



Tacoma Eastern Railroad

AND

Chicago, Milwaukee and St. Paul Railway

GRAYS HARBOR LINE

No. 20 TIME TABLE No. 20

PREVIOUS ISSUE DATED NOVEMBER 8, 1915

TAKING EFFECT SUNDAY, MAY 7, 1916, AT 12:01 O'CLOCK A. M.

PACIFIC OR 120TH MERIDIAN TIME

FOR THE GOVERNMENT AND INFORMATION OF EMPLOYEES ONLY

A. C. BOWEN,
Trainmaster

J. F. RICHARDS,
Superintendent

W. H. WINGATE,
Chief Dispatcher

E. CLEMONS,
Assistant General Superintendent

W. B. FOSTER,
General Superintendent

TACOMA EASTERN RAILROAD

TRAINS GOING WEST

TRAINS GOING EAST

TRAINS GOING WEST				Distance from Tacoma	Telephone Offices	STATIONS	Distance from Morton	Water-Oil Wyes—Scales	TRAINS GOING EAST					
Third Class	Second Class	First Class	First Class						First Class	First Class	Third Class	Third Class		
No. 91	No. 161	No. 117	No. 1						No. 2	No. 118	No. 162	No. 92		
Way Freight	Time Freight	Passenger	Passenger						Passenger	Passenger	Time Freight	Way Freight		
Except Sunday	Except Saturday	Daily	Daily	Time over Div. Av. Miles per Hour	Time over Div. Av. Miles per Hour	3.55 18.5	.32 21.6	1. 11.3	7.15 7.3					
9 15 AM De	10 30 PM De	5 15 PM De	8 50 AM De	0.0	DN	TACOMA 3.1	67.3	WOYS	5 45 PM Ar	6 05 PM Ar	1 55 AM Ar	3 00 PM Ar		
9 50	10 59	* 5 32 Mt 2	* 9 01	3.1	D	BISMARCK 2.4	64.2	S	* 5 32 Mt 117	* 5 50	1 30	2 30		
			* 9 07	5.5		MIDLAND 1.0	61.8		* 5 25					
10 05	11 12	† 5 42 Mt 118	† 9 10	6.5		ALLISON 4.8	60.8		† 5 22	† 5 42 Mt 117	1 10	1 50		
10 30	11 30 PM Ar	* 5 50 PM Ar	* 9 20	11.3	DN	SALSICH JCT 1.4	56.0	W ^Y _{2mE}	* 5 12	* 5 33 PM De	12 55 AM De	1 25		
10 40			* 9 24	12.7		BERKELEY 2.3	54.6		* 5 07			1 00		
			9 30	15.0		HARDING 2.2	52.3		5 00					
11 20			* 9 38	17.2		THRIFT 3.8	50.1		* 4 53			12 25 PM		
11 55 Mt 92			* 9 46	21.0	B	TANWAX JCT 2.0	46.3	Y	* 4 45			11 55 Mt 91		
12 30 PM			9 52	23.0	D	KAPOWSIN 3.4	44.3	W	4 40			11 30		
			* 10 02	26.4		HOLZ 1.9	40.9		* 4 32					
1 20			* 10 07	28.3		CLAY CITY 0.9	39.0		* 4 27			11 00		
			* 10 10	29.2		OHOP 3.4	38.1		* 4 24					
2 00			10 20 Mt 92	32.6	D	EATONVILLE 4.0	34.7	WO	4 15			10 20 Mt 1		
2 30			* 10 30	36.6		LAGRANDE 4.6	30.7		* 4 06			9 35		
3 15			10 46	41.2	D	ALDER 1.9	26.1		3 50			9 05		
3 45 Mt 2			* 10 51	43.1		RELIANCE 3.1	24.2		* 3 45 Mt 91			8 50		
4 00			* 11 00	46.2		WILLIAMSON 1.0	21.1		* 3 36			8 30		
4 15			11 05	47.2	D	ELBE 2.4	20.1	W	3 32			8 20		
4 30			{ 11 12 11 45	49.6	B	PARK JCT 4.1	17.7	Y	{ 3 25 2 51			8 00		
5 00 PM Ar			11 58	53.7	D	MINERAL 0.7	13.6	WO	2 40			7 45 AM De		
			* 12 01 PM	54.4		EAST CREEK JCT 5.1	12.9	Y	* 2 38					
			12 21	59.5		COWLITZ JCT 7.8	7.8		2 18					
			12 50 PM Ar Mt 2	67.3	D	MORTON	0.0	Y W ^{4mE}	1 50 PM De Mt 1					
7.45 6.8	1. 11.3	.35 20.	4. 18.4			Time over Div. Av. Miles per Hour			Daily	Daily	Except Monday	Except Sunday		

SPECIAL RULES — Trains going East will have absolute right of track over trains of the same class running in the opposite direction, except that No. 2 will wait at Ashford for No. 7 and No. 6 will wait at Ashford for No. 1. No. 2 will wait at Morton for No. 1.

Trains will take their dates at starting points.
 Trains will register at Tacoma, Salsich Junction, Park Junction, Ashford, Mineral and Morton.
 Between Bismarck and Tacoma, East bound passenger trains will not exceed fifteen (15) miles an hour, and freight trains will not exceed twelve (12) miles an hour. Passenger trains will not exceed fifteen (15) miles an hour and freight trains will not exceed ten (10) miles an hour between La Grande and 3 1/2 miles west.
 Trains of the same class will pass and run ahead of trains of the same class without special orders. Third class and extra trains will have the right of run ahead of second class trains without train orders, but must not occupy track ahead of second class trains when it will cause delay to such trains. Irregular trains will have the right to run ahead, or pass and run ahead of third class trains without special orders. Trains moving under this rule must be governed by General Rule No. 59.
 Standard time is kept in Dispatcher's office and Tacoma Junction. Freight trains will not carry passengers. Observe special rules and instructions in back of this time-table. The yard limits at Mineral include East Creek Junction. Trains cannot meet or pass at Midland, Holz or Ohop.
 Passenger trains will not exceed 35 miles per hour and on maximum grade between Tacoma and two miles west will not exceed schedule time.
 Trains will be under control approaching Bluffs and Rock Cuts. Look out for slides. Run slow over high trestles. Where track is rough or view obstructed reduce speed to insure safety. Freight trains will not exceed 20 miles per hour and when hauling logs will not exceed 15 miles per hour.
 Be governed by rules, on second page of this time card, concerning the movement of trains between Tacoma Passenger Station, Tacoma Junction and Tide Flats Yard.

ASHFORD LINE

TRAINS GOING WEST

TRAINS GOING EAST

TRAINS GOING WEST				Distance from Park Jct.	Telephone Offices	STATIONS	Distance from Ashford	Water-Oil Wyes, Scales	TRAINS GOING EAST	
First Class	First Class	First Class	First Class						First Class	First Class
No. 7	No. 1	No. 6	No. 2						No. 6	No. 2
Passenger	Passenger	Passenger	Passenger						Passenger	Passenger
Daily	Daily	.17	.15	Time over Div. Av. Miles per Hour	Time over Div. Av. Miles per Hour					
2 51 PM De	11 12 AM De	11 45 AM Ar	3 25 PM Ar	0.0		PARK JCT 3.5	5.5			
* 3 00	* 11 20	* 11 36	* 3 17	3.5		NATIONAL 2.0	2.0			
3 08 PM Ar Mt 2	11 27 AM Ar Mt 6	11 28 AM De Mt 1	3 10 PM De Mt 7	5.5	D	ASHFORD	0.0			
.17	.15	Daily	Daily			Time over Div. Av. Miles per Hour				

SPECIAL RULES AND INSTRUCTIONS

FOR TRAIN AND ENGINE MEN.

1. Conductors and Engineers must examine bulletin boards before commencing their runs.

Conductors must examine all train registers and know that all trains having the right of track over their trains have arrived and departed and will fill out train register check (Form 255) and personally deliver to Engineers before leaving any registry station. Engineers will not leave any register station without it and must satisfy themselves that no trains affecting their trains are omitted.

Bulletin boards at the following stations:
Cle Elum, Cedar Falls, Everett, Seattle yard, O.-W. R. & N. Station, Seattle, Tacoma yard, Tacoma, and Mineral.

A train laid up at a non-registering station, must before starting, procure an order in the following form:

"To Conductor and Engineer:
Trains due at _____ up to _____
(A. M. or P. M.) _____ (date) have arrived and departed."
(Signed by the dispatcher, to be answered and O. K.'d in the usual manner.)

If any regular train due has not arrived, the order should read "except No. ____" (giving number.)

2. When orders are issued per form "B" ONLY the trains moving BETWEEN the points named in the order will have the right to avail themselves of it.

3. When trains are run with double headers, the air brakes of the leading engine must be connected through the second engine with the train, and the train controlled by engineer of leading engine.

4. Approaching drawbridges and railroad crossings, engineers must make a slight application of air to insure the proper working of the brakes. Trainmen must station themselves at the hand brakes a sufficient distance from these points prepared to stop the train upon whistle signal from the engineer.

5. During the prevalence of severe storms, fog, smoke or forest fires, trains will run with reference to safety and without regard to making schedule time.

When any of the above conditions are encountered, conductors must report the fact to the Chief Dispatcher at the first opportunity.

6. When flag signals are not answered, as called for in General Rule No. 26 the train sounding flag signals must be brought to an immediate stop and cause of failure to answer ascertained and reported to the Superintendent.

7. A brakeman must be stationed on the rear of all trains when moving or while standing at stations, or at other places where the track is such that by letting off brakes the cars would run back. Conductors must know that a competent man is so stationed and remains there while the train is in such position.

No train must be left at any station without at least one man on the engine and one competent man in charge of the rear of the train.

9. When it becomes necessary to back up a train, engineers will first give proper whistle signal, but must not move train until they receive signal from trainmen. Conductor will see that a competent man is stationed at the rear end of the rear car.

10. In cases where trains part, engineers must side-track their head end before starting back for rear portion, except in cases where they can see the rear end and know positively that it has been stopped.

11. In approaching stations, engines or cars must not be cut off train before rear end is stopped, and in no case must rear portion be allowed to run into station with engine detached therefrom.

12. During the season of snow, trainmen must carefully examine and if necessary, thoroughly clean all main line split switches before and after using. Brooms and shovels will be provided for this purpose. Engineers will allow sufficient time for this rule to be complied with.

13. Work trains must, under no circumstances, work under flags against delayed passenger trains. When necessary to work under flags against delayed freight trains, it must be done under the protection of torpedoes in addition to flags.

14. Conductors and engineers handling work trains must note on the back of time slips the nature of the work done and report on Form 193.

15. Turn tables must be locked when not in use.

16. Station employes will not open or close switches for trainmen, except to prevent accident.

17. After a passenger train has made a stop at any station, train must not be moved to take coal, water or do other work, until the passengers have alighted, and the conductor signifies by the usual signal that the train can be moved.

18. Each train must have at least 85 per cent, of air brake cars coupled up for service. Air brakes must be tested before commencing a run and after cars have been separated, conductor or brakeman examining each car when air is applied to see that the brakes apply properly, also that they are fully released. Engineer to be informed of the number in service.

Conductors and engineers will have an understanding on each train as to how and where the hand brakes are to be used. At other places the train should be controlled by air brakes by the engineer and hand brakes not used except in case of emergency, or when called for by whistle signal.

When hand brakes are used, air brakes once applied must not be released until hand brakes have been released and engineer receives proper signal from rear end.

When backing, a sufficient number of hand brakes must be applied on rear end to hold the slack and prevent damage when air brake is used.

19. Dead locomotives hauled in freight trains may be moved with side rods connected or disconnected. If side rods are connected, the train may be moved at speed of 15 miles per hour. If side rods are disconnected, speed must not exceed 10 miles per hour at any place whether engine is towed or is working steam with one or both main rods connected. There must be eight cars between locomotives so moved. The slow speed is intended so as not to damage rails account of counter balance in wheels when rods are removed.

20. All closets must be kept locked in trains within the limits of Cedar River Water Shed, indicated by sign boards, 2.67 miles east of Noble, and 0.13 miles east of west switch, Cedar Falls. Refuse must not be thrown from private, dining or other cars within these limits. Conductors will be held responsible for a strict observance of this rule.

21. When conductors arrange meeting points with each other the arrangement shall be written on manifold paper, signed by the conductors, and each conductor shall give one copy to his engineer and retain one himself.

When a flagman is instructed to hold a train at a specified place or until a specified time, such instructions shall be in writing on manifold paper, signed by the conductor giving the instructions, and he shall give one copy to the flagman, one to his engineer and retain one himself.

Conductors of passenger trains, when approaching stations where they are to meet a train of the same class, or when meeting point is made by train order with a train of any class, must pull the air whistle signal immediately after engineer has whistled for the station, and engineer must answer this signal as per fourth paragraph of general time table rule No. 26. Conductors and brakemen must give their attention to the matter when approaching the station that in case the engineer fails to sound the whistle his attention will be called to the meeting point by trainmen pulling the air signal.

Tail-hose must be in place and ready for use on the rear platform of all passenger trains, regardless of whether back-up movement is being made or not.

22. Conductors will examine their trains for flat wheels before reaching first telegraph station and report therefrom by wire to Trainmaster, initials and numbers of cars under which wheels are found flattened.

23. When switching at a point where another train or yard engine is switching or standing at the same time, before making a back-up movement, a man must be sent to the rear to notify the other train or yard crew of the proposed movement.

24. When using back up hose for backing passenger trains the handle of the engineer's brake valve should be carried on running position. It must not be placed on lap to assist in making an application from back up hose.

When stops are contemplated, work steam with a light throttle (not entirely shut off) until after the first brake application is felt from the backup hose. This will keep the train slack from changing, thereby avoiding rough handling.

On grades where a train will not stand with brakes released, it should be held by the straight air brake on engine and tender, or in the absence of such a brake, by admitting steam to the cylinders with engine reversed to the opposite position to which the train might move.

The engineer should apply the automatic brake in the absence of a sufficient application from the backup hose, whenever necessary to insure the safety of the train.

Trainmen should understand that to operate the brakes with service applications from the backup hose, the backup hose should be opened gradually; also that the opening should be gradually increased until the valve is either wide open, the train slowed down as much as is desired, or has stopped. It must not be repeatedly opened and closed.

If the brakes are applied too hard and stop the train too soon, close the backup hose and allow the brakes to release and recharge. In case of emergency the backup hose valve should be opened wide instantly, and left open until train is stopped or danger is past.

Trainmen MUST NOT use any backup hose with valves or fittings that will not give the full opening of the $\frac{3}{4}$ " stop cock. Modifying the STANDARD backup hose as used by this company will NOT BE TOLERATED.

Following the regular train brake test, which is made from the locomotive, the brakes must be applied with backup hose before train starts to back. The engineer will not back train until this test has been made, as indicated by the air gauge.

25. The speed of passenger trains will ordinarily be that prescribed in the schedule, but in cases of delay, requiring greater speed in order to enable trains to make meeting points or to secure connections, the speed may be so moderately increased above that prescribed in the schedule, as in the judgment of the conductor and engineer in charge of the train, may be safe and prudent, due consideration being always given to condition of track, comfort of passengers and all the circumstances.

26. Mallet engines must not be run to exceed twenty-five (25) miles per hour, and at any point where conditions require it, a reduction of speed must be made to meet the requirements.

27. Passenger trains departing from terminals or points of inspection where locomotives are changed or where air hose is parted for any cause, engineer will, after attaining speed of six (6) to eight (8) miles per hour, make application of air to determine efficiency of braking power.

Rear brakeman will station himself on rear end of rear car having retaining valve and notice if air escapes from it while brake is releasing; if air escapes he will give engineer proceed signal, if not, train must be stopped, cause ascertained and remedied.

FOR TRAINMEN.

50. When making couplings it is often necessary for cars to strike quite hard. Trainmen must take the necessary precautions in such cases to prevent injury to persons or teams that may be passing the rear end of the train, when the end of said train is near to or standing in a public street or highway, or any other traveled way or path.

51. When taking into train, cars loaded with long timber, telegraph poles, etc., where one load is carried on two cars, conductor will be careful to see that the coupling is properly made between these two (2) cars, and should continue this inspection from time to time.

52. Any brasses which may be removed from cars must be delivered to Car Inspector at end of run, together with written statement showing the number and initials of car from which removed. Car foreman will furnish new brasses to replace those removed. When you have occasion to make light repairs, such as applying knuckles, air hose, brasses, etc., to cars, a report on form 631 must be made to car foreman immediately on arrival. The defective parts so removed must be turned in with your report.

53. When fuses are used, they must not be deposited on bridges or any place where there is danger of fire.

54. When trainmen are at a switch waiting for a train to pass, they will station themselves on the opposite side of the track from the switch stand and remain there until the expected train has passed.

55. The rear brakeman on every train carrying passengers will be known as flagman, and must wear a badge while in service. His first duty will be to protect the rear of his train from following trains. Such employes must pass an examination as to their knowledge of General Rules 62, 63, 64 and 66, concerning the protection of the rear of trains, and must act under the rules, without instructions from the conductor. Conductors must see that the flagman performs his duty as per the rules. When it becomes necessary for the flagman to go back to protect the rear of his train, the next brakeman will immediately take the flagman's position on the train and remain there until relieved by the flagman, and on passenger trains the baggageman must take the place of the forward brakeman when necessary.

56. Conductors and brakemen must examine their trains whenever there is an opportunity to do so, looking particularly for hot boxes and defective draft and brake rigging.

57. Accident reports on proper forms, 142 and 171, must be made promptly, no matter how insignificant the accident may appear. In case of accident to persons, care must be exercised to secure the names and addresses of all witnesses, particularly those not employes of the company.

58. Conductors will report when short of equipment to seat passengers, steam pipes loose or out of order, defective steam hose, lamps, etc., or anything necessary to be done to improve the service.

59. Conductors will see that wheel blocks and derailing switches are replaced after using sidings, whether there are cars on sidings or not.

60. Whenever a train parts, account of draft irons pulling out, conductors will send a man back until draft iron is found and removed, or next station is reached, from which he must report the fact to the Chief Dispatcher.

61. In case of wrecks caused by defective rolling stock, broken parts causing them must be preserved by Conductor and sent to Superintendent of Motive Power with explanation. In case of injury to persons in coupling or otherwise, Conductors will carefully inspect such cars, make a memorandum of condition of same, and report full particulars to the Superintendent with report on Form 171.

62. In case a split switch is run through, Conductors will notify the Chief Dispatcher, Station Agent and Section men, and will not leave said switch except in care of Section men or by order from Chief Dispatcher.

63. Conductors must keep way-bills locked in desk in caboose unless they carry them on their person.

64. Minors will not be employed as brakemen or switchmen without first having executed a minor's release. Conductors and Yardmasters will see that this rule is observed.

65. Cars must not be set out on passing tracks—unless Conductor is so instructed by Chief Dispatcher.

66. Blanks for telegraphic reports of accidents, Form 250, W. K. Report, are kept in all telegraph offices. In case of accident, Conductors must promptly fill out one of these blanks, being particular to make a full statement. It is of the greatest importance that this is fully and exactly complied with.

67. Conductors will examine way-bills carefully and see that notations thereon are compiled with so far as they are concerned.

68. Cars loaded with rails, coke, lumber, brick, sand, ties, bulk lime, stone, iron ore, coal, pig iron, steel blooms, ice, sewer pipe, water pipe and iron channels, need not be sealed, but doors must be closed and fastened.

69. When cars containing freight are damaged in wrecks, conductors will protect same against pilfering until relieved therefrom by trainmaster, roadmaster or party in charge of clearing track. It is not intended that this provision shall interfere in any way with work of clearing track before arrival of wrecking outfit.

70. Conductors of trains hauling U. S. Mail must know that the mail for their train is loaded, or mail shortage slip delivered before leaving a station at which their train receives mail.

71. For the protection of baggage and express in transit, conductors will not permit any except authorized persons to ride in the baggage or express cars. Doors must be kept locked.

72. When cars are set out in bad order, the fact must be plainly noted on way-bill and report sent to Chief Dispatcher from first telegraph station. When loads on cars, in your judgment, are improperly secured, they should be treated as bad order cars.

73. Yard and trainmen must not adjust the air-brake leverage. If they notice cars on which brakes are not working properly, they must report such cars to the car inspector at the end of their run.

74. On account of the danger from fire, parties in charge of cars loaded with emigrant movables and stock must not be permitted to smoke therein.

75. In case of accident to a train, conductors will send to the President's office direct all passes collected on such train.

76. Empty foreign cars must not be moved except upon regular or slip bills. Agents are required to place destination cards on such cars.

77. Yardmasters and conductors must not allow boys, or any outsiders to assist in doing switching at stations, and must make every effort to keep such persons off their trains.

78. Conductors are charged with the responsibility of seeing that General Notice No. 21 is displayed conspicuously in cabooses and baggage cars under their charge, and to call the attention of all employes under their charge to this notice, and see that they read and understand it. They will take a record of the name of each employe, and the date upon which his attention was called to the same. Yardmasters will be charged with the responsibility of seeing that this notice is displayed in all switchmen's houses, or places where it is customary for switchmen to receive their instructions. They will be required to call the attention of switchmen and other employes under their charge to this notice, and take a record of the name, and the date upon which all employes are so instructed.

79. Trainmen must not step on cushions and seat frames to reach lamps. Conductors will see that they use boards provided for that purpose.

80. Conductors of trains setting out or picking up cars at Junction points where car inspectors are not employed, or are not on duty, will make a record in their train book of any defects in car or shortage of air-brake attachment, etc.

81. During cold weather conductors of passenger trains will see that brakemen open steam trap and feed valve on arrival at terminal stations, to prevent water freezing therein. When steam hose are uncoupled, they must be hung in place provided.

82. Conductors of trains carrying live stock will consult the wishes of the stockmen in matters pertaining to the care and comfort of the stock. Especial attention must be given to stock unaccompanied by drovers. In warm weather trainmen will water hogs as often as may be necessary.

83. A careful examination of refrigerator cars must be made by Conductors to see if properly iced, and Chief Dispatcher advised when re-icing is required.

84. When hauling special trains, such as circus trains, etc., or special cars for which a charge is made, make a report on Form 8 and send in promptly.

85. Conductors must fill out the movement blank on back of way-bills, and when movement record blank is attached to the bill cars must be used to fill it out completely.

86. When cars are to be set out or put in passenger trains, no couplings will be broken until the train has been stopped at the point where the change is to be made.

87. Switching must not be done with passenger cars or cabooses between engine and cars.

88. Conductors running freight trains which are scheduled to carry passengers, must send an envelope, Form E, to Return Ticket Agent, Chicago, whether any tickets or mileage is collected or not. Tickets or mileage collected must be sent, as above, by express, and a receipt taken from the express company's agent.

89. When it is necessary to haul a car behind a caboose for any reason, it must be chained thereto, in addition to coupling to prevent breaking off, and markers displayed on each side of such car.

90. Conductors of time and stock freights will report delays of over ten minutes to Chief Dispatcher.

91. Conductors of freight trains having coaches for cabooses will report same to car department on Form 77.

92. In coupling steam heating hose together for heating trains, trainmen will commence at rear end of train to make the couplings.

93. When Automatic Couplings are made, be particular to see that lock pin and lift lever are down in proper position.

94. The following cars should be hauled next to the caboose, giving preference to the order shown: Bad Order, Outfit, Emigrant Movables, Flats, Coal Cars, Empty Oil Tanks.

95. Trainmen are positively prohibited from carrying tail lights, etc., through coaches, sleeping cars or private cars.

96. Conductors will examine all way-bills for carload freight, and if no weighing stamp or other evidence that the freight has been weighed appears, they will call attention thereto of Agent at first station, having track scales and have car weighed, unless otherwise instructed by Chief Dispatcher. Said Agent will correctly weigh car and contents and note gross, tare and net weight on way-bill.

97. In cases of heavy rain storms or high water, trains must be brought to a stop, and a man sent out to examine bridges, trestles, culverts and other points liable to damage, before passing over. If found safe for trains to pass, but in danger of becoming unsafe for following trains, flagman must be left for the protection of such trains, and Chief Dispatcher notified by wire from the next telegraph station.

98. During high winds, when cars are liable to be blown out on the main track, trains must approach side tracks carefully, especially where there are no agents or operators.

FOR ENGINEMEN.

100. Engine men should avoid, as much as possible, blowing off steam when standing opposite or passing passenger trains; and will not sound whistles under such circumstances, unless to prevent accident.

101. Engineers will not drop sand on split switches, derailing points or detector bars at interlocking switches.

102. Spouts at water tanks must be pushed up as far as they will go.

103. On freight trains of over 15 cars engines must be cut off to take water.

SPECIAL RULES AND INSTRUCTIONS REGARDING THE OPERATION OF TRAINS ON MOUNTAIN GRADES

Location will be Specified on Time-Tables

ASCENDING.

1. When no helper power on rear, the last car must be one that is equipped with a good hand brake and a trainman stationed upon it at all times. Conductors are responsible for having trainmen properly stationed.

2. When helper power is to accompany the train beyond the summit, it will be used to double-head the train down grade.

3. When power is used on rear of freight trains, it must be in advance of boarding outfits, empty flat cars or cars of insufficient strength to safely resist the push of such engines.

DESCENDING.

4. Before commencing descent, engineers and conductors will be held responsible for thoroughly ascertaining condition of brakes and train and determining the method that will be followed in controlling its descent. They will not start until it is positively known that the train can be handled safely. To afford the engineer an opportunity to recharge and retain maximum air pressure at all times, conductors will confer with engineers as to the number of retaining valves to be turned up and will be responsible for the number required in service. When retainers are used, they will be turned up, commencing at the head end of the train. As a rule, all available retainers should be used on

freight trains. On passenger trains every other retainer should be used, alternating them to avoid heating of wheels.

5. An air brake test will be made before commencing descent, which must be carefully supervised by the conductor. Such tests shall be made by setting the brakes and leaving them set while a trainman walks from each end of the train toward the middle, who must observe that the piston travel is properly adjusted, not less than four inches nor more than eight inches, that retainers are in good condition and that hand brakes are ready for operation. If any of the air-brake apparatus is out of order, the air will be cut out on such cars. Conductors must notify engineer when air is cut out on a car, or any change made in the brake equipment, and see that proper test is made after every such change.

6. Same rule to apply before commencing ascent.

7. Approach and commence descent at slow speed, applying retainers before starting and keep them applied until the actual foot of grade is reached.

8. Brake resistance decreases as speed increases; speed, therefore, must be controlled from the start.

9. Immediately after starting, engineers will apply air, ascertaining at once, and while speed is slow, as to the holding power of the brakes. Speed of trains will be governed by local conditions and must in no instance exceed that at which they can be quickly brought to a stop.

10. Should air hose burst while descending, sand must be used and train stopped as quickly as possible. When stopped

the engineer will reverse his engine and use steam enough to hold it against the train and trainmen will set a sufficient number of hand brakes to insure holding the train should the air release. Hand brakes must remain set until the train is again fully charged with air. The engineer will notice by the air gauge that train pipe is empty and occasionally move the handle of engineer's valve quickly from "lap" to full release and back to "lap" to show trainmen by escape of air the location of damaged hose or pipe. While an air hose is being changed train pipe cocks must not be closed on account of danger of forward brakes releasing.

11. Use air brake facilities to full extent, supplementing them with hand brakes only when necessary for the safe handling of the train. When necessary to use hand brakes, do so with judgment, avoid flattening wheels and make full use of them when called for by signal from the engineer.

12. Trainmen must watch closely for excessive heating of wheels, and if any are found the train must be brought to a stop and remain standing a sufficient length of time to allow them to cool.

13. Pushing cars ahead of engines on descending grades is prohibited.

14. Brakemen are required to ride on top of freight trains on descending grades between Rockdale and Cedar Falls.

GENERAL

16. Air will be operated from the leading engine, and will, if continuous, be cut through to helper and include such air

cars as may be in the rear of it, making air continuous from leading engine as far back as conditions will permit.

17. When two or more locomotives are handling a train, the cut-out cock in brake pipe underneath the engineer's brake valve must be closed and the brake valve handle carried in running and straight air in release position on all locomotives except the one from which the brakes are operated.

18. If for any reason it becomes necessary to cut off road engine from train, it shall be known positively before doing so that the train is properly secured with hand brakes or blocks. The engine shall not be uncoupled until the conductor so directs. This is a matter that must be handled personally by the conductor and engineer, who will be held equally responsible for safety of train.

19. When cars are placed on sidings on mountain or maximum grades, they shall be left on the down-hill end of same as near derail as practicable, the air released, hand brakes securely applied and wheels blocked before detaching engine from cars.

20. When a freight train is to stop, all trainmen will remain on the train until it comes to a stop and has been properly secured by hand brakes. In the case of a descending train the air should be released after the train is secured by hand brakes, to enable the engineer to recharge the train before starting.

The Following Table Should Be Used in Estimating Train Tonnage

	30 ft. Cars	33 ft. Cars	36 ft. Cars	36 ft D. D. Cars
Weight of empty stock car	24,500 lbs	27,500 lbs	29,500 lbs	29,500 lbs
Weight of cattle	20,000 lbs	23,000 lbs	23,000 lbs	23,000 lbs
Gross weight	44,500 lbs	50,500 lbs	52,500 lbs	52,500 lbs
Weight of hogs	14,500 lbs	18,000 lbs	18,000 lbs	26,000 lbs
Gross weight	39,000 lbs	45,500 lbs	47,500 lbs	55,500 lbs
Weight of sheep	10,000 lbs	12,000 lbs	12,000 lbs	22,000 lbs
Gross weight	34,500 lbs	39,500 lbs	41,500 lbs	51,500 lbs
Weight of horses	20,000 lbs	23,000 lbs	23,000 lbs	23,000 lbs
Gross weight	44,500 lbs	50,500 lbs	52,500 lbs	52,500 lbs

When the way-bill does not show scale weight for shipments, the capacity of car should be used in reporting tonnage on train report, form No. 105.

When figuring tonnage of empty cars on which weight is not stenciled, use following figures:

Box cars (28 to 31 feet)	11 tons
Box cars (33 feet and L. L.)	13 tons
Box cars (33 to 34 feet)	15 tons
Box cars (Standard 36 feet)	15 tons
Box cars (40 feet)	18 tons
Furniture cars (36 to 38 feet)	15 tons
Furniture cars (40 feet)	17 tons
Carriage cars (50 feet)	19 tons
Beer and vegetable cars	18 tons
Refrigerator cars	20 tons
Stock cars (double deck)	16 tons
Stock cars (36 to 38 feet)	15 tons
Stock cars (less than 36 feet)	13 tons
Coal cars (all steel)	20 tons
Coal cars (100,000 capacity)	21 tons
Coal cars (60,000 capacity)	15 tons
Coal cars (40,000 capacity)	11 tons
Ore cars (100,000 capacity)	15 tons
Flat cars (short plain)	10 tons
Flat cars (long plain)	13 tons
Flat cars (42 ft. steel underframe, 100,000 capacity)	17 tons

Roger ballast cars	15 tons
H. & B. cars (40 feet)	16 tons
U. T. L. cars	20 tons
Caboose (four-wheel)	10 tons
Caboose (31 feet common)	15 tons
Caboose (36 feet, drovers)	18 tons
Milk Express (44 and 45 feet)	25 tons
Milk Express (35 and 40 feet)	22 tons
Mail and Express cars (50 feet)	29 tons
Mail and Express cars (60 feet)	37 tons

Steel Underframe Passenger Equipment

Refrigerator Express cars	36 tons
Refrigerator Express cars	35 tons
Mail cars (60 feet)	59 tons
Mail and Baggage cars (60 feet) interlocking steel siding)	59 tons
Mail and Baggage cars (60 feet) (wooden siding)	56 tons
Baggage cars (60 feet)	52 tons
Baggage cars (61 feet)	54 tons
Baggage cars (72 feet)	65 tons
Coaches (61 feet)	58 tons
Coaches (72 feet)	67 tons
Chair cars (72 feet)	67 tons
Tourist Sleeping cars (72 feet)	76 tons
Dining cars (72 feet)	76 tons
Sleeping cars (19 sec., 2 compt., 72 feet)	76 tons
Sleeping cars (12 sec., and Smoking Apt., 72 feet)	76 tons
Compartment Sleeping cars (72 feet)	79 tons
Parlor cars (72 feet)	72 tons
Buffet Library cars (72 feet)	77 tons
Buffet Observation cars (72 feet)	77 tons

MILWAUKEE HOSPITAL ASSOCIATION

ASSOCIATION SURGEONS

Dr. A. I. Bouffleur, Chief Surgeon, Seattle, Wash.

Dr. H. Eugene Allen, District Surgeon; Dr. G. N. McLoughlin, Asst., Seattle. Office, Cobb Bldg.; hours 2 to 4 P. M.; telephone Elliott 3814. Always reachable through Providence Hospital. Telephone East 3140.

Dr. H. G. Willard, Local Surgeon, Tacoma. Office, National Realty Bldg.; hours 12 to 1, 2 to 5 and 7 to 8 P. M.; telephone Main 4500. Always reachable through St. Joseph's Hospital, telephone Main 1569.

Dr. C. D. Hunter, Local Surgeon, Tacoma. Office, National Realty Bldg.; hours 12 to 1, 2 to 5 and 7 to 8 P. M.; telephone Main 1420. Always reachable through residence, telephone Main 4194.

Dr. A. G. Nace, So. Tacoma. Office, 54th and Union.

Dr. A. W. Hawley, Oculist, Seattle. Office, Leary Bldg.

Dr. G. W. Swift, Oculist, Seattle. Office, Cobb Bldg.

Drs. Wing & Spencer, Oculists, Tacoma. Office, Fidelity Bldg.

Dr. W. L. Ludlow, Kapowsin, Wash.

Dr. A. W. Bridge, Eatonville, Wash.

Dr. F. J. Shadd, Mineral, Wash.

Dr. T. H. Long, Ashford, Wash.

Dr. C. W. Hall, McKenna, Wash.

Dr. Harry Feagles, Morton, Wash.

Dr. G. E. Marcy, Montesano, Wash.

Dr. J. B. Kinne, Aberdeen, Wash.

Dr. J. McIntyre, Hoquiam, Wash.

Association Hospitals

St. Joseph's Hospital, Tacoma, telephone Main 1569.

Stretchers at Tacoma, McKenna, Ashford and Mineral.

COMMERCIAL SPURS

Tacoma Eastern R. R.

Harvard	Mill	600 ft.	1.3 miles west of Bismarck
Kirby	Mill	4 mi.	0.3 miles east of Harding
Graham	Mill	500 ft.	1.0 miles west of Harding
Electron	Industry	2.2 mi.	0.3 miles west of Kapowsin
Skewis	Mill	1.3 mi.	0.5 miles east of Clay City
Clay City	Industry	2600 ft.	at Clay City
Camp 36	Logs	242 ft.	2000 feet east of Ohop
Lynch Creek	Gravel Pit	1.4 miles	east of Eatonville
Epler Mill	Mill	2 mi.	at Eatonville
Fairview	Industry	300 ft.	1.7 miles west of Eatonville
Nisqually S. M. Co. Mill	Mill	521 ft.	1.2 miles east of Alder
Rock Spur	Logs	1.0 miles	east of Alder
Selle	Logs	1000 ft.	1.3 miles west of Park Jct.
Pacific Nat. Lbr. Co. Mill	Mill	2000 ft.	at National
Camp 17	Logs	1200 ft.	1.0 miles east of Ashford
Camp 12	Logs	200 ft.	1.0 miles west of Park Jct.
Pleasant	Mill	200 ft.	1.0 mile east of Ladd
Carlson	Mill	1400 ft.	1.3 miles west of East Creek Jct.
Carlson	Log Spur	2.0 miles	west of East Creek Jct.
Divide	Coal	2237 ft.	4.0 miles west of East Creek Jct.
Lundeen	Logs	0.7 miles	east of West Fork
West Fork	Logs	150 ft.	5.4 miles east of Morton
Inland	Logs	150 ft.	5.0 miles east of Morton
East Fork	Logs	212 ft.	1.0 miles west of West Fork
Lindberg	Logs	1000 ft.	3.0 miles east of Morton
Powell & Poole	Logs	307 ft.	0.3 miles east of Reliance.

Grays Harbor Line

Cuyler	Logs	150 ft.	0.5 miles east of Loveland.
Haskins	Industry	300 ft.	1.0 miles west of Loveland
Betchards	Mill	400 ft.	0.7 miles east of Roy
Arkley	Mill	1500 ft.	3.0 miles east of Rainier
Johnson Creek	Mill	3 mi.	0.9 miles east of Rainier
Gregory	Mill	5.5 mi.	2.8 miles east of Ofut.
Patske Spur	Logs	250 ft.	2.8 miles east of Ofut.
Des Chutes	Mill	0.5 miles	west of Gregory.
Campbell & Campbell	Logs	488 ft.	1.5 miles west of Ofut.
Beaver Creek	Mill	200 ft.	2.0 miles east of Maytown
Carl Nelson	Logs	1800 ft.	1.0 miles east of Mumby
Bordeaux	Mill	6580 ft.	at Mumby
Carl Nelson No. 2	Logs	200 ft.	1.5 miles west of Mumby
Ninemire & Morgan Mill	Mill	3350 ft.	at Helsing Jct.
Killmer & Brown	Logs	290 ft.	2.2 miles west of Independence.
Clear Lake Shingle Co.	Mill	300 ft.	2.5 miles west of Independence
Natl Lbr & Mfg Co. Logs	Logs	8760 ft.	at Cedarville
Vance Lbr. Co. Logs	Logs	1600 ft.	0.3 miles west of Ford
Western Spur	Logs	1760 ft.	0.9 miles west of Ford

GENERAL RULES

To be observed by all employes, who will be held responsible for any violation of them.

The safety of Passengers and Trains is of the first importance, and all operations of working and repairing the road must be subservient thereto. To this, with the regularity and punctuality of the trains, and the comfort and convenience of passengers, all work must be entirely subordinate.

1. Every person accepting a position with this Company does so with the full knowledge of the perils incident to the operation of railways, and agrees to exercise due care in the performance of his duties to prevent accident to himself or others. Before using machinery or tools employes must see that they are in a safe condition to perform the services required.

2. Every employe of this Company whose duties are in any way prescribed by these rules, must always have a copy of them in his possession when on duty, and must make himself perfectly acquainted with every rule, and be prepared to stand an examination at any time. No employe will be permitted to run a train or engine without first passing a thorough examination on the rules by the Superintendent. The head of each department will see that his subordinates are supplied with current time tables.

3. The fact that any one enters or remains in the service of the Company will be considered as an expression of willingness to obey these rules. He will not be excused for the violation of any of them, though they may not be included among those applicable to his department.

4. Special rules shall supersede general rules and be fully observed while in force. These rules are all deemed important, and a strict observance of each and all of them is absolutely required. In all cases of doubt take the safe course.

5. Employes must wear the prescribed badges or uniforms while on duty.

Mail agents, express messengers, parlor and sleeping car conductors and porters, news agents and persons in charge of individual cars, are subject, while on duty, to the rules governing the employes of the Company.

6. Incivility to patrons of the road will not be tolerated, whatever the provocation may be. Boisterous, profane or vulgar language on trains, or on the premises of the Company, is strictly forbidden.

7. Any employe knowing of the violation of the rules by another employe, and who fails to report the same to the Superintendent, becomes equally censurable.

8. The use of intoxicating drinks has proven a most fruitful source of trouble to railways as well as to individuals. The Company will exercise the most rigid scrutiny in reference to the habits of employes in this respect, and any employe who has been dismissed on this account will not be re-employed. Drinking when on duty or frequenting saloons will not be tolerated, and preference will be given to those who do not drink at all.

9. If any one is in doubt as to the meaning of any rule or special instruction, application must be made at once to the Superintendent or other proper division officer, for an explanation. Ignorance of the rules will not be accepted as an excuse for neglect of duty.

10. All former rules that conflict with these rules are abolished, and all former time tables are to be destroyed.

STANDARD TIME.

11. Standard time will be telegraphed daily at eight o'clock A. M. The clocks at stations indicated in special rules will be regulated to "Standard time."

Each conductor and engineer must have a reliable watch. Conductors must compare and correct their watches before starting on their runs, and register in a book provided for that purpose, that such comparison and correction has been made.

Conductors and engineers must compare time with each other before starting on their runs.

Conductors and engineers not having access to clocks that are regulated to Standard time will call for and receive correct time from the Train Dispatcher before starting on their runs.

12. Immediately on receipt of Time, operators will acknowledge same by saying "O. K." and signing their calls. Operators will see that all clocks are compared and corrected daily. They will also compare time with Train Dispatcher's office at 9.00 P. M.

TIME TABLES.

13. Each time table, at the moment it takes effect, supersedes the preceding time table. All regular trains on the road running according to the preceding time table shall, unless otherwise directed, assume the time and rights of trains of corresponding numbers on the new time table.

14. When new time tables are issued, blank receipts will be sent with them, which receipts must be signed by all Conductors, Enginemen, Round House Foremen, Yard Masters, Road Masters and Chief Carpenters, and promptly forwarded to the Train Dispatcher. If there is not sufficient time to get these receipts in the ordinary way before the taking effect of the time table, the acknowledgment must be secured by telegraph.

15. Where but one time is shown, it shall be regarded as leaving time. Where two times are shown, the earlier will be the arriving time and the later the departing time. Trains will not leave stations before the time specified unless so directed.

16. Full Faced Figures denote regular meeting and passing points of trains.

STANDARD SIGNALS.

17. All employes whose duties require them to give signals must provide themselves with the proper appliances, and keep them in good order and always ready for immediate use.

Flags of the proper color must be used by day and lamps by night, or whenever from fog or other cause the day signals cannot be clearly seen.

18. Red signifies danger, and is a signal to STOP. Green signifies caution, and is a signal to go slow. It is also a signal to stop trains at Flag Stations.

White signifies safety.

19. A torpedo placed on the rail is a signal to be used in addition to the regular danger signals. The explosion of one or more torpedoes is a signal to stop immediately. Torpedoes must not be placed near stations or road crossings, where persons are liable to be injured by them. A fusee is an extra danger signal to be lighted and placed on the track, AND TO BE FREELY USED in case of accident, or when a train stops or reduces speed so as to endanger its rear from trains that may be following OR WHEN THERE IS A CONDITION ENDANGERING A TRAIN ON AN ADJACENT TRACK. WHEN FUSES ARE USED, THEY MUST NOT BE DEPOSITED ON BRIDGES OR ANY PLACE WHERE THERE IS DANGER FROM FIRE.

20. A flag or lamp swung across the track, a hat or any object waved violently signifies danger, and is a signal to stop.

LAMP SIGNALS.

21. A lamp swung across the track is the signal to stop. A lamp raised and lowered perpendicularly is the signal to move ahead.

A lamp swung in a half circle over the head, when the train is standing, is the signal to back.

A lamp swung in a circle at arm's length, when the train is running, is the signal that the train has parted.

A flag or the hand moved in any of the directions given above will indicate the same signal as given by a lamp.

If signal is given quick, move quick; if slow, move slow.

FIXED SIGNALS.

22. Fixed signals are placed at Junctions, Railroad Crossings, Draw Bridges, Stations and other points that require special protection. Special instruction will be issued indicating their position and use.

23. A signal imperfectly displayed or the absence of a signal at a place where usually shown, must be regarded as a danger signal and the fact reported to the Superintendent.

24. Switch lights and train order signal lights must be kept burning all night.

AIR WHISTLE SIGNALS

25. One blast of the air signal whistle when the train is standing is the signal to call engineer's attention to the rear and test the air brake.

Two blasts of the air signal whistle when the train is running is the signal to stop at once. When given after the whistle signal for approaching a station, it will signify that the train is to stop at the station.

Three blasts of the air signal whistle is the signal to back up.

When one blast of the air signal whistle is heard while the train is running the engineer must immediately ascertain if the train is parted, and be governed accordingly.

WHISTLE SIGNALS.

26. One short blast of the whistle, thus, —, is the signal to apply the brakes.

One long blast of the whistle, of five seconds' duration, thus, ———, is the signal for approaching stations, railroad crossings, junctions and draw bridges.

Two short blasts of the whistle, thus, — —, is the signal to release brakes, and must also be given before starting, after stop has been made for railroad crossings.

One long and one short blast of the whistle, thus, — — —, must be given in answer to all signals to stop.

Three short blasts of the whistle, thus, — — —, when train is standing, to be repeated until answered by trainmen, is the signal that the train will back.

One long and two short blasts of the whistle, thus — — —, is the signal for highway crossings.

Three long blasts of the whistle, thus, — — — — —, when train is running, to be repeated until answered by signal from trainmen, is the signal that train has parted.

Four short blasts of the whistle, thus, — — — —, is the engineer's call for signals from switch tenders, watchmen, trainmen and others.

One long and three short blasts of the whistle, thus, — — — — —, is the signal that train is carrying signals for a following train, and is to call attention of trains they meet or pass to that fact. Trains thus notified must answer by giving the same signal, — — — — —.

One long, two short and one long blast of the whistle, thus, — — — — —, will be given by engineers when they find it necessary to stop between stations and to notify conductor, thus enabling him to drop off and send back a flagman.

Four long blasts of the whistles, thus, — — — — —, is the signal for flagman to return from the west. Five long blasts of the whistle, thus, — — — — —, is the signal for flagman to return from the east.

TRAIN SIGNALS.

27. All trains must display one marker lamp both day and night on each side of rear car as markers, same to be lighted, showing red to the rear and green to the front and side at night. All trains running after sunset, or when obscured by fog or other cause, must display head light in front and two or more red lights in the rear. Engines running without cars when backing up, must carry markers on the rear of tender.

28. Signal cords shall be used on all passenger trains, and shall extend from the rear car to the whistle or signal bell on the engine, and shall not be detached while the train is in motion.

29. Two green flags by day, and in addition two green lights by night, displayed on the front of an engine, denote that the train is followed by another train.

30. When two or more engines are coupled together, the leading engine only shall display the signals as provided by rules governing the carrying of signals and shall answer all signals.

31. Two white flags by day and in addition two white lights by night, displayed on the front of an engine, denote that the train is an irregular one. These signals must be displayed on all irregular trains.

32. One flag or light displayed as a classification signal will be regarded the same as if two were displayed. Conductors and engineers will be held responsible for the proper display of all signals.

33. When freight trains are standing on side tracks, all red lights on rear of train must be removed and green side lights displayed as soon as main track is clear. The red lights must again be displayed before returning to main track.

34. White signals must be used by watchmen on public and street crossings to prevent persons and teams from crossing when trains are approaching. Danger signals must be used only when necessary to stop trains.

35. A red flag by day or a red light by night placed on the end of a car denotes that car inspectors are at work under or about the car or train. The car or train so protected must not be coupled to or moved until the red signal is removed by the car inspectors. When a car or train standing on a siding is protected by a red signal, other cars must not be placed in front of it so that the red signal will be obscured, without first notifying the car inspector that he may protect himself.

36. All signals must be used in accordance with the rules and trainmen and enginemen must keep a constant lookout for signals.

CLASSIFICATION OF TRAINS.

37. All trains shall be designated as regular or irregular. Regular trains are those represented on the time table, and may consist of one or more sections. Irregular trains are those not represented on the time table. An engine without cars, in service on the road, shall be considered a train.

38. Trains are classified on the time table as to their right to the track. Trains of the first class being superior to those of the second and all succeeding classes, and so on indefinitely. The terms Passenger, Freight, or Mixed are descriptive, and do not refer to class.

39. Irregular trains will be designated as follows: Irregular passenger trains shall be designated as Special Trains. Irregular freight trains shall be designated as Extra Trains. Working and construction trains shall be designated as Work Trains.

40. Irregular trains are of inferior class to regular trains.

TRAIN RIGHTS.

41. Trains in a specified direction will have the absolute right to track over trains of similar or inferior class, moving in the opposite direction. This will be indicated on the different divisions by special rule on face of time card.

42. Trains of inferior class must keep out of the way of trains of a superior class.

43. Regular trains, twenty-four hours or more behind their time table time, lose all their rights.

44. No train shall assume the rights of any other train without orders. Should a train be delayed so that another train of the same class overtakes it, the train overtaking the delayed train shall not have the right to pass it without orders.

45. No train having the right to the road must leave any station where, by the time table, it should meet a train of the same class until five (5) minutes after its time, and this must be observed at every succeeding station until it shall have met the expected train. The five (5) minutes are allowed for the variation of watches and must not be used by either train.

46. When there is more than one train running on the time of a regular train, the leading section or sections will carry Green Signals and the following section or sections will have precisely the same Time Table rights as the leading section and no more.

47. Conductors of trains carrying signals for following sections must note in each train register that they are carrying signals, and state from, and to what points, and will not leave the station where the signals are to be taken in, without orders, unless the following train has arrived.

48. At meeting points, the train having the right of the road shall occupy the main track, when practicable. Trains taking siding must enter from nearest end and not run by to back in, except in cases of emergency, and then only under cover of signals. Great care must be used approaching all stations. Special caution must be observed when the view is obscure. Main track must be kept clear for passenger trains, especially for those which do not stop.

49. No train shall leave a station preceding a station where it is to meet or be passed by a train of a superior class, unless it shall be able to reach such station and take siding five (5) minutes before such train is due.

INSTRUCTIONS TO TRAIN AND ENGINEMEN.

50. Train and enginemen will be held equally responsible for the violation of any of the rules governing the safety of trains, and they must take every precaution for the protection of trains even if not provided for by the rules.

51. The conductor will have charge and control of the train and of all persons employed on it, and is responsible for its movements while on the road, except when his directions conflict with these rules or involve risk or hazard, in either of which cases the engineer will be held alike accountable.

52. No train will leave the station commencing its run without a clearance card. If a train receives an order before starting on its run, it must, in addition, procure a clearance card from the operator, reading: "I have no further orders for your train."

53. No train will pass other stations where the order signal is displayed without receiving an order or a clearance card.

54. If a train receives orders, and the signal still remains displayed for other trains, said train must, before leaving, procure a clearance card reading: "I have no further orders for your train."

55. Clearance cards must be signed, dated and timed by the operator on duty. Conductors will see that the correct number of their trains is written on clearance cards.

56. Engineers will not start their trains unless clearance cards, in accordance with the above instructions, have been shown them.

57. No train shall leave a station commencing its run, nor after making a station stop, without a signal from the conductor. No freight train shall pass a station where it does not stop, unless the engineer receives a "go ahead" signal from the rear end.

58. No train shall leave a station to follow a passenger train until ten (10) minutes after its departure.

59. Freight trains following each other must keep not less than ten (10) minutes apart, except in closing up at station or at meeting and passing points.

60. When a train is being pushed by an engine, except when switching and making up trains in yards, a trainman must be stationed on the front of the leading car with proper signals so as to perceive the first sign of danger, and immediately signal the engineman.

61. Conductors of trains of the same class must register with each other at all meeting points. When meeting points are made by telegraph orders, conductors of trains, of all classes, must register with each other.

62. When a train stops between stations, a flagman must immediately go back with proper signals to stop any train that may be following. Not a moment must be lost in inquiry as to the cause of stoppage or its probable duration. The flagman must go back INSTANTLY and shall take not less than three torpedoes, AND THREE FUSEES, also a red flag by day and a red and white light by night, and shall place one torpedo on the rail on the Engineer's side when three-quarters of a mile (30 telegraph poles) distant from the rear of train and at a further distance of one-quarter of a mile (10 telegraph poles), he shall place two torpedoes on the rail on the Engineer's side. He will then, selecting a place where the view is long and clear, remain until a train is stopped, or he is recalled. Returning he will leave two torpedoes at the most distant point from his train and take up the rest. Whenever it becomes necessary, the forward end of the train shall be protected in the same manner.

63. If it is necessary for an engineer to stop his train between stations, he must, if possible, select a place where the view is clear in the rear of train for at least one-half mile and give the proper whistle signal as per Rule 26. This shall be the signal that the engineer wants to stop and the rear brakeman must instantly go back and protect the train as per Rule 62. If the conductor finds it necessary to stop, he shall take the same precaution and protect the train in the same manner.

64. If for any cause, speed is reduced OR A STOP IS MADE so as to endanger the rear of train, conductors will be held responsible for its proper protection from trains that may be following by the FREE use of fuses or other danger signals as per Rules 19 and 62. A train finding a fusee burning upon the track must come to a stop, then proceed with great caution.

65. When a flagman is sent out to protect the front of a train, he must not be recalled by whistle signals, but must remain until he is called in by another flagman or until he has stopped the opposing train.

66. Trains of all classes, except regular passenger trains, must approach all stations under control so that it shall not be possible for them to strike any train that may be inside the yard limits. The entire responsibility in such cases rests with the approaching train. When at stations trains carrying passengers must be protected against approaching trains at all times and under all circumstances, even if they are inside the yard limits. It will be understood that yard limits extend to the outside switches unless otherwise designated by yard limit signs or special rules.

67. Enginemen must look back frequently to see that all is right.

If a train should part while in motion, trainmen must use great care to prevent the detached parts from colliding. Engineers must give the signal for train parted, and keep the forward part of the train in motion until they know the detached portion is stopped. The forward portion will have the right to go back, regardless of following trains, to recover the detached portion, first ascertaining if the draft iron of the rear car is in proper condition, and then sending a flagman with danger signals a sufficient distance back to insure absolute safety against collision. Engineers will be held responsible for the movement of the forward portion of the train. The detached portion must not be moved until the forward portion comes back.

68. Before crossing the track of another railway or entering thereon, and before crossing any draw bridge during the season of navigation, every train shall be brought to a stop, not nearer than one hundred feet nor further than four hundred feet from the crossing, switch, or draw bridge, and will not proceed until the engineer has given the necessary crossing whistle and is satisfied that the track is clear. When two trains are approaching a railroad crossing at the same time, neither train must attempt to cross until certain that the other has come to a stop.

69. When a train is standing on double track for passengers, trains from the opposite direction will come to a stop with the engines opposite each other, and proceed slowly until trains are passed.

70. Conductors will be held responsible for the proper adjustment of the switches used by them and their trainmen, except where switch tenders are stationed. Whoever opens a switch will remain until it is closed, unless relieved by some other competent trainman.

71. Accidents, detention of trains, failure in the supply of water or fuel, or defects in the track or bridges, must be promptly reported by telegraph to the Superintendent.

72. Passenger train conductors are required to be in attendance on their trains, in regulation uniform, half an hour before leaving time, and to remain in attendance in full uniform until they reach the end of their runs, discharge their passengers and turn their trains over in proper condition to their successors or to the yardmen. They will be held responsible for the cleanliness and proper condition of cars in their trains, and for the prompt action and general good conduct of their baggagemen, brakemen and porters, requiring them to be on duty in regulation uniform half an hour before leaving time, and to remain so until the end of their runs and all their duties have been performed. As soon as a passenger train leaves a station a trainman must go through each coach and announce distinctly near each end of the coach what the next station will be at which the train stops. And when the train arrives at the station the name must again be distinctly called in each coach. Passenger trainmen must not smoke while on duty.

73. Freight trainmen must be in attendance at their trains at least thirty minutes in advance of their leaving time. Conductors will be held responsible for the faithful performance of duty required on the part of their brakemen.

74. Enginemen and trainmen, when passing trackmen, must watch them until the train has passed, as they have instructions to watch and signal trains in case anything is wrong. Engineers will be particular to have their ash pans closed while crossing all bridges and trestles and in passing wood yards, and must use all possible precaution to prevent damage by fire from their engines. They will not draw their fire in front of station building nor on frogs and switches.

75. There must be a sufficient number of good brake cars in each freight train to insure safety. Conductors will be held responsible for the observance of this rule.

In switching, trainmen must know that brakes are in good order before cutting off cars.

In setting brakes, both by air and hand, care must be taken not to slide the wheels. In setting brakes, by hand, they should not be applied continuously on the same wheels, but changed frequently to avoid heating.

The rear car of every train must be a brake car.

76. Flying switches are forbidden except at spur sidings. Know that the switches and brakes are in working order before making a switch.

77. In case freight trains on which passengers are carried are run in sections, the passengers shall be carried on the first (or schedule) section of the train, except persons in charge of live stock and freight, who may be carried on the section hauling their cars. Unless otherwise ordered, the last section will do the local work.

78. No train must be run from one station to another with the engine behind it when it can be avoided.

79. Trainmen will be required to be out on top leaving and arriving at terminals; on descending grades where retainers are used; approaching draw bridges; railroad crossings at grade; end of double track; junctions and any other place where the safety of the train would be endangered by reason of trainmen not being out on top of train.

80. Freight train conductors must see that doors of all empty cars in their train are closed and fastened.

81. When on the road, engineers and conductors become subordinate to the roadmaster so far as relates to the safety of the track and bridges.

82. When trains are running in heavy rain storms or immediately after such storms, engineers will run very cautiously.

83. No one except the roadmasters, track foremen on their own section, conductor or brakeman of the train, will be allowed to ride on the engine without permission from the Superintendent or Master Mechanic.

84. In case of accident, conductors of trains may command the services of work trains, and trackmen and every person in the vicinity in the employ of the Company is required to assist if called upon.

85. Conductors will be particular to see that no part of their train is left standing on railway crossings. This is very important in regard to trains carrying passengers.

Conductors will not permit cars or engines to stand on public crossings to exceed five (5) minutes. When passenger trains are to pass, care must be taken to leave free passageway for all persons going to or from them.

In leaving cars at stations, conductors will see that the highway crossings are not obstructed.

Conductors leaving cars on sidings, will see that they are properly secured against their running, or the possibility of their being blown out on the main track, and that they are far enough from the main track to clear passing trains, and will leave loaded cars at the most convenient place for unloading, and will advise and act in harmony with the agent.

86. Great care should be used in coupling and uncoupling cars. Extra care is required when coupling foreign cars.

87. Conductors will make a detailed report to the Superintendent of all accidents or injuries to persons or property that may occur on their trains, also the names of the witnesses, if any, to the same. Reports of injury to persons will be made to Special Agent.

Killing or injuring stock must be reported to the Superintendent in duplicate by the engineer, on proper blanks. Particular care must be taken to avoid running over stock, and frequent occurrence will be regarded as incompetency on the part of the engineer.

88. Enginemen must see that the engine is provided with the necessary day and night signals, INCLUDING NOT LESS THAN SIX FUSEES AND SIX TORPEDOES. A red and white lantern must be kept burning between sunset and sunrise, upon locomotives in service upon the road and enginemen must see that the lights are kept in good condition.

89. When a passenger train loses ten or more minutes, the conductor will report the cause of the detention to the Train Dispatcher from the next telegraph station at which the train stops.

90. Freight trains will not exceed 10 miles an hour passing stations.

91. Engineers will be held responsible for running off switches, they must not start the engine to enter or leave sidings until the switch is in proper position and they have received signal from the person attending the switch.

Train and yard men must not give signal to move until the switch is fully thrown to position.

92. All persons are cautioned against standing upright on top of covered cars while passing under bridges or through tunnels. All persons are forbidden to board engines or cars while they are in too rapid motion. Under no circumstances must they stand on the track and board engines or cars when same are approaching them.

93. Engines of irregular and delayed trains during daylight shall sound the highway crossing signal at obscure places.

94. The whistle shall be sounded in accordance with the rules, one-half mile from stations, railway crossings, draw bridges and junctions, also eighty rods from highway crossings; the bell shall be rung and kept ringing until the crossing is passed.

95. Conductors and engineers, when they see the telegraph line down, must report the fact at the first telegraph station they pass, giving the locality as near as possible. Should a train be held over thirty minutes at a telegraph station where there is no night operator, the conductor will call the day operator into the office to get orders for him.

MOVEMENT OF TRAINS BY TELEGRAPH.

96. Superintendents and Train Dispatchers are the only persons authorized to give orders for the movement of trains.

97. If train orders are not fully understood by those to whom addressed, an explanation will be required before accepting them.

98. All special orders for the movement of trains must be addressed to the conductor and engineer, of which three copies shall be made upon manifold paper. All orders must be written in full, and no abbreviations used in the body of the order, except the figures "12" and "13." (These abbreviations are explained as follows: 12—"Answer how you understand and get my answer before starting," 13—"I understand.") And the words "Condr.," and "Engr."

99. The operator, after receiving an order, will have the conductor read the order aloud in his hearing, sign his understanding for himself and engineer, and after the order is endorsed "O. K." and timed, the operator will sign it, file one copy and give two copies to the conductor, who will retain one and personally deliver one to the engineer, who must read the order aloud to the conductor, who must compare his copy with the engineer's reading. The engineer must refuse to accept a train order from any person other than the conductor, and must read such order aloud to the conductor; and both must know, before starting the train, that their reading and understanding of the order is the same.

100. A train must not leave a station when directed to run by special order, unless the conductor and engineer have a copy of the same in their possession.

101. Conductors must in all cases show telegraphic orders pertaining to the movement of trains to the rear brakeman, and when practicable to the forward brakeman. Engineers must in all cases show the same to the fireman, and when practicable to the forward brakeman. Brakemen and firemen must report every instance when conductors and engineers fail to comply with this rule.

102. A special order for the movement of trains, sent by telegraph, has no force or value until the understanding of the conductor and engineer has been repeated to the person giving the order, and has been approved by him as "O. K." and not then until the approval is endorsed upon the order and the operator has signed his own name thereon. The "O. K." will be given by the order number, and the time the "O. K." is given will be endorsed on bottom of order as follows:
Order, 1, "O. K.," 5.10 P. M.

..... Dispatcher.

103. When an operator receives an order which is not to be immediately repeated, he will acknowledge receipt of same in the following manner: Repeat the No. of the order, the address, the signal X (which is equivalent to "the signal is out") his private initial, and office call. For example: No. 91 to C. & E. No. 17 X. H. D. GO. When an order is sent to two or more places at the same time, the responses will be given in the order in which it is addressed. For example:

Order No. 97.
Conductor and engineer No. one hundred and thirteen (113), Milwaukee.

Operator, Wauwatosa.
Conductor and engineer No. four (4), Brookfield.
No. one hundred and thirteen (113) and No. four (4) will meet at Wauwatosa 12.

G. H. A.
No. 97 to C. & E., No. 113, X. M. C. A.
No. 97, X. L. B. O.S.
No. 97 to C. & E., No. 4, X. A.B.

104. When by reason of the telegraph line failing, or other cause, the understanding cannot be sent or "O. K." returned, the order is void and will be so considered by all concerned, but the order must be shown to the conductor and engineer of any train affected by it, who will take such precaution as will insure safety.

105. When an operator receives an order to hold a train or an order for an expected train, he will at once display the red signal, reply to the Train Dispatcher, "Signal is out," and proceed with the 13. As soon as the orders are completed and perfect, and have been delivered to the conductor of the proper train, and not before, the red signal shall be taken in. While signals are displayed, if trains should arrive for which there are no orders, the operator must give the conductor a "clearance" on the proper form.

The signal must remain displayed until all orders to trains have been delivered, and all orders to operators to hold trains have expired.

106. Train and enginemen in passing a station must specially observe whether signals are displayed for train orders. They will not pass a telegraph station until they are certain that such signals are not displayed. No train must leave a station where a train order signal is displayed without receiving an order or "clearance" from the operator. See Rule No. 54.

107. No train will leave a registering station without the conductor reporting at the telegraph office in person. This rule does not excuse the operator from showing signals to stop trains, or from neglect in the prompt delivery of all orders, but is intended only as an additional safeguard.

108. When a train has orders regarding a specified train, it gives the train under such orders no right over any other train, nor must such orders be used by any other persons than those addressed.

109. Should a train having the right to the road be directed not to leave a station until a specified time, unless another train has arrived, the train so held must wait five minutes for safety before proceeding, if the expected train does not arrive by the time specified. The five minutes must not be used as running time by either train, as it is intended to guard against the possible difference in watches.

110. In moving trains by special orders each section shall be taken and considered as a separate and distinct train, and shall receive and run only under special orders addressed to its own conductor and engineer. This will apply to the ruling as well as the non-ruling trains. The order must specify the number of sections that are affected by the movement, and each section of both trains shall receive a separate order; for example: First and second sections No. fourteen (14), and first, second and third sections No. seventeen (17), will meet at Delphi, but if a ruling train receives an order to meet a non-ruling train, and the non-ruling train is carrying signals, the ruling train shall in that case consider that the order has been incorrectly sent, and must wait for all sections of the non-ruling train.

111. Special orders for the movement of trains will be given in the forms herewith prescribed, and orders shall be sent when practicable to all the trains affected at one and the same time, but notices of obstruction to track, repairs of bridges, or other matter which cannot be expressed in said form, will be sent to trains in such forms as may be necessary to cover the case.

112. In making meeting points by special order, when practicable, one telegraph station should intervene between the places where the orders are given, and if this station be the meeting point, the operator there should receive a copy of the order as sent to the trains affected, and his "13" received before starting the trains.

113. All copies of a train order must be taken on manifold paper, at the same time, when it is possible; when the number of copies required cannot be made at one impression, subsequent copies must be traced from the original copy.

114. When operators relieve each other, the one coming on duty must receipt in writing, in a book provided for that purpose, to the one relieved, for all orders still in effect.

115. All orders shall be numbered consecutively for each day, commencing with number one at midnight; but they shall not be referred to by number alone for the purpose of making them void.

116. When a train is abandoned, an order to that effect shall be sent to all trains on the road affected by its movement. A copy of the order shall be posted on bulletin boards at points from whence trains start upon their runs. At such points the order shall be addressed to "All Concerned," as per Form H. This shall be repeated to the dispatcher, and after it is made "O. K." the operator shall trace a sufficient number of copies and deliver two to the conductor of each train that is affected by the movement of the train abandoned, for twenty-four hours after its leaving time.

FORM OF ORDERS.

For a definite meeting point:

FORM A.

No. and No. will meet at

OR

..... will meet No. at and No. at and pass No. at

OR

First and second sections No. will meet first section No. at and second section No. at

Upon an order of this form, the trains mentioned in this order will run to the station named. The train or trains arriving first will wait until the other train or trains arrive, unless they receive further orders to proceed. Operators receiving this order will display train order signal, give their "13" and keep train order signal displayed until all the trains mentioned in the order have arrived.

For moving a train against or ahead of a train having the right to the road:

FORM B.

No. will run late from to

Upon receiving an order of this form, the train mentioned in the order will run not less than five minutes more behind time table than the time specified. Other trains receiving this order can use the time of the train mentioned as specified between the points named, ahead or against it.

When an order is to be given to any train to pass or run ahead of a passenger train, Form "B" must always be used. The train which is to be passed must also receive an order to run a sufficient length of time behind its time table to some station in advance, where it can reasonably be presumed that the train passing has cleared the time of the passenger train. If it has not done so, the order must be re-issued and kept in force until the train passing has entirely cleared the time of the train so passed.

For a time order:

FORM C.

No. has until to run to against No.

Upon receiving this order, the first named train has the right to run to the station designated, up to the time given in the order, but not ahead of time table time. In case the first named train should fail to reach the station named in the time allowed it will run as per time table. In such case the last named train in the order will not leave the station designated until five minutes after the time specified in the order.

For a "Holding" order:

FORM D.

"Hold No. for orders."

The operator receiving this order must not give his understanding to such order, until he has displayed proper signal and is assured beyond a doubt that he can hold the train as directed in the order. An order to an operator to hold a train for orders, or an order for a train to hold at a station for orders, remains in force until made void by the Train Dispatcher.

For signal order:

FORM E.

"..... and Engineer:

"Run first section No. and carry signals from to"

"..... and Engineer:

"Run second section No. from to"

The leading train shall be considered the first section of the number of train named in the order, the second train the second section and so on.

When trains are moving in sections and it becomes necessary to abandon one or more of them, the orders directing such trains to move in sections must be made void, and such new orders issued as will cover the case. When there are only two sections, one of which is to be abandoned, and the other is to run as a scheduled train, the following order will be given:

"Run No. from to"

For irregular trains:

FORM F.

"..... and Engineer:

"Run extra to"

The character of the train, special, extra, work train, etc., must be designated in the address.

Upon receipt of this order the train will run to the station named in the order, keeping out of the way of regular trains. When it is necessary to give a round-trip order, form "G" is preferable, but when it is not practicable to use this form, the following form shall be used:

"Run extra to and return to"

For a work train:

FORM G.

"Work extra between and until M." MONTH DAY OF MONTH

Upon this order a work train will have a right to the track between the points specified, keeping out of the way of regular trains.

When two work trains are using the same limits, an order of the following form shall be given:

"Work train Conductor and work train Conductor will work extra between and protecting themselves against each other."

Under this form it will be understood that the word "protecting" means that the conductors and engineers of the different trains shall, when necessary, arrange meeting points with each other, but in the absence of such an arrangement, they must flag against each other.

Abandoning trains:

FORM H.

"No. of is abandoned between and"

For re-instating a train that has been abandoned indefinitely:

FORM I.

"On and after Train No. will run as per time table No."

When this order is issued all conductors and enginemen must acknowledge receipt of the order to the Train Dispatcher, and the Train Dispatcher must have the understanding of all persons interested previous to the date mentioned in the order.

For changing meeting point:

FORM J.

"..... and Engineer:

"No. and No. will meet at instead of"

For countermanding an order:

FORM K.

"..... and Engineer:

"Order No. reading is void."

Order to work train for protection of an irregular train passing through its limits:

FORM L.

"After 3.00 P. M. work train, Brown conductor, will protect against Extra East, Smith conductor, between and"

Upon this form of order the work train may work under proper protection, but must not move in the direction from which the extra is coming, unless the flagman has been instructed in writing to hold the expected train at a definite place for the work train. The extra train receiving this order must not use the track between the stations named until five (5) minutes after the time mentioned and then may proceed with caution, expecting to find the work train on main track.

FORM L. A.

"After 3.00 P. M. work train, Brown conductor, will keep out of the way of Extra East, Smith conductor, between and"

Upon an order of this form the work train must be out of the way at the time named in the order and the extra must not use the track between the stations named until five (5) minutes after the time mentioned.

For running trains against each other at Junction Terminal or Division points:

FORM M.

"No. will run to regardless of No."

This order will be addressed to the trains interested in the movement, and to the operator at the point named, who will hold the last mentioned train or trains until the first named train or trains have arrived.

The last mentioned train or trains must not leave the station named in the order until the first mentioned train or trains have arrived:

For passing freight trains:

FORM N.

"..... will pass at and run ahead to"

When it is desired to start an extra train from a terminal or division point upon the time of a regular freight train, the form of order will be as follows:

"..... will leave at or after M., and run ahead of No. to"

For extending the time of a work train against an irregular train, of which it has received previous notice, as per Form "L." or "L. A."

FORM O.

"Work train Conductor will work extra between and until M., regardless of TRAIN DIRECTION CONDUCTOR

Upon receipt of this order, the train first mentioned can use the time as specified between the stations named against the last named train; the last named train must not use the track between the stations named until five (5) minutes after the time mentioned.

INSTRUCTIONS TO TRACK AND BRIDGEMEN.

117. No notice will be given of the passage of irregular trains. Track and bridgemen will govern themselves accordingly. They must use the utmost caution at all times. When any work is to be done which will render the track unsafe or impassable, a flagman or a red flag must be stationed in each direction three-fourths of a mile—or 30 telegraph poles—and two torpedoes placed on the rail two rail-lengths apart on the engineer's side. If it is in the vicinity of descending grades or obscure places, the distance must be doubled, and the foreman in charge will be held responsible for knowing that this is properly done. On portions of the road where a sufficient force is employed, the flagman must remain with the signals until the train is stopped or the track is repaired. When the force is too small to admit of this, the danger signals must be placed on the track as provided above, except during snow storms, foggy weather or in the night, when the flagman must in all cases remain with signals. After the track has been repaired and rendered passable for trains, the flags and torpedoes must be removed. If work is being done which will render the track unsafe for trains to pass at their usual rate of speed, a stationary green signal must be placed at least three-fourths of a mile—30 telegraph poles—from the spot in each direction on engineer's side of the track.

118. Trackmen must keep a close watch of passing trains, and when anything wrong is discovered, immediately signal the enginemen or trainmen and use every effort to stop the train.

119. Trackmen will see that all fences, cattle guards and culverts are kept in good order. In stormy weather they will be out and guard those points on the road liable to wash, or to disturbances of any kind, day or night.

120. Trackmen must not allow wood, ties or anything else piled on the right of way near highway crossings, so as to obstruct the view from trains or of persons on the highway. Hand-cars must not be allowed to remain standing on public or private road crossings.

121. When the telegraph wires are broken or crossed, trackmen are expected to have wire and connect them temporarily and report the fact at the first telegraph station, giving the locality and other particulars.

INSTRUCTIONS TO STATION AGENTS.

122. Station agents will be held responsible for the safety of switches, which must be kept locked on the main track, except when trains are using them. The main track must be kept clear and unobstructed for the passage of trains. They will see that doors of cars are securely closed and fastened, and that cars on sidings are out of the way of passing trains, brakes set, or wheels blocked.

123. Station agents are required to report all accidents occurring to trains at or near their stations, and to communicate such matters of interest or importance as may be useful in protecting the interests of the Company. They must report to the Superintendent all violations of the time table rules.

124. Ticket agents must open their ticket offices for the sale of tickets at least thirty minutes before the arrival of trains that stop at their stations, and keep them open until trains have passed.

Tickets must not be sold for stations at which trains do not stop.

125. As trains at night must stop when switch lights or train order signals are not found burning, agents (and operators in charge at night) must personally see that they are kept in good condition and burning from sunset to sunrise.

Agents will be held strictly accountable for this.