

MAXIMUM CLEARANCES

LIMIT OF LOAD—MEASUREMENT

ST. PAUL DIVISION

HEIGHT ABOVE TOP OF RAIL

	8'-6" Wide	9'-0" Wide	9'-6" Wide	10'-0" Wide	10'-2" Wide	10'-6" Wide	11'-0" Wide	11'-6" Wide	Max. Height	Max. Width
1st Subdivision....	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	11'-6"
2nd Subdivision....	18'-6"	18'-4"	18'-2"	18'-2"	17'-10"	17'-7"	17'-4"	16'-3"	20'-3"	11'-6"
3rd Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
4th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
5th Subdivision....	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	11'-6"
6th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
7th Subdivision....	19'-11"	19'-8"	19'-5"	19'-2"	19'-2"	19'-0"	18'-8"	18'-5"	20'-3"	11'-6"
8th Subdivision....	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	11'-6"
8th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
9th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"

M. L., Northtown to Staples.....
M. L., Staples to Dilworth.....
Little Falls to Brainerd.....
Little Falls to Morris.....
Wadena Jet. to Oakes.....
Manitoba Jet. to E. Grand Forks.....
E. Grand Forks to Winnipeg.....
Fortile to Carthage Jet.....
Key West to Sherack.....
Fairview Jet. to Berndt.....

L. J. BENNER,
Trainmaster.

C. C. PRICE,
Trainmaster.

W. L. WOOD,
Trainmaster.

C. H. SCHUTT,
Trainmaster-Roadmaster.

E. H. BRILEY,
Chief Dispatcher.

NORTHERN PACIFIC RAILWAY COMPANY

St. Paul Division

Special Instructions No. 4

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

Saturday, March 1, 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.

T. M. FLYNN,
Superintendent.

SPECIAL INSTRUCTIONS

FIRST SUB DIVISION.

(MAIN LINE)

1. At Minneapolis depot, class A-3 engines not permitted on tracks 1 to 5 inclusive, tracks 12, 13 and 14. The seven inch stack extension must not be used.
2. At Northtown, switchtender territory extends from . . . Line overhead bridge to three hundred ten (310) feet east of Thirty-third Avenue N. E. overhead bridge. All trains moving through this territory must receive signal from switchtender before proceeding. Eastward trains moving from eastward main line to Line A are not governed by "Stop Board" located above tracks east of Soo Line overhead bridge.
3. Between Coon Creek and Northtown, eastward second class and inferior trains may run ahead of Trains 24 and 28 without authority of train orders.
4. At Coon Creek, when automatic signal 224 indicates STOP, eastward passenger and light tonnage freight trains will stop, and then proceed at restricted speed to the next signal. Tonnage freight trains will STOP at telephone 1300 feet west of the signal and get information from the towerman as to condition of the block. If telephone is out of order, engine will be cut off and go to tower for definite information.
5. At Elk River, all trains from G. N. Princeton line must get permission from operator before entering First Subdivision. If unable to communicate with operator, train may proceed to the passenger station under protection of flag.
6. At Gregory and Philbrook, switch at end of double track is dual control. Normal position of the switch, at Gregory is for the eastward track and at Philbrook for the 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.
7. At Little Falls, first class trains of the Third and Fourth Subdivisions must observe Transportation Rule 93, the same as required of second class and inferior trains.
8. At Gregory, train must be clear of derail before operating switch to Old Line.
9. Train Order Signals—
At Coon Creek, governs trains going to and coming from the Mesabi Division, and does not govern trains running through between Northtown and Anoka or beyond.
At Elk River, does not govern trains coming from the G. N. Princeton Line.
10. Bridge and Engine Restrictions—
Bridge 43, Elk River:
Engines classes Z-5 and Z-6 twenty (20) MPH on eastward track.
Bridge 105, Mississippi River: Engines classes Z-5 and Z-6 twenty (20) MPH.
Class A or heavier engines not permitted on following tracks:
Elk River—Middle and back tracks.
Bailey—Spur on eastward track.
St. Cloud—Jones' spur beyond 200 feet from switch. City track is not safe for class W-3 or heavier engines. Class A-2 and A-3 engines will not clear freight house platform fifty (50) feet beyond the east end.
Sauk Rapids—Mill track.
Sartell—Mill track.
At Little Falls, engines heavier than class T not permitted on mill track. Engines not permitted to go over bridge 3 on mill track near paper mill.
At Staples, class W and heavier engines not permitted on track leading to stationary power plant.
11. Speed Restrictions—
Passenger trains, sixty-five (65) MPH on westward track MP 13, Northtown, to MP 26, east of Anoka; MP 34, west of Dayton, to MP 41, west of Elk River; MP 59, west of Becker, to MP 76, west of Sauk Rapids; MP 87, east of Rice, to MP 106, east of Little Falls.
Passenger trains, sixty-five (65) MPH on eastward track MP 13, Northtown, to MP 20, east of Coon Creek; MP 40, west of Elk River, to MP 75, west of St. Cloud.

Passenger trains, sixty-five (65) MPH on single track MP 116, east of Randall to MP 134, Philbrook.
Between Northtown and St. Cloud, engines class G. N. O-1, thirty-five (35) MPH; G. N. N-2, twenty-five (25) MPH.
Coon Creek Interlocking—Passenger trains sixty (60) MPH; freight trains forty (40) MPH.
At Anoka, thirty-five (35) MPH from one quarter mile east of passenger station to Ferry Street, the first crossing west of Rum River.
At Elk River, twenty-five (25) MPH between two hundred (200) feet west of Oak Street (first crossing east of freight station) and two hundred (200) feet east of Mill Street (first crossing east of passenger station).
At Clear Lake, thirty-five (35) MPH through village.
At St. Cloud, ten (10) MPH over St. Germaine Street Crossing, just east of freight house and passenger station.
At Sauk Rapids, twenty-five (25) MPH between MP 75 and Borup Street, the first crossing west of station.
Gregory Interlocking—All eastward trains forty-five (45) MPH; all westward trains thirty (30) MPH.
At Little Falls, ten (10) MPH over Broadway, the first crossing east of passenger station.
At Randall, thirty-five (35) MPH between second crossing east and first crossing west of passenger station.
Philbrook Interlocking—All eastward trains twenty-five (25) MPH; westward freight trains fifty (50) MPH, passenger trains sixty (60) MPH.
At Staples, twelve (12) MPH over Sixth Street.

12. Register Stations—

Northtown.

Coon Creek for trains from G. N. Ry., Mesabi Division.

Elk River for trains from G. N. Ry., Princeton Line.

Little Falls, for trains originating or terminating, and for trains to and from Third and Fourth Subdivisions.

Staples.

13. Register Exceptions—

At Northtown, first class trains and passenger extras will register by Form 608.

At Coon Creek and Elk River, trains from G. N. Mesabi Division and Princeton Line will register by Form 608.

14. Clearance Exceptions—

At Northtown, first class trains will not require clearance if train order signal indicates clear.

At Coon Creek, eastward G. N. Mesabi Division trains will not require clearance or orders and will be governed by position of interlocking signals.

At St. Cloud, eastward G. N. trains will obtain clearance at G. N. passenger station and be governed by position of interlocking signals at N. P. Junction.

15. Commercial Spurs—

	Miles from Northtown	Car Capacity
Bailey	31.2	3
Graham	38.3	2

16. Lap Siding—Lincoln.

17. Cross-overs—

Northtown, Fridley, Coon Creek, Anoka, Dayton, Elk River, Big Lake, Becker, Clear Lake, Reformatory, St. Cloud, Sauk Rapids, Sartell, Rice, Royalton, Staples.

SECOND SUBDIVISION.

(MAIN LINE)

1. At Detroit Lakes, the following engine signals will govern the operation through the interlocking, Soo Line Crossing:
For main line, eastward or westward—One long.
On double track, when using reverse track through interlocking limits—Two short and one long.
From main line to diverging route—One long, one short and one long.
From diverging route to main line—One long and one short.
For cross-over between main tracks on double track—Three short and one long.
2. Bridge and Engine Restrictions—
Bridges 155 and 187 westward track:
Engines classes Z-5 and Z-6 twenty (20) MPH.
Bridge 170.1 westward track:
Engines class Z-5 twenty (20) MPH.
Bridges 249 and 250 westward track:
Engines classes Z-5 twenty (20) MPH, Z-6 forty (40) MPH.
At Lake Park, coal dock hopper and west trestle of coal dock not safe for engine.

3. **Speed Restrictions—**
Twenty-five (25) MPH through Verndale and Wadena, ten (10) MPH through Detroit Lakes.
Detroit Lakes Interlocking—Passenger trains forty-five (45) MPH.
Manitoba Jct. Interlocking—Passenger trains forty-five (45) MPH.
Glyndon Interlocking—Passenger trains sixty (60) MPH; freight trains forty (40) MPH.

4. **Register Stations—**
Staples.
Dilworth.
Lake Park for trains originating or terminating.
Wadena for trains to and from Fifth Subdivision.

5. **Register Exceptions—**
At Dilworth, through passenger trains will register by Form 608.

	Miles from Staples	Car Capacity
Ice House	60.5	120
Barnes	101.3	20

7. **Crossovers—**
Staples, Aldrich, Verndale, Wadena, Bluffton, N. Y. Mills, Richdale, Perham, Frazee, Detroit Lakes, Audubon, Lake Park, Manitoba Jct., Hawley, Witherow, Glyndon, Dilworth.

THIRD SUBDIVISION.

(BRainerd LINE)

1. At Little Falls, all trains must protect against First Subdivision trains. First class trains must observe Transportation Rule 93, the same as is required of second class and inferior trains.
2. At Camp Ripley Junction, gate has been placed over track leading to Camp Ripley, about four hundred (400) feet west of the river bridge. Gate is equipped with switch lock, and must be kept closed and locked when not in use.
Train or engine movements across the joint railway-highway bridge must be made at reduced speed, and movement protected in accordance with Transportation Rule 103.
3. At Camp Ripley, unloading platform along south track does not afford standard clearance from a point two hundred seventy (270) feet west of gasoline unloading pipe to end of platform.
4. At Brainerd, trains from the St. Paul Division must stop and know route is clear and switches properly set before fouling Lake Superior Division main track.
5. **Bridge and Engine Restrictions—**
Engines classes A-2, A-3, Z-5 and Z-6 not permitted.
Bridge 106, Mississippi River:
Engines classes T, Q-3, Q-4, Y, Y-1, Y-2, and Y-3, and double header engines, classes Q, and S-4, eight (8) MPH.
Lighter classes twenty (20) MPH.
Engines classes A, A-1, G-1, G-2, Q-5, Q-6, W, W-1, W-2, W-3, W-4, W-5, Z, Z-1, Z-2, Z-3 and Z-4, may be hauled dead without coal or water at five (5) MPH.
Bridge 120, Nokasippi River:
Double header engines, classes Q, Q-1, Q-2, Q-3, Q-4, S-4, S-10 and T, twenty (20) MPH.
Engines classes A, A-1, G-1, G-2, Q-5, Q-6, W, W-1, W-2, W-3, W-4, W-5, Z, Z-1, Z-2, Z-3 and Z-4, eight (8) MPH.
Lighter classes twenty (20) MPH.
Class W or heavier engines not permitted on Parker commercial spur or on west end of tracks 13, 14, 15, 16 and 17 at Brainerd.
At Barrows, engine not permitted on spur except on east three hundred (300) feet.
6. **Speed Restrictions—**
At Brainerd, ten (10) MPH over Oak Street and twelve (12) MPH from east switch to passenger station.

7. **Register Stations—**
Brainerd.
Little Falls.

	Miles from Brainerd	Car Capacity
Parker	14	4

FOURTH SUBDIVISION.

(LITTLE FALLS AND DAKOTA BRANCH)

1. At Little Falls, all trains must protect against First Subdivision trains. First class trains must observe Transportation Rule 93, the same as is required of second class and inferior trains.
2. **Bridge and Engine Restrictions—**
Engines classes Q-5, Q-6, W-3 and heavier not permitted.
3. **Speed Restrictions—**
At Grey Eagle, ten (10) MPH over grade crossing 950 feet east of station.
At Sauk Centre, fifteen (15) MPH through city limits. Twenty (20) MPH through interlocking.
All steam trains with class T, Q-4 or lighter engines thirty (30) MPH.

4. **Register Stations—**
Little Falls.
Morris.

	Miles from Little Falls	Car Capacity
Industrial School	35.1	122
State Agricultural School	86.0	52

FIFTH SUBDIVISION.

(FERGUS FALLS BRANCH)

1. At Wadena, first class trains will call operator on telephone if on time of overdue Second Subdivision first class eastward trains. All other trains will call operator on telephone before occupying Second Subdivision main track.
2. At Fergus Falls, trains must stop not less than twenty-five (25) feet from G. N. crossing over Rosengren spur, send man ahead and then proceed if way is clear.
- Bridge and Engine Restrictions—**
Bridge 74, Bois de Sioux River:
Engines classes A-2, A-3, Z-5 and Z-6 not permitted. Engine classes A, A-1, G-1, G-2, Q-5, Q-6, W, W-1, W-2, W-3, W-4, W-5, Z, Z-1, Z-2, Z-3 and Z-4, eight (8) MPH. Lighter classes twenty (20) MPH.
4. **Speed Restrictions—**
At Fergus Falls, twelve (12) MPH over street crossings.
Fergus Falls Interlocking—twenty (20) MPH.
Twenty-five (25) MPH through Wahpeton. Ten (10) MPH over Union Street crossing at Oakes.
Engines classes T, Q-3 and lighter forty-five (45) MPH between Wadena and Milnor; Thirty (30) MPH between Milnor and Oakes.
Engines class W, thirty (30) MPH between Wadena and Wahpeton; Forty-five (45) MPH between Wahpeton and Milnor; Thirty (30) MPH between Milnor and Oakes.
At Milnor, engines and trains will move at lowest speed possible when turning on wye.

5. **Register Stations—**
Wahpeton.
Wadena.
Oakes.

	Miles from Wadena	Car Capacity
Hoot Lake	49.7	15
Packing House	52.5	3
Fergus Falls Rendering Co.	52.9	6
Ames Pit	59.5	14

SIXTH SUBDIVISION.

(RED RIVER BRANCH)

Between Carthage Junction and Fertile, extra trains will run via Sixth Subdivision unless otherwise instructed by train order.

2. **Bridge and Engine Restrictions—**
Bridges 18 and 26, Wild Rice Creek, bridge 68-1, McDonald Ave., Crookston:
Engines classes A-2, A-3, Z-4, Z-5 and Z-6 not permitted. Engines classes A, A-1, W-3, W-5 and Z-3 ten (10) MPH. Engine classes Q-5, Q-6, Z and Z-2, twenty (20) MPH.
Bridge 44, Sand Hill River:
Engines classes A-2, A-3, Z-5 and Z-6 not permitted. Engines classes A, A-1, G-1, G-2, Q-5, Q-6, W, W-1, W-2, W-3, W-4, W-5, Z, Z-1, Z-2, Z-3 and Z-4, eight (8) MPH.
Lighter classes twenty (20) MPH.

3. **Speed Restrictions—**
Freight trains forty-five (45) MPH.
At East Grand Forks, ten (10) MPH over Division Street.
At Fertile, restricted speed between west yard limit board and passenger station.
Crookston Interlocking—twenty (20) MPH.
Anglim Interlocking—twenty (20) MPH.

4. **Register Stations—**
Fertile.
East Grand Forks.

5. **Commercial Spurs—**

	Miles from Manitoba Jct.	Car Capacity
Nada	1.4	8
N. P. Storage	53.3	43
Holmes Pit	53.4	67
Thorson Pit	53.6	93
Spring Pit	54.4	183
Crookston Mill	66.4	165
Vannet	80.1	37
Cummings	86.0	12
Sullivan	91.2	20

SEVENTH SUBDIVISION.

(RED RIVER BRANCH)

1. **Between Pembina (N. P. Junction, International Boundary) and Emerson Junction,** train movements will be made solely on authority of clearance, Form A, or Canadian National clearance, Form 728, issued by telephone block operators at Pembina and Emerson Junction.
2. **Bridge and Engine Restrictions—**
Engines classes A, A-1, A-2, Z-4, Z-5 and Z-6 not permitted.
3. **Speed Restrictions—**
Freight trains forty-five (45) MPH.
At Grand Forks, trains will run at reasonable speed and with due care.
4. **Register Stations—**
East Grand Forks.
Pembina.

EIGHTH SUBDIVISION.

(RED LAKE FALLS AND SHERACK BRANCHES)

1. **At Fertile,** all trains, before using Sixth Subdivision main track, must call operator on telephone, located on pole at west wye switch, and ascertain if any trains are due. If unable to communicate train may proceed under flag protection.
2. **At Tilden Junction,** towerman on duty 9:00 a. m. to 6:00 p. m. daily except Sunday.
Route will be lined for G. N. trains, when no towerman on duty.
3. **Between Carthage Junction and Fertile,** extra trains will run via Sixth Subdivision unless otherwise instructed by train order. All N. P. extra trains running between Carthage Jct. and Fertile will report at Red Lake Falls for orders between 8:00 a. m. and 5:00 p. m.
4. **Bridge and Engine Restrictions—**
Bridge 70, Red Lake River:
Engines classes Q-3, T and heavier not permitted. Engine classes F-1, Q, S-4, S-10 and single header class Q-1, eight MPH. Lighter classes twenty (20) MPH.

5. **Speed Restrictions—**
Fifteen (15) MPH between Key West and Sherack; twenty (20) MPH between 4260 feet west of MP72 between Red Lake Falls and Hilltop and Carthage Junction; thirty (30) MPH over balance of Subdivision.

6. **Register Stations—**
G. N. Junction.
Tilden Junction.
Carthage Junction.
Fertile.

7. **Register Exceptions—**
At Tilden Junction, No. 130 will register by Form 608.

8. **Clearance Exceptions—**
At Carthage Junction, trains originating will not require clearance.
At G. N. Junction, trains originating will be governed by clearance furnished at G. N. station Red Lake Falls.

9. **Commercial Spurs—**

	Miles from Fertile	Car Capacity
Smisek	7.0	3
Kohler	39.2	5
Walkerton	51.0	8

NINTH SUBDIVISION.

(FAIRVIEW BRANCH)

1. **Bridge and Engine Restrictions—**
Engines heavier than class W not permitted.
2. **Speed Restrictions—**
All trains fifteen (15) MPH.
3. **Clearance Exceptions—**
Trains will not require clearance at Fairview Junction or Great Bend.

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 subdivision 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 501-B, is modified as follows: INDICATION—Approach next signal prepared to stop. Block is clear; second block in advance is not clear.
Transportation Rule 509 (B) 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 501-B 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 12-c. The engine-man 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 N. P. 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 Eighth and Ninth 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 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, six (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 over interlocked crossings, and 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 cross head 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.

14. 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.

15. 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.

1. 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.

17. Gas-electric motor cars when handled in freight trains, must be behind cabooses.

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 will 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.

18. 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.

19. BULLETIN STATIONS—

St. Paul.
Minneapolis.
Northtown.
Little Falls.
Staples.
Lake Park.
Dilworth.
Brainerd.
Wahpeton.
East Grand Forks.
Tilden Junction.

20. STANDARD TIME CLOCKS—

St. Paul.
Northtown.
Staples.
Lake Park.
Dilworth.
Brainerd.
East Grand Forks.

21. WATCH INSPECTORS—

St. Paul—Christensen's, A. Lindahl, C. J. & H. W. Anderson, Northern Watch Co.
 Minneapolis—C. G. Lindquist, W. B. Dahl, Allen & Be
 Oscar P. Gustafson Co.
 St. Cloud—Webster Jewelry & Music Co.
 Little Falls—E. V. Wetzel.
 Staples—C. E. La Bonte.
 Brainerd—C. L. Burnett.
 Morris—S. H. Grosland.
 Wahpeton—E. E. Bassett.
 East Grand Forks—Oliver St. Martin.
 Grand Forks—E. A. Arhart.
 Pembina—M. H. Miller.

NOTE.

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

SPEED TABLE

Time per Mile		Miles per Hour	Time per Mile		Miles per Hour
Min.	Sec.		Min.	Sec.	
0	51	70.6	1	25	42.3
0	52	69.2	1	30	40
0	53	67.9	1	40	36
0	54	66.6	1	45	34.3
0	55	65.4	1	50	32.7
0	56	64.2	2	..	30
0	57	63.1	2	10	27.6
0	58	62	2	15	26.6
0	59	61	2	20	25.7
1	..	60	2	30	24
1	1	59	2	40	22.5
1	2	58	2	45	21.8
1	3	57.1	2	50	21.2
1	4	56.2	3	..	20
1	5	55.3	3	9	19
1	6	54.5	3	20	18
1	7	53.7	3	31	17
1	8	52.9	3	45	16
1	9	52.1	4	..	15
1	10	51.4	5	..	12
1	12	50	6	..	10
1	15	48	7	30	8
1	20	45	10	..	6

RAILROAD CROSSINGS AND INTERLOCKINGS

First Subdivision—

NORTHTOWN
 G. N. Crossing.
 COON CREEK
 G. N. Junction—Interlocked.
 ELK RIVER
 G. N. Junction—Automatic Interlocking.
 ST. CLOUD
 G. N. Crossing—Interlocked.
 STAPLES
 Lake Superior Division Junction—Interlocked.

Second Subdivision—

WADENA
 G. N. Crossing—Automatic Interlocking.
 DETROIT LAKES
 Soo Line Crossing—Interlocked.
 MANITOBA JUNCTION
 6th Subdivision Junction—Interlocked.
 GLYNDON
 G. N. Crossing—Interlocked.

Fourth Subdivision—

SAUK CENTRE
 G. N. Crossing—Automatic Interlocking.
 GLENWOOD
 Soo Line Crossing.

Fifth Subdivision—

HENNING
 Soo Line Crossing.
 FERGUS FALLS
 G. N. Crossing—Automatic Interlocking.
 BETWEEN WATOSCO AND BRECKENRIDGE
 G. N. Crossing—Interlocked.
 WAHPETON—
 C. M. St. P. & P. Crossing
 WYNOMERE
 Soo Line Crossing.

Sixth Subdivision—

MANITOBA JUNCTION
 2nd Subdivision Junction—Interlocked.
 BETWEEN HAROLD AND CROOKSTON
 G. N. Crossing—Automatic Interlocking.
 BETWEEN ANGLIM AND HIXON
 G. N. Crossing—Automatic Interlocking.

Seventh Subdivision—

BETWEEN GRAND FORKS AND BOLACK
 Two G. N. Crossings.
 FOREST RIVER
 Soo Line Crossing—Interlocked.
 BETWEEN KELLOGG AND GRAFTON
 G. N. Crossing.

Eighth Subdivision—

TILDEN JUNCTION
 G. N. Crossing—Interlocked.
 BETWEEN DOROTHY AND BUFFINGTON
 G. N. Crossing—Interlocking. Operated by trainmen.

GENERAL INSTRUCTIONS ON OPERATION OF AUTOMATIC INTERLOCKING.

Signals at automatic interlockings clear on the approach of trains, and a train on either line first receiving a proceed signal indication will move over the crossing regardless of class.

Where smashboards are in use and are in the proceed position and operation of the hand release does not clear the home signal for the route desired, trainman shall lock the release box, and signal his train to proceed over the crossing, after making certain that all signals and smashboards on conflicting routes are at stop and no immediate conflicting train movement is evident.

If smashboards for the route desired are in the Stop position and operation of the hand release does not clear the desired signal, trainman must operate the smashboard by hand and then if the desired signal does not clear, may signal his train to proceed over the crossing, after making certain that signals and smashboards all conflicting routes are at Stop and no immediate train movement is evident.

To Operate Smashboard by Hand. Crank for hand operation of smashboard is located in the release box at crossing. After opening the small door at the back of the mechanism locked with a switch lock, place crank over the shaft, turn crank slowly and uniformly to the left until the smashboard has moved to the Proceed position, being sure the entire stroke has been completed. Restore Crank and Lock all apparatus before leaving.

SPECIAL INSTRUCTIONS FOR ELK RIVER AUTOMATIC INTERLOCKING.

The junction switch and crossover are each equipped with ground throw switch machines and electric switch locks.

The smashboards and the top arm of the N. P. signals will clear automatically for trains making through moves with the current of traffic on the main tracks.

The dwarf signals will clear automatically for through moves against the current of traffic on the main tracks when a train is within two hundred (200) feet of these signals.

If a train is stopped by a home or dwarf signal and there is no conflicting train movement evident it may proceed after ascertaining if the smashboard for the route is clear and the switches are properly lined. If the smashboard for the route is not in the clear position trainman shall operate it to the clear position by hand.

For train movements from the westward main track to the G. N. Princeton line the train will stop at the westward home signal. Trainman will operate the electric switch lock and reverse the switch and derail by throwing over the lever of the junction ground throw switch machine. The bottom arm of the westward home signal will then clear.

For train movements from the G. N. Princeton line to the eastward main track the train will stop at the G. N. home signal. Trainman will push the button of both the eastward and westward switch indicators, and if both of the indicators indicate clear he may operate the electric switch locks and reverse the junction and crossover switches by throwing over the levers of the ground throw switch machines. The top arm of the eastward G. N. home signal will then clear.

For train movements over the crossover the train will stop at the dwarf signal for the route desired. Trainman will push the button of the switch indicator for the track to which the move is to be made. If the indicator indicates clear he may then operate the electric switch lock and reverse the crossover by throwing over the lever of the ground throw switch machine. The dwarf signal for the route should then clear.

To Operate Electric Switch Locks. Open the bottom door of the iron box which is marked electric lock and push the push button. If the lock indicator shows clear the switch may be unlocked by turning the handle to the left. This handle must be returned to its normal position before the door can be locked. If the indicator does not show clear when the button is pushed and no conflicting train movement is evident the electric switch lock may be released by operating the time release.

To Operate Time Release. Open the top door of the iron box which is marked release and turn the knob of the release to the right until it stops. Hold 3 or 4 seconds and then release knob. The clockwork release will return to its normal position in two minutes which should release the electric lock as indicated by the indicator.

To Operate Smashboard by Hand. Attached by a chain to the smashboard mechanism located near the base of the mast of the main line home signals is a small crank which may be placed over a shaft of the operating mechanism after opening the small door which is locked with a switch lock. Turn the crank slowly and uniformly to the left until the smashboard has been moved to the clear position being sure that the stroke has been completed. Remove crank and lock door.

All Apparatus must be returned to its normal position as locked before leaving.

SPECIAL INSTRUCTIONS FOR WADENA AUTOMATIC INTERLOCKING

Hand throw switches within the limits of the plant are provided with hand operated facing point locks which must be operated before the switch can be thrown. Before operating a hand throw switch inside the home or dwarf signal limits, make certain the home signals and smash boards on the opposing line are at Stop and no immediate train movement is evident. Train movements through any of these switches will be governed by the dwarf signal indication. All switches of the route desired must be lined up before the movement is made and then if crossing is clear the proper dwarf signal will indicate Proceed.

SPECIAL INSTRUCTIONS FOR SAUK CENTRE AUTOMATIC INTERLOCKING

Switches located inside the home signals of the plant are operated by switch stands provided with point locks operated by the lever of the switch stand or by ground throw safe lock switch machines. Derails, pipe connected to the switch stand or switch machine, are located at the fouling point of the G. N. stockyard track, at the junction of the Park Rapids branch with the G. N. main line, at the west end of the transfer track and at the west end of the G. N. siding. When trains are heading in on these tracks the switch must not be closed until the train has cleared the derail.

Dwarf signals governing train movements from sidings to the main tracks will indicate Proceed when the switch for the route desired is thrown.

At signal 36.7 a circuit controller for hand operation is provided to permit westward trains to do switching between signals 36.7 and 37.1 without interfering with the G. N. main line crossing. This hand operated switch is located on the track side of the relay case at signal 36.7 and is locked with a switch lock.

When necessary for trains to do switching between signals 36.7 and 37.1 the circuit controller at signal 36.7 should be unlocked and the lever pulled down before train passes the signal, which will permit the switching to be done without interfering with train movements on the G. N. main line.

The lever of circuit controller must be restored and locked proper position before leaving.

SPECIAL INSTRUCTIONS FOR FERGUS FALLS AUTOMATIC INTERLOCKING

Hand throw switches inside the home signals of the plant are equipped with point locks operated by the lever of the switch stand to insure that the switch point is up tight against the rail. Derails are pipe connected to the switch stands for the N. P. siding and the G. N. north and south sidings. When trains are heading in on these tracks the switch must not be closed until train has cleared the derail.

Dwarf signals governing train moves from sidings are located at the derails which are pipe connected to the hand throw switch stands and will indicate proceed when the switch for the route is lined up.

A train or engine wishing to use the transfer track will stop at the transfer track switch and trainman will unlock and open the door marked Electric Lock. If the small semaphore indicator indicates Clear when the door is opened the switch machine may be unlocked by turning the crank to the left.

If the indicator indicates Stop and no immediate conflicting train movement is evident, unlock and open the door marked Release and turn the knob of the release to the right until it stops. Hold in this position three or four seconds and then release knob. When the release runs down the indicator will show clear and the switch machine may be unlocked by turning the crank to the left.

When the transfer track switches have been thrown the proper dwarf signal for the transfer track will indicate proceed. Close and lock apparatus before leaving.

TONNAGE RATING

ENGINES

Class A2, A3 & A4 Tons	Class Q Tons	Class T Tons	Class W Tons	Class W3&W5 Tons
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Eastward.				
Dilworth to Lake Park with Pusher, Glyndon to Witherow.....	4900	2700	3700
Dilworth to Lake Park without Pusher.....	4600	.....	2200	3400
Lake Park to Staples.....	5700	.....	3200	4700
Staples to Little Falls.....	6600	2400	2500	4500
Little Falls to Northtown.....	Car Limit	.....	3000	5000
Brainerd to Little Falls.....	.....	2400	2500	4500
Morris to Glenwood.....	.....	790	.....	.....
Glenwood to Sauk Centre.....	.....	2200	.....	.....
Sauk Centre to Little Falls.....	.....	1090	.....	.....
Oakes to Gwinner.....	.....	.....	2050	.....
Gwinner to Wahpeton.....	.....	.....	3500	.....
Wahpeton to Fergus Falls.....	.....	.....	1750	.....
Wahpeton to Fergus Falls (doubling French).....	.....	.....	2500	.....
Fergus Falls to Henning.....	.....	.....	1700	.....
Henning to Staples.....	.....	.....	3300	.....
Pembina to Meckinock.....	.....	.....	3200	.....
Meckinock to East Grand Forks....	.....	.....	3500	.....
East Grand Forks to Lake Park....	.....	.....	2600	.....
Westward.				
Northtown to Little Falls.....	4500	.....	2000	3000
Little Falls to Staples.....	4100	1750	1800	2700
Staples to Lake Park.....	5500	.....	3200	4200
Lake Park to Dilworth.....	Car Limit	.....	Car Limit	Car Limit
Little Falls to Brainerd.....	.....	1950	2000	3000
Little Falls to Sauk Centre.....	.....	950	1000	.....
Sauk Centre to Glenwood.....	.....	1550	.....	.....
Glenwood to Morris.....	.....	2300	.....	.....
Staples to Wahpeton.....	.....	.....	2100	.....
Wahpeton to Milnor.....	.....	.....	2600	.....
Milnor to Oakes.....	.....	.....	2300	.....
Lake Park to East Grand Forks....	.....	.....	2400	.....
East Grand Forks to Pembina.....	.....	.....	2500	.....

TONNAGE RATING INSTRUCTIONS:

This rating is made to govern ruling grades only, and will in no manner interfere with handling additional tonnage where the grade will permit.

MAXIMUM CLEARANCES

LIMIT OF LOAD—MEASUREMENT

HEIGHT ABOVE TOP OF RAIL

ST. PAUL DIVISION

	1'-0" Wide	2'-0" Wide	3'-0" Wide	4'-0" Wide	5'-0" Wide	6'-0" Wide	7'-0" Wide	7'-6" Wide	8'-0" Wide	Max. Height	Max. Width
1st Subdivision....	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	11'-6"
2nd Subdivision....	20'-3"	20'-3"	20'-3"	20'-1"	19'-10"	19'-6"	19'-2"	19'-0"	18'-9"	20'-3"	11'-6"
3rd Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
4th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
5th Subdivision....	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	11'-6"
6th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
7th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-2"	20'-3"	11'-6"
8th Subdivision....	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	11'-6"
8th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
9th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"

1st Subdivision....	M. L., Northtown to Staples.....
2nd Subdivision....	M. L., Staples to Dilworth.....
3rd Subdivision....	Little Falls to Brainerd.....
4th Subdivision....	Little Falls to Morris.....
5th Subdivision....	Wadena Jct. to Oakes.....
6th Subdivision....	Manitoba Jct. to E. Grand Forks.....
7th Subdivision....	E. Grand Forks to Winnipeg.....
8th Subdivision....	Fertile to Carthage Jct.....
8th Subdivision....	Key West to Sherack.....
9th Subdivision....	Fairview Jct. to Berndt.....