

NORTHERN PACIFIC RAILWAY COMPANY

Lake Superior Division

Special Instructions No. 5

**In Effect at 12:01 A. M. Central
or 90th Meridian Time**

Sunday, September 7, 1941

**These Instructions govern Current Time Table.
Read carefully and be positive that you have the
Current Time Table, also copy of Current Special
Instructions.**

**W. W. JUDSON,
General Manager.**

**P. H. McCAULEY,
General Superintendent of
Transportation.**

**G. H. JACOBUS,
Superintendent.**

SPECIAL INSTRUCTIONS

FIRST SUBDIVISION.

(MAIN LINE)

1. At Ashland—Normal position of Main Track switch just East of Seventh Ave., leading to the Soo Line, is for the Soo Line connection.
2. At Allouez—Track No. 2 must not be used by ore trains.
3. Yard Limits—Tracks between yard limit signs west of East End and east of Allouez.

4. Bridge and Engine Restrictions:

All Bridges:

N. P. engines Classes A, A-1, A-2, A-3, Q-5, Z-4, W-3, W-5 and heavier not permitted. Double header Soo Line and DSS&A Engines Classes L-2, L-20, N-20 and heavier, and single engines heavier than L-2, L-20 and N-20 not permitted.

Bridge O, Vaughn Avenue and Bridge 5, Fish River:

N. P. engines Classes T, W, W-1, W-2, W-4 and Z-1, and Soo Line and DSS&A engines Classes F-6, F-12, F-22, L-2, L-20 and N-20, twenty-five (25) MPH.

Bridge 37, Brule River: Double header N. P. engines Classes W, W-1, W-2, W-4 and Z-1 and double header Soo Line and DSS&A engines Classes F-6, F-12 and F-22, twenty-five (25) MPH.

Bridge 48, Poplar River: Soo Line and DSS&A engines Classes L-2, L-20 and N-20, twenty-five (25) MPH.

Bridge 49, Middle River: N. P. engines Classes T, W, W-1, W-2, W-4 and Z-1, and Soo Line and DSS&A engines Classes F-6, F-12, F-22, L-2, L-20 and N-20, twenty-five (25) MPH.

Bridge 53, Amnicon River: Soo Line and DSS&A engines Classes L-2, L-20 and N-20, twenty-five (25) MPH.

At Ashland—Class W engines or heavier, not permitted on No. 2 house track.

5. Speed Restrictions—

N. P. engines Class T-1 and Soo Line and DSS&A engines Class F and heavier, 7th Avenue West to 22nd Avenue West, between MP 0 and 2, Ashland, ten (10) MPH.

MP 2 to MP 13 passenger trains forty (40) MPH, freight trains thirty-five (35) MPH.

MP 13 to Superior East End passenger trains forty (40) MPH, freight trains thirty-five (35) MPH, on curves twenty-five (25) MPH.

See also Bridge and Engine Restrictions.

6. Register Stations—

Central Avenue.

East End.

Ashland, Soo Line Station.

Superior, Soo Line 21st Street Yard Office, for DSS&A trains.

7. Clearance Exceptions—

At East End—Trains originating secure clearance at Central Avenue, or Soo Line 21st Street Yard Office.

SECOND SUBDIVISION.

(MAIN LINE)

1. At Carlton—Eastward freight trains and light engines from the Second Sub-division will head in on North Siding. Westward Trains, Yard Engines or Branch Trains will not use North Siding without permission from the Train Dispatcher. At Interlocking—Trains will call for route as follows:

Second to Second "East & West":	oo & oo.
Second to Third "East & West":	oo & ooo.
Second to Loop Track "West":	oo & oooo.
Second to 5th Sub-division "East":	oo & oooo.
Third to Third "East and West":	ooo & ooo.
Third to Second "East and West":	ooo & oo.
Third to Loop Track "West":	ooo & oooo.
Third to 5th Sub-division "East":	ooo & oooo.

Fifth to Second "West":	oooo & oo.
Fifth to Third "West":	oooo & ooo.
Fifth to Loop Track:	oooo & oooo.
Loop Track to Second "East":	oooo & oo.
Loop Track to Third "East":	oooo & ooo.
Loop Track to 5th Sub-division "West":	oooo & oooo.
Coal Dock Track "East and West":	—o.
No. 9 Lead through Interlocking "East & West":	—.

2. At McGregor—Siding east of passenger station is westward siding. Siding west of passenger station is eastward siding. At Interlocking—Trains will call for route as follows:

For Northern Pacific and Soo Line main tracks:	—
From Northern Pacific and Soo Line to West wye:	—o
From Northern Pacific and Soo Line to East wye:	o—
To and from Interchange Track and West wye:	oooo
For all movements on eastward siding:	oo—
3. At Brainerd—Between St. Paul Division connection just East of 8th Street and passenger station expect to find St. Paul Division trains using main track. St. Paul Division and M&I passenger trains head in on inside track at passenger station where they will remain until departure. St. Paul Division trains stop before fouling Lake Superior Second Sub-division main track.
4. At M&I Junction—Connection with M&I Railway is governed by automatic block signals. Conductors of Eastward M&I trains secure from telegraph office at Brainerd by telephone, information required by rule S-83.
5. At Staples Interlocking—Westward distant signal 8700 feet east of the home signal is a two arm signal. Upper arm is fixed indicating Stop. Lower arm is a three position signal. Westward trains that may have difficulty starting at home signal must not pass distant signal until the lower arm indicates Proceed. If lower arm is not immediately changed to Proceed for such trains, or to Approach or Proceed for other trains, the condition of block ahead will be obtained from the Towerman at Interlocking Station by using the telephone at distant signal, and will then proceed on instructions from Towerman, at restricted speed.
6. Pusher Districts—Central Avenue to Sawyer.
7. Yard Limits—Tracks between yard limit signs east of Brainerd and west of M&I Jct.
8. Retaining Valves—On freight trains retaining valves must be used on grades Iverson to Pokegama, handles to be turned up to low pressure (horizontal) position, beginning at head end of train, as follows:

Trains of 8000 tons or over—	20 retainers.
Trains of 6000 tons or over—	16 retainers.
Trains of 4000 tons or over—	10 retainers.
Trains of less than 4000 tons—	No retainers unless requested by engineman.

All retaining valves will be turned down when the foot of grade is reached; between Pokegama and Central Avenue.

On solid trains of ore or trains consisting to a large percentage of ore, retaining valves must be turned up on one-fourth of the total number of cars in the train just before passing Sawyer, and turned down between Pokegama and Central Avenue. Or ore trains, 90 lbs. brake pipe pressure will be used from Sawyer to point where train is set out.

At Carlton—When engine has been cut off and recoupled retaining valves will be turned down while the brake pipe test is being made, and then turned up again before starting. When difficult to start a train while retainers are turned up, the brake cylinders may be bled by turning retainer handles down momentarily, and then turning them up again.

9. Bridge and Engine Restrictions—Bridge 9.1 just West of Central Avenue twenty (20) MPH. Avoid using automatic brakes over this bridge except in case of emergency. Bridge 95, Cedar Creek: Engines Classes A-2, A-3, Z-5 and Z-6, twenty (20) MPH. Bridge 119, Mississippi River: Engines Classes A-2, A-3, Z-5 and Z-6 not permitted. Engines Classes A, A-1, W-3, W-5 and Z-4 twenty (20) MPH. Bridge 140, Crow Wing River: Engines Classes Z-5 and Z-6 twenty (20) MPH.

Engines Classes W, and heavier must not use following tracks:

Tamarack—Stock Track.

Brainerd—Track Nos. 13, 14, 15, 16 and 17, West end of New Yard.

Motley—North Spur.

Engines Classes W-3 and heavier must not use following tracks:

Wrenshall—Wrenshall Brick Yard 1 and 2.

Zenith Gravel Pit Spur.

Aitkin—Hole Track beyond First Street Crossing and Power House Spur.

10. Speed Restrictions—

Trains handling ore, not exceed forty (40) MPH.

At Brainerd. Ten (10) MPH over highway crossings. First class trains twenty (20) MPH between east switch of north siding "East of Car Shop" and St. Paul Division connection at 8th Street and restricted speed between St. Paul Division connection and Passenger Station.

The "Long Double" and "Scale Track" may be used for light engine movements, between Roundhouse lead and 8th Street, in addition to yard switching operations. Road trains not permitted to use these tracks.

At Aitkin, thirty (30) MPH through village.

At Carlton, fifteen (15) MPH over diamond switches at the Interlocking.

See also Bridge and Engine Restrictions.

11. Register Stations—

Central Avenue, Carlton, Staples.

12. Register Exceptions—At Central Ave. and Carlton trains register by Form 608.

13. Lap Sidings—Aitkin, Motley.

14. Commercial Spurs—

	Miles from Duluth	Car Capacity
Zenith Gravel Pit Spur	30.2	30
Arens Spur	89.4	5

THIRD SUBDIVISION.

(MAIN LINE)

1. At West Duluth Jct.—Switch at end of double track is dual control. Normal position is for westward track. If signals fail to clear, switch must be examined and if not in proper position, first throw POWER LEVER then operate switch with the HAND THROW LEVER. POWER LEVER must not be returned to normal position until after the final move over the switch is made. Both levers must be left in normal position and locked.

2. At Carlton Interlocking—Trains will call for route as shown in Second Subdivision instructions.

3. At Hinckley—Siding east of Grind Stone River is westward siding. Siding west of Great Northern Crossing is eastward siding. Cars must not be left on No. 1 yard track. Switch from Roundhouse lead to Coal Dock Pit Track must be set and locked for Coal Dock Pit Track when not in use.

At Interlocking—trains will call for route as follows:

For Through Main Track Movement:	—
For Movement from Main Track to Sidings:	—o
For Movement from Sidings to Main Track:	o—
For Movement between yard and eastward siding:	oo

4. At Rush City—Siding west of passenger station is eastward siding. Siding east of passenger station is westward siding.

5. At North Branch—Siding west of passenger station is eastward siding. Siding east of passenger station is westward siding.

6. At Wyoming—Siding west of passenger station is eastward siding. Siding east of passenger station is westward siding.

7. At Bald Eagle—The Bald Eagle Lead may be used by trains in both directions expecting to find it occupied.

8. Pusher Districts—West Duluth to Otter Creek.

9. Retaining Valves—On freight trains retaining valves must be used on grades Brownell to Smithville. Handles to be turned up to low pressure (horizontal) position, beginning at head end of train, as follows:

Trains of 8000 tons or over—20 retainers.

Trains of 6000 tons or over—16 retainers.

Trains of 4000 tons or over—10 retainers.

Trains of less than 4000 tons—No retainers unless requested by engineman.

All retaining valves will be turned down when the foot of grade is reached; between Smithville and West Duluth Junction. When difficult to start a train while retainers are turned up, the brake cylinders may be bled by turning retainer handles down momentarily, and then turning them up again.

10. Speed Restriction—

Brownell to Smithville: Passenger trains, forty-five (45) MPH, freight trains, twenty-five (25) MPH.

At Carlton—Fifteen (15) MPH over diamond switches at the Interlocking except straight through movement via Third Subdivision.

11. Register Stations—

West Duluth, Carlton, White Bear Lake.

12. Register Exceptions—

At West Duluth, Carlton and White Bear Lake trains register by Form 608.

13. Clearance Exceptions—

At West Duluth Junction: Trains originating secure clearance at West Duluth.

14. Commercial Spurs—

	Miles from Duluth	Car Capacity
Power Company	17.0	4

FOURTH SUBDIVISION.

(IRONTON BRANCH)

At Deerwood—Eastward trains use junction switch one and three-fourths miles east of passenger station; westward trains use crossover west of passenger station, unless otherwise authorized by train order.

2. Bridge and Engine Restrictions—Engines heavier than Classes W-5 and Z-4 not permitted.

3. Register Stations—Ironton and Deerwood.

FIFTH SUBDIVISION.

(CLOQUET BRANCH)

1. At Carlton Interlocking—Trains will call for route as shown in Second Subdivision instructions.

2. Bridge and Engine Restrictions—Between Carlton and MP 3, engines heavier than Class W-3 not permitted; between Cloquet and MP 3, engines heavier than Class W-1, not permitted. At Cloquet, engines Classes W and heavier must not be used around curvature of over 15 degrees on yard tracks. Engines Class W and heavier must not use the D&NE interchange track.

3. Speed Restrictions—

Between Cloquet and MP 3, east of Scanlon; fifteen (15) MPH. Carlton; fifteen (15) MPH over diamond switches through the Interlocking.

Over balance of Subdivision; thirty (30) MPH.

4. Register Stations—Carlton and Cloquet.

5. Clearance Exceptions—At Cloquet trains will not require clearance.

SIXTH SUBDIVISION.

(GRANTSBURG BRANCH)

1. Bridge and Engine Restrictions—

Engines heavier than Class S-10, not permitted.

Bridge 5, St. Croix River—Engines Class S-10, eight (8) MPH, lighter Classes, fifteen (15) MPH.

2. Speed Restrictions—

Over subdivision—thirty (30) MPH.

Rush City, approach Highway No. 61 crossing at restricted speed. See also Bridge and Engine restrictions.

3. Register Stations— Rush City, Grantsburg.

4. Clearance Exceptions—At Grantsburg, trains will not require clearance except during assigned hours of telegraph service.

5. Commercial Spurs—

	Miles from Rush City	Car Capacity
McGrath	3.3	3
Canfield	8.0	6
Linds	10.5	4
Anderson's	14.5	18

SEVENTH SUBDIVISION. (TAYLORS FALLS BRANCH)

1. Bridge and Engine Restrictions—

Engines heavier than Classes Q-3 and T, not permitted.
Bridges 18, 18-1, 18-2, and 19—Engines Classes Q-1, Q-3, and T, eight (8) MPH, Classes Q, S-4 and S-10, twenty (20) MPH.

2. Speed Restrictions—Over subdivision, maximum thirty-five (35) MPH.

At Taylors Falls, between passenger station and turn-table switch, eight (8) MPH.

At Wyoming—Approach No. 61 highway crossings at restricted speed.

See also Bridge and Engine Restrictions.

3. Clearance Exceptions—

At Taylors Falls—Trains will not require clearance except during assigned hours of telegraph service.

ALL SUBDIVISIONS.

1. Transportation Rule 11 is modified as follows: A train finding a fusee burning on or near its track may proceed at restricted speed without stopping.

2. Lights will be displayed at night on all main line train order signals. On Branch line subdivisions where lights are not displayed on day office train order signals, all trains will positively ascertain position of signal and be governed by the day indication.

3. Transportation Rule D-97 applies to all divisions.

4. Transportation Rule 105 is modified as follows: When a siding of an assigned direction is blocked with cars, or taken out of service for any reason, the siding of the opposite direction will be used as a single siding. At lap sidings, unless otherwise provided, trains taking siding must head in at the lap.

5. IN AUTOMATIC BLOCK SIGNAL TERRITORY: When moving with the current of traffic, or on single track, where the automatic block signals governing the track in use are of the semaphore type and can be plainly seen from the rear of a standing train to be at stop, such signal being not less than one-half mile from the rear of such train, it will not be necessary to protect the train by a flagman. Under all other circumstances, Rule 99 must be observed.

Transportation Rule 501B is modified as follows: INDICATION—Approach next signal prepared to stop. Block is clear; second block in advance is not clear.

Transportation Rule 509B is modified as follows: It must be understood that such signal indication may be due to an opposing train proceeding into the same block at the opposite end under an approach signal indication Rule 501B and before proceeding into the block every precaution consistent with running orders and the nature of the track ahead should be taken to insure safe movement through the block.

When a train dispatcher desires to advance a train from a station where by rule it should enter the siding before passing a train order office, he may instruct the operator to use white signal as prescribed by Transportation Rule 12c. The engineman may then continue to move his train on the main track to the signal at restricted speed and there be governed by train orders that are addressed to his train.

6. Transportation Rule 606: Emergency Signals are not used at interlockings or drawbridges operated by the Northern Pacific Railway.

7. Transportation Rule 728 is modified as follows: The red flag by day, and in addition the red light at night, will be placed twenty (20) rail lengths distant from the point of obstruction instead of fifty (50) rail lengths. The flagman will be located with the yellow signals, one mile distant beyond the red signals. On the approach of a train the flagman will display the yellow signals, which must be acknowledged by the enginemen in accordance with Rule 14(g). On the Fourth, Fifth, Sixth and Seventh Subdivisions, and in special cases authorized by the Superintendent, and protected by train order, the yellow signals will be placed as prescribed and the flagman will not be required except during fog, storms or otherwise bad weather.

8. Transportation Rule 1062, requiring the making of running brake test on passenger trains, must also be observed on all passenger trains following departure from terminals, or from a station at which either train or engine crews, or both of them, have been changed, or where switching has been done. Enginemen will acknowledge proceed signals of trainmen by two (2) short blasts of the whistle.

9. When a siding is to be used temporarily as a main track, the switches will be set and locked for the siding and must be protected by flagman until train order covering the movement is issued to all trains and the section foreman of that section notified; the flagman to remain until released by the train dispatcher.

10. Helper engines waiting to help trains will keep clear of main track until train to be helped has arrived and stopped.

11. In case of failure of communicating signal system on passenger trains, and on freight trains when conditions permit, enginemen will receive "proceed" signal before passing any station.

12. SPEED RESTRICTIONS—Except as otherwise provided; Passenger trains, sixty (60) MPH.

Freight trains, fifty (50) MPH, except when restricted to lower rate of speed by engine speed restriction.

ENGINES—All A, Q and P classes, and classes S-4 and T, sixty (60) MPH, except when used on passenger trains where higher speed is authorized; Z-6 sixty (60) MPH; other Z classes, thirty-five (35) MPH. All other classes fifty (50) MPH. Switch engines under steam, moving between stations, fifteen (15) MPH. ALL TRAINS AND ENGINES—Fifteen (15) MPH through crossovers, turnouts and gauntlets; twenty-five (25) MPH passing telegraph offices where orders are delivered; thirty (30) MPH when handling steam wrecking derrick, pile driver or locomotive crane.

To avoid damage to rail and bridges by moving locomotives having main or side rods down, over the road at too high a speed, the following speeds will be maximum permitted:

On Main Line—

With main and side rods removed:

All A and Q classes30 MPH.
All other classes25 MPH.

With main rods removed and side rods in place:

All A and Q classes35 MPH.
All other classes30 MPH.

On Branch Lines—

With either or both main and side rods removed:

All A and Q classes25 MPH.
All other classes20 MPH.

Over Bridges—Main or Branch Line20 MPH.

Engines with either or both main and side rods removed shall not be moved over any bridge at a speed in excess of twenty (20) MPH and the speed shall be further reduced over bridges which carry speed restrictions against the class of power being so moved. In the latter case, the speed of an engine with rods removed shall be reduced over the bridge to one-half the restricted speed for that engine in working order, as shown under "Bridge and Engine Restrictions."

Dead engines with all rods up or in place, the piston rod being parted from the crosshead and removed and the valve motion disconnected and blocked, may be moved in trains at not to exceed the permissible speed of freight trains operating in the territory over which such engines are moved. Bridge or other restrictions applicable to these engines when in operating condition to be observed. For engines coming from the shop, to prevent running hot, authorized maximum speed is:

All A and Q Classes35 MPH.
All other Classes30 MPH.

13. **Bridge Restrictions for Single and Double Header Engines—**
Where no mention is made of single or double heading, the instructions apply alike to single and double header engines of each class.

An engine of any class double-headed with an engine of lighter class will carry the same restrictions as if the heavier engine were double-headed with its own class, unless instructions to the contrary have been issued.

14. **SPRING SWITCHES—**

Maximum speed for all facing point and trailing point movements through switch fifteen (15) MPH.

Trailing movements on the track for which the switch is normally lined may be made at normal speed.

Trains trailing through or stopping on a spring switch must not back up or take slack until points have been thrown by hand. Flying switches over or through spring switches are prohibited. When operated by hand, lever must be moved slowly, keeping a steady pressure on the handle until the switch is thrown and the handle is in the notch on the switch stand provided for it. When signal governing block in which spring switch is located is at stop, or where automatic block signals do not govern account trains running against current of traffic, facing point movements must not be made over switch until points have been examined.

Sand must not be used over points of spring switches.

15. Before moving a work or wrecking train, the whistle signal (14-b) or (14-h) must be sounded for the protection of men working about such trains.

16. Gas-electric motor cars, when handled in freight trains, must be behind caboose.

Test of hand brakes of gas-electric motor cars must be made once each trip. If crew has charge of moving car prior to leaving initial station, test must be made during such movement; otherwise, as soon as possible after leaving initial station. On cars equipped with "Deadman's Control", conductor and engineman will cooperate in making test.

17. Precautions must be taken on double track to prevent accidents from swinging doors or other loose construction attached to cars or locomotives. Trains handling logs must stop when being met or passed by passenger trains.

18. Transportation Rule 101(A) is modified as follows: On First, Sixth and Seventh Subdivisions, where there can be no other train following, protection may be provided in accordance with Transportation Rule 728 as modified in these special instructions, using fixed flags in place of flagman. When protection is provided under Rule 101(A) or its modification, the first available section foreman must be notified, day or night, and full report must be made to the Superintendent by the first available means of communication. If any trains are met they must be stopped and notified of the conditions and location.

19. **BULLETIN STATIONS—**

Ashland. Soo Line Passenger Station.
Duluth. Union Depot, Rices Point Yard and Roundhouse,
Soo Line Passenger Station.
Superior. Soo Line Yard and Roundhouse.
Carlton. Passenger Station and Roundhouse.
Ironton. Passenger Station.
Staples. Passenger Station, Yard and Roundhouse.
Rush City. Passenger Station.
White Bear Lake. Passenger Station.
St. Paul. Miss. St. Yard and Roundhouse, CMStP&P Yard and Roundhouse.

20. **STANDARD TIME CLOCKS—**

Duluth—Union Depot, Rices Point Yard Office and Round House.
Carlton—Passenger Station.
Brainerd—Passenger Station.
Staples—Passenger Station, Round House and Yard Office.
Hinckley—Passenger Station.
Rush City—Passenger Station.
White Bear Lake—Passenger Station.

21. **WATCH INSPECTORS—**

Duluth	O. M. Hopper.
Duluth	Herbert W. Schmidt.
Duluth	Harlan Wells.
West Duluth	W. F. Hurst.
Superior	L. J. Howatt.
Brainerd	C. L. Burnett.
Staples	C. E. LaBonte.
Ironton	D. R. Sandstrom.
Cloquet	L. A. Freeman.
St. Paul	Christensen's.
St. Paul	Northern Watch Co.
Minneapolis	Allen and Berg.

NOTE

Schedule meetings or passing stations are indicated in full-faced type; numbers of the trains meeting, passing or being passed will not be shown.

RAILROAD CROSSINGS AND INTERLOCKINGS

First Subdivision—

ASHLAND

C. & N. W. and Soo Line Crossings.

ASHLAND JCT.

C. St. P. M. & O. Crossing.

ALLOUEZ

N. W. C. Crossing—Interlocked.

Second Subdivision—

CENTRAL AVENUE

G. N. Crossing—Interlocked.

POKEGAMA

Interstate Crossing—Interlocked.

STATE LINE

G. N. Crossing—Interlocked.

CARLTON

Third Sub-Div. Crossing—Interlocked.

McGREGOR

Soo Line Crossing—Interlocked.

Third Subdivision—

CARLTON

Second Sub-Div. and G. N. Crossings—Interlocked.

HINCKLEY

G. N. Crossing—Interlocked.

BALD EAGLE

Soo Line Crossing—Interlocked.

Fifth Subdivision—

CARLTON

Third Subdivision Junction—Interlocked.

SPEED TABLE

Time per Mile			Miles per Hour		
Min.	Sec.		Min.	Sec.	Hour
0	51		1	25	42.3
0	52		1	30	40
0	53		1	40	36
0	54		1	45	34.3
0	55		1	50	32.7
0	56		2	..	30
0	57		2	10	27.6
0	58		2	15	26.6
0	59		2	20	25.7
1	..		2	30	24
1	1		2	40	22.5
1	2		2	45	21.8
1	3		2	50	21.2
1	4		3	..	20
1	5		3	9	19
1	6		3	20	18
1	7		3	31	17
1	8		3	45	16
1	9		4	..	15
1	10		5	..	12
1	12		6	..	10
1	15		7	30	8
1	20		10	..	6

TONNAGE RATING—FREIGHT ENGINES

Subdivision	District	Class of Engines			
		T	W	W-3	W-5
First Eastward..	Central Ave. to Iron River	1200	1650	.....	.....
	Iron River to Ashland...	1350	1850	.....	.....
First Westward..	Ashland to Central Ave...	1100	1500	.....	.....
Second Eastward	Staples to Brainerd.....	3500	5400	8500	10000
	Brainerd to Duluth.....	2650	4200	6000	7000
	Ironton to Central Ave...	.....	5000	8500	10000
Second Westward	Duluth to Sawyer.....	1150	1600	2600	3000
	Sawyer to Brainerd.....	2300	3500	5200	6000
	Brainerd to Staples.....	2800	4000	5900	6800
Third Eastward..	White Bear Lake to Hinckley.....	2250	3450	4000	4600
	Hinckley to Groningen....	2150	3100	3700	4800
	Groningen to Carlton.....	2800	3900	5800	6700
	Carlton to Duluth.....	2600	3500	5200	6000
Third Westward.	Duluth to Carlton.....	950	1300	1800	2100
	Carlton to Hinckley.....	2300	3700	5400	6200
	Hinckley to White Bear Lake.....	2600	3900	5900	6800

MAXIMUM CLEARANCES.

LIMIT OF LOAD MEASUREMENT.

Height Above Top of Rail.

	1 ft. Wide	2 ft. Wide	3 ft. Wide	4 ft. Wide	5 ft. Wide	6 ft. Wide	7 ft. Wide	7 ft. 6 in. Wide	8 ft. 6 in. Wide	9 ft. Wide	9 ft. 6 in. Wide	10 ft. 2 in. Wide	10 ft. 6 in. Wide	11 ft. 6 in. Wide	11 ft. 6 in. Hgt.	Max. Wtd.
1st Sub-division, Ashland to East End....	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	21'0"	11'6"
2nd Sub-division, Duluth to Staples.....	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	11'6"
3rd Sub-division, Duluth to White Bear Lake	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	11'6"
4th Sub-division, Deerwood to Trommald..	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	11'6"
5th Sub-division, Carlton to Cloquet.....	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	11'6"
6th Sub-division, Grantsburg to Rush City.	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	18'11"	11'6"
7th Sub-division, Taylors Falls Yard to Wyoing.....	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	20'3"	11'6"

C. W. COIL,
Asst. Superintendent.

H. J. COUNCILMAN,
Trainmaster.

E. J. WIGG,
Chief Dispatcher.