

SOUTHERN PACIFIC COMPANY



SACRAMENTO DIVISION SPECIAL INSTRUCTIONS No. 5

EFFECTIVE SUNDAY, SEPTEMBER 26, 1954

AT 12:01 A. M.,

PACIFIC STANDARD TIME

SUPERSEDING SPECIAL INSTRUCTIONS No. 4

THESE INSTRUCTIONS CONSTITUTE A PART
OF THE TIMETABLE CURRENTLY IN
EFFECT

R. E. HALLAWELL,
General Manager.

E. D. MOODY,
W. D. LAMPRECHT,
Assistant General Managers.

C. H. GRANT,
General Superintendent of
Transportation.

D. P. BOYKIN,
Superintendent of Transportation.

M. L. JENNINGS,
Superintendent.

⊙ This symbol indicates change except on rating of
engines pages, such changes are not so indicated.

Spec Instr 4 eff 11 Jan 1953
6 1 July 1956

⊙**RULE A.** The following rules have been revised. Revised pages have been printed covering these changes, and employees must have revised pages in their copy of Book of Rules.

Page Number	Rule Revised
17.....	7-A
19.....	10-G and 10-H
53.....	104-C
104.....	306
108.....	536
126.....	822
127.....	825
130.....	831
131.....	832 (cancelled)

RULE M. Employees are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employees must be familiar with their location and avoid personal injury.

RULE 7-B. Yardmen must use green flag by day and green light by night in giving proceed signals for movement of trains at Sacramento, Roseville and Gerber, except that at Roseville proceed signal for movement to or from East Valley Subdivision yellow flag by day and yellow light by night must be used.

RULE 10-J. Speed signs prescribing an increase in speed will not be installed on branches. Speed Restrictions tables will indicate permissible speeds between mile post locations named.

⊙**RULE 14.** The following paragraph has been added:

"Signs bearing the letter 'X', located one-fourth mile in advance of certain public crossings at grade, and signs bearing the letter 'W', located one-fourth mile in advance of certain tunnels and obscure curves, require engine whistle signal as prescribed by Rule 14(l). Absence of these signs, in advance of public crossings at grade, tunnels or obscure curves, does not relieve engineers from complying with Rule 14(l)."

RULE 15. Each torpedo placed will be duplicated on opposite rail during snow storms, or when snow on rails.

⊙**RULE 19.** Certain passenger cars have supplemental roof-line markers in addition to side electric markers. When such cars are on rear of train, the supplemental markers must be lighted by day as well as by night and duplicate the display to the rear of side electric markers.

⊙**RULE 35.** First paragraph is revised to read:

"The following signals must be used by flagmen:

Day signals: A red flag, torpedoes and fuses.

Night signals: A white light, torpedoes and fuses."

⊙**RULE 99-A.** The following paragraph has been added:

"When protection is to be afforded for other than a train or engine and where conditions may interfere with the safe passage of trains or engines at normal speed, flagman must provide protection in accordance with second paragraph of Rule 99."

RULE 99-C. Will apply on Placerville, Walnut Grove, Yuba City, Oroville, Stirling City, Colusa and Knights Landing Branches.

⊙**RULE 102-A.** Is revised to read:

"When part of a train is left on main track by night, or by day where the view is obscured, two torpedoes must be placed on the rail two rail-lengths apart, one-fourth mile in advance of the rear part of the train, to warn enginemen, and by night a white light must be placed on the front of the rear part of the train. When circumstances require, a flagman must protect engine when returning."

RULE 211. Form N train order may be issued to authorize lowering of train-order signal arm twice and its return to stop position as a calling-on signal, at stations where letter type indicator for display of letter "M" is not installed, and such operation of the signal will be an indication to an approaching train that orders are to be delivered which will authorize movement to the next station at least, against and ahead of, all superior trains. Engineer must acknowledge this calling-on signal by sounding signal 14(b), and will proceed on main track to receive orders.

If train is delayed between the time of acknowledging the calling-on signal and receipt of train orders, protection by flagman against any superior train must be provided.

Operation of the signal in above manner is prohibited unless operator has received Form N train order, and provided time limit named in the order has not expired.

RULE 283. Movements governed by semaphore type diverging route signals displaying "Proceed on Diverging Route," Figs. A and B, must be made with caution.

RULES 281 and 285. Movements against the current of traffic governed by semaphore type dwarf signals displaying "Proceed", Fig. E, Rule 281; or by light type dwarf signals displaying "Proceed not Exceeding Medium Speed", Fig. G, Rule 285, must be made with caution and position of switches observed.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

PUSH BUTTONS

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

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

Pilot light will appear after time-release has operated and signal has cleared.

Further instructions posted inside push button box.

ELECTRIC SWITCH LOCKS

Where electric switch locks are installed, lock box door must not be opened if movement is to be made into a track leading from main track until engine or car is standing within 150 feet of the switch; or if movement is to be made from such track, or through a crossover to a main track, until block indicator indicates block clear on opposite track.

After lock box door is opened lock lever cannot be moved to opposite position to release switch for hand throwing until indicator in lock box indicates "unlocked".

Lock lever must not be returned to locked position until all movements over the switch are completed, switch returned to normal position and locked. Lock-box door must then be closed and locked.

When block indicators indicate "block occupied," instructions posted inside lock box for operation of push button to start time-release must be complied with if movement is to be made to main track while approach circuit is occupied by another train, in addition to providing flag protection when necessary.

Emergency lock release to be used only in case of electrical or mechanical failure, as indicated by failure of time-release to function after several minutes. When necessary to break seal on emergency lock release, train dispatcher must be notified, and movement made only after flag protection is provided.

MECHANICAL SWITCH LOCKS

Lock box door must not be opened unless block indicators indicate block clear in both directions.

After lock box door is opened lock lever may be moved upward against stop. After a time interval of from one to seven minutes indicator will show UNLOCKED and lever may be moved to reverse position "R". Switch may then be operated in usual manner.

Lock lever must not be returned to normal position "N" until all movements over the switch are completed and switch returned to normal position and locked.

Emergency lock release is to be used only in case of mechanical failure, as indicated by failure of time release to function after several minutes. When necessary to break seal on emergency release, train dispatcher must be notified immediately and movement made only after flag protection is provided.

RULE 535. SPRING SWITCHES

Maximum speed for trailing movement when the spring is to be actuated, and maximum speed for facing movement with switch points in normal position, as indicated in Speed Restrictions tables must not be exceeded.

CENTRALIZED TRAFFIC CONTROL

○**RULE 772(a).** Is revised to read:

"Work limits and clock time limit must be obtained from the train dispatcher, and dual control switch machine must be placed in hand position and locked, whether switch is to be thrown or not, and it must not be again placed in motor position until switching or work has been completed. Signals governing movements within the limit specified by train dispatcher will then display stop indication, and signals may be passed without stopping. Protection by flagman will not be required in either direction within the work limit and time limit. All movements must be made with caution, and if work is not completed within the time limit specified, extension must be obtained from train dispatcher. If the track is cleared and selector lever restored to motor position and it is again desired to use the dual control switch or foul main track, new authorization must be obtained."

○**RULE 774.** Is revised to read:

"After permission is obtained from the train dispatcher, switch must be placed in hand position in the following manner:

- (a) Unlock switch lock.
- (b) Move selector lever from position marked 'Motor' to position marked 'Hand'.
- (c) Operate hand-throw lever back and forth until switch points are seen to move with movement of lever, then line switch for route to be used and check points to see that they fit properly.
- (d) After movements over switch have been completed, switch must be restored to position in which originally found, then restore selector lever to position marked 'Motor' and secure with lock. The selector and switch levers must not be forced. They will move easily when properly in mesh, although some manipulation of first one and then the other may be necessary to get them in proper mesh."

○**RULE 776(b).** Is revised to read:

"If desired movement requires that position of switch be changed, or if light on control machine is not illuminated (which would indicate that dual control switch is not locked), train dispatcher must not authorize movement except by requiring that switch machine be placed in hand position before the movement, and that it be returned to motor position after movement over the switch is completed. Dual control switch must be hand thrown for movement if required. Member of crew must notify train dispatcher when selector lever has been returned to motor position. Movement must not exceed restricted speed to the next signal."

GENERAL REGULATIONS

RULE 821. Speed of equipment over inundated tracks must not exceed 3 MPH, and the depth of water above top of rail must not be more than the following:

Diesel engines.....	3 inches
Passenger cars and steam engines equipped with roller bearings.....	6 inches
Other passenger cars and steam engines.....	12 inches

RULE 849. When temperature drops below freezing point (32 degrees) train-heat valve on rear car must be opened frequently and train-heat line blown out to avoid condensation in train-heat line.

○**RULE 872.** Second paragraph is cancelled.

RAILROAD RADIO RULES

○**RULE 950-C.** Is revised to read:

"Employees required to operate railroad radio transmitting sets at fixed stations must be conversant with Railroad Radio General and Operating Rules and pass examination thereon."

AIR BRAKE RULES

○**RULE 3.** On diesel engines of DP-5, 6, 8, 9, 10 and 11 classes the safety valve in the discharge pipe must be set at 185 pounds.

○**RULE 13.** Should all power units of a diesel engine running light or while handling train become inoperative on a grade, light engine or train, after stopping, must be immediately secured with hand brakes and engine wheels secured by blocking or chains.

FREIGHT TRAINS

○**RULE 25.** Is revised to read:

"At any point, except as provided in Rule 32, after angle cock is closed and locomotive detached or train uncoupled, then recoupled and angle cock opened, rear end test must be made in the following manner:

- (a) When visibility permits or other means of communication are available for transmission of signals between the lead locomotive and rear of train, the engineer must place brake valve handle in lap position while couplings are being made and angle cocks opened, after which he must note brake pipe pressure as indicated by gage, and if it has not been reduced at least 20 pounds he must reduce it to that amount and release brakes. While release is being made trainmen must observe caboose gage and must not authorize train to proceed until it is known that the pressure is restored to at least 60 pounds and the rear brakes have released.
- (b) When visibility does not permit and other means of communication are not available for transmission of signals between the lead locomotive and rear of train, or at any point that the Superintendent may designate, the engineer must charge the brake system to not less than 10 pounds below standard pressure, make a reduction of 10 pounds, and as soon as the brake valve exhaust closes, signal by one sound of the locomotive whistle. The angle cock at the rear of train must then be opened gradually and with care to avoid emergency action, allowing only enough air to escape to cause the brake pipe gage hand on the locomotive to fall. When the engineer notes the brake pipe pressure falling, he must signal by two sounds of the locomotive whistle and the angle cock must then be closed. When the brake pipe pressure has stopped falling, the engineer must release the brakes.
- (c) When coupling or detaching one or more locomotives ahead of road locomotive, or immediately ahead of, or at rear of caboose, or when caboose only is added or detached, the brakes must be applied with not less than a 20 pound reduction before the angle cock is opened or closed. After coupling and opening the angle cock, and while release is being made, trainmen must observe caboose gage and must not authorize train to proceed until it is known that the pressure is restored to at least 60 pounds and rear brakes have released.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

○**RULE 32.** Last sentence of third paragraph is revised to read:

"Trainmen must observe caboose gage and must not authorize train to proceed until it is known that the pressure is restored to at least 60 pounds and the rear brakes have released.

PASSENGER TRAINS

○**RULE 38.** Incoming engineer at Sacramento and Sparks on CITY OF SAN FRANCISCO will make electro-pneumatic brake application of not less than 60 pounds and leave brakes applied. Inspector will note that rear brakes of train apply, then signal for release. Outgoing engineer will release brakes and inspector will note that rear brakes release. In case electro-pneumatic brakes are inoperative, automatic brake valve will be used.

MISCELLANEOUS

4. Pushing trains out of yards:

- Engines must not be placed behind a wooden underframe caboose or other wooden underframe equipment.
- Engines weighing more than 330,000 lbs. on the drivers must not be placed behind steel underframe cabooses.
- Air must not be coupled through the pusher engine.
- Knuckle must not be removed, or closed, or cutting lever temporarily fastened in release position on a pusher engine, as means of preventing coupling being made.

5. Helper service:

- Helper engines must not be placed behind wooden underframe cars or wooden underframe cabooses.
- Engines weighing more than 330,000 lbs. on the drivers must not be placed behind steel underframe cabooses.
- Not more than one helper engine will be placed behind steel underframe cabooses.

○When steam engine is coupled next behind diesel engine on head end of either a freight or passenger train, dynamic brakes must not be used.

○In passenger service DF-1 to 12 class engine of not more than four units may be coupled ahead of steam engine; DF-1 to 12 class engine of not more than four units may be coupled ahead of DF-1 to 12 class engine; and steam engine may be coupled ahead of DP or DF-1 to 12 class engine. When so coupled dynamic brakes must not be used.

One helper may be placed on head-end, except that not more than one AC class engine, nor more than two engines of other classes may be placed on head-end of any freight train. When additional helpers are required, they will be placed when practicable in rear of train four cars ahead of caboose and any cars of wooden frame construction, except that C class helpers may be placed ahead of caboose and cars of wooden frame construction and when practicable should be placed behind a loaded car.

Helper or double header engines must not be placed on head-end of freight trains powered by DF-1 to 12 class engines.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

When used as helpers in rear of train AC class engines must not be coupled together, nor may more than two F, Mt, or heavier class, or more than three smaller classes be coupled together. When coupled, larger engines must be placed ahead of smaller engines. If tonnage requires more power, additional helpers of not to exceed two coupled in each case, must be separated by at least four cars.

Helpers must not be operated backing except in emergency, and in such case engines should not push through a backing engine if it can be avoided.

Helper engines coupled in middle or rear of train must be cut off from forward portion before taking water. On grades road engine and helper must not be cut off from train at the same time without hand brakes being securely set.

27. Should a passenger train, irrespective of the type of power being used, be stopped in a tunnel, air conditioned cars within the tunnel must immediately have the air conditioning systems, including ice engines and engine generators, shut off, fresh air intake shutters closed, and blower fans shut off.

Should a diesel-powered train be stopped with the engine in a tunnel and it is found that, in the case of a passenger train it cannot be moved within five minutes after stopping, and in case of a freight train it cannot be moved within a reasonable length of time, trainmen and enginemen must take necessary precautions to prevent movement. Independent brake and sufficient hand brakes must be immediately applied. Engine wheels must be secured by blocks and chains, and power plants and steam generators, if any, on diesel engine shut down.

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

NOMINAL CLASS	RUNNING FORWARD		RUNNING BACKWARD WITH TRAIN OR LIGHT
	WITH TRAIN	LIGHT	
AC.....	60	55	25
C.....	40	40	30
DF-1 to 12, except.....	55	55	*30
Units 6178, 6181, 6182, 6185, 6191 to 6193, 6203, 6206 to 6208, 6210, 6214 to 6219, 6222 to 6229, 6232 to 6239, 6242, 6249, 6256, 6266, 6342, 6343, 6346 to 6349, 6356, 6362 to 6364, 6366, 6372 to 6382, 6394 to 6407, 6409, 6411 to 6423, 6425, 6426, 6429, 6430, 6432, 6433, 6437 to 6449, 6452 to 6455, 6458 to 6461, 8032, 8043, 8071, 8080 to 8082, 8090, 8093, 8107, 8108, 8110, 8111, 8114 to 8119, 8122 to 8126, 8139, 8142 to 8145, 8147 to 8149, 8151, 8197, 8199, 8219, 8225, 8242, 8243, 8248, 8249, 8256, 8262 to 8264, 8267 to 8270, 8272 to 8274, 8276 to 8297, 8299, 8300, 8302, 8303, Units 6190, 6202, 6450, 6451, 6456, 6457, (T&NO) 338 to 353; 8091, 8092, 8102, 8103, 8106, 8109, 8298, 8301, (T&NO) 526 to 541..	65	55	*30
DF-100, 114 to 120, except.....	65	65	65
Units 5279 to 5287, 5290 to 5293, 5309 to 5315.....	55	55	55
DF-101 to 112.....	60	60	60
DF-200 to 204.....	55	55	55
DF-300 to 306.....	65	65	65
DF-500, 501.....	70	70	70
DF-603.....	70	70	70
DP.....	79	79	*30
DS-1, 4, 5.....	45	45	45
DS-2, 3, 6, 7, 8.....	60	60	60
DS-100 to 108, 110, 111, 113 to 115, 117, 118..	60	60	60
DS-109.....	65	65	65
DS-200, 201.....	35	35	35
F.....	50	50	30
GS.....	75	55	30
M.....	50	50	25
Mk-2, 4.....	40	40	30
Mk-5, 6, 9.....	50	50	30
Mk-11.....	35	35	30
Mt.....	75	55	30
P-4, 5 (T&NO), 6 (2453).....	65	55	30
P-6 (2454, 2458), 7, 8, 10.....	75	55	30
RDC.....	79	79	*30
S, SE.....	20	20	20
SP.....	55	55	30
T-1, 23, 28, 31.....	50	50	30
T-32.....	60	55	30
TW-8.....	40	40	30
Any engine not listed.....	35	35	25

*When on head end of train or running light and engineer is in other than leading control cab in direction of movement.

○Steam engines running backward, and DF-1 to 12 and DP class engines operated with engineer in other than the lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossings at grade, subject to further restrictions imposed by local conditions.

Steam engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

When all weight has been removed from any one pair of drivers.....	20 MPH
When all weight has been removed from only one wheel of any pair of drivers.....	30 MPH
When engine truck is removed.....	20 MPH
When main rod only is removed.....	30 MPH
When side rod only is removed.....	30 MPH
When both main and side rods are removed...	20 MPH

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

○ Maximum speed of trains handling dead engines of S or SE class 20 MPH; other steam engines 40 MPH; and diesel engines the speed shown for same engine running forward light, except DS-200, 201 class must have traction motor brushes removed and speed restricted to 30 MPH.

○ Dead diesel engines hauled in train and weighing 150,000 pounds or more must be placed first behind the engine handling the train; and dead steam engines weighing 150,000 pounds or more on drivers must be placed with 8 to 15 cars between it and engine handling the train. If weight is less than 150,000 pounds, dead diesel or steam engines must be placed near rear of train. Dead steam engines should be headed in direction of movement when possible.

Unless otherwise restricted, two dead road locomotives may be coupled together for movement. When necessary to separate them, or when an S or SE class and a road locomotive are moved dead in train, a steel underframe freight car must be placed between them, and S or SE class locomotive entrained with tender ahead.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Line Clearance Circular have been complied with.

When train-order is received indicating that main track is out of service and that trains are to be detoured through a siding or other track, or over a shoofly, necessitating a reduction in normal train speed, signal 16(f) must be sounded on passenger trains one mile before reaching point where train must reduce speed, which must be acknowledged by whistle signal 14(g).

OTHER MAXIMUM SPEEDS

	MPH PASSENGER TRAINS	MPH FREIGHT AND MIXED TRAINS
Foreign steel-wheel cars not equipped with high speed trucks.....	60	55
Trains of deadhead equipment, with caboose..	55	..
Passenger trains, with caboose.....	55	..
Engine and caboose only, except.....	..	55
must not exceed speed for same engine running forward light.		
Engine, flanger and caboose only, except.....	..	40
On curves.....	..	30

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers if any, to move on passenger trains.

Passenger carrying cars, baggage, express and other head-end cars, unless equipped with steel center sills and steel platforms must not be handled in passenger trains except on authority of Superintendent.

When foreign steel-tired or all-steel wheel cars are picked up at points where no car inspectors are on duty, conductor must contact train dispatcher to determine applicable speed restriction for the movement.

Freight cars must not be handled behind occupied passenger carrying cars, except in mixed trains in military or naval movements.

Baggage, express, mail, refrigerator or other head-end cars must not be handled on rear of passenger trains unless trainmen can pass through them.

Where mail, papers, or ice are to be dispatched from passenger trains at points where train does not stop, slow down sufficiently to permit safe dispatch without hazard, and stop at such stations for this purpose if train is moving on adjoining track between passenger train and point of exchange.

When moving against current of traffic, or when movement is not protected by block signals, speed of passenger trains must not exceed 50 MPH, and speed of freight trains and light engines must not exceed 40 MPH, nor may speed exceed that applying to normal operation. Unless proceed signal received, or it is known that warning devices are operating, such trains and engines must stop approaching road crossings where automatic warning devices are installed, and may proceed after member of crew protects crossing.

MAXIMUM SPEED PERMITTED
WITH CERTAIN EQUIPMENT

MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
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Cars and loads with height, width or weight greater than maximum shown in Line Clearance Circular (when movement is authorized)	40	25
○ Double or triple loads.....	40	25
Scale test cars.....	40	30
Cars with arch bar trucks.....	40	30
Steel pile-drivers.....	40*	30*
Relief outfits with steam derrick, except.....	35*	25*
(Relief outfits 7014 and 7025 must not be operated on any branch).....		
Power shovel on own wheels.....	35*	25*
Ditchers on own wheels, except.....	35*	25*
SPMW-4044.....	25*	25*
Car-top ditchers, if blocking and tie-down cables are removed.....	35*	25*
○ K&J, Western, and Oliver, pedestal or center-hinged air-dump cars (except SPMW 5100 to 5189).....	35*	25*
Locomotive cranes.		
With boom disconnected, heavy end forward	35*	25*
With boom disconnected, light end forward.	20*	15
With boom in place, either end forward.....	25*	15
Rotary snow plows.....	25	15

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

○**RULE 10-J.** Round yellow speed signs indicate the speed restrictions applying to CITY OF SAN FRANCISCO with diesel passenger engine.

Speed signs placed on the right of track in current of traffic direction but with one track intervening:

Eastward at MP 89.50 Sacramento bears figure 15,
 Eastward at MP 132.58 Brighton bears figure 25,
 Westward at MP 91.70 Sacramento bears figures 35-15,
 Westward at MP 90.75 Sacramento bears figure 15,
 Westward at MP 90.25 Sacramento bears figure 10.

RULE 14(e). As specified below, — — — — will be indication that flagman may return from east:

Roseville on East Valley Subdivision,
 Brighton on Placerville Branch.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
85.51	Sacramento.....	95.35
	(Walnut Grove Branch).....	93.09
	(Placerville Branch).....	94.93
131.60	(Stockton line).....	136.33
101.66	Roseville (Eastward and No. 2 Track).....	110.87
101.66	(No. 1 and Westward Track).....	110.87
	(Tehama line).....	107.59
103.80	Citrus.....	105.26
	(Fair Oaks line).....	106.48
	Folsom.....	112.05
110.57	(Placerville Branch).....	111.38
144.31	Diamond Springs.....	145.74
148.19	Placerville.....	149.66
110.64	Walnut Grove.....	113.90
121.05	Isleton.....	122.32

Sacramento: Westward trains on station tracks must not pass fouling point of adjoining tracks unless proceed signal received from yardman at Second St.

Westward trains on main track must not pass Seventh St. shanty (just west of Signal 891) unless proceed signal received from yardman.

Movement against current of traffic on eastward track Sixth St. to Front St., may be made when proceed signal received from yardman at Sixth St., passing Signal 891 in stop position without stopping, and yardman will be responsible for protection of the movement.

Eastward trains on main track must not pass fouling point of crossover between main tracks, 400 feet east of Sacramento River Drawbridge unless proceed signal received from yardman at Second St., and must not pass first switch of crossover between main tracks west of Sixth St. shanty (1500 feet east of Sacramento River Drawbridge) unless proceed signal received from yardman at Sixth St.

Eastward trains and yard engines on station tracks must not pass fouling point of adjoining tracks unless proceed signal received from yardman at Sixth St., and again at Seventh St.

The two center tracks, for entering and leaving station tracks are equipped with automatic block signals between Sixth St. and Seventh St. Signal 889 will display green aspect when route lined for direct movement to Sixth St., and yellow aspect when route lined for crossover movement to Sixth St. Signal 886 governs movements from station tracks 2, 3, 4 and 5 but does not indicate position of switch 20 feet east of the signal.

Roseville: End of double track at MP 103.14 Antelope, and at MP 106.16 Roseville. Single track between MP 103.14 and MP 106.16 is within interlocking limits.

○Westward freight trains from Mountain Subdivision, after receiving proceed signal from yardman, may pass Signal 1065 displaying stop indication without stopping; and westward freight trains from East Valley Subdivision must not pass Signal 1063 unless proceed signal received from yardman.

Westward first class trains from Mountain Subdivision, when engines are to be changed, must stop clear of point where East Valley Subdivision lead to yard tracks crosses No. 1 Track near MP 106.65.

Westward freight trains using running track must not pass fouling point at west end in vicinity of Dry Creek unless proceed signal received from yardman.

Eastward trains entering yard track must not pass Antelope train-order office unless proceed signal received from yardman.

○Eastward freight trains leaving via drill track must not pass Signal 1072 displaying stop indication without contacting yardman by telephone.

○Eastward freight trains leaving via No. 2 Track must not pass Signal 1074 displaying stop indication without contacting yardman by telephone.

Movement of trains in both directions between MP 106.64 and MP 106.78 on Mountain Subdivision, and between junction switch at MP 106.66 and MP 106.75 on East Valley Subdivision will be governed by signal indication which will supersede the superiority of trains, but movements must be made with caution, and only after block signal indicating proceed is displayed as prescribed below:

For eastward movement on No. 1 Track, top unit on Signal 1064 governs movement to No. 1 Track; bottom unit governs movement to East Valley Subdivision.

Eastward movement on No. 2 Track is governed by Signal 1060.

For westward movement on No. 1 Track, top unit on Signal 1065 governs movement to No. 1 Track; bottom unit governs movement through crossover to No. 2 Track.

For westward movement on East Valley Subdivision, top unit on Signal 1063 governs movement to junction switch leading to No. 1 Track; bottom unit governs movement across No. 1 Track and No. 2 Track of Mountain Subdivision to yard tracks.

Signal 1062 on east drill track governs movement to East Valley Subdivision only.

○Trains stopped by Signals 1060, 1062, 1063, 1064 or 1067 must not proceed until signal displays proceed indication, but may proceed after stopping if proceed signal received from yardman, movement to be made with caution.

○Outbound engines leaving west end roundhouse must not pass fouling point of spring switch on roundhouse lead, in vicinity of Dry Creek, unless proceed signal received from yardman, yellow flag by day, yellow light by night.

Switch position indicator located at:

Roseville.....Jennings Unit, switch in westward running track.

Indicator does not indicate track occupancy but when displaying red, yellow or green aspects following will govern:

Red aspect...Inoperative.

Yellow aspect...Switch lined for yard receiving unit.

Green aspect...Switch lined for running track Antelope.

RULE 98. Railroad crossings at grade not interlocked:

Sacramento: WPRR at Front and R Sts.—Trains and engines must approach with caution expecting to find crossing occupied.

Switching and industry tracks in vicinity of Front and R Sts.—Ascertain that each crossing is clear before using.

SNRy at Front and R Sts.—Stop within 200 feet of crossing.

Electric line at Front and M Sts.—Stop and not proceed unless hand signal received from flagman on ground (green flag by day, green light by night).

SNRy at 31st and R Sts.—Stop before crossing.

Roseville: Lead from yard to East Valley Subdivision main track crosses No. 2 Track and No. 1 Track of Mountain Subdivision near passenger station. Eastward freight trains from yard to East Valley Subdivision will be governed by Signal 1062, and westward freight trains from East Valley Subdivision to enter yard will be governed by bottom unit of Signal 1063 before fouling or moving over No. 2 Track and No. 1 Track.

RULE 103-A. Trains and engines must stop and be preceded by flagman before crossing highways at:

Isleton, on wharf spur.

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

Citrus—Fair Oaks Branch, for Placerville Branch,
 Folsom Jct.—Folsom Branch, for Placerville Branch.

RULE 306. The following block signals, equipped with triangular plate displaying the letter "P", have included in their control limits some special protective device. Interlocking signals are listed as "P-I".

Eastward Signal	Protection	Westward Signal
P-I	} Spring switch, end double track, MP 103.14, Antelope.....	P-I
P-I		

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Sacramento: Eastward main track from a point 350 feet east of Sacramento River Drawbridge to Signal 890 at Seventh St., is not protected by block signals. All trains must proceed with caution between these points.

Sacramento: Movements over crossings at Front St. just east of Sacramento River Drawbridge governed by signals and derails operated by switchtender at Front St. (except derail on westward main track which is operated by signal operator on bridge), and do not indicate position of switches or occupancy of track between signals and crossing. Trains and engines moving on proceed indication of signals must see that switches are properly lined for them and that track is not obstructed by other cars or engines. Locations are as follows:

Westward main track—350 feet east of crossing,
Eastward main track—For movement against current of traffic, 350 feet from crossing,

Station tracks—350 feet from crossing. Green aspect for movement to westward main track; yellow aspect for movement through crossover to eastward main track,

Front St. track—100 feet from crossing of main tracks,
Pioneer Mill track—also governs movement to store lead,
No. 4 track—also governs movement to No. 5 track,
No. 6 track—also governs movement to No. 7 track.

If signal 350 feet east of Front St. crossing governing movement on westward main track or from station tracks does not indicate proceed, trains or engines after stopping may proceed on signal from switchtender to clearance point of Front St. crossing, yellow flag by day, yellow light by night.

RULE 535. SPRING SWITCHES

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

Location	Normal Position
Antelope... End of double track (MP 103.14).....	Westward main track

Switch position indicator located at:

Roseville.... Spring switch No. 2 Track, east end drill track.

Indicator does not indicate track occupancy but governs movements against current of traffic No. 2 Track. See Rule D-539.

RULE 605. INTERLOCKING

Sacramento River Drawbridge: Eastward trains failing to receive green aspect in approach Signal 878 must stop west of road crossing, 1030 feet east of Signal 878, unless semi-automatic signal at MP 88.4 indicates "proceed".

Nineteenth Street, Sacramento: At crossing of R Street track with WPRR.

Yard engines using industry spurs will give following signal from push button located on home signal 400 feet west of crossing:

To Valley Grocery spur, o — —,
To Bekins spur, — o —.

○**Elvas:** Limits extend on Sacramento-Roseville line from interlocking signal 1,800 feet west of tower to interlocking signal 1,370 feet east of tower, and on Elvas-Polk line to interlocking signal at west switch Polk; and on Placerville Branch to interlocking signal 600 feet east of junction switch.

Hand signals as required by Rule 628 may be given from the tower instead of from the ground.

Following switches and derails within interlocking limits are hand operated and must not be thrown until permission has been obtained from signal operator:

Middle siding..... Crossover to eastward and westward tracks, Elvas-Polk line.
"..... West switch and derail.

Hopfen spur..... Switch and derail.

R Street industrial track (Brighton)..... Switch and derail.

American Can Co. spur..... Switch and derail.

Permission must be obtained for each movement into or out of American Can Co. spur.

○Telephone transmitter located on pole at MP 93.2. Route signal must be sounded by westward trains at sign reading "Whistle Route" located 600 feet east of transmitter.

○Whistle signals governing routes as follows:

To Sacramento, — o —,
To Polk, o —.

Roseville: Limits as follows:

On main tracks between MP 102.50 and MP 106.64.

Eastward signal at MP 102.50 governs movements as follows:

Top unit to eastward main track,
Middle unit to receiving track through first switch,
Bottom unit to receiving track through second switch.

Eastward signal at MP 106.16 governs movement as follows:

Top unit to No. 2 Track,
Bottom unit to No. 1 Track.

○Telephone transmitter located on pole at Walerga, MP 99.71 for eastward trains and engine whistle signal, — o —, must be sounded at sign reading "Passenger Whistle" located 600 feet west of transmitter by all trains proceeding on main track to Roseville.

Telephones to signal operator are located at main track signals. Instructions for operation of dual control switch machines are posted in telephone booths.

Georgiana Slough Drawbridge: At MP 119.53 on Walnut Grove Branch.

SPECIAL INSTRUCTIONS—SACRAMENTO SUBDIVISION

GENERAL REGULATIONS

RULE 825. Benali: Kathleen Ave. crossing must not be blocked unnecessarily. No cars may be spotted within 300 feet of this crossing on any yard track, except team track.

⊙**RULE 827.** Except when handled by diesel engine with dynamic brake in operation, westward freight trains will stop 10 mins. at MP 123.00, Placerville Branch, for heat radiation, at which time train inspection will be made, and enginemmen will inspect engines.

RULE 873. Blow-off cocks, sanders or sprinkler valves must not be operated, and boosters or injectors must not be started, while engine is standing on, or passing over, slip switch, Sacramento.

AIR BRAKE RULES

⊙**RULE 17.** Retainers must be used on freight and mixed trains on descending grades as follows:

On Placerville Branch:

MP 131.70 to MP 123.00. One retainer for each 70 tons in train, except when handled by DF-103 to 108, 110, 112 class engines with dynamic brake in operation handling over 1750 tons, one retainer for each 125 tons in train.

FREIGHT TRAINS

RULE 22. Hand brakes on outgoing trains at Roseville must not be released until engine is coupled to train or yard air is through train.

RULE 25. Rear end test must be made immediately prior to leaving Placerville on westward trains.

RULE 33. Gross tonnage of any freight train must not exceed the tons per operative brake between the stations shown below:

Placerville to Folsom Jct.—50 tons.

TRAIN HANDLING

⊙**RULE 60.** On freight trains handled by diesel engines and using dynamic brakes, before entering or leaving siding, turnout or crossover on descending grade between Placerville and Folsom, dynamic braking force must be reduced to one half of the maximum and, if necessary, automatic brake applied sufficiently so that speed of 15 MPH will not be exceeded while engine is moving between points 500 feet before reaching and 1500 feet after passing turnout or crossover.

PASSENGER TRAINS

RULE 36. Roseville: Engineer on incoming train will leave brakes applied when train stops, and if continuity of brake pipe is not disturbed car inspector will note that rear brakes on train apply, then will signal outgoing engineer to release brakes, noting that rear brakes of train release. Running test in accordance with Rule 39 must be made as soon as speed permits after leaving Roseville.

MISCELLANEOUS

⊙**Sacramento:** Stationmaster will inform conductor or member of crew when passenger train is ready to depart, and trainmen must be so distributed as to give proceed signal by hand or lamp. The use of communicating signal to start trains is not permitted, except on CITY OF SAN FRANCISCO.

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

Class of Engine	Restricted Tracks
AC.....	Sacramento. Umbrella sheds at passenger station.
⊙All engines. Folsom.....	Beyond engine restriction sign east of east yard limit sign.

⊙**11. Load limit (car and contents):**

Sacramento-Roseville.....	251,000 pounds
Brighton-Elvas.....	251,000 pounds
Sacramento-Isleton.....	210,000 pounds
Sacramento-Brighton via R St.....	240,000 pounds
Brighton-Placerville.....	210,000 pounds
Folsom Jct.-Folsom.....	210,000 pounds
Citrus-Fair Oaks.....	210,000 pounds

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

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

MP	Location	Description
88.54	Sacramento.....	Sacramento River bridge ... Side
92.15	Elvas.....	American River bridge Side (Placerville Branch)
122.3	East of White Rock.....	Rock cut..... Side
126.4	Latrobe.....	Rock cut..... Side
126.5	East of Latrobe.....	Rock cut..... Side
128.6	East of Latrobe.....	Rock cut..... Side
⊙139.17	East of Shingle Springs.....	Tunnel No. 1. Side and overhead (Walnut Grove Branch)
92.41	East of Baths.....	Bridge..... Side
111.42	Snodgrass Slough ..	Bridge..... Side

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

With Caution
Not Exceeding
MPH

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches.....	10
Through turnouts on other than sidings.....	10
On branches.....	10
Through all sidings, yard tracks and other tracks with engine running backward.....	10
On "R" St. Sacramento, between Front St. and Brighton.....	10
On Mather Field spur.....	10
⊙On back tracks or engine leads to Roundhouse, Sacramento.....	10
⊙On American Can Company tracks, Elvas....	10
On tracks serving McClellan Field (Plane-haven).....	10
On spur to Government lumber yard and Camp Kohler, Walerga.....	10

SPECIAL INSTRUCTIONS—SACRAMENTO SUBDIVISION

9

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 4, and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 5 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and **INSURE SAFETY, REGARDLESS OF TIME.**

TERRITORY	*Streamlined PASSENGER TRAINS	OTHER PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
EASTWARD, SACRAMENTO TO ROSEVILLE:					
MP MP					
88.54 to 89.50.....	10	10	10	10	10
89.50 to 90.00.....	15	15	15	15	15
90.00 to 91.65.....	35	35	35	35	15
91.65 to 92.56 (Interlocking and bridge).....	25	25	25	25	15
92.56 to 95.00 (Benali).....	50	50	30	30	30
95.00 to 102.50.....	79	70	55	55	30
102.50 to 106.08.....	35	35	35	35	35
106.08 to 106.91.....	15	15	15	15	15
EASTWARD, BRIGHTON TO ELVAS:					
133.20 to 133.33.....	..	65	55	55	30
133.33 to 133.35 (end double track).....	..	25	25	25	20
133.35 to 136.00.....	..	40	35	35	30
136.00 to 136.36 (91.65) (Wye to Sacramento).....	..	25	25	25	15
136.00 to 136.38 (92.03) (Wye to Roseville).....	..	25	25	25	15
EASTWARD, BRIGHTON TO PLACERVILLE:					
94.67 to 111.10.....	..	30	30	30	20
111.10 to 139.00.....	..	20	20	20	15
139.00 to 139.30.....	..	10	10	10	10
139.30 to 148.70.....	..	20	20	20	15
EASTWARD, FOLSOM JCT. TO FOLSOM:	..	20	20	20	15
EASTWARD, CITRUS TO FAIR OAKS:	..	20	20	20	15
EASTWARD, SACRAMENTO TO ISLETON:					
89.59 to 114.50.....	..	20	20	20	15
114.50 to 121.90.....	..	15	15	15	15
WESTWARD, ROSEVILLE TO SACRAMENTO:					
MP MP					
106.91 to 106.08.....	15	15	15	15	15
106.08 to 102.50.....	35	35	35	35	35
102.50 to 95.00 (Benali).....	79	70	55	55	30
95.00 to 92.56.....	50	50	30	30	30
92.56 to 91.65 (Bridge and interlocking).....	25	25	25	25	15
91.65 to 90.00.....	35	35	35	35	15
90.00 to 89.50.....	15	15	15	15	15
89.50 to 88.54.....	10	10	10	10	10
WESTWARD, ELVAS TO BRIGHTON:					
136.38 to 135.99 (Wye from Roseville).....	..	25	25	25	15
136.36 to 135.99 (Wye from Sacramento).....	..	20	20	20	15
135.99 to 133.33.....	..	40	35	35	30
133.33 to 133.20.....	..	70	55	55	30
WESTWARD, PLACERVILLE TO BRIGHTON:					
148.70 to 139.30.....	..	20	20	20	15
139.30 to 139.00.....	..	10	10	10	10
139.00 to 111.10.....	..	20	20	20	15
111.10 to 94.67 (133.27).....	..	30	30	30	20
WESTWARD, FOLSOM TO FOLSOM JCT.:	..	20	20	20	15
WESTWARD, FAIR OAKS TO CITRUS:	..	20	20	20	15
WESTWARD, ISLETON TO SACRAMENTO:					
121.90 to 114.00.....	..	15	15	15	15
114.00 to 89.59.....	..	20	20	20	15

★★ICC Regulation.

○*Streamlined passenger trains applies only to CITY OF SAN FRANCISCO with diesel passenger engine.

○CITY OF SAN FRANCISCO with P-7, 8, 10; GS, or Mt class engine, may run not to exceed 75 MPH on tangent track where 70 MPH is authorized in Column 1.

UNLESS AUTHORIZED BY SUPPLEMENTARY ENDORSEMENTS WILL NOT BE PERMITTED TO OPERATE IN THESE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE

SPECIAL INSTRUCTIONS—SACRAMENTO SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Brighton and Roseville Sacramento and Roseville	Placerville to Folsom	Folsom to Placerville	Folsom to Brighton	Brighton to Folsom	Sacramento and Ialeton
DP-4, 7	6000 to 6004, 6017, 6018	3750	....	....	....	....	....
DP-5, 6	6005 to 6016	6850	....	....	....	....	....
DP-8 to 10	6019 to 6033	9250	....	....	....	....	....
DP-11	6034 to 6045	9825	....	....	....	....	....
DF-1 to 12	6138 to 6461	14400	....	....	....	....	....
DF-100	5200 to 5202	....	....	....	....	....	....
DF-101 to 108, 110, 112	5203 to 5249, 5253 to 5278, 5500 to 5502	5000	1825	975	5000	4125	4775
DF-109, 111	5250 to 5252, 5503 to 5505	5000	....	....	....	....	....
DF-114, 116, 117, 118, 120	5279 to 5293, 5308 to 5335, 5340 to 5371	6300	1850	1200	5650	3600	4850
DF-115, 119	5294 to 5307, 5336 to 5339	....	....	....	....	....	....
DF-200 to 204	5100 to 5118	6300	....	....	....	....	....
DF-300 to 304	4600 to 4623, 4700 to 4703	....	....	....	....	....	....
DF-305, 306	4624 to 4633	....	....	....	....	....	....
DF-500, 501	4800 to 4815	....	....	....	....	....	....
DF-603	5600 to 5603	....	....	....	....	....	....
DS-1 to 8	1000 to 1032	1600	400	280	1150	725	1200
DS-100 to 109, 111, 115	1300 to 1441, 1464 to 1485, 1514 to 1528	2400	700	490	1925	1250	2000
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	3100	1250	590	3825	2425	2375
DS-113, 117	1486 to 1491, 1529 to 1538	....	....	....	....	....	....
DS-200, 201	1900 to 1903	775	230	155	675	475	620
M-4	1673, 1713	2300	625	390	1875	1150	1700
M-6, 8	1721 to 1801, 1824, 1825	2700	775	495	2300	1425	2075
M-9	1805 to 1817, 1830	2825	825	525	2425	1500	2200
M-11	1832 to 1835	2950	825	525	2425	1500	2200
T-1	2248, 2252	1950	550	350	1675	1050	1550
T-23	2302, 2303	2825	825	525	2425	1500	2200
T-28, 31	2312 to 2362	3100	900	575	2650	1625	2400
T-32	2363 to 2384	3100	900	575	2700	1725	2525
P-4	2414	2725	750	450	2375	1400	2075
P-5 (T&NO)	600 to 606	....	....	....	....	....	....
P-6	2453, 2454, 2458	3075	900	550	2675	1650	2375
P-7	2476, 2477	3275	975	600	2850	1750	2525
P-8, 10	2461 to 2474, 2479 to 2483	3650	....	....	....	....	....
P-8, 10	2475, 2484 to 2491	3650	....	....	....	....	....
C-8, 9, 10	2513 to 2598, 2700 to 2860	3425	1000	650	2900	1775	2600
C-18	3400, 3406	3150	925	600	2675	1650	2375
C-19	3420, 3423, 3426	3300	950	625	2775	1725	2475
TW-8	2914	2975	850	555	2525	1550	2300
Mk-2, 4	3203 to 3236	3875	....	....	....	....	....
Mk-5, 6	3247 to 3275	4350	....	....	....	....	....
Mk-9	3322	4825	....	....	....	....	....
Mk-11	3298	3400	....	....	....	....	....
F-1	3614 to 3652	4975	....	....	....	....	....
F-3, 4, 5	3653 to 3669	5725	....	....	....	....	....
AC-4, 5	4104 to 4120	9000	....	....	....	....	....
AC-6 to 12	3801 to 3811, 4130 to 4294	9550	....	....	....	....	....
Mt-1, 3, 4, 5	4300 to 4376	4600	....	....	....	....	....
GS-1, 2	4401 to 4415, 4470 to 4473	4950	....	....	....	....	....
GS-3, 4, 5, 6	4416 to 4469	5150	....	....	....	....	....
GS-7, 8	4475 to 4487	....	....	....	....	....	....
SP-1, 2, 3	5005 to 5047	6725	....	....	....	....	....

© Ratings shown for nominal class DP-4 through 11 are applicable to 3-unit engines. To determine rating of engine with less than 3 units, divide published rating by 3 and multiply by number of units comprising the engine.

Ratings shown for nominal class DF-1 through 12 are applicable to 4-unit engines. To determine rating of engine with less than 4 units, divide published rating by 4 and multiply by number of units comprising the engine.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULES 7-A and 10-G. Yellow signals and unattended red flags and red lights will be placed to the left of track between mile posts:

119.40 and 120.10
129.00 and 129.80
130.20 and 130.70
131.70 and 132.30
197.20 and 220.60
221.00 and 222.00
225.30 and 232.60
236.10 and 238.80

Mile post locations above are those shown for No. 2 Track.

⊙**RULE 10-J.** Round yellow speed signs indicate the speed restrictions applying to CITY OF SAN FRANCISCO with diesel passenger engine.

Speed signs placed to the right of track in current of traffic direction but with two tracks intervening:

Eastward at MP 106.94 Roseville bears figure 40-35-25.

Speed signs on No. 1 Track and on No. 2 Track between MP 111.00 and MP 133.00 are to the right of track for current of traffic movement.

RULE 11. Between Gold Run and Truckee from Nov. 1st to May 1st, train finding a fusee burning along or near track must stop, and then proceed with caution not exceeding 15 MPH for a distance of three-fourths mile.

RULE 14(e). As specified below, — — — — — will be indication that flagman may return from east:
Roseville on East Valley Subdivision.

RULE 14(l). Westward trains will sound crossing whistle signal immediately after emerging from west portal of Tunnel No. 6, west of Eder.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP	East MP
101.66 Roseville (Eastward and No. 2 Track).....	110.87
101.66 " (No. 1 and Westward Track).....	110.87
" (Tehama line).....	107.59
119.34 Newcastle (No. 2 Track).....	120.82
118.74 " (No. 1 Track).....	120.15
140.03 Colfax.....	142.94
⊙169.11 Emigrant Gap.....	172.12
207.28 Truckee.....	209.09
241.63 Sparks.....	247.60

Yard limit signs located to left of track:

Approaching Truckee in both directions.

Roseville: End of double track at MP 103.14 Antelope, and at MP 106.16 Roseville. Single track between MP 103.14 and MP 106.16 is within interlocking limits.

Westward freight trains from Mountain Subdivision must not pass Yosemite St. (MP 106.91) unless flashing yellow light is displayed in high special signal just east of passenger station.

⊙Westward freight trains from Mountain Subdivision, after receiving proceed signal from yardman, may pass Signal 1065 displaying stop indication without stopping; and westward freight trains from East Valley Subdivision must not pass Signal 1063 unless proceed signal received from yardman.

Westward first-class trains and trains of passenger equipment from Mountain Subdivision, when engines are to be changed, must stop clear of point where East Valley Subdivision lead to yard tracks crosses No. 1 Track near MP 106.65.

Westward freight trains using running track must not pass fouling point at west end in vicinity of Dry Creek unless proceed signal received from yardman.

⊙Eastward freight trains leaving via drill track must not pass Signal 1072 displaying stop indication without contacting yardman by telephone.

⊙Eastward freight trains leaving via No. 2 Track must not pass Signal 1074 displaying stop indication without contacting yardman by telephone.

Movement of trains in both directions between MP 106.64 and MP 106.78 on Mountain Subdivision, and between junction switch at MP 106.66 and MP 106.75 on East Valley Subdivision will be governed by signal indication which will supersede the superiority of trains, but movements must be made with caution, and only after block signal indicating proceed is displayed as prescribed below:

For eastward movement on No. 1 Track, top unit on Signal 1064 governs movement on No. 1 Track; bottom unit governs movement to East Valley Subdivision.

Eastward movement on No. 2 Track is governed by Signal 1060.

For westward movement on No. 1 Track, top unit on Signal 1065 governs movement to No. 1 Track; bottom unit governs movement through crossover to No. 2 Track.

For westward movement on East Valley Subdivision, top unit on Signal 1063 governs movement to junction switch leading to No. 1 Track; bottom unit governs movement across No. 1 Track and No. 2 Track of Mountain Subdivision to yard tracks.

Signal 1062 on east drill track governs movement to East Valley Subdivision only.

⊙Trains stopped by Signals 1060, 1062, 1063, 1064 or 1067 must not proceed until signal displays proceed indication, but may proceed after stopping if proceed signal received from yardman, movement to be made with caution.

⊙Outbound engines leaving west end roundhouse must not pass fouling point of spring switch on roundhouse lead, in vicinity of Dry Creek, unless proceed signal received from yardman, yellow flag by day, yellow light by night.

Switch position indicator located at:

Roseville.....Jennings Unit, switch in westward running track.

Indicator does not indicate track occupancy but when displaying red, yellow or green aspects following will govern:

Red aspect...Inoperative.

Yellow aspect...Switch lined for yard receiving unit.

Green aspect...Switch lined for running track Antelope.

RULE 98. Railroad crossings at grade not interlocked:

Roseville: Lead from yard to East Valley Subdivision main track crosses No. 2 Track and No. 1 Track of Mountain Subdivision near passenger station. Eastward freight trains from yard to East Valley Subdivision will be governed by Signal 1062, and westward freight trains from East Valley Subdivision to enter yard will be governed by bottom unit of Signal 1063 before fouling or moving over No. 2 Track and No. 1 Track.

RULE 102. Should a passenger train break in two or an emergency application of brakes occur while in motion on the grade between Colfax and Truckee, forward brakeman will immediately go towards rear, close angle cock at opening if train is parted, set hand brakes, and turn up retainers on detached portion. After train is coupled air must be applied from engine before hand brakes and retainers are released.

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

RULE 107. Roseville: Westward trains must not pass Yosemite St. when eastward passenger train is doing work at the station, unless proceed signal received from yardmaster or his representative, green flag by day, green light by night.

RULE 211 will apply when letter "M" is illuminated in letter type indicator as follows:

On Signal	Approaching
1408.....	Colfax
○1427.....	Colfax
1706.....	Emigrant Gap
2091.....	Truckee

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

Eastward	Protection	Westward
P-1214	Collision detector, highway underpass, MP 121.94.....	
P-1242	Collision detector, highway underpass, MP 125.53.....	
	Collision detector, highway underpass, MP 133.35.....	P-1347
P-1374	Collision detector, highway underpass, MP 137.68.....	
P-1438	Slide detector fence MP 144.50.....	
P-2146	Slide detector fence MP 216.50.....	P-2181
P-2164	Slide detector fence MP 216.50.....	P-2165
P-2220	Slide detector fence MP 222.50.....	P-2239

○RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Sparks: Upper unit of Signal 2452 on signal bridge governs main track movements on eastward main track. Lower unit of Signal 2452 on signal bridge governs diverging route movement from eastward main track across westward track into freight yard. Dwarf light Signals 2453 and 2459 govern main track movements on westward main track.

Following main track not protected by block signals:

Eastward, from 1400 feet east of engine lead switch at MP 245.5 to Signal 2462.

Westward, from east switch of crossover forming end of double track to Signal 2459.

Dwarf light Signal 2455 governs movement from engine lead to eastward main track. When this signal indicates "stop," engine must after stopping at signal, proceed only on hand signal from yardman. Yardman must not give signal to engineer until trains moving on eastward main track have stopped or crossover switches are lined from eastward main track into freight yard, protecting movement.

Signals 2470 and 2472 are equipped with push buttons. After properly operating push buttons, if signal fails to display green or yellow aspect, train may proceed as prescribed by Rule 509, paragraph (c).

RULE D-506. Signals govern movements in both directions on No. 1 Track and No. 2 Track between crossover at Emigrant Gap and Andover.

Signals govern movements in both directions on No. 1 Track between MP 111.89 and Newcastle.

Rule 509 as applied to single track, or Rule 510 will apply when these signals display stop indication for trains moving against the current of traffic.

Floriston: Light type indicator at MP 222.40 applies to No. 1 Track only, and indicates condition of slide detector fence only and is not connected with block signal circuit. Lunar white light indicates track at slide detector fence safe for trains; red aspect requires that inspection must be made of track protected by slide detector fence before train passes the fence.

RULE 535. SPRING SWITCHES

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

Location	Normal Position
Roseville.....	East end east drill track... No. 2 Track
Roseville.....	East end house track..... East drill track
Midas.....	West end siding..... No. 1 Track

Switch position indicators located at:

Roseville.... Spring switch No. 2 Track, east end drill track.

○Midas..... Spring switch, west end siding.

Indicator does not indicate track occupancy but governs movements against current of traffic No. 2 Track. See Rule D-539.

RULE 605. INTERLOCKING

Roseville: Limits as follows:

On main tracks between MP 102.50 and MP 106.64.

Telephones to signal operator are located at main track signals. Instructions for operation of dual control switch machines are posted in telephone booths.

○**Norden:** Interlocking limits extend on No. 1 Track and No. 2 Track from interlocking signals located on signal bridge 775 feet west of train-order office to interlocking signals on signal bridge 100 feet east of east switch of east crossover Eder, MP 197.80.

○East crossover switches at Eder are power operated; west crossover switches are hand operated and equipped with electric locks.

When desired to use west crossover at Eder consult operator at Norden by phone to release electric lock. Train must not pass interlocking signal until both switches have been lined. Electric locks cannot be released with train standing between interlocking signals.

Telephones are located in house at east end of crossover.

When instructed by operator to hand throw power operated switches, carefully follow instructions posted near telephones.

Fire Train spur—Switch and derail hand operated, derail electrically locked and must not be thrown until permission has been obtained from operator.

Run-around track—Trains or engines occupying run-around track must obtain permission from operator before lining switch to siding.

Spur track switches must not be lined for movement to siding without first obtaining permission from operator.

When permission is given by operator to eastward trains to pass interlocking signals located on main track and on siding east end of Norden, trains must wait ten minutes and then be preceded by flagman keeping ten minutes behind flagman to next home signal or distant signal displaying green aspect.

When interlocking signal located at MP 195.82 indicates "Stop", westward trains will call operator.

Repeater signal is located on left side of track governing westward movements from turntable lead to No. 2 Track.

Westward interlocking signal on No. 1 Track, 240 feet east of Norden station building connected with repeater signal on the left side of track for better visibility.

Call-on signals on certain interlocking signal masts are normally dark, but when displaying flashing yellow light are authority to pass interlocking signal at stop without obtaining permission from operator to couple to train or engine; movement to be made at restricted speed.

When westward trains are moved against current of traffic Eder to Norden, no eastward train or light engine may be permitted to occupy No. 2 Track between signal bridge 775 feet west of train-order office and east switch Norden except for movement from No. 2 Track to siding.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. On	Authorizes and Requires
Letter Signal Approaching	Movement as Follows

EASTWARD

M... 7-ft. mast Bowman..... Proceed to Colfax.
 ○M... Signal
 Case... East end siding
 Bowman..... Enter eastward track and proceed to Colfax.
 (Does not relieve conductors or engineers of complying with Rule 513.)
 S... 1408... Colfax..... Enter siding and contact operator.
 M... 1514... Gold Run..... Proceed to Midas.
 ○M... 7-ft. mast Midas..... Proceed to Emigrant Gap.
 S... 1706... Emigrant Gap... Enter siding and contact operator.
 M... 1850... Troy..... Proceed to Norden.
 ○W... 7-ft. mast Reno..... Stop west of Keystone Street and proceed only when it is known that westward train at Reno passenger station is leaving.

WESTWARD

M... 2331... Verdi..... Proceed to Hinton.
 M... 2201... Hinton..... Proceed to Truckee.
 S... 2091... Truckee..... Enter westward siding.
 M... 1863... Troy..... Proceed to Yuba Pass or next siding where train can get into clear.
 S... 1863... Troy..... Enter siding expecting to pass a train on main track.
 ○W... 1853... Troy..... Wait 15 minutes clear of fouling point for following train or light engine to pass.
 M... 1611... Midas..... Proceed to Gold Run.
 S... 1611... Midas..... Enter middle siding expecting to pass a train on main track.
 W... 1601... West end Midas... Wait 15 minutes for following train or light engine to pass.
 M... 1539... Gold Run..... Proceed to Colfax.
 S... 1297... Bowman..... Enter westward siding expecting to pass a train on main track.
 W... 1277... West end Bowman..... Wait 15 minutes for following train or light engine to pass.

Trains desiring to enter siding at Troy or Midas and finding signal displaying stop indication and not displaying illuminated letter type indicator, must secure permission from train dispatcher.

GENERAL REGULATIONS

○**RULE 825.** Portable rail skids are hung on posts at lower end of sidings at the following stations:

Bowman	Gold Run	Midas	Emigrant Gap
Hinton	Verdi		

When necessary to leave cars on any of these sidings permission must first be obtained from chief train dispatcher, after which rail skid must be placed on rail and leading wheel of first car in descending direction run onto the rail skid, and hand brakes set if brakes are operative before engine is detached.

Trains picking up cars from these sidings must remove rail skid and return it to proper post and lock it in place with switch lock.

RULE 827. Freight trains handled by steam engine will stop between switches, as indicated, at the following stations for heat radiation, at which time train inspection will be made, and enginemen will inspect engines and drain water from main reservoirs and dirt collectors on engine:

Eastward	Westward
MP 202.00..... 10 mins. (Stop must be made west of Culvert 202.31)	MP 164.30, West of Blue Canon..... 5 mins.
Truckee..... 10 mins.	Midas..... 10 mins.
Troy..... 10 mins.	Gold Run..... 10 mins.
Yuba Pass..... 10 mins.	Bowman..... 10 mins.

During stormy weather when snow on ground, stop may be made at Crystal Lake instead of Yuba Pass, and in that event stop of 5 mins. will be made at Emigrant Gap. Stop may be made at Auburn instead of Bowman in event Bowman occupied, or if necessary to let a train by at Auburn.

On freight trains between Lawton and Loomis, a member of the crew must observe track to rear of train for evidence of derailment or any other condition requiring immediate stopping of train. Two Dietz lanterns placed on rear of caboose will be used at night to assist in observing track. When practicable, member of crew must ride rear platform or in rear car on all trains and in a position to observe fire that may be set from moving train while passing through wooden-lined tunnels and over open-deck wooden trestles.

Freight trains handled by diesel engine with dynamic brake operating, may make continuous run Norden to Roseville, provided rolling inspection of train is made at Gold Run.

Train must approach east end of siding at Gold Run at speed not exceeding 8 MPH to allow brakeman to detrain on engineer's side, and must not exceed 8 MPH for length of train, and may then increase speed unless flashing white light appears on mast of Signal 1515.

Brakeman will make rolling inspection as train passes, and if defect requiring stopping of train is observed, will open relay box on post just east of Signal 1529 with switch key, and press button marked "Start", and hold it until white pilot light appears on the board, which will actuate flashing white light on Signal 1515 at west end of siding. Engineer must stop train when flashing white light appears, and must not again move the train until orally informed by conductor or brakeman that train is ready to proceed. After white light is actuated, it must be extinguished before train starts by pressing button marked "Cancel", but extinguishing the light will not authorize movement of train.

This does not relieve trainmen or enginemen from compliance with last paragraph of Rule 26 in the event it becomes necessary for trainman to do repair work under or about a car in the train.

Train inspection light located at east end of siding on westward track will be illuminated on approach of westward train, and inspection is to be made at that point.

○**RULE 874.** Light steam engines not equipped with tire coolers, on descending grade, will stop at Truckee, Emigrant Gap and Colfax a sufficient length of time to permit heat radiation, at which time enginemen will inspect engines.

Westward light engines equipped with tire coolers will stop at Emigrant Gap to inspect tire coolers and tie sprinklers.

AIR BRAKE RULES

RULE 17. Retainers must be used on freight and mixed trains handled by steam engines on descending grades as follows:

Norden to Truckee: One retainer for every 60 tons in train.

Summit to Yuba Pass: One retainer for every 70 tons in train.

Yuba Pass to Loomis: One retainer for every 50 tons in train.

Exception: If tonnage exceeds the number of tons specified for each retainer, trains may be handled Yuba Pass to Loomis with up to 55 tons, and Norden to Truckee with up to 62½ tons per operative retainer if necessary. Not necessary to turn down retainers at Loomis unless stop is made for other reason.

Retainers must not be turned down on eastward freight trains at Truckee until engine has passed west switch of house track.

Retainers must be used on freight and mixed trains handled by diesel engines on descending grades as follows:

Norden to Truckee: With four dynamic brakes in operation handling over 5000 tons, one retainer for each 125 tons in train.

With three dynamic brakes in operation handling over 3750 tons, one retainer for each 125 tons in train.

Norden to Loomis: With four dynamic brakes in operation handling over 4125 tons, one retainer for each 125 tons in train.

With three dynamic brakes in operation handling over 3100 tons, one retainer for each 125 tons in train.

⊙**Between Loomis and Truckee:** With less than three dynamic brakes in operation, retainers as prescribed for trains handled by steam engine must be used.

Retainers must be used on passenger trains handled by steam engines on descending grades as follows:

⊙**Norden to Truckee:** Fifty percent of retainers must be used on No. 22 and trains consisting entirely of mail and/or express cars, which may be turned up on rear of train, and may be turned up at Emigrant Gap instead of Norden if stop is made for any reason at that point, to avoid making stop at Norden. Additional retainers must be used if in the judgment of conductor or engineer they are necessary. Accessible retainers will be used on other passenger trains.

Summit to Loomis: All retainers.

FREIGHT TRAINS

RULE 22. Hand brakes on outgoing trains at Roseville must not be released until engine is coupled to train or yard air is through train.

⊙**RULE 25.** Rear end test must be made immediately prior to leaving Norden on eastward freight trains; at Truckee and at Summit or Norden on westward freight trains, except from May 1st to November 1st diesel powered westward freight trains when not required to stop at Truckee for other reasons may make continuous run from Sparks to Norden provided air gage in caboose registers proper brake pipe pressure when passing Truckee. Conductor after noting required amount of air pressure on caboose gage, will give proceed signal to head end as caboose passes tool house, Eder. If engineer does not receive required signal, train must be stopped and rear end test made.

At Colfax on ascending grade, rear end test will be made in accordance with Rule 25 (a). Whistle Signal 14 (b) from rear helper engine will indicate that brake pipe pressure has been restored and train ready to proceed.

RULE 33. Gross tonnage of any freight train must not exceed the tons per operative brake between the stations shown below:

Norden to Truckee.....	62½ tons
Summit to Yuba Pass.....	70 tons
Yuba Pass to Loomis.....	55 tons

TRAIN HANDLING

⊙**Rule 60.** On freight trains handled by diesel engines and using dynamic brakes, before entering or leaving siding, turnout or crossover on descending grade between Norden and Loomis and Norden and Lawton, dynamic braking force must be reduced to one half of the maximum and, if necessary, automatic brake applied sufficiently so that speed of 15 MPH will not be exceeded while engine is moving between points 500 feet before reaching and 1500 feet after passing turnout or crossover.

PASSENGER TRAINS

RULE 36. Roseville: Engineer on incoming train will leave brakes applied when train stops, and if continuity of brake pipe is not disturbed car inspector will note that rear brakes on train apply, then will signal outgoing engineer to release brakes, noting that rear brakes of train release. Running test in accordance with Rule 39 must be made as soon as speed permits after leaving Roseville.

RULE 39. Running test must be made on westward trains just after emerging from Tunnel 6, west of Eder.

MISCELLANEOUS

1. Eastward freight trains stopping at Colfax for water with helper engines in train, lead engine should stop clear of fouling point of siding.

After taking water at water columns at Colfax or Truckee, spout must be left cleared, and spout of eastward column pointing east, and spout of westward column pointing west.

2. Eastward trains will approach crossing at Colfax with caution when westward trains are in the vicinity of the crossing.

5. Helper service:

Eastward freight trains with three AC class engines from Roseville or Colfax will place first helper four cars ahead of caboose and second helper separated from the first by eleven cars. If C class helper added at Colfax it will be placed ahead of road engine.

⊙Eastward freight trains from Roseville with one steam helper other than AC class will place same one car ahead of caboose and if more than one helper required the engines must be separated by eleven cars.

⊙Eastward freight trains requiring one, and not to exceed two steam helpers other than AC class from Colfax will place them in train one car ahead of caboose.

Westward freight trains requiring two helpers from Truckee will place one helper next ahead of caboose and separate the second helper from the first by five cars.

Westward freight trains cutting out helpers at Summit will observe car marker signs and make stop accordingly. If cars other than caboose are to be coupled, helper will shove rear of train to a coupling, then stretch train to insure coupling properly made, after which rear end test must be made. Trainmen will then turn up retainers, after which they will notify enginemmen they are ready to move to eating house.

⊙DF-1 to 12 class engines, when used as helper on eastward freight trains will be placed 18 cars ahead of caboose.

10. Storage tanks of Standard Oil Company near tracks at MP 107.90 between Roseville and Rocklin. Flues of engines must not be sanded until engine has passed this point.

⊙Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
F, AC, Mk, Mt, GS, DF-1 to 12, DF-603, DS-118	Rocklin..... Team and house tracks.
F, Mk, Mt, GS	Loomis..... House tracks; tracks 1, 2, and 3; Pacific spur.
"	Penryn..... Fruit spur west of station.
"	Newcastle..... Fruit spurs 3, 4, 6 and 7; Auburn Lbr. Co. spur.
"	Auburn..... Standard Oil Co. spur and High line.
Engines over 200,000 lbs. on drivers	Soda Springs.... Spur tracks off siding.
"	Summit..... Lumber spurs 3, 4, and 5 beyond derail.

⊙11. Engines turning at Colfax must begin the movement on west leg of wye.

Load limit (car and contents):

Roseville-Sparks..... 251,000 pounds

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

12. Tracks between Roseville and Sparks numbered, and unless otherwise authorized, will be used as double track as follows:

- No. 1 westward trains, via Auburn and
No. 2 eastward trains, via Auburn, Nevada Street.

14. From May 1 to Nov. 1, sprinklers will be placed in service on westward freight trains and light engines, Norden to Loomis, and on eastward freight trains and light engines Norden to Truckee.

Sprinklers are to be kept open while train is in motion; where long stops are made they will be closed temporarily to avoid waste of water.

24. Minimum clearances for rotary plows:

Rotary snow plows 7210 and 7222 equipped with wings will not clear snow sheds and tunnels when wings are extended.

All rotaries will not properly clear ground throw switches with switch lamps and it will be necessary to remove switch lamps before passing and then replace them.

Rotary snow plows must come to a stop when a train or engine is passing on adjacent track.

Rotary snow plows equipped with wide wings must not meet or pass other rotaries so equipped, on adjacent track until it is known that proper clearance exists.

Flangers operating in snow territory must raise flanger blades and stop while train or engine is passing on adjacent track.

OPERATION OF TURNABLES

28. Yellow light signals on leads from turntable at Norden. These signals will indicate route to be used from turntable. If no aspect visible when engine is ready to leave turntable, telephone operator at Norden for instructions.

Turntable equipped with rail locks each end. Before moving onto table from any lead table must be lined so engine will enter from locked end only. Engines when backing and approaching table from lead from eastward siding, east end, will stop to clear table and fireman after properly lining and locking table will signal engineer to move onto table by green light controlled by push button located on post of turntable shed on engineer's side. This signal does not indicate position of turntable or turntable lock. Engines leaving turntable will leave from locked end. In making movements to or from turntable it will not be necessary to lock opposite end of table.

Norden turntable must not be moved until engineer signals fireman engine is properly spotted and brakes applied.

Marker posts are placed on each end of the Norden turntable to aid in spotting engines. AC class engines must be spotted with center of cab door directly opposite marker post to avoid couplers striking concrete piers when turning.

Enginemen must see that knuckles on both ends of engine are closed before turning engine.

Normal position turntable will be as follows:

Norden.....East approach to eastward track.

Trainmen and enginemen using this turntable must leave it lined as shown above.

○Engineer or fireman, preferably engineer, must remain in the cab of engine at all times when engines are being turned at Norden.

○Balloon track at MP 169.16, west of Emigrant Gap, diverging from No. 1 Track. Crossover between main tracks located at east end of balloon track at MP 169.55. Engines and equipment will enter balloon track at west switch and leave balloon track at east switch.

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

MP	Location	Description
(ROSEVILLE-SPARKS—EASTWARD)		
111.21	East of Rocklin.....	Antelope Creek Bridge.....Side
114.20	East of Rocklin.....	Tunnel No. 15.....Side and overhead
114.70	East of Rocklin.....	Tunnel No. 16.....Side and overhead
117.30	East of Lincoln Ave., Penryn.....	Tunnel No. 17.....Side and overhead
120.50	East of Newcastle.....	Tunnel No. 18.....Side and overhead
122.70	East of Newcastle.....	Tunnel No. 19.....Side and overhead
123.10	East of Newcastle.....	Tunnel No. 20.....Side and overhead
124.60	East of Nevada St., Auburn.....	Tunnel No. 21.....Side and overhead
131.20	East of Bowman.....	Tunnel No. 22.....Side and overhead
132.70	East of Clipper Gap.....	Tunnel No. 23.....Side and overhead
132.90	East of Clipper Gap.....	Tunnel No. 24.....Side and overhead
133.10	East of Clipper Gap.....	Tunnel No. 25.....Side and overhead
133.30	East of Clipper Gap.....	Tunnel No. 26.....Side and overhead
133.80	East of Clipper Gap.....	Tunnel No. 27.....Side and overhead
134.80	East of Applegate.....	Tunnel No. 28.....Side and overhead
135.90	East of Applegate.....	Tunnel No. 29.....Side and overhead
138.70	East of New England Mills.....	Tunnel No. 30.....Side and overhead
139.20	East of New England Mills.....	Tunnel No. 31.....Side and overhead
139.40	East of New England Mills.....	Tunnel No. 32.....Side and overhead
141.70	Colfax, west of station.....	Signal 1414.....Side
152.20	Gold Run, East of station.....	Water Column.....Side
152.20	Gold Run, East of station.....	Oil Column.....Side
○ 164.30	East of Midas.....	Tunnel No. 1.....Side and overhead
166.60	Blue Canon, East of station.....	Water Column.....Side
177.87 to 198.91	Crystal Lake to Andover.....	Snowsheds and signals in Snowsheds.....Side and overhead
210.60	East of Truckee.....	Signal Bridge 2106.....Side
214.71	East of Truckee.....	Signal Bridge 2146.....Side
216.52	Boca.....	Signal Bridge 2164.....Side
218.05	Hinton.....	Signal Bridge 2180.....Side
221.88	Wickes.....	Signal Bridge 2220.....Side
231.50	Verdi.....	Signal Bridge 2316.....Side
237.02	Lawton.....	Signal Bridge 2370.....Side
238.90	East of Lawton.....	Signal Bridge 2390.....Side
(SPARKS-ROSEVILLE—WESTWARD)		
238.90	West of Reno.....	Signal Bridge 2389.....Side
231.50	Verdi.....	Signal Bridge 2317.....Side
218.05	Hinton.....	Signal Bridge 2181.....Side
216.52	Boca.....	Signal Bridge 2165.....Side
214.71	West of Boca.....	Signal Bridge 2147.....Side
212.63	West of Boca.....	Signal Bridge 2125.....Side
198.91 to 177.87	Andover to Crystal Lake.....	Snowsheds and signals in Snowsheds.....Side and overhead
200.22	Andover.....	Tunnel No. 13.....Side and overhead
195.70	West of Eder.....	Tunnel No. 12.....Side and overhead
195.40	West of Eder.....	Tunnel No. 11.....Side and overhead
195.10	West of Eder.....	Tunnel No. 10.....Side and overhead
194.90	West of Eder.....	Tunnel No. 9.....Side and overhead
194.30	West of Eder.....	Tunnel No. 8.....Side and overhead
194.10	West of Eder.....	Tunnel No. 7.....Side and overhead
193.70	West of Eder.....	Tunnel No. 6.....Side and overhead
181.00	West of Troy.....	Tunnel No. 4.....Side and overhead
180.70	West of Troy.....	Tunnel No. 3.....Side and overhead
166.00	Blue Canon, East of station.....	Water Column.....Side
○ 164.30	West of Blue Canon.....	Tunnel No. 1.....Side and overhead
152.20	Gold Run, East of station.....	Oil Column.....Side
141.70	Colfax, West of station.....	Water Column.....Side
141.70	Colfax, West of station.....	Signal 1415.....Side
122.66	West of Auburn.....	Rock Cut.....Side
122.52	West of Auburn.....	Rock Cut.....Side
122.20	West of Auburn.....	Bloomer Cut.....Side
122.00	West of Auburn.....	Rock Cut.....Side

FIRE ALARM BOX LOCATIONS KNAPP TO ANDOVER

No. Box	LOCATION	MP
○7	Emigrant Gap, on signal bridge.....	171.60
8	East of Signal 1725.....	172.50
9	At Signal 1735, east of Emigrant Gap.....	173.70
12	East of Emigrant Gap.....	174.20
○13	Crystal Lake.....	178.00
14	Crystal Lake, near section house.....	178.40
17	West end Butte Canyon Bridge.....	178.90
18	East end of Shed No. 10.....	179.10
19	Opposite section house at Cisco.....	180.30
21	At Signal 1841, east of Cisco.....	184.00
22	Troy.....	185.50
26	East end lower Cascade Bridge.....	186.80
27	East end upper Cascade Bridge.....	187.60
28	West end snow shed, west of Norden.....	191.80
29	No. 1 Track Norden, east of cook house.....	192.50
31	No. 1 Track Norden, old Summit station.....	193.00
32	No. 1 Track, west of Tunnel 6.....	193.60
33	No. 1 Track, east of Tunnel 7.....	194.20
34	No. 1 Track, east of Tunnel 8.....	194.70
35	No. 1 Track, east of Tunnel 10.....	195.20
36	No. 1 Track, east of Tunnel 11.....	195.70
37	No. 1 Track, on top of Tunnel 12.....	195.80
38	No. 2 Track east portal Tunnel 41.....	195.50
39	Eder crossovers.....	197.70
42	West end of shed No. 47.....	198.60
43	East end of shed No. 47.....	199.00
44	West of Tunnel 13.....	200.00
46	Opposite Andover section house.....	200.50
49	Norden turntable.....	192.10
51	No. 2 Track, east switch, run-around track.....	192.60
52	No. 2 Track Norden, road crossing.....	193.00
53	No. 2 Track Norden, east switch.....	193.20

Code signals following box numbers are as follows:

- One: Broken rail on No. 2 Track,
- Two: Broken rail on No. 1 Track,
- Three: Slide on No. 2 Track,
- Four: Slide on No. 1 Track,
- Five: Telephone,
- Six: FIRE.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

With Caution
Not Exceeding
MPH

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches.....	10
Through turnouts on other than sidings.....	10
On branches.....	10
Through all sidings, yard tracks and other tracks with engine running backward.....	10

SPECIAL INSTRUCTIONS—MOUNTAIN SUBDIVISION

17

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 4, and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 5 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and **INSURE SAFETY, REGARDLESS OF TIME.**

TERRITORY	*Streamlined PASSENGER TRAINS	OTHER PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
EASTWARD, ROSEVILLE TO SPARKS, No. 2 Track:					
MP MP					
106.91 to 108.12	40	35	25	25	15
108.12 to 113.00	70	50	35	35	20
113.00 to 141.70 (Colfax)	50	45	35	35	20
141.70 to 152.00	32	30	20	30	15
152.00 to 153.00	32	30	30	30	15
153.00 to 171.80 (Emigrant Gap)	32	30	20	30	15
171.80 to 192.00 (Norden)	32	30	25	30	15
192.00 to 207.75, except:	32	30	20	30	15
Passing waiting room, Norden	15	15	15	15	15
207.75 to 209.10	40	35	20	30	15
209.10 to 238.80	45	40	35	35	25
238.80 to 241.68	45	40	30	30	20
★241.68 to 244.16 (Reno)	20	20	20	20	15
244.16 to 245.12	45	40	20	20	20
○245.12 to 247.14	20	20	20	20	15
WESTWARD, SPARKS TO ROSEVILLE, No. 1 Track:					
MP MP					
○247.14 to 245.12	20	20	20	20	15
245.12 to 244.16	45	40	20	20	20
★244.16 to 241.68	20	20	20	20	15
241.68 to 238.80	45	40	30	30	20
238.80 to 209.10	45	40	35	35	25
209.10 to 113.26, except:	32	30	20	30	15
Passing waiting room, Norden	15	15	15	15	15
113.26 to 111.27	70	50	35	45	30
111.27 to 111.03	40	35	35	35	15
111.03 to 108.12	70	50	35	45	30
108.12 to 106.91	40	40	15	15	15

★Regulated by City ordinance.

○*Streamlined passenger trains applies only to CITY OF SAN FRANCISCO with diesel passenger engine.

○Freight train handled by diesel engines when permitted to operate without use of retainers, may make maximum speed as follows:

Westward, MP 192.10 (Norden) to MP 169.60 25 MPH

" MP 144.00 (Colfax) to MP 123.00 25 MPH

Eastward, MP 192.00 (Norden) to MP 209.10 25 MPH

Trains with flangers must not exceed 30 MPH between Lawton and Loomis.

Trains with rotary snow plows must not exceed 25 MPH between Lawton and Loomis, and when pushed by engine must not exceed 20 MPH between these points.

Fire trains, with water cars full must not exceed 25 MPH at any point, and with water cars less than three-fourths full must not exceed 20 MPH. Water cars must be kept full when possible.

RULE 10-J. A light engine, or an engine with caboose may make speed shown in Speed Restrictions table for light engines in territory where such speed is in excess of that authorized by speed sign.

UNLESS AUTHORIZED BY SUPERINTENDENT ENGINEER WILL NOT BE PERMITTED TO OPERATE IN THESE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE

SPECIAL INSTRUCTIONS—MOUNTAIN SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Roseville to Colfax via No. 2 Track	Colfax to Sparks via No. 2 Track Roseville to Colfax via No. 1 Track	Sparks to Truckee	Truckee to Summit
DP-4, 7	6000 to 6004, 6017, 6018.....	1300	700	1675	1150
DP-5, 6	6005 to 6016.....	2200	1275	3275	1700
DP-8 to 10	6019 to 6033.....	2750	1650	4075	2150
DP-11	6034 to 6045.....	2825	1700	4200	2200
DF-1 to 12	6138 to 6461.....	4425	2900	6400	4150
DF-100	5200 to 5202.....	.....	.....	.....	.....
DF-101 to 108, 110, 112	5203 to 5249, 5253 to 5278, 5500 to 5502.....	1450	900	2150	1125
DF-109, 111	5250 to 5252, 5503 to 5505.....	.....	.....	.....	.....
DF-114, 116, 117, 118, 120	5279 to 5293, 5308 to 5335, 5340 to 5371.....	.....	.....	.....	.....
DF-115, 119	5294 to 5307, 5336 to 5339.....	.....	.....	.....	.....
DF-200 to 204	5100 to 5118.....	.....	.....	.....	.....
DF-300 to 304	4600 to 4623, 4700 to 4703.....	.....	.....	.....	.....
DF-305, 306	4624 to 4633.....	.....	.....	.....	.....
DF-500, 501	4800 to 4815.....	.....	.....	.....	.....
DF-603	5600 to 5603.....	.....	.....	.....	.....
DS-1 to 8	1000 to 1032.....	445	255	660	340
DS-100 to 109, 111, 115	1300 to 1441, 1464 to 1485, 1514 to 1528.....	685	405	1025	530
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550.....	875	530	1300	685
DS-113, 117	1486 to 1491, 1529 to 1538.....	.....	.....	.....	.....
DS-200, 201	1900 to 1903.....	230	135	345	180
M-4	1673, 1713.....	525	345	825	400
M-6, 8	1721 to 1801, 1824, 1825.....	650	435	1000	500
M-9	1805 to 1817, 1830.....	700	465	1075	525
M-11	1832 to 1835.....	700	465	1075	525
T-1	2248, 2252.....	450	295	700	340
T-23	2302, 2303.....	675	460	1050	525
T-28, 31	2312 to 2362.....	750	500	1175	575
T-32	2363 to 2384.....	725	485	1150	550
P-4	2414.....	625	390	1000	525
P-5 (T&NO)	600 to 606.....	.....	.....	.....	.....
P-6	2453, 2454, 2458.....	725	445	1150	575
P-7	2476, 2477.....	800	490	1250	625
P-8, 10	2461 to 2474, 2479 to 2483.....	775	495	1275	675
P-8, 10	2475, 2484 to 2491.....	775	495	1275	675
C-8, 9, 10	2513 to 2598, 2700 to 2860.....	850	575	1300	650
C-18	3400, 3406.....	775	490	1175	625
C-19	3420, 3423, 3426.....	800	500	1225	650
TW-8	2914.....	725	485	1125	625
Mk-2, 4	3203 to 3236.....	950	625	1475	800
Mk-5, 6	3247 to 3275.....	1050	700	1625	925
Mk-9	3322.....	1150	750	1750	1000
Mk-11	3298.....	875	550	1325	700
F-1	3614 to 3652.....	1225	825	1875	1050
F-3, 4, 5	3653 to 3669.....	1375	925	2150	1200
AC-4, 5	4104 to 4120.....	2225	1400	3400	1775
AC-6 to 12	3801 to 3811, 4130 to 4294.....	2400	1450	3650	1850
Mt-1, 3, 4, 5	4300 to 4376.....	1075	700	1700	925
GS-1, 2	4401 to 4415, 4470 to 4473.....	1125	725	1800	975
GS-3, 4, 5, 6	4416 to 4469.....	1175	775	1850	1025
GS-7, 8	4475 to 4487.....	.....	.....	.....	.....
SP-1, 2, 3	5005 to 5047.....	1625	1025	2525	1325

Ratings shown for nominal class DP-4 through 11 are applicable to 3-unit engines. To determine rating of engine with less than 3 units, divide published rating by 3 and multiply by number of units comprising the engine.

Ratings shown for nominal class DF-1 through 12 are applicable to 4-unit engines. To determine rating of engine with less than 4 units, divide published rating by 4 and multiply by number of units comprising the engine.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 10-J. Speed sign placed to right of track but with one track intervening:

Westward at MP 144.63 Berg, bears the figures 50-35.

RULE 14(d). As specified below, — — — — o, will be indication that flagman may return from west:

Tehama on West Valley Subdivision.

RULE 14(e). As specified below, — — — — — will be indication that flagman may return from east:

Roseville on East Valley Subdivision,
Berg on Yuba City Branch.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
102.04	Roseville (Eastward and No. 2 Track).....	110.87
102.04	" (No. 1 and Westward Track).....	110.87
	" (Tehama line).....	107.59
138.75	Marysville.....	143.94
	" (Oroville Branch).....	124.44
	" (Dantoni Branch).....	144.25
182.61	Chico.....	185.36
	" (Stirling City Branch).....	187.06
146.40	Oroville.....	147.95
146.78	Yuba City.....	148.24

Yard limit sign located to left of track:
Eastward approaching Gerber.

Roseville: End of double track at MP 103.14 Antelope, and at MP 106.16 Roseville. Single track between MP 103.14 and MP 106.16 is within interlocking limits.

○ Westward freight trains from Mountain Subdivision, after receiving proceed signal from yardman, may pass Signal 1065 displaying stop indication without stopping; and westward freight trains from East Valley Subdivision must not pass Signal 1063 unless proceed signal received from yardman.

Westward freight trains using running track must not pass fouling point at west end in vicinity of Dry Creek unless proceed signal received from yardman.

Movement of trains in both directions between MP 106.64 and MP 106.78 on Mountain Subdivision, and between junction switch at MP 106.66 and MP 106.75 on East Valley Subdivision will be governed by signal indication which will supersede the superiority of trains, but movements must be made with caution, and only after block signal indicating proceed is displayed as prescribed below:

For eastward movement on No. 1 Track, top unit on Signal 1064 governs movement to No. 1 Track; bottom unit governs movement to East Valley Subdivision.

Eastward movement on No. 2 Track is governed by Signal 1060.

For westward movement on No. 1 Track, top unit on Signal 1065 governs movement to No. 1 Track; bottom unit governs movement through crossover to No. 2 Track.

For westward movement on East Valley Subdivision, top unit on Signal 1063 governs movement to junction switch leading to No. 1 Track; bottom unit governs movement across No. 1 Track and No. 2 Track of Mountain Subdivision to yard tracks.

Signal 1062 on east drill track governs movement to East Valley Subdivision only.

○ Trains stopped by Signals 1060, 1062, 1063, 1064 or 1067 must not proceed until signal displays proceed indication, but may proceed after stopping if proceed signal received from yardman, movement to be made with caution.

Switch position indicator located at:

Roseville..... Jennings Unit, switch in westward running track.

Indicator does not indicate track occupancy but when displaying red, yellow or green aspects following will govern:

Red aspect..... Inoperative.

Yellow aspect... Switch lined for yard receiving unit.

Green aspect... Switch lined for running track Antelope.

RULE 98: Railroad crossings at grade not interlocked:

Roseville: Lead from yard to East Valley Subdivision main track crosses No. 2 Track and No. 1 Track of Mountain Subdivision near passenger station. Eastward freight trains from yard to East Valley Subdivision will be governed by Signal 1062, and westward freight trains from East Valley Subdivision to enter yard will be governed by bottom unit of Signal 1063 before fouling or moving over No. 2 Track and No. 1 Track.

Yuba City: SNRy at Bridge St., and at B St.—Stop within 200 feet of crossings.

MP 186.60 on Stirling City Branch: SNRy crossing—Stop within 200 feet of crossing.

RULE 103-A. Trains and engines must stop and be preceded by flagman before crossing highways and streets at:

Clayton..... Both spurs,

Marysville... Fourth St. crossing on Old Cannery track and 14th and E Street crossing,

Wilson..... Wilson road crossing.

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

Dantoni Jct... Dantoni Branch, for Main line,

Berg..... Yuba City Branch, for siding,

Chico..... Stirling City Branch, for No. 1 yard track.

○ **RULE 221.** Unit for display of flashing light installed at the following locations:

Station	Location	Direction
Lincoln.....	On train-order signal mast.....	Eastward
Gridley.....	On train-order signal mast.....	Eastward

Display of flashing white light indicates that operator has train orders ready for delivery, that such train orders do not restrict train at that station, and that train, provided it is not restricted by timetable or by train orders previously received, may pass fouling point of switch at which an opposing train may enter siding or place where time applies if there is no siding.

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

Eastward	Protection	Westward
○ P-1082	Collision detector, highway underpass, MP 108.22.....	P-1095
○ P-1344	High water detector, bridge 135.00.....	P-1357
P-1406	Spring switch west end siding Marysville....	
P-1906	High water detector, bridge 191.83.....	P-1927
P-2104	Collision detector, county road underpass, MP 210.7.....	P-2111

RULE 535. SPRING SWITCHES

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

Location	Normal Position
Marysville.....	West end siding..... Main track

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

Location	Normal Position
Stirling City.....	50 feet west of balloon track switch..... For eastward movement

Main track switch 50 feet east of spring derail at Stirling City must be left lined and locked for movement into balloon track.

Switch position indicator located at:

Roseville..... Spring switch No. 2 Track, east end drill track.

Indicator does not indicate track occupancy but governs movements against current of traffic No. 2 Track. See Rule D-539.

RULE 605. INTERLOCKING

Roseville: Limits as follows:

On main tracks between MP 102.50 and MP 106.64.

Telephones to signal operator are located at main track signals. Instructions for operation of dual control switch machines are posted in telephone booths.

Binney Jct. Tower: Limits extend from fouling point east end siding Marysville to westward interlocking signal opposite Signal 1446 at Berg.

Trains from Yuba City Branch must obtain permission from signal operator Binney Jct., before fouling Berg siding.

Westward trains on siding Berg must obtain permission from signal operator Binney Jct., before fouling main track, and will then enter interlocking limits when signal just west of siding switch displays proper indication for movement, or as prescribed by Rule 663.

If there is no westward train on siding, a train on main track finding interlocking signal for entrance to Binney Jct. interlocking in proceed position may proceed to interlocking limits.

Telephone located at west end Berg siding.

Whistle signals:

Main track to or from Tehama, — o o o o,

Siding to or from Tehama, o — — —,

Siding to or from Oroville, — — — o,

Siding to or from west leg of wye, o o o — —,

Main track to or from west leg of wye, — — o o o,

Main track to or from east leg of wye, o —.

Tehama-Gerber: Interlocking limits on main track extend from signal 398 feet west of Tehama junction switch on West Valley Subdivision and signal 293 feet west of Tehama junction switch on East Valley Subdivision to signal 48 feet west of west switch track 1 Gerber yard. Interlocking limits on siding extend from west switch to dwarf semi-automatic signal 295 feet east of west switch Gerber siding.

Top unit of signal on East Valley Subdivision 293 feet west of Tehama junction switch governs movement on main track. Lower unit governs movement to Gerber siding.

Top unit of semi-automatic signal at west end siding Gerber governs movement to West Valley Subdivision; lower unit governs movement to East Valley Subdivision.

○ West switch of crossover between main track and Gerber siding equipped with electric lock. Permission to move through this crossover must be obtained from the operator. Signal 2119 between main track and siding is normally dark, and only governs movement through crossover from siding to main track.

RULE 630. AUTOMATIC INTERLOCKING

Live Oak: Crossing SNRy one-half mile east of Live Oak.

Trains must not exceed 30 MPH between home signal and crossing.

When trains are stopped by signals governing the use of automatic interlockings, flagman must be sent to crossing to operate clock-work time release. Release must not be operated when trains are between home signals or seen approaching on intersecting line.

After release has been operated, a red indicator light should be displayed over release and home signal should indicate proceed or red indicator on home signal must be displayed. Trains may then proceed.

If red indicator lights are not displayed, trains may proceed over crossing as provided by Rule 663.

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

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum.	On	Approaching	Authorizes and Requires Movement as follows
M.....1432....	Berg.....	Proceed to east end siding.	
S.....1432....	Berg.....	Enter siding.	
M.....1467....	Berg.....	Proceed to interlocking limits west of Berg.	
S.....1467....	Berg.....	Enter siding.	

GENERAL REGULATIONS

RULE 827. Freight trains, and light steam engines not equipped with tire coolers, on descending grade, will stop between switches, as indicated, at the following stations for heat radiation, at which time train inspection will be made and enginemen will inspect engines:

Westward on Stirling City Branch:

Doon.....10 mins.

Paradise.....10 mins.

RULE 830. Westward freight trains stopping at Chico to perform switching or to take water, must stop east of Sacramento Ave., or cut train at that point to permit the passage of traffic over tracks.

RULE 836. Cars must not be shoved ahead of engine at any point between Stirling City and Chico on westward trip.

AIR BRAKE RULES

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

○ **Stirling City to Chico:** One retainer for each 40 tons in train, except when handled by DF-103 to 108, 110, 112 class engines with dynamic brake in operation and over 750 tons one retainer for each 75 tons in train.

FREIGHT TRAINS

RULE 22. Hand brakes on outgoing trains at Roseville must not be released until engine is coupled to train or yard air is through train.

○ **RULE 24.** When terminal test outlined in Air Brake Rule 22 has been made at originating terminal on through freight trains, road test as outlined in Air Brake Rule 24 will not be made at intermediate terminal, Gerber, except when cars are added to the consist. Instead, test will be made as outlined in Air Brake Rule 25—Rear end test. Changing crews, caboose and/or engine will not necessitate road test outlined in Air Brake Rule 24.

○ **RULE 25.** When terminal test outlined in Air Brake Rule 22 has been made at originating terminal, rear end test outlined in Air Brake Rule 25 will be made at intermediate terminal Gerber on freight trains moving through without cars being added to the consist or on which only crews, caboose and/or engines may be changed. Under these conditions rolling inspection by trainmen will be made on freight trains arriving and leaving the intermediate terminal.

Rear end test on freight trains must be made immediately prior to leaving Stirling City on westward trains.

RULE 33. Gross tonnage of any freight train must not exceed 40 tons per operative brake Stirling City to Chico.

TRAIN HANDLING

○ **RULE 60.** On freight trains handled by diesel engines and using dynamic brakes, before entering or leaving siding, turnout or crossover on descending grade between Stirling City and Chico, dynamic braking force must be reduced to one half of the maximum and, if necessary, automatic brake applied sufficiently so that speed of 15 MPH will not be exceeded while engine is moving between points 500 feet before reaching and 1500 feet after passing turnout or crossover.

MISCELLANEOUS

1. Emergency stand pipe water supply for engines 300 feet west of station on main track Marysville. Operated from valve handle extending above platform railing.

4. Helper service:

Two engines must not be coupled on Stirling City Branch. Helper engine must be cut back in train.

©10. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
F, AC, Mk, Mt, GS, DP, DF 1-12; DS-118; DF-603.....	Chico.....Priol warehouse spur; Reynolds warehouse spur; No. 3 and No. 4 Barber Yard.
"	Marysville....Strain warehouse—9th and B Sts.—(Engines must not enter warehouse).
"	Yuba City....Spurs to Diamond Match Co.; Rosenberg Bros.; Calif. Pkg. Crop; Calif. Prune and Apricot Growers.
"	Tudor.....Gottwals warehouse spur; American Fruit Growers siding.
F, AC.....	Clayton.....Stockton Fire Brick spur across highway.

Steam engines over 210,000 lbs. on drivers and diesel engines DP; DF-1 to 12; DS-118; DF-603.....

Marysville....Old Cannery Spur
Lincoln.....Grain Growers elevator track.

Steam engines over 200,000 lbs. on drivers and diesel engines DP; DF-1 to 12; DS-118; DF-603.....

Marysville....Within yard limits on Oroville line beyond Valley Meat corral track.
Lincoln.....Gladding McBean tracks.

Steam engines over 200,000 lbs. on drivers and diesel engines except DF-100; DF-200 to 204; DS-200, 201.....

Honcut.....Siding.
MP 144.28....Beyond fouling point on Triangle Logging Co. Spur Oroville Line.
Oroville....Back track one car length beyond loading crane to Adams Lbr. Co.

Diesel Engines.....Palermo.....Spur to Olive Plant beyond fouling point.

All Engines.....Chico.....Diamond Match Co. track at wye.

Dantoni.....Industry track beyond 700 feet east of east switch of siding.

Oswald.....Back track, beyond three car lengths from west end and beyond road crossing from east end.

©11. Load limit (car and contents):

Roseville-Tehama.....251,000 pounds
Chico-Stirling City.....210,000 pounds
Berg-Wilson.....210,000 pounds
Dantoni Jct.-Dantoni.....210,000 pounds
Binney Jct.-Oroville.....210,000 pounds

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

14. From May 1 to Nov. 1, sprinklers will be placed in service on westward freight trains and light engines Stirling City to Butte Creek bridge.

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

MP	Location	Description
147.6	Yuba City...	SNRy trolley wire, Bridge St... Overhead
147.6	Yuba City...	SNRy trolley wire, B St..... Overhead

SPECIAL INSTRUCTIONS—EAST VALLEY SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 4, and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT AND OTHER MAXIMUM SPEEDS** appearing on page 5 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and **INSURE SAFETY, REGARDLESS OF TIME.**

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
EASTWARD, ROSEVILLE TO TEHAMA: MP MP				
⊙ 106.61 (106.57) to 106.85.....	15	15	15	15
106.85 to 117.17.....	60	50	50	30
117.17 to 117.43.....	50	50	50	30
117.43 to 126.88.....	60	50	50	30
126.88 to 126.96 (Bear River bridge) except: with GS, AC, or F class engines.....	60	50	50	30
126.96 to 139.80.....	25	25	25	25
139.80 to 142.44.....	60	50	50	30
142.44 to 143.88.....	25	25	25	25
143.88 to 152.30.....	50	35	35	30
152.30 to 152.31 (SNRy. crossing).....	60	50	50	30
152.31 to 162.00.....	30	30	30	30
⊙ 162.00 to 175.30.....	60	50	50	30
	50	35	35	30
⊙ 175.30 to 183.30.....	60	50	50	30
⊙ 183.30 to 185.08 (Chico).....	25	25	25	20
⊙ 185.08 to 189.50.....	60	50	50	30
⊙ 189.50 to 192.00.....	50	35	35	30
192.00 to 198.96.....	60	50	50	30
198.96 to 203.67.....	60	40	40	30
203.67 to 203.69 (Deer Creek bridge) except: with GS, AC, or F class engines.....	60	40	40	30
203.69 to 209.93.....	25	25	25	25
209.93 to 210.82.....	60	40	40	30
210.82 to 210.97 (Sacramento River bridge) except: with GS, AC, or F class engines.....	35	35	35	30
210.97 to 211.85.....	35	35	35	30
211.85 to 211.87 (junction switch).....	25	25	25	20
EASTWARD, CHICO TO STIRLING CITY:				
184.38 to 188.75.....	20	20	20	20
188.75 to 215.46.....	12	12	12	12
EASTWARD, DANTONI JCT. TO DANTONI:	20	20	20	15
EASTWARD, BINNEY JCT. TO OROVILLE:	20	20	20	15
EASTWARD, BERG TO WILSON:				
★ 144.43 to 148.80.....	15	15	15	15
148.80 to 159.24.....	25	25	25	20
WESTWARD, TEHAMA TO ROSEVILLE: MP MP				
211.87 to 211.85 (junction switch).....	25	25	25	20
211.85 to 210.97.....	35	35	35	30
210.97 to 210.82 (Sacramento River bridge) except: with GS, AC, or F class engines.....	35	35	35	30
210.82 to 209.93.....	25	25	25	25
209.93 to 203.69.....	35	35	35	30
203.69 to 203.67 (Deer Creek bridge) except: with GS, AC, or F class engines.....	60	40	40	30
203.67 to 198.96.....	25	25	25	25
198.96 to 192.00.....	60	40	40	30
⊙ 192.00 to 189.50.....	60	50	50	30
⊙ 189.50 to 185.08.....	50	35	35	30
	60	50	50	30
⊙ 185.08 to 183.30 (Chico).....	25	25	25	20
⊙ 183.30 to 175.30.....	60	50	50	30
⊙ 175.30 to 162.00.....	50	35	35	30
162.00 to 152.31.....	60	50	50	30
152.31 to 152.30 (SNRy. crossing).....	30	30	30	30
152.30 to 143.88.....	60	50	50	30
143.88 to 142.44.....	50	35	35	30
142.44 to 139.80.....	25	25	25	25
139.80 to 126.96.....	60	50	50	30
126.96 to 126.88 (Bear River bridge) except: with GS, AC, or F class engines.....	60	50	50	30
126.88 to 117.43.....	25	25	25	25
117.43 to 117.17.....	60	50	50	30
117.17 to 106.85.....	50	50	50	30
⊙ 106.85 to 106.57 (106.61).....	60	50	50	30
	15	15	15	15
WESTWARD, STIRLING CITY TO CHICO:				
215.46 to 188.75.....	12	12	12	12
188.75 to 184.38.....	20	20	20	20
WESTWARD, DANTONI TO DANTONI JCT.:	20	20	20	15
WESTWARD, OROVILLE TO BINNEY JCT.:	20	20	20	15
WESTWARD, WILSON TO BERG:				
159.24 to 148.80.....	25	25	25	20
★ 148.80 to 144.43.....	15	15	15	15

★Regulated by City ordinance.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches.....	10
Through turnouts on other than sidings.....	10
On branches.....	10
Through all sidings, yard tracks and other tracks with engine running backward.....	10

SPECIAL INSTRUCTIONS—EAST VALLEY SUBDIVISION

23

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Roseville and Gerber	Chico to Stirling City	Stirling City to Chico	Wilson and Berg	Dantoni Jet. and Dantoni	Binney Jet. and Oroville
DP-4, 7	6000 to 6004, 6017, 6018	3750	....	....	....	....	....
DP-5, 6	6005 to 6016	6850	....	....	....	....	....
DP-8 to 10	6019 to 6033	9250	....	....	....	....	....
DP-11	6034 to 6045	9825	....	....	....	....	....
DF-1 to 12	6138 to 6461	14400	....	....	....	....	....
DF-100	5200 to 5202	....	....	....	3000	3000	3000
DF-101 to 108, 110, 112	5203 to 5249, 5253 to 5278, 5500 to 5502	5000	725	1250	4725	4725	4725
DF-109, 111	5250 to 5252, 5503 to 5505	5000	....	....	....	....	....
DF-114, 116, 117, 118, 120	5279 to 5293, 5308 to 5335, 5340 to 5371	6175	750	6100	....	....	....
DF-115, 119	5294 to 5307, 5336 to 5339	....	....	....	....	....	....
DF-200 to 204	5100 to 5118	....	....	....	....	....	....
DF-300 to 304	4600 to 4623, 4700 to 4703	....	....	....	....	....	....
DF-305, 306	4624 to 4633	....	....	....	....	....	....
DF-500, 501	4800 to 4815	....	....	....	....	....	....
DF-603	5600 to 5603	....	....	....	....	....	....
DS-1 to 8	1000 to 1032	1600	145	280	1200	1200	1200
DS-100 to 109, 111, 115	1300 to 1441, 1464 to 1485, 1514 to 1528	2400	275	490	2000	2000	2000
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	3100	345	625	2375	2375	2375
DS-113, 117	1486 to 1491, 1529 to 1538	....	....	....	....	....	....
DS-200, 201	1900 to 1903	775	100	150	620	620	620
M-4	1673, 1713	2150	215	415	1700	1700	1700
M-6, 8	1721 to 1801, 1824, 1825	2625	265	490	2075	2075	2075
M-9	1805 to 1817, 1830	2775	270	510	2200	2200	2200
M-11	1832 to 1835	2775	285	535	2200	2200	2200
T-1	2248, 2252	1925	170	335	1550	1550	1550
T-23	2302, 2303	2775	275	500	2200	2200	2200
T-28, 31	2312 to 2362	3025	300	550	2400	2400	2400
T-32	2363 to 2384	3075	320	575	2525	2525	....
P-4	2414	2425	....	....	1900	1900	....
P-5 (T&NO)	600 to 606	2675	....	....	2075	2075	....
P-6	2453, 2454, 2458	3050	....	....	2375	2375	....
P-7	2476, 2477	3250	....	....	2525	2525	....
P-8, 10	2461 to 2474, 2479 to 2483	3375	....	....	....	2625	....
P-8, 10	2475, 2484 to 2491	3375	....	....	....	2625	....
C-8, 9, 10	2513 to 2598, 2700 to 2860	3325	350	625	2600	2600	....
C-18	3400, 3406	3025	320	585	2450	....	2450
C-19	3420, 3423, 3426	3150	....	....	....	....	....
TW-8	2914	2875	300	555	2300	2300	2300
Mk-2, 4	3203 to 3236	3825	....	....	....	....	....
Mk-5, 6	3247 to 3275	4200	....	....	....	....	....
Mk-9	3322	4600	....	....	....	....	....
Mk-11	3298	3400	....	....	....	....	....
F-1	3614 to 3652	4825	....	....	....	....	....
F-3, 4, 5	3653 to 3669	5725	....	....	....	....	....
AC-4, 5	4104 to 4120	8650	....	....	....	....	....
AC-6 to 12	3801 to 3811, 4130 to 4294	9250	....	....	....	....	....
Mt-1, 3, 4, 5	4300 to 4376	4475	....	....	....	....	....
GS-1, 2	4401 to 4415, 4470 to 4473	4775	....	....	....	....	....
GS-3, 4, 5, 6	4416 to 4469	4950	....	....	....	....	....
GS-7, 8	4475 to 4487	....	....	....	....	....	....
SP-1, 2, 3	5005 to 5047	6725	....	....	....	....	....

Ratings shown for nominal class DP-4 through 11 are applicable to 3-unit engines. To determine rating of engine with less than 3 units, divide published rating by 3 and multiply by number of units comprising the engine.

Ratings shown for nominal class DF-1 through 12 are applicable to 4-unit engines. To determine rating of engine with less than 4 units, divide published rating by 4 and multiply by number of units comprising the engine.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—WEST VALLEY SUBDIVISION

⊙**RULE 10-J.** Round yellow speed signs indicate the speed restrictions applying to CASCADE and SHASTA DAY-LIGHT, with diesel passenger engine.

Speed sign placed to the right of track but with one track intervening:

Eastward at MP 212.75 Gerber bears the figure 35.

RULE 14(d). As specified below, — — — — o, will be indication that flagman may return from west:

Tehama on West Valley subdivision.

RULE 14(e). As specified below, — — — — — will be indication that flagman may return from east:

Davis on West Valley subdivision,
Woodland on Knights Landing Branch,
Harrington on Colusa Branch.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
74.20	Davis (Dixon line).....	77.37
	“ (Tehama line).....	77.39
83.66	Woodland.....	85.82
	“ (Knights Landing Branch).....	88.08
106.80	Harrington.....	110.10
	“ (Colusa Branch).....	110.00
147.96	Willows.....	150.84
164.43	Orland.....	167.72
177.62	“ (Colusa Branch).....	
211.92	Gerber.....	216.08
120.00	Grimes.....	122.00
169.00	Hamilton.....	171.00

Yard limit signs located to left of track:

Eastward approaching Gerber.

⊙**Gerber:** Westward freight trains and light engines must not pass east switch of crossover from main track to track 1 just east of Signal 2149, unless proceed signal received from yardman.

Eastward trains except first-class must not pass crossover just west of Signal 2136 unless proceed signal received from yardman.

RULE 98. Drawbridges not interlocked:

Drawbridge 94.14, Knights Landing Branch: Over Sacramento River—Stop within 200 feet of drawbridge.

RULE 103-A. Trains and engines must stop and be preceded by flagman before crossing highway at:

Woodland... Main St. crossing on house track.

⊙**RULE 104.** The normal position of rigid switches at junctions:

Woodland... Knights Landing Branch, for movement from siding to Knights Landing Branch,
Harrington... Colusa Branch, for siding,
Wyo... Colusa Branch, for main line,
Marchant... Ensley Branch, for Knights Landing Branch.

RULE 306. The following block signals, equipped with triangular plate displaying the letter “P”, have included in their control limits some special protective device.

Eastward	Protection	Westward
⊙P-1182	High water detector, bridge 118.88.....	P-1197
⊙P-1368	High water detector, bridge 137.44.....	P-1381
⊙P-1748	High water detector, bridge 176.21.....	P-1769

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Gerber: Yellow aspect in diverging route unit on Signal 2134 governs movement through crossover 1300 feet beyond signal.

RULE 516. Overlap posts:

Westward Trains: Wyo—at fouling point east switch of siding.

RULE 535. SPRING SWITCHES

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

Location	Normal Position
Gerber.....	East end siding..... Main track

Spring switch east end siding Gerber equipped with electric switch lamp. If green light is not displayed, trains must stop and examine switch and it must be known that it is safe for passage of train before passing over it; and when trailing movement is to be made from siding, switch must be hand-thrown before and after the movement is made.

RULE 605. INTERLOCKING

Tehama-Gerber: Interlocking limits on main track extend from signal 398 feet west of Tehama junction switch on West Valley subdivision and signal 293 feet west of Tehama junction switch on East Valley subdivision to signal 48 feet west of west switch track 1 Gerber yard. Interlocking limits on siding extend from west switch to dwarf semi-automatic signal 295 feet east of west switch Gerber siding.

Top unit of signal on East Valley subdivision 293 feet west of Tehama junction switch governs movement on main track. Lower unit governs movement to Gerber siding.

Top unit of semi-automatic signal at west end siding Gerber governs movement to West Valley subdivision; lower unit governs movement to East Valley subdivision.

⊙West switch of crossover between main track and Gerber siding equipped with electric lock. Permission to move through this crossover must be obtained from the operator. Signal 2119 between main track and siding is normally dark, and only governs movement through crossover from siding to main track.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum.	On	Letter Signal	Approaching	Authorizes and Requires Movement as Follows:
			East end siding	
M..	7-ft. mast..	Gerber.....		Enter main track and proceed to crossover just west of Signal 2136 to enter yard.
M.....	2134...	Gerber.....		If passenger train, proceed to train-order office. If freight train, proceed to crossover to enter yard.

These indicators do not apply to trains entering yard at west switch No. 1 track.

If "M" is not illuminated train must stop and call operator for instructions.

GENERAL REGULATIONS

○**RULE 827.** At Gerber, forward brakeman of CASCADE and SHASTA DAYLIGHT will take position on station side where rear of train will stop and make rolling inspection of train, then walk length of train on opposite side making standing inspection, giving careful attention to running gear and journal boxes, and entrain on station side.

AIR BRAKE RULES**FREIGHT TRAINS**

RULE 22. Gerber: Trainmen must not couple air hose on outgoing trains until train is made up and engine and caboose on train.

○**RULE 24.** When terminal test outlined in Air Brake Rule 22 has been made at originating terminal on through freight trains, road test as outlined in Air Brake Rule 24 will not be made at intermediate terminal Gerber, except when cars are added to the consist. Instead, test will be made as outlined in Air Brake Rule 25—Rear end test. Changing crews, caboose and/or engine will not necessitate road test outlined in Air Brake Rule 24.

○**RULE 25.** When terminal test outlined in Air Brake Rule 22 has been made at originating terminal, rear end test outlined in Air Brake Rule 25 will be made at intermediate terminal Gerber on freight trains moving through without cars being added to the consist or on which only crews, caboose and/or engines may be changed. Under these conditions rolling inspection by trainmen will be made on freight trains arriving and leaving the intermediate terminal.

PASSENGER TRAINS

RULE 37. Gerber: Trainmen must not couple steam and air hose on outgoing trains until train is made up.

○**RULE 38.** Rear end air test need not be made at Gerber if continuity of brake pipe is not disturbed. Incoming engineer will apply brakes when train is stopped. Outgoing engineer will release them. Running test in accordance with Rule 39 must be made as soon as speed permits after leaving terminal.

MISCELLANEOUS

1. Take water only in emergency at:
Orland

○**10.** Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
F, AC, Mk, Mt, GS, DF-1 to 12, DF- 109, 111, DF-500, 501, DF-603, DS except 1 to 8, 200 201, DP.....	Merritt..... Ellison spur. Riz..... Warehouse spur. Willows..... Union Oil spur; Union Ice spur.
"	Orland..... Standard Oil spur; Union Oil spur.
"	Corning..... Heinz spur.
F, GS.....	Woodland..... Swanston spur.
All engines.....	Sugarfield..... Must not operate on Track 5 beyond 50 feet west of west end of beet dump pit.
"	Wyo..... Stoney Creek gravel pit—Engines must not go beyond gravel bin more than three car lengths. Any class engine may use either leg of wye at Wyo and on Colusa Branch between Wyo and east switch Cory.

Underground gasoline tanks installed opposite house track at a point 300 feet west of station Colusa. Engines must not be stopped in front of unloading spot when oil or gasoline cars are being unloaded.

○**11.** Load limit (car and contents):

Davis-Gerber.....	251,000 pounds
Woodland-Josephine.....	210,000 pounds
Harrington-Wyo via Colusa.....	210,000 pounds
Marchant-Ensley.....	210,000 pounds

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

SPECIAL INSTRUCTIONS—WEST VALLEY SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 4, and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 5 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and **INSURE SAFETY, REGARDLESS OF TIME.**

TERRITORY	*Streamlined PASSENGER TRAINS	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column: A	1	2	3	4	
EASTWARD, DAVIS TO GERBER:					
MP MP					
75.60 to 76.00	40	40	30	30	20
76.00 to 81.80	79	70	55	55	30
81.80 to 82.20	70	65	55	55	20
82.20 to 85.03	79	70	55	55	30
85.03 to 85.13 (Woodland)	12	12	12	12	12
85.13 to 86.02	65	60	50	50	30
86.02 to 149.50	79	70	55	55	30
149.50 to 150.00 (Willows)	40	40	40	40	20
150.00 to 165.50	79	70	55	55	30
165.50 to 165.70 (Orland)	40	40	40	40	20
165.70 to 178.00	79	70	55	55	30
178.00 to 178.90 (Corning)	40	40	40	40	20
178.90 to 185.90	79	70	55	55	30
185.90 to 186.51 (211.87)	45	45	35	35	30
211.87 to 213.50	60	60	50	50	30
213.50 to 213.80	35	35	35	35	30
EASTWARD, HARRINGTON TO WYO, VIA COLUSA:					
108.80 to 120.70	..	25	25	25	20
120.70 to 121.30 (Grimes)	..	15	15	15	15
121.30 to 170.00	..	25	25	25	20
170.00 (Hamilton) to 180.46	..	30	30	30	30
EASTWARD, WOODLAND TO JOSEPHINE:					
85.56 to 96.50	..	25	25	25	20
96.50 to 117.42	..	20	20	20	15
EASTWARD, MARCHANT TO ENSLEY					
..	..	15	15	15	15
WESTWARD, GERBER TO DAVIS:					
MP MP					
213.80 to 213.50	35	35	35	35	30
213.50 to 211.87 (186.51)	60	60	50	50	30
186.51 to 185.90	45	45	35	35	30
185.90 to 178.90	79	70	55	55	30
178.90 to 178.00 (Corning)	40	40	40	40	20
178.00 to 165.70	79	70	55	55	30
165.70 to 165.50 (Orland)	40	40	40	40	20
165.50 to 150.00	79	70	55	55	30
150.00 to 149.50 (Willows)	40	40	40	40	20
149.50 to 86.02	79	70	55	55	30
86.02 to 85.13	65	60	50	50	30
85.13 to 85.03 (Woodland)	12	12	12	12	12
85.03 to 82.20	79	70	55	55	30
82.20 to 81.80	70	65	55	55	20
81.80 to 76.00	79	70	55	55	30
76.00 to 75.60	40	40	30	30	20
WESTWARD, WYO TO HARRINGTON, VIA COLUSA:					
180.46 to 170.00	..	30	30	30	20
170.00 (Hamilton) to 121.30	..	25	25	25	20
121.30 to 120.70 (Grimes)	..	15	15	15	15
120.70 to 108.80	..	25	25	25	20
WESTWARD, JOSEPHINE TO WOODLAND:					
117.42 to 96.50	..	20	20	20	15
96.50 to 85.56	..	25	25	25	20
WESTWARD, ENSLEY TO MARCHANT					
..	..	15	15	15	15

⊙ *Streamlined passenger trains are **CASCADE** and **SHASTA DAYLIGHT** with diesel passenger engine.

⊙ **CASCADE** and **SHASTA DAYLIGHT**, with P-7, 8, 10; GS, or Mt class engine, may run not to exceed 75 MPH on tangent track where 70 MPH is authorized in Column 1.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10
On gravel pit tracks—Cory	10

SPECIAL INSTRUCTIONS—WEST VALLEY SUBDIVISION

27

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Davis and Gerber	Woodland and Josephine Marchant and Enaley	Harrington and Wyo via Colusa
DP-4, 7	6000 to 6004, 6017, 6018.....	3750	.....	.....
DP-5, 6	6005 to 6016.....	5850	.....	.....
DP-8 to 10	6019 to 6033.....	7450	.....	.....
DP-11	6034 to 6045.....	7650	.....	.....
DF-1 to 12	6138 to 6461.....	11350	.....	.....
DF-100	5200 to 5202.....	.....	.....	.....
DF-101 to 108, 110, 112	5203 to 5249, 5253 to 5278, 5500 to 5502.....	3925	4775	5000
DF-109, 111	5250 to 5252, 5503 to 5505.....	5000	.....	.....
DF-114, 116, 117, 118, 120	5279 to 5293, 5308 to 5335, 5340 to 5371.....	4900	4900	5450
DF-115, 119	5294 to 5307, 5336 to 5339.....	.....	.....	.....
DF-200 to 204	5100 to 5118.....	.....	.....	.....
DF-300 to 304	4600 to 4623, 4700 to 4703.....	.....	.....	.....
DF-305, 306	4624 to 4633.....	.....	.....	.....
DF-500, 501	4800 to 4815.....	.....	.....	.....
DF-603	5600 to 5603.....	.....	.....	.....
DS-1 to 8	1000 to 1032.....	1175	1200	1375
DS-100 to 109, 111, 115	1300 to 1441, 1464 to 1485, 1514 to 1528.....	1775	2000	2275
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550.....	.....	.....	.....
DS-113, 117	1486 to 1491, 1529 to 1538.....	2475	2375	2675
DS-200, 201	1900 to 1903.....	620	620	705
M-4	1673, 1713.....	1700	1700	1700
M-6, 8	1721 to 1801, 1824, 1825.....	2075	2075	2075
M-9	1805 to 1817, 1830.....	2200	2200	2200
M-11	1832 to 1835.....	2200	2200	2200
T-1	2248, 2252.....	1550	1550	1550
T-23	2302, 2303.....	2200	2200	2200
T-28, 31	2312 to 2362.....	2400	2400	2400
T-32	2363 to 2384.....	2525	2525	.....
P-4	2414.....	2075	.....	.....
P-5 (T&NO)	600 to 606.....	.....	.....	.....
P-6	2453, 2454, 2458.....	2375	.....	.....
P-7	2476, 2477.....	2525	.....	.....
P-8, 10	2461 to 2474, 2479 to 2483.....	2625	.....	.....
P-8, 10	2475, 2484 to 2491.....	2625	.....	.....
C-8, 9, 10	2513 to 2598, 2700 to 2860.....	2600	2600	3025
C-18	3400, 3406.....	2375	2450	.....
C-19	3420, 3423, 3426.....	2475	2550	2900
TW-8	2914.....	2300	2300	2650
Mk-2, 4	3203 to 3236.....	2975	.....	.....
Mk-5, 6	3247 to 3275.....	3300	.....	.....
Mk-9	3322.....	3600	.....	.....
Mk-11	3298.....	2650	.....	.....
F-1	3614 to 3652.....	3775	.....	.....
F-3, 4, 5	3653 to 3669.....	4475	.....	.....
AC-4, 5	4104 to 4120.....	6775	.....	.....
AC-6 to 12	3801 to 3811, 4130 to 4294.....	7250	.....	.....
Mt-1, 3, 4, 5	4300 to 4376.....	3475	.....	.....
GS-1, 2	4401 to 4415, 4470 to 4473.....	3725	.....	.....
GS-3, 4, 5, 6	4416 to 4469.....	3850	.....	.....
GS-7, 8	4475 to 4487.....	.....	.....	.....
SP-1, 2, 3	5005 to 5047.....	5250	.....	.....

Ratings shown for nominal class DP-4 through 11 are applicable to 3-unit engines. To determine rating of engine with less than 3 units, divide published rating by 3 and multiply by number of units comprising the engine.

Ratings shown for nominal class DF-1 through 12 are applicable to 4-unit engines. To determine rating of engine with less than 4 units, divide published rating by 4 and multiply by number of units comprising the engine.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.