AUTHORIZED SURGEONS.

Location of Stretchers—(S)

Dr. B. I. Derauf, Chief Surgeon....St. Paul

Dr. A. McEwan,
Dr. H. S. Proud,
Dr. D. E. Derauf,
Dr. C. J. Hedlund,
Dr. R. M. Ahrens,
Dr. J. E. Brown,
} Associate Surgeons, N. P. B. A. Hospital, St. Paul (S)

Dr. A. W. Ide, Jr. .....Minneapolis
Dr. D. M. Thysell .....Minneapolis
Dr. T. S. McClanahan .....White Bear Lake (S)

SPECIALISTS.

Dr. L. T. Simons, Eye, Ear, Nose & Throat .....1039 Lowry Bldg., St. Paul
Dr. L. G. Edwards, Eye, Ear, Nose & Throat .....1039 Lowry Bldg., St. Paul
Dr. Eugene L. Bauer, Ear, Nose & Throat .....621 Lowry Bldg., St. Paul
Dr. Robert H. Monahan, Oculist (Eye Specialist) .....1023 Lowry Bldg., St. Paul
Dr. Richard C. Horns, Oculist (Eye Specialist) .....1137 Med. Arts Bldg., Minneapolis

St. Paul, General Office Bldg. (S)*
St. Paul, Third Street, Car Foreman's Office (S)
St. Paul, Fourth Street, Yard Office (S)*
St. Paul, Mississippi Street, Round House (S)
St. Paul, Mississippi Street, Yard Office (S)*
St. Paul, Como Shops (S)*
Northtown, Yard Office (S)*
Northtown, Round House (S)*
Northtown, Tool Car No. 4 Steam Derrick (S)
N. P. Freight Yard, Yard Office (S)

*Litter—No equipment.

NOTE.

N. P. B. A. physicians and surgeons, when called upon, will attend to all cases of sickness and accident to employees, passengers and others. In a case of illness, or of injury unrelated to railway operation to other than N. P. B. A. members, surgeon should endeavor to collect a reasonable fee for service from person attended. If unable to collect, Chief Surgeon should be notified.

Where injuries, to other than N. P. B. A. members, are directly related to railway operation, charge for service should be sent to the General Claim Agent of the railway company.

In case of emergency, proper aid should be procured until arrival of local surgeon, when case must be placed in his hands.

NORTHERN PACIFIC RAILWAY COMPANY

AND

CHICAGO & NORTHWESTERN RAILWAY

JOINT TERMINAL

TIME TABLE 334

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

Sunday, July 16, 1961

For the Government of Employes only. The Company reserves the right to vary therefrom at pleasure. Be positive that you have the Current Time Table and destroy all previous numbers. Read carefully the Special Instructions and always carry for reference a copy of OPERATING RULES.

J. O. DAVIES,
Superintendent.

E. S. ULYATT,
General Superintendent of Transportation.

D. A. THOMSON,
General Manager.

D. L. PERRIN,
Superintendent,
C&NW. Ry.

Time Table No. 334

July 16, 1961

Water, Fuel, Scales, Turn Tables, Wyes and Yard Limits.	Station Numbers.	Car Capacity of Sidings.	THIRD CLASS 715 Way Freight Daily Ex. Sun.	FIRST CLASS 65 Passenger Daily	Distance from Stillwater.	STATIONS	Distance from St. Paul.	FIRST CLASS 66 Passenger Daily	THIRD CLASS 716 Way Freight Daily Ex. Sun.
XR	LG12	Yard	L 12.45 AM		0.0	STILLWATER ..... P	24.0		A 5.00 AM
	LG9	18	1.00		3.9	3.9 SUMMIT	20.1		4.25
	LG7		1.07		6.2	2.3 DULUTH JCT.	17.8		4.20
	LG4	15	1.15		9.1	2.9 MAHTOMEDI	14.9		4.10
	LG2	S4	1.20		10.6	1.5 DELLWOOD	13.4		4.05
XR K	L141	116	s 1.25 1.45	L 11.50 PM	12.7	Automatic Block: 2.1 WB....WHITE BEAR....DN / LAKE	11.3	As 10.56 PM	4.00 s 3.30
XY	L142	Yard	1.50		13.7	1.0 M. & D. JCT.	10.3		3.25
XR	L147	74	A 2.00 AM	Af 11.58 PM	18.9	5.2 GN.....GLOSTER.....DN	5.1	Lf 10.44 PM	L 3.15 AM

BETWEEN GLOSTER AND TROUT BROOK JCT. TRAINS AND ENGINES USING SOO LINE TRACK WILL BE GOVERNED BY SOO LINE TIME TABLE AND RULES.

										0.1 TROUT BROOK JCT.				

BETWEEN TROUT BROOK JCT. AND MISSISSIPPI ST. YARD, TRAINS AND ENGINES WILL BE GOVERNED BY SECOND SUBDIVISION TIME TABLE.

OTY RBK	S142	Yard						22.2	MY....MISSISSIPPI ST.....PN YARD					
XR	L147	74					Lf 11.58 PM	18.9	Automatic Block: GN.....GLOSTER.....DN	5.1	Af 10.44 PM			
	L149	48						21.1	2.2 CLAYMONT .....P	2.9				
	L151	Yard					12.08 AM	23.5	2.4 .....3rd STREET.....P	0.5	L 10.32 PM			

BETWEEN THIRD STREET AND ST. PAUL UNION DEPOT, TRAINS AND ENGINES WILL BE GOVERNED BY ST. PAUL UNION DEPOT RULES AND REGULATIONS.

TWY BRK Z	S142						A 12.15 AM 12.25 AM	24.0	U.....ST. PAUL.....DN (Union Depot) 10.6	0.0	10.30 PM 10.20 PM			

BETWEEN ST. PAUL AND MINNEAPOLIS TRAINS AND ENGINES USING GREAT NORTHERN TRACKS WILL BE GOVERNED BY GREAT NORTHERN TIME TABLE AND RULES.

RKB Z							A 12.50 AM		S.....MINNEAPOLIS.....DN (Passenger Station)		L 9.50 PM			

EASTWARD TRAINS ARE SUPERIOR TO WESTWARD TRAINS OF THE SAME CLASS.

SPECIAL INSTRUCTIONS, PAGES 5 thru 11.

Time Table No. 334

July 16, 1961

Water, Fuel, Scales, Turn Tables, Wyes and Yard Limits.	Station Numbers.	FIRST CLASS 323 — Soo 13 — Passenger — Daily	FIRST CLASS 315 — Soo 9 — Passenger — Daily	FIRST CLASS 325 — Soo Stevens Point Div. 6 — Passenger — Daily Ex. Sat.	Distance from St. Paul.	STATIONS	Distance from First Street No.	FIRST CLASS 326 — Soo Stevens Point Div. 5 — Passenger — Daily Ex. Sun.	FIRST CLASS 324 — Soo 14 — Passenger — Daily	FIRST CLASS 304 — Soo 10 — Passenger — Daily
TWY BRK	S-142			L 7.25 PM	0.0	U.....ST. PAUL.....DN (Union Depot)	12.3	A 6.20 AM		

(EAST SIDE LINE) BETWEEN ST. PAUL UNION DEPOT AND THIRD STREET, TRAINS AND ENGINES WILL BE GOVERNED BY ST. PAUL UNION DEPOT RULES AND REGULATIONS

	L-151			L 7.28 PM	0.6	0.6 .....3RD STREET (East Side Line)..... 1.2 To Miss. St. Tower	11.7	A 6.06 AM		
						AUTOMATIC BLOCK: ....7TH STREET (West Side Line)....				
OT				7.31	1.8	0.9 MX..MISSISSIPPI ST. TOWER...DN	10.5	6.03		
RBK	S-142				2.4	0.6 MY...MISSISSIPPI ST. YARD....PN	9.9			
				A 7.35 PM	2.5	0.1 .....TROUT BROOK JCT.....	9.8	L 6.00 AM		
					2.9	0.4 .....SOO LINE JCT.....	9.4			
	S-137				5.8	2.9 .....COMO SHOPS.....P	6.5			
					6.7	0.9 .....G. N. CROSSING.....	5.6			
	S-136½				7.3	0.6 .....UNION.....P	5.0			
Y	L-156½				7.8	0.5 .....ST. ANTHONY PARK JCT....P To Park Jct. 1.0 To Eustis St. .06	4.5			
	L-156				8.8	DOUBLE TRACK: .....PARK JUNCTION.....P				
HXZB	L-154				10.4	1.6 .....EAST MINNEAPOLIS.....P				
KBR XOTWZ	S-128				13.1	2.7 NJ.....NORTHTOWN.....DN				
	S-134				8.4	AUTO. BLOCK: .....EUSTIS STREET.....P	3.9			
					9.9	1.5 .....18TH AVE. SOUTH EAST....P	2.4			
					10.7	0.8 .....20TH AVE. SOUTH.....	1.6			

BETWEEN TWENTIETH AVENUE SOUTH AND THIRD AVENUE NORTH, MINNEAPOLIS, TRAINS AND ENGINES WILL BE GOVERNED BY C&NW RY. SPECIAL RULES AS SHOWN ON PAGES 8 AND 9.

			L 10.30 PM	L 8.50 PM	11.5	0.8 .....6TH AVE. SOUTH.....	0.8		A 6.19 AM	A 7.04 AM
R			10.31	8.51	12.2	0.7 .....3RD AVE. NORTH.....	0.1		6.18	7.03
			A 10.32 PM	A 8.52 PM	12.3	0.1 .....FIRST STREET NORTH.....P	0.0		L 6.17 AM	L 7.02 AM

EXCEPT ON DOUBLE TRACK, EASTWARD TRAINS ARE SUPERIOR TO WESTWARD TRAINS OF THE SAME CLASS. SPECIAL INSTRUCTIONS, PAGES 5 thru 11.

WESTWARD — FOURTH SUB-DIVISION — EASTWARD

Time Table No. 334

July 16, 1961

Water, Fuel, Scales, Turn Tables, Wyes and Yard Limits.	Car Capacity Sidings.	Station Numbers.	Distance from M. & D. Jct.	STATIONS	Distance from East Minneapolis	EASTWARD— East Minneapolis to M. & D. Jct.
RXY	Yard	L142	0.0	.....M. & D. JCT.....P	12.6	
	S6	L149½	8.1	8.1 .....ROSEVILLE.....	4.5	
X		L152½	10.0	1.9 .....BELT LINE CROSSING.....	2.6	
XYZR	Yard	L154	12.6	2.6 .....EAST MINNEAPOLIS....P	0.0	

EASTWARD TRAINS ARE SUPERIOR TO WESTWARD TRAINS OF THE SAME CLASS. SPECIAL INSTRUCTIONS, PAGES 5 thru 11.

Time Table No. 334

July 16, 1961

Water, Fuel, Scales Turn Tables, Wyes and Yard Limits			FIRST CLASS 11	3	323	315	25	1		STATIONS	Distance from Minneapolis
					Soo 13	Soo 9					
			Passenger	Passenger	Passenger	Passenger	Passenger	Passenger			
			Saturday Only	Daily Ex. Sat.	Daily	Daily	Daily	Daily			
			L 11.15 PM	L 11.15 PM			L 7.50 PM	L 9.15 AM	S	MINNEAPOLIS (Passenger Station) DN	0.0
										0.3	

BETWEEN MINNEAPOLIS PASSENGER STATION AND FIRST STREET NORTH, MINNEAPOLIS, TRAINS AND ENGINES WILL BE GOVERNED BY GREAT NORTHERN TIME TABLE AND RULES.

			L 11.17 PM	L 11.17 PM	L 10.32 PM	L 8.52 PM	L 7.51 PM	L 9.17 AM	AUTO. BLOCK	FIRST STREET NORTH ..... P	0.3
										0.4	
Z			11.18	11.18	10.33	8.53	7.52	9.18		N. P. FREIGHT YARD ..... P	0.7
										0.2	
			11.19	11.19	A 10.34 PM	A 8.54 PM	7.53	9.19		14th AVE. NORTH	0.9
										1.2	
Y			11.21	11.21			7.56	9.22		MULBERRY JCT. ..... P	2.1
										2.9	
OTWZ			A 11.26 PM	A 11.26 PM			A 8.01 PM	A 9.27 AM	DOUBLE TRACK	NJ ..... NORTHTOWN ..... DN	5.0

EXCEPT ON DOUBLE TRACK, EASTWARD TRAINS ARE SUPERIOR TO WESTWARD TRAINS OF THE SAME CLASS.

THIRD SUB-DIVISION EASTWARD

Time Table No. 334

July 16, 1961

Distance from Northtown.	STATIONS	FIRST CLASS 4	12	26	324	304	2		
					Soo 14	Soo 10			
		Passenger	Passenger	Passenger	Passenger	Passenger	Passenger		
		Daily Ex. Mon.	Monday Only	Daily	Daily	Daily	Daily		
5.0	MINNEAPOLIS (Passenger Station) DN	A 4.00 AM	A 4.00 AM	A 6.10 AM			A 9.17 PM		
	0.3								

BETWEEN FIRST STREET NORTH, MINNEAPOLIS, AND MINNEAPOLIS PASSENGER STATION, TRAINS AND ENGINES WILL BE GOVERNED BY GREAT NORTHERN TIME TABLE AND RULES.

4.7	AUTO. BLOCK	FIRST STREET NORTH ..... P	A 3.57 AM	A 3.57 AM	A 6.07 AM	A 6.17 AM	A 7.02 AM	A 9.14 PM		
		0.4								
4.3		N. P. FREIGHT YARD ..... P	3.55	3.55	6.06	6.16	7.01	9.13		
		0.2								
4.1		14th AVE. NORTH	3.54	3.54	6.05	L 6.15 AM	L 7.00 AM	9.12		
		1.2								
2.9		MULBERRY JCT. ..... P	3.50	3.50	6.02			9.09		
		2.9								
0.0	DOUBLE TRACK	NJ ..... NORTHTOWN ..... DN	L 3.45 AM	L 3.45 AM	L 5.58 AM			L 9.05 PM		

EXCEPT ON DOUBLE TRACK, EASTWARD TRAINS ARE SUPERIOR TO WESTWARD TRAINS OF THE SAME CLASS.

SPECIAL INSTRUCTIONS, PAGES 5 thru 11.

ALL SUBDIVISIONS.

1. **Speed Restrictions—** Maximum Speeds Permitted:

Passenger trains ..... 60 MPH.
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 N.P. and tenant lines ..... 35 MPH.
Handling loaded ore cars ..... 40 MPH.

Diesel-electric engines—	Handling trains or Running light
No. 98	35 MPH.
No. 99	50 MPH.
No. 100	40 MPH.
100 series except No. 100	60 MPH.
200 and 300 series	60 MPH.
400, 600 and 700 series	45 MPH.
500 and 800 series	60 MPH.
900-911, 6000 and 7000 series	60 MPH.
5400 series	55 MPH.
6500, 6600, 6700 series	60 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. B-30, B-40 and B-41 ..... 60 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 rate 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;
St. Paul to White Bear Lake ..... 400,000 lbs.
White Bear Lake to Stillwater ..... 210,000 lbs.
All other subdivisions ..... 400,000 lbs.

3. 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)."

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

5. 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 85 MPH.

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

(a) 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.

(b) Such equipment that is geared for self-propulsion shall have the driving gears disconnected or removed.

(c) 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.

(d) 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.

6. 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.**

7. 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.

8. 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.

9. BULLETIN STATIONS—

St. Paul, Telegraph Office at Union Depot.
4th Street, Yard Office.
Mississippi Street, Round House and Yard Office.
C.M.St.P.&P. New Yard, Round House & Yard Office.
Northtown, Round House and Yard Office.
N. P. Freight Yard, Yard Office.
East Minneapolis, Yard Office.

10. STANDARD TIME CLOCKS—

St. Paul, Telegraph Office at Union Depot.
Mississippi Street, Round House and Yard Office.
Minneapolis, Dispatcher's Office.
Northtown, Telegraph Office.
White Bear Lake, Telegraph Office.

11. WATCH INSPECTORS—

St. Paul, A. Lindahl, 910 Payne Ave.
" " C. J. & H. W. Anderson, 1573 University Ave.
" " Northern Watch Co., 342 Robert St.
Minneapolis, Samuel H. Lindquist, 4171 Washington Ave. North.
" Buchkosky & Wikstrom, 1106 West Broadway St.
" Oscar P. Gustafson, 410 Nicollet Ave.
" Kavchar Jewelry, 2213 Central Ave.
Stillwater, Peder Gaalaas.

12. Within yard limits all second class and inferior trains and transfer runs occupying main tracks, must display a red flag by day and in addition a red light by night on the rear end of the rear car, except when caboose is used marker lamps displaying red lights to the rear must be used by day and night. The presence or absence of a red flag or a red light will not relieve the approaching train of responsibility for collision where limited to restricted speed, either by speed restrictions or Rule 93. In case of collision, the responsibility will ordinarily rest with the approaching train.

13. Passenger extras, transfers and light engine movements may run ahead of delayed first class trains without train order authority; conductors and switch foremen and engineers of light engines will inform themselves through Yard Master, or Train Dispatcher Minneapolis, as to how late first class trains will be and avoid delaying them.

14. The City ordinances of St. Paul and Minneapolis prohibit the unnecessary use of the engine whistle.

FIRST SUBDIVISION.

BETWEEN 3RD STREET, ST. PAUL AND STILLWATER.

1. **Speed Restrictions—**

Zone—Between	Freight and mixed Trains	Passenger Trains
White Bear Lake and St. Paul	50 MPH	60 MPH
Between White Bear Lake and Stillwater	20 MPH	30 MPH
At St. Paul, between East 7th Street and 3rd Street	Westward use 15 minutes	15 MPH

At St. Paul Union Depot, through crossovers, turnouts and puzzle switches ..... 10 MPH.
All back up movements.... 8 MPH.
At Gloster, westward trains over end of siding hand-throw switch ..... 15 MPH.
At White Bear Lake, all movements over State Highway No. 61 ..... 5 MPH.
Approach and move over 4th St. crossing at Restricted Speed.

2. **Bridge and Engine Restrictions—**
Trains handling wrecking cranes 45 to 48 incl. or other wrecking cranes 250 ton or heavier over timber trestles.... 15 MPH.
Bridge 11—North Broadway Street, Stillwater:
Wrecking cranes 41 to 48 inc. or other wrecking cranes 250 ton or heavier and pile drivers 25-28 not permitted;
Diesel engines ..... 10 MPH.
Cars with total weight exceeding 169,000 lbs. must be separated from each other and from engine with a car 40 feet long with total weight not over 169,000 lbs; trains handling such cars ..... 8 MPH.

3. **Between White Bear Lake and 3rd Street St. Paul,** Train and engine crews operating between these points will accept and be governed by train orders, clearances and instructions issued over the signature of the Lake Superior Division Superintendent.
White Bear Lake will not be considered an initial station for through trains moving **to** or **from** Lake Superior Division Third Sub-Division **to** or **from** Joint Terminal First Sub-Division.
Train order signal governs only these trains.

4. **At 3rd Street, St. Paul,** crossing with C. B. & Q. R. R. is single track.
The N. P. Ry. and C. B. & Q. R. R. joint tracks between 3rd Street and Division Street are operated under yard rules. All train and engine movements, including first class trains over these tracks are controlled by switchtenders at 3rd Street and Operator at Division Street and no train or engine may move over these tracks except as controlled by switchtenders at 3rd Street and Operator at Division Street. Eastward movements will only be made on proceed signal from switchtenders at 3rd Street and westward movements will be governed by interlocking signals operated from Division Street.

5. **East of 4th St. Bridge,** all westward trains using crossover to eastward main track will stop and proceed upon signal from 3rd Street Switchtender. Trains moving against the current of traffic on eastward main track will approach crossover expecting to find it in use.

6. **Between 3rd Street and Claymont—**
Westward freight trains will be governed by the following instructions on the grade between Claymont and 3rd Street, St. Paul:
Engineer controlling train must adjust feed valve on engine to obtain 90 pounds brake pipe pressure following the stop for grade crossing at Gloster. Train to be stopped at Claymont for turning up retaining valves and making a brake pipe test. Engineer to sound one blast of whistle to advise trainmen that brakes are fully applied for test.
Retaining valve handles must be turned up to the low pressure position (horizontal) as follows:
Trains of 1000 tons or less, no retainers.
Trains of over 1000 tons and up to 4000 tons, use 15 retainers and as many more as engineer requests.
Trains of over 4000 tons, use 15 retainers and 1 additional retainer for each 100 tons in excess of 4000 tons and as many more as engineer requests.
Retainers to be turned up on head portion of train beginning at the engine and not turned down until stop has been made at 3rd Street.

7. **At Claymont,** switch foreman and engineers of light engines must call operator Gloster or switchtender 3rd Street and inform themselves as to first class trains before entering main track. Movement may then be made ahead of delayed first class trains without train orders. Care must be used not to delay them.

8. **At Gloster—**

Eastward trains waiting for a meet will stay west of signal 44 at Gloster and west of Larpenteur Avenue.

A "STOP" sign for westward trains via Soo Line is placed on the Northern Pacific-Soo Line connection 500 feet east of Soo Line main track switch. If train orders or clearance received when stop is made authorizes movement onto Soo Line main track, train may proceed.

9. At M&D Jct.—Normal position of east switch of wye will be lined for through movement on siding.

10. **At White Bear Lake—**

Eastward trains making stop at passenger station must stop with engine or cars west of white post located on south side of track.

Cars must not be left on siding within 300 feet of Fourth Street crossing.

Normal position of east switch of crossover at Ramaley Avenue will be lined for through movement on siding.

Eastward extra trains picking up in New Yard will cut off far enough west of Ramaley Avenue so as not to foul the ringing section of the automatic crossing signals on that avenue.

When trains will be delayed more than ten (10) minutes, crossings must be opened promptly.

11. **From Summit to Stillwater,** retaining valves must be used. Engineer will determine minimum, and Conductor will use any additional number that he considers necessary.

12. **Yard Limits—**

3rd Street Yard St. Paul to yard limit sign east of Gloster.

13. **Short Clearances—**

St. Paul Yard, overhead bridge at Omaha crossing, and tunnels under 7th Street, located 700 feet east of Third Street, will not clear a man on side of car. Minnehaha and Reaney Street bridges, opposite Hamm's Brewery, will not clear a man on top of car.

14. **Register Stations—**

St. Paul—Telegraph Office at Union Depot.
Gloster.

White Bear Lake—For trains to or from the Stillwater Line.
Stillwater.

Miss. Street Yard Office—For trains originating or terminating.
Milwaukee Pig's Eye Yard.

15. **Register Exceptions—**

At Gloster, trains will register by Form 608. Operators will deliver orders and clearances to trains passing through the wye at English Street Highway Crossing.

At Stillwater, conductors of trains and enginemen of light engines will fill out register Form 608, covering their arrival and departure and will deliver to the operator at White Bear Lake.

16. **Clearance Exceptions—**

At 3rd Street, C.M.St.P.&P. trains starting will be governed by clearance furnished at C.M.St.P.&P. Yard. N.P trains will be governed by clearance furnished at Union Depot.

At Miss. Street Yard, N.P. trains via Soo Line to Gloster will secure clearance at Miss. Street Tower.

At Gloster, C.M.St.P.&P. helper engines must secure clearance.

At White Bear Lake, No. 715 must secure Lake Superior Division clearance. No. 716 must secure St. Paul Division Clearance before leaving White Bear Lake.

At Stillwater, clearance not required.

17. **Cross-overs—**

3rd Street, 4th Street.

18. **At Gloster—**

Siding is east of Depot.

Run around track west of Depot has capacity for 12 cars.

SECOND SUBDIVISION.

BETWEEN 3RD STREET, ST. PAUL AND 20TH AVE. SOUTH, MINNEAPOLIS AND LINE B, BETWEEN ST. ANTHONY PK. JCT. AND NORTHTOWN

1. **Speed Restrictions—**

Zone—Between	Freight and mixed Trains	Passenger Trains
Mississippi St. Tower and 7th St. (West Side line) and 3rd St. (East Side line)	15 MPH.	20 MPH.
Mississippi St. Tower and First St. North	35 MPH.	35 MPH.
Except Lafayette Ave. and 7th St. Bridge (West Side line)		All Trains 8 MPH.
23rd Ave. S. E. & 20th Ave. So. (Minneapolis)		25 MPH.
29th Ave. S.E. and 1st Ave. S.E. over crossings		20 MPH.
At Mississippi Street Interlocking		12 MPH.
At Snelling Avenue, over crossing		15 MPH.

2. **Bridge and Engine Restrictions—**

Trains handling wrecking cranes 45 to 48 or other wrecking cranes 250 ton or heavier over timber trestles and over the following bridges:

Bridge 7, Raymond Ave. and Bridge 7-1, Bayless Ave. Line A ..... 15 MPH.

3. **At 3rd Street, St. Paul,** crossing with C. B. & Q. R. R. is single track. Westward second class and inferior trains may run ahead of delayed first class trains, when given the route by switchtenders. Double track switch on East Side Line is protected by a derail and color light signal on eastward main track. All eastward trains picking up or setting out cars must leave their train west of the derail.

The N. P. Ry. and C. B. & Q. R. R. joint tracks between 3rd Street and Division Street are operated under yard rules. All trains and engine movements, including first class trains over these tracks are controlled by switchtenders at 3rd Street and Operator at Division Street and no train or engine may move over these tracks except as controlled by switchtenders at 3rd Street and Operator at Division Street. Eastward movements will only be made on proceed signal from switchtenders at 3rd Street and westward movements will be governed by interlocking signals operated from Division Street.

4. **At Mississippi Street Interlocking—**(Connection East and West Side Lines).

The train order signal at Mississippi St. tower is to govern Soo Line, Stevens Point Division outgoing trains exclusively.

All movements approaching on main track will be governed by the interlocking color light signal located 100 feet west of the Interlocking tower. This signal governs movements on eastward main track to 3rd Street, movements over turnout to 4th Street Yard, via west side line, and movements over crossover between the eastward and westward main tracks of east side line.

Use whistle for routes as follows:

West Side Line ..... Two long.
East Side Line ..... Three long.
Round House ..... Four long.
Diesel House ..... Five long.

All movements approaching on east side line will be governed by the interlocking color light signal located 500 feet east of Mississippi Street bridge. This signal governs movements on westward main track and movements to back lead of Mississippi Street Yard.

Use whistle signals for routes as follows:

Main Lines ..... One long.
Back Lead ..... Two long.

All movements approaching on west side line will be governed by the interlocking color light signal located 500 feet east of Mississippi Street bridge. This signal governs movements for westward main track and movements to back lead of Mississippi Street Yard.

Use whistle signals for routes as follows:

Main Lines .....One long.
Back Lead .....Two long.

All eastward movements out of east end of Mississippi Street yard will be governed by color light signal located 50 feet west of Mississippi Street Bridge.

Use whistle signals for routes as follows:

West Side Line .....Two long.
East Side Line .....Three long.

5. **At Soo Line Jct.,** Soo Line crews desiring to make reverse movements between Soo Line Jct. and switch of west leg of wye at Trout Brook Jct. before entering the main track will call operator at Mississippi Street Tower and ascertain if all first class trains due have passed, or if any transfers are moving over westward track, between Mississippi Street Tower and Soo Line Jct. Movement must then be protected as per Rule 99.

6. **At Como Ave., Como Place and Snelling Ave.** crossings, where automatic electric signals are installed, engine whistles must not be sounded except to prevent accidents.

7. **At Snelling Ave.,** St. Paul Line "A".
When westbound trains are to pick up cars at Como or Koppers Coke, trains must stop and cut off engine at Automatic Signal 55, located 1400 feet west of Como Shops.
Conductors and switch foremen will be held responsible for the above instructions being complied with.

8. **At Union,** all eastward and westward trains going to or coming from Great Northern Yard, must call operator St. Anthony Park Jct. on phone and obtain permission to cross over.

9. **At St. Anthony Park Junction Interlocking—**
Enginemen will call for routes as follows:
Straight Main Line East or West (Line A).....One long.
Line A to Line B Westward track .....Two long.
Line A to Eastward track Line B .....Three long.
Line B to Line A Eastward track .....One long.
Line A is 2nd and 3rd Subdivision.

10. **At Eustis Street Yard,** all trains must call St. Anthony Park Jct. operator on phone located on pole at old yard office location and obtain permission to cross over before fouling either the eastward or westward main track. In order to prevent cars running out over the derails at the west end of Eustis Street Yard, the hand brakes must in all cases be set with a club on the first six (6) cars from the west end of each track. Yard foremen will be held responsible for knowing this is done.

11. Between Eustis Street and 25th Avenue S. E. engine bell will be kept ringing while engine is in motion.

12. Line B, double track line (no automatic block signals), is a switching and alternate route between St. Anthony Park Jct. and Northtown, via East Minneapolis. All movements on these tracks are governed by the provisions of Rule 93. Transfer runs occupying main tracks must display a red flag by day and in addition a red light by night on the rear end of the rear car, except when caboose is used, marker lamps displaying red lights to the rear must be used by day and night. The presence or absence of a red flag or a red light will not relieve the approaching train of responsibility for collision where limited to restricted speed, either by speed restrictions, or Rule 93. In case of collision, the responsibility will ordinarily rest with the approaching train.

13. **At Park Jct.,** when cars are set out in the Eastbound Yard, sufficient hand brakes must be set to prevent cars running out at west end. Also when trains or portions of trains are left standing on the main track while cars are being set out or picked up, air must first be set before cutting off engine or cars.

14. **Yard Limits—**
3rd Street, St. Paul to 20th Avenue South, Minneapolis, including 3rd and 4th Street Yard, St. Paul.

15. **Short Clearances—**
All loaded Bi-level and Tri-level auto rack cars must be handled via Westward track between 3rd Street and Mississippi Street.
At St. Paul, short clearances for man on side of car:
Lafayette Ave. bridge on East and West Side Lines, stone wall west of Lafayette Ave. bridge on East Side Line and stone wall along diagonal track, 4th Street Yard.
At St. Paul, tunnels on East and West Side Lines will not clear a man on side or top of car.
At Southeast Minneapolis, three overhead cranes are located on spur to Lewis Bolt and Nut Co. galvanizing plant. Employes must not ride on top of cars approaching or moving under the overhead trolley beams. Beams will not clear a man on top of box car or high load.

16. **Register Stations—**
St. Paul, Telegraph Office at Union Depot.
St. Paul, 4th Street Yard Office, for M. & St. L. freight trains.
Mississippi Street Yard Office, for trains originating or terminating.

17. **Clearance Exceptions—**
At 7th Street, Mississippi Street Yard, Soo Line Jct., 6th Ave. South, 3rd Ave. North and First Street North, clearance not required.

18. **Crossovers—**
3rd Street, Mississippi Street, Maryland Street, Soo Line Jct., Chatsworth Street, Como, Union, St. Anthony Park Jct., Eustis Street, 27th Ave. South East, 18th Ave. South East, East end Misssissippi River bridge, 19th Ave. South, 10th Ave. South, 8th Ave. South, 7th Ave. South, 6th Ave. South, 2nd Ave. North, 3rd Ave. North

19. **Derail Switches—**
St. Paul, East Side line, eastward track near 4th Street Bridge.

FOLLOWING C&NW SPECIAL RULES GOVERN MAIN TRACK MOVEMENTS BETWEEN 20TH AVE. SOUTH AND 3RD AVE. NORTH, MINNEAPOLIS

These special rules govern main tracks of the Chicago and Northwestern Railway Company between 3rd Avenue North and 20th Avenue South, Minneapolis, and they supersede all other rules and instructions inconsistent therewith.

Maximum speed: Passenger Trains 20 miles per hour
Other Trains and Engines 15 miles per hour

Between 3rd Avenue North and 6th Avenue South and between 18th Avenue South and 20th Avenue South, maximum speed:

Passenger Trains 15 miles per hour
Other Trains and Engines 10 miles per hour

All trains and engines must move at restricted speed between 3rd Avenue North and 20th Avenue South.

All trains, transfers and engines will register by register ticket at 3rd Avenue North.

At crossings with tracks of Minneapolis Eastern Railway Company between 1st and 2nd Streets South, Minneapolis, all trains and engines on Minneapolis Eastern tracks must stop and then proceed over these crossings under flag protection. All other trains and engines must approach these crossings expecting to find them occupied.

Train orders are not required between 3rd Avenue North and 20th Avenue South. Trains and engines may use the main tracks between these points without protection when not on the time of first class trains, and may use main tracks on the time of first class trains after such trains are five (5) minutes late, protecting as prescribed by Rule 99. Switch engines must be prepared to clear main track without delay to regular trains and transfers.

Second and inferior class trains, transfers, and engines may run ahead of first class trains which are five (5) minutes or more late when this can be done without delay to first class trains, and may pass and run ahead of each other.

All trains, engines, transfers and yard engines when stopped on main tracks at any point between 3rd Avenue North and 20th Avenue South must be protected, but this will not relieve engineers of responsibility in case of collision, for failure to observe speed restrictions or for failure to move at restricted speed at any point.

Movements between 3rd Avenue North and 1st Street South will be governed by automatic block signals; the end of track section protected by automatic block signals is indicated by sign post reading, "END BLOCK". Signals are of the color light type, one light only should appear at any one time. A green light indicates track clear, proceed. A yellow light indicates Caution, approach next signal or end of block at restricted speed.

A red light indicates STOP, train must be brought to a full stop before any part of the train or engine passes the signal and may then proceed prepared to stop short of train, obstruction, or switch not properly lined and be on the lookout for broken rail or anything that may require the speed of a train or engine to be reduced. Engineers will be held responsible in case of accident caused by overtaking a preceding movement. When signals are out of order, Rule 27 will apply. It must be understood that automatic block signals in no way relieve men in charge of trains and engines of protecting whenever and wherever required by these special rules.

Switches at Third Avenue North will be handled by switch tenders. All trains and engines must approach these switches at restricted speed and must not proceed until proceed signal has been received from the switch tender.

Cars must not be left on main track without an engine attached unless unavoidable in case of accident, in which event they must be protected by flagmen.

Between sunset and sunrise and at other times when day signals cannot be clearly seen, a red light must be displayed on the rear of all transfers; when such transfers are provided with caboose, proper display of markers is required.

Between 3rd Avenue North and 20th Avenue South, passenger trains flagmen must ride outside on rear platform to be in position to drop off immediately their train stops and protect it. Conductors will see that flagmen comply with this rule.

Dwarf signal located 626 feet west of Cedar Avenue bridge is connected with main track switch to Wheat Yard, Railway Transfer.

When signal is at STOP position and when not on time of first class trains and when the weather conditions are favorable for vision, trains (except first class) and engines with or without cars may occupy the eastward main track between the signal and 20th Avenue South without flag protection. All eastward trains and engines will aproach this signal prepared to stop and will not pass the signal unless at proceed position.

THIRD SUBDIVISION.

BETWEEN FIRST STREET NORTH AND NORTHTOWN, INCLUDING MULBERRY LINE.

1. **Speed Restrictions—**

Zone—Between	Freight mixed and other trains	Passenger
First St. and Northtown	Use not less than 12 minutes	Not exceed average of Schedule Speed

2. **Bridge and Engine Restrictions—**
At Northern States Power Co., Riverside Plant. Engines are not permitted on trestle bridges.

3. **At First Street North,** after stop is made, all eastward trains and light engines must receive proceed signal from G. N. switchtender before proceeding.

4. **At 14th Avenue Interlocking:**
The Soo Line junction switch and the main to main crossover at 14th Avenue are equipped with dual control switch machines controlled by the Soo Line train dispatcher at Shoreham. A direct telephone to the Soo Line dispatcher is provided in the west entrance of the steel bungalow at the junction.

If communication with the Soo Line dispatcher fails, emergency release push buttons are provided in a steel cabinet mounted on the exterior west wall of the steel bungalow. Instructions for operation under emergency conditions when communication has failed are posted on the inside of the door of the steel instrument cabinet.

Diamond Iron Works Spur:
Switch for the Diamond Iron Works Spur is located 352 feet west of the westerly limits of the 14th Avenue North interlocking in the eastward track. This switch and the derail in the spur track south of the Soo Line tracks are equipped with electric switch locks under the control of the Soo Line dispatcher.

5. **At Mulberry Jct.,** a telephone is located on pole adjacent to wye track. Conductors and switch foremen and engineers of light engines before entering Line A must call train dispatcher, Minneapolis, on telephone, and ascertain if all first-class trains due have passed.

6. **At Northtown,** switchtenders' territory extends from Soo Line overhead bridge to three hundred and ten (310) feet east of 33rd Ave. N. E. overhead bridge.

Eastward trains from eastward main line to Line A will not be governed by Stop Sign located east of Soo Line overhead bridge.

7. **Yard Limits—**
First Street North, Minneapolis, to Yard Limit Sign west of Northtown.

8. **Short Clearances—**
At Minneapolis Passenger Station, clearance between track and elevator shafts, tracks 3, 5, 7 and 11 at both ends is not sufficient to permit men riding on side or steps of engines. Enginemen must use care when passing.

At Minneapolis, between Plymouth Ave. North and Broadway Street North, the side clearance along the Omaha delivery track adjoining the main track and between the Omaha delivery and receiving tracks is not sufficient to permit men riding on side of cars at all points.

Northtown, east end D yard, short side clearance between tracks 2 and 3 for distance of two hundred (200) feet from lead. Cars must not be left standing on track 2 within the above distance from lead and all employes should avoid standing between tracks 2 and 3 at that point when cars are moving on both tracks.

9. **Register Stations—**
Minneapolis passenger station.
Northtown.

10. **Register Exceptions—**
At Northtown, first class trains and passenger extras will register by Form 608.

11. **Clearance Exceptions—**
Eastward trains will not require clearance at Northtown if train order signal is in proceed position.

Trains whose runs terminate at N. P. Freight Yard, Minneapolis, may leave Minneapolis passenger station without clearance.

Passenger extras originating, must secure clearance at Minneapolis passenger station.

At First Street North, N. P. Freight Yard, and 14th Ave. North, clearance not required.

12. **Crossovers—**
N. P. Freight Yard, 14th Ave. North, Broadway Street North, Grand Street, Mulberry Jct., Lowry Ave., Northtown.

FOURTH SUBDIVISION.

BETWEEN EAST MINNEAPOLIS AND M. & D. JCT.

1. **Speed Restrictions—**
Between
East Minneapolis and M. & D. Jct. ..... 30 MPH.

2. **Bridge Restrictions—**
Trains handling wrecking cranes 45 to 48 inc. or other wrecking cranes 250 ton or heavier over timber trestles..... 15 MPH.

3. **At East Minneapolis,** normal position of east wye switch, east of Broadway crossing, will be for the Minneapolis Branch main track.

4. **At White Bear Lake, New Yard,** Conductors on transfers moving via Minneapolis Branch will call train dispatcher Minneapolis, on telephone, immediately before departure.

5. **Register Stations—**
East Minneapolis, M. & D. Jct.

6. **Clearance Exceptions—**
At M. & D. Jct. and East Minneapolis clearance not required.

SPECIAL INSTRUCTIONS FOR GREAT NORTHERN FAIR GROUNDS AUTOMATIC INTERLOCKING

Signals for train movements in either direction on either track will not indicate Proceed unless gates are set and properly locked against G. N. trains and the smash board on the route desired is in the Proceed position.

The derail on NP Industry Track is connected to and thrown by the switchstand.

When a train is stopped by a Home or Dwarf signal trainman will go to the crossing, unlock the release box and operate the release after making certain gates are set against G. N. trains.

SPECIAL INSTRUCTIONS FOR 18TH AVE. N. E. MINNEAPOLIS AUTOMATIC INTERLOCKING.

The signals for the G. N. tracks are color light type and for the N. P. track are semaphore type equipped with smashboards.

N. P. trains must Stop within one hundred (100) feet of the home signals and wait for two (2) minutes for time relay to operate before smashboards and signal will indicate Proceed.

If the smashboards do not clear and signal does not indicate proceed after two minutes have elapsed, and no train is approaching on an opposing line, trainman shall go to the crossing and operate the hand release. After operating release, wait two (2) minutes and if the automatic home signal does not indicate Proceed and no immediate crossing train movement is evident, the trainmen at the crossing, after placing themselves in position to flag any train movement on the conflicting line, may hand signal their train to proceed over the crossing.

SPEED TABLE

Time Per Mile Minutes	Seconds	Miles Per Hour	Time Per Mile Minutes	Seconds	Miles Per Hour
0	45	80	1	12	50
0	46	78.3	1	15	48
0	47	76.6	1	20	45
0	48	75	1	25	42.3
0	49	73.5	1	30	40
0	50	72	1	40	36
0	51	70.6	1	45	34.3
0	52	69.2	1	50	32.7
0	53	67.9	2	..	30
0	54	66.6	2	10	27.6
0	55	65.4	2	15	26.6
0	56	64.2	2	20	25.7
0	57	63.1	2	30	24
0	58	62.0	2	40	22.5
0	59	61.0	2	45	21.8
1	..	60	2	50	21.2
1	1	59	3	..	20
1	2	58	3	9	19
1	3	57.1	3	20	18
1	4	56.2	3	31	17
1	5	55.3	3	45	16
1	6	54.5	4	..	15
1	7	53.7	5	..	12
1	8	52.9	6	..	10
1	9	52.1	7	30	8
1	10	51.4	10	..	6

RAILROAD CROSSINGS AND INTERLOCKINGS.

First Sub-Division

C&NW Crossing—Interlocking. Operated by trainmen.
GLOSTER. Soo Line Crossing (Gate).
DULUTH JCT. Soo Line Crossing.

2nd Sub-Division

MISSISSIPPI STREET.
Junction East and West Side Lines—Interlocked.
G. N. CROSSING. Fair Grounds—Automatic interlocking.
ST. ANTHONY PARK JUNCTION.
Junction Lines A and B—Interlocked.
LINE B—PARK JCT.
Minn. Transfer Ry. Crossing—Interlocked.
18TH AVE. SOUTH EAST.
C. M. St. P. & P. Crossing—Interlocked.

3rd Sub-Division

FIRST STREET NORTH. G. N. Crossing.
14TH AVE. NORTH. Soo Line Jct.—Interlocked. (Remotely controlled from Shoreham.)
18TH AVE. NORTH EAST.
G. N. Crossing with Mulberry Line—Automatic Interlocking.
NORTHTOWN. G. N. Crossing.

4th Sub-Division

BELT LINE CROSSING.
Belt Line Crossing—Automatic interlocking.

ST. PAUL UNION DEPOT & MINNESOTA TRANSFER

The Consolidated Code of Operating Rules, Edition of 1959, in addition to the following instructions will govern employes while operating on Minnesota Transfer Railway Co. and St. Paul Union Depot Company trackage:—

(a) All trackage of the Minnesota Transfer Railway Company is defined as a system of tracks within yard limits over which movements must be made at restricted speed and are not authorized by timetable, or train order, but subject to prescribed signals and rules or special instructions.

The limits of The Saint Paul Union Depot Company property extend from connection with the Northern Pacific Ry. and Great Northern Ry. tracks at Third Street and connection with the CMStP&P-CB&Q R.R. tracks opposite depot round-house, on the east, to connection with the CGW Ry. and CMStP&P R.R. tracks at Robert Street on the west.

(b) The time-table of The Saint Paul Union Depot Company is for information only. Employes of railroads using the tracks of this Company will be governed by current time-table of their respective Companies only as to arriving and departing time of trains.

(c) Where in the rules of the Consolidated Code reference is made to trains, such rules will also apply to yard movements and engines.

(d) Under Rule 11, burning fusees must not be used except in case of emergency and then only when held in hand and must be extinguished before leaving.

(e) Under Rule 15, the use of torpedoes is prohibited.

SUPERIORITY OF TRAINS

(f) There is no superiority of trains within the limits of The Saint Paul Union Depot Company property.

MOVEMENT OF TRAINS

(g) Within the limits of The Saint Paul Union Depot Company property trains and engines must move at restricted speed and must not exceed ten (10) miles per hour through crossovers, turnouts and puzzle switches.

The entrance to and all movements on this property will be made only on authority of hand signals from switchtenders. No train or engine may foul any track or puzzle switch without authority of hand signals from switchtenders in control of such movements, except that short interior switching movements may be made through crossovers connecting shed tracks when authorized by train director.

(h) Any lead or track may be used for the make-up of trains on authority of train director. The movement of trains should be given preference.

(i) When indicated by the ringing of the bell, flashing of headlight, hand or light signal that a train or engine is ready to move, the switchtender in charge of the shed track on which the movement is standing will handle as follows: at west end of station the switchtender will control the movement by hand or light signal; at the east end of station the switchtender will inform the train director, who will route the movement by instructions over the public address system. Switchtenders will be governed by these instructions, relaying such instructions by hand or light signal to the next switchtender in the direction of the movement, each must receive an acknowledgment before signalling the movement. Signals must not be acknowledged or acted upon unless the signal corresponds with instructions from the train director and is definitely understood.

(j) When backing, the back-up air brake valve on passenger trains must be operated by the conductor, except in the movement of empty equipment, it may be operated by a competent trainman or yardman. When practicable, conductors must see that trainmen are stationed so hand or light signals may be used, in case of any emergency.

When backing a train, the engine brake valve must be in running position; an application of the brakes must be made with back-up air brake valve before starting and it must be known that the brakes are in operative condition. Movement must not be started until the proper signal is given. A running test must be made with the back-up air brake valve before the train has moved 300 feet; if the running test is not made within 300 feet the engineer must stop the train and ascertain cause. The speed of train must not exceed eight (8) miles per hour and train must be under such control that it can be stopped short of train, or obstruction, and short of bumping post on stub tracks.

(k) Headlights must be dimmed while on shed tracks.

Limit of load measurements based on 52′ cars with 42′ truck centers.

Note—Heights and widths in table allow 6 inches clearance.

MAXIMUM CLEARANCES.

Table is based on open car loading equally divided on either side of center line of car.

		LIMIT OF LOAD—MEASUREMENT — HEIGHT ABOVE TOP OF RAIL								GOVERNING STRUCTURE
		1′0″ Wide	2′0″ Wide	3′0″ Wide	4′0″ Wide	5′0″ Wide	6′0″ Wide	Max. Height	Max. Width	
1st Subdivision	White Bear Lake to 3rd Street Jct., St. Paul	17′ 1″	17′ 1″	17′ 1″	17′ 1″	17′ 1″	17′ 1″	17′ 1″	11′ 0″	Seventh Street Tunnel and Minnehaha Ave. Over Crossing, St. Paul.
1st Subdivision	Stillwater to White Bear Lake	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	12′ 0″	Overhead Highway Bridge M.P. 10 & 1514
2nd Subdivision	3rd St., St. Paul to 19th Ave. South, Minneapolis — W. B.	19′ 2″	19′ 2″	19′ 2″	19′ 2″	19′ 2″	19′ 2″	19′ 2″	12′ 0″	Lafayette Ave. Bridge, Mississippi St. Over Crossing & Tunnels No. 1 & No. 2, St. Paul.
	E. B.	19′ 4″	19′ 4″	19′ 1″	18′ 10″	18′ 8″	18′ 5″	19′ 4″	11′ 6″	
2nd Subdivision	West Side Line, St. Paul — W. B.	18′ 0″	17′ 10″	17′ 8″	17′ 5″	17′ 2″	16′ 11″	18′ 0″	12′ 0″	Westminster Street Tunnel.
	E. B.	18′ 0″	17′ 10″	17′ 8″	17′ 5″	17′ 3″	17′ 0″	18′ 0″	12′ 0″	
2nd Subdivision	East Minneapolis to White Bear Lake via Gloster.	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	12′ 0″	
2nd Subdivision	19th Ave. South to 1st Street North, Minneapolis.	16′ 2″	16′ 1″	16′ 1″	16′ 1″	16′ 1″	16′ 0″	16′ 2″	11′ 0″	First Street So. & Hennepin Ave. Over Crossings.
3rd Subdivision	1st Street North, Minneapolis to Northtown	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	12′ 0″	Northtown–"Soo Line" Over Crss'g
4th Subdivision	M. & D. Jct. to East Mpls. Jct.	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	12′ 0″	Near M. P. 8–"Soo Line" Over Crss'g

		LIMIT OF LOAD—MEASUREMENT — HEIGHT ABOVE TOP OF RAIL							GOVERNING STRUCTURE
		7′0″ Wide	7′6″ Wide	8′0″ Wide	8′6″ Wide	9′0″ Wide	9′6″ Wide	Max. Height	Max. Width	
1st Subdivision	White Bear Lake to 3rd Street Jct., St. Paul	17′ 1″	17′ 1″	17′ 1″	17′ 1″	17′ 1″	17′ 1″	17′ 1″	11′ 0″	Seventh Street Tunnel and Minnehaha Ave. Over Crossing, St. Paul.
1st Subdivision	Stillwater to White Bear Lake	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 2″	20′ 1″	20′ 6″	12′ 0″	Overhead Highway Bridge M.P. 10 & 1514
2nd Subdivision	3rd St., St. Paul to 19th Ave. South, Minneapolis — W. B.	19′ 0″	18′ 10″	18′ 6″	18′ 2″	17′ 9″	17′ 4″	19′ 2″	12′ 0″	Lafayette Ave. Bridge, Mississippi St. Over Crossing & Tunnels No. 1 & No. 2, St. Paul.
	E. B.	18′ 2″	18′ 0″	17′ 11″	17′ 9″	17′ 7″	17′ 5″	19′ 4″	11′ 6″	
2nd Subdivision	West Side Line, St. Paul — W. B.	16′ 8″	16′ 7″	16′ 5″	16′ 3″	16′ 0″	15′ 8″	18′ 0″	12′ 0″	Westminster Street Tunnel.
	E. B.	16′ 9″	16′ 6″	16′ 3″	15′ 10″	15′ 4″	15′ 0″	18′ 0″	12′ 0″	
2nd Subdivision	East Minneapolis to White Bear Lake via Gloster.	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	20′ 6″	12′ 0″	
2nd Subdivision	19th Ave. South to 1st Street North, Minneapolis.	16′ 0″	16′ 0″	16′ 0″	16′ 0″	16′ 0″	16′ 0″	16′ 2″	11′ 0″	First Street So. & Hennepin Ave. Over Crossings.
3rd Subdivision	1st Street North, Minneapolis to Northtown	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	12′ 0″	Northtown–"Soo Line" Over Crss'g
4th Subdivision	M. & D. Jct. to East Mpls. Jct.	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	12′ 0″	Near M. P. 8–"Soo Line" Over Crss'g

		LIMIT OF LOAD—MEASUREMENT — HEIGHT ABOVE TOP OF RAIL							GOVERNING STRUCTURE
		10′0″ Wide	10′6″ Wide	11′0″ Wide	11′6″ Wide	12′0″ Wide	Max. Height	Max. Width	
1st Subdivision	White Bear Lake to 3rd Street Jct., St. Paul	16′ 9″	16′ 2″	15′ 6″	.....	.....	17′ 1″	11′ 0″	Seventh Street Tunnel and Minnehaha Ave. Over Crossing, St. Paul.
1st Subdivision	Stillwater to White Bear Lake	20′ 1″	20′ 1″	20′ 1″	20′ 1″	20′ 1″	20′ 6″	12′ 0″	Overhead Highway Bridge M.P. 10 & 1514
2nd Subdivision	3rd St., St. Paul to 19th Ave. South, Minneapolis — W. B.	16′ 10″	16′ 5″	15′ 10″	15′ 2″	14′ 5″	19′ 2″	12′ 0″	Lafayette Ave. Bridge, Mississippi St. Over Crossing & Tunnels No. 1 & No. 2, St. Paul.
	E. B.	17′ 2″	16′ 10″	16′ 6″	16′ 0″	.....	19′ 4″	11′ 6″	
2nd Subdivision	West Side Line, St. Paul — W. B.	15′ 4″	14′ 10″	14′ 3″	13′ 8″	13′ 0″	18′ 0″	12′ 0″	Westminster Street Tunnel.
	E. B.	14′ 6″	13′ 10″	13′ 3″	12′ 8″	11′ 11″	18′ 0″	12′ 0″	
2nd Subdivision	East Minneapolis to White Bear Lake via Gloster.	20′ 6″	20′ 6″	20′ 6″	20′ 2″	20′ 6″	20′ 6″	12′ 0″	
2nd Subdivision	19th Ave. South to 1st Street North, Minneapolis.	16′ 0″	16′ 0″	16′ 0″	.....	.....	16′ 2″	11′ 0″	First Street So. & Hennepin Ave. Over Crossings.
3rd Subdivision	1st Street North, Minneapolis to Northtown	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	17′ 11″	12′ 0″	Northtown–"Soo Line" Over Crss'g
4th Subdivision	M. & D. Jct. to East Mpls. Jct.	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	18′ 11″	12′ 0″	Near M. P. 8–"Soo Line" Over Crs'g

T. A. GREGORY, Asst. Supt. **R. H. ANDERSON,** Trainmaster **H. J. WALTERS,** Trainmaster **R. O. HAMMERSTROM,** Trainmaster

D. B. LEWIS, Trainmaster **W. D. GRAY,** Trainmaster **S. O. ERICKSON,** Chief Dispatcher