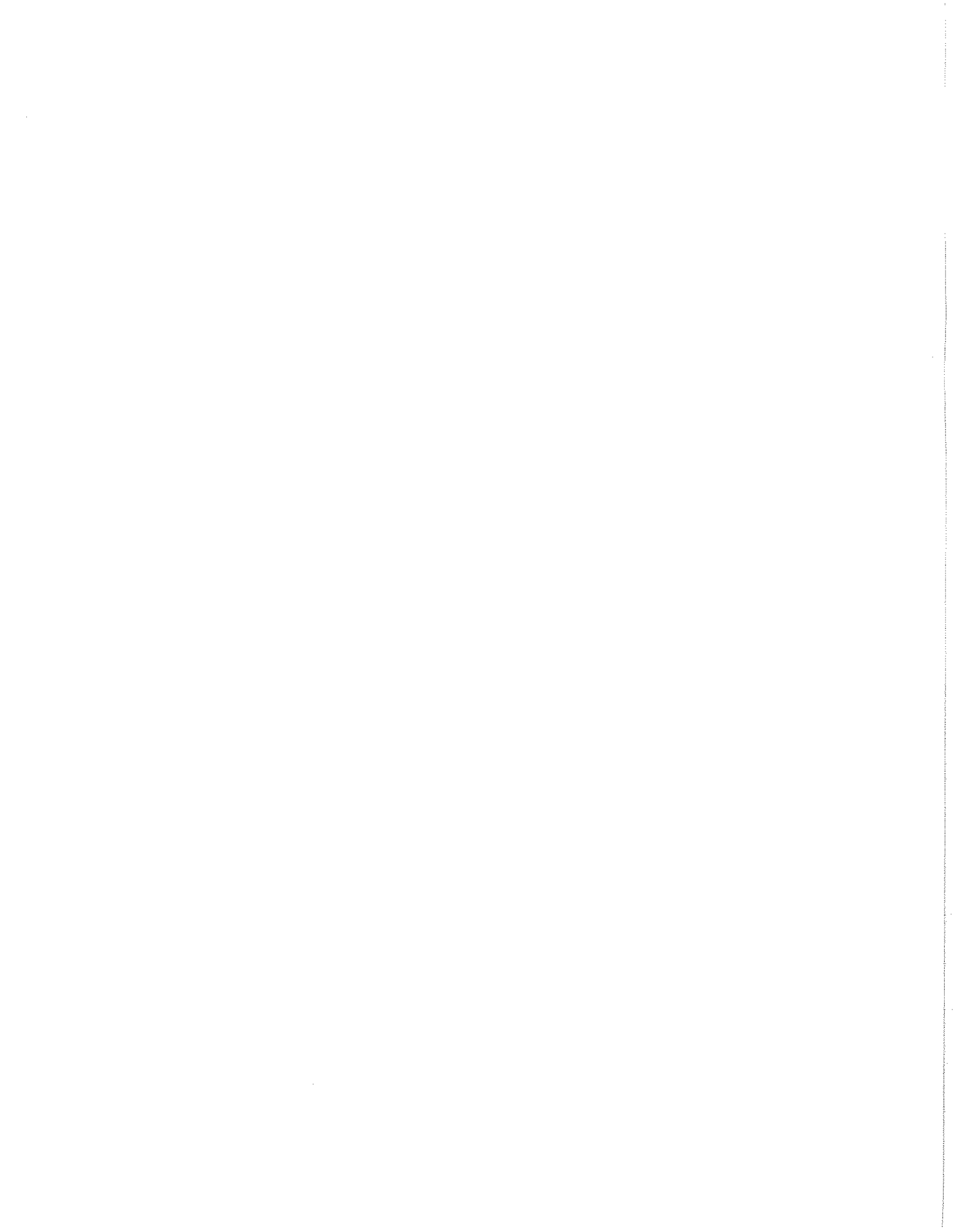


DCA11FR002  
Collision - BNSF  
Red Oak, Iowa  
April 17, 2011

BNSF  
System Special Instructions  
No. 1  
Effective April 7, 2010



## BNSF Railway Safety Vision

We believe every accident or injury is preventable. Our vision is that BNSF Railway will operate free of accidents and injuries. BNSF Railway will achieve this vision through:

**A culture** that makes safety our highest priority and provides continuous self-examination as to the effectiveness of our safety process and performance...

**A work environment**, including the resources and tools, that is safe and accident-free where all known hazards will be eliminated or safe-guarded...

**Work practices and training** for all employees that make safety essential to the tasks we perform...

**An empowered work force**, including all employees, that takes responsibility for personal safety, the safety of fellow employees, and the communities in which we serve.

This version contains the following revised, deleted or added pages:

**April 7, 2010:** 31, 32.

**May 21, 2010:** 27, 28, 39, 40.

**June 21, 2010:** 19, 20.

**December 14, 2010:** 23, 24, 35, 36, 51, 52.

**January 14, 2011:** 29, 30.

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**March 1, 2011:** 3, 4, 7, 8, 49, 50, 50a (Added/Revised), 50b (Added/Revised),

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## System Special Instructions

### All Subdivisions No. 1

In Effect at 0001  
Central, Mountain and Pacific  
Continental Time

**April 7, 2010**  
(Including revisions through  
March 28, 2011)

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In the individual division timetables, the number at the bottom of the schedule column entitled "Miles to Next Station" indicates total miles on the subdivision.

**1. Speed Restrictions**

All speeds are subject to modification by speed restrictions indicated under individual subdivision special instructions.

Passenger trains will be governed by freight train speed if passenger train speed is not specified under individual subdivision special instructions.

All trains consisting entirely of passenger equipment as well as locomotives without cars (light engines) will be considered passenger trains and may operate at passenger speeds where provided. This includes Amtrak, commuter trains, business cars and passenger equipment modified to serve as track inspection, track geometry or similar test cars. Refer to 1(B) regarding maximum authorized speed of engines (locomotives).

Unless defined differently in the individual subdivision special instruction, tons per operative brake (TOB) is defined as the gross trailing tonnage of the train divided by the total number of control valves.

**Maximum Speeds Permitted**

Freight trains up to 100 TOB .....	60 MPH
Trains 100 TOB and over .....	45 MPH
Trains handling empty cars (excluding intermodal equipment).....	55 MPH

(See SSI Item 1C for intermodal equipment speed rules)

**Exceptions:**

1. Passenger/commuter equipment.
2. Empty coal trains may operate at a maximum authorized speed of 60 MPH if train list indicates no speed restricted equipment in train.

On sidings .....20 MPH  
(Unless a different speed is indicated in the division timetable).

Key trains .....	50 MPH
Key trains on sidings .....	10 MPH
Trains moving in non signaled territory.....	49 MPH
Trains moving against current of traffic .....	49 MPH
Solid consist of military equipment.....	55 MPH

Trains handling loaded tank car(s)  
containing materials that require the notation "Poison (Toxic)-Inhalation Hazard" and "Inhalation Hazard"..... 50 MPH

Inhalation Hazard (IH) trains operating on those subdivisions identified in System Special Instructions Item 38 .....

.....	35 MPH
-------	--------

Trains and engines through turnouts.....	10 MPH
On tracks other than main tracks and sidings .....	10 MPH
Within Mechanical Department limits .....	5 MPH
Movements on or off turntables.....	1 MPH
Trains with welded rail loaded in open end gondolas.....	45 MPH

Speed restrictions posted inside the locomotive cab of foreign railroad locomotives which are less than that indicated in special instruction 1(B) only apply when locomotive is utilized as a lead, controlling locomotive.

<b>Equipment.....</b>	<b>Main .....</b>	<b>Branch .....</b>
Roadrailer equipment (loaded or empty).....	60 MPH	60 MPH
AMTK 1400 through AMTK 1569 (Material Handling Cars) .....	60 MPH	60 MPH
Flat cars, empty, NP 580400-580739 .....	50 MPH	50 MPH
Flatcars OTTX (loaded or empty) 90380-90446, 90911, 90933-91394, 91517, 91576-91592, 91628, 91735-91823, 92072-92350, 92678-92688, 92757, 93297, 93337, 93561-93563, 93745-93811, 94070-94114, 97052-97054, 97060-97201, 97244-97245, 97282-97312, 97351, 97394-97785, 97792-97937 .....	45 MPH	45 MPH
Gondolas: empty cars picked up en route and not on conductor's wheel report or work order.....	50 MPH	50 MPH
Gondolas: loaded and empty PC 598500 through 598999, CR 598500 through 598990 SP 345000 through 345699 .....	45 MPH	45 MPH
Gondolas: empty KCS 801011 through 802930 CR 576026 through 579245 .....	45 MPH	45 MPH
Balfour Beatty machines RKCX 467, 476 .....	45 MPH	45 MPH
Plasser machines PACX 293, 4656, 4657 .....	45 MPH	45 MPH
Plasser 08 & 09 Tampers, PTS 61, 62 & 90 Stabilizers and BDS 100 & 200 Ballast machines traveling in train or traveling under it's own power with a Conductor or Engineer Pilot .....	50 MPH	50 MPH
Loram 400 and 300 series and Harsco Rail Grinder Traveling (not in work mode) as a train on its own power with a Conductor or Engineer pilot .....	50 MPH	50 MPH
When controlling movement of a Loram 400 series or Harsco Rail Grinder from the rear control cab in the lead .....	50 MPH	50 MPH
When controlling movement of a Loram 300 series Rail Grinder from the rear control cab in the lead .....	40 MPH	40 MPH
Exception: Refer to individual manufacturers maximum operating speeds for operating on descending grades.		
Empty bulkhead flatcars picked up en route and not on conductor's wheel report or work order.....	45 MPH	45 MPH
Air dump cars, loaded .....	45 MPH	45 MPH
Clay Cars, RARW 3801-4199 .....	45 MPH	45 MPH
Empty bulkhead wallboard flatcars: BN 616475 through 616674, CS 616375 through 616474, DJTX 9300 through 9398 and SOU 115250 through 115274 .....	45 MPH	45 MPH
Scale test cars .....	35 MPH	25 MPH
Exception: Scale test cars listed below have a minimum gross weight of 100,000 pounds and may move in any position in the train and at maximum authorized speed for which train is qualified: WWBX 199917-199919, MP 15507, MP 15510-15512, UP 167579, UP 900700, UP 903600, BN 979019-979024, BN 979026-979036, FGWX 100000-500000		
Ribbon rail cars, (loaded) .....	35 MPH	25 MPH
Ribbon rail cars, (empty) .....	45 MPH	45 MPH
Ribbon rail loading and unloading cars .....	45 MPH	45 MPH

Wedge plow or dozer, hauled in tow .....35 MPH .....25 MPH  
 Rotary plow, wrecking derrick,  
 locomotive crane, pile driver or  
 Jordan spreader, handled in trains .....30 MPH .....25 MPH  
 Exception: Locomotive cranes/pile drivers AT 199454  
 through AT 199468 may be handled in trains at a  
 maximum of 45 MPH. Trains or engines handling this  
 and similar equipment which is moving on its own  
 running gear must operate through the curved side  
 of turnouts at a speed not exceeding one-half the  
 maximum authorized speed for that turnout.

Locomotive cranes, wrecking derricks and other types of heavy  
 work equipment must not be operated on any subdivision  
 designated as a Branch Line unless authorized by dispatcher  
 and roadmaster or covered by specific instructions.

The following equipment when handled in trains will be  
 handled on rear end of train only, and is subject to the following  
 maximum speeds:

Balfour Beatty, RKCX 103, 104, 105,  
 106, 467, 476, 3005 .....45 MPH .....45 MPH  
 Plasser Machines, PACX 293, 2630,  
 2645, 3024, 4656, 4657, 4774, 4775 .....45 MPH .....45 MPH  
 Plasser THS 2000 Tie gang Consist .....30 MPH .....30 MPH  
 P 811, BNSF 922999 .....45 MPH .....45 MPH  
 Herzog, HZGX 200 .....45 MPH .....45 MPH  
 Loram, LMIx 409, 410, 412, 414, 415,  
 417, KMUX 750, 110 .....50 MPH .....45 MPH  
 Loram, LMIX 418 .....No Speed or Location Restrictions  
 When moving coupled with maintenance of way tool cars, they  
 must remain coupled to such cars.

No shoving movements while in train consist are to be made  
 with the above Loram equipment.

Empty 35 ft. ore cars, OLB 1000—1099 .....50 MPH .....50 MPH  
 Loaded 35 ft. ore cars, OLB 1000—1099 .....45 MPH .....45 MPH  
 Tank cars ACFX 17451 through 17495 .....45 MPH .....45 MPH  
 Tank cars NATX 10841 through 10865 .....45 MPH .....45 MPH  
 Tank cars:

DVLX 4001 through 4190 and the following UTLX cars:  
 76517 76742 thru 76745 78287 thru 78293  
 76539 76747 78326  
 76556 76748 78328 thru 78333  
 76558 76750 78336 thru 78340  
 76568 76751 78343  
 76595 78256 thru 78269 78344  
 76649 78272 78347  
 76656 78274 78348  
 76696 78278 78350  
 76733 78281 78353  
 76736 thru 76738 78285 .....40 MPH .....40 MPH  
 CORX tank cars, when empty .....50 MPH .....50 MPH  
 CELX 6400-6455 and  
 10400-10443, when loaded .....45 MPH .....45 MPH  
 (CELX 6400-6455 and 10400-10443, when loaded must not  
 be handled nearer than 6 cars from locomotive).

Empty Schnabel type cars:

APWX 1004 EXEX 1016  
 BBCX 1000 GEX 80000, 80002, 80003  
 CCRX 40010 HEPX 200  
 CEBX 100, 101 KRL 204000, 204001, 204002  
 CPOX 820 KWUX 10, 101, 102, 301  
 MAMX 1001 .....40 MPH .....40 MPH

All empty Schnabel cars listed must be handled on or near  
 the rear of trains not exceeding 100 cars in length, must not  
 be handled in trains requiring pusher service and must not be  
 humped or switched with motive power detached.

Empty Hopper cars  
 WFAX 84654 through 84700 and  
 TUGX 36001 through 36125 .....45 MPH .....45 MPH

Empty covered hopper cars:

ASGX 1-50,  
 BCAX 50-149  
 CGLX 4200-4249,  
 CHTT 200400-200499  
 CRDX 3000-3014, CRDX 9905-9989, CRDX 9755-9904  
 CRDX 20100-20199, CRDX 20200-20209  
 CRDX 20300-20324, CRDX 20525-20724  
 CSXT 242000-242299  
 DME 29000-29324  
 DJLX 97300-97319, DJLX 97800-97999  
 ERCX 9400-9699  
 FLOX 3200-3241, FLOX 983400-983414  
 GACX 3000-3139, GACX 3150-3196  
 GACX 3202-3359, GACX 3486-3510, GACX 7959-8008  
 GCCX 55000-55099,  
 GPIX 9900-9999  
 IMRL 9200-9299  
 HS 1301-1331  
 LCEX 801-820, LCEX 824-898  
 NAHX 21000-21054, NAHX 29700-29867,  
 NAHX 320000-320399  
 NCUX 20001-20050, NCUX 20106-20130  
 NRLX 32500-32605, NRLX 32706-32725  
 NVCX 9500-9619  
 NS 294220-294319  
 RGCX 650-899, RGCX 902-1067  
 RGCX 1069-1142, RGCX 1183-1222, RGCX 5100-5102  
 RGCX 20051-20100  
 SDWX 9700-9919, SDWX 10000-10333, SDWX 11000  
 SHPX 132001-132056  
 SHPX 432118-432137, SHPX 432057-432116  
 TILX 2900-2904  
 WW 7001-7300 .....40 MPH .....40 MPH  
 (Unless no speed restriction is indicated by train  
 documentation)

Flatcars ATSF 190298, 209144,  
 209149, loaded with track panels .....35 MPH .....35 MPH

**1(A). Control of Harmonic Rocking on Jointed Rail**

Under certain conditions, operation of trains between 13 MPH  
 and 21 MPH can cause derailments due to harmonic rocking  
 of cars. Where specified by individual subdivision special  
 instructions or general order, the following restrictions apply  
 when operating on jointed rail:

Freight trains, other than coal trains, ore trains, or trains  
 consisting entirely of empty equipment, which cannot maintain  
 a minimum speed of 21 MPH, must reduce speed to 13 MPH  
 or less until movement can again exceed 21 MPH.

**1(B). Maximum Speed of Engines**

Engines	MPH	When not controlled from leading unit (MPH)
Amtrak	90*	45
Metrolink	90*	45
Metra	79*	45
Souder (Sound Transit)	79*	45
All other classes	70	45

Exception: When the controlling locomotive is a car body type  
 or has a desktop control stand and is being operated long  
 hood forward, maximum speed is 45 MPH.

\* Engine without cars must not exceed 70 MPH.

**1(C). Multiplatform Equipment**  
**All Types and Single Unit Intermodal Equipment TOB/Car**  
**Count and Speed Restriction**

TSS Car Kind Codes	Car Description	Units or Segments	Maximum Car Length	Axle Count	Control Valves and/or Car Count	Trailers=T Containers=C Either=T/C
Articulated cars						
QY	Doublestack	5	308 ft.	12	3	C
QV	Doublestack	3	190 ft.	8	2	T/C
QM	Spine Car	3	189 ft.	8	2	T/C
QC	Spine Car	3	189 ft.	8	2	T
QO	Spine Car	5	291 ft.	12	3	T/C
Q5	Spine Car	5	291 ft.	12	3	C
QE	Spine Car	5	291 ft.	12	3	T
FM	Twin Flat	2	88 ft.	6	2	C
M2D M3D M2F M3F	Automax	2	144 ft.	6	2	
CSX	Superhopper	5	167 ft.	12	3	
Non-Articulated Cars						
QW	Doublestack	3	215 ft.	12	3	T/C
QX	Doublestack	4	286 ft.	16	4	T/C
QT	Doublestack	5	359 ft.	20	5	C
QB QD	Twin Flats	2	186 ft.	8	2	T
QL	Twin Flats	2	186 ft.	8	2	T/C
QDE	Front-Runner	4	188 ft.	8	4	T
Single Unit Intermodal Cars						
QU	Doublestack	1	72 ft.	4	1	T/C
QA	Front-Runner	1	51 ft.	2	1	T
QK	Doublestack	1	72 ft.	4	1	T/C

Note: Multiplatform (articulated or non-articulated) intermodal equipment (other than coal multiplatform equipment) is identified with a single initial and number and its individual units identified by a letter designation (refer to Special Instruction, Item 41).

Individual units of multiplatform solid-drawbar connected (non-articulated) coal equipment are identified as individual cars with a unique initial/number for each unit. Not all conventional intermodal equipment is listed in the table.

**Car Kind Codes**

Car kind codes are usually 3 characters. On cars shown above, only the first two characters are required to identify car type, with the exception of CSX, M2F, M3F, and QDE.

**Definitions of Multiple-Unit Equipment**

*Articulated*—Refers to cars with multiple units (segments) that are connected with an articulated couplings that share a common truck.

*Non-Articulated*—Refers to cars with multiple units (segments) that are connected with solid drawbars. Each unit is a stand-

alone unit and does not share a common truck with another unit.

**Tons Per Operative Brake (TOB)**

Tons per operative brake on cars above are determined by dividing the number of control valves/car count into the weight of the car. This can be determined without inspection as follows:

Articulated cars = total number of units divided by two, rounded up to next number divided into total weight of the car.

(Example: five unit doublestack, Car kind code QY=3 by car count)

Non-articulated cars = total number of units divided into weight of car.

(Example: Four Unit doublestack Car Kind Code QX=4 by car count)

**Speed**

In order to limit truck hunting, trains must not exceed 55 MPH unless all cars in train are loads. Caboose and any car loaded with container chassis are considered loads for the purpose of the rule.

Exception: Intermodal equipment with empty units/platforms are restricted to 55 MPH only if not equipped with constant contact side bearings (CCSB). BNSF train documentation now provides guidance on this empty unit restriction as it applies to cars listed in the chart above. When handling intermodal equipment listed above, train documentation will provide one of three messages as follows:

1. Train does not contain any intermodal equipment with empty units without CCSB.
2. Train is restricted to 55 MPH due to intermodal equipment with empty units without CCSB.
3. Train may be restricted to 55 MPH due to possibility of intermodal equipment having empty units without CCSB - Inspect to Verify.

In the event message 3 above is on train documentation, if train is otherwise authorized to exceed 55 MPH, a visual inspection must be made to determine the loaded status of units/platforms on car(s) listed. The inspection results must be noted on train list for relieving crews' guidance on train's maximum authorized speed.

When intermodal equipment identified above is added en route, train documentation may not have been generated. When this occurs, consider such car(s) to be restricted to 55 MPH if any units/platforms are empty. Subsequent train lists produced for crews after a pick up en route will provide speed information on cars based on if CCSB-equipped.

This does not apply to trains that are otherwise restricted to 55 MPH or less such as when handling cars not listed above that are empty, other equipment speed restrictions, fuel conservation speed limits, etc.

**2. Locomotive and ETD Information**

Locomotives coupled together in multiple-unit configuration must be limited to 12 locomotives.

When locomotive consist exceeds 8 locomotives, 200 tons per



locomotive exceeding 8 will be included when calculating TOB.

2(A). **2-Way ETD Grade Reference Chart for 2-mile / 2% Grades**  
 Trains operating on the following grades listed must be equipped with an operable 2-way end-of-train telemetry device (ETD and HTD) or equivalent device. However, passenger trains do not require a 2-way EOT or equivalent device.

Cajon Sub.....MP 56.6 to MP 80, all tracks  
 Raton Sub ..... MP 639 to MP 660  
 Glorieta Sub .....MP 775 to MP 810 and MP 818 to MP 842  
 Pikes Peak Sub.....MP 52 to MP 66  
 Hi Line Sub.....MP 1151 to MP 1166, both tracks  
 Midway Sub.....MP 0.5 to MP 2, both tracks  
 St. Paul Sub .....MP 430 to MP 5, both tracks  
 Scenic Sub .....MP 1694.5 to MP 1731.3  
 Stampede Sub.....MP 41.0 to MP 58.5  
 San Diego Sub .....MP 250 to MP 255 (SDN RR)  
 Gateway Sub.....MP 178.0 to MP 188.0

**On UP Railroad:**

Mojave Sub .....MP 331.3 to MP 381.3  
 Moffat Tunnel Sub ....MP 19 to MP 50 and MP 58.1 to MP 61.7  
 Provo Sub.....MP 630.5 to MP 638.1 and MP 652 to MP 682  
 Roseville Sub.....MP 115 to MP 170 & MP 195 to MP 210

2(B). **Locomotive Data Tables**

DC Traction Locomotives				
Model	Rated Powered Axles	Rated Dynamic Brake Axles	Horsepower	Weight (Tons)
SW1	4	0	600	99
SW10	4	0	1,000	125
NW10	4	0	1,200	126
SW12	4	0	1,200	125
SW15	4	0	1,500	131
MK1200G	4	0	1,200	125
SWBL-W	4	0	1,500	131
GP7	4	0	1,500	125
GP9	4	4*	1,750	130
GP9B	4	0	1,750	124
GP10	4	0	1,800	130
GP15, GP15-1	4	0	1,500	129
GP18	4	0	1,800	124
GP20	4	4BT	2,000	131
GP28 MP	4	4BF	1,800	130
GP30	4	4BT	2,500	131
GP35	4	4BT	2,500	133
GP38, GP38-2	4	4ET	2,000	143
GP39, GP39-2	4	4EF#	2,300	135
GP40 M.E.-2	4	4BF	3,000	139
GP40X	4	4BF	3,000	139
GP50	4	4EF	3,600	138
GP53, GP53L	4	4EF	3,000	136
GP60M	5+	5EF+	3,800	137
GP60B	5+	5EF+	3,800	135
B23-7	4	4EF	2,300	134
B30-7A	4	4BF	3,000	138
B36-B-7	6+	4EF	3,600	140
B-39-8	6+	5EF+	3,900	140

- + Power or dynamic brake axle rating exceeds actual axles
- \* May not be equipped with dynamic brakes
- # May be equipped with standard range dynamic brakes

DC Traction Locomotives (continued)				
Model	Rated Powered Axles	Rated Dynamic Brake Axles	Horsepower	Weight (Tons)
B-40-8	6+	5EF+	4,000	142
SD7	6	5BF+	1,500	157
SD9	6	5 *	1,750	184
SD18	6	0	1,800	175
SD35	6	5 * #	2,500	195
SD38-2	6	6 * #	2,000	184
SC38P	6	6BF	2,000	196
TEBC6	6	6B	2,000	194
SD39	6	6EF	2,500	195
SD40, SD40-2	6	6EF * #	3,000	196
SD45, SD45-2	6	6ET	3,600	198
SD50	6	6EF	3,600	194
SD60, SD60M	7+	8EF+	3,800	201
SD70M	7+	9EF+	4,000	200
SD75M	7+	9EF+	4,300	197
C30-7	6	6EF#	3,000	209
SF30C	6	6EF	3,000	160
C38-7	6	6EF	3,600	197
C40-8	7+	8EF+	4,135	197
C44-9W	8+	8EF+	4,400	196/210
ES44DC	8+	8EF+	4,400	210

AC Traction Locomotives				
Model	Rated Powered Axles	Rated Dynamic Brake Axles	Horsepower	Weight (Tons)
C44AC <sup>1</sup> AC4400CW <sup>1</sup> AC4400EV <sup>1</sup> CW44AC <sup>1</sup>	8+	10EF+	4,400	210
1TM c/o	8+	8EF+		
2TM c/o	6	6EF		
3TM c/o	4	5EF		
4TM c/o	3	3EF		
5TM c/o	2	2EF		
C60 <sup>1</sup> C60AC <sup>1</sup>	8+	12EF+	6,000	210
1TM c/o	8+	10EF+		
2TM c/o	8+	8EF+		
3TM c/o	6	6EF		
4TM c/o	4	4EF		
5TM c/o	2	2EF		
ES44AC	8+	10EF+	4,400	208
1TM c/o	8+	10EF+		
2TM c/o	8+	8EF+		
3TM c/o	6	6EF		
4TM c/o	4	4EF		
5TM c/o	2	2EF		
SD70MAC	8+	8EF	4,000	208
1 Truck c/o	4	5EF		
SD70ACE	8+	10EF+	4,300	208
1TM c/o	6	6EF		

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AC Traction Locomotives (continued)				
Model	Rated Powered Axles	Rated Dynamic Brake Axles	Horsepower	Weight (Tons)
SD80MAC	8+	10EF	5,000	210
1 Truck c/o	5+	5EF		
SD90/43MAC	8+	10EF	4,300	208
1 Truck c/o	4	6EF		
SD90MAC	8+	11EF	6,000	208
1 Truck c/o	6	6EF		
ES44C4	8+	10EF+	4,400	208
1 TM c/o	6	8EF+		
2 TM c/o	4	5EF+		
3 TM c/o	2	2EF		

Note: Dynamic braking is operational with Inverters/Traction motors cut out on AC locomotives.

- + Power or dynamic brake axle rating exceeds actual axles
- 1 GE Locomotives (C44AC, C60AC, etc.) have one inverter per axle and can have individual traction motors cut out as with DC locomotives.

**3. Equipment Restrictions**

The following equipment must be placed next ahead of caboose or at rear of cabooseless trains, except in work trains, unless otherwise indicated in the individual subdivision special instructions.

- Outfit cars (Exception: Univans may be placed anywhere in the train.)
- Pile drivers
- Locomotive cranes
- Ribbon rail loading and unloading cars
- Empty ribbon rail cars  
(Only if moving with no train list or if identified as "Rear End Only" on train list.)
- Rear end only cars
- Jordan spreaders
- Rotary snowplows
- Wedge plows
- Dozers
- Herzog MPM  
HZGX 164, 165  
HZGX 166, 173  
HZGX 167  
HZGX 169, 1690  
HZGX 170, 1700  
HZGX 171, 1750  
HZGX 172, 1720  
HZGX 174, 1740  
HZGX 176, 1760  
HZGX 178, 1780  
HZGX 179, 1790  
HZGX 181, 1810  
HZGX 182, 1820  
HZGX 186, 1860  
HZGX 187, 1870  
HZGX 188, 1880  
HZGX 190, 1910

Except as provided in Item 1, scale test cars must be placed ahead of caboose or, on cabooseless trains, ahead of the last car.

Scale test cars must not be humped.

When locomotive cranes/pile drivers, wrecking derricks or similar equipment are being moved on their own wheels or on cars in a train, they will be handled on the rear of the train only.

**Exception:** Locomotive cranes/pile drivers AT 199454 through AT 199468 must be handled in trains next to the engine.

This equipment must be properly loaded and secured. Booms must be properly secured and, when possible, boom must be trailing. Equipment must be inspected before being moved. Such equipment is allowed to operate on any subdivision designated as Main Line but must not be operated on any subdivision designated as Branch Line unless authorized by roadmaster or covered by specific instructions. Equipment of this type must not be humped.

Spreaders and dozers being moved in trains must, when possible, be headed in the direction train is moving, and wings must be properly secured.

DODX 40000-40100 are cars belonging to the Department of Defense. Handbrakes on these cars must not be used to control movement and must be applied from a ground position while car is standing.

Loaded ribbon rail cars must not be:

- Coupled to other cars except buffer cars (Buffer cars will be placed ahead of and behind ribbon rail cars at welding plant).
- Handled in freight service with other cars unless authorized and train is equipped with Rail Movement Detectors (RMD).
- Separated for maintenance or repairs unless under direct supervision of a roadmaster.

**3(A). Multi-Platform and Stack Intermodal Cars**

Unless otherwise indicated in the individual subdivision special instructions, multiplatform stack intermodal cars are authorized for movement on tracks with weight limit of 177,000 pounds or more.

These cars must not be cut off in motion or struck by any car moving under its own momentum.

**3(B). Rotary/Rapid Discharge Coal Cars**

All cars equipped with dump door air lines, this includes foreign line cars, having:

- Elevated hoses for dump door air line,  
or
- Air brake train line on one side of coupler and the dump door air line on the other side (both hoses at end sill level)

must have the dump door air line coupled between cars equipped in unit trains or in proper receptacle to prevent dragging when not in use.

Note: Connect door air line hoses to locomotives only when at unloading facility or shortly before unloading.

**3(C). V-Slope Flat Cars**

V-Slope Flat Car loads of pulpwood logs, without side retainers, are restricted to 35 MPH and must be observed closely en route. Trains handling these cars will stop before passing through truss or girder bridges and crew will inspect cars to ensure safe passage through bridge before proceeding.

**3(D). Two-Axle Cars**

Hand brakes must not be depended upon to hold two-axle cars. When a two-axle car is set out, it must be chained to the rail or coupled to a non-two-axle car with operative hand brake.

**3(E). Air Dump Cars**

Employees are prohibited from riding in air dump cars. Cars must not be moved with doors open, except as necessary to clear material just dumped. Air dump cars must not be cut off in motion or struck by any car moving under its own momentum.

When air dump cars are being operated, the conductor must personally supervise the handling to see that all locking devices are in proper position and that all people are in the clear before charging actuating air line and before they are operated.

Only employees who are knowledgeable in the operation of air dump cars may operate such cars in unloading operations. When coupling actuating air hoses, not more than three air dump cars may be charged at a time.

Before charging the actuating air line, or before attempting to dump air dump cars, it must be known that protection against movement on adjacent tracks which could be fouled by material to be dumped, has been provided as follows:

- A. If the adjacent track is an auxiliary track, except where CTC is in effect, movement must not be permitted to pass air dump cars which are being charged or being unloaded.
- B. If the adjacent track is a main track, authority must be obtained as prescribed by MWOR Rule 6.3.1 (Main Track Authorization) or flag protection must be provided in both directions as prescribed by MWOR Rule 6.19 to control movement by the work area.

**3(F). Caboose Placement**

All cabooses other than the working caboose moving in trains for any reason, are to be handled on rear of train or just ahead of working caboose, except:

- A. Trains operating with helpers on the rear end must have cabooses other than the working caboose placed behind helpers.
- B. Trains or yard movements limited to maximum speed of 10 MPH may operate with caboose placed anywhere in train.
- C. Cars with defective couplers may be transported to repair facilities behind caboose.
- D. A crew transport train consisting of no more than two cabooses positioned between two locomotives may be operated during inclement weather conditions. The lead locomotive must be the controlling locomotive, with trailing locomotive isolated.

**3(G). Georgetown Equipment Restrictions**

Georgetown Rail Equipment cars (cars with initials GREX) must not be cutoff in motion or struck by any car moving under its own momentum. They must not exceed 5 mph through other than mainline turnouts. "Georgetown Dump Train" car sets (series GREX 2000-2999, 4000-4999, 8000-8999) must be placed next ahead of the caboose or at the rear end of cabooseless trains, except they may be in any location in work trains. Other GREX cars not in the series mentioned do not have train placement restrictions.

**3(H). GTTX Equipment**

All GTTX cars are restricted to rear end only unless the train consists entirely of GTTX equipment. No more than 25 GTTX cars may be handled in any train unless the train consists entirely of GTTX equipment.

**3(i). AMGX Equipment Restrictions**

Gondola cars in series AMGX that are solid-drawbar connected must be placed as rear end cars only and are restricted to 50 MPH. For the purpose of this rule these cars may be placed in the rear five cars of the train. Solid blocks of this equipment may extend up to 20 cars from the rear of the train if the trailing car of the block is in the rear five cars.

**3(J). Herzog Articulated Equipment**

Herzog articulated equipment (all purpose machines) are restricted as rear end only due to drawbar connection between Herzog locomotive and cars does not have vertical restraint.

Switching Restrictions: All Herzog equipment must not be humped or handled with other freight cars during switching operations. This equipment must be cut off or set over so that remaining cars can be switched.

**3(K). Herzog Rail Unloading Car**

Herzog Rail Unloading Car HZGX 200, due to the drawbar arrangement on the B end, must be placed at the rear of the train. For the purpose of this instruction, this car may be placed in the rear 4 cars of the train.

**4. Geometry Test Car Instructions**

Engine(s) handling geometry test car(s) 80/81, 85/86, and 87/88 may observe passenger train speed on curves not to exceed 70 MPH as shown in individual subdivision special instruction 1(A).

Geometry test cars 80/81, 85/86, and 87/88 must move in train by themselves and are not required to have an ETD at the rear of the car when the car is occupied.

Trains handling test cars AAR 112, BNSF 82 and BNSF 83 behind the locomotive consist may operate without further restricting the train from the maximum authorized timetable speed. GCOR Rule 7.3 and 7.9 must be used when switching and geometry test cars must not be cut off in motion or struck by any car moving under its own momentum. They must not be coupled with more force than is necessary to complete the coupling, not exceeding coupling speed of 2 MPH. These cars must receive careful handling at all times.

When not on a train, cars must be protected as prescribed by GCOR Rule 5.12 or 5.13. These cars are considered to be occupied at all times.

**5. Car Restrictions**

Item 2 of the individual subdivision special instructions indicates a maximum gross weight of car and a letter restriction (A through H).

The maximum gross weight of car restriction is applicable only to four-axle cars with a coupled length of 49 feet 6 inches or greater. The maximum gross weight of car restriction for cars shorter than 49 feet 6 inches, six-axle cars, eight-axle cars or other specialty cars can be obtained from Table 5 by cross referencing the car length and the letter restriction for the subdivision.

Example: Item 2, Individual Subdivision Special Instruction of subdivision XXX indicates a maximum gross weight of car of 143 tons, Restriction E.

- For hoppers 53' long, the maximum gross weight/car = 143 tons from Item 2 (or by looking at line 8, column E).
- For tank car 43' long, the maximum gross weight/car = 136 tons (line 6, column E).

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Cars that do not meet the weight limits specified in Table 5 or in Item 2 of the individual subdivision special instructions or in any part of the following paragraphs are not permitted without authority of System Structures Department or BNSF Clearance Bureau. 35-ft. cars (BNSF 601090-601399) loaded to 143 tons may operate only on the Hibtac, Casco, Lakes (between Superior and Gunn) and Allouez Subdivisions. These cars must comply with weight limits indicated in Table 5 when operating on all other subdivisions.

The actual car weight may exceed the maximums by up to one ton due to weighing tolerances. Weight and length restrictions indicated in this section and in Item 2 of the individual subdivision special instructions do not apply to multiple-unit double stack well cars, locomotive cranes or ribbon rail cars.

When single car movements apply to the movement of cars weighing over 143 tons and up to 157.5 tons as specified in Table 5 for '143X', single car movements shall denote that the car shall be separated from the locomotive and from other cars weighing more than 143 tons by at least one car weighing no greater than 143 tons. One train may contain up to ten '143X' cars weighing over 143 tons and up to 157.5 tons with separation meeting the single car movement definition noted above.

Car Restrictions										
Line No.	No/Axes and/or Car Length	Typical Car Types & Partial Listing of Representative Car Number Series	Maximum Weight of Car (Tons) Based on Car Restrictions Class A through H Indicated weight limits are applicable to either single car or multiple car movements except for: "143X," which denotes that 143 tons are permitted for multiple car movements but weights over 143 tons and up to 157.5 tons can be accepted for single car movements. "NP," which denotes that this type of car is not permitted without special authorization.							
			A	B	C	D	E	F	G	H
1	4 axes & length less than 35'0"	Hopper	89	NP	89	NP	NP	NP	NP	NP
2	4 axes & length 35'0" to 36'11"	Hopper; tank cars BN 99000-99949, BN 98000-98189, BNSF 601090-601179	134	117	134	117	110	110	110	110
3	4 axes & length 37'0" to 38'11"	Hopper; tank cars ATSF 82056-82990, 178900-177861	141	123	141	123	117	117	117	117
4	4 axes & length 39'0" to 40'11"	Hopper; tank cars BN 435500-433999	143	131.5	143	131.5	123	123	123	123
5	4 axes & length 41'0" to 42'11"	Hopper; tank cars BN 476000-476019	143	143	143	143	134	134	134	131.5
6	4 axes & length 43'0" to 44'10"	Hopper; tank cars	143	143	143	143	136	136	134	131.5
7	4 axes & length 44'11" to 49'5"	Hopper; gondola, tank cars BN 686000-686054 COLCARE	143	143	143	143	143	136	134	131.5

Car Restrictions											
Line No.	No/Axes and/or Car Length	Typical Car Types & Partial Listing of Representative Car Number Series	Maximum Weight of Car (Tons) Based on Car Restrictions Class A through H Indicated weight limits are applicable to either single car or multiple car movements except for: "143X," which denotes that 143 tons are permitted for multiple car movements but weights over 143 tons and up to 157.5 tons can be accepted for single car movements. "NP," which denotes that this type of car is not permitted without special authorization.								
			A	B	C	D	E	F	G	H	
8	4 axes & length greater than or equal to 49'6"	Hoppers, flats, gondolas, tank cars	143-X	143X	143	143	143	143	136	134	131.5
9	27'8"	13-unit trough car BN 552000-552022	930	930	930	930	884	884	871	NP	
10a	6 axes	ACFX 88348-88373, CELX 6400-6458, CELX 10400-10438, DODX 40000-40573, DUPX 29400-29439, 29600-29669, HCMX 4402, KCS 700002-700063, KRL 600908-600910 LMX 403, 409, 410, 412, 414, 418, NS 185541-185542,	197	197	197	197	197	197	185	NP	
10b	6 axes	DODX 38810-38832, KRL 600430	197	197	185	185	185	178	175	NP	
11	6 axes	Others	185	185	170	170	170	165	160	NP	
12a	8 axes & length greater than or equal to 87'0"	ATSF 90001-90004, 90006-90007, ATSF 90011-90016, BN 631021	263	263	263	263	263	235	235	NP	
12b	8 axes & length greater than or equal to 55'0" and less than 80'0"		263	255	263	255	235	235	235	NP	
13	8 axes & length less than 55'0"	ATSF 90020-90023	220	195	220	195	180	180	180	NP	

6. **Work Order: Instructions for Reporting Work**

Conductors and engine foremen are responsible for documenting and reporting all scheduled and unscheduled work performed during their tour of duty. Timely reporting by radio communication, telephone, cellular phones, and electronic devices such as computers is key to maintaining current inventory, accurate records and a successful operation.

Any foreign line carrier operating on BNSF that sets out equipment must notify the BNSF train dispatcher and the BNSF Mechanical Help Desk at the earliest opportunity and provide the following information:

- Equipment being set out including the engine/car number.
- Location where equipment was set out.
- Reason equipment was set out (e.g. flat spots, broken brake rigging, hot box, etc.).
- Commodity if a car contains a hazardous material, including but not limited to, Inhalation Hazard car(s).
- Any other pertinent information.

Unless otherwise designated by the division, all trains except work trains and those trains currently reporting via the Work Order Reporting System will be required to use the Voice Train Reporting System to report arrivals, departures, pickups and setouts that were previously reported en route or at the completion of their trips.

Communication between the train and the VTR System will be by MRAS/PBX radio and telephone.

When reporting by Voice Train Reporting and Work Order Reporting are not possible, conductors and engine foremen are expected to contact the Customer Support Specialist promptly after completion of work performed at each station. You will be required to enter your employee ID number for routing to the proper Customer Support Specialist.

Work orders issued to train and switch jobs will list all scheduled work.

Conductors and engine foremen must know the **proper TSS track numbers** where they report work. Refer to the TRKLIST command in TSS for track numbers at a station or on a subdivision.

Train Work Order Package includes the following documents:

- Train list and profile.
- FRA 215.9 Mechanical Defective Cars List (if applicable).
- Hazardous manifest (if train contains hazardous materials).
- Work order for each station.
- Track list of each track to be worked.
- Supplemental Work Order Form.

The following reporting codes will be used to report work performed:

Reporting Codes	
Reporting Instructions for Scheduled/Unscheduled Work	
Code	
MO	<b>MOVE</b> - (Code, date, time, station name, zone/track/spot). Use only to reposition a placed car to correct customer inventory.
SP	<b>SPOT</b> - (Code, date, time, zone/track/spot) When cars are spotted to an industry track and no spot number is provided, use "01" as a spot number.
PU	<b>PULL</b> - (Code, date, pull time, station name, zone/track where cars are pulled from. Also include date, time station, zone/track where cars were left.)
IP	<b>INTRA-PLANT SWITCH</b> - (Code, date, time, zone/track/spot)

Reporting Codes	
RS	<b>RESPOT</b> - (Code, date, time, zone/track/spot)
PK	<b>PICKUP</b> - (Code, date, time, station name, track, location in train) Display train location using one of the following codes (HE-Head End, RE-Rear End, FB-Fill Behind). When filling behind cars in the train, enter the initial/number of the car the pickup will follow in standing order.
RR	<b>CARS RECEIVED IN INTERCHANGE</b> - (Code, date, time, station name, zone/track, and name of road)
SO	<b>SETOUT</b> - (Code, date, time, station name, zone, track, timetable direction and standing order) When track length will not hold all cars to be set out, enter first car initial/number and track where remaining cars were moved. If cars are set out on an interchange track, refer to reporting code DD.
TU	<b>CARS TURNED ON WYE OR TURNABLE</b> - (Code, date, time, station name, zone/track/spot)
OF	<b>CARS OFFERED OR NEEDING OFFERED TO A CONNECTING ROAD</b> - (Code, date, time, station name, zone/track, name of road and person's name refusing cars)
DD	<b>CARS DELIVERED IN INTERCHANGE</b> - (Code, date, time, station name, zone/track, and name of road)
CC	<b>CARRIERS CONVENIENCE</b> - (Code, date, time, station name, zone, track where cars were left) Cars left on an industry track for carrier convenience must not include a spot number.
ND	<b>NOT DONE</b> - (When ND code is used, enter ND explanation code or a full written explanation.)

**Not Done Reasons**—Not Done Reasons are separated into two main categories:

- Potential Charge to a Customer.
- Not Chargeable to a Customer.

Chargeable reasons are further separated into two categories:

- Car Can't Be Pulled - Customer Reason.
- Car Can't Be Spotted - Customer Reason.

In order to protect any potential revenue due to BNSF, it is vital to use the correct Not Done Reporting reason.

The information below lists reasons that could potentially result in charges to a customer. Sub-reasons will be indented beneath the main Not Done Reason.

**Not Done Reasons - Potential Charge to Customer**  
Car Can't Be Pulled - Customer Reason

- Car Not Loaded/Car Not Empty
- Customer Cancelled Today's Switch
- Customer Instructions or Fax Differ From Work Order
- Customer Trucks or Equipment Blocking Track
- Dock Plates Attached to Car or Cars
- Gates or Switch Locked With Private Lock
- Hazardous Billing or Placards Missing
- Hoses Attached to Car or Cars
- Not Put to Outbound Trk by Customer
- Not Put to Outbound Trk by Shortline
- Not Secured Properly For Movement
- Other Reasons Did Not Pull
- Plant Closed
- Plug Door Open on Car or Cars
- Track Blue Flagged-Still Working
- Unsafe Conditions Exist

**Car Can't Be Spotted - Customer Reason**

- Customer Instructions or Fax Differ From Work Order
- Customer Request to Weigh First
- Customer Requests No Switch Today
- Customer Trucks or Equipment Blocking Track
- Dock Plates Attached to Car or Cars on Track
- Gate or Switch Locked With Private Lock
- Hazardous Billing or Placards Missing
- Hoses Attached to Car or Cars on Track
- Other Reasons Did Not Spot
- Plant Closed
- Track Blue Flagged
- Track Full-No Room to Spot Car
- Unsafe Conditions

**Not Done Reasons - Not Chargeable to Customer**

- Car Missing From Track or Location
- Car Substituted at Customer Request
- Bad Order—Derailed—Inspection
- Engine Restrictions or Problems
- Axle Restrictions
- Engine Problems
- Insufficient Horse Power
- No Power Available
- Federal Hours of Service Expired
- Instructions From Dispatcher
- Instructions From BNSF Supervisor
- Mutual Agreement With Customer
- Not In Train, Not Switched, Unavailable
- No Overtime, Short On Time
- Reasons Not Customer Responsibility

- Rail Traffic Conditions
- Crew Decision
- Holding For Unit Train
- Joint Facility—Moved By Another RR
- Work Order or Computer Is Not Correct
- Work Performed by Another Train

**Substituted Alternate Car**

- Empty Substituted
- Load Substituted

**Track Blocked or Out of Service—Not By Customer**

- By BNSF or Another Railroad
- By a Different Customer
- By Other

**Unsafe Conditions Exist**

- Inclement Weather
- Other

**Work Was Already Completed**

Done In Other Direction

**Reporting Methods**

**Radio** – With the exception of trains using the Work Order Reporting system or when reporting work trains, Voice Train Reporting using the MRAS/PBX system is the preferred method of reporting work. Conductors and engine foremen are expected to report as soon as possible after work is performed at each station. If Voice Train Reporting (VTR) or Work Order Reporting System (WORS) is used to report, it is not necessary to call Customer Support.

**Telephone or Cellular Phones** – Telephone or cellular phones assigned to conductors and engine foremen may be used when MRAS/PBX or radio communication is unavailable or radio is congested in order to provide timely reporting in the field.

**Electronic Device** – Computer reporting will not require any written documentation to be forwarded.

Conductors and engine foremen are required to call their designated Customer Support Specialist anytime there are questions or problems with work order information or work to be performed during their tour of duty.

**Work Order Codes**

There are three types of work order codes that appear on work orders: Request Codes, Status Codes and Hold Codes.

Request Codes	
Code	Displays Work to Be Performed
SP	<b>SPOT</b> - Customer request to spot car for loading/unloading.
PU	<b>PULL</b> - Customer request to move a car from an industry track to another track or scheduled destination.
IP	<b>INTRA-PLANT SWITCH</b> - Customer request to move a car originally spotted correctly to another spot or track within the industry. Cars are commonly moved per this request to complete loading, for inspection, etc. This switch is chargeable to the customer.
RS	<b>RESPOT</b> - This switch is not chargeable to the customer and should be used only when correcting a railroad error. Customer request to move a car to a different track or spot within the industry after being placed incorrectly.
TU	<b>CARS TURNED ON WYE OR TURNABLE</b> - Request to turn a car previously spotted and re-spot.
PK	<b>PICKUP</b> - Cars available to be picked up by train, local, road switcher at station.
SO	<b>SETOUT</b> - Cars scheduled to be set out by train, local, road switcher at station.
Status Codes	
Displays Current Status of Cars (Does not require any work to be performed)	
Code	
PL	<b>PLACED</b> - Car on spot (Displays car status and not a request.)
CP	<b>CP</b> - Constructive placement (Condition between carrier and customer.)
OF	<b>CARS OFFERED OR NEEDING OFFER TO A CONNECTING ROAD</b> - Displays to the carrier, cars normally delivered in interchange cannot be delivered due to connecting road's inability or unwillingness to accept cars.
DD	<b>CARS DELIVERED IN INTERCHANGE</b> - Displays cars scheduled for interchange delivery to a connecting road.

Work order documents will display work order codes as outlined by customer or carrier for specific instructions to conductors or engine foremen. They will be located in the Special Car Handling Instructions (SCH) column or in the Scheduled Train column.

**Hours of Service**

Conductors or engine foremen should plan ahead and report scheduled and unscheduled work before hours of service expire. Conductors and engine foremen who relieve crews whose hours of service have expired will be responsible for reporting work performed during their tour of duty. If a crew's hours of service expire and they are unable to report scheduled or unscheduled work, the information must be passed on to the relieving conductor, engine foreman or supervisor who will be responsible to report work for the previous job.

**Pick Up in Block**

When picking up cars, en route, trains must pick up in block unless otherwise advised by train dispatcher or in conflict with current train make-up instructions.

Hold Codes	
Carrier/Customer Instructions Have Not Been Provided	
Code	
HOLD MT	Car not scheduled for outbound train. (Hold code appears in the Scheduled Train field.)
HOLD NI	Car has no instructions for spotting. (Hold code appears in the Scheduled Train field.)
HOLD HL	Car is HiWIDE and has not been scheduled to a train. (Hold code appears in the Scheduled Train field.)
HOLD LS	Car is on floating lease. (Hold code appears in the Scheduled Train field.)
HOLD ED	Car to be held for equipment distribution. (Hold code appears in the Scheduled Train field.)
HOLD WH	Car is to be held for weighing. (Hold code appears in the Scheduled Train field.)
HOLD OT	Car is to be held for local order. (Hold code appears in the Scheduled Train field.)
HOLD ME	Car is to be held for mechanical inspection. (Hold code appears in the Scheduled Train field.)
HOLD EH	Car is to be held for embargo. (Hold code appears in the Scheduled Train field.)
NC *	Non-credit customer. DO NOT SPOT. (Code appears in the SCHI field.)
DO *	Written delivery order. DO NOT SPOT. (Code appears in the SCHI field.)
SO *	Car billed shipper's order. DO NOT SPOT. (Code appears in the SCHI field.)
Zn Tk Sp * 00 00 00	* Do not spot cars with '00 00 00' in the ZNTKSP field or cars with NC, DO or SO in the SCHI field. (Cars may be pulled or picked up and moved to a location for further disposition when these codes are displayed.)

Work order documents will display work order codes as outlined by customer or carrier for specific instructions to conductors or engine foremen. They will be located in the Special Car Handling Instructions (SCHI) column or in the Scheduled Train column.

**Hours of Service**

Conductors or engine foremen should plan ahead and report scheduled and unscheduled work before hours of service expire. Conductors and engine foremen who relieve crews whose hours of service have expired will be responsible for reporting work performed during their tour of duty. If a crew's hours of service expire and they are unable to report scheduled or unscheduled work, the information must be passed on to the relieving conductor, engine foreman or supervisor who will be responsible to report work for the previous job.

**Pick Up in Block**

When picking up cars, en route, trains must pick up in block unless otherwise advised by train dispatcher or in conflict with current train make-up instructions.

**7. Dimensional and Special Shipment Restrictions**

All employees involved in handling dimensional or special shipments must be familiar with and are governed by these instructions.

Note: Dimensional loads on BNSF are defined as wider than 11' and/or higher than 17' ATR and/or longer than the length of the car.

- a. Any dimensional and/or oversize car or special shipment must be accompanied by one of the following: message included with train's work order, track bulletin or message issued by BNSF Clearance Bureau.

- b. Before a dimensional or special shipment can be moved in a train, yard forces or employee in charge of station where no yard forces on duty, must obtain permission from the train dispatcher. This does not relieve conductor from complying with Rule 1.47 of the General Code of Operating Rules. When yard supervisors are notified of expected arrival of wide cars, precautions must be taken to safeguard employees in yard.
  - c. Before a dimensional shipment is picked up on line, conductor must obtain permission from the train dispatcher. When dimensional or special shipment is set out on line, conductor must promptly notify the train dispatcher.
  - d. Train dispatcher must issue appropriate track warrant, track bulletin or message when dimensional shipment restricts opposing train and confirm message received.
  - e. Train with dimensional shipment must not pass or be passed by a train in the same direction unless authorized by the train dispatcher or proper safeguards taken.
  - f. To provide for close observation en route, all dimensional shipments must be placed in a block next to the lead locomotive consist. Dimensional shipments, coupled with idler cars weighing less than 45 tons, must be placed in compliance with train make-up rules and placed as close as possible to the lead locomotive consist. Boeing dimensional shipments, identified as having contents ACFTEQ on the train list, must be placed next to the lead locomotive consist ahead of any additional dimensional shipments. No more than 10 dimensional Boeing loads/empties with contents ACFTEQ may be placed in a train. BNSF 800026 through BNSF 800039 are specialized Boeing Service idler cars weighing 45 tons or more and may be billed loaded, or empty, depending on destination. These specialized Boeing Service idler cars DO NOT apply to the 10 car loads/empties Boeing restriction. No more than 25 dimensional Boeing empties with contents ACFTEQ may be placed in a train.
- Note: In the application of the above, FTTX flatcars and autoveyors (car kinds M2F and M3F) are not considered dimensional shipments. (See Item 46)
- Exceptions:
- 1. On trains destined to or operating in the state of California, and train room permits, dimensional shipments must be no closer than the 6th car or platform from the lead locomotive consist.
  - 2. Dimensional shipments, including idler cars moving with dimensional shipments, must be placed in compliance with minimum weight requirements outlined in train make up rules. However, placement of dimensional shipments must otherwise be as close to lead locomotive as possible.
  - 3. Trains received from foreign railroads with dimensional shipment placement other than described above, may proceed to a location specified by train dispatcher to correct the condition.
  - 4. When dimensional shipment is found to be a shiftable load, GCOR Rule 1.37 will apply.
- g. Employees are prohibited from riding excessive dimension cars.
  - h. Train crews handling dimensional and/or oversize car or special shipment car(s) approaching locations controlled by the train dispatcher and where these car(s) are restricted should communicate with the train dispatcher and jointly determine if a meet or pass of any other equipment at the restricting location(s) can be accomplished safely.

- i. When the dimensional message indicates "Stop, Proceed on Hand Signals" at a bridge in conductor only operations, the following will apply:
  - Stop the train before entering the bridge.
  - Conductor will check the dimensional load for shifted contents.
  - Engineer will protect his side of the train through the mirror.
  - Conductor will protect the other side of the train.
  - Move through the bridge not exceeding 5 MPH until the dimensional shipment clears the bridge.

**8. Trackside Warning Devices (TWD)**

**8(A). Description**

Trackside warning devices (TWD) inspect passing trains for defects or monitor for unusual trackside conditions that could adversely affect the safe and efficient movement of trains.

Examples of such devices include the following:

- Overheated journal bearings (hot box) (HBD)
- Hot wheels
- Dragging equipment detector (DED)
- High/Wide/Shifted load (SLD)
- High water detector
- Earth/Rock slide fence

Individual subdivision special instructions identify the following:

- Detector location
- Detector type

Unless otherwise stated, protection will be hot journal and dragging equipment with bidirectional operation.

Exceptions will be shown as follows:

- Northward direction only (NWD)
- Southward direction only (SWD)
- Eastward direction only (EWD)
- Westward direction only (WWD)
- Dragging equipment only (DED)
- Shifted load only (SLD)
- Detectors that protect bridges, tunnels or other structures
- Exception Reporting detector

When a shifted load or dragging equipment detector is actuated at a point where an adjacent main track or controlled siding may be obstructed, crew must provide protection as prescribed by Rule 6.23.

**8(B). Detector Radio Message**

A message "You have a defect" will be transmitted during train passage if a defect is detected. When this message is received from a TWD, immediately reduce train speed to less than 30 MPH, utilizing train handling methods that minimize in-train forces. After train passes the detector, a radio message will be transmitted (unless defined as "Exception Reporting" or "Failure Reporting" in Item 5(B) of the individual division timetables).

This message will indicate "no defects" or will state any "alarms" or "integrity failures" that were detected during train passage.

The detector message is not complete until "Out" is received.

**Train Approaching Detector**

Except in emergency, when approaching train is within 150 feet of a TWD, DO NOT make a radio transmission until the entire train has passed the TWD.

The train crew must have the radio set to the "in service" radio channel, for the Subdivision and location of the TWD, as shown in the timetable. The radio channel should not be changed until the entire train has passed by the TWD location and you have allowed time for the TWD to transmit any messages.

**8(C). Detector Message and Train Crew Action**

Use the following table to determine crew requirements when a detector message is received. If detector indicates more than one detector message or circumstance, comply with each train crew action shown. Radios at Exception Reporting detectors will only transmit a message when an alarm is present. Do not report a failure to transmit to the train dispatcher as is required with other types of detectors.

Note: 5(A) indicates detectors that protect bridges, tunnels or other structures. 5(B) indicates other TWD locations.

Type Detector	Non-Alarm Message	Train Crew Action	Additional Instructions
5(A) or 5(B)	When detector announces "... no defects", "Maintenance Required" or when advised by signal maintainer or train dispatcher that there are no defects.	Proceed.	Report "Maintenance Required" to the train dispatcher, unless "Train Too Slow" is transmitted in the same message. Then, no report to the train dispatcher is required.
5(A)	"Integrity Failure"	Stop, Make a walking inspection of both sides of entire train before reaching bridge, tunnel, or structure being protected.	Report integrity failure to train dispatcher.
5(A)	"Train Too Slow" or Crew is notified by train dispatcher or signal maintainer that TWD is out of service.	Proceed.	None
5(B)	"Train Too Slow" or "Integrity Failure" or "Maintenance Required" or Crew is notified by train dispatcher or signal maintainer that TWD is out of service.	Proceed.	Report "Integrity Failure" or "Maintenance Required" to the train dispatcher unless "Train Too Slow" is transmitted in the same message. Then, no report to the train dispatcher is required.



Table No. 2 - 8(C) Alarm Message

Type Detector	Alarm Message	Train Crew Action	Additional Instructions
5(A) or 5(B)	"First hot box right/left side axle XXX" or "First dragging equipment near axle XXX" or "First hot wheel right/left from axle XXX to axle XXX" or "First wide load right/left side near axle XXX" or "Shifted load right/left side near axle XXX"	1. As soon as message "...you have a defect" is received, immediately reduce train speed to less than 30 MPH. 2. Stop the train. 3. inspect the indicated axle(s). 4. If no defect is found, inspect 12 axles forward and 12 axles to the rear of the indicated axle regardless of whether a defect is found before reaching the 12th axle. 5. Report findings to the train dispatcher. 6. When defective car(s) are set out or continue in train, notify the train dispatcher and Mechanical Help desk.	Detector alarm message may identify more than one defect. Inspect train for all reported defects before proceeding.  If detector alarm message does not include axle designation, inspect both sides of entire train.
5(A) or 5(B)	"Excessive Alarms"	1. As soon as message "... you have a defect" is received, immediately reduce train speed to less than 30 MPH. 2. Stop the train. 3. inspect the indicated axle(s). 4. If no defect is found, inspect 12 axles forward and 12 axles to the rear of the indicated axle regardless of whether a defect is found before reaching the 12th axle. 5. Inspect both sides of the remainder of the train from the last reported defect. 6. Report findings to the train dispatcher. 7. When defective car(s) are set out or continue in train, notify the train dispatcher and Mechanical Help desk.	Detector alarm message may identify more than one defect. Inspect train for all reported defects before proceeding.  If detector alarm message does not include axle designation, inspect both sides of entire train.
5(A) or 5(B)	"Hot Box-Train Too Slow" is Transmitted.	Stop and make a walking inspection of both sides of entire train.	Report "Hot Box-Train Too Slow" to Train Dispatcher

Table No. 3 - 8(C) Other Circumstances

Type Detector	Circumstance	Train Crew Action	Additional Instructions
5(A) or 5(B)	Speed varies by more than 10 MPH from actual speed.	1. Stop the train. 2. Make a walking inspection both sides of entire train. 3. Report findings to train dispatcher.	None
5(B) - with recall code	No message or Incomplete message is transmitted.	1. Enter recall code and be governed by message. 2. If still no message or incomplete message, proceed.	Report no message or incomplete message to train dispatcher.
5(A) - with recall code	No message or Incomplete message is transmitted.	1. Enter recall code and be governed by message. 2. If still no message or incomplete message, stop the train. 3. Make a walking inspection of both sides of entire train.	Report no message or incomplete message to train dispatcher.
5(B) - without recall code	No message or Incomplete message is transmitted.	Proceed	Report no message or incomplete message to train dispatcher.
5(B) - Exception Reporting	No Message	Proceed	Do Not Report "No Message" to Train Dispatcher
5(B) - with recall code Exception Reporting	Incomplete Message is Transmitted	1. Enter recall code and be governed by message. 2. If still no message or incomplete message, stop the train. 3. Make a walking inspection of both sides of train.	Report incomplete message to train dispatcher.
5(B) - without recall code Exception Reporting	Incomplete Message is Transmitted	1. Stop the train. 2. Make a walking inspection of both sides of entire train.	Report incomplete message to train dispatcher.

Note: Detector message followed by the word "Out" indicates a complete message. Total axle count is not required for a complete message. If an alarm message is transmitted and it is not followed by the word "Out", the train will be governed by the Train Crew Action for that alarm message.

**8(D). Train Inspection**

When alarm message requires inspection, inspect the side of the train in the message. The reference to defect locations will be from HEAD END of train, and references to LEFT or RIGHT side are to engineer's left or right side in the direction of travel.

Determine the location of the indicated axle by physically counting axles from the HEAD END of the train, including locomotive axles. DO NOT depend on wheel report information for correct axle count. When alarm message requires, inspect indicated axle(s). If inspection does not reveal a defect, inspect 12 axles forward and 12 axles to the rear of the indicated axle. When this is necessary, inspect all 12 axles in each direction regardless of whether a defect is found before reaching the twelfth axle.

**Dragging Equipment/Shifted Load Inspection**

When a dragging equipment or shifted load alarm message is received, make a walking (trackside) inspection of the train until the inspection is complete or until an obstruction (bridge without a walkway) prevents further inspection. When obstruction prevents completion of inspection, move train at no more than 5 MPH to complete the inspection per Rule 6.29.2. The train may proceed only after walking inspection confirms there is no dragging equipment or shifted load(s), defective car(s) are repaired or permission is received from the train dispatcher or manager to move the defective equipment.

**Overheated Equipment Inspection**

When an overheated equipment alarm is received, follow this procedure to inspect equipment:

- Crew member positioned on the ground must count axles.
- Move train at no more than 10 MPH until the indicated axle is near crew member or until inspection is complete.

When a train is stopped by a trackside warning device for hot journal or hot wheel, crew is to immediately contact train dispatcher who will relay the occurrence along with train identification and location to the NOC Detector Desk. The NOC Detector Desk will then contact the train and assist the crew with the process of inspection and identification of the suspect car. Train may not depart inspection location until NOC Detector Desk releases train from inspection and permission to depart is received from train dispatcher. The train crew must report the following to the NOC Detector Desk:

1. The axles were physically counted
2. A heat-indicating crayon or infrared device was used at the indicated axle, and
3. If inspection does not reveal a defect, that 12 axles forward and to the rear of the indicated axle have been inspected.

If a heat-indicating crayon or infrared device is not available, set out the indicated car.

After released by the NOC Detector Desk, contact the train dispatcher for permission to depart inspection location and to report train delay/detector stop information (i.e. axle readout, inspection result, car initial and number, journal number and size, set out location, crayon used, etc.). To contact the NOC Detector Desk, when using the 3 digit radio call-in code, use the 2 digits indicated in the timetable followed by a 5. If using the 1 digit radio call-in code, use 5.

**Freight Trains**

If no defect is found, train may continue, but crew members must closely observe indicated equipment for the next 25 miles or until inspection by hot bearing detector.

When a train actuates a wayside hot box detector before crew change location, the relieving crew will be advised of the equipment that activated the detector so that they can inspect the car and follow the above procedure if the equipment actuates a subsequent detector en route. **Exception:** If indicated axle is on a loaded, placarded, non-intermodal car containing hazardous material, set out the loaded, placarded, non-intermodal car. (For Key Train instructions see US Hazardous Material Instructions for Rail, Section VII, Key Trains.)

**Passenger Trains**

If no defect is found after inspecting 12 axles forward and 12 axles to the rear of the indicated axle, inspect both sides of the entire train.

If no defect is found, train may continue, but crew must closely observe indicated equipment for the next 25 miles or until next inspection by hot bearing detector.

**8(E). Testing Bearing Temperature**

Use a heat-indicating crayon or handheld infrared device to test bearing temperature. Test bearing temperature by stroking the heat indicating crayon on the bearing cup. A liquid smear will remain on an overheated bearing. (Determine if the bearing is hot by using a Dual Temp. 163 degree - 200 degree Fahrenheit, Mark All Thermal Melt, Millennium ordering reference no. 458304011.)

When ambient temperature is 32 degrees Fahrenheit or above, use a 200-degree Fahrenheit heat-indicating crayon to test bearing temperature.

When ambient temperature is below 32 degrees Fahrenheit, use a 163-degree Fahrenheit heat-indicating crayon to test bearing temperature.

Set out equipment with overheated bearings.

If it is safe to move equipment, set out car with an overheated bearing at a location accessible to repair personnel.

**Operating Infrared Device**

To measure a temperature, point at object and pull the trigger. Unit must be held approximately 1 – 1 ½ feet away from the journal or wheel to be measured. In order to be accurate, the target area must be at least twice as large as the spot size. Target must be free of grease or dirt. Steam, dust, smoke etc. can prevent accurate measurement by obstructing the unit's optics. Use the laser only for aiming.

**CAUTION:** Laser should never be pointed directly at eye or indirectly off reflective surfaces.

Point Non-Contact Thermometer (Infrared Device) at the bearing cup identified during train inspection and pull the trigger. Use laser for aiming the device. Record temperature displayed on the LCD. If temperature exceeds 180 degrees above ambient (outside) temperature, journal or wheel is considered hot and must be set out for repair. Ambient temperature may be determined by targeting any portion of the railroad car (except the wheel or journal) that has been exposed to outside air temperature. Avoid targeting the shiny surface of the wheel tread when measuring wheel for excessive temperature. Inaccurate readings will result from measuring polished or shiny surfaces. To measure wheel temperature, target the outside area of the wheel.

**NOTE:** When outside ambient temperature is significantly lower or higher than temperature where device is stored i.e., personal luggage or pocket, thermal shock may occur to the unit when removed from stored area. This may affect the ability of the LCD to give readout. In addition, accuracy of readout can be affected. If outside air temperature is less than 32 degrees Fahrenheit, it is recommended the device be kept in pocket until ready to target the wheel or journal to be inspected.

**8(F). Consecutive Alarm Messages**

If the same equipment is indicated by two (2) successive hot bearing alarm messages, set out the indicated equipment. When a train actuates a wayside hot box detector before a crew change location, the crew being relieved will advise the relieving crew of the equipment that activated the detector. If the same equipment is indicated by the next detector with a hot bearing alarm message after departing the crew change location, set out the indicated equipment.

**8(G). Alarms Indicated on Locomotive or Caboose**

When unable to locate a defect indicated on a locomotive or caboose, notify the following:

- Connecting crew members
- Mechanical personnel
- Supervisor

Do not set out a caboose with a generator belt attached to the indicated axle unless a hot bearing, hot wheel or dragging equipment is found.

**8(H). Special Conditions**

When a hot bearing is found within 25 miles of TWD equipment, a crew member must notify the train dispatcher. The train dispatcher must notify the signal maintainer and request the TWD equipment be inspected.

When blowing or swirling snow conditions may prevent detectors from making a proper inspection, crew members must reduce train speed to **no more than 30 MPH** to minimize this condition.

**8(I). High Water Detectors**

High water detectors have been placed under certain bridges and in areas where high water might occur.

A. When train is notified of high water by rotating red lights, radio message, signal indication or at a radio readout and no response is received, crew must not proceed over bridge or track until trackside examination by crew member has been made to determine the following:

- The track has not lost its normal alignment,
- The track or bridge does not have sagging surface,
- There is no shoulder ballast or ballast between the ties missing or water running through the tie cribs, and
- Water is not over the rail.

If determination cannot be made, contact train dispatcher for instructions before proceeding.

B. Trains moving against the current of traffic must approach all locations protected by high water detectors prepared to stop unless:

- The track has not lost its normal alignment,
- The track or bridge does not have sagging surface,
- There is no shoulder ballast or ballast between the ties missing or water running through the tie cribs, and
- Water is not over the rail.

If determination cannot be made, contact train dispatcher for instructions before proceeding. Note: When moving against the current of traffic and the location is protected by rotating red light or radio response, be governed by Item A above.

**8(J). Slide Detectors**

Slide detectors have been placed in certain areas where earth/rock slides might occur.

When a rock slide is indicated by rotating red light or radio message, trains must proceed at restricted speed AND be prepared to stop short of any obstruction through the entire slide detector area.

When train is stopped or moving at restricted speed because of signal indication governing movement through a slide detector, train must ALSO be prepared to stop short of any obstruction through the slide detector area.

Train dispatcher must be promptly notified if slide conditions are observed.

At locations equipped with Radio Readout type detectors, if no response is received, trains must proceed at restricted speed until track at this location is known to be clear of any obstruction. Train dispatcher must be promptly notified if slide conditions are observed.

**8(K). Warm Journal Detectors**

When a train stop is indicated, the NOC Detector Desk will utilize the information that is currently only provided to the NOC, evaluate the severity of the potential failure indicated and will then contact the chief dispatcher who will advise the train dispatcher to contact train crews via radio with instructions on the action required.

Train crews are to contact the NOC Detector Desk. When a running set and release is indicated the NOC Detector Desk will contact the train crew directly.

Since this is only a potential failure condition that is being predicted well in advance of any actual failure, when notified to take action relative to a "warm" bearing/journal, train may be moved without any additional speed restriction to a convenient location to inspect or set out as directed by the dispatcher in order to minimize the impact on operations. In addition, walking the train is not required and train may also be moved to expedite the inspection and/or set out. These instructions for cars identified with only warm bearings do not supersede any guidelines for handling hot journals or defective cars identified by Trackside Warning Devices or from other visual inspections.

Action required may include:

1. Perform a Set and Release of the Air Brakes:  
Perform a set and release of the air brakes (minimum of 10 psi brake pipe reduction) in an attempt to release any sticking brakes at the first convenient location and consistent with good train handling. A "running release" may be performed if engineer determines conditions will allow as per ABTH Rule 103.3, Item C.
2. Stop and Inspect a Specified Car:  
Stop to inspect specified car and be governed by specific inspection instructions given in each case.
3. Set Out a Specified Car:  
Set out specified car at location as directed by dispatcher.

**8(L). Track Integrity Warning System (TIWS)**

The following TIWS instructions are in effect, unless otherwise specified in subdivision specific Timetable Special Instructions:

The Track Integrity Warning System checks the rail for continuity and alerts the Train Dispatcher to possible track occupancies or defects (e.g. broken rail) in non-signaled territory.

Subdivisions where TIWS is in effect are divided into a series of "zones" displayed by the Train Dispatcher's control system and identified in the field by Milepost signs, Siding Switch signs, or a combination of these signs. Milepost signs identifying boundaries of a "Zone" may be displayed in tenths of a mile. Example: MP 926.3.

Track authority limits may be designated by MP signs representing "Zone" limits.

Alerts will be generated to the train dispatcher when occupancy is detected within a zone(s) not corresponding in proper sequence with an authority issued on that segment of track. Such alerts are referred to as "Track Integrity Down" (TID) and will be communicated by the Train Dispatcher to trains authorized within the zone(s).

Verbal instructions for "TID" may be provided to trains closely approaching the TIWS zone when an alert is received.

A new authority including "TID" information will be issued to trains not closely approaching an alerting zone. "Track Integrity Down" will be abbreviated as "TID". Following are examples of a "TID" communicated by Track Authority:

"TID MP 1011.3 to MP 1015.8" or "TID WSS Baker"

Trains receiving notification of "TID" must move at Restricted Speed within the designated zone limits and/or over a designated switch.

**9. Amtrak Instructions**

BNSF dispatchers must have General Track Bulletins (GTB) issued at least (1) hour prior to trains departure. If the Amtrak train crew does not have the GTBs 45 minutes prior to trains departure they must contact the dispatcher immediately. If unable to contact the dispatcher for GTBs 35 minutes prior to train departure, train crew must contact the BNSF Passenger Operations Team at 1-800-871-0902.

Dispatcher must be immediately notified when train does not maintain maximum authorized track speed.

Dispatcher must be immediately notified when crews experience rough track conditions stating limits and severity. This same information must be documented on the conductor delay report

No trash may be discarded on BNSF property.

**Station and Reporting Times**

Station work must be done in an expedient manner to avoid exceeding station dwell times. If station work is anticipated to exceed scheduled dwell time by more than 5 minutes, sufficient advance notice must be given to the dispatcher to eliminate or minimize train delays.

**Amtrak Trains Reporting Clear/Releasing Track Warrants**

Engineer and conductor are jointly responsible, through job briefing, to ascertain and agree on the exact location that their entire train has passed before reporting past a specific point or clearing their track warrant. When reporting past a specific location:

- Engineer and conductor will job brief and agree on train's location.
- Communication will use the following format:  
Crew member will state: (Name), locomotive initial, number, (direction), reports clear of (Milepost/location) (Provide switch briefing when required) - Over.

Dispatcher will then check information against computer system information and if correct, will restate track release information followed by the question, "Is that correct?"

Crew member will state: "Job briefing between conductor (name) and engineer (name) confirm, that is correct. - Over".

**Equipment**

Unless otherwise provided, equipment that cannot be safely operated at maximum speed must be set out at first available location unless train can arrive at final destination in less time than would be required to make the set out.

- Maximum speed for freight locomotives in Amtrak service is 70 MPH.
- Movement with locomotives between cars is prohibited. Double stretch is required after pick up or set out of cars or locomotives.
- Required hand tools and supplies must be available on locomotive.
- Required switch keys must be in possession of Engineer and Conductor.
- Amtrak may not exchange or discharge passengers between trains except at stations.
- Amtrak may not exchange supplies between trains except at stations unless authorized by train dispatcher.
- Amtrak train garbage/refuse to be off loaded must be loaded into approved containers and only at stations that have assigned Amtrak employees or caretakers.
- Amtrak toilets must be discharged into appropriate containers. Dumping of toilets from Amtrak trains on BNSF right of way is prohibited.

**Head End Attendance**

The head end of all occupied passenger trains must not be left unattended for any reason while occupying main track or siding. At crew change locations the engineer's job briefing will take place in the locomotive cab or controlling compartment of cab control car. If the outbound crew is not on spot at a crew change location on arrival, the inbound engineer will remain on the head end until the outbound engineer arrives.

**Head End Power (HEP) Requirements**

- Departure from the originating station with the HEP cables short looped is prohibited.
- In the event of HEP failure, crew members must determine if the train may be handled safely and must make every effort to advance the train to the next siding or scheduled stop before repairs are made.
- All HEP cables must be secured with approved tie-downs.
- Air hoses and HEP cables must be secured no less than 4 inches above the top of the rail.

**BNSF Crews Operating Amtrak Trains**

When a BNSF crew operates an Amtrak train, a freight locomotive must be used. Amtrak personnel must handle all 480-volt AC power and set up Amtrak locomotives in the trail position. BNSF crews are prohibited from handling, adjusting or performing work between or under cars when Head End Power (HEP) 480 volt AC is energized. A freight locomotive will not be necessary when BNSF engineer is accompanied by an Amtrak qualified engineer or qualified Amtrak supervisor.

**BNSF Mechanical Assistance**

When mechanical problems develop the train dispatcher must be notified immediately as described in System Special Instructions item #45 and BNSF NOC Mechanical Desk notified if assistance is required. The delay for mechanical problems must be documented properly on the delay report.

**Conductor Delay Reports**

The conductor delay report is an essential document to both Amtrak and BNSF. Prior to tie-up, engineer or conductor must furnish the dispatcher with complete, legible and accurate conductor delay report. The BNSF Passenger Operations Team must also receive a copy of the delay report (Fax 800-423-9551).

The conductor delay report must be professional, brief, specific, and worded clearly and concisely. Each individual reason for delay must be separated from other delays. The document must include, in order of occurrence, the following:

- Any delay due to the inability to maintain maximum authorized passenger train speed.
- Reasons for delay over dwell times identifying specific cause of delay (passengers, baggage, late bus connections, mechanical issues, etc.).
- Delays associated with field equipment detectors. These delays require that specific information be given, even if no defect is found. Information as to the location of the defect, Car/Locomotive initial and number, axle and journal if applicable, and reason for inspection and defect, if any found.
- Amtrak instructions regarding authorization to hold or delay train, including reason.
- Delays caused by operating with one engineer.
- Delays caused by late General Track Bulletins.
- BNSF Pilot crew name must be recorded on the delay report including from/to locations.

The conductor delay report must be turned in on all trips, including special trains, deadhead moves and trains terminated short of destination.

#### Signal Awareness Forms

Passenger train conductors and crew members are exempt from special instructions Item 43 unless they are in the controlling unit or the cab room of the controlling cab car and there is more than one crew member in the controlling unit or cab room of the controlling cab.

#### 10. Storage of Cars Within Restricted Limits or Yard Limits In Non-Signaled Territory

Within restricted limits or yard limits in non-signaled territory, the main track must not be used as a storage track except in case of emergency. When it becomes necessary to leave cars on main track in such territory, they must be protected by track warrant or track bulletin. This does not modify requirements of Rule 6.13 or 6.14.

#### 11. Shunting the Track

##### Commodities Insulating Track In CTC And ABS

Employees should be alert for insulating commodities such as clay, chips, oil, etc., on top of rails. This condition could possibly insulate the track and cause loss of train shunt. Such conditions should be promptly reported and trains protected per rules while in CTC and ABS territory.

##### Single Unit Light Engine

When a train sets out all cars en route and becomes a single unit light engine within CTC, manual interlocking, or ABS territory, the train dispatcher/control operator must be notified.

##### Movements Consisting of Less Than 12 Axles

Train, engine and other such movements consisting of less than 12 axles must approach road crossings at grade equipped with automatic crossing warning devices prepared to stop until it is determined that the warning devices are operating properly.

#### 12. Switch Control/Monitoring Systems

##### 12(A). Turnouts Equipped with Two Switch Machines

###### (Moveable Point Frogs/Swing Nose Frogs/Derails)

Locations where turnouts are equipped with two switch machines will be identified under individual subdivision special instructions. When dual control switches equipped with two switch machines are operated by hand, the switch machine which operates the switch points and the switch machine which operates the moveable point frog, swing nose frog, or derail must both be placed in hand operation.

Rule 9.13.1 applies at all locations where turnouts are equipped with two switch machines (moveable point frogs/swing nose frogs/derails).

##### 12(B). Remote Control Power Switch (RCPS)

Remote Control Power Switch (RCPS) allows the train dispatcher to request that the switch be lined and monitor switch position in non-signaled territory. The location of RCPS will be designated in the timetable. RCPS limits are designated by signs and the limits must not be occupied unless authorized. Track authority will authorize use of RCPS limits at each end of authority in the following manner:

"Switch - Yes" indicates that the authority includes the RCPS limits designated by signs in the field.

"Switch - No" indicates that the authority does not include RCPS limits and movement must stop short of sign designating RCPS limits.

If the train dispatcher cannot line the remote control power switch to the desired position, or the control machine does not indicate that the switch is lined and locked, the train dispatcher must instruct the employee to operate the switch by hand. Movement may then proceed to that switch. Before passing over the switch, movement must stop and the employee must operate the switch by hand.

To operate a remote control power switch by hand:

- Obtain permission from the train dispatcher.
- Unlock the switch lock.
- Place the selector lever in the HAND position.
- Operate the hand throw lever until the switch points move when the lever is moved.
- Line the switch for the intended route.
- Do not return the selector lever to the POWER position until at least one unit or car has passed over the switch.

The following information and instructions apply when the RCPS system is in service:

The train dispatcher will receive an alert if a train has authority over any equipped switch that changes status to indeterminate/out of correspondence.

When an alert is received, the train dispatcher must promptly determine the location of the train with authority over the alerting switch and do the following:

- If the train has passed the alerting switch, perform a track release to cancel the alert.
- If the train is closely approaching (less than 7 miles) the alerting switch, the train dispatcher must instruct the crew to stop their train, consistent with good train handling, if possible, before traversing switch.
- If the train is not closely approaching the alerting switch, but it is more than seven miles from alerting switch, the train dispatcher is required to issue a new authority to the affected train that voids the authority over the alerting switch and ends at the alerting switch.

##### 12(C). Switch Point Monitoring System (SPMS)

Switch Point Monitoring System (SPMS) is a program that will alert the dispatcher that a main track switch may not be properly lined for an approaching train in non-signaled territory. SPMS locations will be designated in the timetable.

The following information and instructions apply when the system is in service:

The train dispatcher will receive an alert if a train has authority over any equipped switch that changes status from the normal position. Alerts will occur if a switch is reversed or its position becomes unknown (indeterminate).

Exception: An alert will not occur for trains operating with a proceed track authority (box 2) for switches located in the "from" and "to" locations of their authority.

When an alert is received, the train dispatcher must do the following:

- Promptly determine the location of the train with authority over the alerting switch. If the train has passed the alerting switch, perform a track release to cancel the alert.
- If the train is closely approaching the alerting switch, the train dispatcher may notify the crew verbally using the appropriate verbiage in the dialog box presented.
- If the train is not closely approaching the alerting switch, the train dispatcher is required to issue a new track authority to the affected train that restricts authority to the alerting switch.

Note: Work between (box 4) authority for trains must end at any indeterminate switch. Authority may be issued beyond the indeterminate switch only after employee has verified that the switch is in the normal position by performing an on-ground inspection.

The dispatcher is prohibited from issuing two work between (box 4) track authorities to the same train that make the limits of authority end-to-end.

For example, do not issue track authority #1 with work between (box 4) from Anna to Bess and track authority #2 with work between (box 4) from Bess to Cloy.

Information received from the Switch Point Monitoring System must not be used to change the position of a main track switch that is protected by a track authority under the Protect Open Switch rules (GCOR 8.3, MWOR 8.3, and TDOCOM 42.19).

When a train crew is notified to be prepared to stop at an alerting switch, (either verbally or with a track authority), the train must not proceed over the switch until a crew member inspects the switch from the ground. The position of the switch must be reported to the train dispatcher as soon as possible after the inspection.

Maintenance of Way (MW) employees must have permission prior to operating an equipped main track switch. When Form B authority is in effect, the foreman or employee(s) working under the Form B must notify the dispatcher when opening any equipped main track switch(es).

When a MW employee receives a track authority with "Be prepared to stop at (location) until known to be in the normal position, the dispatcher must not indicate the switch to be "normal" unless the reporting employee has traversed the switch in main track to main track movement with on-track equipment and is physically at the switch.

The dispatcher must not "normal" an alerting switch until it has been inspected by a field employee.

#### **12(D). Independently Controlled Switches (ICS)**

Independently Controlled Switches are dual control switches of a crossover which, under certain conditions prescribed by the rules, may be operated independently. At locations identified in the timetable as having independently controlled switches, Maintenance of Way employees may request control operator permission to operate one end of a crossover for maintenance or testing purposes only.

#### **12(E). Protect Open Switch (POS)**

In non-signaled territory, track warrant authority for trains must end at any open main track switch. Authority may be issued beyond the open switch after the train has stopped at the switch. Immediately contact the train dispatcher for additional authority when the train is stopped at the switch.

In ABS territory, track warrant work between authority for trains must end at any open main track switch. Authority may be issued beyond the open switch after the train has stopped at the switch. Immediately contact the train dispatcher for additional authority when the train is stopped at the switch.

(Note: A train stopped short of the switch for topographical reasons, i.e., road crossings, grade considerations, etc., may be considered as stopped at the switch for application of this process).

#### **13. In Effect on BNSF Railway**

- General Code of Operating Rules, Sixth Edition, in effect April 7, 2010
- Maintenance of Way Operating Rules, in effect December 2, 2009.
- Air Brake and Train Handling Rules, in effect April 7, 2010.
- Train Dispatcher's, Operator's and Control Operator's Manual, in effect January 15, 2010.
- TY&E Safety Rules, in effect October 30, 2005.
- Maintenance of Way Safety Rules, in effect October 30, 2005.
- Employee Safety Rules, in effect October 30, 2005.
- Mechanical Safety Rules, in effect June 24, 2009.
- United States Hazardous Material Instructions for Rail in effect July 29, 2009.
- 2008 Emergency Response Guidebook.
- BNSF Chicago Passenger Operations Manual, in effect June 21, 2010.
- Canadian Rail Operating Rules, in effect October 28, 2009. (For use in Canada only.)

#### **In Effect While Operating on Foreign Railroads:**

The following System Special Instruction items must be complied with by BNSF crews operating over a foreign railroad:

- Item 6. Work Order: Instructions for Reporting Work
- Item 23. Remote Control Operations
- Item 27. Cars Set Out Bad Order
- Item 28. Grade Crossing Accidents
- Item 35. Switching Business Cars
- Item 43. Signal Awareness/Position of Switch Form
- Item 45. Network Operations Center Notification Requirements
- Item 49. Engineer Responsibilities and Certification
- Item 50. Rail Security Sensitive Material (RSSM) Instructions Chain of Custody Documentation for Rail Sensitive Material

**14. General Code of Operating Rules, Changes and Additions**

The following rules apply only on BNSF Railway:

**GCOR Rule 1.37, Open Top Loads**—Is changed to read:

Flat cars, open top cars, and open TOFC/COFC's with loads which protrude beyond the car ends or if shifted, would protrude beyond the car ends must not be placed in trains next to the following if train length and makeup permit:

- Occupied outfit car
- Passenger car
- Engine
- Caboose
- Shipment of automotive vehicles or machinery that is not fully enclosed

This restriction does not apply to cars equipped with chains or cables securing the load to the car.

**GCOR Rule 1.46, Duties of Yardmasters**—The following is added:

At the end of each shift, the yardmaster must make a transfer, filling in all the required information, including:

- All grade crossings out of service
- Any undelivered Track Bulletin Restrictions
- Any tracks, switches, or other infrastructure out of service
- Any other conditions or issues which may affect the safe and efficient management of the yard.

If the office has more than one shift, the yardmaster being relieved will remain until the relieving yardmaster understands, accepts, and acknowledges the transfer.

The transfer must be documented in Yardmaster Transfer in YDS. If TSS is not available, the transfer must be documented in writing and maintained for 30 days.

**GCOR Rule 1.47, Duties of Trainmen and Enginemen**—Item C, All Crew Members' Responsibilities, the following is added to Item 2:

Crew members must not use binoculars or similar devices to determine the position, aspect, or indication displayed by a fixed signal.

**GCOR Rule 2.14.2, Before Reporting Clear of Authority Limits**—The following new rule is added:

Before a field employee reports clear or releases a portion of authority limits, and the Train Dispatcher/Control Operator accepts the information, the following must occur:

- The employee will provide their name or other identification and the authority number to the Train Dispatcher/Control Operator.
- The Train Dispatcher/Control Operator will have the required form or computer screen displayed for data entry and confirmation.
- The Train Dispatcher/Control Operator and employee will carefully match the verbally transmitted information against the authority form to ensure the information matches and is correct.

**GCOR Rule 5.4.1, Temporary Restrictions**—Delete the following sentence from the second paragraph:

Only one set of flags may be displayed in advance of the entire restriction in each direction.

**GCOR Rule 5.4.2 A, Restriction Specified in Writing**—The second paragraph "Less than Two Miles Ahead of Restricted Area", is changed to read:

Less than Two Miles Ahead of Restricted Area. When the restricted area is close to a terminal, junction, or another area or if restriction is on a siding, employees will display the yellow flag less than 2 miles before the restricted area. This information will also be included in the track bulletin, track warrant, or general order.

**GCOR 5.4.6, Display of Flags Within Current of Traffic**—This rule is canceled.

**GCOR Rule 5.4.8, Flag Location**—The first paragraph is changed to read:

Flags will be displayed on all main tracks and sidings leading to the track affected.

**GCOR Rule 5.8.1, Ringing Engine Bell**— Add the following as a fourth bullet:

- When whistle signal (7) is required.

**GCOR Rule 5.8.4, Whistle Quiet Zone**—Add the following:

A locomotive engineer may sound the train horn to provide warning to crews on other trains in an emergency situation, vehicle operators, pedestrians, trespassers or animals if, in the locomotive engineer's sole judgment, such action is appropriate to prevent imminent injury, death, or property damage. Train crews are not restricted from sounding the horn when:

- There is an emergency situation.
- A wayside horn is malfunctioning.
- Active grade crossing warning devices malfunction.
- Grade crossing warning systems are out of service.
- Supplemental or alternative safety measures are not compliant.
- Needed for purposes other than highway-rail crossing safety, for example, to announce the approach of a train to roadway workers.

All other whistle requirements remain in effect.

**GCOR Rule 5.11, Engine Identifying Number**—The following exception is added:

Exception:

- On track bulletins that advise about excessive dimension equipment, trains may be identified by train symbol.
- On track bulletins and on track warrants that do not convey movement authority, passenger trains may be identified by train symbol.

**GCOR Rule 5.13 C, Blue Signal Readily Visible to Engineer**—Item 3 is changed to read:

3. The engine must not be moved. The controls must not be changed unless directed by individuals who placed the blue signal protection.

**GCOR Rule 6.2, Initiating Movement**—The first bullet is changed to read:

Receive a track warrant or general track bulletin.

**GCOR Rule 6.2.1, Train Location**—The first sentence is changed to read:

Trains who receive authority to occupy the main track after the arrival of a train or to follow a train must ascertain the train's location by one of the following methods:

**GCOR Rule 6.3, Main Track Authorization**—The paragraph titled Joint Authority is deleted, and the following is added:

Overlapping Limits

When a train receives track and time, track warrant or track permit authority joint with an employee or OCS permission joint with an employee, the train must not occupy the overlapping limits until permission is received to enter the overlapping limits from the employees listed on the authority or on the OCS permission.

**GCOR Rule 6.3.1 E, Train Coordination - OCS territory**—The following new rule is added:

Employees may use a train's permission in OCS territory in the same manner as using a train's authority. Working limits may be established within a train's OCS limits as follows:

1. With a train having permission to move in either direction that is not joint,
  - or
2. With a train having permission to move in one direction only, working limits must not be established:
  - Behind the train.
  - More than one block in advance of the train or beyond any location that a train or engine could enter the track between the employee in charge of the working limits and the train.

**GCOR Rule 6.5, Shoving Movements**—Is changed to read:

Cars or engines must not be shoved until the engineer knows who is protecting the movement and how protection will be provided. The employee providing protection for the movement shall not engage in any task unrelated to the movement.

When cars or engines are shoved, crew member must be in position and provide visual protection unless relieved by:

- Local instructions for tracks equipped with shove lights/cameras.
- Special instructions specific to tracks involved.
- Rule 6.6 (Picking Up Crew Member).
- Pullout move within an activated Remote Control Zone (RCZ)

Minimum requirements when radio communication is used during shoving movements:

- Direction will be described in relationship to the front of the controlling locomotive (F stencil).
- To instruct the engineer to move the locomotive forward use "ahead".
- To instruct the engineer to move the locomotive backward use "backup".
- To instruct the engineer to stop, use the word "stop".



- Communicate distance using 50 feet as a standard for one car length.
- Engineer must acknowledge the distance, when more than four cars.

Movement must be stopped within half of the distance specified unless additional instructions are received.

Note: Employees are encouraged to communicate additional information related to shoving movements (e.g. switch / derail position, close clearance conditions, stop signals, authority limits, etc).

When cars or engines are shoved on a main track or controlled siding in the direction authorized, movement must not exceed:

- 20 MPH for freight trains.
- 30 MPH for passenger trains.

When engaged in snow plow operations:

- One common authority may be used by both maintenance of way employees and the train crew when all employees are on the equipment,
- Maximum timetable speed applies unless a higher speed is authorized by the employee in charge.
- Employees are relieved from providing visual protection for snow plow being shoved.

Cars or engines must not be shoved to block other tracks until it is safe to do so.

**GCOR Rule 6.7 A, Entering Remote Control Zone**—The 2nd paragraph is changed to read:

When the remote control zone is activated, track(s) within the zone must not be fouled with equipment, occupied, or switches operated until the remote control zone has been deactivated.

The 3rd paragraph is deleted in its entirety.

**GCOR Rule 6.23, Emergency Stop or Severe Slack**

**Action**—The following is added to the section titled "Inspection of Cars and Units":

The following trains are relieved of visual inspection required by an emergency application when it is known that the brake pipe pressure has been restored by observing the caboose gauge, end-of-train telemetry device (ETD) or distributed power telemetry before proceeding:

- Solid loaded bulk commodity trains,
- Any train where emergency application of the brakes occurs at a speed above 30 MPH,  
or
- Any train that is 5000 tons or less.

If physical characteristics prevent a complete visual inspection, inspect as much of the train as possible. The train may then be moved, but may not exceed 5 MPH for the distance necessary to complete the inspection, and must be stopped immediately if excessive power is required to start or keep the train moving.

**GCOR Rule 6.29.1, Inspecting Passing Trains**—The paragraph "Ground Inspections" is changed to read:

When a train is stopped and is met or passed by another train, crew members must inspect the passing train. The trainman's inspection must be made from the ground if there is a safe location.

- Dismount equipment on the side opposite approaching train.
- Do not cross adjacent tracks solely for the purpose of inspecting a passing train.
- During inclement weather, crew members may remain in the locomotive cab when inspecting passing trains.

**GCOR Rule 6.32.2 C, Power Off Indicators**—The following new rule is added:

When the power off indicators on the side of signal housings at highway crossings are flashing or not illuminated, immediately notify the train dispatcher.

**GCOR Rule 7.6, Securing Cars or Engines**—The first paragraph is changed to read:

Do not depend on air brakes to hold a train, engine or cars in place when left unattended. Engineer and conductor are jointly responsible, through job briefing, to ensure equipment left unattended is properly secured and a sufficient number of hand brakes are applied to prevent movement. If handbrakes are not adequate, block the wheels.

**GCOR Rule 7.7, Kicking or Dropping Cars**—Is changed to read:

Kicking cars is permitted only when it will not endanger employees, equipment or content of cars. Dropping cars is permitted only on territory where specifically authorized by individual subdivision special instructions.

Before dropping cars, crew members must fully understand the intended movement. They must verify that the track is sufficiently clear and that switches and hand brakes are in working order. If possible, the engine must run on straight track. Cars must not be dropped over spring switches or dual control switches.

**GCOR 7.10, Movement Through Gates or Doorways**—The last sentence is changed to read:

Do not ride on side of a car, engine or other equipment when moving through gates, doorways or similar openings where close clearance exists.

**GCOR Rule 8.19, Automatic Switches**—The following paragraph is added:

In non-signalized territory, when movement continues beyond an automatic switch signal displaying a Stop indication, train must move at restricted speed for two miles or until leading wheels pass the next automatic switch signal or opposing distant signal.

**GCOR Rule 9.11, Movement from Signal Requiring Restricted Speed**—Is changed to read:

When a train passes a signal requiring movement at restricted speed, the train must move at restricted speed until its leading wheels have passed the next governing signal. When leaving block system limits, trains operating on the main track must move at restricted speed for two miles or until leading wheels pass the opposing distant signal.

**GCOR Rule 9.15.2, Clearing Track Permits**—The following 4th bullet is added:

- Position of hand operated main track switches.

**GCOR Rule 9.16, Stop and Proceed Indication**—Paragraph 2, e is changed to read:

e. Proceed from a Stop indication in CTC territory, when authorized by the control operator as prescribed in Rule 9.12.1 (CTC Territory). This will apply to each consecutive signal displaying a Stop and Proceed indication.

**GCOR Rule 10.1.1, Leaving the Main Track**—The following new rule is added:

Unless authorized by track and time, a crew member must notify the control operator when the train clears the main track unless a crew member is in position to prevent a following movement from passing.

**GCOR Rule 10.3, Track and Time**—The instructions inside the box are changed to read:

Track and time does not authorize trains to occupy the main track within automatic interlocking limits.

**GCOR Rule 13.1.4, Cab Signals Cut In and Out**—Delete the following sentence from the last paragraph:

If the device was not tested previously, the engineer must make a departure test prior to entering ACS territory.

**GCOR Rule 13.1.4, Cab Signals Cut In and Out**—The following note is added after the last paragraph:

Note: Partial cutout requirements do not apply to engines not so equipped.

**GCOR Rule 13.3.1, Cab Signal and Block Signal Do Not Agree**—Delete the following exception:

Exception – When the train dispatcher's instructions require the train to proceed at Restricted Speed, the train must comply with the train dispatcher's instructions regardless of cab signal indication.

**GCOR Rule 13.3.3, Movement with an Inoperative Cab Signal Device**—Is changed to read:

When it is determined the cab signal device is inoperative, the train may proceed according to block signal indications. However, the train must not exceed 40 MPH until it reaches a point where a crew member can report the defect to the train dispatcher.

The train dispatcher will establish an absolute block in advance of the train.

**GCOR Rule 14.3, Operating With Track Warrants**—The following is added to Item 1:

Record the location of the specific point on the track warrant form.

The following is added to Item 2:

Record the location of the specific points on the track warrant form.

**GCOR Rule 14.7, Reporting Clear of Limits**—Delete the following paragraph:

When a hand-operated switch is used to clear the main track, except where Rule 6.13 (Yard Limits) or Rule 6.14 (Restricted Limits) are in effect, advise the train dispatcher of the position of the switch and that the switch is locked when reporting clear of track warrant limits. Train dispatcher shall repeat the reported switch position and employee releasing the limits shall confirm to the train dispatcher this information is correct.

**GCOR Rule 14.9 A, Transmitting Track Warrants**—Is changed to read:

## A. Transmitting Track Warrants

1. The train dispatcher will transmit the track warrant, followed by a summary of the total number of boxes and individual box numbers included by stating: "(total number) boxes marked (Individual box numbers)."
2. An employee will enter all of the information transmitted by the train dispatcher, except the summary. As the summary is transmitted, the employee will check the total number of boxes and individual box numbers copied to ensure all items are included.
3. The employee will repeat the preprinted and written information transmitted by the train dispatcher, followed by a summary of the total number of boxes and individual box numbers included by stating: "(total number) boxes marked: (Individual box numbers)."
4. The train dispatcher will check the repeat and, if all information including the summary is correct, will state the following: "Authority (number) OK (time) (dispatcher initials)".

The employee will enter the OK time and the train dispatcher's initials on the track warrant and repeat them to the train dispatcher, or  
If the track warrant includes after arrival, the dispatcher will state the following:  
"Authority (Number) with after arrival of (train) at (location) OK (time) (dispatcher initials)."

The employee will enter the OK time and the train dispatcher's initials on the track warrant and repeat the "After Arrival" information, OK time and dispatcher's initials to the train dispatcher.

Note: The summary information in Items 1, 2, 3 and the after arrival information in Item 4 will be exempt from pronouncing and spelling numbers as indicated in GCOR 2.14.1, Verbally Transmitting and Repeating Mandatory Directives.

**GCOR Rule 14.9 B, In Effect**—The last sentence is changed to read:

Rules qualified employees may relay track warrants.

**GCOR Rule 14.10, Track Warrant in Effect**—is changed to read:

A track warrant is in effect until a crew member reports the train has cleared the limits, or the track warrant is made void. The crew member must inform the train dispatcher when the train has cleared the limits. Before a train reports clear of a track warrant, the track warrant is made void or a portion of track warrant limits are released, a crew member must restore hand operated main track switches to normal position unless relieved by track warrant.

Employees reporting clear of track warrant limits must state:

- Their name or other identification
- Track warrant number being released
- Limits being released

In non-signaled territory or double track ABS territory (outside of restricted limits or yard limits), a crew member will job brief with the train dispatcher about the position of main track switches and those switches operated are locked within the limits being released, referencing completion of the Position of Switch form or stating no entries required.

#### Time Limit Shown

If the track warrant shows a time limit, the train must clear the limits by the time specified, unless another track warrant is obtained. If an employee cannot contact the train dispatcher and the time limit expires, authority is extended until the train dispatcher is contacted.

**GCOR Rule 15.2, C, Stop Column**—The following new rule is added:

When "STOP" is written in the Stop column, the train must not enter the limits unless instructed by the employee in charge. A red flag or red light may be displayed at the beginning of the limits. A train within the limits at the time the track bulletin Form B takes effect, must not make further movement until instructed by the the employee in charge.

**GCOR Rule 15.2, D, Entering Within Limits**— The following new rule is added:

Before entering the track governed by the track bulletin Form B from any location other than the beginning of the Form B limits, obtain permission from the employee in charge.

**GCOR Rule 15.13.1, Voiding General Track Bulletins or Restrictions**—The following new rule is added:

To void a bulletin restriction or an entire general track bulletin, train dispatcher may do the following:

1. "Restriction (number) \_\_\_\_ reading \_\_\_\_ is void."

An employee must repeat this information to the train dispatcher. If the information is correct, the employee must write "Void" in the margin to the left of the restriction made void.

2. "General track bulletin No. \_\_\_\_ is void."

An employee must repeat this information to the train dispatcher. If the information is correct, the employee must write "Void" across the first page of the general track bulletin being voided.

#### **GCOR Rule 20.0, Occupancy Control System (OCS)**

**Rule 20.1, OCS for Trains and Engines**— The following new rule is added:

In addition to GCOR Rule 6.13 (Yard Limits), the following also applies at locations designated under the individual subdivision special instructions:

#### **Occupying the Main Track**

Before occupying the main track, trains or engines must receive one of the following permissions from the train dispatcher.

- Written OCS,
- Proceed indication on a controlled signal,  
or
- Verbal permission.

Individual subdivision special instructions or general order will designate locations where permission is granted by:

- Controlled Signal Indication. (Movements against the current of traffic may be authorized by controlled signal indication.)
- Verbal Permission. (Movements against the current of traffic may be authorized by verbal permission.)

Written OCS must be used when permission is joint with Maintenance of Way.

OCS does not relieve a train or engine from complying with restricted speed in non-signaled territory.

The employee requesting OCS will state name, occupation, location and train or other identification. The employee will repeat the permission granted. Written OCS must be copied on the prescribed form. If the permission is repeated correctly, the train dispatcher will acknowledge. The train must not move until the engineer understands the OCS granted. Written OCS record must be retained until OCS is released.

Employees must advise the train dispatcher when they are clear of the limits. Exception: Trains or engines clearing OCS limits at a control point are not required to report clear.

Employees releasing OCS must state the following:

- Their name.
- The OCS number being released, if applicable.
- The track limits being released.
- The time OCS limits released.

#### **Designated Limits**

OCS limits must be designated by specifying track, where required, and exact points such as switches, mile posts, or other identifiable points.

#### **Direction of Movement**

When trains or engines receive permission to proceed from one point to another, they must move only in the direction specified.

When trains or engines receive permission to work between two specific points, they may move in either direction between those points.

#### **Same Limits with a Train or Engine**

Before a train or engine receives permission to occupy the same limits with a train or engine working between two locations, a crew member of each train or engine must be notified. When notified, all movements must be made at restricted speed.

#### **Same Limits with Men or Equipment**

Before a train or engine receives permission to occupy the same limits with men or equipment, the maintenance of way employee in charge and a crew member of the train or engine must be notified. When notified, all movements must be made at restricted speed.

#### **Permission Expired**

When unable to contact the train dispatcher and OCS permission expires, permission is extended until the train dispatcher can be contacted.

**OCS Form**

The following is an example of the OCS form:

**"OCS" Occupancy Control System**

No. \_\_\_\_\_ 20 \_\_\_\_\_

To: \_\_\_\_\_

A. OCS No. \_\_\_\_\_ is cancelled.

B1. Proceed from \_\_\_\_\_ to \_\_\_\_\_ on \_\_\_\_\_ track.

B2. Proceed from \_\_\_\_\_ to \_\_\_\_\_ on \_\_\_\_\_ track.

C. Work between \_\_\_\_\_ and \_\_\_\_\_ on \_\_\_\_\_ track.

D. Do not proceed until \_\_\_\_\_ arrives at \_\_\_\_\_.

E. Following \_\_\_\_\_.

F. Limits occupied by train or engine between \_\_\_\_\_ and \_\_\_\_\_.

G. Limits occupied by men or equipment between \_\_\_\_\_ and \_\_\_\_\_.

J. This permission expires at \_\_\_\_\_.

K. Do not exceed \_\_\_\_\_ MPH between \_\_\_\_\_ and \_\_\_\_\_.

L. Other Specific Instructions: \_\_\_\_\_

OK \_\_\_\_\_ Issued by \_\_\_\_\_ Limits reported clear at \_\_\_\_\_.

(Mark X in box of each item instructed)

**GCOR Glossary**—the following abbreviations are added:

- AS.....Absolute Signal
- CNT.....Connection
- EBCS..... Eastbound Controlled Signal
- EE..... East End
- EXO..... East Crossover
- NA..... Not Applicable
- NBCS..... Northbound Controlled Signal
- NE..... North End
- NXO..... North Crossover
- RESTRN..... Restriction
- RL..... Restricted Limits
- RP..... Release Point
- SBCS..... Southbound Controlled Signal
- SE..... South End
- SS..... Station Sign
- SW-N..... Switch No
- SW-Y..... Switch Yes
- SXO..... South Crossover
- TFND..... Track Flags Not Displayed
- WBCS..... Westbound Controlled Signal
- WE..... West End
- WXO..... West Crossover

**GCOR Glossary**—New glossary term added:

**General Track Bulletin**—A notice containing track bulletin restrictions and other conditions affecting train movement.

**15. General Code of Operating Rules and Maintenance of Way Operating Rules, Supplemental Instructions**

Several rules in the General Code of Operating Rules and the Maintenance of Way Operating Rules allow and/or require that supplemental instructions be carried in the timetable or special instructions. The following are supplemental instructions that apply to BNSF Railway.

**Supplemental GCOR Rule 1.17, Hours of Service Law**—Apply the following when reporting Hours of Service:

Time spent waiting for deadhead transportation must not be counted when determining time on duty for hours of service purposes when relieved of all duties as outlined in GCOR Rule 1.17.

**Supplemental GCOR and MWOR Rule 1.48, Time**—Dial 8-998-8463 (8-WVV-TIME) or 8-435-6000 to obtain coordinated universal time signal.

**Supplemental GCOR and MWOR 2.14 Mandatory Directive**—When authorities are repeated precisely as they are transmitted, the Control Operator / Train Dispatcher is able to follow the words when checking the repeat for accuracy.

When authorities are not repeated properly, it is more difficult for the Control Operator / Train Dispatcher to follow the repeat process.

Employees are expected to repeat authority precisely as it is recorded on the authority form. All words which are on the form or shown in the examples must be repeated in the proper order and without adding or deleting words.

Employees will be given three chances to repeat an authority properly. If unable to repeat properly after three attempts, the Control Operator / Train Dispatcher will stop the authority and the employee will not be given additional authority until a supervisor has been contacted.

**Supplemental GCOR and MWOR Rule 2.14.1, Verbally Transmitting and Repeating Mandatory Directives**—Apply the following when verbally issuing a mandatory directive identified by numbers separated with a hyphen:

- State the first number, then state or spell each digit separately for that number.
- State the hyphen as "dash".
- State the second number, then state or spell each digit separately for that number.

Example: Authority number 407-15; "407; 4, 0, 7 dash 15; 1, 5."

Employees repeating the initial transmission of the mandatory directive must repeat the number in this same format.

**Supplemental GCOR Rule 4.3, Timetable Characters**

- A.....Automatic Interlocking
- B.....General orders, notices, and circulars
- C.....Radio communication
- g.....Gate, normal position against conflicting route
- G.....Gate, normal position against this subdivision
- J.....Junction
- M.....Manual interlocking
- P.....Telephone
- R.....Restricted Limits
- S.....Railroad crossing protected by permanent stop sign
- T.....Turning facility
- U.....Railroad crossing not protected by signals or gates
- X.....Crossover
- X(2).....Multiple crossovers
- Y.....Yard Limits

**Supplemental GCOR and MWOR Rule 5.5, Permanent Speed Signs**—The following paragraphs are added:

Reduced speed limits may be designated by Advance Warning sign (diagonally upward), Reduce Speed sign (rectangle) and Resume Speed sign (vertical).

The Advance Warning sign will be placed two miles in advance of the location where the lower speed takes effect. At the point where the reduced speed applies, a speed sign will repeat the permissible speed. The lower speed will be in effect until a Resume Speed sign or another Speed sign is displayed.

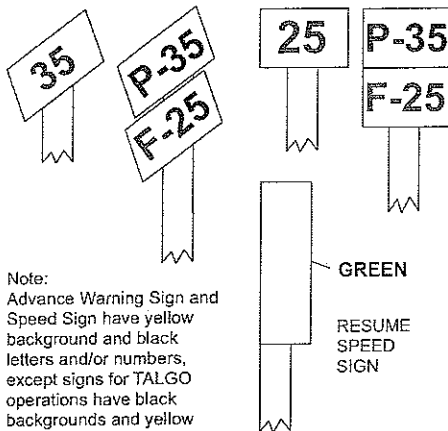
At the end of a reduced speed zone, a train or engine will be governed by a Speed sign displaying a higher speed or a Resume Speed sign which will authorize the maximum permissible speed on that subdivision. In either case, the speed must not be increased until the entire train has passed the sign displayed or has cleared the limits of the restriction.

Locations where reduced speeds are required, but which are not indicated by signs, are listed in the special instructions for each subdivision.

Permanent speed signs will not be placed for trains moving against the current of traffic unless otherwise indicated.

These signs, as illustrated, apply to train and engine movements as follows:

**ADVANCE WARNING SIGN    SPEED SIGN**



Note: Advance Warning Sign and Speed Sign have yellow background and black letters and/or numbers, except signs for TALGO operations have black backgrounds and yellow letters and numbers (not shown).

Figures preceded by letter P apply to passenger trains, except TALGO, if there is a TALGO sign.

Figures preceded by letter F apply to freight trains.

Figures preceded by letter T apply to TALGO passenger trains.

Figures not preceded by a letter apply to all trains.

**Supplemental GCOR and MWOR Rule 5.11, Engine Identifying Number**—the following supplemental instruction is added:

Engines with the following initials stenciled on the side of the locomotive will be identified as NS engines:

SOU, NW, PRR, CG, INT, GSF, AGS, CRCX and CR (ConRail).

Engines with the following stenciled on the side of the locomotive will be identified as CSXT engines:

CSXT, CSX and CSX Transportation.

**Supplemental MWOR Instruction Rule 6.3.1, Track Authority with Standing Equipment**—

When track and time or track permit is granted by the control operator/train dispatcher in the same area as standing equipment (tied down train - no crew, cut of cars, etc.), job brief with the train dispatcher or control operator as to the location and status of the standing equipment.

If the standing equipment is a train waiting for a relief crew to arrive, the MW employee in charge must place a red flag:

- On both ends of the standing equipment if the standing equipment will be inside working limits to be established. These flags will be in addition to the working limits flags and will be placed facing the head end and rear end of the train, or
- On the end of the standing equipment closest to the location the track will be occupied if the standing equipment will not be within working limits or working limits will not be established.

**Supplemental GCOR Rule 6.26, Use of Multiple Main Tracks**—The following supplemental instruction is added:

Unless otherwise indicated in the individual subdivision special instructions, when using main tracks in westward or southward timetable direction, they will be numbered consecutively from right to left beginning from Main 1. When using in eastward or northward timetable direction, they will be numbered from left to right beginning with Main 1.

**Supplemental GCOR Rule 6.32.2, Automatic Warning Devices**—The following supplemental instruction is added:

In the application of this rule, a crossing having a broken gate(s) is to be considered as having working devices when the balance of the automatic warning devices are seen to be working. Movement may proceed over the crossing at 15 MPH without stopping.

**Supplemental GCOR and MWOR Rule 15.1, Track Bulletins**—The following supplemental instruction is added:

BNSF Railway may use a general track bulletin instead of a track warrant to deliver track bulletin restrictions. All rules that apply to track bulletins apply to general track bulletins. Additionally, conductor and engineer may receive a general track bulletin instead of a track warrant listing all restrictions affecting their train movement.

**Other Supplemental Instructions****Track Warrant - Open Switch**

[Reference System Special Instructions Item 12(E).]

**Requesting Track and Time**—The following supplemental instruction added:

The employee requesting track and time will state name, occupation, location and train or other identification. The employee will copy the authority granted on the form provided for that purpose, and repeat from the form the authority granted. If the authority is repeated correctly, the control operator will acknowledge with "That is correct." The train must not move until the engineer understands the track and time granted. The employee who requests track and time must retain the written track and time record until track and time is released.

When requesting track and time, if communication is lost or an incomplete message is received while the control operator is issuing track and time, or if after repeating the authority to the control operator, the employee does not hear the response from the control operator "That is correct," the employee must not occupy the track. The employee requesting track and time must contact the control operator as soon as possible and confirm with the control operator that the track and time was not received.

**Mechanical Issuance**—The following supplemental instruction added:

Track warrants issued mechanically through printer or fax print only items checked. The item numbers checked will be listed on the bottom of the track warrant. Notify the dispatcher if:

- The track warrant does not contain all items listed on the bottom,
- Computer generated line on the bottom listing the items checked is missing,
- or
- Track warrant is missing text or is otherwise not legible.

When contacted, train dispatchers will arrange to provide crews with complete, legible copies and report incident to their supervisor.

**After Arrival Authorities**—The following supplemental instruction added:

When track warrant requires "After Arrival" of another train, the limits must not be occupied until the train to be met has been identified by engine number and the rear end marker has passed the meeting point.

In non-signaled territory, a train may only be granted "After Arrival" track warrants, after the following requirements have been completed:

1. Dispatcher advises the train that will receive the "After Arrival" track warrant of the identification of train(s) that will be met (by initials and engine number).
2. If a controlled signal does not govern movement at the meeting point, the train that will receive the "After Arrival" track warrant must establish the location of the train(s) that will be met (by initials and engine number), advising the dispatcher that direct communication has been made and the location of the train(s) contacted.
3. If a controlled signal does not govern movement at the meeting point, the train to receive the "After Arrival" track warrant has stopped at the meeting point and has notified the dispatcher that they are stopped.

(Note: A train stopped short of the meeting point for topographical reasons, i.e., road crossings, grade considerations, etc., may be considered as stopped at the meeting point for application of this process.)

In non-signaled territory after the meet has occurred, the train with the "After Arrival" must establish positive radio contact with the train listed in the "After Arrival" to confirm the identity of the passing train. If radio communication cannot be established, the train dispatcher must be contacted to provide the required confirmation. The train identification, time passed, location passed, or current time and location must be written on the track warrant form by both the conductor and engineer of the train being so restricted.

**Radio Announcement Approaching Siding/Junctions**—The following supplemental instruction added:

In non-signaled TWC territory, when a train is approximately 2 miles in advance of a siding or junction, a crew member must transmit the following by radio:

"Train identification (initials, engine number and direction) is approaching (location name) at (speed) MPH."

**Document Filing**—The following supplemental instruction added:

At the completion of each trip, all track warrants reported clear or made void must be turned in with the signal awareness form as directed by the Division General Manager.

**Reporting Clear/Releasing Track Warrants**—The following supplemental instruction added:

Engineer and conductor are jointly responsible, through job briefing, to ascertain and agree on the exact location that their entire train has passed before reporting past a specific point or clearing their track warrant.

When reporting past a specific location:

- Engineer and conductor will job brief and agree on train's location.
- Engineer and conductor will communicate with the train dispatcher.
- Communication will use the following format:

Conductor will state: Conductor (Name), locomotive initial, number, (direction), reports clear of (Milepost/location) (Provide switch briefing when required) - Over.

Dispatcher will then check information against computer system information and if correct, will restate track release information followed by the question, "Is that correct?"

Engineer will state: "Engineer (name), that is correct. - Over".

**Mechanically Transmitted Track Bulletins**—The following supplemental instruction added:

Mechanically transmitted track bulletins from TSS provide summary information indicating the total number of lines or restrictions issued. Employees who receive these documents must cross reference the summary with the document to ensure all items are listed.

**16. Maintenance of Way Operating Rules, Changes and Additions**

Rules listed in Item 4, General Code of Operating Rules Items, of the individual subdivision timetables are in effect for employees governed by the Maintenance of Way Operating Rules when applicable.

**MWOR 2.14.2, Before Reporting Clear of Authority Limits—**  
The first sentence and first bullet is changed to read:

Before a field employee reports clear or releases a portion of authority limits, and the Train Dispatcher/Control Operator accepts the information, the following must occur:

- The employee will provide their name or other identification and the authority number to the Train Dispatcher/Control Operator.

**MWOR 6.3.3, Visual Detection of Trains—Part A. Lone Workers**, under "Conditions for Use" add the following new 3rd and 6th bullets:

- Visibility is sufficient to observe the entire track segment at the minimum separation distance as specified by the "Statement of On-Track Safety".
- Natural or artificial light and conditions are sufficient to observe approaching trains, engines or on-track equipment at the minimum separation distance as specified by the "Statement of On-Track Safety". Individual train detection is prohibited based solely upon the observation of headlights, ditch lights or markers, such as during conditions of insufficient visibility as affected by darkness or inclement weather.

Part B. Lookouts, under "Conditions for Use" add the following new 3rd and 5th bullets:

- Visibility is sufficient to observe the entire track segment at the minimum separation distance as specified by the "Statement of On-Track Safety".
- Natural or artificial light and conditions are sufficient to observe approaching trains, engines or on-track equipment at the minimum separation distance as specified by the "Statement of On-Track Safety". Train approach warning is prohibited based solely upon the observation of headlights, ditch lights or markers, such as during conditions of insufficient visibility as affected by darkness or inclement weather.

**MWOR Rule 6.11, Mandatory Directive—**Is changed to read:

Mandatory directives are written, printed, or displayed authorities or speed restrictions issued by the train dispatcher or control operator.

Mandatory directives are:

- Track warrants
- Track bulletins
- Track and time
- Track permits
- Radio speed restrictions
- Foul time
- OCS

A mandatory directive restricting a train's movement will not be issued near a point where the restriction applies until the engineer or conductor confirms that the train can comply with the restriction.

MW employees must indicate "VOID" on mandatory directives which are made void. Where multiple mandatory directives are recorded on a single form, MW employees must indicate "VOID" on each portion of the mandatory directive form that is released.

**MWOR Rule 8.2, Position of Switches—**Is changed to read:

The employee handling the switch or derail is responsible for the position of the switch or derail in use.

Do not operate a switch that is tagged. If a switch is spiked, do not remove the spike unless authorized by the craft or group that placed it.

Employees handling switches and derails must make sure that:

- Switches and derails are properly lined for the intended route.
- The switch or derail is not operated while on-track equipment is fouling, standing on or moving over the switch points or derail.
- On-track equipment does not foul the adjacent track until the hand-operated switch or derail is properly lined for the intended route.
- When moving over a switch, the switch remains lined for the movement until the on-track equipment has moved beyond the fouling point of the adjacent track.
- When the operating lever is equipped with a latch, they do not step on the latch to release the lever except when throwing the switch.
- The points fit properly and the target, if so equipped, corresponds with the switch's position.
- After locking a switch or derail, they test the lock to ensure that it is secured.

When practical, employees must see that the switches and derails near on-track equipment are lined properly.

When operating a main track switch, switch point lock or derail, the employee in charge must record the following information on the form entitled Position of Switches/Derails:

- Name and location of the main track switch, switch point lock or derail used.
- Time the employee initially operates the main track switch, switch point lock or derail.
- Time the main track switch, switch point lock or derail is finally restored to the proper position.

This record must be retained for 5 days after tour of duty is completed.

In non-signaled TWC or Double Track ABS Territory, when a main track switch is operated for any reason, on track equipment shall:

- Stop short of switch until activity is completed when possible.
- When activity is completed, if authority allows, make a facing point movement over the switch to ensure switch is lined properly for the main track.
- If authority does not allow for a facing point movement over the switch, make a walking inspection of the switch points to ensure proper fit and route.

When a main track switch is operated for any reason and on-track equipment is not being used in non-signaled TWC or Double Track ABS Territory, a walking inspection of the switch points must be made to ensure proper fit and route.

17. **Air Brake and Train Handling Rules, Changes and Additions**  
None

18. **Safety Rules, Changes and Additions**  
**Maintenance of Way Safety Rules Amendments**  
**MW Rule S-1.2.6, Warning Signs**—The following is added:

Apply an orange Out of Service tag (form #488159042) to equipment that is not to be operated/used until repaired. The employee applying the tag is required to complete the documentation portion of the tag and affix the tag to the affected equipment in a conspicuous location. The employee initiating this action is also responsible for notifying the appropriate supervisor as indicated on the tag.

Following risk assessment and implementation of identified precautionary measures, personnel tasked with conducting service or repairs may operate equipment tagged as out-of-service in order to identify or troubleshoot problems. After the employee completes the service or repair, the employee is required to complete the documentation portion of the tag, sign and forward the tag to the supervisor originally contacted by the employee who applied the tag.

The yellow Roadway Maintenance Machine (RMM) Safety tag is used in accordance with the requirements of FRA 49 CFR, Part 214, Subpart D, Roadway Maintenance Machine Safety. This tag is to be affixed to the vehicle/equipment in a conspicuous location and is used solely to identify a non-complying condition on on-track work equipment or on a hy-rail vehicle. The Machine Operator's Daily Log Book provides complete details, including allowable time frames for the completion of identified problems. The employee initiating this action is responsible for notifying their supervisor, the local roadway equipment mechanic or the local roadway equipment supervisor.

- After the completion of corrective actions, the mechanic tasked with making repairs is required to complete documentation in the Machine Operator's Daily Log. The RMM Safety tag may then be removed and discarded.
- Place an orange Out of Service tag onto on-track work equipment or hy-rail vehicles to supplement the RMM Safety tag when:
  - Identified repairs are not completed within the time frame specified in FRA 49 CFR, Part 214, Subpart D.
  - The responding mechanic identifies a condition, not initially identified, that is serious enough to warrant immediate removal from service.

**MW Rule S-2.9, Protection from Manganese During Frog Repair**—Is changed to read:

Whenever you are air arcing (gouging) on "frogs," you must wear respiratory protection to reduce potential exposure to metal fume, including manganese. Additionally, the Smoke Cannon local exhaust ventilation system must be used.

**MW Rule S-2.10, Protection from Silica-Containing Dust**—Is changed to read:

You must wear a respirator during the following operations when visible dust is generated:

- Maintenance of Way activities when visible dust is produced. This includes, but is not limited to, ballast dumping,

scarifying, brooming, etc.

- Taconite handling and related maintenance operations when working within Belt Buildings and other locations where visible dust is present.

**MW Rule S-3.1.1, General**—The following 4th bullet is deleted:

- Test Structures (metal buildings, flood light towers, etc.) with live power circuits, before touching them, to make sure they are not energized.

**MW Rule S-3.2.2, Protective Gloves**—Is changed to read:

**S-3.2.2 Voltage Rated Protective Gloves**

When working on energized circuits of 50 volts (AC or DC) or more, wear voltage rated rubber gloves with leather protector gloves of the appropriate length over the rubber gloves. Rubber gloves shall not be worn without leather protectors. Gloves shall be tested by an accredited facility prior to first issue, and every 6 months thereafter. If the insulating equipment has been tested and not issued for service, it may not be placed into service unless it has been tested within the previous 12 months. Defective gloves shall be removed from service immediately.

**MW Rule S-6.2.1, General Requirement**—The second bullet is changed to read:

- Set up a suitable screen marked "Do Not Watch the ARC" at welding sites to shield those not engaged in the welding operation.

**MW Rule S-7.5, Banding Material**—Is deleted.

**MW Rule S-7.8.14, Drift Pin**—Number 2 is changed to read:

Surround the striking surface with a protective collar or coating.

**MW Rule S-8.3.1, Vehicle Requirements**—Is changed to read:

Required safety equipment on yard vehicles must be functioning and used when vehicle is operated on the facility. This includes strobes or oscillating lights, headlights, taillights, and brake lights, turn indicators, and windshield wipers.

All personnel operating within an intermodal facility must comply with the following chassis deflector policy. Service Partners must not use private vehicles in place of company vehicles. All pick-up trucks, vans, step vans, and other specialized vehicles permanently assigned, or work on the facility daily (i.e. Trailer repair, Tire repair, Lift equipment repair, Crew haulers, Facility maintenance, etc.) must be equipped with chassis deflectors. Other vehicles will not



be allowed on the intermodal property at any time unless the driver of the vehicle is issued a "Facility Authorization Pass" which will identify the authorized vehicle. The "Facility Authorization Pass" must be visible through the front windshield of the vehicle whenever on the facility property. BNSF Hub Management must use careful consideration before an authorization pass is issued, and drivers must be properly trained in the Hub Safety rules. Vehicles can be limited to specific routes within the Hub, particularly when workers must drive a private vehicle to their workplace within the Hub property. Authorized vehicles, which are limited to a specific route within the Hub, cannot be used to drive to any other location within the facility.

**MW Rule S-8.3.2, Vehicle Operations**—The following 4th bullet is added:

- All unattended vehicles must place standard transmission in low gear or automatic transmission in park, with engine shut off.

**MW Rule S-8.4, Check Point Ingate / Outgate Procedures**—is changed to read:

All BNSF checkpoints will be designed as outlined below. The driver and inspector must comply with the following procedures:

1. Establish an area 35 feet from the inspection lane, and declare this area the safe clearance zone between trucks and inspection lane. A three feet wide area will be painted RED across each lane.

Exceptions:

South Seattle, Billings, Dilworth - (No safe zone required not manned)

St. Paul, Spokane, Portland - (15 feet from the inspection lane)

San Bernardino - (KISOK out-gate 15 feet from the inspection lane)

Rancho East & West - (10 feet from the inspection lane)

Los Angeles main yard, Lot 8, Lot 9, and Lot 11; Bell Lot; Commerce Lot - (30 feet from inspection lane)

Fresno - (25 feet from inspection lane)

2. Stop signs will be posted at this area in each check lane and the ground stenciled with the word STOP (painted in WHITE) across the lane. Drivers will be required to turn truck engines off while at the Inspection stop signs or painted stop bars on pavement in the checkpoint lanes. Each facility should add "Turn Engine Off" signs to current stop bars or stop signs, effectively immediately.
3. Mounted on the pole below the stop sign will be a white sign with black lettering stating: "WAIT FOR SIGNAL TO MOVE FORWARD".
4. Cones with a height of 48 inches will be placed in the middle of each check lane and removed only by the inspector that signals a vehicle to pull forward. When the vehicle is stopped, the inspector will replace the cone back into the middle of the check lane. This procedure is repeated each time an inspection is to be performed.

Inspectors will not enter the inspection lane until the truck engine is turned off for the unit to be inspected, and the truck engine is turned off for the truck at the stop sign or stop bar in the first queuing position behind the inspection lane. The inspector will instruct drivers when they can re-start their tractors and proceed. The cone shall remain in the lane until the inspector removes it.

**MW Rule S-9.13.1, Scissor Lifts**—The following 3rd bullet is deleted:

- If required by local or state law, a safety belt or harness must be worn that meets the same requirements as stated below in S-9.13.2. Safety belts may only be used for fall restraint in scissor lifts.

**MW Rule S-9.13.2, Boom-Mounted Baskets or Buckets**—Is changed to read:

When working from a boom-mounted basket or bucket:

- A harness equipped with a lanyard that restrains personnel within the platform must be worn to prevent personnel from being ejected out of the platform.
- The lanyard must be secured to an anchor point designed and designated by the manufacturer for this use.
- Do not attach the lanyard to a pole, piece of equipment, or any other structure.
- Do not allow the platform to rest on or against any structure or equipment while working from the platform, unless this practice is permitted based on the manufacturer's operating manual for the unit.
- Do not climb in or out of an elevated basket or bucket, unless it is equipped with a door or a gate and the lift is positioned to provide safe access.
- On equipment designed primarily as personnel carriers, use only equipment with upper and lower platform controls where the lower controls can override the upper controls.
- Personnel using fall arrest or restraint equipment must attend appropriate training.

**MW Rule S-11.5.1, Banding Material**—The first bullet is changed to read:

- Wear cut-resistant or leather gloves to protect your hands from sharp edges of banding.

**MW Rule S-11.5.2, Sharp Edges/Slivers - Metal**—The following new rule is added:

As a part of risk assessment activities, identify and address any potential contact with sharp metal edges or burrs when working with metal.

Do not handle sharp metal pieces or slivers with a bare or gloved hand. Use an appropriate tool; e.g., pliers, vice grips.

Do not slide a bare or gloved hand along rail or metal components during inspection activities.

After removing slivers from rail, or when handling other metal scraps, be sure to appropriately dispose of the material. Do not leave such materials on the track structure, in right-of-way areas, or in shop, where others may be exposed to injury.

**MW Rule S-11.5.3, Sharp Edges/Nails - Wood**—The following new rule is added:

As a part of risk assessment activities, identify and address any potential contact with splinters, rough edges, or nails when working with wood products.

Do not slide a bare or gloved hand along wood edges during inspection activities.

Verify that nails are removed or safely bent over on scrap lumber temporarily maintained at job-sites.

**MW Rule S-11.9.1, Speed and Movement Restrictions**—Is changed to read:

When operating a forklift:

- Reduce speed and sound the horn when rounding corners or passing by or through doorways or congested areas.
- Watch for and avoid contact with overhead and side obstructions and overhead wires.
- Make sure the way is clear before moving in any direction.
- Bring a forklift to a complete stop before reversing direction.
- Look in both directions before crossing tracks. Where possible, cross diagonally.
- Operate the forklift backwards if the load obstructs your view.

**MW Rule S-12.8, Backing**—Is replaced by the following:

**MW Rule S-12.8, Backing**

**MW Rule S-12.8.1, Vehicles**

Position the vehicle, when possible, to avoid backup movement.

Before backing, inspect areas to the rear to verify that no personnel or obstructions are in the path of movement.

When backing vehicles, including vans, but other than automobiles and pickup trucks:

- Position someone near the back of the vehicle to guide movement, when available.
- Sound the horn three short blasts in vehicles not equipped with backup alarms.
- Stop if the person guiding movement disappears from view.

**MW Rule S-12.8.2, Off-Track Mobile Construction Equipment**

Establish a "circle of safety" around off-track equipment operations.

The dimensions of this safety zone are communicated during the job safety briefing. Personnel are not to enter the "circle of safety" without first communicating with the equipment operator.

A co-worker is to be designated in job safety briefings to guide backing movements where risk assessment has identified potential overhead or underground hazards

**MW Rule S-14.1.2, Seat Belts**—The 1st bullet is changed to read:

- The field of view is obstructed and it is necessary to stand to obtain a clear view of the surroundings, or

**MW Rule S-16.25, Hydraulic Tools**—The following new rule is added:

Inspect, maintain, and use hydraulic tools in accordance with manufacturer recommendations.

- Visually inspect hydraulic tools, hoses and connectors prior to daily use.
- Pull back any protective hose sleeves to help ensure a thorough inspection.
- Defective equipment is to be conspicuously labeled as defective, and immediately removed from service.
- Comply with lockout/tagout procedures during the inspection, service and maintenance of hydraulic tools.
- Do not handle pressurized hoses with a bare or gloved hand. Use an appropriate tool.
- Do not place pressurized hoses against the body.
- Manage hoses during set-up and use, so as to not create a tripping hazard, or allow hose contact with sharp edges or hot surfaces.

**MW Rule S-17.2.5, Power Line Clearance**—Under Clearances for Cranes or Other Equipment in Transit Near Power Lines, change:

0.78 KV - 50 KV 6 feet

To:

0.75 KV - 50 KV 6 feet

**MW Rule S-21.1, PPE Requirements**—The 1st sentence is changed to read:

All BNSF employees, contractors and their agents, visitors, and vendors must wear the following equipment while on BNSF property or in the performance of their duties.

**MW Rule S-21.1, PPE Requirements**—The 1st bullet is changed to read:

- Hard hats which meet the specifications (ANSI Standard Z89.1, Type I, Class E & G) found in the BNSF Safety and Health Equipment Catalog.

**MW Rule S-21.1, PPE Requirements**—The 2nd bullet is changed to read:

Safety glasses with permanently mounted side shields and authorized by BNSF. Authorized tints for safety glasses are: Rose #1 and 2 and Grey #1 indoors and Rose #1 and 2 and Grey #1, #2 and #3 outdoors. Eye protection may need to be upgraded depending upon the work to be performed or exposure to that work.

**MW Rule S-21.1, PPE Requirements**—The 6th bullet is changed to read:

- Enhanced visibility work wear is to be worn in accordance with the below-listed specifications. Enhanced visibility work wear is defined through this rule as an ANSI Class II or III garment that is orange in color, with retro-reflective striping.
- Acceptable items of enhanced visibility work wear: vest, tee-shirt, jacket, sweatshirt or rain suit.
  - Tee shirts, sweatshirts, polo shirts may not be worn as outer garments when performing, or within the established "circle of safety" of hot work operations, or when exposed to energized electrical systems or equipment above 50 volts.
  - Vests, other than those specifically rated for electrical work, may not be worn when exposed to energized electrical systems or equipment above 50 volts.
  - ANSI Class III work wear is required to be worn by the flagger when highway flagging at night or when highway flagging operations are performed on roadways where posted speeds are 50 MPH or greater.
- At least one item of enhanced visibility work wear must be worn when:
  - working in right-of-way areas, including when foul of track,
  - working within 50' of operating mobile construction equipment, including cranes and boom trucks,
  - performing highway flagging operations, or otherwise exposed to vehicular traffic while on-duty; e.g. vehicle breakdowns along roadways,
  - involved in work train operations,
  - at derailment site,
  - at intermodal facilities.
- The wearing of a "high visibility" hardhat, without the hardhat being supplemented by the wearing of an enhanced visibility garment, does not meet enhanced work wear requirements. "High visibility" hardhats are to be replaced when they become faded or dirty to the point where enhanced visibility is lost.

**MW Rule S-21.1, PPE Requirements**—Add an 11th bullet reading:

- For personal hygiene reasons items of personal protective equipment (PPE), excluding fall arrest equipment and items that may be sanitized between users based on manufacturer's instructions, are not to be shared.

**MW Rule S-21.1, PPE Requirements**—The 1st bullet under the Exceptions, that part reading:

- in enclosed work equipment cabs when windows are completely closed.

Is changed to read:

- in enclosed work equipment cabs (not including locomotive cabs) when windows are completely closed.

**MW Rule S-21.1, PPE Requirements**—Exceptions is changed to read:

- Personal protective equipment (PPE) is not required to be worn:
  - when performing office tasks in office areas,
  - when inside highway vehicles when windows are completely closed,
  - or
  - when inside passenger-carrying rail cars.

- A hard hat is not required to be worn:
  - by Train, Yard, and Engine (TY&E) employees except when performing work service with Maintenance of Way, at derailments, or as directed by supervisor,
  - when inside roadway equipment with an enclosed cab with doors and windows closed,
  - or
  - when inside highway vehicles or hy-rail vehicles.
- Safety glasses and lenses:
  - Employees must wear safety glasses provided by BNSF unless exempted by contractual agreement.
  - When exempted by contractual agreement, personal safety eye wear must also meet the below-listed requirements.
- No other tinting other than as prescribed in the BNSF Prescription Safety Glasses Policy (indoors: Grey #1 and Rose #1 and #2) (outdoors: Grey #1, #2 and #3, and Rose #1 and #2) is permitted.
- Mirror-like lenses, amber "shooter" lenses, or lenses that are intended to correct a color vision deficiency are prohibited.
  - Safety glasses are not required when inside highway vehicles or hy-rail vehicles when windows are completely closed.

**MW Rule S-21.2.2, Safety Boots**—The 6th bullet is changed to read:

- Minimum ASTM F2412-05, ASTM F2413-05-75 pound (100 pounds in Canada) impact and compression class toe.

**MW Rule S-21.2.2, Safety Boots**—Delete the following 7th bullet:

- Chemical Resistant

**MW Rule S-21.2.4, Anti Slip Winter Footwear**—The following new rule is added:

Employees will wear anti slip winter footwear when working in icy and or snowy conditions. Only BNSF approved winter footwear may be worn.

**MW Rule S-21.3, Respirator Selection and Use**—Is changed to read:

Refer to the Respiratory Protection Chart to determine which task requires use of respirators. Your supervisor, safety manager, or the Industrial Hygiene group may specify additional tasks or activities not listed that require the use of respirators. If you have questions about the appropriate respirator selection, contact Industrial Hygiene.

**MW Rule S-21.3.1, Respiratory Protection Program**—Is changed to read:

All BNSF employees who use a respirator must comply with the practices and procedures outlined in the Respiratory Protection program. When you are required to wear a respirator, you must:

- Be trained and fit-tested annually for the specific make and model of the respirator used.
- Be medically qualified annually.
- Not have any facial hair, including stubble of more than one day, within the respirator to face seal area.
- Inspect your respirator prior to use.
- Clean and properly store respirator following use.

#### **Voluntary Respirator Use**

When a respirator is not required for an activity, but you wish to voluntarily wear a respirator you must:

**Elastomeric Facepiece Models**

Be trained and fit-tested annually for the specific make and model of the respirator used.

- Be medically qualified annually.
- You must not have any facial hair, including stubble of more than one day, within the respirator to face seal area. This requirement applies at the time you are fit tested and when your work group is performing jobs that require a respirator to be on. Inspect your respirator prior to use.
- Clean and properly store the respirator following use.

**Filtering Facepiece Models**

For voluntary use of a filtering facepiece respirator, the user must comply with the prohibition on facial hair in the sealing area, and must be provided with Appendix D to the OSHA Respirator Standard (29 CFR, 1910.134). This document is entitled: Mandatory Information For Employee Using Respirators When Not Required Under the Standard. This document is available from the BNSF IH Department intranet home page.

**MW Rule S-21.30, Personal Protective Equipment and Clothing Chart**—Is changed to read:†

**MW Rule S-21.31, Eye and Face Protection Chart**—Is changed to read:†

**MW Rule S-21.32, Work Glove Chart**—Is changed to read:†

**MW Rule S-21.33, Respiratory Protections Chart**—Is changed to read:†

**MW Rule S-27.15, Respiratory Protection**—Is changed to read:

The Respiratory Protection program was developed for BNSF people to prevent inhalation of airborne contaminants which could cause irritation, respiratory problems, or other illness. The program offers a selection of respiratory protection devices and provides training on the each device's proper use, limitations, and maintenance. Fit testing is provided for all devices to verify adequate seals for particular devices. Individuals required to wear respiratory protection are also evaluated medically to verify their physical fitness to use a respirator.

**†BNSF Amended PPE Charts:**

The BNSF Maintenance of Way Safety Rule book with the amended PPE charts is available on the BNSF Living Rule Book intranet website at the following address:

<http://bnsfweb.bnsf.com/departments/ttc/Timetable/mwsafetyrevisedpages.html>

**TY&E Safety Rules Amendments**

**TY&E Rule S-1.2.10, "Bill of Rights" Relative to Employees Riding in Transport Vehicles**—Right 5 is changed to read:

Providers and BNSF drivers are prohibited from making a backing movement with BNSF occupants as passengers. If a backing maneuver is necessary, the driver will back the vehicle prior to passengers entering the vehicle or after passengers have exited the vehicle. Expect the driver to request assistance when backing where required due to vision limitations or other conditions. When providing assistance and before a backing movement begins, perform a safety briefing to ensure that all employees remain clear of the expected movement. Advise the driver when employees are clear of the expected movement and remain clear of the expected movement.

**TY&E Rule S-1.4.10, Lights or Lanterns**—The following new rule is added:

At night or when visibility is limited:

- Crew Members (except engineers) must use a railroad supplied lantern.
- Remote Control Operators must use a railroad supplied lantern or railroad supplied hands-free lighting device.
- Locomotive Engineers must use a flashlight or railroad supplied lantern.

**TY&E Rule S-8.3.1, Vehicle Requirements**—Is changed to read:

Required safety equipment on yard vehicles must be functioning and used when vehicle is operated on the facility. This includes strobes or oscillating lights, headlights, taillights, and brake lights, turn indicators, and windshield wipers.

All personnel operating within an intermodal facility must comply with the following chassis deflector policy. Service Partners must not use private vehicles in place of company vehicles. All pick-up trucks, vans, step vans, and other specialized vehicles permanently assigned, or work on the facility daily (i.e. Trailer repair, Tire repair, Lift equipment repair, Crew haulers, Facility maintenance, etc.) must be equipped with chassis deflectors. Other vehicles will not be allowed on the Intermodal property at any time unless the driver of the vehicle is issued a "Facility Authorization Pass" which will identify the authorized vehicle. The "Facility Authorization Pass" must be visible through the front windshield of the vehicle whenever on the facility property. BNSF Hub Management must use careful consideration before an authorization pass is issued, and drivers must be properly trained in the Hub Safety rules. Vehicles can be limited to specific routes within the Hub, particularly when workers must drive a private vehicle to their workplace within the Hub property. Authorized vehicles, which are limited to a specific route within the Hub, cannot be used to drive to any other location within the facility.

**TY&E Rule S-8.3.2, Vehicle Operations**—The following 4th bullet is added:

- All unattended vehicles must place standard transmission in low gear or automatic transmission in park, with engine shut off.

**TY&E Rule S-8.4, Check Point Ingate / Outgate Procedures**—Is changed to read:

All BNSF checkpoints will be designed as outlined below. The driver and inspector must comply with the following procedures:

1. Establish an area 35 feet from the inspection lane, and declare this area the safe clearance zone between trucks and inspection lane. A three feet wide area will be painted RED across each lane.

Exceptions:

South Seattle, Billings, Dilworth - (No safe zone required not manned)

St. Paul, Spokane, Portland - (15 feet from the inspection lane)

San Bernardino - (KISOK out-gate 15 feet from the inspection lane)

Rancho East & West - (10 feet from the inspection lane)

Los Angeles main yard, Lot 8, Lot 9, and Lot 11; Bell Lot;

Commerce Lot - (30 feet from inspection lane)

Fresno - (25 feet from inspection lane)

2. Stop signs will be posted at this area in each check lane and the ground stenciled with the word STOP (painted in WHITE) across the lane. Drivers will be required to turn truck engines off while at the inspection stop signs or painted stop bars on pavement in the checkpoint lanes. Each facility should add "Turn Engine Off" signs to current stop bars or stop signs, effectively immediately.
3. Mounted on the pole below the stop sign will be a white sign with black lettering stating: "WAIT FOR SIGNAL TO MOVE FORWARD".
4. Cones with a height of 48 inches will be placed in the middle of each check lane and removed only by the inspector that signals a vehicle to pull forward. When the vehicle is stopped, the inspector will replace the cone back into the middle of the check lane. This procedure is repeated each time an inspection is to be performed.

Inspectors will not enter the inspection lane until the truck engine is turned off for the unit to be inspected, and the truck engine is turned off for the truck at the stop sign or stop bar in the first queuing position behind the inspection lane. The inspector will instruct drivers when they can re-start their tractors and proceed. The cone shall remain in the lane until the inspector removes it.

**TY&E Rule S-13.1.1, Going Between Cars or Locomotives Coupled to Locomotives**—Is changed to read:

**S-13.1.1, Going Between Cars or Locomotives**

Going between or working on the end of rail equipment means an employee has placed all or part of their body where it could be struck by rail equipment if the equipment were to move.

Note: Operating the uncoupling lever is not considered going between rail equipment.

Before crew members go between or work on the end of rail equipment on any track, they must:

- Wait for movement to stop and slack to adjust.
- Ensure that all crew members have a clear understanding of the work to be performed.

Where engines may be working at both ends of a track or tracks, crews switching must have a clear understanding of movements to be made.

If a locomotive is not coupled to the rail equipment:

- A crew member must notify all members of the crew by radio, that the crew member will be going between or working on the end of rail equipment on any track.
- Members of the notified crew must acknowledge by radio that they understand a crew member will be going between or working on the end of rail equipment.

If a locomotive is coupled to the rail equipment:

- After ensuring movement has stopped and slack has adjusted, the crew member must either announce by radio, "Going between," or give the prescribed hand signal.
- The crew member at the controls of the locomotive must fully apply the independent brakes, center the reverser, and then acknowledge the radio transmission or the hand signal:
  - If using a radio response, acknowledge, "Set and centered"
  - If using hand signals, sound one long whistle signal.
- The brakes must remain applied with the reverser centered or removed, and the locomotive must not be left unattended until the crew member requesting protection gives a radio or hand signal to move or announces by radio, "In the clear."

Prescribed hand signals to indicate Going Between Cars or Locomotives:

- By day:
  - Give a stop signal.
  - Raise arm farthest from the rail equipment straight above the head.
  - Point the arm nearest the rail equipment at a 90-degree angle toward the rail equipment.
- By night:
  - Give a stop signal.
  - With the arm extended forward parallel to the ground, move the light from left to right.

When stepping from between rail equipment, be alert for movement on adjacent tracks or vehicles moving on the walkway or roadway.

Do not go between uncoupled locomotives or cars when clearance between them is less than 50 feet except when a train on main track or siding is unable to move safely and you have exhausted all practical means of complying with the 50 feet requirement.

In addition to complying with the other applicable portions of this rule, employees going between with less than 50 feet of separation must:

- Ensure equipment is secure against undesired movement.
- Keep at least one foot outside the rail, when practical.
- Refrain from placing all or part of their body directly between coupling devices unless necessary to complete the work.
- Obtain 50 feet of separation between the uncoupled locomotives or cars as soon as the equipment can be positioned practically and safely.

**TY&E Rule S-13.1.3 A. Crossing Tracks**—The first bullet is changed to read:

- Do not cross within 25 feet of standing equipment, unless "set and centered" protection has been established as outlined in S-13.1.1.

**TY&E Rule S-13.2.2, Operating Uncoupling Lever**—Is changed to read:

When operating the uncoupling lever on a rail car:

- Face the direction of the movement.
- Use your hand nearest the equipment to operate the lever.
- Watch for pinch points.
- Place your hand on the portion of the uncoupling lever designed as the handle.
- Use constant, steady pressure when operating the uncoupling lever.
- Do not run while operating the uncoupling lever.
- Do not use your feet to operate the uncoupling lever.

When operating the uncoupling lever on a locomotive:

- Do not operate the uncoupling lever of a moving locomotive from the ground.
- From the ground, use the lower uncoupling lever.
- From the locomotive step, use the upper uncoupling lever.
- Place your hand on the portion of the uncoupling lever designed as the handle.
- Watch for pinch points.
- Use constant, steady pressure when operating the uncoupling lever.
- Do not use your feet to operate the uncoupling lever.

**TY&E Rule S-21.2.2, Safety Boots**—The 6th bullet is changed to read:

- Minimum ASTM F2412-05, ASTM F2413-05-75 pound (100 pounds in Canada) impact and compression class toe.

**TY&E Rule S-21.2.2, Safety Boots**—The following 7th bullet is deleted:

- Chemical Resistant

**TY&E Rule S-21.2.4, Anti Slip Winter Footwear**—The following new rule is added:

Employees will wear anti slip winter footwear when working in icy and or snowy conditions. Only BNSF approved winter footwear may be worn.

**TY&E Rule S-21.3, Respirator Selection and Use**—Is changed to read:

Refer to the Respiratory Protection Chart to determine which task requires use of respirators. Your supervisor, safety manager, or the Industrial Hygiene group may specify additional tasks or activities not listed that require the use of respirators. If you have questions about the appropriate respirator selection, contact Industrial Hygiene.

**TY&E Rule S-21.3.1, Respiratory Protection Program**—Is changed to read:

All BNSF employees who use a respirator must comply with the practices and procedures outlined in the Respiratory Protection program. When you are required to wear a respirator, you must:

- Be trained and fit-tested annually for the specific make and model of the respirator used.
- Be medically qualified annually.
- Not have any facial hair, including stubble of more than one day, within the respirator to face seal area.
- Inspect your respirator prior to use.
- Clean and properly store respirator following use.

**Voluntary Respirator Use**

When a respirator is not required for an activity, but you wish to voluntarily wear a respirator you must:

**Elastomeric Facepiece Models**

Be trained and fit-tested annually for the specific make and model of the respirator used.

- Be medically qualified annually.
- You must not have any facial hair, including stubble of more than one day, within the respirator to face seal area. This requirement applies at the time you are fit tested and when your work group is performing jobs that require a respirator to be on. Inspect your respirator prior to use.
- Clean and properly store the respirator following use.

**Filtering Facepiece Models**

For voluntary use of a filtering facepiece respirator, the user must comply with the prohibition on facial hair in the sealing area, and must be provided with Appendix D to the OSHA Respirator Standard (29 CFR, 1910.134). This document is entitled: Mandatory Information For Employee Using Respirators When Not Required Under the Standard. This document is available from the BNSF IH Department intranet home page.

**TY&E Rule S-27.15, Respiratory Protection**—Is changed to read:

The Respiratory Protection program was developed for BNSF people to prevent inhalation of airborne contaminants which could cause irritation, respiratory problems, or other illness. The program offers a selection of respiratory protection devices and provides training on the each device's proper use, limitations, and maintenance. Fit testing is provided for all devices to verify adequate seals for particular devices. Individuals required to wear respiratory protection are also evaluated medically to verify their physical fitness to use a respirator.

19. **Train Dispatcher's, Operator's and Control Operator's Manual, Changes and Additions**  
None

20. **United States Hazardous Material Instructions for Rail, Changes and Additions.**  
None

21. **Currently Not Used**  
(For HLCS rules see MWOR or TDOCOM)

22. **Automatic Cab Signals**  
Cab signal equipment must be cut out except on suburban equipment on the Chicago Subdivision.

23. **Remote Control Operations**

**23(A). Remote Control Operating Instructions**

- a. Employees assigned to a remote control crew are governed by these instructions and must have a current copy accessible while on duty. Remote Control Operators (RCO) will be issued an Operator's Manual, which governs the operation of a Remote Control System. All rules or instructions contained in other company publications will remain in effect unless specifically exempted in these instructions.
- b. All remote control crew members must be informed and clearly understand which crew member will be controlling the movement. Before the control of the Operator Control Unit is transferred from one crew member to another, the receiving Remote Control Operator must be notified and acknowledge that he/she is in a position to assume control. GE and Catron Accuspeed Systems do not require verbal communication to accomplish this.
- c. A crew member must not go between or work on the end of rail equipment coupled to a remote control locomotive or when a remote control locomotive is on the same track until each member of the crew has been informed of the work to be performed. The Remote Control Operator must ensure that the OCU's speed control is in the STOP position and the directional control is in neutral. The primary Remote Control Operator must acknowledge that he/she understands that another employee will be going between equipment by announcing via radio "set and centered." The Primary Remote Control Operator must not change the OCU speed or direction controls, or transfer control to the secondary operator, until the crew member who requested protection gives a radio or hand signal to move or announces by radio "in the clear". When the primary operator will be the employee that will be going in between or working on the end of rail equipment, they must not go in between until each member of the crew acknowledges their understanding. After going in between or working on the end of rail equipment, the Primary Remote Control Operator must ensure they are in the clear before changing OCU speed or direction controls, or transferring control to the secondary operator.
- d. Each Remote Control Operator must have in their possession an operative holstered hand-held radio equipped with a microphone. Upper body mounted holsters or headsets that do not require removal of the radio for transmitting will satisfy this requirement.
- e. Each remote control locomotive must have a tag placed on the control stand when the locomotive is used in remote control mode.
- f. An OCU is considered a safety device. When in use, the OCU must be properly secured to a vest or belt intended for remote control operations. All "D" rings on the OCU must be properly attached to the operator's vest or belt. Improper or incomplete attachment of an OCU to the operator's vest or belt will be considered as tampering with a safety device.

**23(B). Setup and Testing**

Prior to operating a Remote Control System, the Remote Control Operator must ensure the equipment is properly setup and tested in accordance with prescribed procedures. If two OCUs are to be utilized in a "shared" or "pitch and catch" operation, both must be tested.

**23(C). Operating the Equipment**

- a. Only qualified operators or students who have been trained in remote control operations may operate an OCU.
- b. A Remote Control Operator shall control only one locomotive consist at a time with an OCU and shall not operate simultaneously any other locomotive.
- c. When using "shared" or "pitch and catch" operations, the procedure for changing operators is specified in the operators' manual.
- d. Operation of the OCU must not be performed from a moving motorized vehicle.
- e. Dropping of cars is prohibited during remote control operations except at locations specifically authorized by special instructions.
- f. When using a remote control locomotive in "shared" or "pitch and catch" operations to make a coupling, the Remote Control Operator located at the coupling must be the primary operator.
- g. When initiating a remote control movement the Primary Remote Control Operator must visually determine direction the equipment moves, or a crew member must visually determine direction the equipment moves and confirm direction with the primary remote control operator. If no confirmation is received, the movement must be stopped immediately.

**23(D). Securing Equipment**

- a. Remote control locomotives and OCUs must not be left unattended unless secured and/or disabled. For remote control system purposes, "unattended" means a remote control locomotive is not set up (linked) to an operating OCU in the possession of a crew member.

When leaving equipment for meal period, break, etc., the Remote Control Operator will secure remote control locomotive as required and turn the OCU power off.

When ending tour of duty, the Remote Control Operator must place the locomotive in the MANUAL mode unless being relieved by another Remote Control Operator. If another Remote Control Operator is relieving a Remote Control Operator, a job/safety briefing must be held between the employees.

- b. Spare OCUs must be stored with the power off and the battery removed.

**23(E). Remote Control Area**

- a. Division Timetable Special Instructions will designate areas of remote control operations. Signs advising that remote control operations may be in effect will be posted at access locations to Remote Control Areas.
- b. The Remote Control Operator in control of a remote control locomotive must be notified of any track removed from service or working limits established for the protection of another craft. The Remote Control Operator must conduct a job/safety briefing with all members of the crew.

**23(F). Remote Control Zone (RCZ)**

RCZ limits will be identified in the timetable. RCZ signs may also be posted at access locations. RCZ limits do not include tracks within CTC or interlocking limits (CTC or Interlocking rules apply).

**23(G). RCO Terms**

Remote Control Area - Area designated by special instructions for remote control operations.  
 Remote Control Transmitter (RCT) - is interchangeable with the term Operator Control Unit (OCU).

"Shared" or "Pitch and Catch" - Process used for transferring primary control of OCUs between crew members. Transfer of control may only be performed while remote control locomotive is stopped.

**23(H). RCO Operator Down Response**

When an RCO Operator receives an "Operator Down" notification via radio or the OCU screen, the following steps must be taken:

1. Immediately confirm the safety of all crewmembers;
2. Stop movement on adjacent tracks, IF NECESSARY;
3. The Remote Control Locomotive must remain stopped until the safety of all crewmembers is confirmed.

**23(I). RCO Installing or Removing: Knuckles, ETD's, or other Highly Visible Markers**

When required to install or remove Knuckles, ETD's or other Highly Visible markers while in RCO mode, the crew member must turn off the OCU (with GE or Catron Accuspeed OCU's, crewmember should put them in "Sleep" mode). The crew member must then remove the OCU and vest while performing the duties described, using proper body mechanics.

Prior to going in between equipment, crew member must ensure there is a minimum of 50 ft of separation between equipment; communicate intentions of going in between; and receive acknowledgement from the other crew member(s). Crew member performing work is required to follow all applicable rules consistent with this type of work. After completion of task, crew member must put on OCU and vest prior to turning on OCU, and then recover Communication Loss that was created when OCU was turned off.

**24. Switch Tender Instructions**

The train dispatcher and switch tender are required to have a job briefing before a switch tender acts on instructions from the train dispatcher. Following a shift change, another briefing is required between the train dispatcher and switch tender, which will include discussion of pending instructions and determination if the instructions are still correct.

When communicating concerning approaching train movements, use engine initials and number and direction. Do not use only train symbols or blanket terms such as "westbound or eastbound trains."

The dispatcher will issue specific instructions to the switch tender. The switch tender must repeat the instructions to the train dispatcher and receive confirmation of being correct, before acting on the instructions.

For example: After confirming with the train dispatcher that BNSF 1234 West will be the next train to line from Main Track 1 to Main Track 2 at Robinson Spur, the switch tender is then to call the BNSF 1234 West and verify the train has authority

from Main Track 1 to Main Track 2 at Robinson Spur. After verification has been received from the BNSF 1234 West, and after the switch tender has visually identified the BNSF 1234 West, the switch tender will line the route for the movement. After the movement is clear of the switch, the switch must be lined and locked in the normal position.

When necessary for the train dispatcher to change routing instructions to the switch tender after authority has been granted to a train, it is the responsibility of the dispatcher to communicate directly with the switch tender. Another authority over the switch that the tender is in charge of cannot be issued until the dispatcher has informed the switch tender of the change.

When a switch tender is at a remote location, away from a depot and/or base station radio, the switch tender must check with dispatcher when arriving at such location to confirm they can clearly communicate. If the switch tender becomes aware of any radio communication problems, the train dispatcher must be notified. The chief dispatcher will make particular arrangements when communication problems are evident.

While in charge of a switch, the switch tender must not leave the switch unattended unless it is lined and locked for normal movement.

The train dispatcher's transfer must include switch tender locations and pending instructions from the train dispatcher to the switch tender.

**25. FRA Random Drug Testing**

TY&E employees selected for FRA Random Drug Testing must show the start time of the Random Drug Test (RDT) in the remarks column of their timeslip. Start time of RDT begins when a supervisor notifies the employee that they are selected for RDT. A stop time on RDT is necessary only if different from their off-duty time.

**26. Verification of Rules Examination**

Employees required to pass rules examination must have a current rules examination card when issued, or engineer's certificate in their possession while on duty.

**27. Cars Set Out Bad Order**

When a car is set out between terminals account bad order, it should, if possible, be left where it can be driven to by truck for making repairs. If the car setout is a military shipment, immediately contact the Resource Operation Center, Ft Worth at (817) 234-7200 or (800) 832-5452, Option 3.

**28. Grade Crossing Accidents**

The following information is designed to serve as post grade crossing accident guidelines. It is designed to provide the utmost in safety for you and your crew.

After the accident has occurred and the train is stopped:

- A. Ensure the safety of crew members, accident victims, and the public.
- B. Meet the requirements of GCOR Rule 6.23.
- C. Contact the dispatcher or any other available radio contact and advise:
  1. Exact location, and
  2. What emergency services are needed. Be sure to include alternate routes for the emergency vehicles if your train is blocking road crossings.
- D. Assess the damage to the vehicle and train to determine if there is any danger to your crew or the public.



- E. Assign a crew member to monitor a radio to provide further information for emergency assistance.
- F. If it is safe, render assistance to accident victims. It is important not to move the victim unless a life threatening situation exists.
- G. Turn "off" the vehicle's ignition and inform the investigating officer you did so. Otherwise, do not disturb the accident scene. Do not move the train unless it presents a safety problem, such as emergency vehicles needing to get to the accident through a blocked crossing, etc.
- H. Only give information to:
  - 1. The investigating officer, or
  - 2. Authorized company managers.
    - a. Cooperate with the investigating officer. Answer the officer's questions and provide as much information as you can recall.
    - b. Record the badge number and name of the investigating police officer at the scene. Witness with the officer that the headlight is on, and that the whistle and bell on lead unit are in proper working order. Also, note that the crossing warning devices are functioning.
- I. Assign a crew member to verify the accuracy of the train list. Save all train lists, track warrants, track condition messages, and other pertinent documents for the proper BNSF managers.
- J. Ascertain that no part of your train is derailed and that it will be safe to proceed once released by the investigating officer.
- K. Personal counseling will be available to any crew member who might experience post-accident trauma.

**29. System Work Train Policy**

The conductor is in charge of and will be responsible for all work train movements. The safety of the overall train operation is the responsibility of the entire train crew. The engineer shall receive train movement instructions only from a member of the train crew except in cases of emergency.

When Maintenance of Way, Signal, Structures, Mechanical or other work groups are involved with the activities of the work train, a coordinator from such group must be designated. The train crew will communicate with the designated coordinator concerning all train movements and work activities.

An initial job briefing will be conducted before commencing work and additional job briefings must be held at intervals not to exceed four (4) hours until the end of the tour of duty. In addition, when there is a change in assignment or a significant delay in activities has occurred, a job briefing must be conducted prior to commencing work. Employees who subsequently work in the vicinity of a work train after such job briefings have been held, must not commence work until they have received a job briefing from the designated coordinator regardless of authority received to occupy the area. The conductor is responsible to ensure that no work activity begins until the required job briefings are complete.

Job briefings must include applicable operating rules, safety rules, special instructions and any other work-specific information. The designated coordinator is responsible for communicating impending train movements to the work groups under his control.

All employees assigned to a work train and/or its activities are responsible to be on the lookout for train or track car movements at all times. Lookouts will be utilized when necessary and all movements must be fully protected.

**30. Track Condition Messages**

Track condition messages may be issued by train dispatchers to cover restrictions on or near tracks.

Restrictions shown on a track condition message may be cancelled verbally by the train dispatcher.

Authority can be given by a train dispatcher or supervisor to enter a track shown to be out of service on a track condition message.

When a track warrant indicates a track condition or train message is to be received, conductor is responsible for securing those messages necessary for movement of their train. Track condition messages must be retained and complied with on all trips made during the tour of duty on which they were received.

**31. Securing Track Warrants/General Track Bulletins**

When reporting for duty at initial terminal, a crew member will secure track warrants, track bulletins, and track condition messages or general track bulletin, unless otherwise instructed. A relief crew member must contact the dispatcher before departing to determine if additional documents are required, and advise if all crew members are present and ready to depart.

If the identifying unit is not shown correctly on the address line, contact the train dispatcher and correct the address line before departing the initial station.

**32. Engineer Training Assistance Hotline**

For student engineers or questions concerning the Locomotive Engineer Training program, call the BNSF Technical Training Center in Overland Park—(913) 319-3996.

**33. Excessive Wind, Tornado, Flash Flood, Cold Weather and Earthquake Instructions**

**Excessive Wind Instructions**

When wind warnings are received meeting the wind speed criteria, the train dispatcher will notify all affected trains and employees with movement authority in the area providing the time and limits of the expected high winds. The following table will govern train movement:

Wind Speed	Passenger Trains (includes Amtrak, commuter trains and freight trains consisting entirely of business cars)	Light engines, loaded bulk commodity unit trains handling coal, grain, ore, taconite, ballast, molten sulfur or potash	All other trains
51 to 60 MPH	40 MPH*	Not affected	Staging requirements*
61 MPH or greater	Staging requirements*	Not affected	Staging requirements*

**Staging Requirements:**

Affected trains and equipment may proceed not exceeding 20 MPH to a staging location (e.g. station, siding or location with double crossovers) as directed by the train dispatcher to allow trains not affected by the wind warning to pass.

\* If a field employee (e.g. crew member on an affected train) observes that local weather conditions are not as severe as the wind warning indicated and these conditions would not impact safety, the employee will advise the train dispatcher of the local conditions. If the employee advises local wind conditions are 50 MPH or less, with chief dispatcher authority the train dispatcher may grant permission for passenger trains restricted to 40 MPH and other affected trains to operate at maximum authorized speed.

**Tornado Watch and Warning Instructions**

Tornadoes are the most violent of all storms. Paths of destruction range from a few hundred feet in width to more than a mile and extend the length of a city block to 300 miles. The greatest potential for such storms usually exists from April through September.

When tornado watch or warnings are received, the train dispatcher will notify all affected trains and employees with authority in the area providing the tornado watch or warning information.

A "tornado watch" means atmospheric conditions are such that tornadoes may develop. A tornado watch is generally issued 4-6 hours before the conditions may occur.

During a tornado watch, all train movements and yard activities will continue, keeping alert for any signs of weather change. The danger signs to look for are severe thunderstorms, hail, roaring noise, a funnel cloud, or combination of the above. When a crew knows they are in a watch area, the radio on a locomotive or a packset should be used to monitor instructions and information to and from the train dispatcher. In the event a crew spots a funnel cloud, the train dispatcher should be immediately notified, consistent with the crew's safety.

If a train or yard assignment has an occupied caboose, upon being notified of a tornado watch, the occupants of the caboose should immediately move to the locomotive consist. While in the process of moving to the locomotive, if the tornado watch turns into a "tornado warning," or a funnel cloud is spotted, those affected should seek shelter in a nearby ditch, ravine, culvert or in a depression. If none of these are available, lie face down on the ground with hands over the head away from the caboose or cars in the train.

A "tornado warning" means a tornado has been sighted or verified by the National Weather Service or by persons associated with official weather spotters. The train dispatcher will keep trains and crews apprised of limits of tornado warnings. Train crews are to follow instructions as follows:

During a tornado warning, all train movements and yard activities must stop. Any train en route will stop and employees should seek appropriate shelter consistent with the safety of all involved, avoiding the stopping of a train on a high bridge, across railroad and highway crossing at grade, or anywhere the presence of a train could be a hindrance.

After the tornado warning has expired:

- If determination is made that the path of the tornado crossed the tracks at the location or in the immediate vicinity of the train, crew members must inspect their train before moving to determine if any damage or derailment has occurred to the train or if the track structure has been damaged.
- All trains within or entering the tornado warning limits may proceed, prepared to stop when approaching bridges, culverts, or other points likely to be affected until relieved by the dispatcher. The train dispatcher must be advised immediately of damage or unexpected conditions.
- The train dispatcher must restrict trains as prescribed in the second bullet, until an inspection has been completed by division employees or all of the limits of the tornado warning have been traversed by a train and it is confirmed by the train crew(s) that no damage or unexpected conditions were observed.

**Flash Flood Warnings**

Weather information received by BNSF from WeatherData, Incorporated, is categorized as a "Warning" when it describes conditions that require immediate action by the train dispatcher to notify train crews of imminent danger. These warnings are immediately distributed to the relevant train dispatchers.

When WeatherData, Incorporated, issues a "Flash Flood Warning," the dispatching center will immediately advise all involved trains of the specific conditions. When crews of these trains are so advised and are not operating through areas which have been designated by the Division Engineer as being "critical," passenger-carrying trains will be operated at a maximum of 50 MPH through the limits identified in the warning, and freight trains will be operated at a maximum of 40 MPH through those limits. These restrictions will remain in effect until the track has been inspected.

Division Engineers will identify "critical" areas by subdivision, segmented by milepost locations based upon their susceptibility to flooding or their history of being prone to washouts or side-scour wash. In identifying these locations, consideration should be given to shallow-foundation bridges, availability of operable culverts, and other conditions as necessary.

If the "Flash Flood Warning" limits include locations identified as being "critical," all trains will be further limited to restricted speed within the critical locations until the track structure has been inspected on a priority basis at the request of the dispatching center. These temporary speed restrictions must remain in place until the track has been inspected and local personnel have assessed the need for modifications to the speed restrictions as conditions warrant.

**Local Observations**

When local maintenance personnel become aware of current conditions that might produce flash flooding that could result in damage to BNSF track or structures, they will:

- Immediately place the speed restriction described above on the affected route.
- Inspect the track for washouts, side-scour wash, surface irregularities, and/or water over the rail.
- Carefully inspect bridge foundations and drainage structures, with careful attention to bridges with mud sills, for erosion behind dump planks and head walls, erosion around piers and footings, and obstructions from drift and debris.
- If water level, turbulence, or other conditions make a thorough inspection impossible at the site of such a bridge, operations of all trains will be reduced to no more than restricted speed until it is possible to make a proper inspection.
- If, during the initial track inspection, there is any doubt about the safety of train operations over bridges, a qualified Structures employee must be called at once, and any speed restrictions that have been placed on bridges will not be lifted until authorized by the Structures employee.
- Track and bridge foremen must continue to patrol past their respective territories if an adjoining territory is likely to have been damaged, and such damage might not have been discovered.

**Cold Weather Restrictions:**

The correlations that exist between rail service failures, temperature, train axle load, track and equipment conditions, and train speed are complex and involve many factors including equipment and track component design and material properties, their relative wear conditions, and the rail/wheel interaction for various traffic mixes and operating conditions.

In order to maximize safety with regard to extreme temperatures and temperature changes, rail laying temperatures and weather extremities across our railroad have been considered. In that effort, the railroad has been divided into two regions as follows:

**Region 1** contains the following divisions:  
California/LA, Gulf, Kansas, Northwest, Southwest, Springfield, and Texas.

**Region 2** contains the following divisions:  
Chicago, Colorado, Montana (includes the entire Kootenai River Subdivision), Nebraska, Powder River, and Twin Cities.

**Cold Weather Train Speeds:**  
The Engineering Department has identified two factors which require Cold Weather Train Speeds, as follows:

**Low Temperature Threshold:**  
In Region 1, this threshold is 0 degrees Fahrenheit.  
In Region 2, this threshold is -20 degrees Fahrenheit.

**Temperature Differential Threshold:**  
In Region 1, this is any temperature of 50 degrees Fahrenheit or warmer that falls to 10 degrees Fahrenheit or colder within 24 hours.

In Region 2, this is any temperature of 40 degrees Fahrenheit or warmer that falls to 0 degrees Fahrenheit or colder within 24 hours.

**Low Temperature Threshold:**  
Unless further restricted by individual subdivision Special Instructions, be governed by the following:

When ambient (air) temperature drops below the Low Temperature Threshold (0 degrees Fahrenheit in Region 1 and -20 degrees Fahrenheit in Region 2), trains must not exceed the following speeds:

In non-signalized territory:  
40 MPH for all trains.

In block signal system limits:  
40 MPH for trains exceeding 100 tons per operative brake and key trains.

50 MPH for trains less than 100 tons per operative brake.

65 MPH for passenger trains, Z-symbol intermodal trains, or single-level loaded intermodal trains.

If in doubt as to the temperature, contact the train dispatcher. Notify the train dispatcher when your train is restricted due to this requirement.

These restrictions remain in effect until the ambient (air) temperatures rise above the Low Temperature Threshold.

**Temperature Differential Threshold:**  
The train dispatcher will make notification to trains that temperature has exceeded the Temperature Differential Threshold. When so notified, trains must observe Cold Weather Train Speeds, by Region, as shown above. The Engineering Department will perform a track inspection, reporting results to the train dispatcher. If no further restrictions result from the track inspection, the train dispatcher will verbally notify the trains affected.

Be aware that Cold Weather Train Speeds may still be required due to Low Temperature Threshold. In other words, once track inspection is completed following a Temperature Differential Threshold, the ambient (air) temperature may still be below the Low Temperature Threshold, requiring that Cold Weather Train Speeds must still be observed.

However, if the ambient (air) temperature is above the Low Temperature Threshold and no further restrictions resulted from track inspections, observance of Cold Weather Train Speeds is not required.

**Determining Ambient Temperature**

When referring to Item 1(D) of a specific subdivision timetable for operating instructions account extreme air temperatures, be governed by the following:

- Ambient air temperature readings may be obtained by train crews utilizing any local means available such as field personnel, track side warning detectors, yardmasters, temperature displays from such sources as banks, etc.
- When unable to determine the ambient air temperature utilizing local methods, contact the train dispatcher who will determine ambient air temperature at the closest available location utilizing the Internet website Weatherdata.com or other available means.

**Earthquake Instructions**

When an earthquake is reported, the train dispatcher will do the following: (See Decision Table, next column)

1. If the magnitude or epicenter are unknown, instruct all trains within 150 miles of the reporting location to "proceed at restricted speed due to earthquake conditions." An acknowledgment must be obtained from each train or engine receiving these instructions.
2. Once magnitude and epicenter are known, the following inspection criteria will apply:
  - If magnitude is less than 5.0, no inspection is required.
  - If magnitude is 5.0 or greater, response will depend on the group of states and provinces within which the epicenter is located and the following criteria will apply within the designated radius from the epicenter.

Magnitude Range	Criteria for Response	Group 1 Radius	Group 2 Radius	Group 3 Radius	Group 4 Radius
Less than 5.0	No Inspection Required	N/A	N/A	N/A	N/A
5.0 to 5.49	Trains proceed at restricted speed until signals have been inspected.	30 Miles	40 Miles	70 Miles	70 Miles
5.5 to 5.99	Trains proceed at restricted speed until signals, track and bridges have been inspected.	30 Miles	40 Miles	70 Miles	70 Miles
6.0 to 6.49	Trains proceed at restricted speed until signals, track and bridges have been inspected.	N/A	N/A	N/A	150 Miles
	Trains stop until signals, track and bridges have been inspected.	50 Miles	80 Miles	150 Miles	80 Miles
6.5 to 6.99	Trains proceed at restricted speed until signals, track and bridges have been inspected.	N/A	N/A	N/A	220 Miles
	Trains stop until signals, track and bridges have been inspected.	70 Miles	140 Miles	220 Miles	140 Miles
7.0 to 7.49	Trains proceed at restricted speed until signals, track and bridges have been inspected.	N/A	N/A	N/A	400 Miles
	Trains stop until signals, track and bridges have been inspected.	100 Miles	300 Miles	400 Miles	300 Miles
7.5 and above	Trains stop until instructed to proceed after inspection of track, signals and bridges completed.	As Directed*	As Directed*	As Directed*	As Directed*

\* Radius at discretion of command center but not less than for magnitude 7.0 to 7.49  
 Group 1: California and Baja California, Mexico  
 Group 2: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming, Alberta, Canada; and Sonora and Chihuahua, Mexico  
 Group 3: Area east of Group 2  
 Group 4: Oregon, Washington and British Columbia, Canada

**34. Duplicate Mile Posts**

On subdivisions where there are duplicate mile posts the first range of mileposts will have no suffix and the duplicate range of mileposts will have an alpha suffix (e.g. MP 345X, MP 420Z). Refer to Item 7 of the individual subdivision's timetable to determine the location when a track warrant, a track bulletin or another document uses a milepost location with an alpha suffix.

**35. Switching Business Cars**

The following instructions will be complied with in regard to movement of these cars in other than assembled trains. Business cars must be handled as outlined in accordance with General Code of Operating Rules 7.3 and 7.9.

- a. **Air Brakes**—The business car air brake system must be connected to the locomotive and the automatic air brake used in controlling movement during switching.
- b. **Coupling**—When coupling into business cars, business car equipment or when it is coupled to other equipment, the movement must be stopped approximately 50 feet from point at which the coupling will be made. Business cars must not be cut off while in motion and no car moving under its own momentum should be allowed to couple to them.
- c. **After Coupling**—Once the coupling is made to the business car, the couplers must be fully compressed and stretched to know the couplers are locked before making air, electrical or communications connections.
- d. **When cars are to be coupled to the observation end of BNSF Business Car 30 (Glacier View) and Business Car 32 (William B. Strong), the car next to the business car must be an empty flat, gondola or other type of car with a low profile.**
- e. **480 Volt electrical cables between business cars or any other car so equipped will be considered to be energized until applicable lockout/tagout procedures confirm connections are de-energized. All connections and disconnects are to be performed by Authorized Mechanical Personnel Only.**

**36. Instructions for Handling Continuous Rail**

(Excluding articulated loads of 80 ft. length rail or less) Rail trains loaded with continuous welded rail must not be kicked, nor allowed to be struck by other kicked cars; and, must be handled through all turnouts with extreme care. Before a switching move is made, an air brake inspection and test as prescribed by Rule 100.11 must be performed.

Switching movements must be made using automatic air brakes to control slack in either a bunched or stretched condition. Extreme care must be used when stopping movements to avoid injury to employees or damage to equipment. Use of locomotive brake must be avoided, when possible, to stop the movement. When exceeding 12 rated axles of power during shoving movements, use only the minimum amount of tractive effort necessary to begin movement.

Except during necessary switching moves and train makeup, or when moving as a work train under supervision of maintenance of way, suitable cars must be placed at each end of the "rail" cars to act as a buffer and idler. Rail cars equipped with barrier plates or cars labeled "Buffer/Idler" in addition to other cars taller than the height of the top rails on a loaded train meet this requirement. Tunnel cars equipped with barrier doors eliminate the need for buffer cars if doors are closed and secured. (Tunnel cars numbered BNSF 920119 through BNSF 920173 have these barrier doors). Trains handling rail

trains should not be required to make setouts or pickups en route. Two loaded rail trains must not be moved together in same train, unless authorized by the manager of the rail facility or his representative. When a two loaded rail train movement is authorized, the maintenance representative will designate which rail train will be placed at the head end. The other rail train must then be positioned in the train immediately at the rear of the first or head end of rail train separated by a suitable buffer car.

Full-length rail strings, when loaded, will have their lengths constructed so that the ends will fall between the green stripes painted on end ramp cars. When the rail train is stretched or bunched, and during transit, rail ends must be between the red stripes painted on end ramp cars, or else the train must be held until released by the general roadmaster or his representative. A white stripe will be applied across top of all rails between tie-down stands on center car of the rail train so it can be determined at inspection points whether rail has slipped or shifted.

**Loaded Rail Trains**

1. **Trains without Rail Movement Detectors (RMD):**
  - Must be handled in special service.
  - Must not be required to make setouts and pickups en route.
  - Must have suitable cars placed at each end of loaded rail train to act as buffer and idlers except during necessary switching moves and train makeup, or when moving as a work train under the supervision of maintenance of way.
2. **Trains with Rail Movement Detectors (RMD)**  
May be handled in trains other than special service under the following conditions:
  - Rail train must be on head end.
  - Train length limited to 64 cars.
  - Should not be required to make setouts and pickups enroute.
  - Suitable cars placed at each end of loaded rail train to act as buffer and idlers.
  - If cars other than loaded rail train are included in movement, and RMD (i.e. strobe lights) becomes inoperative en route, a maintenance representative (a rider) must accompany each train during transit, unless rail train is then moved in special service. When the RMD is inoperative, each time the train stops, the rider must inspect the cars carrying the continuous welded rail for shifted, bowed, or broken rail, and to ensure that each base clamp (tie-down block) is tight. Defective strobe lights must be reported to the train dispatcher, who will notify the manager of rail facility so that the problems can be documented and repairs can be arranged as soon as possible.
  - Strobe lights at each end ramp car must be observed frequently en route. When strobe lights are observed to be flashing, the train must be stopped and all cars carrying continuous welded rail must be inspected to determine any rail movement. If movement is found, observe and complete the following:
    - a. If adjacent track or standard clearances are not fouled, train may be moved to clear main track not exceeding speed of 10 MPH.
    - b. If adjacent track or standard clearances are fouled, protection must be provided and train must not be moved until inspected by proper personnel.

- If no movement is found, cancel flashing strobe lights by depressing the reset button at the control box for three seconds. The train may proceed at authorized speed.

The RMD consists of electrically activated screens/gates, four amber-colored strobe lights, and associated controls. There are two 12-volt absolute batteries, charged by an array of solar cells mounted between the tunnel stand strobe lights, to power the system. RMDs are installed on all rail train ramp cars, which are placed at each end of a rail train. If a rail string becomes loose and makes contact with the screen, strobe lights will commence flashing. The strobe lights are mounted on the ramp cars, positioned at the uppermost corners toward each end. Two are mounted on each side of the adjustable ramp stand, and the other two are mounted on each side of the tunnel stand.

The "ramp or tunnel" strobe lights operate in a parallel mode with a common activation (redundancy); thus each set will flash independently.

To check that strobe lights are operational, use a metal rod, bare wire or other metal object to make simultaneous contact between the screen and any rail in the load or other metal ground. After observing the lights flash, depress the reset button, which is located on the control box, for three seconds to turn off and conserve batteries. The lights should flash approximately 60 times per minute; and fully charged batteries will operate them for about sixteen hours.

The RMD system is inspected and tested at rail complexes before rail trains are released for movement. When second-hand welded rail is picked up and loaded in the field, the RMD system will be inspected and tested by the rail train supervisor before train is released for movement.

Routing of rail trains from the Rail Welding Facility, Pueblo, CO, to points west should be via Amarillo, TX, instead of the northern route through Raton, NM; unless train has stop(s) to deliver rail between La Junta, CO, and Belen, NM. When a rail train is to be routed via the northern route, loading parameters of welded rail strings will be held more restrictive to allow a greater degree of safety for movement through tight curves and mountains.

Unless under special service, the 6x12 rail train (center tie-down car number ATSF 187023, ordinarily consisting of 32 cars rail and 2 buffers) should always be routed through Amarillo, TX, because of its greater amount of slack due to the increased number of cars and limited ramp car length.

At designated intermediate inspection points, make mechanical inspection of cars in compliance with FRA requirements. Manager Rail Complex in Laurel, Pueblo, or Springfield must be advised if any mechanical repairs are needed.

#### **Open End Gondola Consist (Any Ownership)**

Maximum authorized speed for trains handling short lengths of continuous welded rail in open end gondola consist is 45 MPH.

Open end gondola consist loaded with continuous rail must not be kicked; nor allowed to be struck by other kicked cars.

Loaded open end gondola consist should be handled within 25 cars of the head end of trains. Loading of rail into open end gondola consist shall comply with the following instructions:

1. Continuous lengths of welded rail will not be loaded more than one layer high.
2. Width of layer will not exceed 67 percent of the inside width of the narrowest gondola.

3. Rail will be centered width wise in open end gondola consist. If practical, spikes, cleats or blocks will be driven into bearing timbers (raised fashion) to prevent walking of load near sides. Rail lengths will be spotted lengthwise from outboard ends of open end gondola consist to allow sufficient distance to exist for clearance (i.e. to exceed the amount of coupling slack). Amount will be determined by number of cars in consist.
4. Continuous lengths of rail will be supported upon timbers with a minimum size of 4" x 4" hardwood. These timbers will be spaced equally throughout load in sufficient number to prevent rail from contacting floor of cars or bottom flanges used for gondola end retention, and provide friction necessary to limit rail shifting.
5. Couplers of cars will be gagged and locked to prevent accidental opening.
6. Outboard ends of open end gondola consist will have ends installed or stacked timbers arranged into a barricade with a minimum height that exceeds the height of rail.
7. Continuous welded rail lengths will be loosely banded (to allow the required linear movement of the individual lengths of rail when consist is negotiating a curve) to keep all pieces grouped together.

#### **Empty Rail Train Blocks (Any Ownership)**

When handling empty 'rail train' blocks, all cars weighing 50 tons or less, by car count, must be placed behind all cars weighing more than 50 tons per car.

#### **37. Handling of FRA Track Geometry Inspection Cars**

Federal Railroad Administration (FRA), Office of Safety manages high-speed railbound track geometry inspection cars (identified as either the FRA DOTX 216, DOTX 217, DOTX 218, DOTX 219 or DOTX 220 Geometry Car) that measure track geometry for compliance with the Federal Track Safety Standards nationwide. The DOTX 217, DOTX 218 and the DOTX 219 may be operated self propelled. The DOTX 216 and the DOTX 220 must be towed. Hereafter the term FRA Geometry Car refers to all vehicles except where otherwise specified.

1. Each train dispatcher and train crew or pilot will be governed by these instructions.
2. Prior to each day's survey, the Survey Director will conduct a safety briefing to all occupants of the FRA Geometry Car on general safety, applicable operating and protection procedures.
3. Whenever the DOTX 217, DOTX 218 or DOTX 219 FRA Geometry Cars are operated, including through a designated "yard or restricted" limits and 'other than main track' territories, the railroad will provide either a Locomotive Engineer/Pilot, Travelling Engineer or Road Foreman to pilot the vehicle. The DOTX 217, DOTX 218 and the DOTX 219 Geometry Cars will be governed by applicable operating rules when operating in either signal or non-signal system territories (except that auto routing and automatic clearing features will not be used and all dual control switches will be blocked). When self propelling, Absolute block protection or alternate protection methods, controls or authority (including within "yard or restricted" limit territory), will be applied to protect the DOTX 217, DOTX 218 and the DOTX 219 Geometry Cars against following and opposing trains or on-track equipment. The absolute block will not be required for the DOTX 216 and DOTX 220 when being towed and operating as a train.

4. FRA DOTX 217, DOTX 218 and the DOTX 219 Geometry Cars will operate as a train. Authorization will not be issued to the FRA DOTX 217, DOTX 218 and the DOTX 219 Geometry Cars within the same or overlapping limits of another train or on-track equipment, except to facilitate the FRA DOTX 217, DOTX 218 and the DOTX 219 Geometry Car's disabled movement, if necessary, and in accordance with the railroad's operating rules. The FRA DOTX 217, DOTX 218 and the DOTX 219 Geometry Cars will not be operated by lineup, movement of track cars or similar on-track equipment authorities.
5. The FRA Operating Practices Inspector, prior to the FRA Geometry Car operation, will communicate directly with the train dispatcher and train crew or pilot, to insure that all operating rules, in effect on the route to be traveled, are understood and confirm the FRA Geometry Car is being dispatched as a train. Reference to applicable operating documents will be made to confirm such information, prior to departure. The FRA Operating Practices Inspector will be stationed in the immediate vicinity where the FRA Geometry Car method of operation, procedures and movement can be monitored.
6. All mandatory directives will be transmitted and received in compliance with railroad rules and instructions. For purposes of this instruction, all references to assigned crew member apply only to the train crew or pilot. The FRA Geometry Car operator relies on the train crew or pilot to identify relevant railroad physical characteristics, movement authority limits and authorized speeds, a sufficient distance in advance.
7. In automatic block signal system or traffic control system territory, the FRA Geometry Car should not be stopped on sand or other similar rail surface conditions affecting the shunting of the track circuit. If such a stop cannot be avoided, the FRA Geometry Car will be moved immediately a sufficient distance to clear that affected portion of the rail.
8. Interlocking machines will be operated manually for the FRA Geometry Car movements (automatic clearing and routing features will not be used). The control machine operator will be kept informed of the progress of the FRA Geometry Car from one control point to another. An interlocking control operator will not change the position of any switch or indication of any signal, until informed that the FRA Geometry Car is clear of the interlocking or a section thereof. Where provided, electrical or mechanical blocking devices will be used on switch and signal controls. If the FRA Geometry Car is stopped within the limits of any interlocking, the control operator or dispatcher will be notified of the stop and the precise location. The FRA Geometry Car will not be stopped within the limits of automatic interlocking or a non-interlocked, at grade, railroad crossing.
9. The FRA DOTX 217 and DOTX 218 Geometry Cars are equipped with operating controls at either end. When appropriate, instructions will be given to the FRA Geometry Car operator to change ends and operate from the rear of the FRA Geometry Car. Any reverse movement will be conducted, in accordance with the railroad's operating rules. The FRA DOTX 219 Geometry Car has operating controls at the F end only, and will require protection for reverse movements in accordance with the railroad's operating rules for "shove" movements.

10. In the event the FRA DOTX 217, DOTX 218 and the DOTX 219 Geometry Car operators are to be relieved for any reason, the Locomotive Engineer/Pilot may be utilized (if agreeable) to continue FRA Geometry Car operations to the day's final tie-up point. If the Locomotive Engineer/Pilot is not willing or prohibited from operating the FRA Geometry Car, the survey should be stopped at a suitable point short of the scheduled tie-up or a locomotive will be requisitioned for tow-in. This contingency is one that will be addressed at the beginning of the survey to allow for ample planning.
11. Self propelled FRA Geometry Car will approach all highway-rail grade crossings equipped with automatic warning devices prepared to stop, until it is determined that the warning devices activate and the FRA Geometry Car occupies the crossing. On ground protection against highway vehicles will be provided when automatic warning devices fail to fully activate, the FRA Geometry Car interferes with the normal function, or when prescribed by railroad rules or instructions.
12. The maximum operating speed of the FRA Geometry Cars is shown in Table 1. Authorized Speeds for ATIP Geometry Cars.

Geometry Car ID	Maximum Speed; Self-Propelled	Maximum Speed; Towed
DOTX 216	N/A	125 MPH
DOTX 217	90 MPH	90 MPH
DOTX 218	60 MPH	80 MPH
DOTX 219	90 MPH	90 MPH
DOTX 220	N/A	90 MPH

**Table 1. Authorized Speeds for ATIP Geometry Cars**

The FRA DOTX 217, DOTX 218 and DOTX 219 Geometry Cars are not equipped with automatic cab signal, automatic train stop, or automatic train control systems. All FRA Geometry Cars are restricted on curves greater than 20-degrees. Additionally, due to truck center length, the center of car swing-out clearance is limited on curves greater than 13-degrees, therefore may restrict safe movement.

13. Neither FRA nor contractor employees will operate a railroad switch or derail and will rely upon a railroad employee to perform that function. Protective devices (i.e., blue signal, derails and locking devices, owned by FRA) will be applied by contractor employees after receiving authority for placement from the appropriate railroad representative. A 'blue signal' will be displayed on or near the FRA Geometry Car control stand at a readily visible location and the 'key' removed when on ground instrument verification (IV) checks are made. Similarly, positive protection (brakes placed in emergency position, hand brake applied and surrendering of the locomotive reverser) will be imposed by FRA when the FRA Geometry Car is towed by a locomotive.

14. Except within a locomotive servicing area or car shop area, the FRA Geometry Car may be repositioned by the FRA at anytime on a track or portion of a track that is exclusively occupied by the FRA Geometry Car and protected by FRA owned devices. Within a locomotive servicing area or car shop area, a 'railroad's blue signal rules' will be in place and complied with, to protect 'anyone' on, under or about the FRA Geometry Car. The FRA Geometry Car may be repositioned, only after the movement is authorized by the railroad employee-in-charge of the workmen and approved by the FRA.
15. When unoccupied and at the request of FRA, FRA Geometry Car protection will be provided by the railroad. Additionally, the FRA Geometry Car will not be relocated or coupled to other rolling equipment without permission by the FRA. To prevent undesirable access, a remotely controlled or manually operated switch providing entrance to the track occupied by the FRA Geometry Car will be aligned against movement to that track. Where provided, electrical or mechanical blocking devices will be used on the switch and signal controls. Additionally, the switch will be secured with an effective locking device, exclusive to FRA. The switch stand's operating mechanism will be equipped with a visible all-weather display tag warning any users, "Out of Service-Do Not Operate." If a switch cannot be aligned and locked as described, portable derails capable of restricting access will be used instead of an effective locking device. The placement (Protective devices, owned by FRA, will be placed not less than 150-feet from each end of the FRA Geometry Car, where appropriate of front and rear "portable train control" signs will be displayed in the center of the track, adjacent to derails, marking the presence of the FRA Geometry Car. The warning sign will consist of 16 24-inch red placard, signifying rolling equipment cannot pass. A FRA Geometry Car wheel will be securely chocked to prohibit movement on its own.

### 38. Inhalation Hazard Car Handling Instructions

Any train carrying one or more loaded tank cars with a SCHI code of "IH" as identified on train list, must comply with the following:

1. When stopped by a trackside/wayside warning device, the indicated car (hazmat or not) must be set out.
2. When moving, trains experiencing an emergency application of the brakes whether intentional or not, must be protected as prescribed by rule 6.23 and as supplemented in the current System Special Instructions all Subdivisions. In addition, the entire train must be inspected for derailed or defective cars. If the train is stopped at a location where it cannot be safely inspected (for example: on a bridge), the train may be moved, at the discretion of the appropriate supervisor or train dispatcher, to the nearest location where it can be SAFELY inspected, but at no more than 5 MPH.

Any foreign line carrier operating with inhalation hazard car(s) in their train must, at the earliest opportunity, notify the BNSF train dispatcher that the train is carrying inhalation hazard car(s).

The following are requirements for handling tank car shipments containing materials that require the notation "Poison (Toxic)-Inhalation Hazard" and "Inhalation Hazard" operating in non-signalized track warrant control territory on the following subdivisions:

- Amory Subdivision - Between Amory and Columbus
- Beatrice Subdivision - Between Crete and Beatrice
- Conroe Subdivision - Between Silsbee and Somerville
- El Paso Subdivision - Between Belen and El Paso
- Gateway Subdivision - Between Klamath Falls and Keddie Falls
- Oregon Trunk Subdivision - Between Wishram and Klamath Falls
- Phoenix Subdivision - Between Williams Jct. and Phoenix
- Silsbee Subdivision - Between Beaumont and Silsbee
- Sweet Grass Subdivision - Between Shelby and Sweet Grass

Work Order documents and other TSS commands will identify shipments with the "IH" SCHI code.

The train list and profile for train crews will carry the banner wording of "IH TRAIN" when moving on the restricted subdivisions and carrying two or more loaded poison (toxic) inhalation hazard tank cars and/or inhalation hazard tank cars.

Note: On the Phoenix Subdivision between MP 172.5 and Phoenix, the following instructions will be in effect if the train is carrying one or more loaded poison (toxic) inhalation hazard tank cars and/or inhalation hazard tank cars. The two or more loaded tank car requirement will remain in effect between West Williams Jct. and MP 172.5.

The following instructions are in effect on the subdivisions or part of the subdivisions listed above:

- The route must be evaluated prior to an IH Train operating on the subdivisions indicated above. The IH Train must be the next movement on these subdivisions after the evaluation. If an authority is granted after the route evaluation has been performed, and the IH Train has not passed location where track will be entered, another route evaluation must be performed prior to authorizing the IH Train.
- The Transportation Service Plan gathers cars to run on specified days. On days scheduled to operate with TIH/PIH cars, a train should not be reduced to one TIH/PIH car in an effort to avoid the required Track Evaluation.
- Maximum speed of IH Trains is 35 MPH.
- When meeting any other train, the IH Train will hold the main track. When meeting another IH Train, the IH train with the most Poison (Toxic)-Inhalation Hazard and Inhalation Hazard shipments will hold the main track.
- A train on a siding to meet an IH Train must be stopped before the IH Train on the main track passes. Conductors of the IH Trains will be advised by the dispatcher of meeting points and the conductors will verify that the train in the siding is stopped before the IH Train has passed.
- MW employees must not operate main track switches when using individual train detection (lone worker or lookout for minor work or routine inspection). Authority must be obtained to operate main track switches.
- When MW employees are working with a Form B Track Bulletin, after the route is evaluated for the IH Train movement, main track switches must not be operated and maintenance must not be performed on the track until the IH Train has passed.

Unless relieved of the requirement to do so by the BNSF train dispatcher, the crew operating a TIH/PIH train on a foreign railroad must, at the earliest opportunity, notify the other railroad's train dispatcher that the train is a TIH/PIH train.



**39. Rule of the Week /Dispatcher Daily Job Briefings**

All TY&E, Engineering and Mechanical employees must review the requirements of the Rule of the Week. Train dispatchers must review the Dispatcher Daily Job Briefing distributed by e-mail. Please direct any questions you may have to your immediate supervisor. You should be prepared to discuss the requirements of the Rule of the Week or the Dispatcher Daily Job Briefing with your supervisor.

**40. Rear End Restricted Cars**

Cars restricted to "rear end only" may be in train up to five cars ahead of rear car. Certain cars may require extreme rear end movement because of mechanical deficiencies.

**41. Car Identification B-End**

**Conventional Equipment:** The "B" end of the car is the end where the hand brake is located. Face the "B" end of the car. The left side of the car is to your left and the right side of the car is to your right as you face the "B" end. Count axles from the "B" end beginning with No. 1 being closest to you and No. 4 being farthest away. If the defective journal or wheel is the third axle away from the "B" end of the car on the left side as you face the equipment you will report it as "L3."

**Articulated Equipment:** The important thing is to locate the "B" end of the car. Each segment or unit of such cars is identified by a letter. This letter and the car number are shown on small badge plates located on each segment or unit of the car. The end segments are designated "A" and "B." The interior segments or units are designed (beginning at the "B" end) by the letters "C" through "E" on the five unit or segment cars. Locate the "B" end of the car as indicated by the stencil. Do not rely on the location of the hand brake. Many of these cars are equipped with a hand brake on each end.

Face the "B" end of the equipment. The left side of the car is to your left and the right side of the car is to your right as you face the "B" end of the equipment.

Count axles from the "B" end beginning with No. 1 being closest to you. The axles on this type of equipment are numbered consecutively from No. 1 through No. 9 and then by the alphabet with axle "10" identified by the letter "Z," axle "11" by the letter "Y," axle "12" by the letter "X," etc., going backwards through the alphabet.

If the defective journal or wheel is the ninth axle away from the "B" end of the car on the right side as you face the equipment, you will report it as "R9." If it is the fourteenth axle away from the "B" end of the car on the right side as you face the equipment, you would report it as "RV." Remember, on this equipment, axles "1" through "9" are identified numerically. Axles "10" through "14" are identified alphabetically beginning with the letter "Z" working backwards. Each axle is stenciled on most multi-segment or unit equipment on the truck side. Use the stencil when available to verify your identification.

**42. Currently Not Used****43. Signal Awareness/Position of Switch Form**

Subdivision-specific signal awareness/position of switch forms are available at on-duty points. In addition to observing and calling signals as required by GCOR Rule 1.47, the conductor must fill out one of these forms in ink while operating on BNSF and foreign railroads. Foreign railroads operating on BNSF are allowed to use their own signal awareness/position of switch forms when approved.

All block signal names or aspects, yellow or yellow/red flags and trackside warning detector exceptions must be recorded.

Record the following:

- CLEAR signals - Name or aspect.
- All other signals - Name or aspect of the signal, the train speed and time signal passed.
- Flags - Name and location of each flag, the train speed and time flag passed.

When speed indicator is not visible to the conductor, the engineer must call out the speed, in addition to the signal name or aspect, if other than CLEAR. Should the conductor be unable to record a signal aspect due to other activities, this fact must be noted on the form, including the reason.

When operating on an Approach or Diverging Approach signal indication, the engineer must notify the conductor when the train speed has reduced to the required speed. The conductor must note the time the train has reduced to the required speed on the signal awareness form and repeat the time to the engineer. A job safety briefing between the conductor and engineer must confirm understanding that the train may be required to stop at the next signal.

In non-signaled territory or Double Track ABS territory (outside of restricted limits or yard limits) a crew member must record:

- Name and location of hand operated main track switches, switch point locks, and derails operated.
- Name and location of hand operated main track switches left in reverse position.
- Time and initials of employee operating the main track switch, switchpoint lock or derail.
- Time and initials they are finally restored to the proper position on the Signal Awareness/Position of Switch form.
- Entry of appropriate box number when switch is left in reverse position.

Information must be recorded on the form as soon as practical after initially changing the position of the switch, switch point lock or derail. The time the switch, switch point lock or derail is restored and secured must be recorded on the form and initialed by the conductor and engineer before the crew departs that location. If not practical for both the conductor and engineer to initial the form, after a job briefing, the person filling out the form can enter the other initials on the form. Initialing each entry serves as a cross check to indicate switch, switch point lock or derail position has been briefed between crew members.

In addition, in non-signaled territory or Double Track ABS territory (except in restricted limits and yard limits), after a crew member lines a hand operated main track switch, the crew member must communicate with the engineer by radio using the following format, while physically at the switch location:

- "(Crew member title and name) has lined (switch at MP location or name of switch and station name) to the (normal/reverse) position."

Before movement may occur, the engineer must respond using the following format:

- "Engineer (name) understands (employee title and name) has lined (switch at MP location or name of switch and station name) to the (normal/reverse) position." If radios become inoperable, all crew members must job brief regarding use of hand operated main track switches, switch point locks, and derails before use, with notation of inoperable radio made on the Signal Awareness/Position of Switch form.



At the completion of each trip all forms must be turned in as directed by the Division General Manager. Additionally in non-signaled and double track ABS territory, the Position of Switch form must be signed by the conductor and a copy turned in with all track warrants.

Standard forms:

Signal Awareness Form (Location to Location)							
Date: _____		Conductor: _____		Engineer: _____			
Train Symbol: _____							
Block System Limits							
Signal Location	Signal Name						Time passed
Detector-Exception							Time at required speed
	Clear (Mark X)	Approach Medium (Mark X)	Approach (Mark X)	Stop and Proceed (Mark X)	Stop (Mark X)	Other (Mark X)	
Examples:							
CP 5325	X						
CP 5332			X			40 MPH	1545
VSS Anna		X				80 MPH	1715
TWD MP 568.5	Exception - Main 1, Hot Journal, Aule 45, Right side						
* It is not required to indicate speed and time for CLEAR signals. The following abbreviations may be used: AL - Approach Limited, AA - Advance Approach, AR - Approach Restricting, DC - Diverging Clear, DAD - Diverging Approach Diverging, DAM - Diverging Approach Medium, DA - Diverging Approach, R - Restricting, Y - Yellow Flag, YR - Yellow/Red Flag							

Position of Switch/Flag Location							
Subdivision(s): _____							
Flag Location	Flag Name	MPH	Switch/Detail/Switch Point Lock Name and Location	Time/Initials Operated	Time/Initials Restored	Engineer's Initials	Conductor's Initials
Examples:							
MP 21	Y	30	Whouse Track SW Bess	1800 LGW	1935 LGW	KDW	DET
			ESS Anna	2100 LGW	Box 21	KDW	DET
The following abbreviations may be used: Y - Yellow Flag, YR - Yellow/Red Flag							
Conductor Signature: _____							

**44. Report of Unsafe Motorist/Trespasser**

The Report of Unsafe Motorist/Trespasser Program is designed to capture information on near collisions between trains and vehicles, trespassers or pedestrians. When an incident occurs, employees should make a report by one of the following methods:

- Pre-addressed/Postage-paid postcard (Form SAF51680)
  - Fill in as much information as possible. Note: A license number is not necessary for the report to have value.
  - Place in company or US mail for handling.
- Call 1-800-697-6736 - Accident Reporting Center
  - Monday-Friday, 6 AM to 5:30 PM
  - Saturday-Sunday, Closed
  - Provide as much information as possible. Note: A license number is not necessary for the report to have value.
  - If voice mail - Leave information for processing.
  - Intranet - For convenience, a form is available on-line via the BNSF Intranet in "Safety and Rules/Grade Crossing Safety" which can be filled in and sent on-line; the website is: [http://bnsfweb.bnsf.com/departments/safety/report\\_unsafe.html](http://bnsfweb.bnsf.com/departments/safety/report_unsafe.html)

Emergencies must not be reported on the Accident Reporting Center number. Emergencies must be reported as follows:

- Radio/telephone contact with train dispatcher.
- Radio/telephone/verbal contact with local BNSF resource protection personnel or to the Resource Protection Command Center at 1-800-832-5452.

**45. Network Operations Center Notification Requirements**

BNSF timetable special instructions for individual subdivisions provide a table of radio call-in tones for contacting the train dispatcher, Mechanical Help Desk and Service Support. Tone call-in numbers may be a single digit or as many as three digits as outlined by timetable special instructions, depending on radio systems.

**Procedures for Contacting Help Desks**

- Train Dispatcher—Train crews should continue to contact the train dispatcher as required by current instructions for all delays. When reporting mechanical defects on locomotives, cars, or other equipment such as an ETD, the dispatcher must be contacted initially in order to manage delays relative to these defects.
- Mechanical Help Desk - After initially recording and providing general information about defective locomotives, cars, or an ETD to the train dispatcher, the Mechanical Help Desk must be communicated with concerning the defect. Crew will report specific details concerning the defect and be governed by that supervisor's instructions concerning handling of the defect.

Note: At terminals, locomotive defects (on either ROAD or YARD locomotives) must be reported to local supervision AND the Mechanical Help Desk.

Before repositioning of the lead locomotive in a consist, train crews must contact the Mechanical Help Desk to check lead qualification status of other locomotives in the consist to determine which may be used as a lead locomotive.

The Mechanical Help Desk may be contacted by phone at: Operations North-(817) 234-6258, Co. Line (8) 234-6258 Operations South-(817) 234-2300, Co. Line (8) 234-2300

- Signal Desk—Signal Help Desk (SC) radio tone call-in references are no longer valid, and all signal defect/trouble reports should be reported directly to the train dispatcher.
- Service Support—In addition to reporting via radio to Service Support at Fort Worth, the following phone numbers and fax numbers may be used:

**Train reporting**

- BNSF company line—(8) 593-7610
- Toll-free line—(800) 549-4601
- BNSF fax line—(8) 593-7615
- Fax toll-free line—(800) 234-1341

**Interchange reporting**

- BNSF company line—(8) 593-7640
- Toll-free line—(800) 206-3846
- BNSF fax line—(8) 593-7645
- Fax toll-free line—(800) 223-6757

**46. Special Car Handling Instructions**

One or any combination of two of the following codes may be shown on train lists to designate special car handling requirements. These same codes may also appear in the Special Instruction Column of switch lists and yard inventories.

CODE	DESCRIPTION
AG	Armed Guard Service
AV	Annual Volume
BH	Bad Order Home Shops
BN	If Bad Order Notify Shipper

- BT..... Bare Table Flat
- B1..... Bad Order
- B2..... Cleaned (swept), Holes in floor 1 in. to 6 in.
- CA..... Moving to a Customer Demand
- CB..... CARB (See Note 3)
- CC..... To Be Cleaned and Conditioned
- CD..... Condemned Car (See Note 1)
- CI..... Customs Inspection
- CO..... Coload Manifest Car
- CR..... Empty Coal Car Moving as Revenue
- CS..... Customer Storage
- CU..... Customer Stage
- CY..... Certification That This Equipment is for Recycling
- DB..... Distributed Van Bad Ordered
- DH..... Do Not Hump
- DI..... Redistribute at Destination
- DK..... Do not couple to double shelf coupler cars
- DN..... Shipper's Authority Required for Diversion
- DO..... Delivery Order Shipment
- DR..... Drop Yard
- DS..... Do not spot for loading other than hazardous last contained.
- DT..... Distributed Intermodal Equipment
- DU..... Do Not Uncouple
- DV..... Unit has been diverted
- EC..... Speed Restriction 55 MPH
- EH..... Embargo Hold
- EL..... Empty Container Mechanical Lock
- EM..... Hold for Equipment Management
- ER..... Return Empty Via Reverse Route
- ES..... Expedited Service
- EW..... Hold Early Warning
- FA..... Automobiles Headlights Facing A-End (Opp. of Brake End) of Autoveyor
- FB..... Automobiles Headlights Facing B (Brake End) of Autoveyor
- FM..... Fumigate Car Now
- FP..... Fumigation Placards Applied
- HA..... Cars Held for the Customer in Bond Pending Customs Authority
- HB..... Hold for Billing—Mini Waybill Indicating Industry to Bill
- HC..... Hold for FMC Redistribution
- HD..... Cars Held for Customer Diversion
- HE..... Head End Only
- HF..... Car Held for BNSF Rail Clearances (High Wide)
- HG..... Cars Held for BNSF Pending Customer File Information
- HH..... Cars Held for Overload Condition
- HI..... Hold for Inspection
- HJ..... Cars Held for a Foreign Railroad After Being Offered by BNSF for ICD
- HK..... Empty Non-Private Cars Held on BNSF Track and No Car Order Exists
- HL..... Excessive Dimension
- HM..... Moving in ISO Tank Container
- HN..... Cars Held for Specified Local Conditions, \*\*Restricted Usage
- HO..... Cars Held for Consignee to Surrender Original BOL or Indemnity Bond
- HR..... Cars Held for Customer Furtherance Instructions After Arrival at Destination
- HS..... Empty (Non-Private) Cars Held on BNSF Trackage Awaiting Placement
- HT..... Heat Car
- HV..... High Value Shipment
- HX..... Cars Held Waiting for Waybill Information from Connecting Carrier
- IB..... In BNSF Bond
- IC..... Inspection Requested at Port of Entry into Canada by Canadian Customs
- ID..... In Bond Beyond BNSF Destination
- IE..... Interchange Error
- IH..... Inhalation Hazard
- IM..... Inspection was Requested by Mexican Customs at Port of Entry into Mexico
- IN..... Hold for Inspection
- IS..... In Shipper's Bond
- IU..... Inspection was Requested by US Customs at Port of Entry into USA
- LC..... Car Trip Leased to Consignee
- LD..... Local Distribution Empty
- LG..... Loaded to Gallonage Capacity
- LO..... Local Orders
- LQ..... Loaded to Full Cubic Capacity
- LS..... Handle in Local Service Only
- LU..... Unload in Laredo proper
- LV..... Loaded to Full Visible Capacity
- LX..... Cleared for export via Laredo
- L1..... Customer Location 1
- L2..... Location 2 - East Plant
- M8..... Inspect 8 axle or greater span bolster car for ride quality components
- MB..... Make Bill of Lading
- MC..... Measure Car Now
- MD..... Mixed Destination Intermodal Units
- MI..... Requires mechanical inspection, do not move on train.
- MN 5..... A running reefer unit set at -5 degrees Fahrenheit
- MR 28..... A running reefer unit set at 28 degrees Fahrenheit
- NC..... Non-credit Patron
- ND..... Do Not Divert
- NH..... No Hit—Car Distribution
- NL..... IMDL van or container requires Nava Lock device
- NM..... Non Misc. Credit Patron—Car held account charges due
- NP..... No Placards Required
- NT..... Do Not Transfer Contents
- OI..... Oils Marine Pollutant
- ON..... Oil Notation
- PD..... Privately Owned Equipment Subject to Demurrage
- PH..... Hold for Pool Destination
- PJ..... Mechanical Project Job
- PR..... Prospective Loading Empty
- PT..... Hold for Pre-Trip
- QD..... Hold for Queue Demand
- RC..... Restricted Commodity
- RE..... Rear End Only
- RI..... Rail Inspection Service
- RJ..... Hold for Rejected
- RL..... Revenue Locomotive - Check for Alignment Control
- RP..... Rail Controlled Private
- RS..... Rule 7 Reject Candidate
- SC..... Equipment Scrapped
- SD..... Car Sold
- SE..... Hold for Seasonal Storage
- SF..... Feed Now
- SH..... OPSL Hold
- SO..... Shipper's Order

- SR ..... Rail Surveillance Required
- SS ..... Surplus Storage
- ST ..... Move on special train only, requires single car train movement.
- SW ..... Switch Only Empty Furnished by Foreign Road
- SX ..... Speed Restriction Exception to Sys Special Inst. - OK to Run at Train Speed
- TB ..... Car Control Distributed Bad Order
- TG ..... Transp. Code G—contaminated commodity service. Cars should not be placed at industry other than so designated.
- TS ..... Transit Shipment
- TU ..... Turn This Car Now
- UL ..... Unload from left side of car. Left side of car determined by facing the "B" (brake) end of car.
- UP ..... Unloaded as Placarded
- UR ..... Unload from right side (from brake end)
- VA ..... Vehicle Headlights Facing A-End (Opp. of Brake-End)
- VB ..... Vehicles Headlights Facing B-End (Brake End)
- WA ..... Weigh After Spotted and Released
- WB ..... Weigh This Car Both Before and After It Goes to Spot
- WH ..... Weigh
- WI ..... Waive Inspection
- WL ..... Weigh Light
- XM ..... Cleared to Cross from US to Mexico
- 25 ..... 25 MPH Speed Restriction (See Note 2)

**Clean and Condition Codes for Empty Cars**

CODE	DESCRIPTION
F1	Washed, Food Grade
F2	Cleaned (Swept), Food Grade
F3	Dirty, Food Grade
F4	Cond/Repairs, Food Grade
F5	"Not Observed", Food Grade
F6	Rinse, Food Grade
F7	Inspected, Food Grade
P1	Washed, Processor Grade
P2	Cleaned (Swept), Processor Grade
P3	Dirty, Processor Grade
P4	Cond/Repairs, Processor Grade
P5	"Not Observed", Processor Grade
P6	Rinse, Processor Grade
P7	Inspected, Processor Grade
S1	Washed, Standard Grade
S2	Cleaned (Swept), Standard Grade
S3	Dirty, Standard Grade
S4	Cond/Repairs, Standard Grade
S5	"Not Observed", Standard Grade
S6	Rinse, Standard Grade
S7	Inspected, Standard Grade
S0	Washed and Sanitized

**Other Codes**

There are a number of SCHI codes that begin with a number followed by alpha character which are used to identify alternate storage locations. Example:

1A ..... Hold Storage Arkcity

Codes B1 through B9 mechanical codes reference the type of repairs needed for bad order cars.

Other codes for hazardous materials can be found in the US Hazardous Material Instructions for Rail.

**Note 1.** The 'CD' Condemned Car code will be inserted by the computer when the car is so registered in UMLER (Universal Machine Language Equipment Register). This does not relieve employees of the responsibility of reporting these codes when appropriate.

**Note 2.** Report numeric MPH speed restriction only, e.g., 25 for a car restricted to 25 MPH. Certain series of cars which have a permanent speed restriction will have the speed restriction code inserted by the computer. When such speed or speeds are shown, trains must not exceed the lowest speed so indicated. This does not relieve employees of the responsibility of reporting the proper code on work order(s) on all cars which for any reason have speed restrictions.

When cars are subject to two special handling instructions, both codes should be reported. If subject to move with more than two, report the two most restrictive and protect other special handling requirements by an administrative message to those offices and/or individuals to whom the train is addressed.

**Note 3.** The California Air Resource Board (CARB) has instituted tighter emissions standards for transportation refrigeration units. Some BNSF refrigerated boxcars are not compliant with the new standard and therefore cannot originate, terminate or transit through California state. Non-CARB-compliant cars can be identified by a CB code in the SCHI field and are color coded reverse video blue in TSS.

Equipment management controls have been implemented to assign only CARB cars to the state of California. Waybill edits will verify compliance at release and place a STOP on non-CARB cars if waybilled to a California destination.

No substitution between Non-CARB and CARB cars is allowed unless work orders specifically authorize the exception. Yard Block HOLDDB prevents any Non-CARB cars destined to California, or originating in California from scheduling to a train. Cars will go HOLDMT at origin.

Non-CARB cars will not schedule to trains terminating in or passing through California. Attempts to TRNSET a Non-CARB car to a California-routed train will result in a pop-up window advising that the car must be removed from the line-up and explaining why.

For questions or assistance with handling exceptions for BNSF refrigerated boxcars, email your concerns to the CARB Resolution Team at "MKT DL CP CARB".

When a car on a train list has the "HL" Car Code, and no clearance wire is received, contact your local CS&S office and obtain a clearance wire for the car. If unable to obtain a clearance wire, the car must be set out.

Car kind codes M2F and M3F (articulated Hi Bi/Tri-Levels) must not be operated on any Branch Line or any location listed below:

- Barstow Subdivision—Barstow to Bettendorf via Crescent Bridge
- Beatrice Subdivision
- Bellingham Subdivision—USA Canada Border to Burlington
- Chicago Subdivision—BRC overpass between MP 6.70 and MP 6.73 (Handle on Mains 4 and 5 only)
- Columbia River Subdivision  
(Exception: Car kinds M2F and M3F may operate on this subdivision.)
- Gateway Subdivision
- Hannibal Subdivision—Burlington to West Quincy
- Helena Subdivision
- Hi Line Subdivision  
(Exception: Car kinds M2F and M3F may operate on this subdivision.)
- Kettle Falls Subdivision—Danville, WA, to San Poil
- Kootenai River Subdivision  
(Exception: Car kinds M2F and M3F may operate on this subdivision.)

- Laurel Subdivision
- Lester Subdivision
- New Westminster Subdivision
- Omaha Subdivision—Handle on Main 1 only at Omaha Depot
- Oregon Trunk Subdivision—Fallbridge to Bend
- Scenic Subdivision  
(Exception: Car kinds M2F and M3F may operate on this subdivision and use only MT 2 between MP 0.15 and MP 1.11.)
- Silsbee Subdivision—Beaumont to Brooks
- Sioux City Subdivision
- Stampede Subdivision
- Stockton Subdivision—Port Chicago to Richmond  
(Exception: Car kinds M2F and M3F may operate on this subdivision).
- Mitchell Subdivision
- Wymore Subdivision—Table Rock to Wymore

Car kinds M2F and M3F may operate over all other Main Line Subdivisions without clearance wire to protect movement even if car has "HL" code on the train list. (See Item 7 f)

FTTX flatcars departing GM Plant, Oklahoma City destined for Kansas City (NS) may operate over Red Rock, Arkansas City, La Junta, Douglass, and Emporia Subdivisions without clearance wire to protect movement even if car has "HL" code on the train list. Mechanical inspection is not required on these cars in Oklahoma City.

**47. Train Make-Up Instructions**

**Trailing Tonnage Restrictions:**

1. The following cars must not be ahead of more than 2,500 trailing tons:
  - All loaded or empty 2-axle cars (series TTOX and TTFX).
2. The following cars must not be ahead of more than 3,000 trailing tons (long car/short car):
  - Any car 80 ft or longer coupled to any car 45 ft or shorter.

Exception: Next to locomotive crane 45 ft. or less if coupled to boom car 80 ft. or longer.  
Note: Item 2 does not apply to multi-platform cars except those with individual platforms exceeding 80 feet. (Examples: Twin flat cars and Automax cars.)
3. The following cars must not be ahead of more than 5,500 trailing tons:
  - Multi-platform spine cars, regardless of how loaded.

**Total Train Tonnage Restrictions:**

4. Trains greater than 5,500 total tons:  
The following cars must not be within the first 10 cars/platforms:
  - Any conventional car (non-multiplatform) weighing less than 45 tons.  
Exception: Does not apply to loaded single well double stack cars of any weight (car kind beginning with QU or QK).
  - Any 80 ft. or longer flat car with a single trailer/container, regardless of car weight.  
Note: This includes twin flat cars (solid-drawbar connected flat cars TTEX & RTTX series) with a single trailer/container on either segment/platform.
  - Multi-platform cars with any empty platforms. Note: All multi-level, multi-platform autorack cars referred to as "AutoMax" cars, are considered to have loaded platforms in the application of this rule, regardless of whether car is loaded with vehicles or not.

Additional subdivision restrictions (excludes solid empty bulk commodity trains):

- On Glorieta (MP 775.0 - MP 842.0) and Raton (MP 639.0 - MP 660.0) Subdivisions the following additional restrictions apply:

Trains greater than 2,500 tons and less than 3,000 tons, the cars listed above must not be within the first 10 cars/platforms. Trains 3,000 tons or greater, the cars listed above must not be within the first 15 cars/platforms.

- On Cajon (Main 3, MP 56.6 - MP 62.8), San Diego Northern RR (MP 250 - 255), Gateway (MP 178.0 - 188.0), UPRR Mojave (MP 331.3 - MP 381.3), UPRR Moffat Tunnel (MP 17 - 63), UPRR Provo (MP 626 - 685), Scenic (MP 1694.5 - MP 1731.3) and Stampede (MP 41.0 - MP 58.5) Subdivisions, the following additional restrictions apply:

Trains greater than 3,500 tons and less than 4,000 tons, the cars listed above must not be within the first 10 cars/platforms.

Trains 4,000 tons or greater, the cars listed above must not be within the first 15 cars/platforms.

Note: Unless otherwise authorized, all trains destined Cajon or Mojave Subdivisions will be made up in compliance with above guidelines for Cajon Subdivision (Main 3, MP 56.6 - MP 62.8) and Mojave Subdivision MP 331.3 - MP 381.3).

5. Trains greater than 7,000 tons:  
The rear 1/4 of the train must not weigh more than 1/3 of the total weight.  
Exception: This does not apply to:
  - trains made up entirely of cars weighing a minimum of 45 tons each.
  - solid loaded or solid empty unit bulk commodity trains.
  - trains made up entirely of intermodal equipment.

NOTE: If a train is determined to be out of compliance with these train make-up rules and the maximum authorized speed exceeds 45 MPH, the speed must immediately be reduced to 45 MPH and the train dispatcher notified.

The train must not exceed a maximum speed of 45 MPH until it reaches the location specified by the train dispatcher to correct the condition.

**Detoured Foreign Trains**

If a foreign line train operating on the BNSF for purposes of detour is in compliance with BNSF train make-up instructions, the train may be operated at maximum speed that would be permitted if train was a BNSF train. If train does not comply with BNSF train make-up instructions, train is authorized to operate on BNSF at a maximum speed of 45 MPH.

**Train Length, Tonnage and TOB**

When complying with Special Instructions covering speed and other train restrictions where calculations of train length, tonnage and/or tons per operating brake are involved, the locomotive consist should be excluded unless specifically stated otherwise.

Exception:

1. The weight of isolated/dead locomotives is added to train trailing tonnage when determining HPT in the application of ABTH Rule 106.1 Regulating Horsepower per Ton and
2. The weight of locomotives with inoperative dynamic brakes is also added to train trailing tonnage when determining the minimum number of dynamic brake axles where required on mountain grade subdivisions.
3. When head end locomotive consist on train movements exceed 8 locomotives and recalculating TOB of train as per SSI, Item 2.

**Military Train**

Unit military trains containing shipments on cars with end of car cushioning as shown on the train profile (EOC) shall have no more than total of 80 cars in the train. If train exceeds 60 cars, train is restricted to 45 MPH.

**Loaded Unit Coiled Steel Trains**

Unit trains consisting entirely of loaded coiled steel cars are limited to a maximum of 50 cars.

**Exceptions**

Trains which are exempt from the above train make-up instructions will be identified on Division General Order.

UPRR trains operated on BNSF may operate in compliance with UPRR train make up rules with the exception of distributed power train length limitations as outlined in 47(A).

**47(A). Train Make Up Instructions and Locomotive Requirements Applicable to Trains Equipped with Distributed Power or Manned Helpers**

Note: In the application of instructions below, the terms "DP and "DP remote consist(s)" refers to trains utilizing distributed power and/or manned helper consists. The term "rear end" refers to the very end of the train and "cut in" refers to placement within the train with cars on both sides. RPA refers to Rated Powered Axles and can be referenced in SSI, Locomotive Data Table, 2(B).

**1. Distributed Power and Manned Helper Locomotive Power Limits by rated powered axles (RPA)**

<b>Maximum RPA, conventional and DP/helper trains - System</b>			
<b>Train Type</b>	<b>Head End</b>	<b>Cut-In DP/Helper</b>	<b>Rear end DP/Helper</b>
Manifest	42	24	16
Intermodal	48	24	16
Empty Bulk Commodity	16	8	8
Loaded Bulk Commodity (no empties in train)	32	40	24

Note: If operating with distributed power, total RPA of head end locomotive consist must not exceed 16 RPA of the total RPA of DP/Helper locomotive remote consist(s). Unless otherwise instructed, empty bulk commodities limited to 9,000 horsepower for fuel conservation purposes.

Exception: Trains exceeding 8,000 tons operating on the heavy grade subdivisions listed below, must limit the total RPA of the head end locomotive consist to no more than 8 RPA greater than the total RPA of the DP/Helper locomotive remote consist(s).

- Cajon (Main 3, MP 56.6 - MP 62.8, eastward only)
- Gateway (MP 178.0 - 188.0, northward only)
- Glorieta (MP 775.0 - MP 842.0)
- Raton (MP 639.0 - MP 660.0)
- San Diego Northern RR (MP 250 - 255)
- Scenic (MP 1694.5 - MP 1731.3)
- Stampede (MP 41.0 - MP 58.5)
- UPRR Moffat Tunnel (MP 17 - 63)
- UPRR Mojave (MP 331.3 - MP 381.3, southward only)
- UPRR Provo (MP 626 - 685)

**2. DP Remote and ETD Placement Limitations**

<b>Distributed Power and ETD Length Limitations</b>	
<b>Train description</b>	<b>Maximum length allowed, excluding locomotives</b>
Conventional train, (non-DP) all types operating with 2-way ETD	10,000 ft between locomotive consist and end of train device (ETD) on rear. (Unless equipped with mid-train ETD repeater)
Manifest or bulk commodity trains operating with a single DP remote consist, cut in or on rear	8,500 ft between lead consist and remote DP consist.
Solid intermodal train operating with a single DP remote consist, cut in or on rear	10,000 ft between lead consist and remote DP consist.
Train of any type with two DP remote consists, both cut in or one cut in and the other on rear of train.	6,500 ft between each DP consist.

**50b SYSTEM SPECIAL INSTRUCTIONS—No. 1—April 7, 2010 (Revised 3/1/11)**

**3. System Distributed Power and Manned Helper Train Make Up Restrictions**

DP Locomotive Consist RPA/ Location/Restricted Car Placement		Restricted Cars
Cut in DP/ Helper, any RPA	Rear end DP/ Helper, any RPA	
Must be at rear of train behind any rear end DP/helper consist		Cars indicated as rear end only.
		AMGX 2-unit solid drawbar connected gondolas
		Occupied caboose
On the following subdivisions: Cajon (Main 3, MP 56.6 - MP 62.8, eastward only), Gateway (MP 178.0 - 188.0, northward only), Glorieta (MP 775.0 - MP 842.0), Raton (MP 639.0 - MP 660.0), San Diego Northern RR (MP 250 - 255), Scenic (MP 1694.5 - MP 1731.3) Stampede (MP 41.0 - MP 58.5) UPRR Moffat Tunnel (MP 17 - 63), UPRR Mojave (MP 331.3 - MP 381.3), UPRR Provo (MP 626 - 685), Restricted cars listed must not be within 5 cars or platforms/wells of DP/Helper consist. (cut in and/or on rear end)		<ul style="list-style-type: none"> <li>Any conventional car (non-multiplatform) weighing less than 45 tons. Exception: Does not apply to empty bulk commodity trains or to loaded single well double stack cars of any weight (car kind beginning with QU or QK).</li> <li>Empty platforms/wells of a multiplatform car. All multi-level, multi-platform autorack cars referred to as "AutoMax" cars, are considered to have loaded platforms in the application of this rule, regardless of whether car is loaded with vehicles or not.</li> </ul>
Cut in DP/Helper 9 - 24 RPA	Rear end DP/Helper 9 - 16 RPA	
Restricted cars listed must not be within 5 cars or platforms/wells ahead of or behind cut-in consist.	Restricted cars listed must not be within 10 cars or platforms/wells ahead of consist on rear end.	<ul style="list-style-type: none"> <li>Any car 80 ft or longer coupled to any car 45 ft or shorter. Does not apply to multi-platform equipment unless individual platforms are 80 feet or longer. (Examples: Twin flat cars and Automax cars.)</li> <li>Any conventional car (non-multiplatform) weighing less than 45 tons. Exception: Does not apply to loaded single well double stack cars of any weight (car kind beginning with QU or QK).</li> <li>Any 80 ft. or longer flat car with a single trailer/container, regardless of car weight. Also applies to twin flat cars (solid-drawbar connected flat cars TTEX &amp; RTTX series) with a single trailer/container on either segment/platform.</li> <li>Empty platforms/wells of a multiplatform car. All multi-level, multi-platform autorack cars referred to as "AutoMax" cars, are considered to have loaded platforms in the application of this rule, regardless of whether car is loaded with vehicles or not.</li> </ul>

Note: Inoperative locomotives (dead or isolated) may be used to provide the 5 or 10 car/platform separation between operative locomotives and restricted cars above. Each inoperative locomotive may be counted as 2 cars weighing >45 tons in the restricted area. Locomotive weight, operative or dead/isolated, is not used to recalculate train's TOB or trailing tonnage.

**4. Additional train make up restrictions applicable to DP trains operating on:**

Birmingham, Cuba, Ft Scott, Ft Worth, Galveston, Lampasas, Phoenix, Seligman, Thayer North, Thayer South and Wichita Falls Subdivisions.

DP Locomotive Consist RPA/ Location/Restricted Car Placement	Restricted Cars
Cut in DP/Helper or rear end DP/Helper any RPA	
Restricted cars that must be placed immediately behind the lead locomotive consist.	<ul style="list-style-type: none"> <li>Coiled steel shipments identified by car kind code GOS or GRS and the car initial and number BN 686000-686864, BNSF 529000-533999 and BNSF 534080-538999 are limited to 5 cars (Does not apply to loaded unit coiled steel trains.)</li> </ul>
Restricted cars listed must not be placed within 5 cars or platforms/wells of DP/Helper consist. (cut in and/or on rear end)	<ul style="list-style-type: none"> <li>Any car 80 ft or longer coupled to any car 45 ft or shorter. Does not apply to multi-platform equipment unless individual platforms are 80 feet or longer. (Examples: Twin flat cars and Automax cars.)</li> <li>Any conventional car (non-multiplatform) weighing less than 45 tons. Exception: Does not apply to empty bulk commodity trains or to loaded single well double stack cars of any weight (car kind beginning with QU or QK).</li> </ul>
	<ul style="list-style-type: none"> <li>Any 80 ft. or longer flat car with a single trailer/container, regardless of car weight. Also applies to twin flat cars (solid-drawbar connected flat cars TTEX &amp; RTTX series) with a single trailer/container on either segment/platform.</li> <li>Empty platforms/wells of a multiplatform car. All multi-level, multi-platform autorack cars referred to as "AutoMax" cars, are considered to have loaded platforms in the application of this rule, regardless of whether car is loaded with vehicles or not.</li> </ul>
Cut in or rear end DP/Helper consist of 9 - 24 RPA (Does not apply to trains with 2, single-locomotive DP remotes)	
Restricted cars listed must not be placed between lead consist and remote consist(s)	<ul style="list-style-type: none"> <li>Any conventional car (non-multiplatform weighing less than 45 tons. Exception: Does not apply to loaded single well double stack cars of any weight (car kind beginning with QU or QK).</li> <li>No more than 20 cars with end of car cushioning. (Does not apply to loaded unit coiled steel trains.)</li> <li>Intermodal equipment other than double stack and autoracks, regardless of how loaded. (Conventional intermodal flat cars, spine cars - car kinds QM, QC, QO, Q5 and QE and twin flats - car kinds FM, QB, QD and QL.)</li> </ul>

Note: Inoperative locomotives (dead or isolated) may be used to provide the 5 or 10 car/platform separation between operative locomotives and restricted cars above. Each inoperative locomotive may be counted as 2 cars weighing >45 tons in the restricted area. Locomotive weight, operative or dead/isolated, is not used to recalculate train's TOB or trailing tonnage.

**5. Placement of Cut-In DP/Helper Consists**

**a. One DP Remote Consist**

A single DP remote consist exceeding 8 RPA that is cut-in to the train must be cut in at 300 tons per axle exceeding 8 RPA, but no closer to the head end than mid-train, by car count. This cut in location may vary by 5 cars either forward or to the rear of the train as long as train make up requirements next to DP remote consist outlined above is met.

**b. Two DP Remote Consists**

When two DP remote consists are used, they must be positioned with one DP remote consist at the rear end and the cut in DP remote consist within 20 car lengths of mid-train, by car count.

**6. Limiting Tractive Effort When Using Manned Helpers with Trains Not in Compliance with Train Make-up Guidelines:**

Conventional trains may be helped from the rear of train with a manned helper only (DP may not be used) when exceeding axle limitation guidelines above if train is disabled and not in compliance with train make up restrictions for DP/Helper service as outlined above. Tractive effort limit when exceeding 8 rated powered axles and helping trains not in compliance with DP/Helper train make up guidelines as follows:

**Manned Helper Controlling Locomotive with Amperage Displayed:**

8 rated powered axles - no restriction  
10 rated powered axles - 1,000 amps  
12 rated powered axles - 950 amps  
14 rated powered axles - 900 amps  
16 rated powered axles - 850 amps

**Manned Helper Controlling Locomotive with Tractive Effort Displayed:**

Limit total tractive effort of AC consist to 100,000 lbs. Total AC locomotive consist tractive effort is determined by multiplying tractive effort indicated on display of controlling locomotive and multiplying by the total number of operative AC locomotives in the consist.

Example: A controlling unit of a two-unit AC locomotive consist should not be allowed to produce more than 50,000 lbs. of tractive effort.

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**48. Operations Testing**

When operations testing for compliance where train, engine or on-track equipment movements are required to stop, a high visibility orange banner displayed square on point with the words "STOP OBSTRUCTION" may be used.

Example:



These banners will be placed between the rails of the track and are considered a stop signal and a simulation of on-track equipment. Whenever required by an operating rule, stop all train, engine, and on-track equipment movements short of the "STOP OBSTRUCTION" banner.

Examples of operating rules where the "STOP OBSTRUCTION" banner may be used are:

- GCOR & MWOR Rule 6.27 Restricted Speed,
- GCOR Rule 6.28 Movement On Other Than Main Track, or
- MWOR Rule 6.50 Movement of On-Track Equipment.

Expect to find the "STOP OBSTRUCTION" banner erected at any location, or at any time the rules above restrict movement.

**49. Engineer Responsibilities and Certification**

In the application of the following guidelines, the term "engineer" applies to Train Service Engineers, Student Engineers, Locomotive Servicing Engineers/Hostlers, Remote Control Operators (RCO), and Student Remote Control Operators.

PRIOR TO BEGINNING EACH SHIFT OR TOUR OF DUTY, ALL ENGINEERS MUST ENSURE THEIR CFR PART 240 CERTIFICATE IS IN THEIR POSSESSION AND IT IS VALID. IF THERE IS ANY DOUBT ABOUT THE VALIDITY OF THEIR CERTIFICATE, CERTIFIED EMPLOYEES MUST CONTACT A SUPERVISOR PRIOR TO OPERATING A LOCOMOTIVE.

**1. General Responsibilities**

Engineers are responsible for and must maintain their certification.

- a. Engineers must be certified in the appropriate class of service to operate a locomotive.
- b. Engineers must certify according to federal regulations (49 CFR Part 240) and BNSF Railway certification requirements and programs.
- c. Engineers must possess their class of service certificate and display it at the request of a company manager or FRA representative while on duty.
- d. Engineers must report to his or her supervisor responsible for certification within 48 hours:
  - a conviction for operating a motor vehicle while under the influence or impaired by alcohol or a controlled substance.

- any conviction for refusal to undergo testing by a law enforcement officer who wants to determine whether the engineer is operating a motor vehicle while under the influence of alcohol or a controlled substance.

Note: State-sponsored diversion programs, guilty pleas, and completed state actions to cancel, revoke, suspend, or deny a driver's license are considered convictions under this rule.

**2. Engineer Certification Requirements for Operating Locomotives**

Certified engineers may operate locomotives under the following conditions:

- a. A certified locomotive servicing engineer may not operate locomotives coupled to cars.
- b. A certified locomotive servicing engineer may operate locomotives within a yard or terminal area for hostling purposes.
- c. Only certified Train Service Engineers, Student Train Service Engineers, Remote Control Operators, and Student Remote Control Operators may operate locomotives coupled to cars.
- d. Certified student Engineers and Student Remote Control Operators utilizing a Remote Control Transmitter may operate locomotives within the limits of their class of service under the direct supervision of an Engineer Instructor or Remote Control Operator Instructor. Prior to operating a locomotive in a yard or over a road territory for the first time, a certified Engineer or Remote Control Operator must have made at least one trip observing the territory. Engineer Instructors must have a minimum of six months of experience on the road territory over which they are supervising Certified Student Engineers.
- e. Certified Student Remote Control Operators may operate a locomotive using a Remote Control Transmitter under the direct supervision of a Remote Control Operator Instructor.
 

Note: An RCO Operator must have a minimum of 30 tours of duty as a Certified Remote Control Operator before training a student.
- f. Certified Train Service Engineers and Locomotive Servicing Engineers, including Train Service Engineers/Locomotive Servicing Engineers that have been cutback to train service, and Remote Control Operators who have not had their evaluation and certificate signed prior to October 1 of each year, must advise their respective Road Foreman of Engines or Designated Supervisor of Remote Control Operators (DSRCO) of this fact. Should a new Road Foreman or DSRCO be assigned or a Engineer or Remote Control Operator change work locations after October 1; the Train Service Engineer/Locomotive Servicing Engineer or Remote Control Operator must again report to the new Road Foreman of Engines or DSRCO that certification evaluation is due.

### 3. Maintaining Locomotive Engineer Proficiency for Skills, Route Familiarization and Special Equipment

Certified employees must maintain proficiency as an engineer as it pertains to:

- Skills Proficiency,
- Route familiarization, and
- Special or unique equipment.

#### a. Skills Proficiency

An Engineer who has not operated a locomotive in the last 6 months, including under the provisions of Rule 1.47, Item B, Engineer Responsibilities, of the General Code of Operating Rules, must inform crew management of this fact when called to perform service as an engineer and that he/she may only be used as an Engineer/RCO if another qualified Engineer/RCO acts as a mentor (this includes a member of the crew who is qualified as an engineer/RCO or a supervisory engineer/RCO). If seniority limitations or any situation results in a qualified locomotive Engineer not performing the skills of an Engineer for a period of 6 months, that individual must immediately contact his/her Road Foreman of Engines or Supervisory Remote Control Operator (DSRCO) or other supervisor to determine the number of trips required, if any, and routes, for the purpose of maintaining the Engineer's skills proficiency.

Exception: The period is extended to 12 months for RCO if they are also certified as a train service engineer.

#### b. Route Familiarization

Route familiarization is required in order to perform service as a certified train service engineer without the assistance of a pilot. Once initially qualified on a specific route by making the required number of familiarization trips as specified by the Road Foreman of Engines, route familiarization is maintained by observing the route when performing service in any capacity (engineer or trainman) every 12 months. Other methods of maintaining route familiarization may also be available as specified by the Road Foreman of Engines.

Exception: Route familiarization as outlined above on the heavy and/or mountain grades of the subdivisions listed below, in any capacity, is required every six (6) months:

Cajon, Mojave, Gateway, Scenic, Stampede, Glorieta, Raton, Pikes Peak and Hi Line subdivisions.

Train service engineers assigned to new routes or who become unqualified on current assigned routes are required to contact their Road Foreman of Engines (or other supervisor) who will advise the number of trips, if any, required to qualify or requalify on that route. If and when an engineer is qualified at the completion of these trips, the Road Foreman of Engines or other supervisor will then authorize the train service engineer to perform service on that route without a pilot. Route familiarization (and the use of a pilot) is not required when the movement to be made does NOT include a section of track with an average grade of greater than 1% over 3 continuous miles and:

1. The train is on other than main track, or
2. The maximum distance the locomotive or train will be operated will not exceed one mile, or
3. The maximum authorized speed for any operation on the track does not exceed 20 MPH, or
4. Operations are conducted under operating rules that require all movements to proceed at a speed that permits stopping within one half the range of vision of the locomotive engineer.

Note: Remote Control Operators must check local yard instructions for yard familiarization requirements.

#### 4. Special Equipment Proficiency

Distributed power and electronically controlled pneumatic brake systems require the engineer to have continued experience in order to maintain an adequate level of proficiency. If after the engineer is initially qualified on this equipment and a period of 12 months occurs without any experience operating this equipment (whether or not as assigned engineer), the Road Foreman of Engines or other supervisor must be contacted and the engineer must be governed by his/her instructions concerning requirements to become re-qualified on this equipment.

There are several systems of RC equipment. A certified RCO must receive initial training on unfamiliar equipment before operating it. Once initial training is received the operator only needs to maintain qualification as an RCO on any system.

#### 5. Route Familiarization Pilots

A person acting as a route familiarization pilot may not be an assigned member of the crew. In addition,

##### a. Train Service Engineers:

1. When a pilot is required account engineer has NO previous experience on the route, the pilot must be a certified train service engineer.
2. When a pilot is required account engineer requires re-familiarization on a route where previously qualified, any person with route familiarization may be used as a pilot.

##### b. Remote Control Operators:

1. When a pilot is required account the Remote Control Operator has NO previous experience on the Main Track, the pilot must be a Remote Control Operator.
2. When a pilot is required account the Remote Control Operator requires re-familiarization on a Main Track where previously qualified, a Remote Control Operator member of the same crew with route familiarization may be used as a pilot. In addition this crew member must be positioned at the same location as the individual requiring re-familiarization.

Exception: A pilot is not required if the Remote Control Operator has operated over the territory in another certified class of service.

Note: The requirements for the sections 'Skills Proficiency, Route Familiarization, and Special Equipment Proficiency' do not apply to any individual restricted to yard service as a train service locomotive engineer or locomotive servicing engineer unless otherwise instructed.

**50. Rail Security Sensitive Material (RSSM) Instructions  
Chain of Custody Documentation for Rail Security  
Sensitive Material**

Federal Regulations require Chain of Custody documentation for Rail Security Sensitive Material (RSSM) in the cases described below.

Rail Security-Sensitive Material (RSSM) includes a shipment of one or more of the categories and quantities listed below:

1. Rail car containing more than 5,000 lbs (2,268 kg) of a Division 1.1, 1.2, or 1.3 (explosive) material.
2. Loaded tank car containing a material poisonous by inhalation, including anhydrous ammonia, Division 2.3 gases poisonous by inhalation, and Division 6.1 liquids assigned to hazard zone A or hazard zone B.
3. Rail car containing a highway route-controlled Class 7 (radioactive) material.

These materials are identified with the Special Car Handling Code "RC", Restricted Commodity, and /or "RSSM HAZMAT" in the starred box that identifies hazmat shipments.

Except at locations identified by Division General Order, employees must execute and document Positive Transfers of Custody any time a loaded rail car identified by SCHI code "RC" is:

1. Pulled from or spotted to an industry
2. Delivered or received in interchange

Employees can make a positive transfer of custody when:

1. Physically located on site in reasonable proximity to the rail car.
2. Capable of responding to unauthorized access or activity at or near the rail car, including immediately contacting law enforcement or other authorities.
3. They immediately respond to unauthorized access or activity at or near the rail car by contacting law enforcement or other authorities.

This requirement applies both to BNSF employees and representatives of shippers, consignees, and interchange carriers making positive transfers of custody. A positive transfer of custody can take place only if representatives of both companies are present.

When a representative of an interchange carrier is not available where required, "RC" shipments must not be delivered, but may be received if proper paperwork can be obtained per Hazardous Material Instructions Item II. Contact a supervisor for disposition of "RC" shipments when a representative is not available to accept delivery.

Any car identified an RSSM shipment will require "Chain of Custody" documentation. Empty "residue" cars will not be identified with this code.

BNSF employees must confer with the customer or interchange road representative to ensure both of their documentation records contain the same information. The chain of custody documentation must include the following:

1. The BNSF employee's name or TSS logon ID ("B number").
2. The date and time of the actual custody transfer.
3. The station at which the "RC" cars are transferred.
4. The person to or from whom custody is being transferred.
5. The car initials and numbers.

Completing the chain of custody documentation:

1. TSS, TSS Xpress, or Renegade are the preferred methods for documentation.
2. Utilize the Chain of Custody Form on the back of the GTB or work order when TSS, TSS Xpress, or Renegade is not available due to work performed on line.

- a. When documenting a written chain of custody, employees must enter the information in TSS or TSS Xpress when access to a computer system becomes available.
- b. If a computer system is not available, utilize the FAX number at top of printed chain of custody form.
- c. Hours of service employees must complete the chain of custody documentation before expiring from duty under the hours of service.
- d. When documenting the chain of custody in printed form, employees must deliver the chain of custody documentation to a relief crew or supervisor for entry in to the system via TSS, TSS Xpress, or fax prior to the completion of the tour of duty when possible. This delivery must also be documented on the chain of custody form.
- e. When not possible to deliver the printed chain of custody documentation to a relief crew or supervisor prior to completion of the tour of duty, employees must enter the chain of custody documentation into the system via TSS, TSS Xpress, or fax when returning for next tour of duty.

Chain of custody procedures when receiving an "RC" freight car in interchange:

1. Loaded "RC" freight cars entering a yard from a foreign carrier must be recorded by the BNSF employee assuming responsibility to receive the "RC" car.
2. Employees should use the new TSS or TSS Xpress function "CUSTODY" to record the person's name from which custody is received along with the date and time of custody interchange. If an advance waybill list is not available, documentation must be done on printed format and entered into TSS or TSS Xpress when available.
3. Division Management will identify the point of contact for acceptance of interchange at each location.
4. A visual security inspection must take place with these cars when practical and must take place before departure from the interchange point. This is typically done during normal freight car safety inspections that are currently performed.

**Locations of High Threat Urban Area (HTUA)**

The following locations on the BNSF have been designated as an HTUA.

Anaheim	Memphis	Sacramento
Chicago	New Orleans	San Diego
Dallas/Ft Worth	Oklahoma City	San Francisco
Denver	Omaha	Seattle
El Paso	Phoenix	St Louis
Houston	Portland	Tulsa
Kansas City	Riverside, CA	Twin Cities
Los Angeles	San Antonio	

HTUA and associated boundaries will be identified by Division General Order. An intranet link with these areas mapped out is available at:

[http://bnsfweb.bnsf.com/departments/resourceprotect/homeland\\_sec/htua.html](http://bnsfweb.bnsf.com/departments/resourceprotect/homeland_sec/htua.html)

**Attendance Requirements**

Shipments identified as "RSSM" must be attended at all times while inside an HTUA. RSSM shipments are considered attended when:

- Located at an industry, when plant personnel have accepted chain of custody.
- Located in yard which is staffed 24 hours per day.
  - Employees in yard must be able to routinely view cars physically or by camera.
  - Employees designated as responsible for RSSM cars will be identified by Division General Order and must be able to respond to unauthorized access or activity by contacting law enforcement or other authorities.
- Located within a train with an on-duty crew, authorized employee or representative physically present.

Exceptions to above requirement will be identified by Division General Order.

Employees designated by Division General Order as responsible for location of RSSM cars inside HTUA are required to:

- Contact law enforcement or other authorities to report unauthorized access to RSSM cars.
- Know the placards and designations used to identify RSSM shipments.

Employees responsible for handling RSSM cars within the HTUA are required to:

- Know the contact information outlined by Division General Order for BNSF personnel who are responsible for location of cars within HTUA.
- Know the placards and designations used to identify RSSM shipments.

Note: BNSF Crews operating on foreign railroads must comply with these attendance requirements unless otherwise specified by the foreign railroad's instructions.

**Appendix A - Track Flagging Examples**

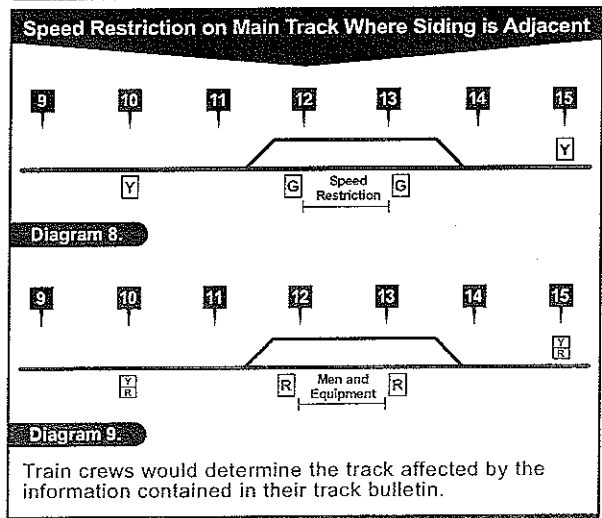
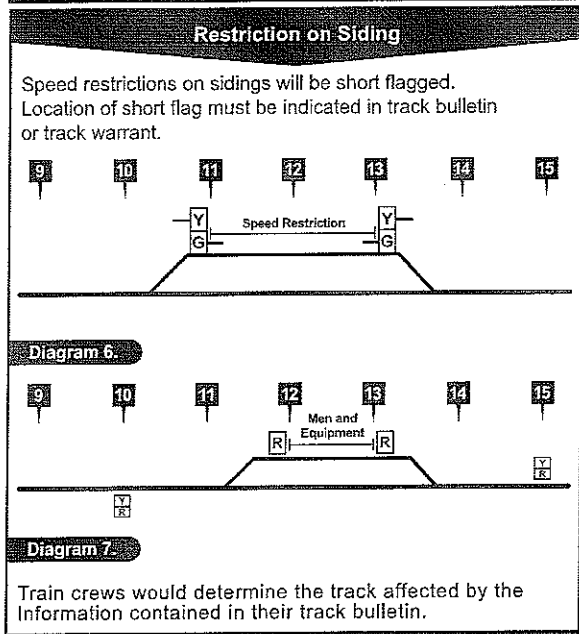
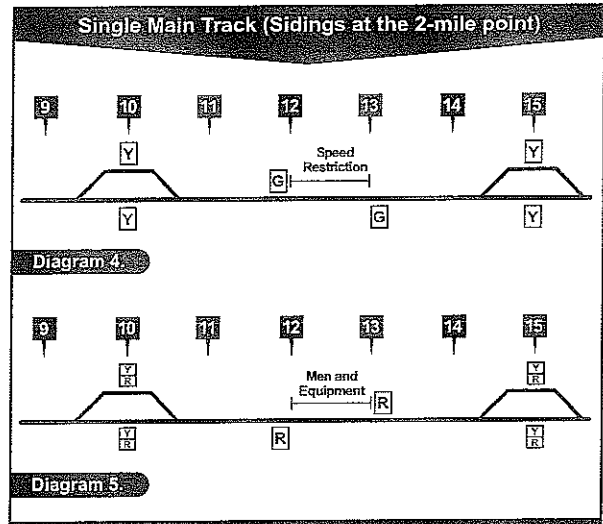
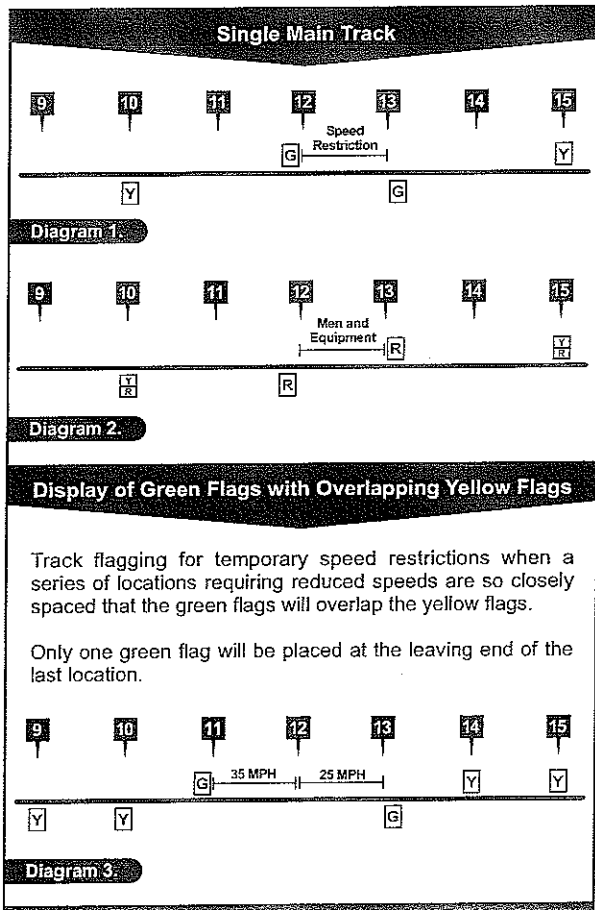
The figures in the appendix provide examples for protecting temporary speed restrictions and people or equipment working on or near the track. When reviewing these examples, keep in mind the following:

- The examples provided do not cover every situation.
- The distances shown are those specified by the rule.

In multiple main track territory, when a restriction is placed on a crossover, no track flags will be displayed after the restriction is specified by track bulletin or track warrant. This information must be included on the track bulletin or track warrant.

Yellow and yellow-red flags will be placed 2 miles before each restriction with the exception of at foreign line junctions, areas where flags cannot be placed 2 miles in advance and in certain situations at crew change points.

In situations in multiple main track or at sidings, when a train passes a yellow or yellow-red flag and a restriction is specified 2 miles in advance on track bulletin or track warrant, if the train takes a different route from the restricted track, this will not be considered as an unspecified restriction. Crew members must determine the track affected by comparing the flag location with the information contained in the track bulletin.



**Speed Restriction When Flag Cannot Be Placed 2 Miles in Advance**

Location of short flag must be indicated in track bulletin or track warrant.

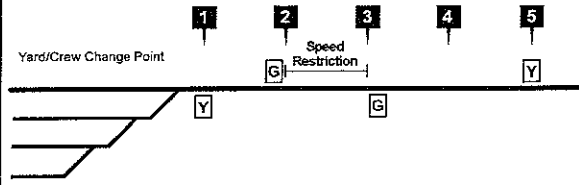


Diagram 10.

**When Flag Cannot Be Placed 2 Miles in Advance of Men and Equipment**

Location of short flag must be indicated in track bulletin or track warrant.

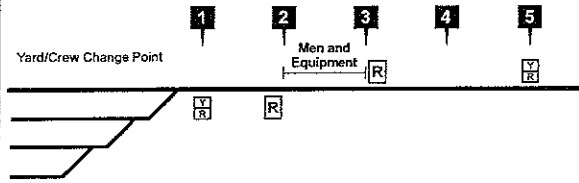


Diagram 11.

**Speed Restriction at Foreign Line Junction**

Location of short flag must be indicated in track bulletin or track warrant.

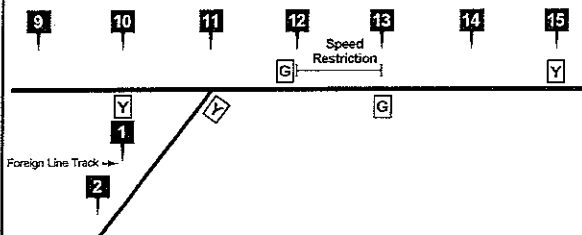


Diagram 12.

**Foreign Line Junction Near Men and Equipment**

Location of short flag must be indicated in track bulletin or track warrant.

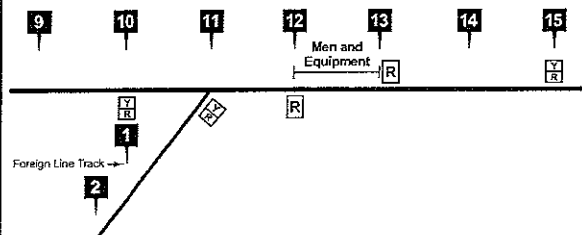


Diagram 13.

**Speed Restriction at BNSF Junction**

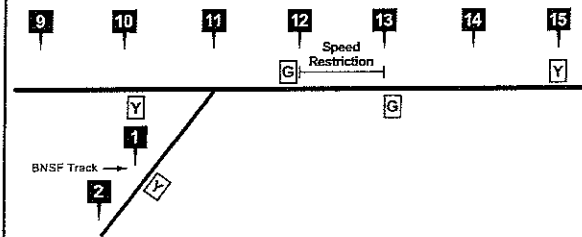


Diagram 14.

**BNSF Junction Near Men and Equipment**

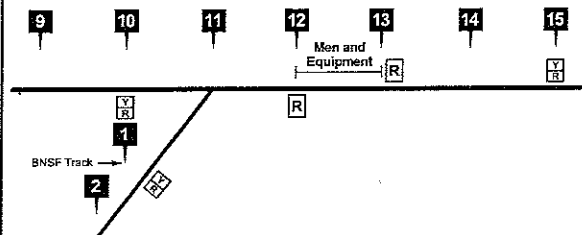


Diagram 15.

**Speed Restriction Just Beyond Turnout to Third Main Track**

Train crews would determine the track affected by the information contained in their track bulletin.

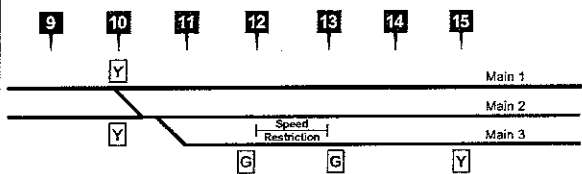


Diagram 16.

**Men and Equipment just Beyond Turnout to Third Main Track**

Train crews would determine the track affected by the information contained in their track bulletin.

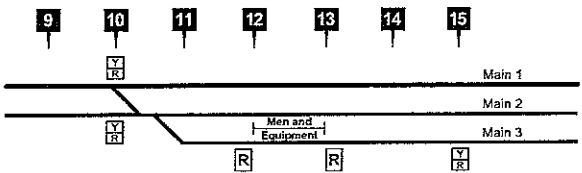


Diagram 17.

**Speed Restriction Just Beyond Turnout to Main 1**

Train crews would determine the track affected by the information contained in their track bulletin.

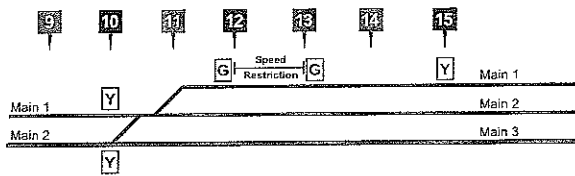


Diagram 18.

**Men and Equipment Just Beyond Turnout to Main 1**

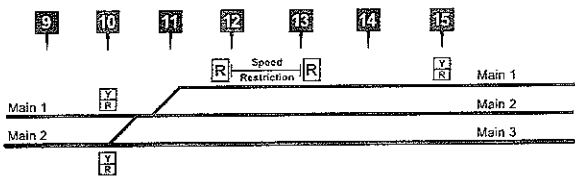


Diagram 19.

**Speed Restriction on Multiple Main Track**

Train crews would determine the track affected by the information contained in their track bulletin.

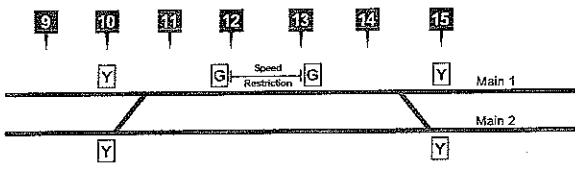


Diagram 20.

**Men and Equipment on Multiple Main Track**

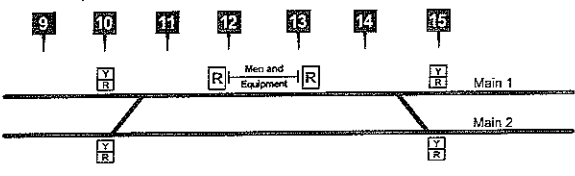


Diagram 21.

**Speed Restriction on Main 1 (CTC Territory)**

Yellow flags are placed 2 miles from the point of the restriction on both tracks because crews determine the track affected by comparing yellow flag with information on their track bulletin.

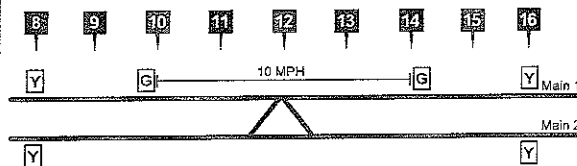


Diagram 22.

**Speed Restriction on Main 1 (CTC and ABS Territory)**

Yellow flags are placed 2 miles from the point of the restriction on both tracks. When a restriction, or flags placed for a restriction, includes both CTC and DT ABS, flags will be placed in accordance with rules for flag placement in multiple main track CTC.

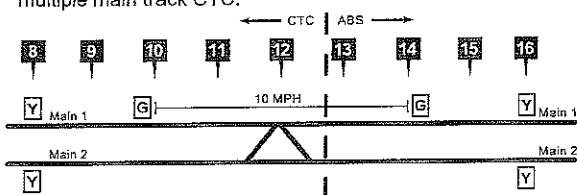


Diagram 23.

**Speed Restriction on Multiple Main Tracks (3 or More Main Tracks)**

Train crews would determine the track affected by the instruction contained in their track bulletin.

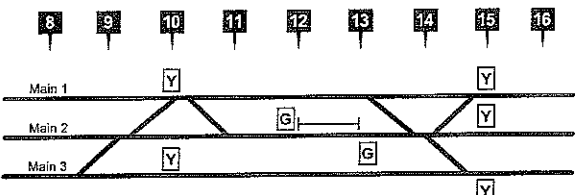


Diagram 24.

**Men and Equipment on Multiple Main Tracks (3 or More Main Tracks)**

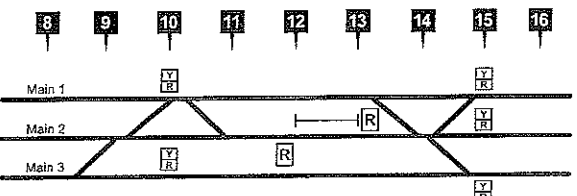


Diagram 25.

Appendix B - Roadway Signs

Spring Switch Rule 8.9  
One-Mile Switch  
Crossing Signal Start Rule 6.32.2  
No Clearance  
NO CLEARANCE

Derail Rule 8.20  
Derail  
Begin Test Mile and End Test Mile  
Begin and End A.B.S.

Crest of Grade Black on yellow reflective background  
Westward Siding or Eastward Siding Rule 6.28.1  
Defines Limits of Track & Time

Begin and End C.T.C.  
No Engine Beyond This Point  
End Double Track

STOP Signs  
Railroad Crossing Rules 6.16 and 6.18

End of Overlap Rule 9.21  
Signal Overlap Rule 9.21  
Flanger  
Restricted Limits Rule 6.14

Junction Rule 6.18  
Fouling Point  
Yard Limits Rule 6.13  
One-Mile Draw Span Rule 6.16

Track Flag  
Track Flag\*  
\* Two Red Track Flags may be displayed  
Yellow—Rule 5.4.2  
Yellow/Red—Rule 5.4.3  
Red—Rule 5.4.7  
Green—Rule 5.4.5

Protect Open Switch Check track warrant. Switch may be open 1 mile ahead.  
Protect Open Switch Check track warrant. Switch may be open 2 miles ahead.  
Protect Open Switch This switch left open when visible.

25  
ATS  
Inert ATS Inductors

W  
Whistle Board/Crossing Sign

W  
QZ  
3  
When QZ is attached, denotes Quiet Zone. When numeral attached, denotes the number of crossings less than 1,320 ft. apart  
BEGIN TWC  
END TWC  
Begin TWC and End TWC



Appendix C - Division/Subdivision Index

**Division                      Subdivisions**

California ..... Bakersfield  
                           Cajon  
                           Lucerne Valley  
                           Mojave  
                           Needles  
                           Riverbank  
                           San Bernardino  
                           San Diego  
                           Stockton

Chicago ..... Aurora  
                           Barstow  
                           Brookfield  
                           Chicago  
                           Chillicothe  
                           Marceline  
                           Mendota  
                           Peoria  
                           St. Croix  
                           Thomas Hill

Colorado ..... Akron  
                           Boise City  
                           Brush  
                           Casper  
                           Cody  
                           Dalhart  
                           Front Range  
                           Golden  
                           Pikes Peak  
                           Pueblo  
                           Raton  
                           Spanish Peaks  
                           Twin Peaks

Gulf ..... Bay City  
                           BBRX  
                           Conroe  
                           DFW  
                           Galveston  
                           Houston  
                           Lafayette  
                           Lampasas  
                           Longview  
                           Mykawa  
                           Silsbee

Kansas ..... Arkansas City  
                           Douglass  
                           Emporia  
                           Hereford  
                           La Junta  
                           Panhandle  
                           Plainview  
                           Slaton  
                           Strong City  
                           Topeka

Los Angeles ..... Alameda Corridor  
                           Harbor  
                           San Bernardino

Montana ..... Big Sandy  
                           Broadview  
                           Choteau  
                           Circle  
                           Colstrip  
                           Copper City

Montana ..... Crosby  
                           Dickinson  
                           Fairfield  
                           Forsyth  
                           Ft. Benton  
                           Glasgow  
                           Great Falls  
                           Grenora  
                           Helena  
                           Hettinger  
                           Hi Line  
                           Kootenai River  
                           Laurel  
                           Lewistown  
                           Milk River  
                           Mobridge  
                           Niobe  
                           Sarpy Line  
                           Sweet Grass  
                           Valier

Nebraska ..... Bayard  
                           Beatrice  
                           Bellwood  
                           Council Bluffs  
                           Creston  
                           Des Moines  
                           Giltner  
                           Hastings  
                           Lester  
                           Napier  
                           Neb City  
                           Omaha  
                           Ottumwa  
                           Ravenna  
                           Sioux City  
                           St. Joseph  
                           Wymore

Northwest ..... Bellingham  
                           Burbank  
                           Cherry Point  
                           Coeur d'Alene  
                           Columbia River  
                           Fallbridge  
                           Gateway  
                           Kettle Falls  
                           Lakeside  
                           Newport  
                           New Westminster  
                           Oregon Trunk  
                           Scenic  
                           Seattle  
                           Spokane  
                           Stampede  
                           Sumas  
                           Yakima Valley

Powder River ..... Angora  
                           Big Horn  
                           Black Hills  
                           Butte  
                           Campbell  
                           Canyon  
                           Dutch  
                           Orin

Powder River ..... Sand Hills  
                           Valley

Southwest ..... Clovis  
                           Coronado  
                           Defiance  
                           El Paso  
                           Ennis  
                           Gallup  
                           Glorieta  
                           Lee Ranch  
                           Phoenix  
                           Seligman  
                           Springerville

Springfield ..... Afton  
                           Amory  
                           Avard  
                           Beardstown  
                           Birmingham  
                           Cherokee  
                           Cuba  
                           Fort Scott  
                           Hannibal  
                           Lead Line  
                           River  
                           Thayer North  
                           Thayer South  
                           Yates City

Texas ..... Chickasha  
                           Creek  
                           Ft. Worth  
                           Madill  
                           Red River Valley  
                           Red Rock  
                           Sooner  
                           Venus  
                           Wichita Falls

Twin Cities ..... Aberdeen  
                           Allouez  
                           Appleton  
                           Brainerd  
                           Browns Valley  
                           Canton  
                           Casco  
                           Corson  
                           Devils Lake  
                           Drayton  
                           Glasston  
                           Grand Forks  
                           Hanley Falls  
                           Hannah  
                           Hib Tac  
                           Hillsboro  
                           Hinckley  
                           Hunter, Clifford Line  
                           & Warwick  
                           Jamestown  
                           KO  
                           Lakes  
                           Madison  
                           Marshall  
                           Mayville  
                           Midway  
                           Mitchell

Twin Cities .....	Monticello
	Moorhead
	Morris
	Noyes
	P Line
	Prosper
	Rolla & Westhope
	St. Paul
	Staples
	Watertown
	Wayzata
	Zap Line

**Subdivision Index**

<b>Subdivision</b>	<b>Division</b>
Aberdeen .....	Twin Cities
Afton .....	Springfield
Akron .....	Colorado
Alameda Corridor .....	Los Angeles
Allouez .....	Twin Cities
Amory .....	Springfield
Angora .....	Powder River
Appleton .....	Twin Cities
Arkansas City .....	Kansas
Aurora .....	Chicago
Avard .....	Springfield
Bakersfield .....	California
Barstow .....	Chicago
Bay City .....	Gulf
Bayard .....	Nebraska
BBRX .....	Gulf
Beardstown .....	Springfield
Beatrice .....	Nebraska
Bellingham .....	Northwest
Bellwood .....	Nebraska
Big Horn .....	Powder River
Big Sandy .....	Montana
Birmingham .....	Springfield
Black Hills .....	Powder River
Boise City .....	Colorado
Brainerd .....	Twin Cities
Broadview .....	Montana
Brookfield .....	Chicago
Browns Valley .....	Twin Cities
Brush .....	Colorado
Burbank .....	Northwest
Butte .....	Powder River
Cajon .....	California
Campbell .....	Powder River
Canton .....	Twin Cities
Canyon .....	Powder River
Casco .....	Twin Cities
Casper .....	Colorado
Cherokee .....	Springfield
Cherry Point .....	Northwest
Chicago .....	Chicago
Chickasha .....	Texas
Chillicothe .....	Chicago
Choteau .....	Montana
Circle .....	Montana
Clifford Line .....	Twin Cities
Clovis .....	Southwest
Cody .....	Colorado
Coeur d'Alene .....	Northwest
Colstrip .....	Montana
Columbia River .....	Northwest

Conroe .....	Gulf
Copper City .....	Montana
Coronado .....	Southwest
Corson .....	Twin Cities
Council Bluffs .....	Nebraska
Creek .....	Texas
Creston .....	Nebraska
Crosby .....	Montana
Cuba .....	Springfield
Dalhart .....	Colorado
Defiance .....	Southwest
Des Moines .....	Nebraska
Devils Lake .....	Twin Cities
DFW .....	Gulf
Dickinson .....	Montana
Douglass .....	Kansas
Drayton .....	Twin Cities
Dutch .....	Powder River
El Paso .....	Southwest
Emporia .....	Kansas
Ennis .....	Southwest
Fallbridge .....	Northwest
Fairfield .....	Montana
Forsyth .....	Montana
Fort Scott .....	Springfield
Front Range .....	Colorado
Ft. Benton .....	Montana
Ft. Worth .....	Texas
Gallup .....	Southwest
Galveston .....	Gulf
Gateway .....	Northwest
Giltner .....	Nebraska
Glasgow .....	Montana
Glasston .....	Twin Cities
Glorieta .....	Southwest
Golden .....	Colorado
Grand Forks .....	Twin Cities
Great Falls .....	Montana
Grenora .....	Montana
Hanley Falls .....	Twin Cities
Hannah .....	Twin Cities
Hannibal .....	Springfield
Harbor .....	Los Angeles
Hastings .....	Nebraska
Helena .....	Montana
Hereford .....	Kansas
Hettinger .....	Montana
Hi Line .....	Montana
Hib Tac .....	Twin Cities
Hillsboro .....	Twin Cities
Hinckley .....	Twin Cities
Houston .....	Gulf
Hunter .....	Twin Cities
Jamestown .....	Twin Cities
Kettle Falls .....	Northwest
KO .....	Twin Cities
Kootenai River .....	Montana
La Junta .....	Kansas
Lafayette .....	Gulf
Lakes .....	Twin Cities
Lakeside .....	Northwest
Lampasas .....	Gulf
Laurel .....	Montana
Lead Line .....	Springfield
Lee Ranch .....	Southwest
Lester .....	Nebraska
Lewistown .....	Montana
Longview .....	Gulf

Lucerne Valley .....	California	Thayer South .....	Springfield
Madill .....	Texas	Thomas Hill .....	Chicago
Madison .....	Twin Cities	Topeka .....	Kansas
Marceline .....	Chicago	Twin Peaks .....	Colorado
Marshall .....	Twin Cities	Valier .....	Montana
Mayville .....	Twin Cities	Valley .....	Powder River
Mendota .....	Chicago	Venus .....	Texas
Midway .....	Twin Cities	Warwick .....	Twin Cities
Milk River .....	Montana	Watertown .....	Twin Cities
Mitchell .....	Twin Cities	Wayzata .....	Twin Cities
Mobridge .....	Montana	Westhope .....	Twin Cities
Mojave .....	California	Wichita Falls .....	Texas
Monticello .....	Twin Cities	Wymore .....	Nebraska
Moorhead .....	Twin Cities	Yakima Valley .....	Northwest
Morris .....	Twin Cities	Yates City .....	Springfield
Mykawa .....	Gulf	Zap Line .....	Twin Cities
Napier .....	Nebraska		
Neb City .....	Nebraska		
Needles .....	California		
Newport .....	Northwest		
New Westminster .....	Northwest		
Niobe .....	Montana		
Noyes .....	Twin Cities		
Omaha .....	Nebraska		
Oregon Trunk .....	Northwest		
Orin .....	Powder River		
Ottumwa .....	Nebraska		
P Line .....	Twin Cities		
Panhandle .....	Kansas		
Peoria .....	Chicago		
Phoenix .....	Southwest		
Pikes Peak .....	Colorado		
Plainview .....	Kansas		
Prosper .....	Twin Cities		
Pueblo .....	Colorado		
Raton .....	Colorado		
Ravenna .....	Nebraska		
Red River Valley .....	Texas		
Red Rock .....	Texas		
River .....	Springfield		
Riverbank .....	California		
Rolla .....	Twin Cities		
San Bernardino .....	California/Los Angeles		
San Diego .....	California		
Sand Hills .....	Powder River		
Sarpy Line .....	Montana		
Scenic .....	Northwest		
Seattle .....	Northwest		
Seligman .....	Southwest		
Silsbee .....	Gulf		
Sioux City .....	Nebraska		
Slaton .....	Kansas		
Sooner .....	Texas		
Spanish Peaks .....	Colorado		
Spokane .....	Northwest		
Springerville .....	Southwest		
St. Croix .....	Chicago		
St. Joseph .....	Nebraska		
St. Paul .....	Twin Cities		
Stampede .....	Northwest		
Staples .....	Twin Cities		
Stockton .....	California		
Strong City .....	Kansas		
Sumas .....	Northwest		
Sweet Grass .....	Montana		
Thayer North .....	Springfield		

SPEED TABLE								
Time Per Mile		Miles Per Hour	Time Per Mile		Miles Per Hour	Time Per Mile		Miles Per Hour
Min.	Sec.		Min.	Sec.		Min.	Sec.	
-	36	100	-	58	62.1	1	40	36.0
-	37	97.3	-	59	61.0	1	42	35.3
-	38	94.7	1	-	60.0	1	44	34.6
-	39	92.3	1	02	58.0	1	46	34.0
-	40	90.0	1	04	56.2	1	48	33.3
-	41	87.8	1	06	54.5	1	50	32.7
-	42	85.7	1	08	52.9	1	52	32.1
-	43	83.7	1	10	51.4	1	54	31.6
-	44	81.8	1	12	50.0	1	56	31.0
-	45	80.0	1	14	48.6	1	58	30.5
-	46	78.3	1	16	47.4	2	-	30.0
-	47	76.6	1	18	46.1	2	05	28.8
-	48	75.0	1	20	45.0	2	10	27.7
-	49	73.5	1	22	43.9	2	15	26.7
-	50	72.0	1	24	42.9	2	30	24.0
-	51	70.6	1	26	41.9	2	45	21.8
-	52	69.2	1	28	40.9	3	-	20.0
-	53	67.9	1	30	40.0	3	30	17.1
-	54	66.6	1	32	39.1	4	-	15.0
-	55	65.5	1	34	38.3	5	-	12.0
-	56	64.2	1	36	37.5	6	-	10.0
-	57	63.2	1	38	36.8	12	-	5.0

FEET	TENTHS OF A MILE
528	.1
1,056	.2
1,584	.3
2,112	.4
2,640	.5
3,168	.6
3,696	.7
4,224	.8
4,752	.9

## TERMSDXO

- T - Trains
- E - Engines
- R - Railroad cars
- M - Men & equipment fouling track
- S - Stop signal
- D - Derail or switch lined improperly
- X - Crossings at grade
- O - Other crew movements

Remember "TERMSDXO" when shoving cars

To assist in determining where to start sounding the whistle as described in Whistle Signal 7, use the following:  
At the speed indicated in the left column, wait the time indicated in the right column before sounding the whistle.

Train Speed	Delay to Sound Whistle
40 MPH	3 seconds
35 MPH	6 seconds
30 MPH	10 seconds
25 MPH	16 seconds
20 MPH	25 seconds
15 MPH	40 seconds
10 MPH	1 minute 10 seconds