona:</b>		
Main Line .....	Block Signal No. 320. ....	Side.
Main Line .....	Signal Case No. 320. ....	Side.
Union Oil Spur. ....	Car connecting pipes. ....	Side.
Union Oil Spur. ....	Retaining wall .....	Side.
Spur, Pomona Fruit Growers' Exchange .....	Platform, hand rail, eaves on building .....	Side.
<b>Sunsweet:</b>		
Spur, Shell Oil Co. ....	Car connecting pipes. ....	Side.
<b>Ontario:</b>		
Track serving Cash Orange Marketing Co. ....	Platform .....	Side.
Track serving Hammond Lbr. Co. ....	Fence .....	Side.
Track serving Cutler Lobingier Co. ....	Buildings .....	Side.
Track serving Cutler Lobingier Co. ....	Overhead runway across track .....	Top.
Track serving Edison Co. ....	Buildings .....	Side.
Track serving Haslett Whse. Co. ....	Platform .....	Side.
<b>Champagne:</b>		
Passing Track .....	Grape loading platform and overhang .....	Side.
<b>Concrete:</b>		
Spur serving packing house. ....	Platform .....	Side.

Continued on page 16.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
First Subdivision—Contd.		
Bridge No. 55.74: Main Line .....	Concrete syphon .....	Side.
Riverside: Spur serving City Pole Yard.	Tank Pit, fence, poles, tank foundation .....	Side.
Spur, Agricultural Chem. Works .....	Building .....	Side.
Spur, Hammond Lbr. Co....	Overhang on building .....	Side.
Second Subdivision		
Yermo: Turn table .....	Overhead air line.....	Top.
Store House .....	Platform .....	Side.
Water Tank .....	Spout .....	Side and top.
Round House .....	Doors .....	Side and top.
Spur No. 27 .....	Corner round house.....	Side.
Harvard: Water Tank .....	Spout .....	Side.
Afton: Tunnel No. 1.....	Main Track .....	Top.
Kelso: Sanding device .....	Spout .....	Side and top.
Water tank .....	Spout .....	Side and top.
Roundhouse .....	Doors .....	Side and top.
Chase: Water tank .....	Spout .....	Side and top.
Desert: Water tank .....	Spouts, east and west.....	Side and top.
Jean: Team Track .....	Ore platforms .....	Side.
Sloan: Mill building .....	Eaves on bldg. lime spouts..	Side.
High line .....	Overhead tram .....	Side and top.
Tunnel No. 2 .....	Main Track .....	Top.
Arden: Water tank .....	Spout .....	Side and top.
Third Subdivision		
Las Vegas: Stock Yard .....	Chutes .....	Side.
Track No. 8, Earle & Cox...	Coal bins .....	Side.
Roundhouse .....	Doors .....	Side and top.
Track No. 4, PFE Icing Platform .....	Platform .....	Side.
National Ice Co.....	Platform .....	Side.
Freight depot .....	Platform .....	Side.
Rip tracks .....	Gate posts .....	Side.
Transfer Table .....	Trolley wires .....	Top.
Paint House .....	Building .....	Side.
Store House .....	Platform .....	Side.
Water tank, out and inbound .....	Spouts .....	Side.
Sand House .....	Building .....	Side.
Outfit Track .....	Board Fence .....	Side.
Machine Shop .....	Doors .....	Side.
Lovell: Pit Track .....	Warehouse .....	Side.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
Third Subdivision—Contd.		
Dry Lake: Main Track .....	Water tank spout .....	Side and top.
Moapa: Icing Facilities .....	Platform and Enginehouse..	Side.
Tunnel No. 3: MP 430.51 .....	Tunnel .....	Side and top.
Br. No. 430.68: MP 430.68 .....	Bridge .....	Top.
Elgin: Water tank .....	Spout .....	Side and top.
San Pedro Branch		
Bandini District:		
Italo Eureka Oil Co.....	Loading pipes, bldg., etc....	Side.
Oswald Bros. Paving Co....	Cement sheds and gate posts	Side.
Petroleum Specialties Co....	Loading pipes .....	Side.
Morris P. Kirk & Sons.....	Buildings .....	Side.
Vernon:		
L. A. Paving Co.....	Depressed blanket wall, steam pipes, oil unloading pipes, buildings .....	Side.
Gen. Petroleum Co.....	Oil loading racks, pipes, bldgs.	Side.
Brombacher Iron Wks. ....	Gate, fence, overhead crane.	Side and top.
Baasch-Ross Tool Co.....	Brick wall, gate, scrap bins..	Side.
Pacific Systems Homes.....	Bldgs., platforms, retaining walls, draw bridge, fire hose boxes, fence, lumber..	Side.
West Coast Glass Co.....	Building .....	Side.
Madison Iron Works.....	Overhead crane .....	Side and top.
Greyhound Mortar Service Co. ....	Hopper, sand chute.....	Side.
Atlas Fire Brick Co.....	Buildings, crusher .....	Side.
St. Louis Fire Brick & Clay Co. ....	Concrete unloading incline..	Side.
Southgate: Calco Tile Mfg. Co.....	Building .....	Side.
Rioco: Export Petroleum Co.....	Chute for unloading cans....	Side.
Perfection Oil Co.....	Oil loading pipes.....	Side.
U. S. Refining Co.....	Oil loading rack.....	Side.
Long Beach:		
Team Track .....	Platform .....	Side.
Italian Food Products.....	Platform .....	Side.
Standard Oil Co. (Near Drawbridge) .....	Building .....	Side.
East San Pedro:		
Roundhouse .....	Doors .....	Side and top.
Oil stand pipe.....	Column .....	Side.
Scale House .....	Building .....	Side.
Pasadena Branch		
Los Angeles:		
Griffith Co. (Paving Plant).	Buildings and hopper .....	Side.
Bruno Tile & Marble Co....	Fence and platform.....	Side.
Bruno Tile & Marble Co....	Overhead crane .....	Side and top.
Arctic Ice Cream Co.....	Pipes and oil house.....	Side.
Durox Steel Corp.....	Retaining wall and platforms	Side.
Arctic Ice Cream Co.....	Building and pipes.....	Side.
Strong & Dickinson Spur No. 2, Between 6th and 7th Sts.	Buildings, platforms, metal window sash, down spouts, etc. ....	Side.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
Pasadena Branch—Contd. Strong & Dickinson Spur Between 6th and 7th Sts... McGivray Raymond Corp... Am. Ldry. Mach. Co. (E. 4th St.)..... D. C. H. Commissary (1st) Freight Shed B (Aliso St.)... Calif. Packing Corp. (South of Macy St.)..... Agricultural Chemical Wks. (North of Macy St.)..... Spur South of North Main St. Frank Graves Sash & Door (Between Ave. 18 and 19) W. P. Fuller & Co. (Ave. 21) Pacific Clay Prod. Co. (Ave. 26)..... Pacific Iron & Steel (Near Ave. 30)..... D&B Pump Supply Co. (A "If on St.)..... L. Awnware & Tile Co. (Ave. 26)..... Baruch Longene Co. (Pasadena Ave.)..... Highland Park: Gordon E. Russell (Ave. 60) Br. No. 8.09..... Br. No. 8.16..... Raymond: Sierra Exp. (NE Co. Glen- arm & Raymond Sts.)... A. E. Braden Canning Co.... Pasadena: Al Berdick & Sons, Cement Shed (MP 10)..... Geo. L. Throop Co. (Between Mary and Reed Sts.).....	Buildings, platforms, metal window sash, down spouts, etc. .... Overhead crane and building  Light brackets ..... Platform ..... Platform .....  Platforms and retaining wall  Buildings and retaining walls Buildings, overhangs .....  Buildings, platforms, etc.... Buildings, platforms .....  Platform and retaining walls  Western Union pole, fence..  Derrick .....  Overhang on shed .....  Canopy over platform, steps  Gates, building ..... Bridge ..... Bridge .....  Platform ..... Gate, shed, platform .....  Buildings .....  Building and platform.....	Side. Side and top.  Side. Side. Side.  Side.  Side. Side.  Side.  Side.  Side.  Side.  Side. Top. Top.  Side. Side.  Side.  Side.
Glendale Branch Glendale: Chas. E. Clifford (MP 5.8).. Lichfield Lbr. Co..... Marshall Produce Co..... Anaheim Branch Whittier: Whittier Walnut Growers Assn. .... La Habra: Freight House ..... Fullerton: Western Glass Co..... Anaheim: Southern Meat Co..... Anaheim Com. Grow. Pkg. House ..... Rialto Branch Br. No. 1.01: Concrete Girders .....	Gate posts, reservoir, open pit, platform, sand bin... Fence, buildings, platforms.. Platform, porch, overhang...  Platform .....  Platform ..... Retaining wall, platform, building .....  Stock chute, fence..... Building and light reflectors.  Girders .....	Side. Side. Side.  Side.  Side.  Side.  Side.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
Rialto Branch—Contd. Crestmore: Riverside Portland Cement Co. .... All tracks at Mill and Warehouses .....	Scale track ..... Platforms, buildings, outside pipes, etc. ....	Side. Side.
St. Thomas Branch Arrowhead: Gypsum Mill ..... Silica: Sand Storage Bins..... St. Thomas: Freight platform ..... Ore platform ..... Oil stand pipe..... Stock Yards Platform.....	Platform .....  Bins .....  Platform ..... Platform ..... Pipe ..... Platform .....	Side.  Side.  Side. Side. Side. Side.
Fourth Subdivision Caliente: Power Plant Spur ..... Cinder Spur ..... Industry Track ..... Turntable .....	Coal bin ..... Cinder conveyor ..... Becker Products Bldg..... Turntable .....	Side. Top and side. Side. Side.
Fifth Subdivision Milford: P.F.E. Icing Tracks..... Industry No. 7..... All Enginehouse Tracks..... Turntable .....	P.F.E. building and platform Coal bin doors..... Enginehouse doors ..... Turntable .....	Side. Side. Top and side. Side.
Sixth Subdivision Lynndyl: All Enginehouse Tracks ... Outbound Engine Track... Tintic: All Enginehouse Tracks ... Scale Track .....	Enginehouse doors ..... Enginehouse wall and eaves.  Enginehouse doors ..... Scale house .....	Top and side. Side.  Top and side. Side.
Stockton: Stockton Lead Spur..... House Track .....	Stockton Lead Co. ore platform ..... Combined Metals coal house	Top and side. Side.
Bauer: All Tracks at Plant of Com- bined Metals Reductions Co.	Buildings, retaining walls, ore hoppers, platforms, etc....	Top and side.
Provo Subdivision Draper: Stauffer Sand Spur..... MP 781.27: Mellen Sand Spur..... Rideout: Loading Spur ..... American Fork: Chipman Spur ..... Co-op. Spur .....	Sand loader .....  Sand loader .....  Loading chute .....  Coal platform and warehouse eaves ..... Coal shed and bin, ore plat- form and fence.....	Top and side.  Side.  Side.  Side. Side.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
Provo Division—Contd.		
Vineyard:		
Beet Track .....	Davis coal shed.....	Side.
Provo:		
Scale Track .....	Scale house .....	Side.
Roylance Spur .....	Gate and warehouse.....	Side.
North Coal Spur.....	Fence corner and gate.....	Side.
South Coal Spur.....	Coal fence and gates.....	Side.
Smoot Lumber Spur.....		
Mill Spur .....	Gate, office and garage.....	Side.
Canning Spur .....		
Gas Co. Spur.....	Culmers Co. office, fence and tank .....	Side.
All Enginehouse Tracks.....	Coal shed .....	Side.
Cinder Pit Spur.....	Enginehouse doors.....	Top and side.
Turntable .....	Cinder conveyor .....	Top and side.
Inbound Engine Track.....		
Outbound Engine Track.....	Coal chute .....	Side.
Brick Shed Spur.....	Brick and waste shed.....	Side.
Springville:		
Passing Track .....	Beet loader .....	Side.
Rheims:		
Beet Track .....	Beet loader .....	Side.
Spanish Fork:		
House Track .....	Depot eaves .....	Side.
Benjamin:		
Beet Track .....	Beet loader .....	Side.
Stearns:		
Beet Track .....	Beet loader .....	Side.
Paysa Track .....		
Scale Track .....	Scale house .....	Side.
Sugar building:		
High line tracks.....	Gates, pipes, tanks, loaders, etc. ....	Top and side.
Annel:		
Beet Spur .....	Beet loader .....	Side.
Nephi:		
Industry Spur .....	Beet loader and coal house..	Side.
House Track .....	Depot eaves and water tank.	Side.
Mill Spur .....	Texas Co. oil unloading device and Goldsborough coal bin	Side.
House and Industry.....	Track centers .....	Side.
Sharp:		
Elevator Spur .....	Grain spout .....	Side.
Lee:		
Beet Spur .....	Loading platform .....	Side.
Parley:		
Ice Spur .....	Platform, hoist and boiler-house eaves .....	Side.
Rock Spur.....	Shippers chute.....	Side.
Eureka Branch		
Eureka:		
Chief Con. Loading Track...	Chief Con. ore bin.....	Side.
Safety Spur .....	U. S. M. & S. Co. truck unloading platform .....	Side.
Lower Beck .....	Buillion-Beck ore chute and cribbing .....	Side.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
Mammoth Branch		
Mammoth:		
Pump Plant Coal Spur.....	Boiler house, smokestack anchor, handrails, Br. SO. 11, phone line wire.....	Top and side.
Grand Central Ore Bin Spur.	Headhouse and ore chute....	Top and side.
Upper Mammoth—N.E.T.Ry.		
Ore Bin Spur.....	Mammoth M. Co. and Ajax M. Co. ore bins and loading chutes .....	Top and side.
Lower Mammoth Spur.....	O. H. platform and stable and posts at cave-in.....	Side.
Main Spur .....	Ore chutes, buildings and iron racks .....	Side.
Gold Chain Spur.....	Rock cut and post cribbing..	Side.
Delta Branch		
Delta:		
Globe Mill Spur .....	Grain spout .....	Side.
Fillmore Branch		
Fillmore:		
House Track .....	McBride coal shed.....	Side.
Frisco Branch		
Frisco:		
Horn Silver Mill Spur.....	Ore bins and mill.....	Side.
End of Main Track.....	Coal bin .....	Side.
Stock, Main and Passing Tracks .....	Track centers .....	Side.
Newhouse:		
E. Leg of Wye.....	Stock yard chute.....	Side.
Cedar City Branch		
Cedar City:		
Industry Track No. 12.....	Continental Oil Co. oil unloading device and Riddle platform .....	Side.
Desert Mound:		
Loading Track .....	Ore bins and chute.....	Top and side.
Iron Mines:		
Mine Spur and Col. Steel Tracks .....	Col. Steel Co. ore bins and chutes .....	Top and side.
Pioche Branch		
Pioche:		
Transfer Track .....	Pioche Pacific ore bins.....	Side.
Transfer and Yard No. 7....	Track centers .....	Side.
Track No. 3.....	Temporary loading platform.	Side.
Fairfield Branch		
Clinton:		
Siding .....	Loading bin .....	Side.
Topliff:		
U. S. Spur No. 2.....	Loading platform and buildings .....	Side.
A. S. & R. Quarry.....	Loading bin .....	Side.

Continued on page 19.

Location	Structure or Obstruction	Clearance of Engine or Car is Close at—
Irontron Branch		
Irontron: Republic Creosote Spur.....	Buildings, stack guys and creosote loading devices...	Top and side.
All Pacific States Cast Iron Pipe Co. Tracks.....	Buildings, platforms, retaining walls, overhead travelers, etc. ....	Top and side.

899 (S). All yard engines serving industries located on industrial track west of Ninth Street, Los Angeles, and south of main line, will do so under full flag protection and see to it that there is no opportunity for accident account siding and main line impaired clearance.

1060 (B). Conductors handling cars with air brake cut out, must wire superintendent at first opportunity in addition to complying with Air Brake Rule 1060 (A).

1063 (B). That part of Air Brake Rule 1063 (A) reading:

"If the train has not more than 8 cars, release brakes so that they will be about off when the stop is completed, this being called 'pre-release.' With longer trains hold the brakes applied until stopped." is changed to read as follows:

"If the train has not more than 12 cars and stop is being made, except on a downward grade of 1% or more, the brakes should be released so that they will be about off when the stop is completed, this being called 'pre-release.' With longer trains hold the brakes applied until stopped."

#### LIGHT WEIGHT OF PASSENGER CARS

Kind	Class	Light Wt. (tons)
Mail, 40 Ft. ....	Steel	40
Mail, 60 Ft. ....	Steel	55½
Mail, 70 Ft. ....	Steel	65
Baggage, 40 Ft. ....	Wood	31
Baggage, 50 Ft. ....	Wood	32½
Baggage, 60 Ft. ....	Wood	45
Baggage, 60 Ft. ....	Steel	47
Baggage, 60 Ft. ....	Steel	48
Baggage, 70 Ft. ....	Steel	63
Express.....	(Same lengths and weights as baggage)	
Coach, 50 Ft. ....	Wood	30
Coach, 60 Ft. ....	Wood	44
Coach, 60 Ft. ....	Steel	60
Coach, 70 Ft. ....	Steel	72
Chair .....	Wood	47½
Chair .....	Steel	50
Chair, 60 Ft. ....	Steel	60
Chair, 70 Ft. ....	Steel	68
Commissary, 70 Ft. ....	Steel	60
Diner .....	Wood	62½
Diner .....	Steel	72½
Diner, 80 Ft. ....	Steel	79
Composite Observation .....	Wood	51
Composite Observation .....	Steel	78
Tourist Sleeper .....	Wood	47½
Tourist Sleeper .....	Steel	68
Tourist Sleeper—16 Sec. ....	Steel	72
Standard Sleeper—12 Sec. ....	Steel	75
Standard Sleeper—12 Sec. ....	Steel	81

#### 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.
Hudson .....	17.9	6	East	Freight Only.
Fallon .....	21.7	9	East	Freight Only.
Industrial Spur .....	27.1		East	Freight Only.
Diamond Bar .....	27.4	26	West	Freight Only.
San Antonio Meat Co....	34.1	34	East	Freight Only.
Harvey & Brown Spur....	39.1	12	West	Freight Only.
Ballou Spur .....	40.3	13	East	Freight Only.
Champagne .....	43.5	36	Both	Freight Only.
Guasti Spur .....	43.6	206	East	Freight Only.
Winery Spur, Mira Loma.	45.8	267	East	Freight Only.
<b>Second Subdivision:</b>				
Water Track .....	251.2	15	Both	
Lime Quarry Spur .....	302.6	8	East	
Blue Diamond .....	321.8		West	
<b>Third Subdivision:</b>				
Lovell .....	344.6	16	East	
Hoya Gravel Pit .....	401.5	73	Both	Freight Only.
Quarry Spur .....	432.6	10	East	
Boyd Spur .....	446.3	2	East	
<b>Fourth Subdivision:</b>				
Mile Post 472.3 .....	472.3	8	East	Freight Only.
<b>Sixth Subdivision:</b>				
Poplar Grove .....				{ 577-578-579-580.
Prest-O-Lite Spur .....	780.9	10	East	{ 581-582-583-584.
Stockton Gravel Pit Spur.	743.2			Freight Only.
<b>Provo Subdivision:</b>				
Parley Ice Plant Spur....	677.8	30	East	Freight Only.
Lee .....	687.8	3		Freight Only.
Nibley—Beet Spur .....	726.0	2	East	Freight Only.
Ansell—Beet Spur .....	733.8	11	East	Freight Only.
Stearns—Beet Spur .....	739.2	9	West	Freight Only.
Rheims—Beet Spur .....	747.6	13	East	Freight Only.
Irontron .....	752.3	108	East	Freight Only.
Provo—Cutting Spur .....	754.8	38	East	Freight Only.
Lehi Sugar Spur .....	769.1	98	East	Freight Only.
Coen .....	778.4	3		Freight Only.
Mellen Sand Spur .....	781.3	10	East	Freight Only.

SIDINGS AND SPURS NOT ON TIME TABLE—Continued

BRANCHES				
Location	Miles from Lund	Car Capacity	Switch Connections	Flag Stops For Trains
<b>Cedar City Branch:</b>				
Columbia Steel .....	21.0	50	West	Freight Only.
Desert Mound .....	21.0	53	West	Freight Only.
Power Plant Spur .....	31.0	2	West	Freight Only.
<b>Pioche Branch:</b>	Miles from Caliente			
Dry Valley Spur .....	22.8	110		
<b>Mammoth Branch:</b>	Miles from Tintic			
A. S. & R. Spur .....	2.7	19		At Mammoth.
<b>St. Thomas Branch:</b>	Miles from Moapa			
Doty Spur .....	3.1	1	West	
Arrowhead Spur .....	3.3	52	East	
Nepac .....	16.7	2	West	
Kaolin .....	17.6	3	West	
Silica .....	19.2	8	West	All trains.
<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	61	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	
Grassi Co. Spur .....	8.2	12	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.
Perfection 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—Continued

Location	Miles from Los Angeles	Car Capacity	Switch Connections	Flag Stops For Trains
<b>Burnett Track:</b>				
Bixby (Siding and Spur) ...	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	
General Petroleum .....	17.5	9	East	Freight Only.
R. H. Herron Co. ....	17.5	8	West	
Hercules Oil Co. ....	17.7	10	East	Freight Only.
Lomita Gasoline Co. ....	18.2	6	West	Freight Only.
Burnett .....	18.9		Both	
<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>	Miles from Rock Jet.			
Taylor Milling Co. ....	1.5	6	East	
Interchange Track .....	2.7	13	Both	
Dohrmaun-Walker Spur ..	3.0	2	East	Freight Only.
Clifford Spur .....	3.1	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.
Bastanchury 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 Track:</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 Track:</b>				
Lewis Spur .....	1.5	8	Both	
Burkett Spur .....	2.5	5	East	
Bly Quarry .....	3.1	18		

**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)	Salt Lake City to Lake Point	Lake Point to Tintic	Tintic to Lynndyl	Lynndyl to Milford	Milford to Lund	Lund to UVada	UVada to Crestline	Crestline to Caliente	Moapa to Las Vegas	Las Vegas to Yermo	Yermo to Victorville	Victorville to Summit	San Bernardino to Los Angeles	Salt Lake City to Mount	Mount to Payson	Payson to Sharp	Sharp to Lynndyl		
P 77 $\frac{22}{28}$ 150S	3150 to 3175	1250	800	3000	1250	1500	1500	800	2000	1030	1030	1030	580	1210	700	1080	700	1080		
P 77 $\frac{25}{28}$ 239SB	3176 to 3181	3000	1420	3000	1500	1800	1800	1170	Car Limit	1170	1170	1170	720	1350	1020	1350	1070	1350		
C 57 $\frac{22}{30}$ 198S	6009 to 6086	3300	1550	3700	2000	2400	2160	1430	3800	1450	1350	1780	925	2000	1280	1900	1430	2160		
MK 63 $\frac{26}{28}$ 214S	2700 to 2715 2726 to 2735	3900	1800	4350	2400	3000	2560	1660	4400	1700	1600	2000	1075	2300	1480	2200	1660	2560		
MT 73 $\frac{29}{28}$ 230S	7850 to 7869	4500	2000	5000	2600	2800	2800	1900	5000	1700	1600	2000	1075	2350	1680	2350	1900	2900		
TTT 63 $\frac{29\frac{1}{2}}{30}$ 288S	5500 to 5525	5900	2700	6600	3600	4000	3800	2350	6600	2520	2450	2520	1625	2800	2250	2850	2350	3800		
FTT 63 $\frac{25}{28-30}$ 287S	8800 to 8809	6400	2800	7100	3900	4200	4200	2670	7100	2800	2750	3000	1825	3100	2500	3150	2670	4200		
MC 57 $\frac{22-41}{32}$ 464S	3615 to 3619										3500	3500	2250	4200						

Tonnage rating, Caliente to Moapa, car limit; Summit to San Bernardino, car limit.

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	Caliente to Islen	Islen to Crestline	Crestline to Milford	Milford to Lynndyl	Lynndyl to Boulder	Boulder to St. John	St. John to Bauer	Bauer to Salt Lake City	Lynndyl to York	York to Cutler	Cutler to Mount	Mount to Salt Lake City
P 77 $\frac{22}{28}$ 150S	3150 to 3175	1080	1030	360	1030	360	1030	640	400	600	1800	1170	800	1250	800	1250	900	1350	700	1500
P 77 $\frac{25}{28}$ 239SB	3176 to 3181 except 3177	1220	1170	500	1170	500	1170	780	650	680	2000	1250	1420	Car Limit	1660	2300	1080	1350	980	1020
C 57 $\frac{22}{30}$ 198S	6009 to 6086	1700	1450	575	1350	575	1400	900	700	1000	3200	2100	1550	3000	1550	3000	1600	2050	1250	2050
MK 63 $\frac{26}{28}$ 214S	2700 to 2715 2726 to 2735	2000	1700	700	1600	700	1600	1050	800	1142	4300	2500	1800	3500	2000	3500	1800	2590	1400	2590
MT 73 $\frac{29}{28}$ 230S	7850 to 7869	2050	1750	750	1600	700	1600	1050	900	1285	3800	2700	1950	3000	1950	3000	2000	3000	1600	3000
TTT 63 $\frac{29\frac{1}{2}}{30}$ 288S	5500 to 5525	2520	2520	1000	2450	1000	2520	1600	1132	1516	5000	3800	2700	4500	2700	4500	2500	3800	1900	3800
FTT 63 $\frac{25}{28-30}$ 287S	8800 to 8809	2800	2800	1200	2750	1200	2800	1900	1400	1820	5000	4300	3000	5000	3200	5000	2670	4200	2200	4300
MC 57 $\frac{22-41}{32}$ 464S	3615 to 3619	3500	3500	1650	3500	1650														

Tonnage rating, 6009 to 6086 class engines, Los Angeles to East San Pedro, car limit; East San Pedro to M. P. A18, 2650 tons; M. P. A18 to Los Angeles, 3500 tons.  
Tonnage rating, Summit to Sands, car limit.

**EXPLANATION**

- "P"—Pacific Type.
- "C"—Consolidation.
- "MK"—Mikado Type.
- "TTT"—Two-Ten-Two.
- "MT"—Mountain Type.
- "MC"—Mallet Type.
- "FTT"—Four-Ten-Two.

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