

NORTHERN PACIFIC RAILWAY COMPANY

Lake Superior Division

Special Instructions No. 2

In Effect at 12:01 A. M. Central Standard Time

Sunday, May 28, 1961

These Instructions constitute a part of the Time Table currently in effect.

Employees whose duties are in any way affected by the Time Table must have a copy of The Current Special Instructions and Current Time Table with them on duty.

**W. L. WOOD,
Superintendent.**

**D. A. THOMSON,
General Manager.**

**E. S. ULYATT,
General Superintendent
of Transportation.**

ALL SUBDIVISIONS.

1. Speed Restrictions—	Maximum Speeds Permitted
Passenger trains	75 MPH.
Passenger trains within yard limits Duluth-Superior terminal	Restricted Speed
Freight and mixed trains	50 MPH.

The above speeds are subject to the restrictions of maximum speeds in miles per hour as shown by zones under each subdivision.

All trains and engines, except as otherwise specified:

Through crossovers, turnouts and gauntlets, except where fixed signals provide otherwise	15 MPH.
Handling pile drivers 26-33 inclusive	40 MPH.
Handling other pile drivers, wrecking cranes, locomotive cranes and similar equipment	30 MPH.
Handling 4-wheel scale test cars	
and scale test car 254	{ Main Line 35 MPH.
	{ Branch Lines 25 MPH.
Handling air dump cars 89000 to 89059 series	35 MPH.
Picking up train orders from operators	30 MPH.
Handling dead diesel-electric engines other than NP and tenant lines	35 MPH.
Handling loaded ore cars	40 MPH.

Diesel-electric engines	Handling trains	Running light
No. 98	35 MPH.	35 MPH.
No. 99	50 MPH.	50 MPH.
No. 100	40 MPH.	40 MPH.
100 series, except No. 100	60 MPH.	60 MPH.
200 and 300 series, except Nos. 244 and 245	65 MPH.	65 MPH.
Nos. 244 and 245	75 MPH.	65 MPH.
400, 600 and 700 series	45 MPH.	45 MPH.
500, 501 and 552-569, incl.	65 MPH.	65 MPH.
No. 525	60 MPH.	60 MPH.
Nos. 550-551	75 MPH.	65 MPH.
Nos. 800-803	60 MPH.	60 MPH.
850-860 series	65 MPH.	65 MPH.
900-911, 6000 and 7000 series	65 MPH.	65 MPH.
5400 series	55 MPH.	55 MPH.
6500, 6600 and 6700 series	75 MPH.	65 MPH.

Diesel-electric motor cars in service or being towed:	
Car B-13	55 MPH.
Cars B-6, B-11, B-15, B-16 and B-18 thru B-22 incl.	65 MPH.
Cars B-30, B-40 and B-41	75 MPH.

Diesel-Electric Engines Handled Dead in Train—Diesel-electric engines or units may be handled dead in trains. The speed of such trains must not exceed the authorized operating speed specified for such engines or units.

When handling diesel-electric single units, road-switcher engines and switch engines dead in a freight train, they shall be separated from the engine handling the train and each other by at least one freight car. This does not apply to diesel-electric road engines of two or more units coupled in multiple.

All diesel-electric engines or units handled dead in freight trains must be placed on head end of train within ten cars of road engine handling train, this to insure that brakes will release properly.

When handling diesel-electric units dead in train, bridge, speed and other restrictions must be observed, same as when in operating condition.

When road passenger diesel units are coupled in multiple with road freight or road switcher units, the road passenger units must be trailing to avoid danger of sliding wheels on the freight or road switcher units due to excessive brake cylinder pressure. The speed restrictions for freight and road switcher units must be observed to avoid damage to traction motors.

If the units of a consist are of different gear ratio, the engine must not be operated at speeds exceeding that of the unit having the lowest maximum permissible speed. Also, the overload short time rating of any unit in the consist must not be exceeded.

When two, Four-Unit diesel-electric engines are used to double-head freight trains, the leading engine only will apply power to start train, or to make backup movement with cars.

2. Heavy cars—Cars heavier than the following not permitted without authority of Superintendent:	
30 ft. or less in length	210,000 Lbs.
Over 30 ft. long:	
First Subdivision between Ashland and Allouez	280,000 lbs.
Second Subdivision between Staples and Central Ave.	270,000 lbs.
Third Subdivision	400,000 lbs.
All other Subdivisions except within Duluth-Superior terminal	210,000 lbs.
Within Duluth-Superior terminal	400,000 lbs.

3. Rule 200—Lights will not be displayed on train order signals on the 8th and 9th Subdivisions, except at Walker and Blackduck. Trains will be governed by the day indication of these train order signals.

4. Rule 519 of the 1959 edition of the Consolidated Code of Operating Rules will not apply on the Northern Pacific Railway. The following rule governs: "Unless otherwise provided, in automatic block signal territory, when a train or engine has been stopped by a signal governing movement through or over a spring switch, and signal continues to display the Stop-indication, after complying with Rule 104(B), movement may be made as provided by Rules 501(A)2 and S-509(B)."

5. Rule 607—Emergency Signals are not used at interlockings or drawbridges operated by the Northern Pacific Railway.

6. Cars will not be handled behind light-weight observation cars except in emergency or when so authorized by the Superintendent. In such cases passengers shall not be permitted to pass between such cars while train is in motion due to the unprotected opening.

Diesel-electric motor cars, when handled dead in freight trains, must be behind caboose.

Four-wheel scale test cars must be handled only in local freight trains. Exception:—If there is no local service available, these cars may be handled in dead freights which must be governed by speed restrictions for the handling of four-wheel scale test cars shown under Item 1. All scale test cars must be placed immediately ahead of caboose.

Air dump cars, series 89000-89059, will be handled only in work trains and local trains when available. If local trains not available, cars may be handled on the rear of other trains at a speed not to exceed 35 MPH.

INSTRUCTIONS FOR HANDLING PILE DRIVERS, CRANES, DERRICKS, SHOVELS, OR SIMILAR EQUIPMENT OF THE SWINGING OR PIVOTING TYPE, ARE AS FOLLOWS:

- When such equipment is moved on its own wheels, it shall be prepared and carded in accordance with current A.A.R. Loading Rules unless some condition exists which prevents those requirements being complied with.
- Such equipment that is geared for self-propulsion shall have the driving gears disconnected or removed.
- Such equipment that is Company-owned that requires speed to be restricted shall be covered by a message to the train crew stating the maximum speed permitted.
- The above named equipment with the exception of pile drivers 26 through 33 inclusive when properly prepared and carded may be moved at normal freight train speeds unless there is some condition that prevents it, and in that event the maximum permitted speed shall be noted on the waybill. When not prepared and carded shall be handled at speeds not to exceed 30 MPH.

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

8. Roller bearing failures on cars or engines equipped with roller bearing boxes may be due to lack of oil or grease. If the box is not blazing, the oil plug in the cover should be removed and heavy oil added and plug replaced. Oil must never be added to a box that is blazing. Grease lubricated roller bearing boxes have grease plugs locked with a metal strap which must be cut

off with chisel before plug can be removed. In cases of a hot box, oil should be added and the plug replaced, train should proceed at reduced speed and care exercised until it is apparent the box is running cool.

9. Spring Switches.

Instructions for operation of spring switches are posted at or near the spring switch and must be complied with. Unless otherwise specified, the normal position of spring switches is for main track.

When the target of a spring switch shows "red" to an approaching train or engine, a trailing point movement actuating the spring switch points must not be made.

Normal indication of siding signal is STOP. If siding signal does not clear on approach of train, movement must be governed by instructions posted at the switch.

10. Duluth-Superior Terminals—

Yard Limits.

All tracks between yard limit signs located at:

East D. M. & I. R. Junction

Mile Post 145+1432, West of West Duluth Jct.

Mile Post 9+3632, West of Central Ave. on Second Subdivision

Mile Post 61+1331, East of Allouez on First Subdivision

will be operated as one yard.

(a) First class trains will observe Rule 93 the same as is required of second and inferior class, extra trains and engines. Second and inferior class, extra trains and engines may run ahead of first class trains which are five minutes or more late without train order authority, avoiding delay to such trains to the greatest practicable extent.

(b) Extra trains and engines may move in either direction on single track and with the current of traffic on double track without train order or double track clearance authority, except between 72nd Ave. West and New Duluth.

(c) The D. T. Ry. main track is the northmost track between the Hanna Coal Dock crossing and connection with Grassy Point main track. All switches leading from this track, when not in use, will be left lined for D. T. Ry.

(d) All trains and engines using D. T. Ry. main track from connection of Missabe coal dock to east end of Zenith Furnace Company's lead, on Grassy Point line, will move in both directions at restricted speed, expecting to find the D. T. Ry. main track occupied.

(e) D. T. Ry. connection, located at east end of Zenith Furnace Company's lead, Grassy Point line, will be considered a railroad crossing. Trains and engines using this connection will come to a full stop and make sure that track is clear before proceeding.

11. At Duluth—City ordinance prohibits blocking street crossings at 1st Ave. East and 5th Ave. West for more than 5 minutes; or of any other crossing for more than 10 minutes.

Engine whistle will not be used between 3rd Ave. East and 5th Ave. West, or between 14th Ave. West and 85th Ave. West (except 85th Ave. West) except as an alarm or warning, or to signal towerman, to call for semaphore signals, as a safety precaution in backing cars or engines, or as a signal in testing air brakes. No engine or train will run within the city without having bell ringing while in motion, and approaching any street or avenue.

Westbound freight trains made up in Bridge Yard departing via Third Subdivision will proceed onto Westward main track through Eighteenth Avenue Crossover. Switch tender at Garfield Ave. will line switches after departure of train.

12. Bulletin Stations—

Ashland—Soo Line Passenger Station.

Duluth—Union Depot, Fifth Avenue Yard Office, Rices Point North and South End Yard Offices and Roundhouse, West Duluth Yard Office, Soo Line Passenger Station and Roundhouse.

Superior—Superior Yard Office, Soo Line Yard and Roundhouse.

Carlton—Passenger Station.

Ironton—Passenger Station.

Brainerd—Passenger Station.

North Bemidji—Yard Office and Roundhouse.

International Falls—Passenger Station and Roundhouse.

Staples—Passenger Station, Yard and Roundhouse.

Minneapolis—Passenger Station.

St. Paul—Miss. St. Yard and Roundhouse, CMStP&P Yard and Roundhouse.

13. Standard Time Clocks—

Duluth—Union Depot, Rices Point Yard Office and Round House.

Carlton—Passenger Station.

Brainerd—Passenger Station.

North Bemidji—Yard Office.

International Falls—Passenger Station.

Staples—Passenger Station, Round House and Yard Office.

White Bear Lake—Passenger Station.

14. Watch Inspectors—

Bemidji—O. E. Erwig; Willis Norden.

Brainerd—R. A. Ashmun.

Carlton—Schrafters Jewelry.

Cloquet—T. W. Alaspa.

Duluth—Kanter Jewelers, 325 W. Superior.

Erwin Moen, 1908 W. Superior.

Nold Jewelers, 414 N. Central.

H. W. Schmidt, 25 West Superior.

Security Co., Inc., 307 W. Superior St.

Staples—Imgrund's Jewelry; C. E. LaBonte.

Superior—Peters' Jewelry, 1220 Tower Ave.

FIRST SUBDIVISION.

(MAIN LINE)

1. Speed Restrictions— Maximum Speeds Permitted

Zone—Between Freight Passenger

Ashland and Central Ave.....35 MPH. 40 MPH.

Exception: On all curves between MP 12 and

Allouez25 MPH. 25 MPH.

Trains handling loaded ore cars.....20 MPH.

Trains handling ore loaded in other than

ore cars25 MPH.

All trains and engines, 7th Ave. West to 22nd Ave. West,

between MP 0 and 2, Ashland10 MPH.

2. Bridge and Engine Restrictions:

Wrecking cranes 45 to 48 inc. not permitted between Allouez and Ashland.

Wrecking Cranes 45 to 48 inc. in Duluth-Superior terminal15 MPH.

Bridge 0, Vaughn Avenue:

Bridge 5, Fish River:

Bridge 49, Middle River:

All trains25 MPH.

Bridge 37, Brule River:

Multiple unit diesels25 MPH.

Heavy Car Restrictions: Bridges 0, 5, 37, 48, 49 and 53: Cars less than 30 ft. long with total weight over 170,000 pounds must be separated from each other and engine with an empty car. Cars 30 ft. or longer with total weight over 169,000 pounds must be separated from engine with a car 40 ft. long with total weight under 169,000 pounds.

3. At Ashland—Normal position of main track switch just east of Seventh Ave., leading to the Soo Line, is for the Soo Line connection.

At Ellis Ave., all trains must stop in advance of crossing, and will proceed only after crossing is protected by a member of the crew.

4. At Allouez—Track No. 2 must not be used by ore trains.

5. At East End—Normal position of switch at end of double track is for westward trains.

The approach signal of interlocking at Newton Avenue is an automatic block signal located on single track and governs the single track to end of double track and the westward track to Newton Avenue interlocking.

6. At Newton Ave.—No crossover between eastward and west-

ward main tracks. Between C&NW connection at Newton Ave. and East End, the westward track will be used as single track by eastward trains and engines entering at Newton Ave. and by westward trains and engines. Other eastward movements will be made on eastward track.

7. **At Hill Ave. Yard**—Ore trains arriving will stop to clear east end of arriving tracks.
Trains weighing ore on on automatic scale will move at about 3 MPH. Semaphore over scale house is operated by weighmaster, and engineers will be governed by its indications:
Green: Proper speed.
Yellow: Reduce speed.
Red: Stop.
8. **At Soo Line Crossing**—When using Soo Line tracks, Northern Pacific crews must have in their possession and be governed by current Soo Line Duluth and Superior Terminal Division Time Table, a supply of which is maintained at Rices Point Yard office and roundhouse.
9. **At Central Ave.**—Normal position of switch at junction of First and Second Subdivisions, in Great Northern interlocker, is for Second Subdivision.
10. **Spring Switches**—Central Ave.—Normal position of spring switch at end of double track is for eastward trains. Normal position of spring switch at wye connection between Second and First Subdivisions is for direct route to Pokegama. These switches are governed by interlocking signals equipped for switch key signal operation. If use of switch key does not give "restricting signal", proceed according to rule. Not equipped with facing point lock.
11. **Register Stations**—
Central Ave.
Ashland, Soo Line Station.
Superior, Soo Line 21st Street Yard Office.
12. **Register Exceptions**—At Central Ave. trains register by form 608. Eastward ore trains from Second Subdivision will not register. A check of register on Form 602 may be issued by operator when authorized by train dispatcher, either instead of, or in addition to, train order check.
13. **Clearance Exceptions**—
Ore trains from Second Subdivision will not require clearance at Central Ave.
Soo Line trains originating at Newton Ave. secure clearance at Soo Line 21st Street Yard Office.

SECOND SUBDIVISION. (MAIN LINE)

1. Speed Restrictions— Zone—Between	Maximum Speeds Permitted Freight	Passenger
East D. M. & I. R. Jct., and Garfield Ave.	30 MPH.	30 MPH.
Garfield Ave. and Central Ave.	40 MPH.	55 MPH.
At Superior—Over switches at Belknap St. and C&NW Conn. all trains		15 MPH.
Central Ave. and Anton.	50 MPH.	65 MPH.
Anton and State Line Both Tracks,	50 MPH.	60 MPH.
Against the current of traffic	49 MPH.	59 MPH.
State Line and MP 20	50 MPH.	60 MPH.
MP 20 and MP 28 (Carlton)	50 MPH.	65 MPH.
MP 28 and MP 148 (Staples)	45 MPH.	55 MPH.
At Brainerd, over public crossings all trains		10 MPH.

First class trains—

Between east switch of north siding (east of car shop) and St. Paul Division connection at 8th St. 20 MPH.
Between St. Paul Division connection and 8th Subdivision Jct. there is no superiority of trains. All trains and engines must move within these limits at Restricted Speed.

At Aitkin, through village 30 MPH.
At Carlton, over double-slip switch within interlocking;
through movements via Second Subdivision 30 MPH.
Other movements 15 MPH.

2. **Bridge and Engine Restrictions**—
Bridge 2, St. Louis Bay 20 MPH.
NP cranes 45 to 48 incl. or other wrecking cranes
250 tons or heavier, over bridges 15 MPH.
Bridge 9 just west of Central Ave. 20 MPH.
Avoid using automatic brakes on bridge, except in emergency.
3. **At Garfield Ave.**—Normal position of junction switches will be for Third Subdivision.
Trains will stop not less than two hundred (200) feet from junction switches and not proceed until route is clear.
Unless otherwise instructed, Westward freight trains made up in Bridge Yard, departing via Second Subdivision, will use Second Subdivision Eastward main track from connection just East of Garfield Ave. to the Minnesota Drawbridge.
Before this movement may be started, Switchtender at Garfield Ave. will contact Drawbridge Operator; if Drawbridge Operator OK's the movement, train may proceed on Eastward main track, and when Drawbridge Operator gives the approval it will be understood that Drawbridge Operator will not permit any Eastward train on Eastward track until freight train has passed Minnesota Drawbridge.
4. **At Rices Point**—Spring switch not equipped with either spring switch target or facing point lock is located on roundhouse lead about 1200 feet south of sand tower. Target indication—
Yellow—Straight track.
Green—Roundhouse lead.
Normal position of switches designated below is as follows:
South End Rices Point Yard,
switch from B to C yard lead
(top switch)when lined for B yard lead;
No. 26 and 31 crossovers on Hump
(A Yard)when lined for Hump (A Yard) lead;
No. 26 and 31 crossovers on Load
(B Yard) leadwhen lined for Load (B Yard) lead.
North End Rices Point Yard,
switch off outside lead for
lead to C Yardwhen lined for Load (B Yard) lead;
Crossover switch on inside leadwhen lined for inside lead;
Crossover switch off outside leadwhen lined for outside lead.
Roundhouse, hand throw switches No. 2 and No. 4 from the outgoing roundhouse trackswhen lined for lead.
Crossover switches from yard tracks to main track must be set for yard tracks when not in use, except where otherwise provided.
5. **At Rices Point Interlocking**—Westward dwarf signal located between Hump (A Yard) Lead and Load (B Yard) Lead at West end of Yard governs movements to Westward track and crossover to Eastward track and movements to West end of Hump (A Yard) Lead. Normal position of east switch of crossover from Hump (A Yard) Lead to westward track is for westward track, and must be kept lined and locked in this position when not in use.
Push-button on mast of eastward home signal. If home signal indicates Stop, push-button should be operated, and movement governed by signal indication.
Trains will call for route as follows:

For through main track movements	
Eastward track to westward track	o & oo
Eastward track to yard	o & ooo
Yard to westward track	ooo & oo
Yard to eastward track	ooo & o
Westward track to eastward track	oo & o
Westward track to yard	oo & ooo

6. **Between Bridge Switch and Elevator Station, St. Louis River Bridge**—
Interlocking home signal on Eastward track West of Minnesota Draw governs movements to Northern Pacific track and to C&NW track.
Interlocking home signal on Westward track East of Elevator Station governs movements to Straight Main track and to Great Northern freight track.
Westward trains entering onto Minnesota Draw and Eastward trains entering onto Wisconsin Draw will be governed by signal at the approach and, if proceed signal is received, will not be required to stop. During period of open navigation on St. Louis River, westward trains will stop before entering onto Wisconsin Draw and eastward trains will stop before entering onto Minnesota Draw.

- During closed season of navigation it will not be necessary for trains or engines to stop at either side of drawbridge when signals indicate "Proceed."
7. **At Superior**—City ordinance prohibits blocking any street crossing for more than 10 minutes, except in case of unavoidable breakdown.
 8. **At Central Ave.**—No. 1 track will be used as siding. When setting out or picking up, trains must not block 58th Street, and Tower Avenue crossings.
 9. **At Anton and State Line**—Time of all trains applies at end of double track.
 10. **At Carlton**—
Interlocking—Trains will call for route as follows:

Second to Second "East & West":	oo & oo.
Second to Third "East & West":	oo & 000.
Second to Loop Track "West":	oo & 0000.
Second to 5th Subdivision "East":	oo & 0000.
Third to Third "East and West":	ooo & 000.
Third to Second "East and West":	ooo & oo.
Third to Loop Track "West":	ooo & 0000.
Third to 5th Subdivision "East":	ooo & 0000.
Fifth to Second "West":	0000 & oo.
Fifth to Third "West":	0000 & 000.
Fifth to Loop Track:	0000 & 0000.
Loop Track to Second "East":	0000 & oo.
Loop Track to Third "East":	0000 & 000.
Loop Track to 5th Subdivision "West":	0000 & 0000.
Lower yard lead to Second Subdiv. "East and West":	—o.
No. 9 Lead through Interlocking "East and West":	—.

 Push button system controlling operation of lower arm of Second Subdivision Home Signal, Carlton Interlocking, has been installed to govern follow-up westward movements to either Second or Third Subdivisions. All follow-up movements will be governed by lower arm of Second Subdivision Home Signal as well as return movements to train after setting out in Carlton Yard from Second Subdivision Main Track.
 11. **At McGregor**—
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
Between Interchange Track and West wye:	0000
To eastward siding:	oo—
 12. **At Aitkin**—Cemetery road crossing one mile west of this point must not be blocked in excess of ten (10) minutes, except in case of emergency, when it must be opened as soon as possible.
 13. **At Brainerd**—St. Paul Division trains must stop before fouling Lake Superior Division main track. Trains No. 11 and 12 use inside track at passenger station. Connection with 8th Subdivision is governed by automatic block signals. City ordinance provides that crossings must not be blocked more than five (5) minutes by standing trains or cars. Shop crossings must not be blocked when employees are going to work at 7:00 AM and 1:00 PM. Westward trains stop clear of shop crossing 300 feet east of Thirteenth Street, and eastward trains either move a sufficient distance to clear City crossings or stop clear of First Street crossing, to make setouts or pickups. Trains must not block Oak Street Crossing near milk plant and must promptly clear crossings when coupling up in South Yard for movement.
 14. **At Staples Interlocking**—Westward trains which may be unable to start at home signal may pass signal 1459 only when lower arm indicates Proceed, and must then proceed at slow speed. If such indication is not secured, use telephone and then proceed at restricted speed on instructions from towerman.
 15. **At Staples, St. Paul Division instructions govern.**
 16. **Sidings**—
McGregor, siding east of passenger station is westward siding. Siding west of passenger station is eastward siding. Aitkin, north siding is westward; south siding is eastward.
 17. **Signal Overlap**—
Kimberly & Woodbury—Trains holding main track to meet an opposing train taking siding will stop before reaching signal overlap sign, about middle of siding, to avoid giving approaching train two stop signals.
 18. **Spring Switches**—Superior, at west end of Brewery Lead, normal position for main track. Not equipped with facing point lock. Anton, at end of double track, normal position for westward track, equipped with facing point lock.
 Carlton, east switch of north siding equipped with facing point lock. Not equipped for switch key operation.
 Woodbury, east switch of siding with facing point lock, equipped for switch key operation.
 Kimberly, west switch of siding with facing point lock, equipped for switch key operation.
 Deerwood, at junction of Second and Fourth Subdivisions, one and three-fourths miles east of passenger station, normal position for Second Subdivision main track, equipped with facing point lock.
 Indications displayed by two-position color light signal controlling spring switch indicate only if points of the spring switch are in proper adjustment.
 19. **Retaining Valves**—On freight trains retaining valves shall be used on grades Sawyer to Pokegama, as outlined in following paragraphs:
 Retaining valve handles must not be turned up until air brakes are all released following stop at Sawyer.
 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 where first stop is made, at either Pokegama, Central Ave. or Hill Ave.
 On solid trains of ore, or trains consisting of a large percentage of ore, handled by Diesel-electric engine with dynamic brake inoperative on either unit, retaining valve handles must be turned up on one-fourth of the total number of cars in train. When engine has been cut off and recoupled, retaining valve handles will be turned down while brake pipe test is being made, then turned up again.
 On solid trains of ore, or trains consisting of a large percentage of ore and handled by diesel-electric engines having dynamic brake in effective operating condition, retaining valve handles will be turned up on the first ten cars behind the engines. Cars having four-position direct release control retainers or converted type four-position retainers, handles to be turned up to direct release control position (diagonal upward). Cars having three-position retaining valves, handles to be turned up to low pressure (horizontal) position. Retaining valve handles to be turned down when stop is made at Pokegama, Central Ave., or Hill Ave.
 The feed valve will be adjusted and 90 pounds brake pipe pressure obtained prior to departure from Sawyer.
 20. **Derail Switches**—At approach to Minnesota Draw from Duluth. At Superior—Winter St. just opposite freight house.
 21. **Register Stations**—
 Duluth Union Depot for trains arriving at or departing from Fifth Ave. Yard or Union Depot, Rice's Point Yard Office for other trains.
 Central Ave.
 Carlton, Staples.
 Brainerd—For trains originating or terminating at Brainerd.

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

At Central Avenue when no telegrapher on duty all regular trains, except Great Northern trains and Northern Pacific Train No. 66, unless otherwise instructed, will register in train register located in switchmen's room east of depot office.

A check of register on Form 602 may be issued by operator when authorized by train dispatcher, either instead of, or in addition to, train order check, at Central Ave. and Carlton.

23. At Duluth first class trains arriving may register by Form 608, using tube at foot of east stairway for delivery to operator in "DU" office.

24. **Clearance Exceptions**—At Carlton, all trains secure clearance. Trains originating at East D.M.I.R. Jct. Garfield Ave., Rices Point (Yard), Bridge Switch, Elevator Station, C&NW Conn. and Belknap St. will not require clearance. At Central Ave. eastward trains will not require clearance if train order signal is in the proceed position. Westward Great Northern trains enroute to Great Northern tracks, at the Interlocking, not governed by train order signal.

THIRD SUBDIVISION. (MAIN LINE)

1. **Speed Restrictions**—

	Maximum Speeds Permitted
	Freight Passenger
Garfield Ave. and West Duluth Jct.	30 MPH. 30 MPH.
Over 21st Ave. West Crossing.....	15 MPH. 15 MPH.
West Duluth Jct. and MP 143 (between Short Line Park and West Duluth Jct.)	50 MPH. 60 MPH.
MP 143 and MP 135 (Brownell).....	25 MPH. 45 MPH.
MP 135 and MP 129 (West end Carlton yard)	50 MPH. 60 MPH.
MP 129 and MP 11 (White Bear Lake)	50 MPH. 75 MPH.
At Carlton, over double slip switch within interlocking; through movements via Third Subdivision.....	30 MPH.
Other movements	15 MPH.
At Rush City thru city limits passenger trains.....	50 MPH.
2. **Bridge and Engine Restrictions**—

NP cranes 45 to 48 incl. or other wrecking cranes 250 tons or heavier, over bridges.....15 MPH.
3. **At Garfield Ave.**—Normal position of junction switches will be for Third Subdivision. Trains will stop not less than two hundred (200) feet from Junction switches and not proceed until route is clear.
4. **At Nineteenth Ave. West**—Trains using the Dick tracks must not block crossing.
5. **At Twenty-first Ave. West**—Telephone at crossover—Eastward trains call yard (3 rings) for route when necessary.
6. **At West D. M. & I. R. Jct. Interlocking**—Trains will call for route as follows:
 - o o o Martins track to D. M. & I. R. yard.
 - o o o D. M. & I. R. yard to Martins track.
 - o o o— Martins track to westward main.
 - o o o o Martins track to D. T. main.
 - o o o o D. T. main to Martins track
 - o Westward main to D. M. & I. R. yard.
 - o D. M. & I. R. yard to eastward main.
 - o o o Eastward Main to Martin's track.
 - — Through main track movements.
7. **At West Duluth Jct.**—

Yard engines will use west leg of wye and Fond du Lac line but will not leave cars on these tracks. Switch at end of double track is dual control. Normal position is for the westward track. To secure a restricting proceed interlocking indication, as per

Rule 601-F, Figure (3), at the Westward Dwarf Signal, covering reverse movements on eastward track, engines or trains moving eastward through the dual control switch must, before reversing direction, clear the track circuit, the east end of which is located just east of the switch leading to the new Western Brass Company near 61st Ave. West.

8. **At Carlton**—Second Subdivision Instructions govern.
9. **At Hinckley**—Cars must not be left on No. 1 yard track. Trains must not block highway crossing one-half mile west of passenger station, and South First Street Crossing more than five (5) minutes. Foot crossing east of passenger station must not be blocked with cars.

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

10. **At White Bear Lake**—

NP Ry and M&StL Ry Joint Terminal instructions govern. White Bear Lake will not be considered an initial station for through trains moving TO or FROM Lake Superior Third Subdivision TO or FROM Joint Terminal First Subdivision.
11. **Sidings**—

Hinckley, siding east of Grind Stone River is westward siding; siding west of G. N. crossing is eastward siding.
12. **Signal Overlap**—

At Sturgeon Lake—Westward trains holding main track to meet an eastward train will stop before reaching signal overlap sign west of passenger station, to avoid giving approaching train three stop signals.

At Forest Lake—Eastward trains holding main track to meet a westward train will stop before reaching signal overlap sign east of passenger station, to avoid giving approaching train three stop signals.
13. **Spring Switches**—West Duluth Jct., at junction of Third and Sixth Subdivisions, normal position for Sixth Subdivision main track. Not equipped with facing point lock. Pine City, west switch of siding, with facing point lock equipped for switch key signal operation.
14. **Retaining Valves**—On freight trains retaining valves must be used on grades Brownell to MP 143. 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 between MP 143 and West Duluth Jct.
15. **Register Stations**—

Carlton.
16. **Register Exceptions**—

At Carlton trains register by Form 608. A check of register on Form 602 may be issued by operator when authorized by train dispatcher, either instead of or in addition to train order check, at Carlton.
17. **Clearance Exceptions**—

Trains originating at Garfield Ave., West DM&IR Jct., DW&P Jct., and West Duluth Jct. will not require clearance. At Carlton: all trains secure clearance.

FOURTH SUBDIVISION. (CUYUNA NORTHERN BRANCH)

1. **Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Deerwood and Ironton40 MPH.
2. **Bridge and Engine Restrictions—**
Engines not permitted on Middleton Coal Dock Trestle, and over Under-Track unloading pocket on Coke Track at Hanna Mine.
3. **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.
Train order signal does not govern Fourth Subdivision trains.
4. **At Ironton—**Track must not be used beyond point 2400 feet west of Trommald Jct.
5. **Spring Switches—**
Deerwood, at junction of Second and Fourth Subdivision main tracks, one and three fourths miles east of passenger station, normal position for Second Subdivision main track, equipped with facing point lock.
6. **Register Stations—**Ironton and Deerwood.
7. **Register Exceptions—**At Deerwood, when operator on duty, trains will register by Form 608.

FIFTH SUBDIVISION. (CLOQUET BRANCH)

1. **Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Cloquet and MP 4 (west of Scanlon)15 MPH.
MP 4 and Carlton30 MPH.
Carlton, over double-slip switches through the Interlocking15 MPH.
2. **Bridge and Engine Restrictions—**
NP cranes 45 to 48 incl. or other wrecking cranes 250 tons or heavier, over bridge 6.....15 MPH.
3. **At Carlton—**Second Subdivision instructions govern.
4. **At Cloquet—**D.&N.E. engines may use main track between D.&N.E. connection at Broadway St. 200 feet east of passenger station and west end of yard.
Trains and yard engines must stop at the Northwest Paper Mill crossing (East Cloquet), and protect crossing by flagman.
Movements over Arch Street crossing, West of passenger station, must be protected by flagman.
Derails located near East end of Great Northern tracks No. 1 and No. 2, are not provided with derail signs.
5. **Register Stations—**Carlton and Cloquet.
6. **Clearance Exceptions—**
At Cloquet trains will not require clearance.

SIXTH SUBDIVISION. (GRASSY POINT LINE)

1. **Speed Restrictions—** Maximum Speeds Permitted
Freight Passenger
West Duluth Jct. and Zenith Furnace 30 MPH. 30 MPH.
Zenith Furnace and L. S. T. & T. Ry. Jct. 40 MPH. 40 MPH.
At West Duluth Jct., around east leg of wye and passing Zenith Furnace PlantRestricted Speed
West Duluth Jct., and New Duluth 15 MPH. 15 MPH.
 2. **Bridge and Engine Restrictions—**
NP cranes 45 to 48 incl. or other wrecking cranes 250 tons or heavier, over bridges.....15 MPH.
- At Riverside—**
Door over tracks entering shop building will not clear man on top of car.

3. **At West Duluth Jct.—**Normal position of switches on east leg of wye is for Sixth Subdivision main track. Third Subdivision special instructions govern.
4. **Between West Duluth Jct. and Riverside—**Between 72nd Ave. West and Riverside Jct., trains will run via D. T. Railway, and will be governed by D. M. & I. R. Railway Time Table and Special Instructions. Trains will secure D. M. & I. R. Clearance and train orders at Duluth Union Depot.
Transfers operating between 72nd Ave. West and New Duluth will be given train orders at Duluth Union Depot, covering Westward movement from 72nd Avenue West to Riverside Jct. via "DT" Line. On arrival at New Duluth, Conductor will call the Northern Pacific Chief Dispatcher at Duluth, advising estimated time the Transfer will be ready to depart New Duluth on return trip. To facilitate calling, a Northwestern Bell Telephone has been installed in a telephone booth, secured by switch lock, on the station building. This telephone booth must be kept locked at all times. Before departing New Duluth on return trip, Conductors will pick up orders covering return movement from Riverside Jct. to 72nd Ave. West in bill box, secured by a switch lock, located on station building at New Duluth.
5. **At Berwind Jct. Interlocking—**
Trains will call for route as follows:
— o To and from D. W. & P.
— oo To and from Soo Line.
— Straight track (N. P.).
oooo To and from Mike's Lead to Main track.
6. **Clearance Exceptions—**
Trains originating at West Duluth Jct., Berwind Jct. L. S. T. & T. Ry. Jct. and New Duluth will not require clearance.
7. **Derails—**Winter St. just opposite freight house.

SEVENTH SUBDIVISION. (BULLHEAD LAKE BRANCH)

1. **Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Funkley and Kelliher 15 MPH.
2. **Bridge and Engine Restrictions—**
NP cranes 45 to 48 incl. or other wrecking cranes 250 tons or heavier.....Not permitted.
3. **Register Stations—**
Funkley Kelliher
4. **Clearance Exceptions—**
At Funkley: Westward trains will not require clearance.

EIGHTH SUBDIVISION. (INTERNATIONAL FALLS BRANCH) (BRAINERD TO NORTH BEMIDJI)

1. **Speed Restrictions—** Maximum Speeds Permitted
Zone—Between Freight Passenger
Brainerd and North Bemidji..... 40 MPH. 50 MPH.
At Bemidji—Over public crossings at,
Carpenter Ave.30 MPH.
Mill Park20 MPH.
Skelly Oil20 MPH.
Other public crossings15 MPH.
2. **Bridge and Engine Restrictions—**
NP cranes 45 to 48 incl. or other wrecking cranes 250 tons or heavier.....Not permitted
Bridge 59.1 over Leech Lake, all trains15 MPH.
Bridge 94 over Mississippi River (east of Bemidji psgr. station).
Trains handling cars less than 30 ft. long with total weight exceeding 169,000 pounds when coupled in group or next to engine. Trains handling cars 30 ft. or longer with total weight exceeding 169,000 pounds when coupled next to engine..20 MPH.
If such short cars are not coupled in groups and if any such car is not coupled next to engine the above restriction does not apply.

TONNAGE RATINGS PER DIESEL UNIT

Lake Superior Division		Unit Numbers						
Subdivision	District	99-106 400-427 700-724 750 800-803	107-177	500-551 6500-6513 6550-6552 6600-6601	244-245 6000-6005 6051-6052 6700 Series 6050	5400-5410 500-501 552-569 6007-6020 6050	525 850-863 900 Series 244-245	200-300 and 7000 Series
Third Westward	Duluth to Carlton	790	950	1050	1360	1680	2050	2100
	Carlton to Hinckley	1530	1820	2020	2630	3240	4250	4050
	Hinckley to White Bear Lake	1800	2150	2380	3100	3810	5000	4760
Eighth Eastward	No. Bemidji to Brainerd	1070	1270	1410	1840	2260	2970	2830
	No. Bemidji to Hackensack	1070	1270	1410	1840	2260	2970	2830
Eighth Westward	Brainerd to No. Bemidji	750	890	990	1280	1580	2070	1970
	International Falls to Funkley	1010	1200	1330	1730	2130	2800	2670
Ninth Eastward	Funkley to No. Bemidji	1850	2200	2440	3170	3910	5130	4880
	No. Bemidji to Northome	950	1130	1260	1630	2010	2640	2510
Ninth Westward	Northome to International Falls	1850	2200	2440	3170	3910	5130	4880

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

MAXIMUM CLEARANCES.

	LIMIT OF LOAD MEASUREMENT.											Governing Structure
	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. Wide	Max. Hgt.	Max. Wth.	
1st Sub-division, Ashland to Central Ave. . . .	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
2nd Sub-division, Garfield Ave. to Staples . .	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	St. Louis Bay Bridge
2nd Sub-division, Garfield Ave. to East D. M. & I. R. Jct.	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	12' 0"	Lake Ave. Viaduct
3rd Sub-division, Garfield Ave. to White Bear Lake.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	Br. 131, St. Louis River
4th Sub-division, Deerwood to Ironton Depot	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
5th Sub-division, Carlton to Cloquet.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
6th Sub-division, L. S. T. & T. Ry. Jct. to New Duluth.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
8th and 9th Sub-divisions { Brainerd to Big Falls.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
{ Big Falls to International Falls.	19' 3"	19' 3"	19' 3"	19' 3"	19' 0"	18' 10"	18' 7"	18' 6"	18' 4"	19' 3"	12' 0"	Big Fork & Little Fork River Bridges

Note:—Limit of load measurements based on 52' cars with 42' truck centers. Heights and widths in table allow 6 inches clearance. Table is based on open car loading equally divided on either side of center line of car.

MAXIMUM CLEARANCES.

LIMIT OF LOAD MEASUREMENT.											
Height Above Top of Rail.											Governing Structure
8 ft. 6 in. Wide	9 ft. Wide	9 ft. 6 in. Wide	10 ft. Wide	10 ft. 6 in. Wide	11 ft. Wide	11 ft. 6 in. Wide	12 ft. Wide	Max. Hgt.	Max. Wth.		
1st Sub-division, Ashland to Central Ave. . . .	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	St. Louis Bay Bridge
2nd Sub-division, Garfield Ave. to Staples. . .	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 2"	20' 6"	12' 0"	
2nd Sub-division, Garfield Ave. to East D. M. & I. R. Jct.	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	18' 6"	12' 0"	Lake Ave. Viaduct
3rd Sub-division, Garfield Ave. to White Bear Lake.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 4"	20' 6"	20' 0"	20' 6"	12' 0"	Br. 131, St. Louis River
4th Sub-division, Deerwood to Ironton Depot	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
5th Sub-division, Carlton to Cloquet.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
6th Sub-division L. S. T. & T. Ry. Jct. to New Duluth.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	
8th and 9th Sub-divisions { Brainerd to Big Falls.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	12' 0"	Big Fork and Little Fork River Bridges
{ Big Falls to International Falls.	18' 2"	17' 11"	17' 9"	17' 6"	17' 3"	17' 0"	16' 9"	16' 6"	19' 3"	12' 0"	

Note:—Limit of load measurements based on 52' cars with 42' truck centers. Heights and widths in table allow 6 inches clearance. Table is based on open car loading equally divided on either side of center line of car.

S. A. ANDERSON,
Asst. Superintendent.

W. E. BUCKLEY,
Trainmaster.

J. F. PETERSON,
Trainmaster.

W. J. CONDOTTA,
Trainmaster-Roadmaster.

J. E. ROSS,
Chief Dispatcher.