

RULE 10-1

Oral authorization and acknowledgments between Foremen and Engineers for trains to pass "Red Conditional Stop" signs must be worded in the following forms:

Foreman's Response

"THIS IS S.P. FOREMAN IN CHARGE OF THE WORK BETWEEN MP _____ AND MP _____ S.P. TRAIN ORDER NO. _____. WE ARE IN THE CLEAR AND YOU MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF THE ORDER AT _____ M.P.H."

Engineer's Response

"THIS IS ENGINEER S.P. TRAIN _____. I MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER NO. _____ BETWEEN MP _____ AND MP _____ AT (Speed). REPEAT (Speed) MILES PER HOUR."

Foreman must acknowledge Engineer's response as follows:
S.P. TRAIN NO. _____, O.K. ON ORDER NO. _____

SPEED TABLE

TIME PER MILE	MILES PER HOUR	TIME PER MILE	MILES PER HOUR
41"	87.8	1'11"	50.7
42"	85.7	1'12"	50
43"	83.7	1'13"	49.3
44"	81.8	1'14"	48.6
45"	80	1'15"	48
46"	78.3	1'16"	47.4
47"	76.6	1'17"	46.8
48"	75	1'18"	46.2
49"	73.5	1'19"	45.6
50"	72	1'20"	45
51"	70.6	1'25"	42.4
52"	69.2	1'30"	40
53"	67.9	1'35"	37.9
54"	66.7	1'40"	36
55"	65.5	1'45"	34.3
56"	64.3	1'50"	32.7
57"	63.2	1'55"	31.3
58"	62.1	2'00"	30
59"	61	2'15"	26.7
1'00"	60	2'30"	24
1'01"	59	2'45"	21.8
1'02"	58.1	3'00"	20
1'03"	57.1	3'30"	17.1
1'04"	56.2	4'00"	15
1'05"	55.4	5'00"	12
1'06"	54.5	6'00"	10
1'07"	53.7	7'00"	8.6
1'08"	52.9	7'30"	8
1'09"	52.2	8'00"	7.5
1'10"	51.4	10'00"	6

SOUTHERN PACIFIC COMPANY



OREGON DIVISION SPECIAL INSTRUCTIONS

No. 2

EFFECTIVE SUNDAY, OCTOBER 31, 1965

AT 12:01 A. M.,
PACIFIC STANDARD TIME

THESE INSTRUCTIONS CONSTITUTE A PART
OF THE TIMETABLE CURRENTLY IN
EFFECT

M. A. McINTYRE,
General Manager.

R. D. SPENCE,
S. B. BURTON,
Assistant General Managers.

J. P. GRIFFIN,
General Superintendent of
Transportation.

J. J. WILLIS,
Superintendent of Transportation.

A. W. KILBORN,
Superintendent.

SOUTHERN PACIFIC MEMORIAL HOSPITAL, INC.

Table with 6 columns: LOCATION, NAME, TITLE, LOCATION, NAME, TITLE. Lists medical staff across various locations like San Francisco, Ashland, Medford, etc.

Note.—Emergency Surgeons should only be summoned for temporary treatment when prompt attention is required and when patients cannot be sent to or await arrival of Division or District Surgeon.

HOSPITALS

Table listing hospitals: S. P. MEMORIAL HOSPITAL (SAN FRANCISCO), GOOD SAMARITAN HOSPITAL (PORTLAND), EMERGENCY HOSPITAL (BROOKLYN), EMERGENCY HOSPITAL (EUGENE)

WATCH INSPECTORS

Table listing watch inspectors and their locations: San Francisco, Oakridge, Springfield, Eugene, etc.

RULE A. Employes must have copy of Rules and Regulations of the Transportation Department effective July 1, 1960, with page revisions as listed on pages 1 and 2 revised April 1, 1961.

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

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

Employes are prohibited from riding or walking on the roof of any moving car. (Exception: Employes may ride on the roof of cars when necessary during switching operations, but must not cross from the roof of one car to another while in motion.)

Employes must not ride on the tops of high-cube excess-height box cars. When such cars are picked up enroute and train length permits, these cars shall be entrained at least five cars ahead of caboose.

RULE 1. Form prescribed for recording variations for Stand-ard Clock at Time Signal has been discontinued.

RULE 7-B. Yardmen must use green flag or light or oral instructions for all train movements to or from yard tracks at Eugene Yard, Albany, Salem, Brooklyn, Ashland, Dunsmuir and Klamath Falls.

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 right of track in direction of approach. If clearance between siding and main track does not permit display of these signals to right of track in direction of approach, signals may be displayed to left of track in direction of approach.

Display of these signals to the left of track in direction of approach must be respected as though they were displayed in accordance with these rules.

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

Light engines are authorized to operate at "passenger train" speeds not exceeding 70 MPH except on descending grades without dynamic brake in operation must not exceed speed shown for "freight and mixed" trains.

Engine, flanger and caboose only are authorized to operate at "passenger train" speeds not exceeding 45 MPH on tangent track and 35 MPH on curves.

Passenger equipment with caboose or engine and caboose only are authorized to operate at "passenger train" speeds not exceeding 65 MPH.

RULE 11-A. At locations where fire hazards exist and the use of fuses is required, fuses must be placed between the rails.

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

RULE 16(e). Is cancelled.

RULE 16(k). When standing apply or release air brakes.

RULE 19. Last sentence of Item (5) is cancelled.

RULE 26. On diesel fueling tracks a blue light will not be attached to reflectroized blue "Men at Work" signs.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except as may be noted on schedule pages of timetable.

RULE 102. Should a passenger train break in two or an emergency application of brakes occur while in motion on an ascending grade head 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 lead truck of detached portion descending grade must be blocked or chained in such manner as to derail car should there be an uncontrolled movement.

RULE 103-A. Automatic crossing gates:

Crossings protected by gates have control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against the current of traffic or movements from siding, yard or industrial tracks over crossings protected by crossing gates must know that gates are down and crossings clear of vehicular traffic before entering crossings.

RULE 105. When length of train and/or capacity of siding permits, trains taking siding after clearing main track will provide not less than 400 feet additional clearance to fouling points.

RULE 220-A. First Paragraph of Rule 220-A is revised as follows:

"Train orders relating to track conditions and Form Y train orders, unless annulled, must be respected by conductor and engineer on all trips made during the tour of duty on which such orders are received."

FORMS OF TRAIN ORDERS. Form G, last paragraph is revised as follows:

"When an order, Form G, is fulfilled or annulled, other forms of orders held by the extra so created, except Forms K, V, Y, and train orders relating to track conditions, are also made void.

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

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.

ELECTRIC SWITCH LOCKS

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

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

Lock lever must not be returned to locked position until all movements over the switch are completed, switch returned to normal position and locked. Within CTC limits, train dispatcher's permission must also be obtained before lock box door is opened.

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

Low type electric locks, such as are applied direct to lever of hub type switch stands, function as above except that the removal of the switch lock has the same effect as opening the lock box door. Instead of being equipped with an "unlocked" indicator, these locks have a pilot light that indicates by illumination when the lock is unlocked.

When pilot light will not illuminate to indicate electric lock is unlocked, push button on adjacent cast iron box, protected with a cover and locked with switch lock, should be depressed to illuminate green light. After a time interval of from one to seven minutes pilot light on electric lock will be illuminated, indicating lock is unlocked.

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

MECHANICAL SWITCH LOCKS

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

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

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

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

INTERLOCKING

When for any reason proceed indication of an interlocking signal cannot be acted upon at once, signal operator must immediately be notified.

When power operated switches are dual-control type switch machines, Rules 771 and 772 will also apply.

RULE 663 (c). When moving under the provisions of this rule requires movement over a dual-control type power operated switch, switch must be placed in hand position while movement is made over the switch, then returned to motor position.

LETTER TYPE INDICATORS

RULE 705. Instructions follow for operation of hot box detector boxes when stopped by illuminated letter actuated by hot box detector device. These instructions are also posted inside detector boxes.

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 the direction of movement. Numbers displayed on top or bottom row indicate the number of axles between hot bearing and rear axle of train. Indicators 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. 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 indicator. Case door must be closed and locked with switch lock.

CENTRALIZED TRAFFIC CONTROL

RULE 763. Light engines which originate and terminate within CTC limits need not display indicators, white lights or flags as provided for in Rules 21-A, 21-B and 21-C.

RULE 765. Hand operated switches within A-PB or CTC limits (except A-PB Greton-Beburg) must not be operated without permission from train dispatcher and where main track hand operated switches are not equipped with electric or mechanical switch locks and maximum authorized speed is in excess of 20 MPH, trains and engines using such switches must occupy main track continuously or leave main track switch open while work is being performed. Such tracks must not be used by trains or engines for the meeting or passing of trains.

RULE 765-A. The provisions of Rule 765-A will not apply when Form Y train-order is in effect within CTC limits.

RULE 771. "Drops" must not be made over dual-control switches.

RULE 776. Trains authorized by train dispatcher to pass absolute signal displaying stop indication and to proceed at restricted speed under provisions of this rule, may resume normal speed after rear of train passes next block signal displaying green aspect.

GENERAL REGULATIONS

RULE 808. In case of grade crossing accident it is permissible for crew members on request of law enforcement officers to furnish their names, occupations and addresses; identification of the train; direction and approximate speed of the train confirmation that the whistle, bell and headlight or headlights were operating; and direction of the vehicle. Signed statements are not to be given. Should police officers desire any additional information they should be courteously referred to Claims Department representative.

District Claims Agent,
General Claims Department,
Room 340, Union Station
Portland, Oregon
Telephone: Capitol 8-8181, Extensions 430,
484, 486

RULE 825. When cars are set out or left on grade not protected by derail, they must also be chained to rail, or chain placed ahead of lead wheels on down-grade end. When bad order car is set out another car with brake securely set must be placed below and against the bad order car.

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

RULE 827. Trains handling logs on flat cars being met or passed by trains on adjoining track must be thoroughly inspected to know that proper clearance exists and at meeting or passing point will move only when train on adjoining track is standing they must clear the time of first class trains sufficiently in advance to make inspection and must afford protection against first class trains until inspection is made. Trains except first class must not meet or pass trains handling logs on flat cars until signal or communication is received that inspection has been made.

RULE 836. When necessary to shove cars ahead of engine between stations on descending grade, cars must be chained to the engine unless air brakes are operative on all cars and air cut in.

RULE 873. Sanders must not be operated between absolute or interlocking signals governing movement over power operated switches.

AIR BRAKE RULES

RULE 2. When temperature is 32 degrees above zero or less, air brake system on locomotive must be blown out before coupling to train, as follows:

Place automatic brake valve handle in running position, then open angle cock at rear of locomotive, move brake valve handle suddenly to release position, causing heavy flow of air throughout the brake pipe, which should blow out any condensation that may have accumulated in the brake system.

Before road test is made on any freight train after locomotive has been coupled thereto, blow out air brake pipe hoses on head end of train as follows:

After making brake pipe reduction, close angle cocks between second and third cars, uncouple air hose; close angle cocks between first car and locomotive, uncouple air hose; then recouple hoses and reopen all angle cocks. During this test engineer must drain condensation from drain cocks on air compressor intercooler and aftercooler, main reservoir, control reservoir, dirt collectors, air filters, and strainers on lead unit.

RULE 2(B). Dynamic brake on head end of freight trains must not exceed four 6-axle units, six 4-axle units, or any combination of both which totals 24-axles of dynamic braking except, dynamic brake on DF-1 to DF-13 classes is limited to five units.

When two or more engines are coupled running light, engineers in charge of trailing engines must not use dynamic brake.

FREIGHT TRAINS

RULE 3. Standard brake pipe pressure for freight and mixed trains is 90 pounds, except:

On westward trains Ashland to MP-422.....80 pounds
On eastward trains Dunsmuir to Hilt.....80 pounds

RULE 14. When dynamic brakes are used on both road and helper engines while moving on descending grades, additional tonnage in the same ratio per unit as specified for road engine may be handled without retaining valves.

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

SP-345000—345669	Gondolas
SP-463500—463999	Hoppers (open top)
SP-467500—467549	Hoppers (open top)
SP-491000—491059	Hoppers (covered)
SP-492000—492039	Hoppers (covered)
SP-500604	Flat car

Before leaving a station or point where such cars have been added to the consist, engineer must actuate the automatic change-over feature by reducing brake pipe pressure to below 20 pounds whether cars are loaded or empty.

RULE 25. After making brake pipe reduction and if unable to obtain a proper air brake test while running (Rule 29) when temperature is 32° or less, train must be stopped and air brake hoses on head end blown out in following manner:

Close angle cocks between second and third cars, uncouple air hose; close angle cocks between first and second cars, uncouple air hose; close angle cocks between first car and locomotive, uncouple air hose, then recouple hoses and reopen all angle cocks. During this test engineer must drain condensation from drain cocks on air compressor intercooler and aftercooler, main reservoir, control reservoir, dirt collectors, air filters, and strainers on lead unit.

RULE 33. When tonnage of freight train handling cars with single capacity brakes exceeds 80 tons per operative brake, maximum speed of train must not exceed 45 MPH.

Weight of units not using their dynamic brake in road engines must be added to weight of cars and summation thereof divided by the number of cars having operative brakes to determine the tons per operative brake in train.

RULE 60. Changes in dynamic braking force must be made gradually when practicable. On descending grades, dynamic brake on freight trains must be reduced to one-half of maximum 500 feet before entering and 1500 feet after passing through turnout or crossover and during adjustment of slack following release of train air brakes.

MISCELLANEOUS

1. HELPER SERVICE:

- Helper engines must not be placed behind wooden under-frame equipment.
- When helper engine is placed behind caboose, not more than 2 operating units or 4000 operative horsepower will be used.
- When helper engine is placed immediately ahead of caboose, not more than 4 operating units or 8000 horsepower will be used.

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

2. Scale test cars must not be handled with other cars during switching movements, and must be entrained behind helper engines when moving in train.

3. Rotary snow plows will not clear certain structures, tunnels and cuts with wings extended; be governed by instructions posted in rotary cab.

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

Rotary snow plow SPMW 211 restricted east of the west portal of Tunnel 9, Cascade Line.

All rotary snow plows restricted from operating on Judkins and Natron sidings.

When meeting or passing trains, rotary snow plow must be stopped on straight track with wings in closed position and remain stopped until passing train has cleared.

At Judkins, Natron, Dougren, Dexter, Minnow, Crale, Hampton and Lookout, stop rotary snow plow and similar equipment before passing dwarf signals located between siding and main track. These signals will clear hinges on snow plow wings only about one inch. After stop, movement by signals to be with caution not exceeding 5 MPH.

Rotary snow plow SPMW 206 on main track or siding will not clear eastward "A" signal, 2-unit dwarf at Lawrence Street, Eugene. Signal maintainer must be called before movement is made past this dwarf signal.

Rotary snow plows equipped with wings and when wings are extended, the following impaired clearances exist between MP 565.48 (Eagle Creek) and Crescent Lake:

- At all snow sheds and tunnels.
- Bridges Nos. 565.48 (Eagle Creek), 563.23 (Salt Creek), 552.30, 549.07, 548.95, 548.50 (Noisy Creek), 547.67 (Shady Creek), 546.38 (Cascade Creek), 536.93 (Trapper Creek),
- All water columns at Wicopee, Cruzatte and Crescent Lake.
- Westward "A" signal between East switch Cruzatte and Tunnel No. 6. Signals 5282 and 5288.

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

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

5. Forward brakemen in freight service will ride the lead diesel unit unless otherwise instructed by conductor or engineer.

6. MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT.

Table with 3 columns: MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, MPH MAIN TRACKS OTHER THAN BRANCHES, MPH MAIN TRACKS ON BRANCHES. Rows include Double or triple loads, Logs loaded on flat or logging cars, Scale test cars, etc.

*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.

**When more than one scale test car is handled in a train on any branch, they must be separated by at least one steel-underframe car.

***Because of their weight, electrified snow plows are restricted from operating on branch lines as follows: Woodburn-Springfield Branch, between Springfield and Tallman, and between Lebanon and West Stayton; Mill City Branch; Marcola Branch, between MP 649.40 and Hyland; and Coos Bay Branch, between Myrtle Point and Powers.

*Main track between Eugene Yard and Albany 35 MPH.

**Main track between Eugene Yard and Albany 20 MPH.

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.

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. Unless proceed signal received, or it is known that warning devices are operating, such trains and engines must stop approaching road crossings where automatic warning devices are installed, and may proceed after member of crew protects crossing.

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

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

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

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

7. SPEED RESTRICTIONS FOR ENGINES AND TABLE OF COMPARISON: Maximum speed shown in the table on the following page is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains. Engines are being reclassified and renumbered, to extent shown in table. The table also indicates the relationship of old number series and nominal classifications to revised number and classifications. Table is to be used to resolve applicability of references to engines with current instructions, restrictions and authorities.

Engines handled dead must not exceed speed shown in table, except GS-404 restricted to 30 MPH.

New nominal classifications are descriptive of the engines as follows:

- 1st letter..... Builder: A—Alco; B—BLH; E—EMD; F—Fairbanks-Morse; G—G.E.; K—Krauss-Maffi.
2nd letter..... Type of service: F—Freight, P—Passenger, S—Switcher.
1st number..... Number of axles.
2nd and 3rd numbers.....Horsepower (100).
Last letter..... Style of unit: A—Car body type with control cab. B—No control cab. No letter indicates road switcher type.

Diesel engines weighing 100,000 pounds or more moving dead in train will be placed either first behind engine handling train or behind first car if loaded; diesel engines weighing less than 100,000 pounds must be placed near rear of train.

Dead or disabled engines, listed in timetable which requires movement at reduced speed must not be handled in train until train-order designating maximum speed is issued.

MAXIMUM SPEED FOR ENGINES AND TABLE OF COMPARISON

Table with 5 columns: OLD NOMINAL CLASS, NEW NOMINAL CLASS, OLD ENGINE NUMBER SERIES, NEW ENGINE NUMBER SERIES, MAXIMUM SPEED. Rows list engine classes like DP-6, DS-103, DF-14, etc., with corresponding engine numbers and speeds.

*When on head end of train or running light and engineer is in other than a leading control cab in direction of movement, must not exceed 30 MPH.

**When operated in multiple unit control on head end of train or running light and engineer is in other than lead unit in direction of movement, must not exceed 30 MPH.

RULE 14(b). Salem: After stopping at railroad crossings, sound Signal 14(b) only when visibility is obscured.

RULE 14(k). Will not apply between Portland and Eugene.

RULE 14(m). Salem and Hillsboro: Approaching railroad crossings sound Signal 14(m) only when visibility is obscured.

Brooklyn: Eastward freight trains will not sound Signal 14(m).

RULE 26. Portland: At Union Station blue sign may be displayed on fireman's side when conditions do not permit sign to be displayed on engineer's side of cab of engine.

Eugene Yard: Signals with blue and amber aspects located adjacent to and to be used in connection with permanently installed BLUE SIGNS at the entrances to various departure tracks. Signals are operated by Mechanical Department employees, and following will govern movement on these tracks:

- Amber: Aspect will permit movement past blue sign into track and permit coupling or moving of cars on that track.
Blue: Aspect will NOT permit movement into or on track and all provisions of Rule 26 apply.
Not Lighted: Signal must be considered as displaying most restrictive indication and Yardmaster must be contacted

RULE 81. Willsburg Jct.—Brooklyn: Two Main Tracks between MP 764.9, Willsburg Junction and MP 766.7, Brooklyn. Track No. 1 is located west of and adjacent to track No. 2.

Lebanon: When operator is on duty at Lebanon, OERY trains must obtain permission from operator before entering SP main track.

RULE 82-A. Regular trains authorized on Cascade Subdivision and terminating at Eugene, may assume the corresponding schedule on the Brooklyn Subdivision without obtaining clearance at Eugene.

Regular trains authorized on the Brooklyn Subdivision, terminating at Eugene may assume the corresponding schedule on the Cascade Subdivision without obtaining clearance at Eugene.

Train-orders may be issued on Brooklyn or Cascade Subdivision to apply on either subdivision.

When crews of regular or extra trains are relieved at Eugene all train-orders and instructions must be delivered to relieving crews; except when outgoing engineer is not available at time incoming engineer is released, train-orders and instructions will be given to conductor for delivery to outgoing engineer.

Extra trains via Monroe-Dawson need not obtain clearance at Corvallis.

Train to operate as No. 706 or section thereof from Albany is authorized to display such identity between Eugene Yard and Albany and will receive clearance at Eugene Yard accordingly.

Train operated as No. 705 or section thereof to Albany is authorized to display such identity through to Eugene Yard.

RULE 83. Extra trains operating between Corvallis and Monroe-Dawson, Canby and Molalla, Wilsonia and Jefferson Street, Whiteson and Willamina-Perrydale, Tallman and MP-658.3 and Springfield and MP-652.9, in addition to information required by train register, must register destination of trip, turning point and date and time of departure in column captioned "Signals." When trip has been completed, date and time of arrival at initial station of trip must also be entered in column captioned "Signals." Extra trains enroute into these territories must not leave the initial station until it has been ascertained from the train register that all preceding extra trains via the route to be used have completed their trips and registered time and date of arrival at initial station of trip accordingly.

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

- Eugene Yard..... Trains originating or terminating.
Brooklyn..... Trains originating or terminating.
Corvallis Junction
and Cook..... Only trains instructed by train order.
Wilsonia..... (Tillamook Branch) Only trains instructed by train order.

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

- Hillsboro..... All Trains.
Corvallis..... All Trains.
Albany..... Trains to or from Toledo Branch.

RULE 83-C. Before using UPRR main track East Portland, yard crews must know that all first-class UPRR trains have arrived or left as prescribed by UPRR Rule S-83. Check against UPRR first-class trains may be obtained, by telephone if necessary, from Yardmasters at Brooklyn or Albina or from operator at East Portland Interlocker. Yardmen must protect against overdue first-class trains as prescribed by UPRR Rule 93.

RULE 85. Third paragraph will not apply between Portland and Eugene.

RULE 87(c). Will not apply between block system limit, MP 769.2 and Portland.

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

Table with 3 columns: West MP, Station, East MP. Lists yard limits for various branches like Eugene, Albany, Salem, Woodburn-Springfield, etc.

Albany: Yardman's proceed signal will indicate protection has been provided against first-class trains moving across main track to or from Toledo Branch.

RULE 97: Between the following locations extra trains moving in either direction are authorized to run extra without train-order authority:

- End of CTC, MP 647.6 and End of CTC, MP 652.0
End of CTC, MP 688.7 and End of CTC, MP 692.3
End of CTC, MP 715.5 and End of CTC, MP 718.9
End of CTC MP 765.0 and Haig
Corvallis and Monroe-Dawson
Canby and Molalla
Wilsonia and Jefferson Street
Whiteson and Willamina-Perrydale
Tallman and MP 658.3
Springfield and MP 652.9

RULE D-97-A. Will apply between Haig and Portland.

RULE 98. Railroad crossings at grade not interlocked: Albany..... OERY crossings over yard tracks, Salem..... OERY crossings over yard tracks, Between Salem and Pinckney..... OERY crossing, Gerlinger..... West Side Branch and Falls City Branch crossing, Hillsboro..... OERY crossing at Washington St. East Portland..... SP&SRy crossing at Madison St.

RULE 99 will not apply between the following points: Corvallis and Monroe-Dawson, Canby and Molalla, Wilsonia and Jefferson Street, Whiteson and Willamina-Perrydale, Tallman and MP 658.3, Springfield and MP 652.9

Between the following locations, except on trains carrying passengers, flag protection is not required:

- End of CTC, MP 647.6 and End of CTC, MP 652.0
Eugene-Portland line, MP 689.67, and End CTC, MP 692.3.
Eugene-Portland line, MP 715.91 and End CTC, MP 718.9.
End of CTC, MP 765.0 and Haig.

RULE 99-C. Will apply as follows: On all branches.

RULE 103-A. Automatic crossing gates: At the following locations trains moving under the provisions of Rules 771 or 776 must not enter crossing until protection for vehicular traffic has been afforded by a member of the crew, or it is known that automatic warning devices are operating.

Table with 3 columns: Station, Location, MP. Lists crossing gates at Irving, Junction City, Alford, Shedd, Renard, Fairgrounds, East Milwaukie, East Milwaukie.

*Trains or engines stopped by eastward absolute signals at MP 720.3 must remain at least 100 feet west of signals to permit crossing gates to raise.

Springfield (Woodburn-Springfield Br.): All trains and switching movements must stop 50 ft. in advance of Centennial Blvd. crossing (CC 645.8) before proceeding over crossing, making sure crossing protection is operating.

Haig: City traffic signals governing vehicular traffic crossing tracks 17th and Powell Streets are synchronized so that whenever crossing signal is actuated, traffic signals will display "stop."

In event westward trains or engines on either main track are delayed within the 480 foot traffic circuit east of Powell Street, stop should be made just east of sign indicating "CONTROL POINT" located 55 feet east of Powell Street. Traffic signals will resume normal operation after 60 seconds and continue in normal operation until "CONTROL POINT" is passed, at which time traffic signals will display "stop" for highway traffic until rear of train or engine clears crossing.

After a movement has been stopped and started within the approach circuit caution must be exercised to know that vehicular traffic is being properly controlled by traffic signals before trains or engines enter crossing.

Eastward movements against current of traffic approaching S. E. Powell St. crossing, must stop within 75 feet of crossing, wait 30 seconds for ringing circuit to operate, and in addition flagman must go to crossing to protect traffic until movement is commenced over crossing.

Salem: (Geer Branch): All train and switching movements must stop 50 ft. in advance of Lancaster Dr. crossing (CG723.6) and State Street crossing (CG724.7) before proceeding over crossings, making sure crossing protection is operating.

Cook: Gates to protect highway traffic crossing leads to TOFC ramps at Cook, MP 749.5, are operated manually by inserting switch key in receptacle located on posts each side of crossing, and turn key. Key may be removed but crossing must be occupied within 45 seconds or gates will raise. Crossing must not be entered without crossing gate protection.

Trains and engines must stop and be preceded by flagman before crossing following highways:

Seghers: Within 50 feet of Westside Highway Stimson Mill spur.

Toledo: Crossing over leads to G.P. Paper Mill.

RULE 104. Normal position of rigid switches at junction points and end of double track is as follows:

- Eugene Yard..Coos Bay line, for yard track, Albany..... OERY connection, for SP main track, Albany..... Toledo Branch, for main line. Salem..... Dallas Branch, for main track line. Canby..... Molalla Branch, for siding, Haig..... End double track, for eastward track, Springfield... Woodburn-Springfield Branch, for Cascade line, Tallman.... West wye switch Woodburn-Springfield Branch (Brownsville end of wye), lined for movement between Albany and Brownsville, Junction switch and west wye switch on Tallman Branch for movement between Albany and Lebanon, Geer..... Salem end—Salem to West Stayton, West Stayton end—West Stayton to Silverton, Silverton end—Silverton to West Stayton, Woodburn... Woodburn-Springfield Branch, for siding, Corvallis Jct.. West Side Branch, for Toledo Branch, Corvallis Jct.. East wye switch on West Side Branch, for wye, Corvallis.... West Side Branch, for Toledo Branch, Toledo..... Georgia-Pacific Corp., tracks, for SP main track, Alpine Jct.... Bailey Branch, for West Side Branch, V&S Jct. V&SR track, for SP main track, St. Joseph.... West Side Branch for West Side Branch Newberg.... Spaulding Lbr. Co. track, for SP track, Hillsboro.... West Side Branch, for Tillamook Branch, Cook..... Newberg Branch, for Tillamook Branch, Whiteson.... Willamina Branch, for West Side Branch, Willamina... LP&NRy connection, for siding, Broadmead... Perrydale Branch, for Willamina Branch, Beburg..... OERY connection, for SP main track (P-A), Greton..... OERY connection, for SP main track (P-A), Wilsonia.... Jefferson St. Branch, for Tillamook Branch. Derails in main track Canby..... On Molalla Branch, 100 feet east of east wye switch, Willamina... 1550 feet east of station building, Dawson.... 210 feet east of west switch

RULE 221: Brooklyn—is train-order office only for trains originating.

Eugene Yard—Is a train order office only for trains originating.

Light will not be displayed in train order signal at the following stations, except when train order operator is on duty:

- Independence McMinnville

RULE D-251: Will apply between Haig and block system limit, MP 769.2.

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

Table with 3 columns: Eastward Signal, Protection, Westward Signal. Lists signals like P-6504, P-A, P-7168, P-A, P-A.

Albany: Light type indicators located at MP 691.65 and MP 691.85 in vicinity of First St. and Water St. underpasses. When indicators display red or lunar aspect the following will govern:

- Red..... Stop and make inspection of structure.
Lunar..... Proceed.

AUTOMATIC BLOCK SIGNAL SYSTEM

Between the following locations trains moving in either direction will move by block signals whose indications will supersede the superiority of trains:

- End of CTC, MP 647.6 and End of CTC, MP 652.0
- End of CTC, MP 688.7 and End of CTC, MP 692.3
- End of CTC, MP 715.5, and End of CTC, MP 718.9
- End of CTC, MP 765.0 and Haig

Brooklyn: Westward signal 7665 governing movements on Track No. 1 and westward signal 7667 governing movements on Track No. 2. When these signals display stop indication, permission must be obtained from signal operator at Brooklyn before applying Rule 509(a) or 509(b) or 510(b).

Yard engines en route to "Reed siding" or Willsburg Jct. or industries on track No. 2 must have permission of operator at Brooklyn before passing signal 7665 or 7667.

When Signal 7672 displays stop indication, train after stopping, may proceed immediately at restricted speed not exceeding 10 MPH.

East Portland: Movements over SP&SRy crossing at Madison St. are governed by dwarf light signals located near crossing. If signals display stop indication, trains and engines must stop, and if crossing is clear of intersecting movement, may then proceed as prescribed by Rule 509 or 510, but flag protection must be provided on intersecting track unless derails are known to be in derailling position. Movement against current of traffic over crossing governed by signal for movement with current of traffic.

SPRING SWITCHES

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

Location	Normal Position
Eugene Yard.....MP 650.36 from yard.....	Main track
Irving.....West end siding.....	Main track
Pringle.....West end yard.....	Main track
East Milwaukie....East end siding.....	Main track

INTERLOCKING

Willsburg Jct.: Limits extend on track No. 1 from end of CTC, MP 765.0, to westward interlocking signal, MP 765.2 and to eastward interlocking signal on Tillamook Branch, MP 765.1 and is under the control of signal operator at Brooklyn.

Before authorizing eastward train to pass eastward absolute signal, MP 764.9, displaying stop indication for movement to track No. 1, train dispatcher must obtain authority from signal operator. Authority from train dispatcher will also authorize movement through interlocking.

Before authorizing movements under Rule 663 (b), signal operators must ascertain that indication lights on control panel are illuminated indicating dual-control switch is in proper position and locked. When indication lights are not illuminated, dual-control switch must first be placed in hand position in accordance with Rule 772, until movement over switch has been completed, then returned to motor position.

East Portland Tower: Governs movement over Willamette River bridge.

Limits extend from east end of Willamette River bridge to 1500 feet west of west end of bridge.

Movement governed by UPRR rules, the requirements of which are similar to SP interlocking rules except UPRR Rule 663 requires hand signal from signalman to be given from the center of track on which the movement is to be made.

The following whistle signals will be used:

- To Portland, —
- To Albina, — o,
- To SP main track, o —,
- To Transfer track, — o —,
- To Graham (Sullivan Gulch line), — —,
- To East Second Street, o o —,
- To SP yard, o — o,
- To track 10, o o —.

Northern Pacific Terminal Tower: Limits extend from east end of Willamette River bridge to Terminal tracks, Union Station. Trainmen and enginemen are subject to the rules and regulations of NPTCo.

When the home signal indicates "stop" the following whistle signals will be used:

- To Albina, — o,
- To Troutdale, — —,
- To SP Main track, o —,
- To SP yard, o — o,
- To East Second Street, o o —,
- To SP&SRy to East Side, o o —.

When the home signal indicates "proceed" the whistle must not be sounded.

When conditions are favorable use hand or lamp signals for route desired, omitting whistle signals.

Trains and engines using tracks Nos. 1 to 10 inclusive, must move at restricted speed when passing a train receiving or discharging passengers, and must not cross under "High Shed" at passenger station without receiving proceed signal from stationmaster or his assistant.

Yard engines moving under "High Shed" will have member of crew ride leading end of engine. When cars are being shoved under "High Shed" member of crew must ride leading end of lead car in direction of movement.

A flagman must precede the movement of yard engines over crossing in front of the baggage room unless a proceed signal is given by the stationmaster, baggagemaster or their assistants.

Trains and engines must not exceed 10 MPH between N.W. 17th Ave. and passenger station, and 6 MPH between north end of passenger station tracks and N.W. Front Ave.

RULE 705. LETTER TYPE-INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and requires Movement as follows
S.....	6900..	West switch to Yard, Albany	Be governed by instructions of yardmaster or his representative.
S.....	6923..	East switch to Yard, Albany	Be governed by instructions of yardmaster or his representative.
S.....	7168...	Pringle	Be governed by instructions of yardmaster or his representative.
S.....	7189...	Pringle	Be governed by instructions of yardmaster or his representative.
W.....	MP-765.6..	Tacoma Ave. crossing, Brooklyn	Westward trains on Tracks No. 1 or No. 2, when indicator illuminated must stop short of Tacoma Ave. and wait until indicator extinguished. Signals 7665 and 7667 as the case may be will display yellow aspect when indicator is illuminated. Indicator for Track No. 2 located to left of track.
S.....	Eastward. "A"	East Milwaukie.	Pass absolute signal displaying Stop indication and enter siding East Milwaukie.

ABSOLUTE-PERMISSIVE BLOCK

Absolute-Permissive Block between Gretton and Beburg. Eastward SP trains will, when meets are made at Beburg, move through siding unless otherwise provided by train order. Eastward trains entering siding at Beburg must clear main track as soon as possible to release signals for other movements.

CENTRALIZED TRAFFIC CONTROL

Limits extend from MP 652.0, Eugene yard to MP 688.7, Hall-awell; MP 692.3, Albany to MP 715.5, Renard; MP 718.9, Salem to MP 765.0, Willsburg Jct.

Irving: Proceed indication received from eastward signal 6524 from yard will authorize movement to siding without permission of Train Dispatcher. Signal 6524 governs movement to siding only and will remain dark for movements lined to tail track.

Albany, Page, Pringle: Trains, before entering main track at Albany, Pringle or Page, must first ascertain that Train Dispatcher will be able to move train into CTC limits.

Labish: When absolute signals on siding or yard track at west switch display "lunar" aspect per Rule 289, Rule 775 and second paragraph of Rule 771 will not apply.

Coalca: When absolute signals on siding or extension at east switch display "lunar" aspect per Rule 289, Rule 775 and second paragraph of Rule 771 will not apply.

GENERAL REGULATIONS

RULE 826.

Oregon City: Indicator lights located on tower of Publishers Paper Company retractable chip unloader govern movements as follows:

- Green: Track may be used for switching movements.
- Red: Track may be entered, but cars must not be coupled to, or moved until unloader operator contacted.
- Not Lighted: Must be considered as displaying most restrictive indication.

Jefferson Street: Indicator lights located on side of Multnomah Plywood Bldg. govern movements as follows:

- Green: Track may be used for switching movements.
- Red: Track must not be entered.
- Not Lighted: Must be considered as displaying most restrictive indication.

Eugene Yard: Indicator lights located on Tracks Nos. 30 and 32, govern movement on these tracks as follows:

- Green: Tracks may be used for trains or switching movement.
- Yellow: Tracks may be entered, switched and engines, cars or cabooses added or detached.
- Red: Tracks may be entered, but cars on these 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: Signals must be considered as displaying most restrictive indication and Icing Platform Foreman must be contacted for instructions before cars are coupled to or moved.

When indicator light at east end Track 30 displays "Red" aspect, engines moving eastward on this track must not pass fouling point until indicator light displays "Green" aspect.

Toledo: On spur leading to Georgia-Pacific Paper Company gate has been installed with SP lock on outside. Crews entering this track must unblock and open this gate before commencing movement, and close and lock gate immediately after completing movement, except if another switch is to be made within 30 minutes gate may be left open for following movement.

RULE 827. Freight trains using retainers on descending grade will stop at Enright 10 minutes for heat radiation, at which time train inspection will be made.

RULE 842: Eugene Yard: Westward trains will enter yard at MP 650.94 unless otherwise instructed and yardmen must not line switch into yard until train has been identified. Trains entering yard must not exceed 15 MPH over 1600-foot section of track in approach to switch to permit identification and operation of switch.

All identified trains arriving Eugene Yard, except SLE, do not exceed 7 MPH into receiving track to permit carmen to make inbound inspection.

Salem: Westward trains or engines must not pass OERy Crossing MP 719.68, Dallas Branch until permission is received from yardmaster.

Brooklyn: Eastward trains terminating Brooklyn must not pass signal bridge MP-766.7 unless authorized by yardmaster or by a proceed signal from yardman. When so authorized, trains entering yard from main track No. 2 may pass signal 7666 displaying stop indication without stopping, at restricted speed, which is an indication that protection for the movement has been provided and yardman is responsible that such protection has been provided.

Unit for display of flashing white light, located 100 feet east of Powell Blvd., governs movement of westward transfers entering east end of yard. When flashing white light is not displayed, such transfers must stop and not proceed until foreman contacts yardmaster for instructions.

RULE 872. Enginemen taking charge of engines at Brooklyn and Eugene Terminal will consider engines as having been amply supplied and sanders operative.

AIR BRAKE RULES

FREIGHT TRAINS

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

Summit to Nashville. On retaining valve for each 80 tons in train, except when dynamic brake is in operation and tonnage of train exceeds 1650 tons per six axle unit or 900 tons per four axle unit of dynamic brake, one retaining valve for each 125 tons in train; except when dynamic brake is in operation and pressure maintaining system of braking is being used and tonnage exceeds 2000 tons per six axle unit or 1375 tons per four axle unit of dynamic brake, one retaining valve for each 125 tons in train.

Timber-Enright. Both directions, one retaining valve for each 57½ tons in train, except when dynamic brake is in operation and tonnage of train exceeds 1000 tons per unit of dynamic brake, one retaining valve for each 80 tons in train.

For operating convenience, retaining valves may be turned up and retaining valve test made at Timber.

Tunnel 25 to Buxton. One retaining valve for each 60 tons in train, except when dynamic brake is in operation and tonnage of train exceeds 1200 tons per unit of dynamic brake, one retaining valve for each 100 tons in train.

RULE 22. Trainmen must not couple air hoses on outgoing freight trains at Albany or Salem until they have been notified by Yardmaster or his representative that switching has been completed which includes having engine and caboose on train. After trainmen have been so notified, yardmen must not perform switching on, nor couple other cars or engines to the train without instructions from the Yardmaster or his representative, who must notify trainmen before intended move is made.

RULE 24-B. Eugene Yard: When continuity of brake pipe is not disturbed, incoming engineer will apply brakes when stopped. Outgoing engineer will release brakes and proceed without making rear end or road test.

RULE 25. Will apply at Cochran when temperature is 32 degrees or less.

RULE 33. Gross tonnage on any freight train must not exceed the tons per operative brake between the stations shown:
 Summit and Nashville.....80 tons
 Timber and MP 807.0.....65 tons
 Buxton and MP 738.5.....75 tons

PASSENGER TRAINS

RULE 39. Passenger trains leaving Portland will not make running test until after crossing Willamette River bridge.

MISCELLANEOUS

1. Portland: To assist proper stopping eastward passenger trains arriving Union Station, Stationmaster will give stop signal when train is one car-length from point of final stop.

Engineer on Train No. 11 will apply brakes as soon as NP Train No. 408 stops, keeping them applied until communicating signal whistle indicates cars from NP No. 408 have been coupled to Train No. 11 and air cut in, thereby avoiding moving Train No. 11 when coupling is made and train is stretched.

2. Portland Union Station: Tracks Nos. 1 to 10 inclusive have impaired side clearance and will not clear man on side of car.

3. Corvallis Jct. (West Side Branch). When spotting cars to be cleaned do not block straight leg of wye between Junction switch and 50 ft. east of tool house.

4. Tillamook Branch: When necessary to entrain three engines in any combination in helper service in rear of train, empty flat cars and empty tank cars should be placed behind helper engine, except between Timber and Cochrane.

Engines with dynamic brake inoperative must not be entrained behind empty skeleton log flats on descending grade between Timber and Enright.

Empty log flats must be entrained behind other equipment in train on descending grades between Timber and Enright unless other equipment weighs less than 700 tons.

Empty 67-foot skeleton log flats must not be placed in train ahead of helper engines.

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

Class of Engines Restricted Tracks
DF-1 to 12, 100 to 125, 500 to 501, 603 to 611... Albany—Beyond Northrup and King Spur near end of old C&E main; Coach track No. 2 in old C&E yard; and tracks on Water Street, including lead from Toledo Branch.

DF-100, 101 to 108, 110 to 115, 119, 121 to 126, DS-101, 109, 118, 119... Lebanon-Crown Zellerbach Co. tracks and Santiam Lumber Co. log spur

DF-116, 117, 118, 120... Lebanon-Crown Zellerbach Co. log spur beyond clearance point

All engines... Lyons—Beyond fouling point east end Feres Plywood track.

DF-100, 101 to 112, 114, 116, 117, 118, 120... Dry Creek—On industry tracks at airport. Monroe-House track and Brickyard spur.

All engines except DF-200 to 204, 300 to 306, DS-1 to 9, 100, 111, 114, 115 and 118... Salem—Kay Woolen Mill spur.

All engines except DF-200 to 205, 300 to 307, DS-1 to 12 and DS-100 to 111, 113 to 115, 117 to 122... Salem—Trade and Front St. tracks and tracks leading from Front St.

All engines... Salem—Beyond fouling point on Boiler and Pulp Mill spur west end Trade Street.

All engines except DF-200 to 204 and DS Canby — Beyond engine restriction signs Pit and Stock tracks.

All engines except DS, DF-200 to 204, 300 to 304... Brooklyn—Libby McNeill and Libby lead. East Portland—Dairy Co-op spur; Mason Supply Co. 12th Street spur.

All engines... Oregon City—Between engine restriction signs on Publishers' Paper Co. track.

" " Lake Oswego—Beyond engine restriction signs on Cement Plant tracks Nos. 1, 2, 4, 5 and 6.

" " Lake Oswego—Over crossover from track No. 3A to track No. 3 at rock dump and cars and engines must not be operated over car unloader at Cement plant.

Cars and engines... Juno—Beyond chip loader at North Plains Lumber Co.

All engines... Tillamook—Beyond engine boards on team track and Union Oil spur. Toledo—Georgia-Pacific Paper Mill. On scale spur and crossover between outside track and scale spur track.

All engines... V. & S. Jct.—Plywood Prod.—Beyond engine signs on tracks Nos. 6, 7 and 8. DF-101-126, inclusive... West Salem—Blue Lake lead and all tracks off this lead.

6. The following cars must not be operated between Summit and Toledo, Timber and Tillamook, Shelburn and West Stayton:

Table listing car types and numbers: Wood Chip Cars (SP 351298, SP 351967, SP 354000 series), Veneer Cars (SP-208161-H to 208208-H inclusive, SP-208578-H, SP-208962-H, etc.), and All cars 85 feet or longer.

7. Eighty-five foot or longer cars must not operate on tracks shown below:

Table listing locations and restrictions: Dallas Branch, Willamina Branch, East Portland, Brooklyn, Clackamas, Salem, Albany, Eugene, Jefferson Street, Willsburg Jct.

8. East Portland: Movements with passenger equipment must not be made through crossover between main tracks, just east of Stark Street.

Table listing load limits for various locations: Eugene-Portland (263,000 lbs), Albany-Tallman (240,000 lbs), Springfield-Coburg (169,000 lbs), Tallman-Coburg (200,000 lbs), Shelburn-West Stayton (169,000 lbs).

TILLAMOOK BRANCH

Table listing locations and clearances for Tillamook Branch: 789.60 East of Timber, 801.80 West of Cochrane, 803.60 West of Cochrane, etc.

Table listing locations and clearances for Main Line: Tallman-Shelburn (240,000 lbs), West Stayton-Woodburn (240,000 lbs), Shelburn-End Mill City Branch (240,000 lbs), Salem-Geer (240,000 lbs), Albany-Toledo (240,000 lbs), Salem-Falls City (240,000 lbs), Monroe-Suver (240,000 lbs), Suver-McMinnville (240,000 lbs), McMinnville-Hillsboro (240,000 lbs), St. Joseph-Cook (240,000 lbs), Alpine Jct.-Dawson (240,000 lbs), Whiteson-Willamina (230,000 lbs), Broadmead-Perrydale (199,000 lbs), Canby-Molalla (240,000 lbs), Wilsonia-Jefferson St. (240,000 lbs), Tillamook-Willsburg Jct. (240,000 lbs). Unless authorized by Superintendent, heavier loads must not be handled.

10. LOCATION OF STOCK YARDS

Table with columns: Mile Post, Location, Capacity in cars. Brooklyn... 8 (Water)

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

Table with columns: Mile Post, Location, Description

MAIN LINE

Table with columns: Mile Post, Location, Description. 698.93 East of Millersburg... N. Santiam River Crossing... Overhd & Side

WOODBURN-SPRINGFIELD BRANCH

Table with columns: Mile Post, Location, Description. 650.25 East of Springfield... McKenzie River Crossing... Overhd & Side, 671.67 East of Rowland... Calapooia River Crossing... Overhd & Side, etc.

MILL CITY BRANCH

Table with columns: Mile Post, Location, Description. 714.00 East of Shelburn... Rock cut... Side

DALLAS BRANCH

Table with columns: Mile Post, Location, Description. 719.74 East of Salem... Willamette River Crossing... Overhd & Side

WEST SIDE BRANCH

Table with columns: Mile Post, Location, Description. 731.85 East of Whiteson... S. Yamhill River Crossing... Overhd & Side, 702.96 East of Suver... Luckiamute River Crossing... Overhd & Side

TOLEDO BRANCH

Table with columns: Mile Post, Location, Description. 691.70 Albany... First Street Crossing... Side, 691.82 Albany... Willamette River Crossing... Overhd & Side, etc.

NEWBERG BRANCH

Table with columns: Mile Post, Location, Description. 762.12 East of Tualatin... Tualatin River Crossing... Overhd & Side

WILLAMINA BRANCH

Table with columns: Mile Post, Location, Description. 745.27 East of Sheridan... S. Yamhill River Crossing... Side

12. Pulp: Portable platform across paper loading track to handle shipments from boats to warehouse. Careful inspection must be made to know that this platform has been removed before coupling to cars or switching on this track.

13. Jefferson St.: SPCo. employes will not handle cars on Overhead Door Co. track beyond point 25 feet inside of gate.

14. Albany: Water Street Lead: Overhead impaired clearance 18'3" under U.S. Highway 20, Ellsworth Street.

15. Tillamook: Trainmen must not operate beyond restriction sign 163 feet beyond clearance point to chip loader on Tillamook Veneer Company track.

SPECIAL INSTRUCTIONS—BROOKLYN 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 7 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, 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.

Table with columns for EASTWARD and WESTWARD directions, including sub-columns for PSGR TRAINS and FRT & MIXED. Rows list various routes such as EUGENE TO PORTLAND, ALBANY TO TALLMAN, and SHELburn TO END MILL CITY BRANCH.

Trains handling "Buman Rock" Buman to Oswego will not exceed 30 MPH on Falls City, West Side, Newberg and Tillamook Branches.

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

Table listing speed restrictions for various track types: Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except 15; Through turnouts and sidings at Irving, Swain, Alford, Shedd, Hallawell, Millersburg, Marion, Renard, Labish, Gervais, Hito, Coalca, Clackamas 25; Through slip switches 10; Through turnouts on other than sidings 10; On Union Station tracks, Portland 6.

ICC Regulation. *PUC Order.

SPECIAL INSTRUCTIONS—BROOKLYN SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Continued.

Table with columns for EASTWARD and WESTWARD directions, including sub-columns for ALL TRAINS. Rows list various routes such as SALEM TO FALLS CITY, MONROE TO HILLSBORO, and WILSONIA TO JEFFERSON ST.

*Regulated by City Ordinance. **ICC Regulation. ***PUC.

SPECIAL INSTRUCTIONS—BROOKLYN SUBDIVISION

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

NOMINAL CLASS	ENGINE NUMBERS	TERRITORIES									
		Eugene to Salem	Salem to Barlow	Barlow to Canby Oregon City to Clackamas	Canby to Oregon City Clackamas to Brooklyn	Brooklyn to E. Milwaukie Clackamas to Oregon City	E. Milwaukie to Clackamas Oregon City to Clackamas	Canby to Canby Aurora to Hilo	Canby to Aurora Hilo to Salem	Salem to Eugene	
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917	2275	2650	2100	2650	1550	2650	1550	2650	2100	
DP-5, 6, 8 to 11	6005 to 6016, 6055 to 6058, 5910 to 5915, 6019 to 6033, 5918 to 5924, 6034 to 6045	2300	2675	2125	2675	1575	2675	1575	2675	2125	
DF-1 to 12	6138 to 6470, 8022 to 8303, 301 to 379, 502 to 575, except with 61:16 gear ratio with 60:17 gear ratio	2750	2975	2375	2975	1800	2975	1800	2975	2375	
DF-100	5200 to 5202	2725	3175	2525	3175	1925	3175	1925	3175	2525	
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278	3550	4000	3250	4000	2425	4000	2425	4000	3250	
DF-109, 111	4903 to 4905, 5250 to 5252	5225	6100	4775	6100	3525	6100	3525	6100	4775	
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	4350	5000	4000	5000	3000	5000	3000	5000	4000	
DF-123, 126	5448, 5494 to 5507										
DF-500, 501	4800 to 4815										
DF-602	5892 to 5895										
DF-603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5891	3325	3825	3075	3825	2325	3825	2325	3825	3075	
DF-608 to 610, 613 to 615	5720 to 5729, 5845 to 5871										
DF-127	7000 to 7020										
DF-617, 620	7200 to 7237										
DF-618	7300 to 7309										
DF-621	7400 to 7407										
DF-623	7408 to 7464										
DF-619, 622, 624	7500 to 7567										
DF-701	8500 to 8502										
DF-800, 801	9000 to 9017, 9021 to 9023	5125	5950	4725	5950	3550	5950	3550	5950	4725	
DF-802	9018 to 9020										
DS-1 to 8	1000 to 1032	1100	1275	1025	1275	750	1275	750	1275	1025	
DS-9 to 12	1036 to 1090	1950	2225	1775	2225	1300	2225	1300	2225	1775	
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	1675	1925	1550	1925	1150	1925	1150	1925	1550	
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	2325	2500	2125	2500	1575	2500	1575	2500	2125	
DS-113, 117, 120 to 122	1486, 1491, 1529 to 1538, 1568 to 1596	2025	2350	1900	2350	1400	2350	1400	2350	1900	
DS-200, 201	1900 to 1903										
DS-600 to 604	4600 to 4623, 4700 to 4703	2200	2550	2025	2550	1525	2550	1525	2550	2025	
DS-605, 606	4624 to 4633	2400	2800	2200	2800	1625	2800	1625	2800	2200	
DS-607	4634 to 4645	2625	3025	2425	3025	1850	3025	1850	3025	2425	
DS-500 to 506	5100 to 5120	1375	1600	1275	1600	950	1600	950	1600	1275	

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

SPECIAL INSTRUCTIONS—BROOKLYN SUBDIVISION

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

NOMINAL CLASS	TALLMAN		WOODBURN-SPRINGFIELD BRANCH										MILL CITY		MOL.		
	Albany to Lebanon	Lebanon to Albany	Springfield to Coburg	Coburg to Tallman	Lebanon and Griggs	Aumsville to Geer	Geer to Woodburn	Woodburn to Geer	Geer to Aumsville	Griggs and MP 706	MP 706 and MP 707 Wood-Springfield Branch	MP 707 to Aumsville	MP 855 to Aumsville Tallman to Coburg	Coburg to Springfield	Shelburn to Mill City	Mill City to Shelburn	Canby and Madras
DF-1 to 12	3800	6050	...	...	...	...	①	②	...	...	...	...	...	...	...	...	③
DF-114, 116 to 118, 120 to 122, 124, 125	5450	10000	...	⑩5000	⑩3900	⑩2150	2450	1750	⑩1100	⑩3900	...	⑩3900	⑩3425	...	⑩2625	⑩3425	2375
DF-603, 605, 606, 607, 611	...	...	...	...	...	...	②	②	...	...	...	...	...	...	...	...	④
DF-608 to 610	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
DS-1 to 8	1625	4000	...	...	1150	...	...	...	⑮1150	...	...	...	...	⑰600	⑰1000	600	
DS-9 to 12	2900	4000	...	...	2075	...	...	...	...	...	...	...	...	...	...	1075	
DS-100 to 109, 111, 115, 119	3150	4000	...	...	2225	...	...	...	...	...	...	...	...	...	...	⑧1175	
DS-110, 114, 118	3000	4000	...	...	2200	...	...	...	...	...	...	...	...	...	...	④1175	
DS-113, 117, 120 to 122	3000	4000	...	...	2200	...	...	...	...	...	...	...	...	...	...	⑨	
DS-500 to 506	1625	3000	1875	1875	1475	800	800	575	425	1475	1475	1475	1300	1300	850	1300	775
DS-600 to 604	3300	4000	...	...	...	...	⑥	⑥	...	...	...	...	...	...	...	...	⑥
DS-605, 606	3650	4000	...	...	...	...	⑥	⑥	...	...	...	...	...	...	...	...	⑥
DS-607	3950	4000	...	...	...	...	⑥	⑥	...	...	...	...	...	...	...	...	⑥

- ① Does not apply to DS-101, 109 and 119.
 - ② Applies to DS-110 only.
 - ③ Authorize to use in Woodburn Yard Limits and Canby Yard Limits.
 - ④ Does not include DF-121, 122, 124, 125.
 - ⑤ Restricted to 20 MPH; DS-2, 3, 6, 7, 8 restricted to 25 MPH.
 - ⑥ Restricted to 20 MPH.
- SP&S engines may operate as follows: Between Albany and Lebanon.

NOMINAL CLASS	TOLEDO BRANCH							DALLAS BRANCH				GEER	MOL.	
	Albany to Corvallis	Corvallis to Flynn	Flynn to Summit	Summit to Nashville	Nashville to Toledo	Nashville to Summit	Summit to Flynn	Flynn to Corvallis	Corvallis to Albany	Salem to Dallas	Dallas to MP 740.9	MP 740.9 to Dallas		Dallas to Salem	Salem and Geer
DF-1 to 12	2275	1850	1300	8000	2825	750	2350	2350	6050	3200	...	...	3200	...
DF-114, 116 to 118, 120 to 122, 124, 125	3775	2600	1600	10000	3700	1100	2375	4675	10000	3000	1925	1900	2050	⑥2625
DF-603, 605, 606, 607, 611	3000	2350	1625	8000	2825	925	2375	4000	10000	4075	...	...	4075	...
DF-608 to 610	3000	2275	1575	8000	2825	900	2375	4000	10000	3950	...	...	3950	...
DS-1 to 8	950	625	450	1600	1075	300	700	1175	4000	750	...	...	475	④650
DS-9 to 12	1700	1150	825	2850	1950	525	1200	2100	4000	1300	...	...	925	...
DS-100 to 109, 111, 115, 119	1825	1050	875	3000	3100	575	1300	2225	4000	⑩1150	...	...	⑪1000	...
DS-110, 114, 118	1850	1050	875	3000	2100	575	1300	2225	4000	⑩1575	...	...	⑫1000	...
DS-113, 117, 120 to 122	1800	1000	850	4000	2075	525	1300	2225	4000	...	...	...	...	...
DS-500 to 506	1225	825	600	2000	1400	375	875	1475	3000	950	700	850	575	②850
DS-600 to 604	1950	1325	975	4000	2250	600	1400	2375	4000	...	...	...	...	④1375
DS-605, 606	2100	1450	1000	4000	2425	675	1525	2575	4000	...	...	...	...	...
DS-607	2325	1600	1125	4000	2675	725	1700	2825	4000	...	...	...	...	...

- ② Rating Geer to Salem 3000.
- ④ Rating Geer to Salem 4000.
- ⑥ Rating Geer to Salem 10000.
- ⑩ Does not apply to DS-101, 109 and 119.
- ⑫ Does not apply to DS-118.

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

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

Table with columns for NOMINAL CLASS, ENGINE NUMBERS, WESTSIDE BRANCH (Monroe to Corvallis, Corvallis to Gaston, Gaston to Hillsboro, Hillsboro to Gaston, Gaston to Corvallis, Corvallis to Monroe), DAWSON (Dawson to Alpine Jet, Alpine Jet to Dawson), and WILLAMINA BRANCH (Whitson and Broadmead and Perrydale Branch, Broadmead to Willamina, Willamina to Broadmead).

Table with columns for NOMINAL CLASS, JEFFERSON ST. (Wilsonia to Jefferson St., Jefferson St. to Wilsonia), TILLAMOOK BRANCH (Tillamook to Salmonberry, Salmonberry to Euright, Timber and Euright, Timber to Buxton, Euright to Tillamook Buxton to Hillsboro, Hillsboro to Buxton, Buxton to Timber, Hillsboro to Cook, Willsburg Jet. to Cook Cook to Hillsboro, Cook to Willsburg Jet.), and NEWBERG BRANCH (Sherwood to Springfield St. Joseph to Springfield, Cook to Sherwood, Springfield to Sherwood, Sherwood to Cook, Springfield to St. Joseph).

Does not apply to DF-4, 11, 12. SP&SRy engines may operate as follows: Between Greton and Beburg—DES class not to exceed 248,000 lbs.

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

RULE M. 4800 volt power line on signal pole line Kirk to Umli. If found broken or down extreme caution must be used and prompt report made from first available means of communication.

RULE 14(k). Will not apply between Eugene and Klamath Falls.

RULE 22. Helper engines coupled ahead of road engines need not display indicators between Eugene Yard and Cascade Summit.

RULE 82-A. Eugene: Regular trains authorized on Cascade Subdivision and terminating at Eugene, may assume the corresponding schedule on the Brooklyn Subdivision without obtaining clearance at Eugene.

Regular trains authorized on the Brooklyn Subdivision, terminating at Eugene may assume the corresponding schedule on the Cascade Subdivision without obtaining clearance at Eugene. Train-orders may be issued on Brooklyn or Cascade Subdivision to apply on either subdivision.

When crews of regular or extra trains are relieved at Eugene all train-orders and instructions must be delivered to relieving crews; except when outgoing engineer is not available at time incoming engineer is released, train-orders and instructions will be given to conductor for delivery to outgoing engineer.

Crescent Lake: Regular trains must be re-authorized at Crescent Lake by receipt of clearance bearing okay time and initials of Chief Train Dispatcher and must be endorsed "Green" or "No" signals as the case may be and Rule 96 will not apply.

Klamath Falls: Eastward trains originating Klamath Falls will obtain clearance OK'd by Chief Train Dispatcher which will be issued at Klamath Falls Yard and delivered by tube to Crew Dispatchers' Office, Klamath Falls. Clearance and train orders for first-class trains will be delivered in red container and for extra trains will be delivered in yellow container.

Trains authorized to operate on Marcola Branch must not occupy main track between MP-649.25 Hendricks and MP-659.7 Hyland between the hours of 5:00 AM. and 5:00 PM. on Monday through Saturday.

RULE 83. Trains via Siskiyou Subdivision may identify trains between Eugene Yard and Judkins and such identification will apply at Springfield Jet.

Extra trains operating between Mohawk Jet. and Hyland, in addition to information required by train register must register destination of trip, turning point and date of departure in the column captioned "Signals." When trip has been completed, date of arrival at initial station must also be entered in column captioned "Signals." Extra trains en route into this territory must not leave the initial station until it has been ascertained from the train register that all preceding extra trains by the route to be used have completed their trip and registered time and date of arrival at Mohawk Jet. accordingly.

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

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

Table with columns for West MP and East MP, listing stations like Klamath Falls, Crescent Lake, Fall Creek Jct., Springfield, Eugene, etc.

RULE 97. Extra trains between Mohawk Jet. and Hyland are authorized to operate as extra train in this territory without train-order authority.

RULE 99. Will not apply between Mohawk Jet. and Hyland.

RULE 99-A. Between the following locations, except on trains carrying passengers, flag protection is not required:

- End of CTC, MP 429.81 and MP 432.66.
End of CTC, MP 527.23 and End of CTC, MP 529.03.
"A" signal, MP 618.4 and west switch Judkins.
End of CTC, MP 647.62 and End of CTC, MP 652.0.

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

Fall Creek Jet.....Fall Creek Branch for Cascade line, Mohawk Jet.....Marcola Branch, for track No. 3, Springfield.....Woodburn-Springfield Branch, for Cascade line.

Klamath Falls. GNRy main track, for SP main track, Gilchrist Jet....KNRy main track, for interchange track, Derails in main track:

Fall Creek Jet.....Clearance point junction switch. Marcola.....200 feet east of east switch.

Hendricks: Switch from Marcola Branch to Weyerhaeuser Company plant tracks is lined for movement to Weyerhaeuser tracks.

RULE 221. Springfield is a train order office only for trains via Siskiyou Subdivision.

Chemult is a train-order office for westward GNRy trains only.

RULE 291. Klamath Falls: Unit for display of flashing yellow installed on westward absolute signal, MP 429.87.

Display of flashing yellow authorizes trains to proceed without stopping at restricted speed to enter Track No. 25.

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

Table with columns for Eastward Signal, Protection, and Westward Signal, listing various signal types and locations like P-4406, P-4424, P-4440, etc.

In addition to making careful inspection of track where slide fences are located, the face of bluff above the track must be observed for indication of slide.

AUTOMATIC SIGNAL SYSTEM

Between the following locations, trains moving in either direction will move by block signals whose indications will supersede the superiority of trains:

- End of CTC, MP 429.8 and Klamath Falls Yard, MP 427.5
- End of CTC, MP 527.2 and end of CTC, MP 529.0
- End of CTC, MP 647.6 and end of CTC, MP 652.0.

Klamath Falls: Trains or engines stopped by Signal 4293 at Klamath Falls, may proceed at restricted speed.

- Signal 4278 at derail GNRy Bieber line
 - Top unit..... to Cascade line
 - Bottom unit..... to Lake Ewauna line

Signal 4277 at derail from line crossing Lake Ewauna governs to GNRy Bieber line only.

Eugene: Whenever aspect displayed by Signal 6482, located just east of Van Buren Street crossing, requires train to stop, train should be stopped just west of Van Buren Street crossing.

If a preceding train is not clear of main track after stop has been made, train will remain clear of Van Buren Street crossing until preceding train has entered yard.

RULE 535. Spring Switches

Oakridge: Spring switches equipped with switch point indicators are located as follows:

1. East end Track No. 2
2. West end Track No. 2
3. West end Track No. 3

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and requires movement as follows:
H. . . .	Westward Absolute Signal	East Switch Diamond Lake	Westward trains must stop short of absolute signal on signal bridge, west end Diamond Lake and be governed by instructions on page 4, Rule 705, of these instructions.
H. . . .	Westward "A" Signal at east end Lenz	Lenz	Westward trains must stop short of west end Lenz siding and member of crew must open hot bearing detector box located at clear point at west end Lenz siding and be governed by instructions on page 4, Rule 705 of these instructions.
W. . . .	4887	Mazama	Wait until signal 4887 displays proceed indication.
H. . . .	4902	Yamsay	Eastward trains must stop short of east end of Yamsay siding and member of crew must open hot bearing detector box located at clear point at east end Yamsay siding and be governed by instructions page 4, Rule 705 of these instructions.
W. . . .	4872	Mazama	Wait until Signal 4872 displays proceed indication.

CENTRALIZED TRAFFIC CONTROL

Limits extend from MP 429.81, Klamath Falls to MP 527.23, Crescent Lake; MP 529.03, Crescent Lake to MP 647.62, Eugene.

Klamath Falls: Absolute signals governing movements on drill track will display proceed indication regardless of track occupancy between these signals unless indication is changed by train dispatcher. Switching movements may be made on drill track so long as signals governing such movements display proceed indication and Rule 775 will not apply. When these signals display stop indication, track between these signals must be cleared immediately.

Crescent Lake: Trains entering yard will use track indicated in illuminated indicator on absolute signals at entrance to yard.

Units for display of flashing white light located adjacent to leads at each end of yard. Trains departing from yard must not pull out onto leads without permission of train dispatcher or flashing white light is displayed.

Eugene: Dwarf light type absolute signal east end crossover MP 647.05 governs westward movements through crossover to main track only and will remain dark until electric locks are unlocked by train dispatcher.

Eugene: When westward absolute signal on running track governing movement to siding displays aspect per Rule 289, Rule 775 and second paragraph Rule 771 will not apply.

RULE 763. GNRy trains will display engine numbers in engine indicators instead of train numbers between Klamath Falls and Chemult.

GENERAL REGULATIONS

RULE 825. Instructions for setting hand brakes:

Klamath Falls and Klamath Falls Yard:

- Passenger Trains..... Two brakes on west end.
- Freight Trains..... Five brakes on west end.

Any employe releasing any of these brakes must set an equal number to replace them.

Staff brakes on freight trains must be set with the assistance of a brake club after train has stopped.

Klamath Falls: Hand brakes will not be set on passenger trains standing at the station unless engine is detached provided conductor has reached understanding that engineer will remain on engine at all times and control train by use of air brakes.

Klamath Falls Yard: Hand brakes will not be set on freight trains if outgoing crew takes charge of train on arrival or if inbound crew is advised by yardmaster that engine is not to be detached.

RULE 826.

Springfield: Indicator lights located on mast at Georgia-Pacific Plywood chip track govern movement as follows:

- Green: Track may be used for switching movements.
- Red: Track must not be entered.

Not Lighted: Must be considered as displaying most restrictive indication and Georgia-Pacific Plywood supervisor must be contacted before cars are coupled to or moved.

Springfield: Clear Fir Products track No. 2 equipped with gate across track, which automatically opens building door for switching inside building. Trains must stop at stop sign located approximately 25 feet from gate. Indicator lights located on right side of gate indicate following:

- Green: Gate Open.
- Red: Gate Closed.

Not Lighted: Signals must be considered as displaying most restrictive indication and cars are not to be coupled to, or moved.

AIR BRAKE RULES

RULE 2. When switch engine is used on yard tracks at east end of Klamath Falls, handling twenty-five cars or more, air brakes must be cut in and operative on not less than six cars.

RULE 17. Cascade Summit to Oakridge: Eastward passenger trains, with dynamic brakes operating, and not over 20 cars need not turn up retaining valves; if over 20 cars turn up one retaining valve for each 100 tons over 20 cars, on head end of train. Other eastward passenger trains will turn up retaining valves on all passenger-carrying equipment and on head-end cars in excess of three, stopping if necessary at Cascade Summit, to do so.

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

With no dynamic brake in operation one retaining valve for every 70 tons in train. When dynamic brake is in operation and tonnage of train exceeds 1200 tons per four-axle unit, or 2200 tons per six-axle unit, one retaining valve for each 125 tons in train.

For operating convenience retaining valves may be turned up at Crescent Lake and turned down at Pryor or Lookout.

When dynamic brakes are in operation on TOFC trains and pressure maintaining system of braking is being used, retainers will not be required when car tonnage is less than 80 tons per operative brake.

If dynamic brakes are not in operation or pressure maintaining system of braking is not being used, one retaining valve will be turned up for each 60 tons in train or, if tons per operative brake exceed 60 tons, retaining valves must be turned up on all cars.

RULE 19. When handling dead diesel units in eastward trains between Cascade Summit and Oakridge, pressure maintaining system of braking is not to be used.

RULE 24-B. Crescent Lake and Eugene Yard: When continuity of brake pipe is not disturbed, incoming engineer will apply train brakes when stopped. Outgoing engineer will release brakes and proceed without making rear end or road test.

RULE 25. Will apply as designated below, except when conditions are favorable for releasing air brakes (Rule 29) while running, and engineer after informing trainman test is to be made approaching station named, receives positive information following test that brakes did apply on caboose and brake pipe pressure is being restored:

- Kirk: Westward when temperature is 32° or less.
- Cascade Summit: Eastward when temperature is 32° or less.

RULE 33. Maximum tonnage per operative brake Cascade Summit to Oakridge is 70 tons, except 80 tons per operative brake may be handled providing one 4-axle unit of dynamic brake is in operation for each 1000 tons in train and train is operated under provisions of Air Brake Rule 19. Should conditions arise on descending grade which prohibit operation under the exception, train must be stopped immediately, all retaining valves turned up, and speed restricted to not more than 15 MPH.

Tons per operative brake on TOFC trains must not exceed 80 tons. Tonnage of engine behind the 20th axle of dynamic brake is not to be included with train tonnage in calculating tons per operative brake.

RULE 39. Running test must be made by passenger trains as follows:
Eastward trains..... Just west of station Cascade Summit.

If door fails to open, emergency switch on left side of door will actuate automatic door.

After completion of switching, gate must be closed and locked, which will automatically close plant door.

If indicator lights are not lighted and if door fails to close, contact plant foreman immediately.

Eugene Yard: Indicator lights located on Tracks Nos. 30 and 32, govern movement on these tracks as follows:

- Green: Tracks may be used for trains or switching movements.
- Yellow: Tracks may be entered, switched and engines, cars or cabooses added or detached.
- Red: Tracks may be entered, but cars on these 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: Signals must be considered as displaying most restrictive indication and Icing Platform Foreman must be contacted for instructions before cars are coupled to or moved.

When indicator light at east end Track 30 displays "Red" aspect, engines moving eastward on this track must not pass fouling point until indicator light displays "Green" aspect.

RULE 827. Eastward freight and mixed trains using retaining valves and with less than three dynamic brakes in operation will stop at Frazier 10 minutes for heat radiation unless stop has previously been made at Cruzatte. When stop of 10 minutes has been made at either Frazier or Cruzatte, train may thereafter run not to exceed 18 miles before again stopping for wheel radiation.

Eastward freight and mixed trains with retaining valves in use and with three or more dynamic brakes in operation, will stop at Frazier 10 minutes for heat radiation unless stop has previously been made at Cruzatte. When stop of 10 minutes has been made at either Frazier or Cruzatte, train may thereafter run to Oakridge without stopping.

Train inspection must be made at heat radiation stops. Air Brake Rule 34 must be complied with.

RULE 827. Trains handling logs must stop and crew must inspect load and chains before entering yard at Klamath Falls.

RULE 842. Klamath Falls: Movements of GNRy trains and engines between end of CTC and junction switch of GNRy will be directed by yardmaster.

Westward trains must not pass absolute signal displaying "Proceed on Diverging Route" at east switch unless flashing white light is displayed in signal on signal bridge at end of CTC.

Yardman's proceed signal will indicate that protection has been provided against first-class trains for trains moving between CTC limits and west end Klamath Falls Yard.

Eugene Yard: Eastward trains entering yard will enter yard at Signal 6486 unless authorized by yardmaster or by signal from yardman to proceed on main track to enter yard at MP 650.2.

Westward trains leaving departure yard and moving on main track will not pass Signal 6489 until proceed signal is received from yardman.

All identified trains arriving Eugene Yard, except SLE, do not exceed 7 MPH into receiving track to permit carmen to make inbound inspection.

RULE 872. Enginemen taking charge of engines at Eugene Terminal and Klamath Falls will consider engines as having been amply supplied and sanders operative.

MISCELLANEOUS

1. Load limit (car and contents):

Klamath Falls-Eugene.....	263,000 lbs.
Mohawk Jct.-MP 649.40 (Marcola Br.).....	240,000 lbs.
MP 649.40 (Marcola Br.)-Hyland.....	169,000 lbs.

2. LOCATION OF STOCK YARDS

Station	Capacity in cars
Klamath Falls.....	95 (Water)
Chiloquin.....	40 (Water)
Lenz.....	35
Diamond Lake.....	5

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

Mile Post	Location	Description
537.80	East of Cascade Summit.....	Tunnel No. 3..... Overhd & Side
544.30	East of Abernethy.....	Tunnel No. 4..... Overhd & Side
545.20	East of Abernethy.....	Tunnel No. 5 & Roek Shed..... Overhd & Side
546.50	East of Cruzatte.....	Tunnel No. 6..... Overhd & Side
547.10	East of Cruzatte.....	Tunnel No. 7 & Snow Shed..... Overhd & Side
547.70	East of Cruzatte.....	Tunnel No. 8..... Overhd & Side
548.30	East of Cruzatte.....	Tunnel No. 9 & Snow Shed..... Overhd & Side
548.60	East of Cruzatte.....	Tunnel No. 10 & Roek Shed..... Overhd & Side
548.80	East of Cruzatte.....	Tunnel No. 11 & Roek Shed..... Overhd & Side
549.30	East of Cruzatte.....	Tunnel No. 12 & Roek Shed..... Overhd & Side
550.00	East of Cruzatte.....	Tunnel No. 13..... Overhd & Side
551.80	East of Frazier.....	Tunnel No. 14 & Snow Shed..... Overhd & Side
553.90	East of Frazier.....	Tunnel No. 15..... Overhd & Side
556.00	East of Fields.....	Tunnel No. 16..... Overhd & Side
557.10	East of Fields.....	Tunnel No. 17..... Overhd & Side
557.80	East of Fields.....	Tunnel No. 18..... Overhd & Side
558.60	East of Fields.....	Tunnel No. 19..... Overhd & Side
560.90	East of Wicopee.....	Tunnel No. 20..... Overhd & Side
565.48	East of Heather.....	Eagle Creek through Pl. Girder..... Overhd & Side
572.10	East of McCredie Springs.....	Tunnel No. 21..... Overhd & Side
581.80	East of Oakridge.....	Tunnel No. 22..... Overhd & Side
584.50	East of Westfir.....	Tunnel No. 23..... Overhd & Side
587.20	East of Lookout.....	Tunnel No. 24..... Overhd & Side
590.00	East of Lookout.....	1st Crossing middle Will. River through truss..... Overhd & Side
620.58	East of Springfield.....	Through girder Mill Creek..... Side
649.50	East of Hendricks.....	McKenzie River Crossing..... Overhd & Side

4. Engines listed are not permitted to operate on tracks shown below:

Class of Engine	Restricted Tracks
All.....	Beyond engine restriction sign at following locations: Chiloquin—Stem of old wye. Yamsay—Logging tracks. Oakridge—Sand spur.

5. Eugene: Impaired clearance exists when chutes are in place on Eugene Sand & Gravel Co. spur.

6. Diesel engine cooling water facilities available following locations:

- Oakridge..... ¾-inch hose on reel on west end of old engineman's locker room.
 - McCredie Springs.... 1½-inch hose near old locomotive water tank.
 - Wicopee..... 1½-inch hose near former location of middle locomotive water tank and buildings.
 - Fields..... 1-inch hose near B&B camp.
 - Cruzatte..... Near former location of station building.
 - Crescent Lake..... 1-inch hose in baggage room at station.
 - Chemult..... Baggage Room.
 - Chiloquin..... Baggage Room.
- When necessary to use these facilities replace hose in proper place.

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 7 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, 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.

EASTWARD			PSGR TRAINS	FRT & MIXED	WESTWARD			PSGR TRAINS	FRT & MIXED
MP	MP	Column:	1	2	MP	MP	Column:	1	2
KLAMATH FALLS TO EUGENE YARD:					EUGENE YARD TO KLAMATH FALLS:				
429.50	to 429.87...		50	40	649.70	to 648.95...		79	60
***429.87	to 433.91...		50	50	648.95	to 648.20...		79	55
433.91	to 438.65...		65	60	***648.20	to 646.90...		30	30
438.65	to 439.02...		60	60	646.90	to 644.60			
439.02	to 441.50...		75	60	(621.88).....			40	40
441.50	to 444.93...		75	60	621.88	to 620.40...		40	40
444.93	to 445.09...		65	60	***620.40	to 617.19...		55	45
445.09	to 446.56...		75	60	617.19	to 616.70...		50	45
446.56	to 451.81...		79	60	616.70	to 614.02...		55	55
451.81	to 454.81...		75	60	614.02	to 611.81...		50	50
***454.81	to 467.67...		50	50	611.81	to 596.94...		60	60
467.67	to 471.23...		70	60	596.94	to 596.61...		55	55
471.23	to 508.70...		79	60	596.61	to 592.40...		60	60
508.70	to 523.51...		60	60	592.40	to 591.90...		55	55
523.51	to 528.60...		79	60	591.90	to 588.99...		60	60
528.60	to 533.12...		60	60	588.99	to 583.87...		50	50
533.12	to 537.31...		55	55	583.87	to 580.50...		55	55
537.31	to 553.50...		30	25	***580.50	to 554.00...		30	30
553.50	to 553.60...		20	20	554.00	to 553.60...		25	25
553.60	to 554.00...		25	25	553.60	to 553.50...		20	20
***554.00	to 580.50...		30	25	553.50	to 537.31...		30	30
580.50	to 583.87...		55	55	537.31	to 533.12...		55	55
583.87	to 588.99...		50	50	533.12	to 528.60...		60	60
588.99	to 591.90...		60	60	528.60	to 523.51...		79	60
591.90	to 592.40...		55	55	523.51	to 508.70...		60	60
592.40	to 596.61...		60	60	508.70	to 471.23...		79	60
596.61	to 596.94...		55	55	471.23	to 467.67...		70	60
596.94	to 611.81...		60	60	***467.67	to 454.81...		50	50
611.81	to 614.02...		50	50	454.81	to 451.81...		75	60
614.02	to 616.70...		55	55	451.81	to 446.56...		79	60
616.70	to 617.19...		50	45	446.56	to 445.09...		75	60
***617.19	to 620.40...		55	45	445.09	to 444.93...		65	60
620.40	to 621.88				444.93	to 441.50...		75	60
(644.60).....			40	40	441.50	to 439.02...		75	60
644.60	to 646.90...		40	40	439.02	to 438.65...		60	60
***646.90	to 648.20...		30	30	438.65	to 433.91...		65	60
648.20	to 649.70...		79	60	***433.91	to 429.87...		50	50
					429.87	to 429.50...		50	25
MOHAWK JUNCTION TO HYLAND:					HYLAND TO MOHAWK JUNCTION:				
646.59	to 647.21...		..	20	659.81	to 647.21...		..	25
647.21	to 659.81...		..	25	647.21	to 646.59...		..	20
FALL CREEK JCT. TO MP 608.22.....					MP 608.22 TO FALL CREEK JCT.....				
			..	25				..	25

***PUC Order.

TOFC trains may operate at Column 1 speeds, not to exceed 60 MPH from Crescent Lake to Eugene, provided tons per operative brake do not exceed 80 tons.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH provided trains do not exceed:

Number of Cars	Tons Per Operative Brake
70.....	.60
75.....	.59
80.....	.58
85.....	.57
90.....	.56
95.....	.55
100.....	.54
105.....	.53
110.....	.52
115.....	.51
120.....	.50

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

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through turnouts and sidings at Wocua, Algoma, Modoc Point, Chiloquin, Kirk, Fuego, Lenz, Diamond Lake, Chemult, Mowich, Umli, Cascade Summit, Abernethy, Cruzatte, Frazier, Fields, Wicopee, Heather, McCredie Springs, Pryor and Oakridge.....	25
Through turnouts and sidings at Calimus, Yamsay, Lookout, Hampton, Crale, Minnow, Dexter, Dougren, Natron, Judkins.....	20
Through turnouts on other than sidings.....	10
On branches.....	10

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

NOMINAL CLASS	ENGINE NUMBERS	Cascade Summit to Eugene	Eugene to Douglas	Douglas to Hampton	Hampton to Oakridge	Oakridge to Cascade Summit	Cascade Summit to Klamath Falls	Klamath Falls to Cascade Summit	Mohawk Jct. to Hyland	Hyland to Mohawk Jct.
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917.....	2850	2250	1600	1400	775	2850	1600		
DP-5, 6, 8 to 11		2875	2250	1600	1425	775	2875	1625		
DF-1 to 12	6138 to 6470, 8022 to 8303, 301 to 379, 502 to 575, except.....	3175	2500	1825	1625	1150	3175	1825		
DF-100	with 61:16 gear ratio.....	2525	2000	1425	1250	700	2500	1100		
DF-101 to 108, 110, 112	with 60:17 gear ratio.....	3400	2575	1950	1725	950				
DF-109, 111	5200 to 5202.....	4000	3600	2450	2200	1450	4000	2475		
DF-114, 116 to 118, 120 to 122, 124, 125	4903 to 4905, 5250 to 5252.....	6525	4050	3600	3225	1450				
DF-123, 126	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493.....	5475	3600	3050	2700	1500	5475	3050		
DF-500, 501	5448, 5494 to 5507.....	5475	3600	3050	2700	1500	5475	3050		
DF-503	4800 to 4815.....	6650	10000	4000	3775	1900	6875	3275		
DF-504, 505	4816 to 4844.....	8675	10000	4500	4000	2050	8525	3600		
DF-602	4845 to 4873.....									
DF-603, 605 to 607, 611, 612, 616	5892 to 5895.....	3400	2711	1950	1750	1000	3400	1950		
DF-608 to 610, 613 to 615	5600 to 5719, 5730 to 5844, 5872 to 5891.....									
DF-127	5720 to 5729, 5845 to 5871.....						6175	3525		
DF-617, 620	7000 to 7020.....									
DF-618	7200 to 7237.....	5200	8075	3025	2875	1450	5325	2500		
DF-621	7200 to 7237.....									
DF-623	7300 to 7309.....									
DF-619, 622, 624	7400 to 7407.....	5150	8000	2950	2800	1400	5375	2500		
DF-701	7408 to 7464.....	5475	8000	3150	3000	1500	5825	2650		
DF-800, 801	7500 to 7567.....	6450	5000	3625	3225	1825	6450	3625		
DF-802	8500 to 8502.....	8000	12050	4550	4450	2225	8100	3950		
DS-1 to 8	9000 to 9017, 9021 to 9023.....									
DS-9 to 12	9018 to 9020.....									
DS-100 to 109, 111, 115, 119	1000 to 1032.....	1375	1050	775	675	375	1375	775		
DS-110, 114, 118	1036 to 1090.....	2425	1900	1350	1200	675				
DS-113, 117, 120 to 122	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567.....	2075	2050	1175	1050	575	2075	1175		
DS-200, 201	1442 to 1463, 1492 to 1513, 1539 to 1550.....	2900	2050	1600	1325	725	2675	1500		
DS-600 to 604	1488, 1491, 1529 to 1538, 1568 to 1596.....	2525	2000	1425	1275	700				
DS-605, 606	1900 to 1903.....	2800	2200	1575	1400	800				
DS-607	4600 to 4623, 4700 to 4703.....	3025	2400	1700	1500	825				
DS-500 to 506	4624 to 4633.....	3275	2600	1900	1675	925				
	4634 to 4645.....	1725	1375	975	875	475			①850	①1150

①Not more than 2 units in multiple may be operated over McKenzie River Bridge.

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

RULE M. 7200 volt power line on signal pole line, Black Butte to Mt. Hebron. If found broken or down, extreme caution must be used and prompt report made from first available means of communications.

RULE 14(k). Will not apply in CTC between Dunsmuir Yard and Klamath Falls.

RULE 81. Two main tracks between MP 319.61, Dunsmuir Yard, and MP 322.57, Dunsmuir Track nearest depot designated Track No. 1 and track nearest yard designated Track No. 2.

RULE 82-A. Dunsmuir Yard: Eastward trains originating will obtain clearance OK'd by Chief Train Dispatcher which will be issued at Dunsmuir and delivered by tube to Yard Office, Dunsmuir Yard. Clearance and train orders for first-class trains will be delivered in red container; for second-class trains in blue container and for extra trains in yellow container.

Regular trains originating at Weed on Siskiyou subdivision or at Grass Lake will be authorized by receipt of clearance at Dunsmuir or Dunsmuir Yard to apply at Weed or Grass Lake and may display indicators accordingly between Dunsmuir Yard and Weed or Grass Lake.

Klamath Falls: Westward trains originating Klamath Falls will obtain clearance OK'd by Chief Train Dispatcher which will be issued at Klamath Falls Yard and delivered by tube to Crew Dispatchers' Office, Klamath Falls. Clearance and train orders for first-class trains will be delivered in red container and for extra trains will be delivered in yellow container.

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

Klamath Falls Yard... Eastward first-class trains and trains originating and terminating,

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

Klamath Falls Yard... Eastward first-class trains.
Conductors of eastward first-class trains will leave train register ticket in red tube container at Crew Dispatchers' Office, Klamath Falls.

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

West MP	East MP
405.87 Dorris.....	407.43
425.67 Klamath Falls.....	429.81
551.80 " (Modoc Sub.).....	

RULE 99-A. Dunsmuir: Flag protection is not required on No. 1 or No. 2 Main Tracks between eastward absolute signal at west end Dunsmuir Yard and westward absolute signal at east end Dunsmuir.

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

Mount Shasta... McCRRR main track, for interchange track, Black Butte... Siskiyou line, for controlled siding, Klamath Falls... GNRy main track, for SP main track, Klamath Falls... Alturas line, from track No. 17 for Alturas line, Klamath Falls... OC&ERy main track, for yard track,

RULE 221. Unit for display of flashing light installed at following location:

Station	Location	Direction
Dorris.....	On train-order signal mast.....	Eastward

Display of flashing white light indicates that train-order signal is displaying proceed indication or that train-order operator has train orders ready for delivery, that such train orders do not restrict train at that station.

RULE 291. Dunsmuir Yard: Units for display of flashing yellow installed on absolute signals governing movements from yard to No. 2 main track at east end and west end Dunsmuir Yard govern switching movements only and authorize movements to pass absolute signal without stopping.

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

Eastward Signal	Protection	Westward Signal
P-3234	Slide detector fence, between MP 323.61 and MP 323.67.....	P-3243
P-A	Slide detector fence, MP 326.86 and MP 326.92.....	P-3273
P-3274	Slide detector fence, MP 327.5.....	P-3281
P-3290	Slide detector fence MP 329.50.....	P-3301
P-A	Collision detector, bridge 360.82.....	P-A
P-3728	Spring switch, west end siding, Erickson.....	P-4073
	Spring switch east end siding, Dorris.....	P-4119
P-4098	Collision detector, bridge 410.57.....	
P-4258	Spring switch west end siding, Texum.....	

AUTOMATIC BLOCK SIGNAL SYSTEM

Klamath Falls: Trains or engines stopped by Signal 4293 may proceed at restricted speed.

Signal 4278 at derail GNRy Bieber line, top unit governs from Bieber line to Cascade line main track; lower unit governs from Bieber line to GNRy line crossing Lake Ewauna.

Signal 4277 at derail from line crossing Lake Ewauna governs to GNRy Bieber line only.

Between the following locations, trains moving in either direction will move by block signals whose indicators will supercede the superiority of trains:

Klamath Falls Yard, MP 427.5 and End of CTC, MP 429.8.

RULE 535. SPRING SWITCHES

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

Location	Normal Position
Erickson..... West end siding.....	Main track
Dorris..... East end siding.....	Main track
Texum..... West end siding.....	Main track

INTERLOCKING

Klamath Falls Yard: Limits extend from westward interlocking signal, opposite MP 427, 225 feet westward to eastward interlocking signal at MP 553.16 on Alturas line and 225 feet westward to eastward interlocking signal at MP 426.95 in Texum siding.

RULE 705. LETTER TYPE INDICATORS.

Illum. On Letter Signal Approaching Authorizes and requires movement as follows:

H.....	On 7 ft. West Switch mast at Mt. Hebron MP 392.45	Eastward trains must stop short of east end Mt. Hebron siding and member of crew open hot bearing detector box located at clear point at the east end Mt. Hebron siding and be governed by instructions on page 4, Rule 705 of these instructions.
W.....	3908 East End Jerome	Wait until Signal 3908 display proceed indication.

CENTRALIZED TRAFFIC CONTROL

Centralized Traffic Control on both main tracks between MP 319.61, Dunsmuir Yard, and MP 322.57, Dunsmuir, and between MP 322.57 and east switch siding Grass Lake.

Black Butte: Eastward absolute signal on Main Track just west of crossover governs as follows:

Top Unit.....	Main track
Middle Unit.....	Crossover to Siskiyou Line
Bottom Unit.....	Crossover to Controlled Siding

Units for display of flashing white light located on right and left of signal mast on siding west of crossover. When flashing, indicates signal is cleared for movements as follows:

Right of Mast.....On Controlled Siding
Left of Mast.....From "Siskiyou Siding"

When absolute signals on siding display "lunar" aspect per Rule 289, Rule 775 and second paragraph of Rule 771 will not apply.

Dunsmuir Yard: Three-unit westward absolute signal No. 1 Track, MP 321.35, governs movements as follows:

Top Unit.....No. 1 Track
Middle Unit.....No. 2 Track
Bottom Unit.....Drill Track

Absolute signal on Drill Track at west end crossover between Drill Track and No. 2 track governs movements through crossover to No. 2 Main Track or No. 1 Main Track only and will remain dark until crossover switch is reversed.

When flashing red light mounted on pole at MP 320 is illuminated, all switching moves must clear No. 2 Main Track.

GENERAL REGULATIONS

RULE 825. Instructions for setting hand brakes: Dunsmuir and Dunsmuir Yard:

Passenger Trains.....{Two brakes on east end, Three brakes on west end.
Freight trains or cuts of 25 cars or less.....Ten brakes on west end.
Freight trains or cuts of 26 to 50 cars.....{Ten brakes on west end, Five brakes on east end.
Freight trains or cuts of over 50 cars.....{Ten brakes on west end, Ten brakes on east end.
Klamath Falls and Klamath Falls Yard:
Passenger Trains.....Two brakes on west end,
Freight trains.....Five brakes on west end.

Any employe releasing any of these brakes must set an equal number to replace them.

Staff brakes on freight trains must be set with the assistance of a brake club after train has stopped.

When it is necessary to double over incoming freight trains at Dunsmuir Yard, trainmen will secure that portion of train not doubled over, and yardmen will secure that portion of train doubled over.

Dunsmuir Yard and Klamath Falls Yard: Hand brakes will not be set on freight trains if outgoing crew takes charge of train on arrival or if inbound crew is advised by yardmaster that engine is not to be detached.

Dunsmuir and Klamath Falls: Hand brakes will not be set on passenger trains standing at the station unless engine is detached provided conductor has reached understanding that engineer will remain on engine at all times and control train by use of air brakes.

Portable rail skids are hung on posts at lower end of sidings at Small, Mott, Azalea, Mount Shasta, Upton. At Black Butte rail skid is located east of east wye switch.

When necessary to leave cars on these sidings, permission must first be obtained from chief train dispatcher, after which rail skid must be placed on rail and leading wheel of first car in descending direction run onto the rail skid, and hand brakes set if brakes are operative, before engine is detached. Trains picking up cars from these sidings must remove rail skid and return it to proper post and lock it in place with switch lock.

RULE 827. Freight trains using retaining valves on descending grade will stop as indicated, at the following stations for heat radiation:

Azalea.....5 minutes
Andesite.....10 minutes

(If stop of not less than 5 minutes has been made at Cougar, the stop at Andesite will not be necessary, in which event 10 minute stop must be made at Bolam.)

Freight trains with three or more dynamic brakes in operation need not stop at Andesite or Azalea for heat radiation if there is no indication of wheels overheating and in the judgment of conductor and engineer it is safe to proceed.

Engines without dynamic brake in operation running light on descending grade must stop at the above stations a sufficient length of time to permit heat radiation.

Trains handling logs, (except in gondolas), must stop before entering yard at Klamath Falls; before passing through tunnels; over Dry Canyon viaduct between Hotlum and Bolam; at which time load and chains on cars of logs must be inspected.

RULE 842. Dunsmuir Yard: Trains entering or leaving yard tracks must receive proceed signal from yardman except when movement is governed by diverging route signal.

Klamath Falls Yard: Eastward trains except first-class and TOFC trains must not pass crossover located 2050 feet east of signal 4280 unless proceed signal is received from yardman.

Klamath Falls: Westward trains must not pass absolute signal displaying "Proceed on Diverging Route" at east switch unless flashing white light is displayed in signal on signal bridge at end of CTC.

Yardman's proceed signal will indicate that protection has been provided against first-class trains for trains moving between CTC limits and west end Klamath Falls Yard.

AIR BRAKE RULES

RULE 2. Klamath Falls Yard: Switch engine handling 25 cars or more at east end of yard must have air cut in on not less than 6 cars.

Dunsmuir Yard: Switch engines must have air brakes cut in on cars as follows:

Table with 2 columns: TONS, BRAKES. Rows: 750 to 1250 (5), 1250 to 2000 (10), 2000 and over (15)

RULE 17. Retaining valves will be used on descending grades as follows:

FREIGHT AND MIXED TRAINS

Grass Lake to Dunsmuir Yard: One retaining valve for each 70 tons in train, except when dynamic brake is in operation between Grass Lake and Dunsmuir Yard and tonnage of train exceeds 900 tons per 4-axle unit or 1600 tons per 6-axle unit of dynamic brake, one retaining valve for each 150 tons in train; except when dynamic brake is in operation and pressure maintaining system of braking is being used and tonnage of train exceeds 1375 tons per 4-axle unit or 1825 tons per 6-axle unit of dynamic brake, one retaining valve for each 150 tons in train.

PASSENGER TRAINS

All retaining valves must be turned up when no dynamic brake is in operation, between Azalea and east switch at Dunsmuir.

When dynamic brake is in operation between Azalea and east switch at Dunsmuir engineer will notify trainmen if necessary to use retaining valves.

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hoses on outgoing freight trains at Dunsmuir Yard until they have been notified by the yardmaster or his representative that the switching has been completed. After trainmen have been so notified, yardmen must not perform switching on, or couple other cars or engines to the train without instructions from the yardmaster or his representative, who must notify trainmen before the intended move is made.

RULE 24-B. Dunsmuir Yard and Dunsmuir: When continuity of brake pipe is not disturbed, incoming engineer will apply train brakes when stopped. Outgoing engineer will release brakes and proceed without making rear end or road test.

RULE 25. Will apply as designated below, except when conditions are favorable for releasing air brakes (Rule 29) while running, and engineer after informing trainman test is to be made approaching stations named, receives positive information following test that brakes did apply on caboose and brake pipe pressure is being restored:

Grass Lake.....Westward
Black Butte.....To and from Siskiyou Line

RULE 33. Maximum tonnage per operative brake is as follows:
Azalea to Dunsmuir Yard.....80 tons

PASSENGER TRAINS

RULE 36. Trainmen must not couple or uncouple air hoses or steam conduits on passenger trains at Dunsmuir until they have been notified by the yardmaster or his representative that switching has been completed. After trainmen have been so notified, yardmen must not perform switching on, or couple other cars or engines to the train without instructions from the yardmaster or his representative who must notify trainmen before the intended move is made.

RULE 39. Running test must be made on passenger trains as follows:

Grass Lake: Westward trains.
Black Butte: Eastward trains via Siskiyou line.

RULE 60. On westward freight trains using dynamic brake with 80- or 85-foot trailer-flat cars entrained within first 20 cars from head end, dynamic braking force must be reduced to one-half of maximum, and, if necessary, automatic brakes applied sufficiently so that speed will not exceed 20 MPH 500 feet before reaching curve at MP 328.17 and until train has passed MP 327.87.

MISCELLANEOUS

1. Not more than three units will be placed behind 80- or 85-foot trailer-flat cars between Dunsmuir Yard and Black Butte.

2. Engines listed are not permitted to operate on tracks shown below:

Table with 2 columns: Class of Engine, Restricted tracks. Rows: All engines.....Dorris—Beyond engine restriction sign Ass'd Lbr. Co. spur.

At Mount Shasta, switching movements to or from McCRRR tracks Nos. 1, 2, 3 or 4, when made through the connection from siding to McCRRR main track, may be made without flag protection after ascertaining that there are no movements being made on McCRRR west of State highway. Movements on west leg of wye McCRRR track must not be made without proper flag protection.

3. Load limit (car and contents):
Dunsmuir-Klamath Falls.....263,000 pounds
Unless authorized by Superintendent, heavier loads must not be handled.

4. LOCATION OF STOCK YARDS Capacity in cars

Table with 2 columns: Station, Capacity in cars. Rows: Dorris.....4 (Water), Worden.....6, Klamath Falls.....95 (Water)

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

Table with 3 columns: MP, Location, Description. Rows: 325.00 Dunsmuir...Sacramento River, 407.80 Dorris.....Tunnel No. 17.....Overhead and side, 410.00 Dorris.....Tunnel No. 18.....Overhead and side

6. 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 7 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, 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.

Large table with columns: EASTWARD, WESTWARD, PSGR TRAINS, FRT & MIXED. Rows include DUNSMUIR YARD TO KLAMATH FALLS and KLAMATH FALLS TO DUNSMUIR YARD with various mileposts and speeds.

**ICC Regulation. Freight trains without dynamic brake in operation must not exceed 20 MPH on descending grade between Mount Shasta and Dunsmuir Yard.

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

Table with 2 columns: Location, MPH. Rows: Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except: Upton.....25, Through sidings and turnouts at Mott, Azalea, Upton.....10, Through turnouts on other than sidings.....10, On branches.....10

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

Table with columns: NOMINAL CLASS, ENGINE NUMBERS, Dunsmuir to Black Butte, Black Butte to Grass Lake, Grass Lake to Klamath Falls, Klamath Falls to Mt. Hebron, Mt. Hebron to Dunsmuir. Rows include DP-4, DP-5, DF-1 to 12, DS-1 to 8, etc.

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

RULE 82-A. Trains to Siskiyou Subdivision at Springfield Jct. must obtain clearance at Eugene Yard or Springfield, OK'd by Chief Train Dispatcher.

Regular trains originating at Weed will be authorized by receipt of clearance at Dunsmuir or Dunsmuir Yard to apply at Weed and may display indicators accordingly between Dunsmuir Yard and Weed.

RULE 83. Eastward trains may identify Westward trains at Black Butte to apply at End of CTC, Weed.

RULE 83-A. At following stations only the trains indicated will register: Springfield Jct., Medford, Cottage Grove, Weed, Black Butte.

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

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

Table with columns: West MP, East MP. Lists stations like Weed, Gazelle, Montague, Hornbrook, Hilt, Ashland, Medford, Grants Pass, Glendale, Riddle, Myrtle Creek, Dillard, Roseburg, Oakland, Drain, Cottage Grove with corresponding mileposts.

RULE 99-C. Will apply between Weed and Springfield Jct.

RULE 103-A:

Drain: When moving over former Pacific Highway crossing flag protection must be provided for highway traffic.

Rogue River: Eastward movements on siding over Depot Street crossing must stop within 65 feet of crossing, wait 20 seconds for crossing protection to operate before movement is made onto crossing.

Ashland: Cars or engines must not be left standing within control circuits of automatic warning device at Oak Street crossing. Movements stopped within the limits of these control circuits must not enter crossing until it has been ascertained that automatic warning device is operating.

Sutherland: Bells on automatic warning device at Central Avenue crossing are equipped with cut-out device so that Bells will stop ringing after an interval of one minute and ten seconds. Movements occupying control circuit at this crossing more than one minute and ten seconds must not enter crossing until it has been ascertained that bells are ringing or that crossing is clear of vehicular traffic.

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

- Tolo..... White City Branch, for siding.
Montague..... YWRy main track, for house track.
Deraills on main track:
White City..... 100 feet west of west switch of interchange track.
Ashland..... 210 feet west of east switch.

RULE 105. Following tracks are designated for use as sidings:

Medford: Siding extends from MP 441.4 to MP 442.1.

Kane: Siding extends from Signals 4396-4397 to Signals 4406-4407.

Siskiyou: When a westward train is holding main track to meet an eastward train and switch is open for train to enter siding, conductor of train holding main track will arrange to protect the eastward train against light engines or other trains occupying siding, and will give the eastward train sufficient room to avoid stopping engines in tunnel.

RULE 221. Medford is a train order office daily except Sundays between 12:01 AM and 8:01 AM.

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

Table with columns: Eastward Signal, Protection, Westward Signal. Lists signals like P-3480, P-3500, P-3726, P-4112, P-6418 and their locations.

AUTOMATIC BLOCK SIGNAL SYSTEM

Between the following locations, trains moving in either direction will move by block signals whose indications will supersede the superiority of trains.

End of CTC, MP 348.14 and Train Order Office Weed and fouling point, west leg wye switch Springfield Jct.

Siskiyou: When Signal 4112 west of Siskiyou displays proceed on diverging route eastward trains are authorized to enter siding at Siskiyou.

Ashland: If means of communication available and permission is obtained to proceed on main track or proceed signal received from yardman, eastward trains may pass Signal 4284 displaying stop indication without stopping at restricted speed.

Ashland: Trains or engines stopped by Signals 4293 or 4297 may proceed with caution not exceeding 12 MPH.

Roseburg: Westward trains may pass Signal 5729 displaying stop indication if flashing white light is displayed on signal mast or proceed signal received from yardman.

RULE 535. SPRING SWITCHES

Spring switch not equipped with facing point locks is located as follows:

Table with columns: Location, Normal Position. Shows Weed... West end yard... Main track.

RULE 705. Letter Type Indicators.

Table with columns: Illum. On, Letter Signal, Approaching, Authorizes and Requires Movement as follows. Shows S... P-3480 Weed Enter Weed Yard.

CENTRALIZED TRAFFIC CONTROL

Limits extend from MP 345.20, Black Butte to MP 348.14, Weed.

GENERAL REGULATIONS

RULE 825. Instructions for setting hand brakes:

- Ashland:
Passenger trains.... Two brakes on east end.
Freight trains or cuts of cars..... Five brakes on east end.

Any employe releasing any of these brakes must set an equal number to replace them.

Staff brakes on freight trains must be set with the assistance of a brake club after train has stopped.

RULE 826. Medford: Indicator lights located on tracks at each end Medford Ice and Cold Storage Co. icing platform govern movements as follows:

Green: Tracks may be used for train or switching movements.
Red: Engines or cars must not be placed beyond end of ice dock or cars at ice dock coupled to or moved.

Not Lighted: Must be considered as displaying most restrictive indication and ice dock foreman must be contacted before cars are coupled to or moved.

Indicator light on right side of dock at east end governs movements into Ice Dock No. 2.

Indicator light on left side of dock at west end governs movements into Ice Dock No. 1.

RULE 827. Freight trains using retaining valves and light engines without dynamic brake on descending grade will stop as indicated, at the following stations for heat radiation:

Table with 2 columns: Station Name, Time. Includes MP 419 (10 minutes), MP 407 (10 minutes), Weed or Edgewood (10 minutes).

Freight trains, except those using retaining valves as required on trains without dynamic brakes in operation, need not stop at Hilt for heat radiation if there is no evidence of wheels overheating and in the judgment of conductor and engineer it is safe to proceed.

Trains handling logs (except in gondolas), must stop before passing through tunnels; and over Klamath River bridge west of Hornbrook, at which time load and chains on cars of logs must be inspected.

AIR BRAKE RULES

RULE 2. When switch engine is used in Ashland yard limits air brakes will be cut in on cars as follows:

Table with 2 columns: TONS, BRAKES. Shows 750 to 1250 (5 brakes), 1250 to 2000 (10 brakes), 2000 and over (15 brakes).

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

FREIGHT TRAINS

Glendale-Grants Pass, both directions: Ten retaining valves on head end of train except when dynamic brake in operation and tonnage exceeds 1500 tons per six axle unit or 1200 tons per four axle unit, ten retaining valves solid on head end of train.

Rice Hill and MP 594.00. When necessary to comply with Rule 29.

Rice Hill to MP 602.00. Eastward trains exceeding 4000 tons will use twenty retaining valves on head end.

Oakland and Divide, both directions: Ten retaining valves solid on head end of train, except when dynamic brake in operation and tonnage exceeds 2100 tons per six axle unit or 1600 tons per four axle unit, ten retaining valves solid on head end of train.

Hornbrook and Ashland, both directions: All retaining valves, except when dynamic brake in operation and tonnage exceeds 275 tons per four axle unit or 800 tons per six axle unit of dynamic brake, one retaining valve for each 100 tons in train; except when dynamic brake is in operation and pressure maintaining system of braking is being used and tonnage of train exceeds 600 tons per four axle unit or 1200 tons per six axle unit of dynamic brake, one retaining valve for each 100 tons in train. On loaded cars, retaining valves must be turned to high pressure position.

Black Butte and Edgewood, Montague and Hornbrook: With no dynamic brake in operation, one retaining valve for each 70 tons in train. When dynamic brake is in operation and tonnage of train exceeds 900 tons per four axle unit or 1600 tons per six axle unit, one retaining valve for each 150 tons in train; except when dynamic brake is in operation and pressure maintaining system of braking is being used and tonnage of train exceeds 1375 tons per four axle unit or 1825 tons per six axle unit, one retaining valve for each 150 tons in train.

PASSENGER TRAINS

All retaining valves must be turned up between Hornbrook and Ashland and, when no dynamic brake is in operation, between Black Butte and Edgewood.

When dynamic brake is in operation between Black Butte and Edgewood, engineer will notify trainmen if necessary to use retaining valves.

RULE 22. Trainmen must not couple air hoses on outgoing freight trains at Roseburg until they have been notified by Foot Board Yardmaster or his representative that switching has been completed. After trainmen have been so notified, yardmen must not perform switching on, nor couple other cars or engines to the train without instructions from the Foot Board Yardmaster or his representative who must notify trainmen before intended move is made.

RULE 24-B. Roseburg: When continuity of brake pipe is not disturbed, incoming engineer will apply train brakes when stopped. Outgoing engineer will release brakes and proceed without making rear end or road test.

RULE 25. Will apply at Siskiyou except when engineer receives positive information from trainman that air gage in caboose shows an increase in brake pipe pressure after leaving MP-422 westward, or after leaving Hilt eastward.

Will apply as designated below, except when conditions are favorable for releasing air brakes (Rule 29) while running, and engineer after informing trainman test is to be made approaching stations named, receives positive information following test that brakes did apply on caboose and brake pipe pressure is being restored:

Table with 2 columns: Location, Description. Black Butte: To and from Siskiyou Line. Glendale: Westward when temperature is 32° or less.

FREIGHT TRAINS

RULE 33. Gross tonnage on any freight train must not exceed the tons per operative brake between the stations shown: Grants Pass and Glendale... 70 tons. Black Butte and Ashland... 80 tons.

PASSENGER TRAINS

RULE 38. Immediately prior to leaving Siskiyou test must be made to determine that brakes on rear car apply and release.

RULE 39. Running test must be made on passenger trains as follows:

Table with 2 columns: Location, Description. Black Butte: Eastward trains via Siskiyou Line. Siskiyou: Eastward and Westward trains.

MISCELLANEOUS

- 1. Engines listed must not operate on tracks shown below:
Class of Engines Restricted Tracks
All engines... Medford—Crossover between tracks Nos. 3 and 4, Government Yard.
All engines and cars... Ashland—Beyond restriction sign Bagley Canning spur.
All engines... Grants Pass—Beyond restriction sign 100 feet beyond J Street on Southern Oregon Ply.

2. The following cars must not be operated between Cornutt and Hugo:

Table with 2 columns: Car Range, Series. Wood Chip Cars: SP-350100 to 350299 inclusive (SP-352000 Series), SP-350410 to 350459 inclusive (SP-354000 Series), SP-351010 to 351059 inclusive (SP-351298, SP-351967), SP-351600 to 351999 inclusive (SSW-78000 Series).

Veneer Cars

Table with 3 columns: Car Range, Car Range, Car Range. SP-208161-H to 208208-H inclusive; SP-208563-H to 208851-H; SP-208852-H to 213892-H to SP-213941-H; SP-208962-H to 209527-H.

3. The following cars must not be operated between Ashland and Hornbrook:

Table with 2 columns: Car Range, Series. Wood Chip Cars: SP-350100 to SP-350459 inclusive (SP-352000 Series), SP-351010 to SP-351059 inclusive (SP-354000 Series), SP-351400 to SP-351999 inclusive (SP-390000 Series), SP-351298, SP 351967 (SSW-78000 Series).

All closed cars 60 feet or longer. All cars 85 feet or longer.

4. Load limit (car and contents):

Table with 2 columns: Location, Capacity. Black Butte-Ashland (251,000 lbs.), Ashland-Springfield Jct. (263,000 lbs.), White City-Tolo (263,000 lbs.).

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

5. LOCATION OF STOCK YARDS

Table with 2 columns: Station, Capacity in cars. Grenada... 10 (Water).

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

Table with 4 columns: Mile Post, Location, Description, Clearance. Lists various locations from 390.90 to 627.39 with descriptions like Klamath River bridge, Tunnel No. 13, etc.

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 7 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, 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.

Table with columns for EASTWARD and WESTWARD directions, including MP, MP Column, PSGR TRAINS, and FRT & MIXED. It lists various train routes and their corresponding speeds and engine classes.

With Caution Not Exceeding MPH
SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:
Through slip switches.
Through turnouts on other than sidings.
On branches.
Hornbrook, wye.
Medford, GRC track.
Roseburg, U.S. Ply. lead.
Dole siding.

Table with columns for RATING OF ENGINES—In Units of 2000 Lbs. (Tons) and ENGINE NUMBERS. It lists engine classes and their corresponding ratings for various routes.

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

ENGINE NUMBERS

NOMINAL CLASS

DP-4, 7, 12
DP-5, 6, 8 to 11
DF-1 to 12
DF-100 to 126
DF-500, 501
DF-504, 505
DF-600
DF-603, 605 to 607, 611, 612, 616
DF-608 to 610, 613 to 615
DF-127
DF-617, 620
DF-618
DF-621
DF-623
DF-619, 622, 624
DF-701
DF-800, 801
DF-802
DS-1 to 8
DS-9 to 12
DS-100 to 109, 111, 115, 119
DS-110, 114, 118
DS-113, 117, 120 to 122
DS-200, 201
DS-800 to 804
DS-605, 606
DS-607
DS-800 to 806

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

- Mapleton.....Only trains instructed by train order.
Richardson.....Only trains instructed by train order.

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

- Mapleton.....All trains.

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

Table with 3 columns: West MP, Station Name, East MP. Rows include Eugene, Coos Bay, Coquille, Myrtle Point, Warner, Gaylord, Powers.

RULE 98. Railroad crossings at grade and drawbridges not interlocked:

- Between Eugene Yard and Danebo... OERy crossing.
Coos Bay..... Coalbank Slough.

RULE 99-C. Will apply on Coos Bay Branch.

RULE 104. The normal position of switches at junction points and end of double track is as follows:

- Eugene Yard..... Coos Bay line, for yard track,

RULE 221. Coquille: Light will not be displayed in train-order signal except when train-order operator is on duty.

Reedsport: Train order office located on draw span of Umpqua River Bridge (MP-739).

INTERLOCKING

Reedsport Drawbridge Tower: Governs movement over Umpqua River drawbridge 0.6 miles west of Reedsport.

When interlocking signal located approximately 650 feet east of Umpqua River Bridge displays green aspect, it will authorize movement of trains between Reedsport and train order office on draw span, which will supersede the superiority of trains.

North Bend Drawbridge Tower: Governs movement over Coos Bay drawbridge 1.7 miles west of North Bend.

GENERAL REGULATIONS

RULE 872. Enginemen taking charge of engines at Eugene Terminal will consider engines as having been amply supplied and sanders operative.

MISCELLANEOUS

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

Table with 2 columns: Class of Engines, Restricted Tracks. Lists various engine classes and their restricted track locations.

Reedsport: Do not switch cars under or through chip loader on U. S. Plywood Co. Track No. 2.

North Bend: Do not switch cars under or through chip loader on Weyerhaeuser Company chip spur.

2. Load limit (car and contents): Eugene-Myrtle Point... 240,000 lbs. Myrtle Point-Powers... 169,000 lbs. 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

Table with 3 columns: Mile Post, Location, Description. Lists overhead and side structures along the route.

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

Table with 2 columns: Restriction Type, MPH. Lists speed restrictions for sidings, crossovers, and branches.

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 7 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, appearing on page 6 of Special Instructions for All Subdivisions.

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.

Large table with 8 columns: EASTWARD, ALL TRAINS, WESTWARD, ALL TRAINS. Lists speed restrictions for various engine classes and routes.

ICC Regulation. *PUC Order.

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

Table with 10 columns: NOMINAL CLASS, ENGINE NUMBERS, and various engine ratings for different territories.

①Restricted to 15 MPH between Coos Bay and McCormac. Georgia-Pacific engines may operate between Coos Bay and Powers except engine No. 11 must not operate between Myrtle Point and Coos Bay.

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

RULE 83. Extra trains operating between Alturas and Lakeview or Wendel and Susanville, in addition to information required by the train register, must register destination of trip (turning point) and date of departure in the column captioned "Signals."

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. Rows include Klamath Falls, Tule Lake, Alturas, Sage Hen, Wendel.

RULE 97. Between the following locations extra trains moving in either direction are authorized to run extra without train order authority:

- End of double track, Flanigan and Wendel. Alturas and Lakeview. Wendel and Susanville.

RULE D-97-A will apply as follows:

On both main tracks between Mile Post 336.5, Flanigan and interlocking limits Mile Post 337.7.

RULE 99. Will not apply between Alturas and Lakeview.

RULE 99-C. Will apply between Klamath Falls Yard and Wendel and on Westwood Branch.

RULE 103-A. 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.

- Tule Lake... First crossing west of station over spur track serving Osborne Potato Cellar and Tule Lake Cold Storage, MP 529.40. Lakeview... Western Avenue Crossing, MP 512.50. Alturas... Main St. on Lakeview Branch.

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

- Klamath Falls... GNRy main track, for SP main track, Klamath Falls... Alturas line, to yard track No. 17, for Alturas line, Klamath Falls... OC&ERY main track, for yard track, Alturas... Lakeview Branch for Klamath Falls main track. Wendel... For Alturas line.

RULE 221. WPRR train orders and clearances will be issued at SP Company train-order office, Wendel to apply at Flanigan.

RULE D-261 will apply as follows:

On both main tracks between Mile Post 336.5, Flanigan and interlocking limits, Mile Post 337.9

RULE 292. Wendel: Eastward freight trains or engines must not pass west switch Wendel unless flashing white light is displayed on mast at MP 357.15 or orally authorized to proceed.

When flashing white light is displayed at MP 357.15, trains and engines are authorized to enter No. 2 track and proceed to clear point at east end No. 2 track.

Telephone located at west switch Wendel.

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 "I" or "P-SA."

Table with 3 columns: Eastward Signal, Protection, Westward Signal. Rows include P-SA Spring switch, PI High water detector bridge.

AUTOMATIC BLOCK SIGNAL SYSTEM

Klamath Falls: Trains or engines stopped by Signal 4293 may proceed at restricted speed.

Signal 4278 at derail GNRy Bieber line, top unit governs from Bieber line to Cascade line main track; lower unit governs from Bieber line to GNRy line crossing Lake Ewauna.

Signal 4277 at derail from line crossing Lake Ewauna governs to GNRy Bieber line.

RULE 535. Spring switches not equipped with facing point locks are located as follows:

Table with 2 columns: Location, Normal Position. Rows include Alturas, Flanigan, Wendel.

*Equipped with switch-point indicator. Indicator does not indicate track occupancy, and will display green aspect when switch is lined for normal position.

INTERLOCKING

Klamath Falls Yard: Limits of interlocking extend from westward interlocking signal opposite MP 427, 225 feet westward to eastward interlocking signal at MP 553.16 on Alturas line and 225 feet westward to eastward interlocking signal at MP 426.95 in Texum siding.

Wendel-Flanigan: Limits extend between eastward signal east end double track MP 337.7, Flanigan and westward signal MP 357.2, Wendel, and is under control of signal operator, Wendel.

Trains using switches at Herlong must occupy main track continuously or leave main track switch open while work is being performed. Tracks at Herlong must not be used by trains or engines for meeting or passing of trains.

Flanigan: Limits extend between westward interlocking signals end of double track, MP 336.5 to WPRR signal, MP 384.35 and to SP eastward signal MP 336.2. WPRR connection on WPRR is dual control switch.

Two-unit westward interlocking signal west end double track MP 336.5 governs movements as follows:

- Top Unit... Via WPRR main track. Bottom Unit... Across WPRR main track via SP. Unit equipped with letter type indicator for display of letter "S" which must be illuminated for movements via SP across WPRR main track.

Route selection of trains over WPRR crossing is under control of WPRR train dispatcher.

When trains are stopped by signals governing use of interlocking and no WPRR train can be seen approaching or moving through the interlocking, member of crew must consult with WPRR train dispatcher by telephone located at the crossing.

When instructed by WPRR train dispatcher to use emergency release, operate push button in iron box at crossing.

After push button is operated, red indicator light when displayed indicates time release is in operation. After time interval has elapsed yellow indicator light should be displayed, indicating signals on intersecting line display stop indication, and train may then proceed in accordance with Rule 663(c)

If yellow light is not displayed, train must proceed only after providing necessary protection on intersecting track as required by Rule 663(c).

Instructions for operating push button release posted inside of box at crossing.

AUTOMATIC INTERLOCKING

Stronghold: Crossing GNRy MP 525.4.

GENERAL REGULATIONS

RULE 812. Be governed by current timetables, bulletins and rules of WPRR, on WPRR track between Mason and Westwood. Southern Pacific Company's trains and engines are authorized to operate over WPRR tracks between WPRR Mile Post 384.383, Flanigan and WPRR Mile Post 535.945, Weso and existing WPRR paired track connection Weso subject to Western Pacific Railroad Rules Operating Department effective January 1, 1961, timetable, special instructions and timetable bulletins.

WPRR bulletins will be posted at Wendel.

RULE 825. Instructions for setting hand brakes.

Klamath Falls and Klamath Falls Yard: Passenger trains... Two brakes on west end. Freight trains... Five brakes on west end. Any employe releasing any of these brakes must set an equal number to replace them.

Staff brakes on freight trains must be set with the assistance of a brake club after train has stopped.

Klamath Falls Yard: Hand brakes will not be set on freight trains if outgoing crew takes charge of train on arrival or if inbound crew is advised by yardmaster that engine is not to be detached.

Klamath Falls: Hand brakes will not be set on passenger trains standing at the station unless engine is detached provided conductor has reached understanding that engineer will remain on engine at all times and control train by use of air brakes.

RULE 827. Trains handling logs must stop and crew must inspect load and chains before entering yard at Klamath Falls.

With no dynamic brake in operation, eastward freight and mixed trains and light engines must stop at MP 430.00 for inspection.

With no dynamic brake in operation, westward freight and mixed trains and light engines must stop at MP 383.6 for inspection.

When retaining valves are used Sage Hen to Likely or Crest to Wendel, inspection must be made as prescribed by Rule 34.

Between Susanville and Westwood, a member of crew must watch track from rear of train for evidence of derailment so that in event of derailment, train may be stopped promptly.

Westward trains without dynamic brakes in operation, or consisting of over 900 tons using retaining valves between Westwood Jct. and Susanville will stop at MP 390.00 for inspection.

RULE 842. Klamath Falls: Trains and engines approaching Klamath Falls Yard must not pass Signal 5528 unless flashing white light is displayed on mast of this signal. Flashing white light will authorize movement to east end of Track No. 17 where signal must be received from yardman before moving to receiving track.

AIR BRAKE RULES

RULE 17. Retaining valves will be used on descending grades as follows:

AMBROSE TO CANBY

Freight and Mixed Trains

With no dynamic brake in operation, one retaining valve for each 70 tons in train.

When dynamic brake is in operation and tonnage of train exceeds 900 tons per 4-axle unit or 1800 tons per 6-axle unit of dynamic brake, one retaining valve for each 150 tons in train; except when dynamic brake is in operation and pressure maintaining system of braking is being used and tonnage of train exceeds 1800 tons per 4-axle unit or 2300 tons per 6-axle unit of dynamic brake, one retaining valve for each 150 tons in train.

Passenger Trains

With no dynamic brake in operation, all accessible retaining valves must be turned up.

SAGE HEN TO LIKELY SAGE HEN TO MADELINE CREST TO CARLO VIEWLAND TO WENDEL

Freight and Mixed Trains

With no dynamic brake in operation, one retaining valve for each 80 tons in train.

When dynamic brake is in operation and tonnage of train exceeds 1100 tons per 4-axle unit or 2400 tons per 6-axle unit of dynamic brake, one retaining valve for each 150 tons in train; except when dynamic brake is in operation and pressure maintaining system of braking is being used and tonnage of train exceeds 1800 tons per 4-axle unit or 2700 tons per 6-axle unit of dynamic brake, one retaining valve for each 150 tons in train.

Passenger Trains

With no dynamic brake in operation, two-thirds of the retaining valves must be turned up on trains of 12 or more cars.

WESTWOOD JCT. TO SUSANVILLE

Freight Trains

Retaining valves need not be used on freight and mixed trains with dynamic brake operative with less than 900 tons. Trains consisting of over 900 tons or without dynamic brakes in operation will turn up one retaining valve for each 25 tons in excess of 900 tons, but not less than a block of ten retaining valves on head end of train.

RULE 24-B. Alturas and Wendel: When continuity of brake pipe is not disturbed, incoming engineer will apply train brakes when stopped. Outgoing engineer will release brakes and proceed without making rear end or road test.

RULE 25. Will apply as designated below, except when conditions are favorable for releasing air brakes (Rule 29) while running, and engineer after informing trainman test is to be made approaching stations named, receives positive information following test that brakes did apply on caboose and brake pipe pressure is being restored:

Table with 2 columns: Location, Direction. Rows include Ambrose, Sage Hen, Ravendale, Westwood Junction.

To avoid additional stops at stations indicated above, trains may make inspection, air brake test and turn up retaining valves when stops are made at the following stations:

Eastward: Madeline,

RULE 33. Maximum tonnage per operative brake is as follows:

Table with 2 columns: Location, Tonnage. Rows include Ambrose to Canby, Sage Hen to Likely, Crest to Karlo.

PASSENGER TRAINS

RULE 39. Running air brake test must be made at Sage Hen in both directions; and at Crest and Viewland westward.

SPECIAL INSTRUCTIONS—MODOC SUBDIVISION

MISCELLANEOUS

1. Cars eighty-five foot or longer, loaded or empty, must not be handled over Western Starch Company, Inc., spur at Hatfield.

2. Engines listed are not permitted to operate on tracks shown below:
Class of Engine Restricted Tracks

All engines..... Alturas—Farmers Exchange spur beyond Fourth St.

3. Cars or engines must not be moved beyond a point 500 feet from switch on R. L. Smith Lbr. Co. track at west end house track, Canby.

4. Load limit (car and contents):
Klamath Falls-Flanigan..... 263,000 pounds
Alturas-Lakeview..... 199,000 pounds
Unless authorized by Superintendent, heavier loads must not be handled.

5. LOCATION OF STOCK YARDS

Station	Capacity in cars
Klamath Falls.....	95 (Water)
Merrill.....	16 (Water)
Hackamore.....	10
Alturas.....	10 (Water)
Likely.....	18 (Water)
Madeline.....	32 (Water)
Ravendale.....	14 (Water)
Wendel.....	6 (Water)
Lakeview.....	68 (Water)

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 7 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, 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.**

EASTWARD			WESTWARD			EASTWARD			WESTWARD		
MP	MP Column:	PSGR TRAINS	MP	MP Column:	PSGR TRAINS	MP	MP Column:	PSGR TRAINS	MP	MP Column:	PSGR TRAINS
FLANIGAN TO KLAMATH FALLS:			KLAMATH FALLS TO FLANIGAN:			WENDEL TO WESTWOOD:			WESTWOOD TO WENDEL:		
336.39 to 337.93...		20	428.70 to 427.00		15	358.70 to 359.03...		15	411.30 to 407.20...		35
337.93 to 346.00...		60	(553.30).....		15	359.03 to 379.23...		25	407.20 to 405.00...		25
346.00 to 356.52...		50	553.30 to 553.21...		15	379.23 to 385.75...		20	405.00 to 401.00...		20
356.52 to 357.27...		30	553.21 to 552.91...		25	385.75 to 387.25...		25	401.00 to 397.40...		25
357.27 to 358.70...		15	552.91 to 497.81...		49	387.25 to 393.50...		20	396.40 to 394.75...		20
358.70 to 359.03...		15	497.81 to 497.20...		40	393.50 to 394.75...		25	394.75 to 393.50...		25
359.03 to 365.78...		30	497.20 to 485.05...		49	394.75 to 397.40...		20	393.50 to 387.25...		20
365.78 to 367.64...		40	485.05 to 480.29...		25	397.40 to 401.00...		25	387.25 to 385.75...		25
367.64 to 375.38...		49	480.29 to 478.63...		30	401.00 to 405.00...		20	385.75 to 397.23...		20
375.38 to 376.31...		40	478.63 to 460.03...		49	405.00 to 407.20...		25	397.23 to 359.03...		25
376.31 to 380.03...		35				407.20 to 411.30...		35	359.03 to 358.70...		15
ALTURAS TO LAKEVIEW:			LAKEVIEW TO ALTURAS:			ALTURAS TO LAKEVIEW:			LAKEVIEW TO ALTURAS:		
380.03 to 392.69...		30	460.03 to 458.30...		30	456.80 to 458.74...		20	512.30 to 490.17...		40
392.69 to 419.82...		49	458.30 to 456.79		15	458.74 to 461.96...		35	490.17 to 482.53...		30
419.82 to 421.05...		40	(Alturas).....		15	461.96 to 472.29...		30	482.53 to 472.29...		40
421.05 to 423.65...		35	456.79 to 455.11...		25	472.29 to 482.53...		40	472.29 to 461.96...		30
423.65 to 436.43...		30	455.11 to 443.95...		49	482.53 to 490.17...		30	461.96 to 458.74...		35
436.43 to 439.20...		40	443.95 to 436.43...		45	490.17 to 512.30...		40	458.74 to 456.80...		20
439.20 to 443.95...		45	436.43 to 423.65...		30						
443.95 to 455.11...		49	423.65 to 418.75...		35						
455.11 to 456.79...		25	418.75 to 392.69...		49						
456.79 to 458.30		15	392.69 to 380.03...		30						
ALTURAS TO LAKEVIEW:			LAKEVIEW TO ALTURAS:			ALTURAS TO LAKEVIEW:			LAKEVIEW TO ALTURAS:		
458.30 to 460.03...		30	380.03 to 375.38...		35						
460.03 to 478.63...		49	375.38 to 367.64...		49						
478.63 to 480.29...		40	367.64 to 365.78...		40						
480.29 to 485.05...		25	365.78 to 359.03...		30						
485.05 to 497.20...		49	359.03 to 358.70...		15						
497.20 to 497.81...		40	358.70 to 357.27...		15						
497.81 to 552.91...		49	357.27 to 346.00...		50						
552.91 to 553.21...		25	346.00 to 337.26...		60						
553.21 to 553.30		15	337.26 to 336.51...		40						
(427.00).....		15	336.51 to 336.39...		25						
427.00 to 428.70...		15									

Between MP 460.03 (Alturas) and MP 478.63 (Canby) and on Lakeview Branch, maximum speed of trains as shown below must not be exceeded when handled by following engines subject to further restrictions shown in Speed Restrictions for Trains table:
DS-1 to 8, DS-100 to 122..... 25 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
Sage Hen, on balloon track.....	10

SPECIAL INSTRUCTIONS—MODOC SUBDIVISION

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

NOMINAL CLASS	ENGINE NUMBERS	RATING OF ENGINES—In Units of 2000 Lbs. (Tons)										
		Klamath Falls and Perez Canby and Alturas	Perez to Canby	Canby to Perez	Alturas and Lakeview	Likely to Sage Hen Wendel to Viewland Karlo to Crest	Sage Hen to Ravendale Crest to Karlo Viewland to Wendel	Viewland to Karlo Crest to Madeline Sage Hen to Alturas	Alturas to Likely Flanigan and Wendel	Ravendale to Crest Madeline to Sage Hen	Karlo to Viewland	Wendel and Susanville
DF-1 to 12	6138 to 6470, 8022 to 8303, 301 to 379, 502 to 575, except with 61:16 gear ratio with 60:17 gear ratio.....	2200	1700	850	1325	1275	6050	6050	3150	1775	2250	3375
DF-100	5200 to 5202.....											
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278.....	3025	2150	975	2075	1250	5000	5000	4400	2050	3175	
DF-109, 111	4903 to 4905, 5250 to 5252.....				2600							
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493.....	3700	2600	1200	1925	1525	10000	10000	5425	2850	3750	
DF-123, 126	5448, 5494 to 5507.....											
DF-500, 501	4800 to 4815.....											
DF-602	5892 to 5895.....											
DF-603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5891.....	2375	1700	825		1225	10000	4075	1850	2875	4600	
DF-608 to 610, 613 to 615	5720 to 5729, 5845 to 5871.....											
DF-127	7000 to 7020.....	4275	3075	1475	2525							
DF-617, 620	7200 to 7237.....											
DF-618	7300 to 7309.....											
DF-621	7400 to 7407.....											
DF-623	7408 to 7464.....											
DF-619, 622, 624	7500 to 7567.....											
DF-701	8500 to 8502.....											
DF-800, 801	9000 to 9017, 9021 to 9023.....											
DF-802	9018 to 9020.....											
DS-1 to 8	1000 to 1032.....	925	660	285	550	400	4000	4000	1375	400	1375	
DS-9 to 12	1036 to 1090.....											
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567.....	1425	1025	455	825	625	4000	4000	2050	625	2050	
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550.....	1825	1300	590	1050	750	4000	4000	2650	1075	2050	
DS-113, 117, 120 to 122	1486, 1491, 1529 to 1538, 1568 to 1596.....											
DS-200, 201	1900 to 1903.....											
DS-600 to 604	4600 to 4623, 4700 to 4703.....											
DS-605, 606	4624 to 4633.....											
DS-607	4634 to 4645.....											
DS-500 to 506	5100 to 5120.....											

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