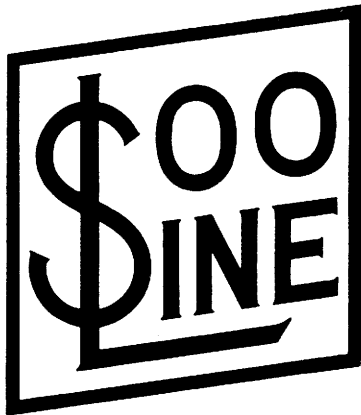


# **SOO LINE RAILROAD COMPANY**

## **WESTERN DIVISION**



### **SPECIAL INSTRUCTIONS and SPEED RESTRICTIONS**

**NO.**

# **SIW-3**

**EFFECTIVE 12:01 A.M.  
CENTRAL STANDARD TIME  
Sunday, December 1, 1974**

**For the government and  
information of employees only.**

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**D. F. KEMMER — Superintendent  
H. A. PETERSON — Director Transportation Operations  
D. M. CAVANAUGH — General Superintendent  
T. R. KLINGEL — Executive Vice President**

## SPECIAL INSTRUCTIONS

**NOTE:** Consolidated Code of Operating Rules numbers correspond to the numbers used in these special instructions.

### **M AMENDED**

Train and engine service employees must not occupy the roof of a freight car or caboose under any circumstances. Other employees whose duties require them to occupy the roof of a car or caboose may do so only when equipment is standing. Employees are prohibited from boarding or riding on either the leading or trailing footboard of engines.

### **2. AMENDED**

Employees in train, engine and yard service, train dispatchers and other employees as may be designated must, while on duty, have a railroad grade watch of 21 or more jewels equipped with lever set unless an approved wrist watch is worn.

Employees governed by time service rules must not wear wrist watches while on duty unless such watches are of an approved type.

Approved type wrist watches are:

Elgin, 13/0 size, 23 jewel, B. W. Raymond model.

Ball, 13 ligne size, 21 jewels, Official R. R. Standard 1604 B model.

Hamilton 505 Electric Railroad Watch.

Bulova Acutron Electric Railroad Approved.

### **5. TIME SHOWN IN TIMETABLE IS CENTRAL STANDARD TIME.**

#### **7(B). AMENDED**

At wrecks one member of train crew will be assigned to give hand signals to the engine handling the wrecker. To avoid confusion and to facilitate compliance with Rule 7 (B) a yellow paddle by day and a yellow light by night will be used to give hand signals to the engineer in the immediate vicinity of wreck. This in no way modifies the requirements of Rule 7(B), or 12.

### **9. AMENDED.**

Reflectorized rigid flags of the prescribed colors are authorized for use by night.

### **11. AMENDED**

A train or engine engaged in spraying operations, when stopped by a lighted fusee, must extinguish the fusee before passing over it.

Lighted fusees must not be thrown off a train or engine engaged in spraying operations in a manner that will cause the spray equipment to pass over it.

### **12. AMENDED**

If the green flag indicating the end of a restriction is inadvertently absent, authority to resume normal speed may be obtained verbally from the train dispatcher who must first ascertain the safety of such permission.

### **14. AMENDED**

If the green flag indicating the end of a restriction is inadvertently absent, authority to resume normal speed may be obtained verbally from the train dispatcher who must first ascertain the safety of such permission.

### **18. Yard engines must display the headlight during daylight hours.**

### **19. QUALIFIED**

Authorized markers:

By night —

Reflectorized rigid flags displaying red to the rear and green to the front.

Flashing lights displaying red to the rear and green to the front.

Lamps displaying red light to the rear and green light to the front and side.

Built in markers displaying red light to the rear.

When train is clear of main track at night in Non-ABS territory, markers must display green to the rear, as prescribed by the Exception to Rule 19.

By day —

Green rigid flags and

Devices authorized by night unlighted or lighted except built in markers must be lighted per Rule 19(B).

## **21. MODIFIED**

Work equipment when run extra and not provided with white lights will display two white flags by day and by night as classification signals.

## **25. ADDITIONAL RULE**

On engines so equipped, oscillating yellow cab roof light must be displayed while engine is running, except when tied up on tie-up track.

On cabooses so equipped, yellow oscillating roof light must be displayed by day and by night when caboose is on the rear of a train.

## **S-71 SUPERIORITY OF TRAINS**

Eastward trains are superior to westward trains of the same class. EXCEPT: See current timetable for exceptions.

## **S-83 (A) AMENDED**

The train register must not be used as evidence of the departure of an extra train. This is in addition to the present requirement of Rule S-83(A).

## **83(A) REGISTER STATIONS**

Conductors will register in train register at stations designated "R" in column 6(A) except:

Hankinson — Trains for which Hankinson is initial or terminal station only.

Minot — Trains for which Minot is initial or terminal station only.

Devils Lake — Trains for which Devils Lake is initial or terminal station only.

Fordville — Trains for which Fordville is initial or terminal station only.

Bisbee — Trains that originate or terminate at that station.

## **83(B) INITIAL CLEARANCE**

Need not be obtained at initial stations designated below —

B.N. Jct.

Geneseo Jct.

Armourdale

Pollock

Egeland

Turn around station established by Form G, Example 6, train order, unless directed by train order to obtain clearance.

## **ADDITIONAL CLEARANCE PROVISIONS**

Burlington Northern Railway trains originating at B.N. Jct. will obtain Soo Line R.R. clearance at Breckenridge.

Burlington Northern Railway trains originating at Geneseo Jct. will obtain Soo Line R.R. clearance at Rutland or Aberdeen.

Westward Sixth Subdivision trains operating beyond Lignite Jct. will obtain B.N. Ry clearance at Portal or Kenmare.

Eastward Sixth Subdivision trains operating beyond Crosby will obtain B.N. Ry clearance at Whitetail or Crosby.

## **91, 91(A), D-91 MODIFIED INSTRUCTIONS FOR SPACING OF TRAINS**

(1) The following instructions apply in Non-ABS territory. Except as affected by Instructions (2) thru (7) all other Operating Rules and Special Instructions remain in effect. They do not relieve trainmen and enginemen from compliance with Rule 99.

(2) Train order signals at open offices will be used to space trains. A train may pass a train order signal indicating STOP at reduced

speed to make a station stop, or to meet a train at the siding beyond the signal, providing track is seen or known to be clear. A train order signal or clearance authorizing a train to proceed does not indicate that main track within yard limits is unoccupied.

(3) Operator must not report a train as having arrived at his station unless the entire train has passed train order signal or train is in clear on siding and operator is so advised by the conductor.

(4) A train which has arrived at an open train order office must not re-enter the main track between that office and the next open office to the rear, except as authorized by train order, or when protected as prescribed by Rule 99.

(5) Operator on duty must space trains 15 minutes apart. Trains must also be spaced 15 minutes apart when moving against the current of traffic.

(6) Trains in the same direction must keep not less than 15 minutes apart, except in closing up at stations.

(7) During stormy and foggy weather, to the extent practicable only one train in the same direction will be permitted to occupy main track between open train order offices. When this is not practicable, trains in the same direction will be spaced not less than 30 minutes apart leaving open train order offices.

## **93. YARD LIMITS**

Glenwood, from 2,450 feet east of extreme east switch to 9,900 feet west of junction switch on Western division and to 4,000 feet west of junction switch on Central division.

Veblen, from west end of main line to 1,500 feet east of east house track switch.

Hankinson, from 4,000 feet east of extreme east switch to 3,000 feet west of extreme west switch on first subdivision and to 5,950 feet west of extreme west switch on seventh subdivision.

Enderlin, from 7,000 feet east of extreme east switch to 7,850 feet west of extreme west switch.

Wimbledon, from 5,000 feet east of extreme east switch to 5,000 feet west of extreme west switch.

Frazier, continuous yard limits between Frazier and Clementsville.

Carrington, from 1000 feet west of the west BN transfer switch to 200 feet east of the extreme east switch.

Harvey, from 4,000 feet east of extreme east switch to 3,000 feet west of extreme west switch.

Drake, on third subdivision, 1,700 feet west of extreme west switch to 1,683 feet east of extreme east switch. On fourth subdivision, 1,680 feet east of extreme east switch. On eighth subdivision, 2,000 feet west of extreme west switch.

Voltaire, from 2,600 feet west of extreme west switch to 500 feet east of extreme east switch.

Siding 466-Minot, from 4,870 feet east of extreme east switch of Siding 466 to 1,232 feet west of M.P. 472.

Kenmare, on third subdivision from 2,500 feet east of extreme east switch to 9,423 feet west of fifth subdivision jct. switch. On fifth subdivision to 9,345 feet east of 5th subdivision jct. switch.

Flaxton, from 3,000 feet east of extreme east switch to 600 feet west of west wye switch on 3rd subdivision and to 4,500 feet west of wye switch on sixth subdivision.

Portal, from international boundary to 3,000 feet east of extreme east switch.

T.R. Falls, from 2,266 feet west of MP 305 to 8,000 feet east of MP 310 on the third subdivision of the Central division, and 6,000 feet west of junction switch on fourth subdivision of Western division.

Forest River, from 5,000 feet east of east house track switch to 5,000 feet west of west house track switch.

Fordville, from 200 feet west of Mile Post 388 on fourth subdivision to 900 feet west of Mile Post 391 on fourth and fifth subdivisions.

Bisbee, from 5,280 feet east of extreme east switch to 5,280 feet west of extreme west switch.

Devils Lake, from 5,280 feet east of East Siding Switch to 6,600 feet west of West Siding Switch.

Rival, Northwest and Lignite Jct. — Continuous yard limits between Rival and Lignite Jct.

Crosby, from B.N. connection trackage west to 3,500 feet west of Soo Line yard switch.

Whitetail, from west end of main track to 1,000 feet east of extreme east switch.

Oakes, from 500 feet east of extreme east switch to 500 feet west of CNW Transfer track switch.

Monango Crossing, from 2,000 feet east of CMSTP&P Railway Diamond to 2,000 feet west of west runaround track switch.

Wishek, from 2,000 feet east of extreme east switch to 2,000 feet west of west wye switch on seventh subdivision and to 2,000 feet west of wye switch on Pollock Line.

Pollock, from extreme west end of main track to 2,640 feet east of extreme east switch.

Bismarck, from extreme west end of yard to 3,584 feet east of westward home signal of interlocking plant B.N. crossing on seventh subdivision and to 8,630 feet east of Jct. switch on eighth subdivision.

Garrison, from 2,100 feet east of extreme east switch to 2,640 feet west of extreme west switch.

Max, on eighth subdivision from 3,000 feet east of extreme east switch to 500 feet west of wye switch. On New Town Line to 500 feet west of wye switch.

Prairie Jct, from 2,000 feet east of extreme east switch to 2,000 feet west of extreme west switch on Max-Newtown Line to extreme west end of main track at Plaza.

New Town, from west end of main track to 2,194 feet east of extreme east switch.

## 98. RAILROAD GRADE CROSSINGS NOTE

† Non-operating approach signals.

†† Operating approach signals that do not indicate condition of the block in advance.

### First Subdivision

Glenwood .....	B.N.	Interlocked
†B.N. Jct. ....	B.N.	Auto. Interlocked
Fairmount .....	C.M. St. P. & P.	Not interlocked
Wyndmere .....	B.N.	Not interlocked
3.7 miles west of Anselm .....	B.N.	Not interlocked

### Second Subdivision

Lucca .....	B.N.	Not interlocked
Rogers .....	B.N.	Not Interlocked
†Wimbledon .....	Clements ville Line	Signals and Gates
Carrington .....	B.N.	Not Interlocked

### Third Subdivision

†Minot .....	B.N.	Interlocked
†1 mile east of Bowbells .....	B.N.	Auto. Interlocked

### Fourth Subdivision

†Warren .....	B.N.	Auto. Interlocked
Ardoch .....	B.N.	Not Interlocked
Forest River .....	B.N.	Not Interlocked
†Conway .....	B.N.	Auto. Interlocked
Sardis, 1.8 miles west .....	B.N.	Not Interlocked
Devils Lake .....	B.N.	Not Interlocked
†Devils Lake, 4.0 miles west .....	B.N.	Auto. Interlocked
Tilden, 3.0 miles west .....	B.N.	Not Interlocked
†Funston, 2.2 miles west .....	B.N.	Auto. Interlocked

### Fifth Subdivision

Alsen, 3.4 miles west .....	B.N.	Not Interlocked
Egeland .....	B.N.	Not Interlocked
Bisbee .....	B.N.	Not Interlocked
Rolette .....	B.N.	Not Interlocked
Omeme .....	B.N.	Not Interlocked
Kramer, 6.5 miles west .....	B.N.	Not Interlocked
Lansford .....	B.N.	Not Interlocked

### Seventh Subdivision

Oakes .....	C. & N.W.	Not Interlocked
Monango Crossing .....	C.M. St. P. & P.	Not Interlocked
1.5 miles east of Moffit .....	B.N.	Not Interlocked
†2.2 miles east of Bismarck .....	B.N.	Auto. Interlocked

### Pollock Line

Madra .....	C.M. St. P. & P.	Not Interlocked
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## 99. FLAG PROTECTION

In Non-Automatic Block Signal Territory, flagman must leave torpedoes and lighted fusee when he returns to his train.

99. On the following subdivisions or lines trains will be governed by the instructions below:

### Subdivision or Line

### Between

First Subdivision	
Veblen Line .....	Veblen Jct. and Veblen
Fourth Subdivision .....	T. R. Falls and Drake
Fifth Subdivision .....	Fordville and Kenmare
Sixth Subdivision .....	Flaxton and Whitetail
Seventh Subdivision .....	Geneseo Jct. and Bismarck
Seventh Subdivision	
Pollock Line .....	Wishek and Pollock
Eighth Subdivision .....	Drake and Bismarck
Eighth Subdivision	
New Town Line .....	Max and New Town

Unless otherwise instructed, protection against following trains as required by Consolidated Code Rule 99 is not required.

If it becomes necessary to operate more than one train in the same direction on the "Subdivision" or "Line" the trains involved will be instructed to provide rear end protection by train order.

## 103C Modified. PLACING CARS NEAR ROAD CROSSINGS.

At Alvarado cars must not be placed closer than 150 feet from the edge of the traveled roadway of Hiway 220.

## 103 (D). MOVEMENT OVER HIGHWAY CROSSING.

Trains or engines with or without cars moving on or from sidings or other auxiliary tracks over a public crossing protected by automatic devices will not obstruct crossing until protective devices are operating a sufficient time to protect the crossing, or the movement is protected by a member of the crew.

#### **104. NORMAL POSITION OF SWITCHES AT JUNCTIONS AND AT END OF DOUBLE TRACK**

Location	Switch Lined For
Veblen Jct. ....	First Subdivision
Hankinson ....	First Subdivision
Drake ....	Third Subdivision
Kenmare ....	Third Subdivision
Flaxton ....	Third Subdivision
Max ....	Bismarck - Drake
Fordville ....	Fifth Subdivision
Wishek ....	Bismarck - Hankinson
Bismarck ....	Seventh Subdivision
Prairie Jct. ....	Max-New Town

NOTE — All trains approach Ashley at reduced speed as main track switch may be lined for Aberdeen main.

**104 (C).** When entering track on which hand operated derail is located at entering end derail must be removed from track before switch is lined for movement.

**104 (G).** Engines will not move onto or over the live rail of track scales.

#### **104 (H). QUALIFIED**

A spring switch must not be operated by hand when wheels are standing on any part of the switch points or before the points have completed their full movement after being trailed through unless the employee is in a position so that no part of him will be struck by the switch handle when it is released from the catch and makes a powerful swing.

#### **105. SIDING CAPACITY**

Siding capacities are based on distance between insulated joints allowing 150 ft. for three unit diesel and 34 ft. for caboose and based on 50 ft. car lengths and allowance of 92 ft. for each highway crossing to be cut.

In a train consisting of ore cars exclusively, figure 25 ft. average car length.

#### **109. ADDITIONAL BULLETIN OR GENERAL ORDER BOARDS**

Breckenridge and Rutland for B.N. Crews operating over Soo Line.

B.N. General Order boards are located at Portal and Kenmare for Soo Line crews operating over the B.N.

#### **213. MODIFIED**

The rear trainman will be furnished a copy of all train orders and clearances on special passenger trains only.

When a train has more than one engine in service, or when an engine is added between terminals, a copy of all train orders and clearances affecting their movement must be furnished to each engineer and conductor.

#### **219. QUALIFIED**

Train Orders must be listed on Clearance in the following sequences:

Previous date orders numerically.

Current date orders numerically.

Slow orders numerically.

Operator will show temperature on upper left hand corner of clearance.

#### **221. TRAIN ORDER SIGNALS**

Hankinson — Governs first subdivision trains only.

Drake, Kenmare — Govern third subdivision trains only.

#### **221. REFLECTORIZED "C"**

Where color light train order signals are in use, absence of light must be regarded as most restrictive indication that can be given by signal, except where train order signal is equipped with reflectORIZED letter "C" which is displayed when office closed. Under such condition, requirement that train obtain clearance on train order signal will not apply.

#### **223. LIGHTS IN TRAIN ORDER SIGNALS**

Lights will not be kept burning in train order signals on 4th, 5th, 6th, 7th, and 8th subdivisions, and on Veblen Line, when operators are not on duty and trains must be governed by day indication of signals.

#### **FORM "Y" TRAIN ORDER QUALIFIED**

The speed restriction specified in a Form Y Train Order applies only during the hours specified in the order.

#### **FORM "Z" RELIEF OF FLAG PROTECTION**

The following example (2) may be used as herein provided.

(2) After 7:01 a.m. Eastward extra trains between H and B except Extra 77 east wait at H until 4:10 p.m.

This example may be used when it is desired to begin relief of protecting against following extra trains after a specified time.

This order must be given to all affected extra trains who may be in, or enter, the limits between the times specified in the order.

Between the times specified in the order, eastward extra trains may not enter or proceed within the specified limits unless excepted as "except Extra 77 east."

When a regular train is to be relieved from protecting against following extra trains, the words "except Extra 77 east" will be omitted.

#### **240 L INDICATION AMENDED**

The "INDICATION" for Rule 240 L as shown in the Consolidated Code of Operating Rules is cancelled and the following "INDICATION" is in effect.

"Proceed on diverging route at restricted speed."

#### **240-W MODIFIED**

Slow orders at the beginning of a subdivision or line will be designated by both the Speed Sign and Restricting Sign on one post.

#### **240-W QUALIFIED**

When a speed zone sign and a restricting sign are mounted on the same post, train will proceed at speed indicated by that sign after entire train has passed it.

#### **655. QUALIFIED**

When the crew of a radio equipped train or engine becomes aware of a distress condition as defined in Rule 655, they will immediately broadcast the word "Emergency" on the radio three times, and then broadcast the details of the condition twice, without waiting for a reply from any other station or train.

After the "Emergency" statement has been issued in the above manner, and it is desired to contact another station or train, the other station or train may then be called in the usual manner.

#### **657 QUALIFIED**

The following verbal forms are guides to compliance with Rule 657.

CALL

Soo Line engineer Extra 735 West, calling No. 82, OVER.

REPLY

Soo Line head brakeman No. 82, OVER.

CALL

Soo Line Trainmaster Jones Harvey calling . . . . . OVER.

(When using a base radio station)

CALL

Soo Line Trainmaster Jones calling Harvey Yard, OVER.

(When using portable radio.)

REPLY

Soo Line operator Harvey Yard, OVER.

CALL

Soo Line yardmaster Glenwood calling Extra 700 East, OVER.

REPLY

Soo Line engineer Extra 700 East, OVER.

**CALL**  
Soo Line Switchman Black Enderlin calling conductor Extra 740 West, OVER.  
**REPLY**  
Soo Line conductor Extra 740 West, OVER.  
**REPLIES**  
Soo Line Switchman Jones, Engine 2113, OVER.  
Soo Line engineer, Engine 2117, OVER.  
Soo Line Section Foreman Jackson at (location), OVER.  
Soo Line Tamber Operator Johnson, OVER.  
Soo Line (equipment) (Name), OVER.

The identification must be made when establishing the communication link and every three (3) minutes during continuous conversation by the same individuals.

#### 710. PASSENGERS ON FREIGHT TRAINS

Employees holding Soo Line passes may be carried in the caboose of freight trains, upon authority from Superintendents of office but only to and from stations where such train are required to stop. The number of passengers must be limited so as not to interfere with crew carrying out their duties.

#### 805(D) AMENDED

Pivoted, rotating or swinging machinery — derricks, cranes, pile-drivers, etc., moving in trains on own wheels will be handled only on instructions of Chief Train Dispatcher. Copy of message authorizing movement must be fastened to each waybill, copy given to engineer and conductor handling in road trains, and copy given to train dispatcher over whose territory machine moves. Conductors of trains handling such machines must not permit trains to proceed without such authority. Machine must be handled in rear of train not more than five cars from Caboose when practicable (See Speed restrictions).

The boom end of the machine must be trailing whether the boom is attached or not.

#### 805(D). QUALIFIED

Handling Work Equipment Cars

Soo Line work equipment and supply cars bearing prefix "X" or "W" must be located on the rear of the train handling, except —

1. Wreckers and wrecker equipment stationed at Schiller Park, Stevens Point, Shoreham and Harvey may be located anywhere in the handling train.
2. Wreckers and wrecker equipment stationed at Thief River Falls, Superior and Marquette may be handled on the head end of handling train, provided total train consist does not exceed 30 cars.
3. Russell Plows, Jordan spreaders and dozer equipment may be handled on head end when in service.
4. Wheel cars X-598, W-1152, W-1153, X-1759, W-1760, X-1761 and X-1762 may be located anywhere in the train handling.

#### 805(E). AMENDED

Poles loaded on flat cars must move within the head 40 cars of trains, and must not be moved in certain trains as designated by local instructions.

#### 806. QUALIFIED

Occupied outfit cars standing on any track will display a yellow signal at each end of the cars.

#### 957. MODIFIED

Signature of person to whom lineup is delivered is not required.

#### TRAIN DEFECT DETECTORS

Location	M.P.	Type	Readout
First Subdivision			
Elbow Lake, Minn.	162.80	Hot Box	Recorder in dispr. office
Second Subdivision			
Lemert, N.D.	359.32	Hot Box	Recorder in dispr. office
Third Subdivision			
Donnybrook, N.D.	509.00	Hot Box	Monitor Display Board
Donnybrook, N.D.	509.00	Dragging Equip.	Monitor Display Board

#### Hot Box Detectors Recorder Type

Hot Box Detectors measure the heat of each journal as it passes the "Detector" and transmits a reading to the train dispatchers' office.

When the reading indicates a hot journal, the train dispatcher will notify the train to stop and inspect a particular journal or journals. Each journal to be inspected will be identified by car count, wheel count (1, 2, 3 or 4) and rail (north or south).

Upon inspection, if the journal does not appear to be hot, open journal cover and check for:

Sufficient oil in journal box

Sufficient oil on pad

Thinning or separation of oil on end of axle

In the event the journal still does not appear to be hot, carefully test for the presence of heat with the bare hand.

If a hot journal is not detected by this examination, carefully inspect for source of heat such as sticking brakes, dragging equipment or traction motor defects.

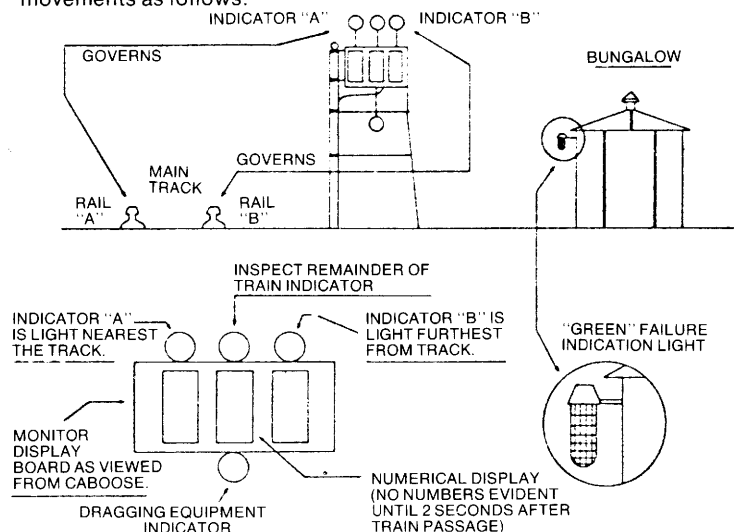
In all cases, the cover of the journal box inspected must be left open and a red "Hot Box" tag attached.

The train dispatcher must be advised the results of the inspection, car initial and number and total cars in train.

When the reading indicates a warm journal, the train dispatcher will notify the train crew to watch the journal closely and identify it by car count, wheel count and rail. When practicable, train crew will advise the train dispatcher the initial and number of car they were notified to watch and the total number of cars in train.

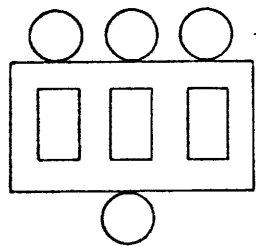
#### DETECTORS WITH MONITOR DISPLAY BOARD

The Monitor Display Board apparatus governs train and engine movements as follows:

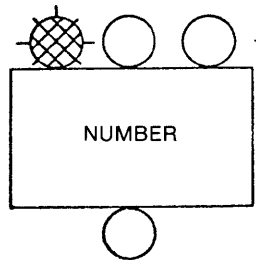


The Green Failure Indication light must be observed prior to & after passage. Should the light go out or be extinguished notify the dispatcher. The green light governs movements in either direction & should be lit at all times.

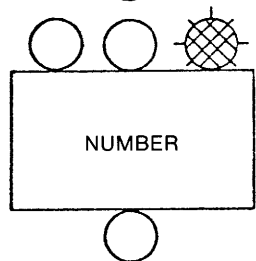
The display board indicating a condition of the actuating train or engine is visible after the movement has passed. The same time a defect is detected a radio will transmit an intermittent tone for 5 seconds to alert the crew to the defect. After passing the Monitor Display Board apparatus, crew members must look back to determine applicable information. Following are possible displays and the information conveyed:



NO HOT BOX OR DRAGGING EQUIPMENT ON TRAIN — INDICATED BY ALL ZERO DISPLAY.



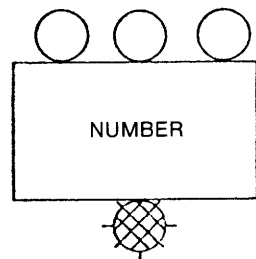
HOT BOX ON SPECIFIED SIDE AT THE INDICATED NUMBER OF AXLES FROM THE REAR OF THE TRAIN.



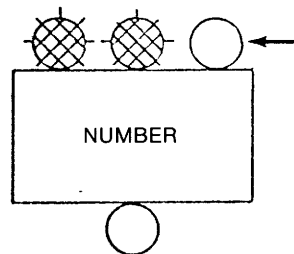
HOT BOX ON SPECIFIED SIDE AT THE INDICATED NUMBER OF AXLES FROM THE REAR OF THE TRAIN.

#### IMPORTANT

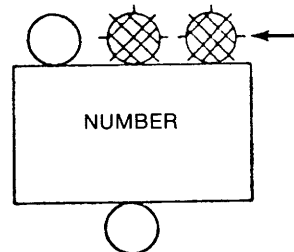
IF HOT BOX IS NOT LOCATED AT INDICATED AXLE, INSPECT TWO CARS ON EITHER SIDE OF THE INDICATED AXLE LOCATION TO PRECLUDE ERROR IN COUNTING AXLES.



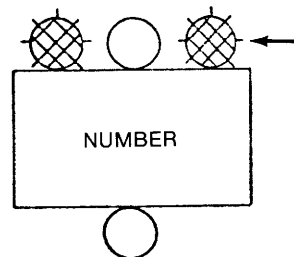
DRAGGING EQUIPMENT INDICATED AT THE INDICATED NUMBER OF AXLES FROM THE REAR OF THE TRAIN. MORE THAN ONE DRAGGING DEFECT MAY EXIST. INSPECT FROM THE INDICATED AXLE LOCATION TO THE REAR OF THE TRAIN.



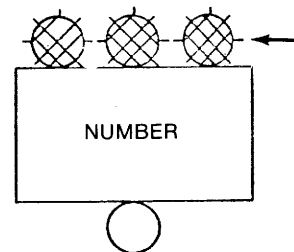
HOT BOX ON SPECIFIED SIDE AT THE INDICATED NUMBER OF AXLES FROM THE REAR OF THE TRAIN. ONE OR MORE ADDITIONAL HOT BOXES ON SAME SIDE — INSPECT FROM THE INDICATED AXLE LOCATION TO THE REAR OF THE TRAIN.



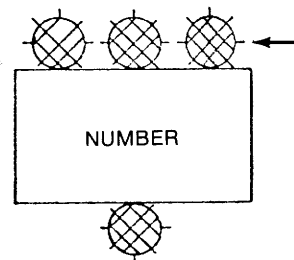
HOT BOX ON SPECIFIED SIDE AT THE INDICATED NUMBER OF AXLES FROM THE REAR OF THE TRAIN. ONE OR MORE ADDITIONAL HOT BOXES ON SAME SIDE — INSPECT FROM THE INDICATED AXLE LOCATION TO THE REAR OF THE TRAIN.



ONE HOT BOX ON EACH SIDE OF TRAIN. THE FIRST HOT BOX OCCURRED AT THE INDICATED NUMBER OF AXLES FROM THE REAR OF THE TRAIN. DETERMINE WHICH SIDE HAS THE FIRST HOT BOX. TO LOCATE THE SECOND HOT BOX, INSPECT OPPOSITE SIDE OF THE TRAIN FROM THE INDICATED AXLE LOCATION TO THE REAR OF THE TRAIN.



MORE THAN ONE HOT BOX ON ONE OR BOTH SIDES OF THE TRAIN. LOCATE HOT BOX AT THE INDICATED AXLE LOCATION AND INSPECT BOTH SIDES OF THE TRAIN FROM INDICATED AXLE LOCATION TO REAR OF THE TRAIN TO LOCATE ADDITIONAL HOT BOXES.



DRAGGING EQUIPMENT INDICATED IN ADDITION TO THREE OR MORE HOT BOXES OR ADDITIONAL DRAGGING DETECTIONS. LOCATE ABNORMALITY AT INDICATED AXLE LOCATION FROM REAR OF THE TRAIN. INSPECT BOTH SIDES OF THE TRAIN FROM INDICATED AXLE LOCATION TO REAR OF THE TRAIN FOR ADDITIONAL HOT BOXES AND DRAGGING EQUIPMENT.

Upon receiving any indication of a hot box or dragging equipment, stop must be made immediately, dispatcher notified and inspection made.

# ADDITIONAL STATIONS

Station Number	Switch at:	Mile Post Locations
<b>SECOND SUBDIVISION:</b>		
4348	Siding 348 . . . . . Both ends	348.8
<b>THIRD SUBDIVISION:</b>		
4464	Bison Spur . . . . . West end	463.6
4465	Minot Gravel Pit . . . . . East end	464.9
<b>FOURTH SUBDIVISION:</b>		
6051	Spur No. 357 . . . . . East end	357.3
6070	Ops . . . . . Both ends	376.5
<b>FIFTH SUBDIVISION:</b>		
6161	Arndt . . . . . East end	467.6
6502	Barks Spur between Egeland and Pasha . . . . . East end	463.0
6225	Spur 531 . . . . . East end	531.9
6258	Wiley . . . . . East end	563.0
6265	Chola . . . . . East end	572.0
<b>SIXTH SUBDIVISION:</b>		
4718	Columbus . . . . . East end	On BN Joint track
4720	Larson . . . . . Various	On BN Joint track
4721	Larson Mine . . . . . Both ends	On BN Joint track
4729	Noonan N.D. . . . . Various	On BN Joint track
4776	Westby Gravel Pit . . . . . East end	617.8
<b>SEVENTH SUBDIVISION:</b>		
8203	Stewartdale . . . . . West end	408.7
<b>POLLOCK LINE</b>		
8353	Herreid Gravel Pit . . . . . West end	394.3
<b>EIGHTH SUBDIVISION:</b>		
8256	Merida . . . . . Both ends	521.5
8216	Reclamation Spur . . . . . West end	558.1

# SPEED RESTRICTIONS

	Miles Per Hour
ALL SUBDIVISIONS	All Trains
Over SPRING SWITCHES FACING POINT LOCKED, in moving against the points when set to diverge or trailing through, except where specifically restricted to a slower speed . . . . .	25
Through dual control switches when diverging . . . . .	20
Through crossovers and through switches, except where another speed is prescribed . . . . .	10
Approaching "19" indication train order signal until rear of train has passed . . . . .	30
TRAINS HANDLING ORE CARS AND AIR DUMP CARS Number W1401 - W1402 - W1404 - X1401 - X1402 - X1403 - X1404 On 1st, 2nd and 3rd subdivisions: . . . . . On 4th, 5th, 6th, 7th and 8th subdivisions: . . . . .	30 25
*TRAINS HANDLING PIVOTING MACHINERY ON ITS OWN WHEELS, steam derricks, pile drivers, cranes, etc. On 1st, 2nd and 3rd subdivisions: Steam wreckers . . . . . *Other pivoting machines . . . . . On 4th, 5th, 6th, 7th, 8th subdivisions and on Veblen Line: Steam wreckers . . . . . *Other pivoting machines . . . . .	40 25 Frt. Speed 20
Trains handling 300, 350, 2100 or 2360 series engines in trains . . . . .	40
Trains handling scale test car, except Soo Line X-870 . . . . .	25

\*Loco. cranes X-81, DS-823, and W-53, speed shown applies only when heavy end of crane is forward. Tender of crane must be ahead and trailer-flat behind crane. When lined up otherwise, speed must be prescribed as directed by time table Rule 805.

	Miles Per Hour
FIRST SUBDIVISION	All Trains
MAXIMUM SPEED	40
EXCEPTIONS:	
MP 178.9 — BN Ry Crossing, between absolute signals . . . .	20
Hankinson—over Cannon St., 1st crossing west of depot and through First Subdivision turnout . . . . .	10
VEBLEN LINE	20
<b>SECOND SUBDIVISION</b>	
MAXIMUM SPEED	40
EXCEPTIONS:	
Enderlin, Broadway Street crossing (first street west of depot)	10
Valley City — on Uptown Track over first curve crossing highway and two curves at bridge . . . . .	5
MP 294.0 to 297.0 — Between Valley City and Rogers . . . .	30
WIMBLEDON — All transfer tracks and track to Frazier . . .	5
Wimbledon to Clementsville . . . . .	10
MP 314.5 Wimbledon — Clementsville Line Crossing to Third Street (first street west of depot) . . . . .	20
MP 330.7 Kensal, trains using siding over first crossing east of depot . . . . .	5
MP 370 to MP 373 — Between Cathay and Fessenden . . . . .	35



	Miles Per Hour
THIRD SUBDIVISION	All Trains
MAXIMUM SPEED	40
EXCEPTIONS:	
Harvey — Hiway 3 crossing	10
Drake — Lake St. crossing (first crossing east of depot)	25
MP 468.0 to 469.2 — In Minot Yard between 9th Street and west absolute Signal BN Crossing	10
Minot — 13th Street S.E. Crossing	25
MP 529.9 — BN Crossing, Bowbells, one Mi. E. of station, between absolute signals	20
FOURTH SUBDIVISION	
MAXIMUM SPEED	35
EXCEPTIONS: MP 337.9 — BN Crossing, Warren between absolute signals	20
MP 348.1 — Over Boundary and Marshall Streets Alvarado	5
MP 379.8 — BN Crossing, Conway, between absolute signals	20
MP 391.0 — Fordville Junction Switch	10
MP 395.8 — Over Bridge W-396-A, 2 miles east of Dahlen . (Enginemen must avoid application of brakes while any part of train is on bridge.)	10
MP 406.9 — Highway Crossing, Whitman	20
MP 415.8 — Sardis, between house track switches	10
MP 441.3 — Devils Lake, from road crossing 1220 feet east of east siding switch to road crossing 4300 feet west of west siding switch	10
MP 445.3 — BN Crossing, 4 miles west of Devils Lake between absolute signals	20
MP 515.3 — BN Crossing, 2.2 miles west of Funston between absolute signals	20
FIFTH SUBDIVISION	
MAXIMUM SPEED	35
EXCEPTIONS:	
MP 409.2 — Adams, over highway 17 crossing west of depot	10
MP 418.3 — Fairdale, over Main Street crossing west of depot	5
MP 461.0 to 482.7 between Egeland and Armourdale	20
KENMARE — Over 4th street NW crossing	10
Over 6th street N.W. crossing	25
SIXTH SUBDIVISION	
MAXIMUM SPEED	35
EXCEPTIONS:	
MP 541.0 to MP 551.2 — Between Flaxton and Lignite Jct.	20
MP 590.8 Ambrose — State Highway No. 42 Crossing	10
MP 582 to MP 591 — Between Crosby and Ambrose	20
MP 632.6 to MP 677.6 Between Comertown and Whitetail	20
Columbus Spur, Highway No. 5 — Stop on track circuit, 75 feet from crossing. Proceed when crossing signals operate	

	Miles Per Hour
SEVENTH SUBDIVISION	All Trains
MAXIMUM SPEED	40
EXCEPTIONS:	
MP 284.9 to MP 313.8 — Between Norway and Fredonia	20
Lehr — Over main street and highway No. 30 crossings	10
Burnstad — Over street crossing located just east of depot. Eastward trains only	10
MP 356.5 to 420.1 — Between Burnstad and Bismarck	20
MP 418.0 — BN Crossing, 2.2 mi. E. of Bismarck between absolute signals	10
POLLOCK LINE	
MAXIMUM SPEED	20
EIGHTH SUBDIVISION	
MAXIMUM SPEED	40
EXCEPTIONS:	
MP 418 to MP 446 between Drake and Ruso	35
MP 435.3 — Butte, Street crossing east of depot	10
MP 448.7 — Ruso, highway No. 41 crossing	20
MP 467 to MP 471 between Max and Garrison	35
Garrison — First crossing east of depot	10
Underwood — Over Lincoln Ave	5
MP 518 to MP 521.5 between Washburn and Merida	35
MP 521.5 to MP 532 between Merida and Wilton	30
NEW TOWN LINE	
MAXIMUM SPEED	35
EXCEPTIONS:	
MP 467 to MP 502 — Between Max and Plaza	20
MP 517 to MP 530 between Parshall and New Town	30

#### ENGINE RESTRICTIONS

1st Subdivision — Locomotives in 800 series will not be operated between Veblen Jct and Veblen.

2nd Subdivision — Locomotives in 700 and 800 series will not be operated between Wimbledon and Clementsville.

3rd Subdivision — At Drake locomotives cannot be operated beyond clearance point of track 15 (loading platform track).

Locomotives or cars must not be handled in trains when a wheel has a flat spot in excess of two and one half inches or there are two or more adjoining flat spots each two inches or more in length on a wheel.

When equipment as described above is found, the train must be stopped immediately and the dispatcher notified.

Be governed by instructions issued by the train dispatcher.

#### HIGH CAPACITY TANK AND HOPPER CARS — WEIGHT AND SPEED RESTRICTIONS

When handling high capacity tank and hopper cars in trains and the gross weight of a car exceeds the Published Load Limit of 200,000 pounds, cars may be handled with a gross weight up to 263,000 pounds, observing the following speed restrictions:

Location:	Maximum Speed:
Armourdale Line	10

ROSTER OF LOCOMOTIVES			
Road No.	Unit HP	Bldr.	Model
204A	1,500	EMD	F3
212A-214A	1,500	EMD	F7
212B-214B	1,500	EMD	F7
300-301	1,000	EMD	NW2
320	600	EMD	SW1
321-328	1,200	EMD	SW1200
350-352	1,000	Alco	RS1
371	1,500	Alco	RSC2
375-378	1,500	EMD	GP7
381-383	1,500	EMD	GP7
400-414	1,750	EMD	GP9
415-416	2,400	Alco	DL640
500A-503A	1,500	EMD	FP7
501C-503C	1,500	EMD	F7
504-505	1,500	EMD	FP7
550-558	1,750	EMD	GP9
700-721	2,250	EMD	GP30
722-731	2,500	EMD	GP35
732-735	3,000	EMD	GP40
*736-774	3,000	EMD	SD40
*800-809	3,000	GE	U30C
2108	1,000	EMD	NW2
2110	1,000	Alco	S2
2111-2115	1,200	EMD	SW9
2117-2119	1,200	EMD	SW9
2120-2127	1,200	EMD	SW1200
2200A, 2200B	1,500	EMD	F3
2200C	1,500	EMD	F3
2201A-2203A	1,500	EMD	F7
2201B-2203B	1,500	EMD	F7
2201C-2204C	1,500	EMD	F7
2225A-2230A	1,500	EMD	F7
2225B-2230B	1,500	EMD	F7
2361	1,000	Alco	RS1
*2381	1,750	EMD	SD9
2400-2413	1,750	EMD	GP9
2500A-2501A	1,500	EMD	FP7
2500C-2501C	1,500	EMD	F7
2550-2556	1,750	EMD	GP9

\*Six-axle, six-motor

FIRST THRU SIXTH SUBDIVISIONS							
LOCOMOTIVE RATING IN TONS OF 2,000 POUNDS BETWEEN ENGINE AND CABOOSE							
WESTWARD		HORSEPOWER					
From	To	6 Axle	4 Axle	2500			
		3000	3000	2400 2250	1750	1500	1200
Glenwood . . . .	Hankinson . . . .	7900	6550	5925	4800	3950	2725
Hankinson . . . .	Enderlin . . . .	9500	7850	7125	5760	4750	3275
Enderlin . . . .	Siding 280 . . . .	4800	4000	3600	3000	2400	1500
Siding 280 . . . .	Valley City . . . .	9500	7850	7125	5760	4750	3275
Valley City . . . .	Rogers . . . .	4800	4000	3600	3000	2400	1500
Rogers . . . .	Bordulac . . . .	6600	5450	4950	4000	3300	2225
Bordulac . . . .	Harvey . . . .	7900	6550	5925	4800	3950	2725
Harvey . . . .	Drake . . . .	7600	6300	5700	4600	3800	2525
Drake . . . .	Balfour . . . .	6200	5150	4650	3900	3100	2050
Balfour . . . .	Kenmare . . . .	7400	6100	5550	4560	3700	2525
Kenmare . . . .	Bowbells . . . .	5000	4150	3750	3100	2500	1675
Bowbells . . . .	Portal . . . .	7600	6300	5700	4560	3800	2525
Flaxton . . . .	Dooley . . . .				3685	3100	2225
Dooley . . . .	Whitetail . . . .				2600	2250	1500
Veblen Jct. . . .	Rosholt . . . .				3850	3400	2800
Rosholt . . . .	New Effington . . . .				2600	2250	1650
New Effington . . . .	Hammer . . . .				2340	2100	1250
Hammer . . . .	Veblen . . . .				3500	3200	2100
T.R. Falls . . . .	Conway . . . .				5050	4200	
Conway . . . .	Adams . . . .				3800	3000	
Adams . . . .	Hurd . . . .				5050	4200	
Hurd . . . .	Tolley . . . .				3500	2800	
Tolley . . . .	Kenmare . . . .				4400	4000	
Fordville . . . .	Whitman . . . .				2950	2600	
Whitman . . . .	Harlow . . . .				3950	3600	
Harlow . . . .	Baker . . . .				3850	3500	
Baker . . . .	Drake . . . .				3750	3400	

## FIRST THRU SIXTH SUBDIVISIONS

### LOCOMOTIVE RATING IN TONS OF 2,000 POUNDS BETWEEN ENGINE AND CABOOSE

EASTWARD		HORSEPOWER					
From	To	6 Axle	4 Axle	2500			
		3000	3000	2400 2250	1750	1500	1200
Portal	Drake	9200	7350	6650	5540	4600	3350
Drake	Harvey	9600	7650	6950	5780	4800	3475
Harvey	Kensal	9000	7450	6750	5520	4500	3125
Kensal	Valley City	11000	10000	8250	6760	5500	3800
Valley City	Siding 280	4800	3800	3450	2900	2300	1575
Siding 280	Enderlin	11000	10000	8250	6760	5500	3800
Enderlin	Nashua	9500	7850	7125	5760	4750	3275
Nashua	Glenwood	8300	6850	6225	5040	4150	2850
Whitetail	Dooley				2500	2100	1300
Dooley	Fortuna				3800	3100	2125
Fortuna	Crosby				4000	3250	2225
Crosby	Rival				4500	4000	2950
Rival	Flaxton				5800	4500	3300
Veblen	Hammer				3800	3100	2100
Hammer	Rosholt				4600	3800	2500
Rosholt	LaMars				5450	4450	2750
LaMars	Veblen Jct				6000	5000	3850
Drake	Baker				4100	3500	
Baker	Harlow				4300	3600	
Harlow	Essex				4750	4000	
Essex	Whitman				4950	4400	
Whitman	Fordville				5900	5200	
Kenmare	Norma				2950	2450	
Norma	Grano				3500	2900	
Grano	Overly				4850	4000	
Overly	Agate				4350	3600	
Agate	Loma				5200	4300	
Loma	Fairdale				4700	3350	
Fairdale	Warren				8850	6200	
Warren	T.R. Falls				5300	4200	

NOTE: These ratings are for single units.

Locomotive Ratings in tons of 2,000 pounds for 2250, 2400, and 2500 horsepower units is 150% of the ratings for 1500 horsepower units.

## SEVENTH AND EIGHTH SUBDIVISIONS

### LOCOMOTIVE RATING IN TONS OF 2,000 POUNDS BETWEEN ENGINE AND CABOOSE

		HORSEPOWER		
From	To	1750	1500	1200
Hankinson	Nicholson	3400	3000	2125
Nicholson	Oakes	3100	2700	1575
Oakes	Merricourt	3800	3300	1950
Merricourt	Wishek	3000	2600	1550
Wishek	Napoleon	3500	3100	1775
Napoleon	Bismarck	4000	3500	2000
Wishek	Ashley	3500	3100	1800
Ashley	Madra	3300	2900	1650
Madra	Pollock	3800	3400	2125
Drake	Max	3300	2900	1650
Max	Coleharbor	3900	3450	2475
Coleharbor	Washburn	3100	2700	1950
Washburn	Wilton	2100	1800	1300
Wilton	Arnold	2600	2300	1650
Arnold	Bismarck	5700	5000	3850
Max	Ryder	3800	3300	1950
Ryder	New Town	3900	3400	2125

### EASTWARD

From	To			
Bismarck	Braddock	2400	2100	1525
Braddock	M.P. 356.6	3800	3300	1950
M.P. 356.6	Wishek	3700	3200	2300
Wishek	Guyson	2600	2300	1600
Guyson	Merricourt	3900	3400	2450
Merricourt	Oakes	4500	4000	2950
Oakes	Nicholson	4000	3450	2450
Nicholson	Hankinson	5300	4900	3125
Pollock	Ashley	3000	2600	1575
Ashley	Wishek	3800	3400	2125
Bismarck	Wilton	2400	2000	1500
Wilton	Underwood	2900	2500	1800
Underwood	Max	3000	2600	1850
Max	Ruso	3700	3300	2350
Ruso	Butte	5200	4500	3175
Butte	Drake	6300	5600	3500
New Town	Prairie Jct.	3500	3100	1775
Prairie Jct.	Ryder	3800	3300	1950
Ryder	Max	3700	3300	2350

NOTE: These ratings are for single units.

Locomotive ratings in tons of 2000 pounds for 2250, 2400, and 2500 horsepower units is 150% of the ratings for 1500 horsepower units.

## COMPANY SURGEONS

LOCATION	NAME	TITLE
Minneapolis . . . . .	Dr. W. W. Weber . . . . .	Medical Advisor
Minneapolis . . . . .	Dr. M. C. L. Hansen . . . . .	Medical Advisor
Minneapolis . . . . .	Dr. D. Kjellsen . . . . .	Exmg. Surgeon
Minneapolis . . . . .	Dr. R. Scott . . . . .	Exmg. Surgeon
Glenwood . . . . .	Dr. G. E. Lee . . . . .	Exmg. Surgeon
Glenwood . . . . .	Dr. J. Reinhart . . . . .	Exmg. Surgeon
Valley City . . . . .	Dr. Warren R. Jensen . . . . .	Local Surgeon
Fessenden . . . . .	Dr. M. J. Towarnicky . . . . .	Exmg. Surgeon
Drake . . . . .	Dr. B. Z. Hordinsky . . . . .	Exmg. Surgeon
Velva . . . . .	Dr. R. S. Larson . . . . .	Local Surgeon
Minot . . . . .	Dr. R. Sorenson . . . . .	Exmg. Surgeon
Wishek . . . . .	Dr. L. Galang . . . . .	Exmg. Surgeon
Bismarck . . . . .	Dr. S. B. Girard . . . . .	Exmg. Surgeon
Bismarck . . . . .	Dr. Phillip O. Dahl . . . . .	Exmg. Surgeon
Parshall . . . . .	Dr. R. Blatherwick . . . . .	Local Surgeon
T. R. Falls . . . . .	Dr. G. B. Martin . . . . .	Exmg. Surgeon
T. R. Falls . . . . .	Dr. G. T. Van Rooy . . . . .	Exmg. Surgeon
T. R. Falls . . . . .	Dr. L. Herber . . . . .	Exmg. Surgeon
Devils Lake . . . . .	Dr. J. C. Fawcett . . . . .	Local Surgeon
Devils Lake . . . . .	Dr. L. F. Pine . . . . .	Exmg. Surgeon
Garrison . . . . .	Dr. Kenneth O. Leonard . . . . .	Exmg. Surgeon
Enderlin . . . . .	Dr. W. Palmer . . . . .	Exmg. Surgeon

## TRAIN DISPATCHERS — ENDERLIN, N. D.

D.E. Steinhaus  
J. O. Van Deusen  
G. L. Rud

W.O. Glaesemann  
D. J. Herzog  
R.E. Gabel  
H. L. Rinowski

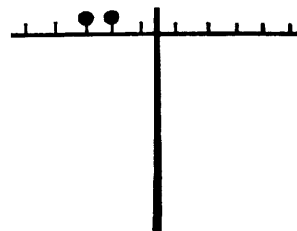
## DIVISION OFFICERS

D. F. Kemmer  
D. R. Engle  
P. L. Ingebretson  
W. M. Iverson  
C. D. Brazel  
F. R. Conklin  
R. E. Voigt

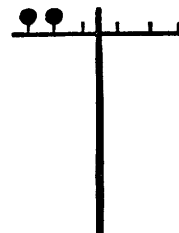
Superintendent  
Trainmaster  
Trainmaster  
Asst. Trainmaster-Agent  
Chief Train Dispatcher  
Asst. Engineer  
Asst. Engineer

Enderlin, N. D.  
Enderlin, N. D.  
Harvey, N. D.  
Minot, N. D.  
Enderlin, N. D.  
Enderlin, N. D.  
Harvey, N. D.

## DISPATCHER'S PHONE WIRES (Face in the direction named)



LOOK WEST  
GLENWOOD TO FAIRMOUNT



LOOK WEST  
FAIRMOUNT TO PORTAL



**JUDGING SPEED**

Accurate judgment of coupling speed depends upon correct timing. An excellent way to get accurate timing without a watch is to count "one hundred and thirty-one, one hundred and thirty-two" and so on as the car passes a stationary point. With a little practice counting can be done at the rate of one a second.

Ability to closely estimate speed at time car strikes is extremely important because impact force builds up as the square of the speed. This means that impact delivered by a car coupled at 8 miles per hour is not four times that at 2 miles per hour, but 16 TIMES AS GREAT. Damage to freight or car can be avoided by always keeping coupling speed within the safe range — NOT OVER 4 MILES PER HOUR — A BRISK WALK.

**IMPACT FORCE AT VARIOUS STRIKING SPEEDS**

Car Coupled at		Units of Destructive Force
Safe	1 mph	1
	2 mph	4
	3 mph	9
	4 mph	16
Damaging	5 mph	25
	6 mph	36
	7 mph	49
	8 mph	64
	9 mph	81
	10 mph	100

**SPEED CARD****To Find Coupling Speed of 40 Foot and 50 Foot Car**

	40 Foot Car		50 Foot Car	
	Seconds	Miles Per Hour	Seconds	Miles Per Hour
Sight vertical end of car body on a fixed point and note the number of seconds it takes car to pass. Speed in miles per hour is shown opposite.  Damage as a result of Rough Handling makes up a large part of the claim bill for Loss and Damage to Freight. From the Railroad standpoint it is the major item in the expense. We all know that Rough Handling can be reduced, often eliminated. It is hoped that this card will be helpful in your efforts to prevent Rough Handling.  Switch Crews must function as a team. Clear signals properly given are mighty important; talk it over — prevent Rough Handling — it can be done.	1.....	28	....	35
	2.....	14	....	17.5
	3.....	9.3	....	11.6
	4.....	7	....	8.7
	5.....	5.6	....	7
	6.....	4.7	....	5.9
	7.....	4	....	5
	8.....	3.5	....	4.4
	9.....	3.1	....	3.9
	10.....	2.8	....	3.5
	11.....	2.5	....	3.1
	12.....	2.3	....	2.9
	13.....	2.15	....	2.7
	14.....	2	....	2.5