

SOUTHERN PACIFIC TRANSPORTATION COMPANY



WESTERN DIVISION SPECIAL INSTRUCTIONS

No. 4

EFFECTIVE DECEMBER 5, 1971

AT 12:01 A.M.,

PACIFIC STANDARD TIME

**THESE INSTRUCTIONS CONSTITUTE A PART
OF THE TIMETABLE CURRENTLY IN
EFFECT**

R. L. KING,
General Manager.

W. J. LACY,
Assistant General Manager.

J. J. WILLIS,
General Superintendent of
Transportation.

O. D. GOODWILL,
Asst. Gen. Superintendent of
Transportation.

W. M. JONES,
Superintendent.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

RULE A. Employes must have copy of Rules and Regulations of the Transportation Department effective January 1, 1969.

List of holidays under definition of HOLIDAYS on Page 10 of The Rules and Regulations Of The Transportation Department are revised to read:

New Year's Day, January 1,
Washington's Birthday, Third Monday in February,
Decoration Day, Last Monday in May,
Independence Day, July 4,
Labor Day, First Monday in September,
Thanksgiving Day, Fourth Thursday in November,
Christmas Day, December 25.

RULE 2. Brakeman, firemen and switchmen with less than ninety days service are not required to carry, while on duty, a reliable railroad grade watch and watch certificate.

RULE 7-B. Switchmen must use green flag by day and green light by night in giving proceed signals for movement of trains and engines entering or leaving yard tracks and for movement of engines on engine tracks San Francisco, Bayshore, San Jose, Watsonville Jct., San Luis Obispo, and Oakland, except trains departing in either direction from main tracks 1 and 2 will be governed by signal indication.

RULE 10-H and RULE 15. On all branch lines except Schellville Branch, yellow flags will be displayed one-half mile instead of two miles from point of restriction and when a torpedo is exploded in the vicinity of a yellow flag in accordance with Rule 10-H, the train must proceed expecting to find an unattended red flag that may be displayed one-half mile beyond the torpedo and yellow signal.

RULES 10-G, 10-H and 10-I. When unattended red flags or red lights, yellow signals, red CONDITIONAL STOP signs and yellow PROCEED PREPARED TO STOP signs are displayed between siding switches, they must be duplicated to the right of the siding in direction of approach. If clearance between siding and main track does not permit display of these signals to the right of track in direction of approach, signals may be displayed to the left of the track. Display of these signals to the left of track direction of approach must be respected as though they were displayed in accordance with these rules.

RULE 10-J. Second and fourth paragraph is revised to read as follows:

Speed signs that prescribe reduction in speed will be located two miles from initial point of restriction, and where used to authorize increase in speed will be located at point where higher speed commences. Speed may be increased as soon as rear of train has passed speed sign. Where such signs are not used to authorize an increase in speed, limit of restriction will be shown in timetable.

Certain speed signs have the word "SIGNAL" above the figures. Such signs in advance of signal indicate the speed that must not be exceeded while engine is passing signal two miles beyond the speed sign, unless signal can plainly be seen to be displaying green aspect.

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. Where there are multiple public crossings not more than one-fourth mile apart, sign bearing letter "X" located one-fourth in advance of first crossing will display a figure which represents the number of crossings involved.

Whistle signal under provisions of Rule 14(1) must be sounded until engine has passed over last crossing.

RULE 21. First paragraph is revised to read as follows:

Trains must be identified by engine number on lead unit when practicable, only the number designated for identification will be continuously illuminated when engine is so equipped.

When helper is coupled ahead of road engine over part of a subdivision, helper engine will not display numbers. Train will be identified by engine number displayed on road engine.

RULE 26. On diesel fueling tracks at West Oakland diesel shop, Tracy diesel track, Third St. Station, San Francisco, San Jose passenger station and Watsonville Jct. a blue light will not be attached to reflectorized blue "Men at Work" signs when displayed at night.

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

RULE 84. Passenger trains making station stop where rear end of train cannot be seen from the head end due to curvature of track, foggy or stormy weather, engineer will recall flagman from

the rear as prescribed by Rule 14(d) or 14(e), as the case may be. When all passengers on rear of train have been loaded, flagman will sound signal 16(k) which will be answered by the engineer with signal 14(g). Train will not proceed until signal is given by trainman on head end of train.

RULE 98. Cars must not be kicked, dropped or shoved over railroad crossings not protected by interlocking, unless movement is protected.

RULE 101. If any member of crew has reason to believe train has passed over defect in track or roadbed, train dispatcher and opposing or following trains must be immediately notified of condition encountered from first available means of communication. If means of communication is not immediately available, or if train dispatcher cannot afford appropriate protection, train involved must afford protection.

RULE 103-A. Trains moving under conditions that may require them to stop must, where possible, stop to clear public grade crossings. When not possible to stop clear of such crossings and train cannot proceed immediately crews on other than passenger trains must cut these crossings within ten minutes unless no vehicles are waiting at or closely approaching the crossing. Public crossings must be left open until it is known that trains are ready to depart. Crews required to pick up, set out or perform switching operations must, when track room exists, stop their trains back a sufficient distance to avoid blocking public crossings when coupling trains and while charging train lines. When recoupling at public crossings, trains shall be moved promptly consistent with safety.

Switching movements over public grade crossings should be avoided whenever possible. If not possible, such crossings must be cleared frequently to allow vehicles to pass and must not be occupied continuously for longer than ten minutes unless it can be seen that no vehicles are waiting at or closely approaching the crossing.

Cars or locomotives must not be left standing nor switches left open when the controlling circuits of automatic gate protection devices unless time-out features are provided to allow the gate arms to rise.

RULE 105. Sidings designated "E" in Capacity of Sidings column are assigned for use by eastward trains; those designated "W" are assigned for use by westward trains. Those designated "M" for middle, may be used by trains in either direction. Those designated "N," "S," "1," "2" or "3" are assigned for use by trains as shown in special instructions for subdivision on which located.

Capacity of Sidings column indicates the distance in feet between fouling points.

RULE 107. Freight trains and engines must avoid passing between stations and loading tracks when passenger trains are closely approaching from opposite direction on double track, and care must be exercised by non-stopping passenger trains when approaching stations at about the same time that other passenger trains are approaching from the opposite direction. When practicable non-stopping trains are to be given preference, but each train must be operated in a manner to avoid confusion and hazard of personal injury.

RULE 290-A. Indication, is revised to read as follows: "INDICATION: Proceed without stopping not Exceeding Restricted Speed Prepared to Stop Short of Next Home Signal."

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.

Further instructions posted inside push-button box.

RULE 507. On single track within yard limits, when an automatic block signal displays stop indication, engines, after stopping, may proceed at restricted speed under the following conditions:

- (1) When a preceding train is seen in the block, and intervening track is seen to be clear.
- (2) When view of track is clear to end of block.
- (3) After waiting five minutes and no train or engine is seen or heard approaching.

ELECTRIC OR MECHANICAL SWITCH LOCKS

Be governed by instructions posted in telephone booths, in doors or on housings of Electric or Mechanical Switch Locks.

RULE 605. INTERLOCKING

Trains and engines must not enter main track within interlocking limits where no signal governs such movement until permission has been obtained from operator, and must then run with caution not exceeding 12 MPH to the next signal.

At all interlockings, when route lined is not to be used, following engine whistle signal will be sounded: o o - o o.

RULE 663(b). (INTERLOCKING)

Operator at

TRACY
FRUITVALE
NILES
NEWARK

SAN JOSE
MARTINEZ
DAVIS

Operator (or dispatcher where applicable) may authorize movements under provisions of this rule after it has been ascertained indication lights on control panel are illuminated indicating dual control switches are in proper position and locked for movement without requiring dual control switches to be placed in hand position as required by Rule 772.

When indication lights on control panel are not illuminated movements may be authorized under provisions of this rule; however, before making a facing point or trailing point movement over dual control switches, such switches must be placed in hand position in accordance with Rule 772 and locked until movement over switch has been completed. When movement has been completed, switch must be returned to normal position and selector lever restored to motor position and locked.

RULE 705. HOT BOX DETECTORS

Instructions follow for operation of hot box detector boxes when stopped by illuminated letter or flashing white light actuated by hot box detector device. These instructions are also posted inside detector boxes.

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

When letter "H" is illuminated or it is known a hot bearing has been detected by crew member observing the flashing white light at scanner site, speed of train must be reduced to not exceeding 15 MPH until stop is made at location of readout indicator.

When letter "W" is illuminated train must stop and wait until indicator is extinguished or permission is obtained from train dispatcher to proceed. Telephone located near "W" indicator.

Numerals displayed by indicator inside of box indicate location of car with hot bearing in train. Top row indicates hot bearing on right side of train and lower row on left side of train in direction of movement. Numbers displayed on top row or bottom row indicate number of axles between hot bearing and rear of train. Indicator will display a maximum of four hot bearings on each side of train. All journals of car indicated by detector as well as each adjoining car must be inspected.

When Hot Box Detector is activated, member of crew must make a physical count of axles from rear of train to axle indicated by digital read out and when hot bearing is not located, all journals of car indicated by detector as well as five (5) cars on either side of the car involved must be inspected.

When H indicator indicates a hot journal on train and there is no count on hot bearing detector and red light below readout marked "Locator out of Service" is illuminated, all journals on train must be

inspected.

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

When hot box detectors actuated, following information is to be reported at next terminal in telegraph message form addressed jointly to Superintendent, Division Engineer, Signal Supervisor, Chief Dispatcher and Master Mechanic identified by symbol H.B.

1. Date and time stopped, and M.P. location.
2. Train identification.
3. Car number and location in train.
4. Box location (1, 2, 3 or 4 from trailing end of car in direction of movement, right or left side).
5. Disposition of car. (If set out, state where. If inspection shows that it was not necessary to set out even though journal was warm enough to activate the detector, advise what corrective action was taken to permit movement of car. If roller bearing equipped, so state.)
6. Report all cases where train passes over the detector without an indication having been displayed, but developing a hot box between detector and a point 20 miles beyond detector.

CENTRALIZED TRAFFIC CONTROL

RULE 776(a). When member of crew examines switch to see that points are in proper position for movement, examination must be made on the ground.

RULE 781. White light which may appear on side of relay housing is maintainer's call light, but when train has been stopped by an absolute signal and white light is observed burning, members of crew will communicate with train dispatcher, even though another train may be seen approaching.

GENERAL REGULATIONS

RULE 822. "When train is starting, stopping, or moving slowly, employes on train must maintain a secure position to avoid personal injury from possible slack action."

RULE 824. Any time an angle cock is closed in the train where the brake pipe pressure is lower than it is elsewhere, the resultant equalization will raise the brake pipe pressure at that point sufficient to release the AB or ABD valve. Equalizing the air in the brake pipe will cause release of brakes throughout the cars, therefore, it is imperative that when cars are set out, regardless of the air brake equipment, a sufficient number of hand brakes must be applied and brake pipe pressure completely depleted by opening angle cock and leaving the angle cock in open position.

RULE 825. A sufficient number of hand brakes must be set to hold cars; if two cars or more, not less than two (2) must be set. Rail skids are hung on posts at locations listed under subdivisions. When using rail skid it must be placed on rail and leading wheel of first car in descending direction run onto rail skid and hand brakes set if brakes are operative before engine is detached. Train crews picking up cars from these locations must remove rail skid and return to proper location and locked where locks are provided.

Cars with short wheel base less than 30 feet inside length as stenciled on side of car should not be left standing on main track in automatic block signal territory and/or within CTC limits nor on CTC sidings unless coupled to another car to prevent possibility of short wheel base car occupying dead section of track.

RULE 827. Engines running light on descending grade without dynamic brake in operation must stop a sufficient length of time to permit wheel heat radiation if there is indication of overheating. Stop need not be made if in the judgment of the engineer it is safe to proceed.

Dragging equipment detector mounted on post adjacent to detector will display revolving Red Light when detector is actuated. Crew members must keep vigilant look out when passing and if revolving red light observed, train will be stopped promptly and inspection made of train and track notifying dispatcher of condition found.

At any time a train with a helper engine on rear or cut-in has emergency application of air brakes for any cause, before proceeding an inspection of train must be made on both sides to determine all wheels are on rail and no damage or defects in track exist which will interfere with safe movement of train.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

RULE 830. At interlocked railroad crossings at grade, cars or engines must not be cut off nor left within interlocking limits in such a way as to foul any part of the crossing frogs.

RULE 853. Passengers may be allowed to take dogs in smoking cars of commute trains provided dogs are on leashes and owners control actions of the animals so that there is no complaint from other passengers.

RULE 872. Enginemen taking charge of road engines at West Oakland, Tracy, 7th Street Diesel Terminal, Bayshore, San Jose, Watsonville Junction and San Luis Obispo, will consider engines as having been amply supplied with water, fuel, sand and other supplies, prescribed signals, tools and flagging equipment in serviceable condition.

RULE 883. Light engines must not be left unattended on grades unless protected in descending direction by derail or spur track switch lined for diverging track. Air brake must be applied and hand brake on each unit of consist must be applied.

RULE 958. First paragraph is revised as follows:
"Employees shall identify the radio station from which they are calling by prefacing their call with the railroad name, for example: 'SP Caboose Train Second 802, over' and to answer a call, announce, for example: 'This is SP Caboose, Train Second 802, over.'"

AIR BRAKE RULES FREIGHT TRAINS

RULE 2. Enginemen taking charge of engines for freight and passenger service at West Oakland, Tracy, 7th Street Diesel Terminal, Bayshore, San Jose, Watsonville Junction and San Luis Obispo, will consider that condensation has been drained from reservoirs, and from moisture and dirt collectors; that sanders are operating properly and that there are no flat spots on wheels.

RULE 2-A. On departure from locomotive maintenance facility, enginemen must determine by making running brake test that the independent and automatic brakes are operating effectively.

RULE 2-B. First sentence in second paragraph is revised as follows:

When going from power to dynamic braking proceed as follows.

- (1) Assure that throttle is in idle position.
- (2) Move selector lever to "OFF" position.
- (3) Pause 10 seconds.
- (4) Move selector lever to "B" or braking position.
- (5) Use throttle to control strength of dynamic braking as needed.

Dynamic brake on head end of freight trains must not exceed three 8-axle units, four 6-axle units, six 4-axle units, or any combination thereof which totals 24 axles, except dynamic brake on EF 415A, EP 415A, EF 415B, and EP 415B Classes is limited to five units.

If the maximum 24-axle limit cannot be adhered to due to units in the consist not having dynamic brake cut-out switches, then such units must be isolated prior to using dynamic brake.

When dynamic brake and automatic air brake are used together, the independent brake valve handle must be depressed and held in release position a sufficient time to ensure engine brakes are released.

RULE 3. A full independent brake application on road locomotive classes EP636, GF628, EF630, EF636, EF850B, GF630, GF633, and EF623 results in a brake cylinder pressure of 72 psi. This brake cylinder pressure must be maintained to provide required braking power at very low speeds or when stopped. Under no circumstances must self-lapping portion of independent brake valve be changed except to obtain brake cylinder pressure of 72 psi from a full independent brake application.

RULE 11. Cars equipped with brake cylinder release valve may have one or two operating release rods. Operating rods connected to brake cylinder release valve may be identified by stencil reading—"Br. Cyl. Rel." or by a diamond shaped stencil or by noting that ends of release rod form a small closed circle. Air brakes can be released on cars equipped with brake cylinder release valve by a

hard momentary pull on release rod after brake pipe pressure has been depleted.

RULE 12. Rules require that when cars are set out and a sufficient number of hand brakes are applied brake pipe pressure must be depleted by opening angle cock. This method of securing cars is applicable to cars equipped with AB air brake equipment or cars equipped with the latest type of air brake equipment, the ABD valve.

RULE 13. Air Brake Rules and Regulations are revised as follows:

Second paragraph is revised to read:

"In case the trouble cannot be corrected or complete air failure occurs from any cause, train must not be moved. Train dispatcher must be promptly notified."

Sixth paragraph is revised to read:

"Should the compressor or main reservoir on the lead engine fail the train must be stopped, automatic brakes left applied, dead-engine feature cut in and control of the brakes transferred to the second engine. The train must not be moved beyond the next point where an engine with suitable air equipment can be placed in the lead."

Seventh paragraph is cancelled in its entirety.

RULE 17. If at any time in engineer's judgment retaining valves are required on any train, stop will be made and retaining valves turned up in accordance with his directions.

RULE 22. Trainmen must not couple air hose on outgoing trains at Ozol, Tracy, Watsonville Junction, and San Luis Obispo until train is made up and caboose and road engine are on train. Coupling caboose and road engine to train will be considered as an indication that train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the road engine and caboose have been attached without instructions from the yardmaster, who will see that members of the crew are notified in advance.

RULE 23. The following series of cars are equipped with AB brake system which has automatic changeover feature to provide proper brake function when car is loaded and when empty:

SSW 75700—75799	Gondolas
SSW 78500—78599	Hoppers (Open Top)
SP 333500—334399	Gondolas
SP 337500—337599	Gondolas
SP 345000—345699	Gondolas
SP 354000—354399	Gondolas
SP 463500—464999	Hoppers (Open Top)
SP 467500—467549	Hoppers (Open Top)
SP 480000—480193	Hoppers (Open Top)
SP 491000—491059	Hoppers (Covered)
SP 492000—492039	Hoppers (Covered)
SP 500604	Flat Car
SP 590000—590099	Flat Cars

RULE 24-B. San Luis Obispo, Watsonville Jct., San Jose, Oakland, Davis and Tracy. Incoming engineer, after completing stop, must make a full service brake application leaving brakes applied. When outgoing crew takes charge of train on arrival or otherwise is assured, upon request, that continuity of brake pipe has not been disturbed, engineer will release brakes and proceed.

MISCELLANEOUS

1. Helper Service:

- (a) When helper engine is placed behind caboose, not more than 2 operating units or 4000 operative horsepower will be used.
- (b) When helper engine is placed immediately ahead of caboose a combination of not more than 18 axles nor more than 7500 operative horsepower will be used.
- (c) Helper engines consisting of more than 12 axles must not be placed directly behind 80 foot or longer trailer flatcars.
- (d) When helper engine is placed directly ahead of caboose, additional helper must not be coupled behind caboose. Helper engines must be separated by at least 20 cars.
- (e) Air will be cut in on all helper engines, and engine must not be coupled or uncoupled while train is in motion.
- (f) When helper engine is shoving on ascending grade, throttle must be reduced as train speed reduces, then throttle regulated so that amperage will be approximately the same as indicated before train speed reduction.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

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

3. F and P 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.

4. All cars handled in passenger train 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.

5. 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.

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

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

8. USAX and DODX flat cars having three axle trucks and swivel butt couplers, Series 38016-38665 and 39095-39199, loaded or empty are restricted to movement on rear of train and behind any helper units.

9. Cars SPMW 6400-6439 (100-ton Air Dump) have gross weight of 263,000 pounds (car and contents). These cars are not to be operated on Lines shown in each Subdivision where allowable gross weight is exceeded. These cars are not to be dumped on curves of 25 degrees or more, or operated through curves of 35 degrees or more.

MAXIMUM SPEED FOR ENGINES—LENGTH OF DIESEL UNITS (Between Pulling Face of Couplers)

CLASSIFICATION	MAXIMUM SPEED EXCEPT (#)	LENGTH (Feet)	CLASSIFICATION	MAXIMUM SPEED EXCEPT (#)	LENGTH (Feet)
AF420-1	70	58	EF623-1	70	66
AF624C-1	70	67	EP415A-1 to 5	79	51
AF624-1	70	67	EP415AC-1	70	55
AF628-1, 2	70	70	EP415B-1, 2, 3	79	50
AF630-1	70	70	EP418-1 to 5	79	57
AF640-1	70	60	EP636-1	70	71
EF415C-1	70	56	FP624-1, 2	70	66
EF415A-5 to 9, 11	70	51	AS407-1	60	45
EF415B-4 to 7, 9, 11, 13	70	50	AS409-1 to 5	60	46
EF418A-1	70	51	AS410-2 to 6	60	46
EF418B-1	70	50	AS415-1	65	54
EF418-1 to 9	70	57	AS416C-1, 2, 3	75	57
EF418E-1	70	57	AS416C-4, 5	65	57
EF418C-1, 2	70	57	AS616-2 to 4	65	57
EF618-1 to 5	70	61	AS616C-1	65	57
EF618E-1	70	61	AS418-1 to 6	70	57
EF420C-1	75	57	AS618-1	70	59
EF420C-1, 2	70	57	BS410-2, 4	60	49
EF420-1, 2	70	57	BS412-1 to 4	60	46
EF423C-1	70	57	ES406-2, 3	45	45
EF423-1	70	57	ES408-1 to 4	65	45
EF425C-1, 2, 3	70	57	ES408B-1	65	45
EF425-1, 2, 3, 4	70	57	ES409-1, 2	65	45
EF625-1	70	61	ES410C-2	65	45
EF430C-1	70	60	ES410-1	60	45
EF630-1, 2	70	66	ES410-2	65	45
EF636-1, 2, 3, 4, 5, 6	70	66	ES412C-1 to 5	65	45
EF636C-1, 2, 3	70	66	ES412-1 to 5	65	45
EF642-1	70	71	ES415-1, 2, 3	65	45
EF850B-1	70	88	ES415C-1, 2	65	45
GF425-1, 2, 3	70	61	ES615-1 to 4	70	61
GF428-1	70	61	FS412-1 to 5	60	50
GF628-1	70	68	GS407-1, 6	55	37
GF630-1, 2	70	68	RDC	79	87
GF633-1, 2, 3	70	68	Any locomotive not listed	35	—
GF850-1	70	84			

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

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or triple loads .....	..	25
Scale test cars	40	30
except SPMW-2024, WO-3	65	49
Relief outfits with steam derrick, except:	45*	25*
Nos. 7000 and 7010 on San Ramon Branch ...	..	10
Nos. 7000 and 7010 must not operate between Larkmead and Calistoga on Calistoga Branch.		
7007-7003-7034	35*	25*
Nos. 7070 and 7110 must not operate on any branch except Schellville Branch; NAPA Branch between Napa Jct. and Napa River bridge 69.62 at Napa; and on Vallejo Branch between Napa Jct. and MP 68.40.		
Vasona Branch and between Castroville and Monterey.		
Locomotive cranes:		
(SPMW 4027, 4080, 4088, 4091, 4542, 4543, 5479, 5595 and 5849)		
With Boom disconnected and counterweight forward, except SPMW 5595	45	25*
With Boom disconnected and light end forward	40	25*
With Boom in place, either end forward	20*	15
With Boom in place, either end forward	25*	15
Steam Pile Drivers:		
(SPMW 3402)		
With leads removed and secured	45	25*
(SPMW 4052 and 4053)	35	25*

*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.

SPMW 4088, Crane Pile Driver restricted to 45 MPH and must be placed on rear of train.
SPMW 5479, 5499 and 5497 are restricted to 45 MPH.

OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT AND MIXED TRAINS
Trains of deadhead equipment, with caboose ...	65	..
Passenger trains, with caboose	65	..
Engine and caboose only, except: .....	..	65
must not exceed speed for same engine running forward light.		
Logs loaded on flat or logging cars, except: .....	..	35
On curves .....	..	25
Through truss bridges, tunnels and passing stations .....	..	15
Engine, flanger and caboose only, except: .....	..	40
On curves .....	..	30

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

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.

10. SPEED RESTRICTIONS FOR ENGINES AND TABLE OF COMPARISON: Maximum speed shown in the table below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains.

Engines handled dead must not exceed speed shown in table. Maximum speed of trains handling dead diesel engines must not exceed the speed shown for same engine running forward light. Dead diesel engines hauled in train and weighing 100,000 pounds or more must be placed first behind engine handling the train. If weight is less than 100,000 pounds dead diesel engines must be placed near rear of train.

Dead or disabled engines, which require 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 is to be moved and location in train in which it is to be placed. Any such engine must not be handled in train until train order designating maximum speed is issued.

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.

SNRY engines will not exceed speed restrictions for engines shown in SNRY timetable and maximum speed is subject to further restrictions applicable to certain territories as shown in speed restrictions for trains.

11. By Decision No. 74486 dated August 6, 1968, California Public Utilities Commission's General Order 26-D revised as follows.

2.5 If freight cars of a height greater than fifteen (15) feet six (6) inches are transported or proposed to be transported, minimum overhead clearances shall be increased by an amount of not less than such additional height provided that box or other house cars sixteen (16) feet ten (10) inches or more in height are exempt from this subsection when the top running boards have been removed, ladders and hand brakes lowered, cars painted, stenciled, and otherwise modified in compliance with the provisions of Section 131.24 of Part 131, U.S. Safety Appliance Standards (Railroad), and provided that if train length permits any such cars. Shall be trained at least five (5) cars distant from caboose.

7.4 All open top cars with lading extending laterally in excess of five (5) feet five (5) inches from centerline of car shall if train length permits be trained at least five (5) cars distant from both the caboose and the engine.

7.8 Cars on which the lading exceeds fifteen (15) feet six (6) inches above top of rail if otherwise in compliance with these requirements as to width of lading and the nature of which precludes the probability of employees getting on top of or passing over them are exempt from the conditions of this section, provided, however, that if train length permits, any such cars except cars transporting highway trucks or trailers, multi-level freight cars either loaded or unloaded, and automobile underframe cars, shall be trained at least five (5) cars distant from caboose. For the purpose of this Section, automobile underframe cars are either special flat cars upon which automobile underframes are stacked and firmly secured in a horizontal position or gondola cars in which such underframes are placed on end and firmly secured to said gondola cars.

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

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

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

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

Westward	Reading
MP 92.97	35

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

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

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

RULE 26. At Third St. Station, San Francisco, and at San Jose passenger station, blue sign may be displayed on either side of engine cab.

RULE 26-A. Watsonville Jct.: Indicator lights above each end of tracks leading to Union Ice Co. dock governing movements on those tracks as follows:

- Green: Tracks may be used for train or switching movements.
- Yellow: Tracks may be entered and engines, cars or cabooses added or detached.
- Red: Tracks may be entered but cars on tracks must not be coupled to or moved. Trains made up on these tracks must not depart until it has been ascertained indicator displays green aspect.
- Not Lighted: Must be considered as displaying most restrictive indication and icing platform foreman must be contacted for instructions before cars are coupled to or moved.

RULE 82-A. Trains originating Sunnyvale must obtain a clearance before departing, when operator on duty.

Freight trains turning at Redwood Jct. must obtain clearance before leaving Redwood Jct.

Westward extra trains originating San Jose Yard will obtain clearance at Santa Clara.

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

Westward trains originating San Jose Yard departing via Milpitas Line will obtain clearance at College Park Tower.

Westward trains, except those having received clearance at San Jose or College Park Tower, must obtain clearance at Santa Clara. Nos. 98, and 374 must obtain clearance at San Jose.

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

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

- Sunnyvale } Trains originating or terminating
- Redwood City... } Trains originating or terminating San Jose
- San Jose Yard..... } Yard
- San Jose All trains except extra trains which originate or terminate at San Jose Yard.
- Gilroy Trains originating or terminating.

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

- Redwood Jct..... Trains to or from Niles Subdivision.
- Santa Clara No. 373 and trains terminating at San Jose Yard
- San Jose..... Nos. 12, 374, 373, 13, and westward trains terminating San Jose.
- Watsonville Jct..... Nos. 12, 374, 373, and 13.

RULE 93. First class trains enter and leave San Francisco passenger station on yard tracks within Fourth St. interlocking limits.

First class trains enter and leave San Jose passenger station on yard tracks between MP 45.91 and MP 47.29.

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

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

Watsonville Jct.: Eastward freight trains, except No. 374 must not pass Signal 984 unless proceed signal received from yardman, green flag by day, green light by night.

Westward freight trains, except No. 373 must not pass Signal 1001 unless proceed signal received from yardman, green flag by day, green light by night.

RULE D-97. Will apply between San Francisco and San Jose; between Lick and Coyote; between Gilroy and Corporal; and between Logan and Watsonville Jct.

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

San Jose: WPRR crossing of the SP tracks on the Vasona Branch at San Jose is not protected by automatic interlocking. Trains and engines must STOP before crossing WPRR and not proceed over crossing until it has been ascertained there are no trains or engines closely approaching the crossing from either direction. SP trains and engines have precedence over WPRR trains and engines when using this crossing.

"STOP" signs installed on WPRR and SP tracks in approach to this crossing.

Sign reading "RAILROAD CROSSING 2000 FT." is located at MP 47.4 for westward trains and sign reading: "RAILROAD CROSSING 2400 FT." is located at MP 48.6 for eastward trains.

SPECIAL INSTRUCTIONS — SAN FRANCISCO SUBDIVISION

American Can Spur at Western Pacific 5th St. Lead

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

Western Pacific Railroad Company switching lead crossing at Western Pacific-Southern Pacific Joint Drill Track, South Seventh Street, San Jose:

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

RULE 99. Granite Rock Co. will do switching at Logan. When necessary for SP crews to enter tracks jointly operated they must provide adequate protection to avoid collision.

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

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

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

RULE 103-A. Automatic crossing gates:

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

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

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

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

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

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

†† Sound detector installed west of Virginia Street. Westward trains stopping east of Virginia St. will stop east of marker located 75 feet east of crossing. Before starting, sound whistle to actuate crossing gates before train enters crossing.

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

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

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

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

San Martin: Trains and engines operating on the siding stop at "Stop" sign 25 feet from San Martin Avenue, MP-74.6, and not proceed on crossing until the gates are down. Cars must not be left standing within 100 feet of San Martin Avenue

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

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

San Carlos—Old Country Road crossing E-23.4-C.

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

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

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

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

Derails on main track:

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

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

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

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

When illuminated these indicators will convey the following information:

TRAIN — Train at platform on opposite track.

CLEAR — Indicator in service.

When neither **TRAIN** or **CLEAR** is illuminated, indicator is out of service and report must be made to chief train dispatcher as soon as practicable.

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

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

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

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

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

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

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

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

Redwood Jct. and Sunnyvale are train-order offices for trains originating only.

RULE D-251. Applies on both tracks between San Francisco and San Jose, except when inferior trains moving on main track are delayed in this territory, they must clear time of following first-class schedules in accordance with Rule 86 (b).

Applies between Watsonville Jct. and Logan; between Corporal and Gilroy; and between Coyote and Lick.

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

All through freight trains in the territory between San Francisco and San Jose during Commute Fleet Operations will stop and contact Train Dispatcher through Towermen at the following locations:

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

who will issue instructions pertaining to freight train movements during Commute Fleet Operations.

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

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

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM.

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

When Signals 463, 463.5, 464, 465, 466 or 467 display stop indication, trains and engines, after stopping, may proceed at restricted speed, provided proceed signal is received from switchman at The Alameda, green flag by day, green light by night, except No. 99 may pass Signal 463 displaying stop indication without stopping at restricted speed, provided proceed signal is received from switchman at The Alameda, green flag by day, green light by night, but must stop to clear crossover between station Tracks Nos. 4 and 5 just west of The Alameda.

Signal 464 on Signal Bridge 466 is a diverging route signal governing entrance into station tracks Nos. 1, 2, 3, and 4 from station track No. 4 Lower unit on Signal 466 governs entrance into these tracks through crossover from station track No. 5. When Signal 464 or lower unit of Signal 466 displays yellow aspect, movement into tracks Nos. 1, 2, 3 and 4 must not be made until proceed signal is received from switchman at The Alameda, green flag by day, green light by night, and then movement must not exceed 10 MPH. No signal protection beyond fouling point on these tracks.

When Signals 468.5, 470 or 473 display stop indication, trains and engines may proceed at restricted speed, provided proceed signal received from yardman at Park Ave., green flag by day, green light by night.

Station track No. 5 between Signal Bridge 466 and west limit of San Jose-Lick interlocking west of San Carlos St. overpass is not within interlocking limits, but signal indication will authorize movement of trains and engines between these points on this track. This includes movement to station track No. 5 governed by lower unit on Signal 473 on station track No. 4.

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

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

RULE 513. Before making movements out of tracks between MP 1.23 and MP 7.07 onto westbound main track or eastbound main track, permission must be obtained from operator.

RULE 535. SPRING SWITCHES

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

Location	Normal Position
Mountain	
View	Moffett Field Spur.....Main track
San Jose	East end station Track 5.....Main track
San Jose	Milpitas wye switch
	Milpitas line main track

SPECIAL INSTRUCTIONS — SAN FRANCISCO SUBDIVISION

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

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

RULE 605. INTERLOCKING

Fourth Street—San Francisco: Limits: Fourth Street Zone, from dwarf signals on station tracks Nos. 1 to 14 near Fourth Street to westward interlocking signal on signal bridge governing movements on main tracks near Sixth Street; **Potrero Zone** eastward main track MP 1.23 to MP 1.33, westward MP 1.68 to MP 1.26; **Bayshore Zone** eastward main track MP 4.21 to MP 5.06, westward main track MP 5.13 to MP 4.98; **Brisbane Zone** eastward main track MP 6.62 to MP 7.07, westward track MP 6.95 to MP 6.89.

Leaving signals on station tracks Nos. 1, 2, 3, 13 and 14, San Francisco, are so arranged that operator may clear the signals temporarily, even though portion of train is beyond the signal. Before starting, call for signal. The signals on tracks Nos. 1, 2, 3, 13 and 14 are searchlight type, and necessary that trainman or yardman relay signal indication to engineman when they are cleared.

If signal cannot be cleared, movement may be made under Rules 628 and 670. Operator will give proceed signal with yellow flag by day and yellow light by night from the tower to authorize movement to the next interlocking signal.

Dual control switches at Potrero are equipped with selector lever and hand-throw lever. Dual control switches at Bayshore and Brisbane are hand operated by use of cranks. Crank for hand operating switches at Bayshore is located on instrument house south of track. Cranks for hand operating switches at Brisbane are located on instrument case at outbound lead and instrument house south of the tracks. When necessary to hand-throw switches, permission must be obtained from Operator, Fourth Street, and be governed by Rule 772. Instructions for hand operating power switches are mounted on instrument housing adjacent to crank holder.

At Fourth Street—One sound or siren or air whistle requires that trains and engines within limits of Interlocking must stop.

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

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

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

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

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

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

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

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

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

Hand-throw switch to the spur track at MP 48.5, 500 feet east of Willow Street Subway is not equipped with electric switch lock and must not be operated without permission from the San Jose operator. Engines using this switch must occupy main track continuously or leave main switch open while work is being performed. This spur track must not be used by trains or engines for the meeting or passing of trains.

From Vasona Branch movement governed by interlocking signal located 30 feet west of crossover between main track and Vasona Branch. Upper unit governs to station tracks, and lower unit governs to main track. When both units display stop indication and it is desired to use connecting link to spur (California Packing Corporation), after stopping if crossover switches are lined normally and the track is seen to be clear to westward Signal 474.5 located at fouling point 250 feet west of interlocking signal, train or engine may proceed without obtaining permission from signal operator.

Westward Signal 471.5 at Park Ave. subway normally dark until line up is made. After permission received from operator, crossover switches may be lined, and if signal displays proceed indication movement may be made.

Movement to Vasona Branch from station track No. 5 governed by lower unit of Signal 470 located east of station, and from main track governed by lower unit of signal located 400 feet west of junction switch.

RULE 680. AUTOMATIC INTERLOCKING

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

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

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and requires movement as follows
W.....273	Redwood Jct.....	Westward trains via Dumbarton must stop short of Signal 273 and wait until indicator is extinguished.
W.....7 ft. mast MP	44.20.....Santa Clara	.....Eastward trains, except first-class, stop short of Reed St. and wait until indicator is extinguished and flashing white light is displayed. Display of flashing white light authorizes movement to interlocking limits Santa Clara.
W.....821	Gilroy	.....Westward trains stop and not proceed until indicator is extinguished, except, after stopping, trains may proceed on verbal authority of Gilroy operator. a. Trains making pickup or set out will cut off and leave train east of Signal 821 taking only locomotive and those cars required for the operation. b. Through train not exceeding restricted speed to the next home signal.

RULE 705. HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
W.....694	Morganhill	
H.....720	San Martin	MP 74.6 San Martin
W.....719	Morganhill	
*H.....MP 68.5	Perry	West End of Perry

*Displays Flashing White Light when "H" illuminated.

Scanner Site	Direction	Location
MP		
70.3	.....East and West	.....Perry-Morganhill

Refer to Rule 705 All Subdivisions.

RULE 760. CENTRALIZED TRAFFIC CONTROL

Limits extend from MP 86.4 Corporal to MP 93.2 Logan.

GENERAL REGULATIONS

RULE 825. Cars must not be stored within 150 feet of all crossings of 9th Street at Gilroy, except spur track No. 125 serving Filice Warehouse.

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

When freight trains stop on receiving track in Watsonville Jct. yard, and road engine is detached, trainmen will set sufficient hand brakes on the rear of westward trains, and on the head end of eastward trains to secure trains.

RULE 830. Redwood City: Passenger trains, stopping at passenger station, should stop to clear Broadway crossing.

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

Eastward passenger trains stop at Broadway to clear Broadway crossing.

Millbrae: Eastward passenger trains stop to clear Millbrae Ave. Westward freight trains on Vasona Branch must not leave cars between Approach Circuit sign and El Camino Real while switching.

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

AIR BRAKE RULES

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

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

Felton to Santa Cruz, Permanente to Monta Vista

Without dynamic brake in operation: One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

*Permissible Tons Per Unit Without Retaining Valves

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

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

*If any unit having basic dynamic brake is operated with units having extended range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF623, EF625, EF630, EF633, EF636, GF425 (except units 6700-6727), GF628, GF630, EF850B and GF850 are equipped with extended range dynamic brake.

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

FREIGHT TRAINS

RULE 24-C. Permanente to Monta Vista: Sufficient time, but no less than 20 minutes, must be allowed to fully charge air brake system on cars picked up at Permanente before making air test. Brakes must be operative on all cars.

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

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

During this recharge time hand brakes will be released on train.

RULE 33. Permanente to Monta Vista: Maximum tonnage per operative brake—100 tons. All retaining valves will be used. Retainers will be used in high pressure position on loaded cars and low pressure position on empty cars, with dynamic brake and pressure maintaining system of braking, with not more than 20 cars for each six axles of dynamic brake, with speed not exceeding 15 MPH.

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

SPECIAL INSTRUCTIONS — SAN FRANCISCO SUBDIVISION

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

Not more than 40 cars will be handled in train, Permanente to Monta Vista.

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

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

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

Descending grades where restrictions apply are designated below:

Watsonville Jct. to Olympia (San Francisco Subdivision)

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

Olympia to Watsonville Jct.

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

PASSENGER TRAINS

RULE 39. Running test must be made on westward trains before reaching spring switch at end double track, Lick.

MISCELLANEOUS

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

2. All freight trains entering San Jose Yard slow to 8 MPH passing San Jose Yard Office so as to allow visual verification of consist.

3. **SANTA CRUZ BRANCH:** Between Watsonville Jct. and Olympia. Empty 85-foot long or longer equipment must be entrained ten or more cars behind road engine and ten or more cars ahead of helper engine, if used, in territories where grade is 1.8 percent or over and curvature is ten degrees or more. A flat with one van or one container either loaded or empty will be considered as an empty.

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

Class of Engine	Restricted Tracks
EF415A, EP415A,.....Howest.....	H. E. Casey spurs.
EF415B, EP415B	
"	.....San Carlos.....Drill spur on bay side of main track.
"	.....Redwood Jct.....S & W spur.
"	.....Redwood Jct.....On line to Redwood Harbor; All spurs off Dumbarton line.
"	.....Menlo Park.....Peninsula Bldg. Matl. Co. spur.
"	.....Palo Alto.....All spurs leading off drill track.
"	.....Mountain View.....Shell Oil spur; beet spur.
"	.....Sunnyvale.....All spurs off both drill tracks except Schuckl, National Can spur, Libby and Berry Growers spurs.
"	.....Morganhill.....Dried fruit spur.
"	.....Lick Branch.....All tracks.
All Engines.....	Santa Cruz.....Cowell spur beyond street crossing. To spot cars beyond street crossing use reach.
"	.....Logan.....Granite Rock Co. bunker loading tracks; scale track; stock pile tracks and beyond engine restriction sign at west end of empty set-out tracks Nos. 1, 2 and 3.

5. Load limit (car and contents):

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

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

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

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

6. **AMTRAK** Trains, Stop at San Jose so that rear car is on platform.

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

8.

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

MP	Location	Description
0.00	San Francisco	Station umbrella sheds .....Side
0.24	"	4th St. interlocking tower .....Side
0.00-1.30	"	Dwarf signals .....Side
1.28	"	Mariposa St. bridge .....Overhead
1.29	"	AT&SFRy bridge .....Overhead
1.34-1.68	"	Tunnel No. 1 .....Overhead and side
1.73	"	22nd Street bridge .....Overhead
1.91	"	23rd Street bridge .....Overhead
1.93-2.14	"	Tunnel No. 2 .....Overhead and side
3.15	"	Oakdale Avenue bridge .....Overhead and side
3.19-3.65	"	Tunnel No. 3 .....Overhead and side
4.15	"	Paul Ave. bridge .....Overhead and side
4.26-4.95	Bayshore	Tunnel No. 4 .....Overhead and side
9.07	South San Francisco	Signal bridge .....Overhead
25.58	Redwood City	Signal bridge .....Overhead
26.10	"	Signal bridge .....Overhead
29.69	Palo Alto	San Francisquito Creek bridge .....Overhead and side
45.99	San Jose	Signal bridge .....Overhead
46.90	"	Station umbrella sheds .....Side
119.70	Santa Cruz	San Lorenzo River bridge .....Side
121.45 to 121.68	Eblis	Tunnel No. 6 .....Overhead and side
125.60 to 125.66	Big Trees	Tunnel No. 5 .....Overhead and side
126.35	Big Trees	San Lorenzo River bridge .....Side
126.43	Big Trees	Redwood tree .....Side
126.70	Big Trees	Redwood tree .....Side
126.72	Big Trees	Redwood tree .....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
On Redwood Harbor spur	10
On Moffett Field spur	10
San Jose, passenger trains on station track No. 5: Eastward, end of double track to Signal Bridge 464	45
Eastward, Signal Bridge 464 to passenger station	30
Westward, passenger station to end double track .	20
San Jose, passenger trains on station track No. 4: Westward, passenger station to Signal Bridge 464	30
Westward, Signal Bridge 464 to end of double track	45
Eastward, end of double track to passenger station	20
San Jose, freight trains on station tracks Nos. 4 and 5: Between end of double track and crossover at Julian St.	20
San Jose, passenger trains on station tracks Nos. 4 and 5: In either direction between passenger station and connection with main track east of station	30
Through all sidings, yard tracks and other tracks with engine running backward	10
Passenger trains with commute equipment	15

SPECIAL INSTRUCTIONS — SAN FRANCISCO SUBDIVISION

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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	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column:	1	2	MP	MP	Column:	1	2
EASTWARD, SAN FRANCISCO TO WATSONVILLE JCT.:					WESTWARD, WATSONVILLE JCT. TO SAN FRANCISCO:				
0.00 to 0.62	0.62 to 1.80		20	20	100.40 to 100.00	100.00 to 98.00		25	25
0.62 to 1.80	1.80 to 3.10		25	25	100.00 to 98.00	98.00 to 94.38		45	45
1.80 to 3.10	3.10 to 11.01		50	40	98.00 to 94.38	94.38 to 92.99		70	60
3.10 to 11.01	11.01 to 24.52		60	40	94.38 to 92.99	92.99 to 92.97 (spring switch)		55	55
11.01 to 24.52	24.52 to 26.40 (Redwood City)		70	55	92.99 to 92.97	92.97 to 87.94		25	25
24.52 to 26.40	26.40 to 44.00		45	45	92.97 to 87.94	87.94 to 86.49		35	35
26.40 to 44.00	44.00 to 45.91 (end of double track)		70	55	87.94 to 86.49	86.49 to 82.00		50	50
44.00 to 45.91	45.91 to 46.90		60	55	86.49 to 82.00	★82.00 to 79.50 (Gilroy)		60	60
45.91 to 46.90			15	15	★82.00 to 79.50			25	25
46.90 to 47.29 (spring switch)	47.29 to 47.53		15	15	79.50 to 78.60	78.60 to 73.96		50	50
47.29 to 47.53	47.53 to 51.81 (55.70)		30	30	78.60 to 73.96	73.96 to 73.78		70	60
47.53 to 51.81	51.81 to 63.21		50	50	73.96 to 73.78	73.78 to 62.00		60	60
51.81 to 63.21	63.21 to 63.23 (Spring switch)		70	60	73.78 to 62.00	62.00 to 55.70 (51.81)		70	60
63.21 to 63.23	63.23 to 73.78		35	35	62.00 to 55.70	51.81 to 51.32		65	60
63.23 to 73.78	73.78 to 73.96		70	60	51.81 to 51.32	51.32 to 51.30 (spring switch)		35	35
73.78 to 73.96	73.96 to 78.60		60	60	51.32 to 51.30	51.30 to 47.53		35	35
73.96 to 78.60	78.60 to 79.50		70	60	51.30 to 47.53	47.53 to 47.29 (spring switch)		50	50
78.60 to 79.50	★79.50 to 82.00 (Gilroy)		50	50	47.53 to 47.29	47.29 to 46.90		30	30
★79.50 to 82.00	82.00 to 86.47		25	25	47.29 to 46.90	46.90 to 45.91 (end of double track)		15	15
82.00 to 86.47	86.47 to 86.49 (spring switch)		60	60	46.90 to 45.91	45.91 to 45.86		15	15
86.47 to 86.49	86.49 to 92.97		25	25	45.91 to 45.86	45.86 to 44.00		15	15
86.49 to 92.97	92.97 to 92.99 (spring switch)		35	35	45.86 to 44.00	44.00 to 26.40		60	55
92.97 to 92.99	92.99 to 94.38		25	25	44.00 to 26.40	26.40 to 24.52 (Redwood City)		70	55
92.99 to 94.38	94.38 to 98.00		55	55	26.40 to 24.52	24.52 to 11.01		45	45
94.38 to 98.00	98.00 to 100.00		70	60	24.52 to 11.01	11.01 to 3.10		70	55
98.00 to 100.00	100.00 to 100.40		45	45	11.01 to 3.10	3.10 to 1.80		60	50
100.00 to 100.40			25	25	3.10 to 1.80	1.80 to 0.62		50	40
					1.80 to 0.62	0.62 to 0.00		25	25
					0.62 to 0.00			20	20

★Speed may be resumed after engine of eastward train has passed Lucesa Avenue Crossing, MP 81.70 and after engine of westward train has passed Leavesly Road crossing MP 79.58.

Between San Jose and Watsonville Jct. freight trains and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 65 MPH provided these trains do not exceed:

Number of Cars	Tons Per Operative Brake
70	70
75	69
80	68
85	67
90	66
95	65
100	64
105	63
110	62
115	61
120	60
125	58
130	56
135	54
140	52
145	50

SPECIAL INSTRUCTIONS — SAN FRANCISCO SUBDIVISION

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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	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column:	1	2	MP	MP	Column:	1	2
EASTWARD, SAN JOSE TO PERMANENTE: 47.21 to 47.38 10 10 47.38 to 53.05 (48.06) 20 20 48.06 to 47.86 10 10 47.86 to 39.50 25 25 39.50 to 37.50 (Permanente) 15 15					WESTWARD, PERMANENTE TO SAN JOSE: 37.50 to 39.50 (Permanente) 10 10 39.50 to 47.86 25 25 47.86 to 48.06 (53.05) 10 10 53.05 to 47.38 20 20 47.38 to 47.21 10 10				
EASTWARD, SOUTH SAN FRANCISCO TO DALY CITY 9.59 to 7.39 15 15					WESTWARD, DALY CITY TO SOUTH SAN FRANCISCO: 7.39 to 13.55 15 15				
EASTWARD, SOUTH SAN FRANCISCO TO BADEN 15 15					WESTWARD, BADEN TO SOUTH SAN FRANCISCO 15 15				
EASTWARD, LICK TO ALAMITOS: 55.34 to 58.99 15					WESTWARD, ALAMITOS TO LICK: 58.99 to 55.34 15				
EASTWARD, CARNADERO TO HOLLISTER: 82.99 to 83.01 (junction switch) 15 15 83.01 to 95.81 20 20					WESTWARD, HOLLISTER TO CARNADERO: 95.81 to 83.01 20 20 83.01 to 82.99 (junction switch) 15 15				
EASTWARD, WATSONVILLE JCT. TO OLYMPIA: 100.46 to 101.40 15 15 101.40 to 102.20 8 8 102.20 to 112.57 25 25 112.57 to 113.00 20 20 113.00 to 116.10 25 25 116.10 to 116.25 15 15 116.25 to 119.20 25 25 119.20 to 120.00 20 20 120.00 to 126.50 15 15 126.50 to 129.72 20 20					WESTWARD, OLYMPIA TO WATSONVILLE JCT.: 129.72 to 126.50 20 20 126.50 to 120.00 15 15 120.00 to 119.20 20 20 119.20 to 116.25 25 25 116.25 to 116.10 15 15 116.10 to 113.00 25 25 113.00 to 112.57 20 20 112.57 to 102.20 25 25 102.20 to 101.40 8 8 101.40 to 100.46 (junction switch) 15 15				
EASTWARD, SANTA CRUZ TO DAVENPORT: 79.35 to 81.36 (120.42) (junction switch) 15 15 81.36 to 91.08 20 20					WESTWARD, DAVENPORT TO SANTA CRUZ: 91.08 to 81.36 20 20 81.36 to 79.35 (junction switch) 15 15				

SPECIAL INSTRUCTIONS — SALINAS SUBDIVISION

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

Eastward	Reading	Westward	Reading
MP 120.75	70-60	MP 118.37	70-60
		MP 163.10	70-60

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

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

RULE 82-A. Trains must obtain clearance Monterey only when operator is on duty.

Trains to Monterey Branch must obtain clearance bearing chief dispatcher's OK before leaving Castroville, only when train order operator on duty.

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

Castroville.....Trains to or from Monterey Branch.
Salinas.....Trains originating or terminating.

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

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

Watsonville Jct.....Nos. 12, 374, 13 and 373.
Castroville.....Trains to or from Monterey Branch.

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

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

West MP		East MP
.96.11	Watsonville Jct.	101.25
110.04	Castroville (Monterey Branch)	112.09
	CTC	
	Limits Salinas.....	126.00
	" (Spreckels Branch)	123.87
132.60	Gonzales	136.30
142.44	Soledad	144.65
160.50	King City	170.00
214.30	Paso Robles	218.00
232.50	Santa Margarita.....	236.75
249.56	San Luis Obispo	254.00
123.30	Monterey.....	127.66
127.70	Pacific Grove	129.88

Watsonville Jct.: Eastward freight trains, except No. 374 must not pass Signal 984 unless proceed signal received from yardman, green flag by day, green light by night.

Westward freight trains, except No. 373 must not pass Signal 1001 unless proceed signal received from switchman, green flag by day, green light by night.

RULE 99. Engines moving between the west yard limit sign Pacific Grove and east yard limit sign Monterey will move as provided by Rule 99 and the first sentence of Rule S-99-B.

RULE 99-C. Will apply on Monterey Branch.

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

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

RULE 103-A. Automatic crossing gates:

King City: Bitterwater Road crossing MP 163.4. Eastward trains, stopping on main track to do switching must stop 500 feet west of crossing to avoid unnecessary operation of gates. White marker post 500 feet west of crossing.

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

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

San Luis Obispo: Foothill Blvd. crossing MP 250.5. Gates will raise after time expires when trains in siding stop clear of crossing. When train is ready to proceed, gates must be lowered manually by inserting switch key in receptacle located on post on either side of crossing. Turn key one half turn to right. Crossing must be occupied within one minute or gates will raise.

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

Spreckels Jct.—Airport Blvd. crossing on east end yard track No. 410.

Monterey—Hoffman Ave. crossing on Custom House Packing Co. Spur.

Castroville—Crossing on D'Arrigo Bros. Co. spur.

Ord—State Highway crossing on tracks Nos. 2 and 3 at MP 119.50 but must wait until automatic warning device has been operating 20 seconds or more before crossing over highway.

Salinas—John St. crossing on tracks Nos. 200, 248 and 250.

King City—Bitterwater-Metz Road on tracks not protected by automatic crossing gates.

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

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

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

RULE 105. No. 1 siding at Salinas extends from SA Signal at MP 1164 to crossover just west of Signal 1178. No. 2 siding extends from crossover just east of Signal 1178 to crossover just west of Signal 1186.

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

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

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

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

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

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

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

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

Eastward Signal	Protection	Westward Signal
	Spring switch, end of double track, Watsonville Jct.	P-SA
P-A	Spring switch, west end siding, Castroville	
	Spring switch, west switch, Monterey branch.	
	Spring switch, east end siding, Castroville.	P-A
P-SA	Spring switch, west end No. 1 siding, Salinas.	
P-1214	Vehicle barricade detector Harris Rd. E-121.8.	P-1225
P-1878	Fire and collision detector Sargent Creek bridge, MP 188.15	P-1889
P-1950	Spring switch, west end siding, Bradley.	
P-2278	Flood detector, east end Henry Siding, MP 228-87.	P-2289
P-2328	Spring switch, west end siding, Santa Margarita.	
P-2416	Slip-out detector, West End Tunnel No. 10, MP 241.6	P-2419
P-A	Slide detector fence, Chorro	P-A
P-A	Fire detector, Steiner Creek bridge, Goldtree.....	P-2493

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 516. Overlap posts:

Spreckels Jct. Westward trains,
Santa Margarita Eastward trains.

RULE 535. SPRING SWITCHES

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

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

RULE 705. Letter type indicators.

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

RULE 705. HOT BOX DETECTORS

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

Scanner Site

MP	Direction	Location
139.6.....	East and West.....	Gonzales-Soledad
178.8.....	East and West.....	San Lucas-San Ardo

Refer to Rule 705 All Subdivisions.

RULE 760. CENTRALIZED TRAFFIC CONTROL

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

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

GENERAL REGULATIONS

RULE 825. When freight trains stop on receiving track in Watsonville Jct. yard and road engine is detached, trainmen will set sufficient hand brakes on the rear cars on westward trains to secure trains.

When freight trains stop on receiving track at San Luis Obispo and road engine is detached, trainmen will set sufficient hand brakes on the head end of eastward trains to secure trains.

Portable rail skids are hung on posts at lower end of sidings at:
Santa Margarita Cuesta Serrano Chorro Goldtree
When necessary to leave cars on any of these sidings permission must first be obtained from chief train dispatcher. See Rule 825 all sub-divisions.

RULE 830. King City: Through freight trains picking up and/or setting out cars must not block Lonoak road crossing at MP 164.3.

SPECIAL INSTRUCTIONS — SALINAS SUBDIVISION

AIR BRAKE RULES

RULE 17.

PASSENGER TRAINS

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

FREIGHT AND MIXED TRAINS

Retaining valves must be used on descending grades as follows:

San Luis Obispo to Santa Margarita.
Goldtree to Camp San Luis Obispo.

WITHOUT DYNAMIC BRAKE IN OPERATION:

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

With Dynamic Brake in Operation:

*Permissible Tons Per Unit Without Retaining Valves

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
With dynamic brake in operation but WITHOUT pressure maintaining system of braking	525	775	625	950	1250
With dynamic brake in operation and WITH pressure maintaining system of braking	1500	2250	1800	2700	3600

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

*If any unit having basic dynamic brake is operated with units having extending range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF623, EF625, EF630, EF636, GF425 (except units 6700-6727), GF628, GF630, GF633, EF850B and GF850 are equipped with extended range dynamic brake.

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

RULE 17-A. Eastward freight trains, Tunnel 6 to San Luis Obispo, without dynamic brake in operation, using retaining valves will stop at Serrano at least 10 minutes to permit wheel heat radiation.

FREIGHT TRAINS

RULE 33.

San Luis Obispo and Santa Margarita,
Goldtree to Camp San Luis Obispo.

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

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

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

Descending grades where restrictions apply are designated below:

Eastward—Tunnel 6 to San Luis Obispo
MP 239.65 to MP 252.10.....Speed 20 MPH

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

Westward—Tunnel 6 to Santa Margarita
MP 239.65 to MP 235.5.....Speed 20 MPH

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

PASSENGER TRAINS

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

MISCELLANEOUS

1. Between Santa Margarita and San Luis Obispo.

MONTEREY BRANCH: Between Castroville and Lake Majella:

Empty 85-foot long or longer equipment must be entrained ten or more cars behind road engine and ten or more cars ahead of helper engine, if used, in territories where grade is 1.8 percent or over and curvature is ten degrees or more.

A flat with one van or one container whether loaded or empty will be considered as an empty.

These instructions will not apply to trains 373/374.

Trains 373-374 between San Luis Obispo and Santa Margarita are restricted to maximum tonnage of 4000 Tons with a minimum horsepower per trailing Ton of 2.75 with all power on the head end. If tonnage is exceeded or if there is less horsepower per trailing Ton, helper engine, appropriately entrained, must be furnished in the above territory.

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

Class of Engine	Restricted Tracks
EF415A, EP415A, EF415B, EP415B	.....Castroville.....All industry and spur tracks.
"	.....Salinas.....Leads 4, 35, 55, 57, 200, 210, and 250, and all industry spurs; Lead 115 east of girder-rail crossing; also spurs 151 and 153.
"	.....Lapis.....Spur.
"	.....Retreat.....Spur.
"	.....Monterey.....House track; team track; and all industry tracks.

SPECIAL INSTRUCTIONS — SALINAS SUBDIVISION

3. Load limit (car and contents):

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

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

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

4.

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

MP	Location	Description
155.28-		
155.54	Metz.....	Tunnel No. 5 ¹ / ₂.....Side
113.46-		
113.60	.....	Salinas River bridge.....Side
200.55-		
200.67	.....	Salinas River bridge.....Overhead and side
222.03	Templeton.....	Overhead crossing.....Side
223.39	.....	Graves Creek bridge.....Side
239.29-		
239.97	Cuesta.....	Tunnel No. 6.....Overhead and side
240.11-		
240.37	Thyle.....	Tunnel No. 7.....Overhead and side
240.61-		
240.70	".....	Tunnel No. 8.....Overhead and side
240.86-		
240.97	".....	Tunnel No. 9.....Overhead and side
242.26	Serrano.....	Signal bridge.....Overhead
245.85-		
245.99	Chorro.....	Tunnel No. 11.....Overhead and side
248.26	Goldtree.....	Signal bridge.....Overhead
251.16	Hathaway.....	Overgrade crossing.....Overhead and side

SPECIAL INSTRUCTIONS — SALINAS SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5, and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT and OTHER MAXIMUM SPEEDS appearing on page 6 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	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column:	1	2	MP	MP	Column:	1	2
EASTWARD, WATSONVILLE JCT. TO SAN LUIS OBISPO:					WESTWARD, SAN LUIS OBISPO TO WATSONVILLE JCT.:				
100.40 to 100.70 (end double track)			25	25	252.10 to 251.50			25	25
100.70 to 100.74 (spring switch)			25	25	251.50 to 248.30			40	40
100.74 to 108.21			50	50	248.30 to 241.90			25	25
108.21 to 118.37			70	60	241.90 to 241.58			15	15
118.37 to 120.75 (Salinas)			25	25	241.58 to 236.75			25	25
120.75 to 125.60			70	60	236.75 to 235.10			35	35
125.60 to 137.20			65	60	235.10 to 231.36			60	60
137.20 to 147.68			70	60	231.36 to 229.15			40	40
147.68 to 151.72			40	40	229.15 to 227.20			50	50
151.72 to 154.00			50	50	227.20 to 220.02			55	55
154.00 to 155.53			65	60	220.02 to 216.80			40	40
155.53 to 163.10			70	60	216.80 to 212.16			60	60
163.10 to 164.00			60	60	212.16 to 211.90			50	50
164.00 to 167.43			70	60	211.90 to 200.79			60	60
167.43 to 168.80			40	40	200.79 to 197.80			70	60
168.80 to 185.50			70	60	197.80 to 197.43			60	60
185.50 to 188.17			60	60	197.43 to 194.60			70	60
188.17 to 192.92			55	55	194.60 to 193.70			30	30
192.92 to 194.35			30	30	193.70 to 188.17			55	55
194.35 to 197.43			70	60	188.17 to 185.50			60	60
197.43 to 197.80			60	60	185.50 to 168.80			70	60
197.80 to 200.79			70	60	168.80 to 167.43			40	40
200.79 to 211.90			60	60	167.43 to 164.00			70	60
211.90 to 212.16			50	50	164.00 to 163.10			60	60
212.16 to 216.80			60	60	163.10 to 155.53			70	60
216.80 to 220.02			40	40	155.53 to 154.00			65	60
220.02 to 227.20			55	55	154.00 to 151.72			50	50
227.20 to 229.15			50	50	151.72 to 147.68			40	40
229.15 to 231.36			40	40	147.68 to 137.20			70	60
231.36 to 235.10			60	60	137.20 to 125.60			65	60
235.10 to 236.75			35	35	125.60 to 120.75			70	60
236.75 to 241.58			25	25	120.75 to 118.37 (Salinas)			25	25
241.58 to 241.90			15	15	118.37 to 108.21			70	60
241.90 to 249.35			25	25	108.21 to 100.74 (end of double track)			50	50
249.35 to 251.50			40	40	100.74 to 100.40			35	35
251.50 to 252.10			25	25					

Light engines may operate at Column 1 speeds not exceeding 70 MPH, except on descending grades when dynamic brakes are not operating light engines must not exceed Column 2 speeds.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH, except 65 MPH authorized between Watsonville Jct. and Santa Margarita, consistent with local restrictions account grade and other conditions, provided trains do not exceed:

Number of Cars	Tons Per Operative Brake	Number of Cars	Tons Per Operative Brake
70	70	110	62
75	69	115	61
80	68	120	60
85	67	125	58
90	66	130	56
95	65	135	54
100	64	140	52
105	63	145	50

SPECIAL INSTRUCTIONS — SALINAS SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 5, and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT** and **OTHER MAXIMUM SPEEDS** appearing on page 6 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	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column:	1	2	MP	MP	Column:	1	2
EASTWARD, CASTROVILLE TO LAKE MAJELLA: 110.10 to 110.70 15 15 110.70 to 127.30 20 20 127.30 to 130.23 15 15					WESTWARD, LAKE MAJELLA TO CASTROVILLE: 130.23 to 127.30 15 15 127.30 to 110.70 20 20 110.70 to 110.10 15 15				
EASTWARD, SPRECKELS JCT. TO SPRECKELS 15					WESTWARD, SPRECKELS TO SPRECKELS JCT. 15				

Light engines may operate at Column 1 speed.

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
East leg of wye Spreckels Jct.	5
Fat City Spur, Gonzales	5

SPECIAL INSTRUCTIONS — NILES SUBDIVISION

RULE 14(I). Whistle signal must be sounded and bell kept ringing when entering or leaving the Sugar Co.'s yard at Alvarado or approaching their road crossing.

RULE 26. West Oakland (Passenger Yard): Electric switch locks on west switches Tracks 2 to 5, inclusive, Track 19 and on east switches Tracks 14 to 18, inclusive.

Power operated derails on west end Track 6 and on east end Tracks 2 to 6, inclusive, and Track 13.

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

RULE 82-A. Trains to Niles Subdivision receiving clearance at San Jose or College Park Tower may leave Santa Clara without clearance.

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

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

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

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

- West Oakland
Newark
Niles
East Pleasanton
Extra trains will register at Niles Tower.
Trains originating or terminating at San Jose Yard will register at the San Jose Yard Office.

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

- Niles Tower - All trains.
Redwood Jct. - All trains.
College Park Tower - All trains arriving or departing via Milpitas Line.
Santa Clara - All trains.

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

Table with 2 columns: West MP, East MP. Lists yard limits for various locations like Oakland, Mulford, Hayward, Alvarado, Tracy, Redwood Jct., Newark, Alviso, Niles, East Pleasanton, Newark, Livermore-Ulmar, Altamont, Milpitas, San Jose, etc.

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

Livermore: When eastward trains which are too long to fit between the switches have a meet at Livermore, the eastward train will stay west of "P" Street, Livermore, until the westward train has moved into the clear before proceeding.

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

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

RULE 103-A. Automatic Crossing Protection.

On double track automatic crossing gates do not operate for against current of traffic movements at territory speeds and Rule 103-A will apply.

Oakland: When moving against current of traffic flagman must protect crossing before movement is made over Grove, Broadway, Franklin and Webster Streets and 29th Avenue.

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

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

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

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

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

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

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

Newark: Movements from Morton Salt Plant across Central Avenue will stop at "STOP" sign and not enter crossing until crossing gates are down.

Newark: Movements on drill track across Cedar Street, MP 38.6 will stop at "Stop" signs and not enter crossing until flashing lights are operating.

Alviso: Eastward trains passing signal 382 per Rule 507 will not exceed 10 MPH approaching Sunnyvale Road MP 39.8.

Westward trains passing signal 403 per Rule 507 will not exceed 10 MPH approaching Elizabeth Street MP 39.1.

Trains which stop or are delayed between MP 34.1 and MP 39.8 shall not exceed 10 MPH approaching crossings MP 39.1 or MP 39.8 and not enter the crossing until it is known crossing signals are operating.

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

- Oakland-
Market St.....Pacific Pool Warehouse No. 7,
MulfordCrossing Maitland Drive on Airport drill, L-16.5-C.

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

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

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

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

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

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

Fruitville is a train order office only for eastward trains. Light type train order signal installed on the west side of the Fruitville Tower Building.

Mulford and Niles are train-order offices only for trains originating when operator is on duty.

Warm Springs is train-order office for originating or terminating trains only.

Eastward trains to San Francisco Subdivision may leave Santa Clara without clearance.

Trains from Niles Subdivision must obtain clearance before leaving Redwood Jct.

RULE D-251. Will apply as follows: Between West Oakland and Elmhurst.

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

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

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Niles: Signal 291 governs movements, through junction switch, from Tracy line. Signal 293 governs movements, through junction switch, from San Jose line.

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

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

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

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

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

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

Signal 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rule 507 will govern.

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

RULE 516. Overlap posts:

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

RULE 535. SPRING SWITCHES

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

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

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

Location	Normal Position
West Oakland	1st and 16th line 16th St. line
Elmhurst.....	Westward track to Stonehurst Line..... Stonehurst Line
Elmhurst.....	End of Double Track Westward track
Shinn.....	East end siding..... Main track
Niles.....	Junction switch west of station..... San Jose line

RULE 605. INTERLOCKING

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

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yards lead 40, 50 and 60.

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operating on yard tracks.

Magnolia Tower (First and Chestnut Sts.): Limits extend on eastward main track from signal 1600 feet west of WPRR crossing to dwarf signal 500 feet east of WPRR crossing, and on westward main track from signal 500 feet east of WPRR crossing to dwarf signal 480 feet west of crossing.

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

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

SPECIAL INSTRUCTIONS — NILES SUBDIVISION

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

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

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

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

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

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

Elmhurst: Interlocking limits extend either side of Junction switches between eastward SA signals on eastward and westward tracks and westward SA signal on Stonehurst Line, westward SA signals on Niles and Santa Clara Lines. The Junction switch of Niles Line and Santa Clara Line MP 13.47, is power operated, dual control switch controlled by Operator at Fruitvale.

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

Interlocking portion of SA signals controlled by Operator at Fruitvale Tower.

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

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

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

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

Top unit governs movements to Milpitas line.

Lower unit governs movements to Centerville line.

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

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

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

Whistle signals:

To San Jose, o — —,

To Centerville, — o —,

To Niles, o — o,

To Tracy, — o — o.

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

West Zone: Main track limits extend from eastward SA signal at MP 30.06 to westward dwarf signal at MP 30.43.

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

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

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

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

San Francisco Bay drawbridge, MP 32.53 on Redwood Jct. line:

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

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

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control switch. When necessary to hand throw this switch, permission must be secured from the Yardmaster.

Interlocking portion of the SA signal will be controlled by Tracy Operator.

The Operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 680. AUTOMATIC INTERLOCKING

East Oakland, WPRR Crossing yard tracks, MP 7.70: Limits extend between interlocking signals in approach to both sides of crossing.

Derails within interlocking limits equipped with electric locks and after locks have been released derails may be operated by hand throwing lever on switch stand located at crossing.

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

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

Radum, WPRR crossing MP 67.8 (San Ramon Branch): Limits extend between eastward SA signals just west of WPRR crossing and westward interlocking signals just east of WPRR crossing on both legs of wye track.

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

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

If signal does not display proceed indication after clearing circuit is occupied a member of the crew must actuate time release. (Wait four minutes in inclement weather or other conditions before actuating time release.) Instructions for operating time release is mounted in time release box.

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

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

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

HOT BOX DETECTORS

SCANNER SITE

M.P.	Direction	Location	Location of readout
12.4	West	Elmhurst	Desert Yard Oakland

Refer to second paragraph Rule 705. All Subdivisions, and in addition train must be stopped when white light is observed flashing. When means of communications is available, crew member must contact Yardmaster at location of recorder to determine location of hot bearing. If location of hot bearing cannot be determined inspection must be made of all journals; also be governed by last paragraph and Items 1 through 5, Rule 705. All Subdivisions.

GENERAL REGULATIONS

RULE 825. Livermore: Portable rail skid located chained to tie on old engine house track.

Refer to Rule 825 All Subdivisions.

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

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

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

MP	Location
30	Henderson
34	Dumbarton

Refer to Rule 827, All Subdivisions.

RULE 830. Milpitas: Westward trains not exceeding 75 cars making pick-up or set-out at Milpitas will stop their train with rear end west of Curtis Way, DA 41.1, crossing.

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

Eastward trains having set-out or pick-up at Milpitas will leave their train west of the Battery Box located 400 feet west of the State Highway crossing at MP 40.0 while making set-out or pick-up.

Eastward trains must not exceed 75 cars after set-out or pick-up is made when meeting an opposing train exceeding 75 cars.

Newark: Between the hours of 7:00 AM and 7:00 PM, east-bound trains arriving Newark on the Dumbarton Line must remain West of Willow Street (Chemical Crossing), if making pickup or setout.

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

Mulford: Westbound trains picking up or setting out on Storage Tracks 1, 2 and Old Siding, must leave their train east of Fairway Drive while performing work, unless train, plus pick-up, will fit between Davis Street and Williams Street, far enough to avoid crossing gates remaining in down position.

Eastward trains making setouts on Cleaning Yard Tracks, Mulford, will leave their train 200 feet west of Davis Street.

Livermore: When eastward trains which are too long to fit between the switches have a meet at Livermore, the eastward train will stay west of "P" Street, Livermore, until the westward train has moved into the clear before proceeding.

AIR BRAKE RULES

RULE 17. Retaining valves must be used on freight and mixed trains on descending grades as follows:
Altamont to MP 52, Altamont to MP 63.

Without dynamic brake in operation:

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

WITH DYNAMIC BRAKE IN OPERATION

*Permissible Tons Per Unit Without Retaining Valves

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
With dynamic brake in operation but WITHOUT pressure maintaining system of braking.....	1000	1475	1250	1850	2475
With dynamic brake in operation and WITH pressure maintaining system of braking.....	1600	2400	2000	3000	4000

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

*If any unit having basic dynamic brake is operated with units having extending range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF623, EF625, EF630, EF636, GF425 (except units 6700-6727), GF628, GF630, GF633, EF850B and GF850 are equipped with extended range dynamic brake.

RULE 22. Warm Springs: Trainmen must not couple air hoses on pick-ups at Warm Springs until it is ascertained that all cars to be picked up are in the track, and trainmen on Warm Springs Switcher crew must not perform switching on, or couple other cars onto the pick-ups without instructions from officer in charge who will see to it that members of pick-up crew are notified in advance.

MISCELLANEOUS

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

Class of Engine	Restricted Tracks
All.....Henderson	Bay Road Salvage spur beyond a point 400 feet from point of switch.
All.....Alvarado	Holly Sugar beyond east switch of interchange track from high line 150 feet west of beet unloading pit.

2. Load limit (car and contents):

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

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

Unless authorized by Superintendent heavier loads must not be handled.

3.

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

Mile Post	Location	Description
6.0	Magnolia Tower	Adeline Street overpass Overhead
28.9	Henderson	Highway underpass Side
32.5	Dumbarton	San Francisco Bay drawbridge Side
34.5	Dumbarton	Newark Slough drawbridge Side
42.0	Shinn	Blue Diamond Overhead
42.9	Niles Jct	Highway underpass Side
30.8	Dresser	Alameda Creek bridge Side
31.5	Farwell	Alameda Creek bridge Side
38.3	Pleasanton	WPRR overhead bridge Overhead
55.4	Altamont	Highway overhead bridge Overhead and side
57.9	Altamont	Tunnel Side
18.2	San Lorenzo	San Lorenzo Creek bridge Overhead and side
24.2	Decoto	WPRR overhead bridge Overhead
26.1	Decoto	Columbia Steel Overhead
29.4	Niles	Highway underpass Side
36.2	Drawbridge	Warm Springs Slough bridge Side
29.4	Niles Tower	Street underpass Side
34.3	Snoboy	Fudena Shed Side
36.3	Warm Springs	General Motors Buildings Tracks 2, 5, 6 and 7 Overhead

4. All movements must stop and trainmen detrain before entering General Motors Buildings. Trainmen must not ride on top of cars while switching movements are being made into and out of the above noted buildings.

5. **Tracy:** All freight trains entering Tracy Yard from Martinez and Altamont Lines slow to 8 MPH passing Tracy Yard Office so as to allow visual verification of consist.

6. **San Jose:** All freight trains entering San Jose Yard Milpitas Line slow to 8 MPH passing San Jose Yard Office so as to allow visual verification of consist.

7. Multi-level unloader on spot 150 feet east of Pacific, Guano Warehouse west end of house track Milpitas. Must not be moved.

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

SPECIAL INSTRUCTIONS — NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 5 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, and **OTHER MAXIMUM SPEEDS** appearing on page 6 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	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column	1	2	MP	MP	Column:	1	2
EASTWARD, REDWOOD JUNCTION TO TRACY:					WESTWARD, TRACY TO REDWOOD JUNCTION:				
26.23 to 26.25	26.25	(jct. switch)	20	20	71.16 to 70.66	70.66	(jct. Los Banos line)	35	35
26.25 to 28.35	28.35		35	35	70.66 to 66.30	66.30		50	50
28.35 to 28.41	28.41	(end double track)	25	25	66.30 to 65.80	65.80		40	40
28.41 to 31.51	31.51		45	45	65.80 to 63.00	63.00		50	50
31.51 to 33.00	33.00		20	20	63.00 to 57.60	57.60		25	25
33.00 to 37.00	37.00		45	45	57.60 to 57.50	57.50		20	20
37.00 to 37.51	37.51	(Newark)	15	15	57.50 to 52.00	52.00		25	25
37.51 to 42.23	42.23		30	30	52.00 to 47.48	47.48		50	50
42.23 to 43.00	43.00	(29.60) (Niles Jct.)	15	15	47.48 to 46.66	46.66	(Livermore)	30	30
29.60 to 37.10	37.10		25	25	46.66 to 41.43	41.43		45	45
37.10 to 40.57	40.57		35	35	41.43 to 40.57	40.57	(Pleasanton)	25	25
40.57 to 41.43	41.43	(Pleasanton)	25	25	40.57 to 37.10	37.10		35	35
41.43 to 46.66	46.66		45	45	37.10 to 29.60	29.60	(43.00) (Niles jct.)	25	25
46.66 to 47.48	47.48	(Livermore)	30	30	43.00 to 42.23	42.23		15	15
47.48 to 52.00	52.00		50	50	42.23 to 37.51	37.51		30	30
52.00 to 57.50	57.50		25	25	37.51 to 37.00	37.00		15	15
57.50 to 57.60	57.60		20	20	37.00 to 33.00	33.00		45	45
57.60 to 63.00	63.00		25	25	33.00 to 31.51	31.51		20	20
63.00 to 65.80	65.80		50	50	31.51 to 28.41	28.41		45	45
65.80 to 66.30	66.30		40	40	28.41 to 26.25	26.25		35	35
66.30 to 70.66	70.66		50	50	26.25 to 26.23	26.23	(jct. switch)	20	20
70.66 to 71.16	71.16	(jct. Los Banos)	35	35					
NILES TO SAN JOSE YARD:					SAN JOSE YARD TO NILES:				
29.00 to 29.81	29.81		15	15	47.39 to 43.55	43.55		15	15
29.81 to 43.55	43.55		40	40	43.55 to 29.81	29.81		40	40
43.55 to 47.39	47.39		15	15	29.81 to 29.00	29.00		15	15
WEST OAKLAND TO SANTA CLARA:					SANTA CLARA TO WEST OAKLAND:				
4.40 to 7.20	7.20		15	15	44.59 to 44.48	44.48		15	15
7.20 to 13.43	13.43		30	30	44.48 to 43.73	43.73		35	35
13.43 to 13.50	13.50	(jct. switch and crossover)	15	15	43.73 to 31.00	31.00		60	60
13.50 to 15.50	15.50		25	25	31.00 to 28.79	28.79		35	35
15.50 to 28.79	28.79		60	60	28.79 to 15.50	15.50		60	60
28.79 to 31.00	31.00	(Newark)	35	35	15.50 to 13.50	13.50		25	25
31.00 to 43.73	43.73		60	60	13.50 to 13.43	13.43	(jct. switch)	15	15
43.73 to 44.48	44.48		35	35	13.43 to 7.20	7.20		30	30
44.48 to 44.59	44.59		15	15	7.20 to 4.40	4.40		15	15

Light engines may make Column 1 speed.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains do not exceed:

Number of Cars	Tons Per Operative Brake	Number of Cars	Tons Per Operative Brake
70	70	110	62
75	69	115	61
80	68	120	60
85	67	125	58
90	66	130	56
95	65	135	54
100	64	140	52
105	63	145	50

SPECIAL INSTRUCTIONS — NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 5 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, and **OTHER MAXIMUM SPEEDS** appearing on page 6 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	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED		
MP	MP	Column:	1	2	MP	MP	Column:	1	2		
EASTWARD, AGAINST CURRENT OF TRAFFIC:					WESTWARD, AGAINST CURRENT OF TRAFFIC:						
West Oakland to Elmhurst, except:.....					40	40	Elmhurst to West Oakland				
(subject to lesser speeds on westward track)							(subject to lesser speeds on eastward track), except:				
9.55 to 10.13					20	20	10.13 to 9.53				
ELMHURST TO NILES JUNCTION:							NILES JUNCTION TO ELMHURST:				
13.43 to 13.50 (jct. switch)					15	15	29.60 to 29.00				
13.50 to 29.00					30	30	29.00 to 13.50				
29.00 to 29.60					15	15	Thru Jct. Switch MP 13.43.....				

Light engines may make Column 1 speed.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains do not exceed:

Number of Cars	Tons Per Operative Brake
70	70
75	69
80	68
85	67
90	66
95	65
100	64
105	63
110	62
115	61
120	60
125	58
130	56
135	54
140	52
145	50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
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Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:.....	15
Through turnouts on other than sidings	10
On branches	10
Ravenswood, on spur.....	10

SPECIAL INSTRUCTIONS — MARTINEZ SUBDIVISION

RULE 5. Time at stations between Oakland (16th Street) and Sacramento applies at station sign, except time for eastward first class trains at Davis via Gerber line applies at east switch north siding.

RULE 14(1). Whistle must be sounded on westward trains immediately on emerging from Tunnel No. 1 at Oleum.

RULE 26. West Oakland (Passenger Yard): Electric switch locks on west switches Tracks 2 to 5, inclusive, Track 19 and on east switches Tracks 14 to 18, inclusive.

Power operated derrails on west end Track 6 and on east end Tracks 2 to 6, inclusive, and Track 13.

RULE 82-A. Trains terminating at Bays will register at West Oakland.

Trains originating Desert Unit, West Oakland, will obtain train orders and clearance at West Oakland.

Trains to Western Division at Sacramento originating at Roseville must obtain two clearances, one endorsed Sacramento Division, the other endorsed Western Division. Train orders addressed to such trains at Roseville will apply the same as if addressed to them at Sacramento and may leave Sacramento without clearance.

No. 378 and extra trains, except trains of passenger equipment, from Western Division passing Sacramento will not obtain clearance at Sacramento.

Sacramento Northern trains originating at Sacramento 19th & B Streets, or Sacramento-Yolo Port District connection to Western Division will obtain clearance at Sacramento.

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

West Oakland.....	}	Trains originating or terminating
Suisun-Fairfield.....		
Dixon		
Davis.....		
Avon.....		
Port Chicago.....		
Pittsburg		

Napa: Extra trains operating beyond Napa, MP 69.5, originating or terminating.

Sacramento: Trains originating or terminating, except No. 378 and extra trains passing Sacramento to or from Western Division.

Extra trains will register at Lombard.

Extra trains will register at Schellville only when instructed by train order.

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

- Suisun-Fairfield. All trains from Sacramento line to Schellville Branch.
- All trains from Schellville Branch to Sacramento line.
- Davis All trains to or from West Valley Subdivision, Sacramento Division.
- All Sacramento Northern Trains.
- Lombard..... All trains from Schellville to Suisun-Fairfield.
- All trains from Suisun-Fairfield to Schellville.

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

West MP	East MP
	Oakland (Martinez line) 17.35
	Oakland (Niles line) 15.82
	Oakland (Alvarado line) 14.01
22.50	Pinole 24.80
27.97	Port Costa 39.24
	Port Costa (Benicia spur) End of track
	Port Costa (Tracy line) 37.08
47.05	Suisun-Fairfield 52.45
	Suisun-Fairfield (Schellville Branch) 51.25
66.00	Dixon 68.10
74.20	Davis 77.37
	Davis (Tehama line) 78.00
37.50	Avon-Port Chicago 42.93
	(San Ramon Branch) 40.50
46.31	Pittsburg 52.20
61.00	Brentwood 62.70
78.50	Tracy (Martinez-Los Banos line) 85.64
66.50	Tracy (Niles-Lathrop line) 74.37
59.85	Napa Jct. (Cordelia-Schellville line) 64.56
	Napa Jct. (Napa line) 71.50
	Napa Jct. (Vallejo line) End of track
71.72	Schellville (Lombard-Ignacio line) NWP 38.93
	Schellville (Sonoma line) NWP 41.70
58.00	Elmira 61.00

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

RULE D-97. Will apply as follows: Between Oakland (16th Street) and Sacramento; Martinez and Mocco.

RULE 98. Railroad crossings at grade not interlocked. Trains and engines must approach with caution, and may move over the following crossing without stopping, if crossing clear and no movement approaching on intersecting line:

Napa Jct.: Big balloon track crossing of Napa Vallejo main track. Schellville line trains using big balloon track need not stop.

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Napa Jct.: Napa-Vallejo main track crossing of big balloon track. Napa-Vallejo line trains must stop.

RULE 103-A. Automatic Crossing Gates: On double track automatic crossing gates do not operate for against current of traffic movements at territory speeds and Rule 103-A will apply.

Martinez: Crossing Gate Key Control installed at Ferry Street to actuate gates when backup movements made to clear junction switch.

Suisun-Fairfield: Eastward trains stopping at station will stop clear of crossing circuit 80-feet west of Union Avenue designated by sign reading "SPOT" on instrument case. Sound Detector microphone is located at instrument case. When ready to proceed, enginemen will sound whistle to activate the crossing gates and proceed slowly to permit gates to be down before train enters the crossing.

SPECIAL INSTRUCTIONS — MARTINEZ SUBDIVISION

Elmira: Eastbound and westbound trains and engines operating on siding STOP at "STOP" sign, 25 feet short of Water Street, MP 59.2, and not proceed onto crossing until gates are down. Cars are not to be spotted within 100 feet of crossing.

Dixon: The Automatic crossing gates at Batavia Road MP 64.1 do not protect for westward movements on eastward track. Crews of trains operating against the current of traffic on eastward track between Dixon and Elmira must know crossing gates are down before proceeding across Batavia Road.

Avon: Trains and Engines operating on corral track STOP at "STOP" sign 25 feet from Solano Way, MP 38.2 and do not proceed on crossing until gates are down. Cars must not be left standing within 100 feet of Solano Way.

Port Chicago: Gates are not actuated when trains are stopping at station until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down.

Los Medanos: Trains and Engines operating on Camp Stoneman Drill Track STOP at "STOP" sign 25 feet from Loveridge Road, MP 50.8, eastbound, and MP 50.9, westbound, and do not proceed on crossing until gates are down. Cars must not be left standing within 100 feet of Loveridge Road Crossings.

Lombard: Highway 29 M.P.-61.7 an illuminated advance warning sign is in service to advise north bound motorists of impending crossing gate operation. The warning sign is connected to controls of automatic crossing gates and is ILLUMINATED before crossing gates are activated.

The crossing gates on east side and west side of the crossing are equipped with flashing white lights to indicate that all gates are down.

Movements that stop approaching Highway 29 shall not enter the crossing unless white light is flashing or it is otherwise known that all gates are down and the crossing is clear of vehicles. Eastward movements shall stop west of instrument case approximately 225 feet west of crossing. Westward movements stop at "SPOT" board approximately 200 feet east of the crossing. Movements so stopped shall lower crossing gates by operating key control on gate each side of the crossing.

Sound detectors are installed at clear point of west siding switch and west yard switch. Westward trains entering the main track over these switches will sound whistle into these detectors before fouling main track.

Operation of key control or sound detector will illuminate highway warning sign immediately, crossing gates will function about 10 seconds later.

Napa: When switching on or across any street crossing city ordinance requires that member of crew must protect crossing.

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

- Suisun-Fairfield...Crossing Union Ave. when moving against current of traffic, A-49-0,
- Thomann.....Crossing highway on Napa Valley Cooperative Winery spur, AB-86.0-C,
- VacavilleCrossing on Standard Oil spur, AD-63.15-C,
- Port Chicago.....Crossing County road on leads to Naval Supply Base, B-40.8-C, B-41.0-C,
- PittsburgCrossings on industry spurs, B-47.8-C, B-48.1-C,
- Los Medanos.....Crossing California Avenue on Antioch Building Materials Spur, B-50.6-C.
- BrentwoodCrossing highway on Irrigated Farms spur, B-62.6-C.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

- Avon.....San Ramon line, for siding.
- Suisun-Fairfield...Napa Jct. line for east leg of wye to Sacramento.
- Napa Jct.....Suisun-Fairfield line, for Schellville line, at MP 61.60.
- Schellville.....Schellville Branch, for NWPRR main track.

Napa Jct.: Track known as big balloon is Schellville line main track.

RULE 105. Suisun-Fairfield: Westward siding is first track north of westward main track extending from MP 48.65 to MP 48.10. Westward trains entering siding, if length of train permits, must stop with rear of train clear of Union Avenue crossing.

North siding is first track north of main track on Schellville Branch extending from MP 48.94 to MP 49.95, to be used by trains from Schellville Branch to Sacramento line. May be used by other trains only when instructed by dispatcher.

Davis: Eastward siding is first track south of eastward main track extending from MP 75.88 to MP 76.60.

Westward siding is first track north of westward main track extending from MP 77.03 to MP 75.73.

North siding is first track west of main track on Gerber line extending from MP 75.79 to MP 76.75.

RULE 221. West Oakland, Rodeo, Dixon and Avon are train-order offices only for trains originating.

RULE D-251. Will apply as follows: On westward track between Sacramento and Oakland (16th Street). On eastward track between Oakland (16th Street) and Sacramento.

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

Eastward Signal	Protection	Westward Signal
P-I	Collision detector, highway underpass west end of wye, Davis	P-I
	Spring switch, end double track, Mococo	P-359
P-510	Collision detector, highway underpass, MP 50.97 (Los Medanos)	P-519
P-710	Spring switch, junction to Los Banos line, Tracy	
	Spring switch to yard, Tracy	P-829
*P-SA	Dragging equipment detector, MP 34.8	
	Dragging equipment detector, MP 35.9	P-347

*A 2-indication, light type indicator installed just below interlocking signal P-SA located 550 feet west of draw span, and a 2-indication, light type indicator attached to the mast of signal P-347, are designated as dragging equipment indicators.

They will display red aspect with signal at "STOP" when actuated by dragging equipment detector, and lunar white aspect when not actuated by dragging equipment detector.

Crews of trains stopped by signals P-SA or P-347 with the red indicator light illuminated, will inspect their train for dragging equipment.

Signal may be cleared and indicator light changed to lunar white by pressing push button located on signals P-SA and P-347 after first complying with Rule 306.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Cannon: Electric locks installed on crossover switches and on switch for Sacramento Northern connection to the eastward track.

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

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

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

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

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

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

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

Tracy: When Signal 816, approach signal to West End Tracy displays stop indication, eastward trains may proceed after receiving oral authority from Operator at Tracy but must comply with Rule 507.

RULE 512. Block indicators adjacent to east switch of crossover and switch to Sacramento Northern connection. Cannon apply to the eastward main track only.

RULE 513. Westward trains before making crossover movement at Cannon, permission must be received from operator, Davis.

Sacramento Northern trains on eastward trip before entering Main Track at Cannon, permission must be received from operator, Davis.

RULE 516. Overlap posts.

Los Medanos (250 feet west of Signal 509).....Westward trains.

RULE 535. SPRING SWITCHES

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

Location	Normal Position
Mococo.....	End double track Westward track
Tracy.....	Junction switch MP 71.16 to Los Banos line Lathrop Sub-division

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

*West Oakland.....	1st and 16th St. line.....	16th St. line
*Stege.....	Seaver wye.....	East leg of wye
*Ozol.....	East end siding.....	Main track
*Ozol.....	West end siding.....	Main track
Martinez.....	Junction switch.....	Bridge line
*Suisun-Fairfield.....	East end north siding.....	Main track
*Lombard.....	East end siding.....	Main track
*Lombard.....	West end siding.....	Main track
Tracy.....	MP 82.98 Los Banos main to yard.....	Yard Track

*Equipped with switch-point indicator.

RULE 605. INTERLOCKING

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

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operated on yard tracks.

Oakland, 16th St.: Limits extend from signals 427 feet east of MP 5 on the Martinez line to signals at MP 6.55.

Hand throw crossover from Desert lead to No. 1 Freight Lead has been installed at MP 5.9, Desert Yard.

Crews making movement from Desert lead to No. 1 freight Lead will secure authority from 16th Street Tower-man to pass signal located near west switch of the crossover into 16th Street interlocking.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yard leads 40, 50 and 60.

Martinez: Limits extend on eastward main track from home signal 600 feet east of station building to westward dwarf signals 938 feet east of station building on Tracy line and on Suisun Bay bridge line.

Limits extend on westward main track from signals 2350 feet east of station building on Tracy line and on Suisun Bay bridge line, to interlocking signal 50 feet west of junction switch. Operator's permission must be obtained before fouling westward main track at crossover and switches from spurs to westward main track between Martinez and Ozol.

Suisun Bay Bridge, Martinez: Bridge zone limits extend on both tracks from home signals 800 feet east of draw span to home signals 550 feet west of draw span.

Davis: Limits extend on eastward and westward main tracks from interlocking signals at MP 75.25 to interlocking signal on signal bridge at MP 75.98 on westward main track, interlocking signals 325 feet west of MP 75.98 on eastward main track and eastward siding, interlocking signal at MP 75.97 on the westward siding and to westward interlocking signal at MP 75.55 on the Gerber line.

Cranks for hand operating power switches are mounted on signal instrument case on south side of track at west end of street underpass on the west end, on instrument case on south side of track opposite P.G.&E. switch on the Sacramento end, and on instrument case between 3rd Street and 4th Street on the Woodland end.

When necessary to hand operate power switches, permission must be obtained from the operator.

Instructions for hand operating power switches are mounted on cases above crank holders.

Sacramento River Drawbridge: Eastward trains stopped by interlocking signal at MP 87.94 must contact Sacramento Yardmaster and if authorized to enter yard, must then contact operator, Sacramento River Drawbridge, and be governed by Rules 662 and 663.

Brazos Drawbridge over Napa River: Movement over bridge not permitted unless operator on duty.

Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.62 on the Niles line and to eastward SA Signal at MP 82.18 on the Martinez line.

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

SPECIAL INSTRUCTIONS — MARTINEZ SUBDIVISION

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control switch. When necessary to hand throw this switch, permission must be secured from the Yardmaster.

Interlocking portion of the SA signal controlled by Tracy Operator.

The operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 680. AUTOMATIC INTERLOCKING

SNRy Crossing, MP 86.90: Limits extend between interlocking signals in approach to both sides of crossing.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows
W	77	Oakland (16th St.)	Stop east of 67th St. Emeryville and wait until Signal 77 displays proceed indication.

RULE 705. HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
W	672	Dixon	
H	702	Tremont	MP 71.6 Tremont

Scanner Site

MP	Direction	Location
68.5	East and West	Dixon-Sucro

MP	Direction	Location	Location of Recorder
*17.0	West	San Pablo	West Oakland Yard

Scanner Site:

MP	Direction	Location
†23.4	East	Pinole-Hercules
‡63.2	West	Elmira-Dixon

*Refer to second paragraph Rule 705, All Subdivisions, and in addition train must be stopped when white light is observed flashing. When means of communication is available, crew member must contact Yardmaster at location of Recorder to determine location of hot bearing. If location of hot bearing cannot be determined inspection must be made of all journals. Also be governed by last paragraph and Items 1 through 5, Rule 705, All Subdivisions.

†Indicator array consisting of white lights and revolving red beacon is mounted on Signal Bridge to the right of Signal 234.

‡Detector instrument house is equipped with indicator array consisting of white lights and revolving red beacon.

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

Revolving red beacon at top center of indicator array will be normally dark except when a hot bearing has been detected, beacon will be actuated.

Three vertical white lights are located on each side of indicator array. Lights on right side will be displaced for hot bearings on right side of train, in direction of movement, and lights on left side will indicate hot bearings on left side of train.

Top light indicates first hot bearing, second light indicates second hot bearing, third light indicates third hot bearing. Lights will indicate a maximum of three hot bearings on each train.

Crew members must keep vigilant lookout when passing these locations and if hot bearing is detected train will be stopped promptly

and inspection made to locate car with hot bearing. In addition truck of car with hot bearing will be sprayed with fluorescent dye marker for identification. All journals on car marked as well as car ahead must be inspected.

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

Refer to RULE 705. ALL SUBDIVISIONS.

GENERAL REGULATIONS

RULE 825. Elmira: Not less than three hand brakes must be set on east end of cars left standing except with less than three hand brakes all brakes must be set.

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

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

RULE 827. Dragging and/or derail equipment detector and indicator installed at the following location:

MP	Location
78.7E	Swingle

Refer to Rule 827, All Subdivisions.

RULE 830. Schellville: Trains arriving and departing and when switching movements are being made over Highway Crossing No. 12, Schellville crossing will be cleared after each move is made to allow vehicular traffic to pass.

RULE 858. Between Oakland (16th Street) and San Francisco passengers and hand baggage will be transported by bus; checked baggage, mail and express by truck.

AIR BRAKE RULES

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

MP 58 to Napa Jct., MP 58 to Cordelia.

Without dynamic brake in operation:

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

With dynamic brake in operation:

*Permissible Tons Per Unit Without Retaining Valves

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
With dynamic brake in operation but WITHOUT pressure maintaining system of braking:					
MP 58 to Napa Jct.	750	1125	950	1400	1875
MP 58 to Cordelia	525	800	650	975	1300
With dynamic brake in operation and WITH pressure maintaining system of braking:					
MP 58 to Napa Jct.	1600	2400	2000	3000	4000
MP 58 to Cordelia	1300	1950	1600	2400	3200

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

*If any unit having basic dynamic brake is operated with units having extending range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF623, EF625, EF630, EF636, GF425 (except units 6700-6727) GF628, GF630, EF850B, EF633 and GF850 are equipped with extended range dynamic brake.

RULE 33. Descending grades where restrictions apply are designated below:

EASTWARD			WESTWARD		
Martinez to Bahia Eastbound Track			M.P. 58 to Cordelia		
MP	MP	Speed	MP	MP	Speed
33.8 to 36.0		20 MPH	58.0 to 55.0		25 MPH

RULE 38-A. Will not apply at Sacramento except incoming engineer after completing stop will make a full service brake application, leaving brakes applied. Running test in compliance with Rule 39 must be made as soon as speed permits after train departs terminal.

RULE 39. Running test must be made as follows:
Eastward and westward trains at MP 58.

MISCELLANEOUS

1. Westward trains making station stop at Martinez will stop with units clear of Ferry street crossing.

Eastward trains making station stop at Martinez will make normal station stop blocking Ferry Street, but not to exceed ten minutes.

2. SCHELLVILLE BRANCH: Between Suisun-Fairfield and Lombard. Empty 85-foot or longer equipment must be entrained ten or more cars behind road engine and ten or more cars ahead of helper engine, if used, in territories where grade is 1.8 percent or over and curvature is ten degrees or more.

A flat with one van or one container either loaded or empty will be considered as an empty.

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

Class of Engine	Restricted Tracks
All.....	Rocktram—Three spur tracks diverging from interchange tracks on river side of main track.
All, except EF 418.....	Brentwood—All Industry Tracks

4. Load limit (car and contents):

*Oakland-Sacramento	263,000 pounds
***Martinez-Tracy	263,000 pounds
Suisun-Fairfield-Napa Jct.....	263,000 pounds
Napa Jct.-Schellville.....	240,000 pounds
Napa Jct.-Krug	240,000 pounds
Napa Jct.-Vallejo	263,000 pounds
Elmira-Winters	240,000 pounds
**Winters-Esparto	210,000 pounds
***Avon-San Ramon.....	210,000 pounds
San Ramon-Radam	240,000 pounds

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

**Exception: Passenger equipment on six axles weighing not over 200,000 pounds may be handled.

***When notified that false bents are not in place on bridge 56.99 load limit between Avon and Radum will be 169,000 pounds.

****Cars SP 463000 through 463499, maximum gross load per car is 260,000 pounds when operated in series.

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

5.

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

Mile Post	Location	Description
6.4	Emeryville.....	Key system underpass.....Side
6.6	Emeryville.....	W. U. pole line, near Park Ave.....Side
14.5	Richmond.....	AT&SFRy overhead bridge.....Overhead
16.0	San Pablo.....	AT&SFRy overhead bridge. Overhead & side
34.7	Martinez.....	Alhambra slough bridge.....Side
88.5	Washington.....	Sacramento River drawbridge.....Side
63.6	Vacaville.....	Ulatis Creek bridge.....Side
75.8	Winters.....	Putah Creek bridge.....Side
52.5	Thomasson.....	Suisun Creek bridge.....Side
53.0	Thomasson.....	Tunnel.....Overhead
37.9	Avon.....	Pachecho slough bridge.....Side
43.1	Nichols.....	Wagon bridge.....Overhead & side
43.2	Nichols.....	AT&SFRy overhead bridge. Overhead & side
48.8	Pittsburg.....	Signal bridge.....Overhead
64.7	Brazos.....	Drawbridge over Napa River.....Side
44.6	Hookston.....	Walnut Creek bridge.....Overhead & side
49.2	Walnut Creek.....	San Ramon Creek bridge.....Overhead & side
57.0	San Ramon.....	San Ramon Creek bridge.....Overhead & side

SPECIAL INSTRUCTIONS — MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on page 5 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, and **OTHER MAXIMUM SPEEDS** appearing on page 6 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	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column:	1	2	MP	MP	Column:	1	2
EASTWARD, WEST OAKLAND TO SACRAMENTO:					WESTWARD, SACRAMENTO TO WEST OAKLAND:				
4.90 to 4.25	4.25 to 5.10		15	15	89.00 to 88.54	88.54 to 76.00		10	10
5.10 to 7.75	7.75 to 16.31		45	45	76.00 to 75.20, except:	75.60 to 75.36 (West leg wye and jct. switch)		45	45
16.31 to 21.50	21.50 to 34.40		60	60	75.20 to 75.60 (crossover and west leg wye to Gerber line)	75.20 to 49.00		20	20
34.40 to 34.70 (Martinez)	31.76 (34.70) to 34.58 (Suisun Bay Bridge)		70	60	49.00 to 48.38	48.38 to 35.50		70	60
34.58 to 35.50	35.50 to 48.38		30	30	35.50 to 34.70			55	55
48.38 to 49.00			45	45				70	60
49.00 to 75.20			20	20				45	45
75.20 to 76.00, except:			70	60					
75.25 to 75.60 (crossover and west leg wye to Gerber line)			35	35					
76.00 to 87.79			10	10					
87.79 to 88.54 (Spring Switch)									
88.54 to 89.00									
EASTWARD, AGAINST CURRENT OF TRAFFIC:					WESTWARD, AGAINST CURRENT OF TRAFFIC:				
West Oakland to Sacramento			59	49	Sacramento to West Oakland			59	49
(Subject to lesser speeds on westward track), except:					(Subject to lesser speeds on eastward track), except:				
31.10 to 31.11 (Ozol)			35	35	34.21 to 34.20 (Ozol)			35	35
34.20 to 34.21 (Ozol)			35	35	31.11 to 31.10 (Ozol)			35	35
75.20 to 76.00			20	20	76.00 to 75.20			20	20
EASTWARD, MARTINEZ TO TRACY:					WESTWARD, TRACY TO MARTINEZ:				
34.70 to 35.91			25	25	82.58 to 82.24 (jct. Los Banos line)			35	35
35.91 to 48.15			60	60	82.24 to 81.83 (jct. Niles line)			20	20
48.15 to 48.90			50	50	81.83 to 80.70			45	45
48.90 to 48.95 (Pittsburg)			25	25	80.70 to 53.60			60	60
48.95 to 53.30			60	60	53.60 to 53.30 (Antioch)			45	45
53.30 to 53.60 (Antioch)			45	45	53.30 to 49.70			60	60
53.60 to 80.70			60	60	49.70 to 48.95			50	50
80.70 to 81.83			45	45	48.95 to 48.90 (Pittsburg)			25	25
81.83 to 82.24 (jct. Niles line)			20	20	48.90 to 35.91			60	60
82.24 to 82.58 (jct. Los Banos line)			35	35	35.91 to 34.70			30	30

Light engines may make Column 1 speed not exceeding 70 MPH.

SPECIAL INSTRUCTIONS — MARTINEZ SUBDIVISION

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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			FREIGHT AND MIXED	TERRITORY			FREIGHT AND MIXED
MP	MP	Column:	1	MP	MP	Column:	1
EASTWARD, AVON TO RADUM:				WESTWARD, RADUM TO AVON:			
38.10 to 44.64			25	67.80 to 57.02			25
44.64 to 44.67	(bridge)		15	57.02 to 56.99	(bridge)		15
44.67 to 49.22			25	56.99 to 49.25			25
49.22 to 49.25	(bridge)		15	49.25 to 49.22			15
49.25 to 56.99			25	49.22 to 44.67			25
56.99 to 57.02	(bridge)		15	44.67 to 44.64	(bridge)		15
57.02 to 67.80			25	44.64 to 38.10			25
EASTWARD, ELMIRA TO ESPARTO:				WESTWARD, ESPARTO TO ELMIRA:			
59.60 to 76.00			25	90.35 to 76.00			10
76.00 to 90.35			10	76.00 to 90.35			25
EASTWARD, SUISUN-FAIRFIELD TO SCHELLVILLE:				WESTWARD, SCHELLVILLE TO SUISUN-FAIRFIELD:			
48.93 to 49.30			15	NWPRR. on wye to 72.60			10
49.30 to 61.47			35	72.60 to 65.25			35
61.47 to 61.77	(Napa Jct.)		15	65.25 to 64.15	(drawbridge)		15
61.77 to 64.15			35	64.15 to 61.77			35
64.15 to 65.25	(drawbridge)		15	61.77 to 61.47			15
65.25 to 72.60			35	61.47 to 49.30			35
72.60 to NWPRR. (on wye)			10	49.30 to 48.93			15
EASTWARD, NAPA JUNCTION TO VALLEJO:				WESTWARD, VALLEJO TO NAPA JUNCTION:			
61.60 to 61.75			15	69.00 to 66.65			15
61.75 to 66.65			25	66.65 to 61.75			25
66.65 to 69.00			15	61.75 to 61.60			15
EASTWARD, NAPA JUNCTION TO KRUG:				WESTWARD, KRUG TO NAPA JUNCTION:			
61.25 to 61.30			15	88.75 to 78.92			10
61.30 to 66.10, except:			20	78.92 to 71.78	(highway crossing)		20
Thru turnout at MP 65.86			15	71.78 to 66.80			20
66.10 to 66.80			5	66.80 to 66.10			5
66.80 to 71.60			20	66.10 to 61.30, except:			20
71.60 to 71.78	(highway crossing)		15	Thru turnout at MP 65.86			15
71.78 to 78.92			20	61.30 to 61.25			15
78.92 to 88.75			10				

On Napa Branch between locations shown below, maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in **SPEED RESTRICTIONS FOR TRAINS TABLE** above:

MP 78.56 to MP 88.75	
EF415A, EF415B, EP415A, EP415B, EF418, EF423, AS418	10 MPH
ES410, BS412, ES412	15 MPH
BS616, BS616B, FP624	15 MPH

On Winters Branch between MP 76.34 to 90.08 maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in **SPEED RESTRICTIONS FOR TRAINS TABLE** above:

ES406	10 MPH
KF636A	10 MPH

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 turnouts on other than sidings	10
On branches	10

