

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 updated pages:
November 1, 2016: 2, 30, 32a (added), 32b (added), 33, 56, 57.
December 1, 2016: 3, 31, 32.
December 16, 2016: 21, 35.
January 2, 2017: Title page, 44.



System Special Instructions

All Subdivisions No. 7

In Effect at 0800
Central, Mountain and Pacific
Continental Time
October 5, 2016
(Including updates through
January 2, 2017)

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In timetable individual subdivision special instructions, the number at the bottom of the station table column entitled "Miles to Next Station" denotes total miles on the subdivision.

1. Speeds

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

Passenger trains will be governed by freight train speed if passenger train speed is not specified under timetable 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 timetable 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.

	MPH
Freight trains under 100 TOB	60
Freight trains 100 TOB and over	45
Freight trains handling empty cars	55
Exception: Intermodal Equipment, see SSI 1(C)	
Empty coal trains (if train list indicates no speed restricted equipment)	60
Key trains	50
Inhalation Hazard (IH) trains as defined in SSI item 38	35
Solid consist of military equipment	55
Trains with welded rail loaded in open end gondolas	45
Non-signaled territory	49
Against the current of traffic	49
Through turnouts	10
Tracks governed by GCOR / MWOR 6.28	10
Within Mechanical Department limits	5
Movements on or off turntables	1

Foreign railroad locomotives - Speed restrictions posted inside the locomotive cab of foreign railroad locomotives which are less than that listed above only apply when locomotive is utilized as a lead, controlling locomotive.

Equipment	Main	Branch		
Side dump ballast cars, BNSF car kind YHA and YHH, loaded	45	45		
AMTK 1400-1569 (material handling cars)	60	60		
Balfour Beatty machines, RKCX 103, 104, 105, 106, 467, 476, 3005	45	45		
Boeing cars, loaded, BNSF 800100-800135, MTTX 978384, 978576, 978596, 978644, 978649, 978660, 978781, 979162, 980855, 981187, 981218	45	45		
Clay cars, RARW 3801-4199	45	45		
Flatcars, empty, NP 580400-580739	50	50		
Flatcars, empty, bulkhead wallboard: BN 616475-616674, CS 616375-616474 DJTX 9300-9398, SOU 115250-115274	45	45		
Flatcars, empty, bulkhead, Picked up enroute and not on conductor's wheel report or work order	45	45		
Flatcars, empty or loaded, OTTX 93561, 97852, 97861, 97914, 97920	45	45		
Flatcars, loaded with track panels, ATSF 190298, 209144, 209149	35	35		
Gondolas, empty, KCS 801011-802930, CR 576026-579245	45	45		
Gondolas, empty, Picked up enroute and not on conductor's wheel report or work order	50	50		
Gondolas, empty or loaded, PC 598500-598999 CR 598500-598990, SP 345000-345699	45	45		
Herzog clip cars, HZGX 153, 154, 155	50	50		
Herzog MPM Machines, HZGX 164-207	55	55		
Hopper cars, covered, empty, (unless no speed restriction is indicated by train documentation)	40	40		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> 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, HS 1301-1331, </td> <td style="width: 50%; border: none;"> IMRL 9200-9299, 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 </td> </tr> </table>	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, HS 1301-1331,	IMRL 9200-9299, 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		
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Hopper cars, empty, WFAQ 84654-84700 TUGX 36001-36125	45	45		

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Equipment	Main	Branch
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	50
Loram, 400 series and Harsco rail grinder, when controlling movement from the rear control cab in the lead.	50	50
Loram, 300 series rail grinder, when controlling movement from rear control cab in the lead	40	40
Refer to manufacturer's maximum operating speeds when operating on descending grades.		
Loram, LMIX 409, 410, 412, 414, 415, 417, KMUX 110, 750	50	45
Loram, LMIX 418, when moving coupled with MW tool cars, must remain coupled to such cars. No shoving movements are to be made with the above Loram equipment in a train consist.		
Loram, LMIX 203, 204 No shoving movements are to be made with the above Loram equipment in a train consist.	55	55
Ore cars, empty, 35 ft., OLB 1000-1099	50	50
Ore cars, loaded, 35 ft., OLB 1000-1099	45	45
P811, BNSF 922999	50	50
Plasser machines, PACX 293, 2630, 2645, 3024, 4656, 4657, 4774, 4775	45	45
Plasser THS 2000, tie gang consist	30	30
Plasser 08 & 09 Tampers, PTS 61, 62 & 90 Stabilizers, BDS 100 & 200 Ballast machines, MFS40 & 60 cars and ULS3000 conveyor cars (traveling in a train or under own power with a conductor or engineer pilot)	50	50
Ribbon rail cars, empty	45	45
Ribbon rail cars, loaded	35	25
Ribbon rail loading and unloading cars	45	45
Roadrailer equipment (empty or loaded)	60	60
Rotary plow, wrecking derrick, locomotive crane, pile driver or Jordan spreader handled in trains	30	25
Exception: locomotive cranes/pile drivers ATSF 199454-199468	45	45
Exception: Jordan spreader, BNSF 939800 - 939804	50	50
Trains and 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 roadmaster or covered by specific instructions.		

Equipment	Main	Branch
Scale test cars Exception: cars listed below have a minimum gross weight of 100,000 lbs. and may move in any position in the train and at maximum authorized speed for which the train is qualified. BN 979020-979024, BN 979026, BNSF 979019, FGWX 100000-500000, MP 15507, MP 15510-15512, UP 167579, UP 900700, UP 903600, WWBX 199917-199919	35	25
Schnabel type cars, empty (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) APWX 1004, BBCX 1000, CCRX 40010, CEBX 100, 101, CPOX 820, EXEX 1016, GEX 80000, 80002, 80003, HEPX 200, KRL 204000, 204001, 204002, KWUX 10, 101, 102, 301, MAMX 1001	40	40
Tank cars, ACFX 17451-17495, NATX 10841-10865	45	45
Tank cars, DVLX 4001-4190, UTLX 76517, 76539, 76556, 76558, 76568, 76595, 76649, 76656, 76696, 76733, 76736-76738, 76742-76745, 76747, 76748, 76750, 76751, 78256-78269, 78272, 78274, 78278, 78281, 78285, 78287-78293, 78326, 78328-78333, 78336-78340, 78343, 78344, 78347, 78348, 78350. 78353	40	40
Tank cars, empty, CORX	50	50
Tank cars, loaded, CELX 6400-6455, 10400-10443 (must not be handled nearer than 6 cars from locomotive when loaded)	45	45
Wedge plow or dozer, hauled in tow	35	25

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 timetable 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 Passenger Trains/Engines

	MPH
Amtrak	90*
Metrolink	90*
Metra	79*
Sounder (Sound Transit)	79*
Northstar	79*
All other classes	70

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.

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**1(C). Multiplatform Equipment
Intermodal Equipment**

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	
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
Single Unit Intermodal Cars						
QU	Doublestack	1	72 ft.	4	1	T/C
QK	Doublestack	1	72 ft.	4	1	T/C

Car Kind Codes for Intermodal Equipment

In addition to the intermodal equipment listed above, all car kind codes beginning with the letter M, P or Q are considered intermodal equipment. On cars shown above, only the first two characters are required to identify car type, with the exception of those identifying Automax cars. However, train lists may use more than two characters to identify a given car type.

Definitions of Multiple-Unit Equipment

Articulated—Refers to cars with multiple units (segments) that are connected with 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 is 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 the intermodal cars listed above. When handling all intermodal equipment, 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 adding intermodal equipment 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.

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
Glorieta Sub	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
Moffat Tunnel Sub	MP 58.1 to MP 61.7
Provo Sub.....	MP 630.5 to MP 638.1
Provo Sub.....	MP 652 to MP 682
Roseville Sub	MP 115 to MP 170
Roseville Sub	MP 195 to MP 210

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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 M/P	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
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
C36-7	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)
C44AC¹ AC4400CW¹ AC4400EV¹ CW44AC¹	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		
C60¹ C60AC¹	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		
ES44AC¹	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		
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		
ES44C4¹ AC44C4M¹	8+	8EF+	4,400	208
1 TM c/o	6	6EF		
2 TM c/o	4	4EF		
3 TM c/o	2	2EF		
ET44C4¹	8+	8EF+	4,400	214
1 TM c/o	6	6EF		
2 TM c/o	4	4EF		
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.
- % PTC Equipped
- * May not be equipped with dynamic brakes
- # May be equipped with standard range dynamic brakes
- E Extended dynamic brake range
- B Basic dynamic brake range
- F Flat dynamic brake system
- T Tapered dynamic brake system

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3. Equipment Restrictions

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

Balfour Beatty machines, RKCX 103, 104, 105, 106, 467, 476, 3005	
Dozers	
Empty ribbon rail cars (if moving with no train list or if identified as "Rear End Only" on train list)	
Herzog clip cars: HZGX 153, 154, 155	
Herzog MPM:	
HZGX 164, 165 167 169, 1690 170, 1700 171, 1750 172, 1720 173, 1730 174, 1740 175, 1750 176, 1760 177, 1770 178, 1780 179, 1790 180, 1800 181, 1810, 18100 182, 1820 183, 1830 184, 1840 185, 1850 186, 1860 187, 1870 186, 1860 187, 1870 188, 1880 189, 1890, 18900	HZGX 190, 1900, 19000 191, 1910, 19100 192, 1920, 19200 193, 1930, 19300 194, 1940, 19400 195, 1950, 19500 196, 1960, 19600 197, 1970, 19700 198, 1980, 19800 199, 1990, 19900 200, 2000, 20000 201, 2010, 20100 202, 2020, 20200 203, 2030, 20300 204, 2040, 20400 205, 2050, 20500 206, 2060, 20600 207, 2070, 20700 208, 2080, 20800 209, 2090, 20900 210, 2100, 21000 211, 2110, 21100 212, 2120, 21200 213, 2130, 21300
Jordan spreaders	
Locomotive cranes	
Loram, LMIX 203, 204, 409, 410, 412, 414, 415, 417, KMUX 110, 750	
Loram, LMIX 418, when moving coupled with MW tool cars, must remain coupled to such cars	
Outfit cars (Exception: Univans may be placed anywhere in the train.)	
P811, BNSF 922999	
Pile drivers	
Plasser machines, PACX 293, 2630, 2645, 3024, 4656, 4657, 4774, 4775	
Plasser THS 2000, tie gang consist	
Rear end only cars	
Ribbon rail loading and unloading cars	
Rotary snowplows	
Wedge plows	

Except as provided in Item 1, scale test cars must be placed ahead of caboose or, on caboosless 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. Hand brakes 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 timetable 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 (including 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.

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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 a main track, controlled siding or other track where CTC is in effect, authority must be obtained as prescribed by MWOR 6.3.1 (Main Track Authorization) or flag protection must be provided in both directions as prescribed by MWOR 6.19 to control movement by the work area.
- B. If the adjacent track is a track governed by GCOR/MWOR 6.28 (i.e. yard, industry track, etc.), movement must not be permitted to pass air dump cars which are being charged or being unloaded.

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 main track 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 because 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 Machine

A Herzog Rail Unloading Machine (RUM) may be coupled to a work train for rail unloading purposes only. The train must remain stationary while the RUM couples to the train in self-propelled mode. The following restrictions apply to trains with a Herzog RUM coupled to the train:

- All train movements may be made only at the direction of a qualified Herzog RUM operator accompanying the equipment.
- Maximum speed with Herzog RUM on trailing end of the movement is 15 MPH.
- Maximum speed with Herzog RUM on leading end of the movement is 10 MPH.

3(L). Roadway Equipment Equipped with Couplers and Air Hoses

When towing Roadway Equipment equipped with rail car couplers and air hoses in a Work/Unit train:

- Do not shove or switch this equipment without an engineering employee present, except in an emergency
- The heaviest machine must be placed as the rear end car only as directed by an engineering employee, with air hoses connected and air brakes cut in.
- Maximum allowable speed while transporting in a train is 50 MPH.

4. Geometry Test Car Instructions

Geometry test cars 80/81, 85/86, 87/88, 90, 91 and NXGX 390 (NxGen Car) must move in train by themselves. Geometry test cars 80/81, 85/86, 87/88, 90 and 91 are not required to have an ETD at the rear of the car when the car is occupied.

Work Orders for trains handling unmanned geometry test car BNSF 90 and 91 will include instructions advising the conductor to call the Geometry Car Desk at 817-352-4559. The conductor must call the Geometry Car Desk for a pre-trip job safety briefing before moving this geometry car.

BNSF 808382 and BNSF 808655 are buffer cars assigned to Geometry Car service. When operating in a Geometry Car Consist, the maximum authorized speed for these buffer cars is 70 MPH.

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 speed designated in timetable individual subdivision special instructions. GCOR 7.3 and 7.9 must be used when switching

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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 5.12 or 5.13. These cars are considered to be occupied at all times.

FRA Track Geometry Inspection Cars

The Federal Railroad Administration (FRA) Office of Railroad Safety-Automated Track Inspection Program (ATIP) manages a fleet of geometry test cars that measure track geometry for compliance with the Federal Track Safety Standards. FRA geometry cars are pulled behind a railroad-owned locomotive and staffed with FRA employees and contractors.

FRA Geometry Car Operation

1. Each train dispatcher and train crew will be governed by these instructions.
2. Before ATIP testing commences, the FRA representative (assisted by the test car director) is responsible for overall safety and will:
 - a. Conduct a face-to-face job safety briefing with the train crew and all occupants of the test car concerning onboard safety appliances and standard operating procedures.
 - b. Be aware of and discuss the operational and safety conditions, and on-track protection procedures, which may change throughout the course of the ATIP test; and update the job safety briefing accordingly.
3. The FRA representative will communicate directly with the railroad to ensure all operating rules, special instructions, and safety rules in effect on the test route are understood and correctly applied.
4. Trains consisting entirely of FRA geometry cars are restricted to BNSF timetable passenger train speeds, and must not exceed the following maximum equipment speeds: DOTX 216, 125 MPH; DOTX 217, 219, 220 and 221, 90 MPH; and DOTX 218, 80 MPH.
5. 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. The FRA Geometry Car operator relies on the train crew to identify relevant railroad physical characteristics, movement authority limits and authorized speeds.

FRA Geometry Car Protection

1. Neither FRA nor contractor employees will operate a railroad switch or derail, and will rely upon a railroad employee to perform that function. After receiving authority for placement from the appropriate railroad representative, protective devices owned by FRA, i.e., signs, derails, and locking devices, will be applied by an FRA representative.
2. FRA geometry cars must not be relocated or coupled to other rolling equipment without permission of FRA. At the request of FRA or the railroad, the following additional protective measures must be used:
 - a. Within a locomotive servicing area or car shop area, the railroad's Blue Signal Protection rules and procedures will govern.
 - b. When FRA geometry cars are unoccupied, FRA may request additional protection, such as posted guards, provided by the railroad and reimbursed by FRA.

- c. Where provided, a remotely controlled switch, providing entrance to the track occupied by FRA geometry cars, will be aligned against movement to that track. Blocking devices applied by the control operator will be placed on the switch and signal controls to prevent undesirable access.
- d. A manually operated switch will be aligned against movement to a track occupied by the FRA geometry car, and secured with an effective locking device, exclusive to FRA. In addition, the switch stand's operating mechanism will be equipped with an FRA-provided, visible, all-weather display tag, warning any users: "OUT OF SERVICE - DO NOT OPERATE."
- e. If a switch-locking device cannot be provided, as described above, FRA-provided portable derails will be used as an alternative to restrict access in either direction. In addition to the portable derails, the placement of warning signs will be displayed, indicating the presence of FRA geometry cars. The warning signs will be affixed or adjacent to the derail. FRA-provided derails will not be placed nearer than 150 feet from each end of the geometry cars, except where appropriate.
- f. If an FRA geometry car is standing alone, in addition to applying the hand brake, one wheel will be securely chocked to prevent movement.
- g. Either on a main track or other than main track, before anyone goes on, under, or between FRA track geometry cars, the locomotive engineer will apply the independent brake on the locomotive, remove the locomotive reverser, and open the field generator switch. The individual requiring protection will place a "Do Not Operate" tag on the locomotive control stand at a location where it is readily visible to the locomotive engineer or operator at the controls of that locomotive. The "Do Not Operate" tag may only be removed by the person who placed it on the locomotive control stand. Additionally, if adjacent tracks are, or will be, fouled by the individual going on, under, or between the FRA track geometry car, appropriate adjacent track protection must be afforded before going on, under, or between the car.

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).

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

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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/Axles 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 axles & length less than 35'0"	Hopper	89	NP	89	NP	NP	NP	NP	NP
2	4 axles & 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 axles & length 37'0" to 38'11"	Hopper, tank cars ATSF 82056-82990, 176900-177861	141	123	141	123	117	117	117	117
4	4 axles & length 39'0" to 40'11"	Hopper, tank cars BN 435500-435999	143	131.5	143	131.5	123	123	123	123
5	4 axles & length 41'0" to 42'11"	Hopper, tank cars BN 476000-476019	143	143	143	143	134	134	134	131.5
6	4 axles & length 43'0" to 44'10"	Hopper, tank cars	143	143	143	143	136	136	134	131.5
7	4 axles & length 44'11" to 49'5"	Hopper, gondola, tank cars BN 686000-686054 COILCAR	143	143	143	143	143	136	134	131.5
8	4 axles & length greater than or equal to 49'6"	Hoppers, flats, gondolas, tank cars	143X	143X	143	143	143	136	134	131.5
9	278'	13-unit trough car BN 552000-552022	930	930	930	930	884	884	871	NP
			A	B	C	D	E	F	G	H

10a	6 axles	ACFX 88348-88373, CELX 6400-6458, CELX 10400-10438, DODX 40000-40573, DUPX 29400-29439, 29600-29666, HCMX 4402, KCS 700002-700053, KRL 600908-600910 LMIX 403, 409, 410, 412, 414, 418, NS 185541-185542	197	197	197	197	197	197	185	NP
10b	6 axles	DODX 39810-39832, KRL 600430	197	197	185	185	185	178	175	NP
11	6 axles	Others	185	185	170	170	170	165	160	NP
12a	8 axles & length greater than or equal to 80'0"	ATSF 90001-90004, 90006-90007, ATSF 90011-90016, BN 631021	263	263	263	263	263	235	235	NP
12b	8 axles & length greater than or equal to 55'0" and less than 80'0"		263	255	263	255	235	235	235	NP
13	8 axles & 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 bearing, 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 performed en route.

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.

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

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

Unit Trains (C, E, G, J, U, and X)

Unit Trains at origin must report a “Pick Up” event and unit trains at destination must report a “Set Out” event using VTR.

- Report “Set Out” time through the VTR when the set out work is complete at the industry track, trains crews are clear of the equipment and the customer can begin processing the train, or when the unit train is handed off to the facility operator.
- Report “Pick Up” time through the VTR when the train begins departure from the industry track, departing the customer facility.

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		
CC	CARRIERS CONVENIENCE	(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.
DD	CARS DELIVERED IN INTERCHANGE	(Code, date, time, station name, zone/track, and name of road)
IP	INTRA-PLANT SWITCH	(Code, date, time, zone/track/spot)
MO	MOVE	(Code, date, time, station name, zone/track/spot). Use only to reposition a placed car to correct customer inventory.
ND	NOT DONE	(When ND code is used, enter ND explanation code or a full written explanation.)
OF	CARS OFFERED OR NEEDING OFFERED TO A CONNECTING ROAD	(Code, date, time, station name, zone/track, name of road and person's name refusing cars)
PK	PICKUP	(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.
PU	PULL	(Code, date, pull time, station name, zone/track where cars are pulled from. Also include date, time, station, zone/track where cars were left.)
RR	CARS RECEIVED IN INTERCHANGE	(Code, date, time, station name, zone/track, and name of road)
RS	RESPOT	(Code, date, time, zone/track spot)
SO	SETOUT	(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.
SP	SPOT	(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.
TU	CARS TURNED ON WYE OR TURNTABLE	(Code, date, time, station name, zone/track/spot)

Not Done Reasons - Potential Charge to Customer

- Car Can't Be Pulled - Customer Reason
- Conflicting Customer Instructions
 - Equipment Inaccessible or Improper Documents
 - Not Put to Outbound Track by Other Than Customer
 - Service Canceled After Crew Arrived
 - Track or Facility Inaccessible
 - Unsafe Conditions

Car Can't Be Spotted - Customer Reason

- Conflicting Customer Instructions
- Equipment Inaccessible
- Service Canceled After Crew Arrived
- Track or Facility Inaccessible
- Unsafe Conditions

Not Done Reasons - Not Chargeable to Customer

Operation Reason

- Bad Order Car
- Done in Other Direction
- Engine Restrictions or Problems
- Holding for Unit Train
- Instruction From Rail Supervisor/Dispatcher
- Not in Train, Not Switched, Unavailable
- Rail Traffic, Track Blocked/Out of Service
- Substituted Alternate Car
- Time-HRS of Service Expired or Short on Time
- Unsafe Conditions
- Work to be Performed by Another Train
- Work Was Already Completed

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.

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Request Codes		
Code	Displays Work to Be Performed	
IP	INTRA-PLANT SWITCH	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.
PK	PICKUP	Cars available to be picked up by train, local, road switcher at station.
PU	PULL	Customer request to move a car from an industry track to another track or scheduled destination.
RS	RESPOT	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.
SO	SETOUT	Cars scheduled to be set out by train, local, road switcher at station.
SP	SPOT	Customer request to spot car for loading/unloading.
TU	CARS TURNED ON WYE OR TURNTABLE	Request to turn a car previously spotted and re-spot.

Status Codes		
Displays Current Status of Cars (Does not require any work to be performed)		
Code		
CP	CP	Constructive placement. (Condition between carrier and customer.)
DD	CARS DELIVERED IN INTERCHANGE	Displays cars scheduled for interchange delivery to a connecting road.
OF	CARS OFFERED OR NEEDING OFFER TO A CONNECTING ROAD	Displays to the carrier, cars normally delivered in interchange cannot be delivered due to connecting road's inability or unwillingness to accept cars.
PL	PLACED	Car on spot. (Displays car status and not a request.)

Hold Codes		
Carrier/Customer Instructions Have Not Been Provided		
Scheduled Train Field		
HOLD ED	Car to be held for equipment distribution.	
HOLD EH	Car is to be held for embargo.	
HOLD HL	Car is HIWIDE and has not been scheduled to a train.	
HOLD LS	Car is on floating lease being held for customer order.	
HOLD ME	Car is to be held for mechanical inspection.	
HOLD MT	Car not scheduled for outbound train.	
HOLD NI	Car has no instructions for spotting.	
HOLD OT	Car is to be held for local order.	
HOLD WH	Car is to be held for weighing.	
HOLD HF	Car has no measurements/clearances.	
SCH I Code Field		
DO *	Written delivery order. DO NOT SPOT.	
NC *	Non-credit customer. DO NOT SPOT.	
SO *	Car billed shipper's order. DO NOT SPOT.	
ZNTKSP Field		
00 00 00*	DO NOT SPOT	
* Do not spot cars with '00 00 00' in the ZNTKSP field or cars with NC, DO or SO in the SCH I 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 (SCH I) 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 makeup 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.

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.

Transportation Supervisors: See Management Instruction regarding advance notification requirements for dimensional shipments routed on UPRR or within the state of California.

- 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 shipment can be assigned to a train the supervisor in charge of train or yard crews (Terminal Manager, Trainmaster, Assistant Trainmaster, Yardmaster, etc.) at that location, or the conductor or yard foreman where no supervisor of train or yard crews is on duty, must review and verify the dimensional clearance bulletin to ensure shipment is clear over the designated route of travel. After the review is complete the shipment may be assigned to the train appropriately. Issues regarding scheduling and/or train set, please contact Service Scheduling at 817-867-2000. Any issues regarding additional clearance segments and/or a lack of clearance, please contact the Dimensional Clearance Team for assistance at high.wide@bnsf.com.
- c. Before a dimensional shipment can be moved in the yard, train or yard crews handling the dimensional shipment must ensure there is adequate clearance on adjacent tracks for safe movement. Clearance bulletins issued by the High Wide Team only protect BNSF main lines.
- d. Before a dimensional or special shipment can be moved in a train the supervisor in charge of train crews (Trainmaster, Assistant Trainmaster, Yardmaster) at that location, or the conductor where no supervisor of train crews is on duty, must obtain permission from the train dispatcher. This does not relieve conductor from complying with GCOR 1.47. When yard supervisors are notified of expected arrival of wide cars, precautions must be taken to safeguard employees in yard.

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- e. 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.
- f. Train dispatcher must issue appropriate track warrant, track bulletin or message when dimensional shipment restricts opposing train and confirm message received.
- g. 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.
- h. To provide for close observation en route, all dimensional shipments must be placed in a block next to the lead locomotive consist, or due to the following exceptions as near the lead locomotive consist as possible:
 1. Dimensional shipments, including idler cars moving with dimensional shipments, must be placed in compliance with minimum weight requirements outlined in train makeup rules.
 2. 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. Dimensional shipments placed in train to comply with these requirements are also considered in compliance when en route from the state of California.
 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 a shiftable load, GCOR 1.37 applies.

Boeing dimensional shipments, identified as having contents ACFTEQ on the train list, must be placed ahead of other dimensional shipments. Trains with one or more dimensional Boeing shipments with contents ACFTEQ, are limited to a combination not to exceed 10 loads and/or empties.

The following idler cars do not count towards the 10 car combination limitation:

BNSF 800010 to BNSF 800013	MTTX 978311	TTMX 80139
BNSF 800020	MTTX 978462	TTMX 80300
BNSF 800022	MTTX 978594	TTMX 80635
BNSF 800023	MTTX 978674	TTMX 80657
BNSF 800025 to BNSF 800036	MTTX 978696	TTMX 80662
BNSF 800039	MTTX 978770	TTMX 80681
MTTX 971384	MTTX 978773	TTMX 80760
MTTX 971493	MTTX 978950	TTMX 80857
MTTX 971505	MTTX 979264	TTMX 80858
MTTX 971532	MTTX 980261	TTMX 81115
MTTX 971785	MTTX 980917	
MTTX 971868	MTTX 981602	

These are specialized Boeing Service idler cars weighing 45 tons or more and may be billed loaded or empty, depending on destination. Trains handling all empty dimensional Boeing cars with contents ACFTEQ are limited to maximum of 25.

Note: In the application of the above, articulated autoveyors (car kinds M2F and M3F) are not considered dimensional shipments. (See Item 46)

No more than four uncovered assembled airplane fuselages may be transported in a train without approval from Boeing.

- i. Airplane fuselages transported in trains from Wichita to Renton must be turned as soon as possible to move nose first in the direction of train travel unless otherwise approved by Boeing.
- i. Employees are prohibited from riding excessive dimension cars.
- j. 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.
- k. When the dimensional message indicates "Stop, Proceed on Hand Signals" at a specific location, the following will apply:
 - Stop the train before passing the location specified.
 - Check the dimensional load for shifted contents.
 - If safe to proceed without damage to shipment or property, move beyond the specified location on instructions from an employee(s) closely observing the shipment, not exceeding 5 MPH until the dimensional shipment clears the location specified.
 - If employee(s) is unable to continue observing the shipment closely due to train makeup, topography, etc., movement may continue, not exceeding 5 MPH until the dimensional shipment clears the location specified.

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 detection of the following conditions:

- Overheated journal bearings (hot bearing) (HBD)
- Hot wheels
- Dragging equipment (DED)
- High/Wide/Shifted load (SLD)
- High water
- 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

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).

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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.

Table No. 1 - 8(C) Non-Alarm Message

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.

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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 of 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.

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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 GCOR 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 bearing 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.

When a freight train, other than a Key Train, is stopped by a trackside warning device and the indicated axle is on a loaded, placarded, non-intermodal car containing hazardous material, apply the following:

1. When a hot box/bearing or hot wheel condition is indicated, the car must be set out.
2. When a dragging equipment or high/wide/shifted load condition is indicated, the car must be set out. However, the indicated car may remain in the train if inspected by mechanical personnel and no defects are found or the condition is corrected.

When a Key Train is stopped by a trackside warning device, apply the following:

1. When a hot box/bearing or hot wheel condition is indicated, the car (hazmat or not) must be set out.
2. When a dragging equipment or high/wide/shifted load condition is indicated, the car (hazmat or not) must be set out. However, the indicated car may remain in the train if inspected by mechanical personnel and no defects are found or the condition is corrected.

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

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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 successive hot bearing alarm messages, set out the indicated equipment. When a train actuates a wayside hot bearing 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 a hot bearing or hot wheel trackside warning device, 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 hot bearing detectors from making a proper inspection, crew members must reduce train speed to no more than 30 MPH while train is passing the detector 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,
 - The shoulder ballast or ballast between the ties is not missing,
 - Water is not running between the ties,
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,
 - The shoulder ballast or ballast between the ties is not missing,
 - Water is not running between the ties,
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

Warm Journal Detectors identify potential failure conditions in advance of actual failures using information provided only to the NOC Detector Desk, where the information is evaluated and necessary crew action is determined. When crew action is necessary, the NOC Detector Desk will coordinate through the chief dispatcher to have the train dispatcher issue required train crew action via radio. Train crews are then to contact the NOC Detector Desk and be governed by any additional instructions.

When notified by the dispatcher or NOC Detector Desk to take action relative to a "warm" bearing/journal, the train (including Key Train, IH Train or any train with hazardous material shipments) may be moved without additional restrictions to a convenient location to inspect or set out as directed.

Directed train crew action 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 consistent with good train handling. A "running release" may be performed if engineer determines conditions allow per ABTH Rule 103.3C. When a running set and release is necessary the NOC Detector Desk may contact the train crew directly with instructions.
2. Stop and Inspect a Specified Car:

Stop and inspect specified car and be governed by instructions provided in each case by the NOC Detector Desk.
3. Set Out a Specified Car:

Set out specified car at location as directed.

Instructions for potential failure conditions identified by the NOC Detector Desk do not supersede instructions for overheated/hot journals or defective equipment identified by other Trackside Warning Devices or visual inspections.

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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 Mile Post signs, Siding Switch signs, or a combination of these signs. Mile post 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.

8(M). Wheel Impact Load Detector (WILD)

A Wheel Impact Load Detector (WILD) monitors passing trains for wheel defects which are categorized as Level 1 or Level 2. WILD installations equipped with field radio broadcast capability will transmit a radio message only when a defect has been identified followed by the word “out” after a train passes over the detector. WILD installations with radio broadcast capability will be identified in the timetable.

Level 1

When a Level 1 defect is identified by a WILD with radio broadcast capability, a radio message will be transmitted indicating “you have (number of defects) defects”, “Train (lead locomotive number)”. After a brief pause, the detector will then broadcast details regarding right or left side, axle count from head end of the train and car number for the defect identified.

Required train crew actions for Level 1 defects:

- Record the information transmitted by the detector.
- Stop train and notify the train dispatcher of the delay due to required Level 1 inspection.
- Inspect the axles identified for defects.
- If no defect is found, inspect 12 axles forward and 12 axles backward from the axles identified.
- Notify the dispatcher of the conditions found.
- Train may not depart from the inspection location until released by the detector desk and permission to depart is received from the train dispatcher.

If a defect message is incomplete or cannot be understood, enter the recall code. If message recall is unsuccessful, notify the train dispatcher and proceed with no restriction.

Level 2

Level 2 condition information is monitored by the detector desk and is used for predictive maintenance purposes only. The WILD will not transmit Level 2 detail by radio.

9. Amtrak Instructions

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

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

Dispatcher must be notified immediately 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 safety 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 (mile post/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. Over?”

Crew member will state: “Job safety 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.

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- 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 safety 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 Reporting

The Amtrak conductor delay reporting method has been replaced with an electronic method. The electronic delay report (EDR) is essential to both Amtrak and BNSF. If the train operates on a route requiring EDR, the delay information must be reported no more than two hours after the train arrives its destination or at a crew change location.

The reporting must be professional, brief, specific, and worded clearly and concisely. Each individual reason for delay must be separated from other delays. The reporting 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.
- If the conductor manually changes electronic time, an explanation of the reason for change must be included within the EDR.

Reporting is required 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 GCOR 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 (Movable 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 movable point frog, swing nose frog, or derail must both be placed in hand operation.

GCOR/MWOR 9.13.1 applies at all locations where turnouts are equipped with two switch machines (movable 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:

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“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.

RCPS Position Indicator

Green	Switch lined and locked for main track movement
Yellow	Switch lined and locked for movement to or from main track
Dark (not illuminated)	Switch not locked, or selector lever in “hand” position. Contact train dispatcher and obtain permission to hand operate the dual control switch.

RCPS position indicator lights do not authorize movements to occupy the limits between the RCPS signs governing the 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 before 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.

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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, Seventh Edition, in effect April 1, 2015
- Maintenance of Way Operating Rules, in effect April 1, 2015.
- Air Brake and Train Handling Rules, in effect April 1, 2015.
- Train Dispatcher's, Operator's and Control Operator's Manual, in effect April 1, 2015.
- TY&E Safety Rules, in effect January 1, 2015.
- Maintenance of Way Safety Rules, in effect January 1, 2015.
- Employee Safety Rules, in effect January 1, 2015.
- Mechanical Safety Rules, in effect January 1, 2015.
- United States Hazardous Material Instructions for Rail in effect July 29, 2009.
- 2016 Emergency Response Guidebook.
- BNSF Chicago Passenger Operations Manual No. 2, in effect May 13, 2013.
- Canadian Rail Operating Rules, in effect October 14, 2015. (For use in Canada only.)
- Remote Control Operating Instructions, in effect December 14, 2016.

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

Detour Train Documents

- When a foreign railroad detours trains on BNSF, the train list and hazardous material information must be left on the lead locomotive for use by the relieving train crew.
- When BNSF detours trains on a foreign railroad, the train list and hazardous material information must be left on the lead locomotive for use by the relieving train crew.
- The train list and hazardous material information must remain on the lead locomotive at crew change points.
- Detoured train documentation is not interchanged to the handling road's computer system.

14. General Code of Operating Rules, BNSF Amendments and Supplements

GCOR 1.17 Hours of Service, Supplemental Instruction

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.

GCOR 1.37 Open Top Loads—is changed to read:

Flat cars, open top cars, and open TOFC/COFCs 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 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 crossing warning devices 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 1.47 Duties of Crew Members—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 1.48 Time, Supplemental Information

Dial 8-998-8463, 8-WWV-TIME, or 8-435-6000 to obtain coordinated universal time signal.

GCOR 2.14.1 Verbally Transmitting and Repeating Mandatory Directives

Supplemental Instruction

Apply the following when verbally transmitting and repeating 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.

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Supplemental Information

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.

GCOR 2.14.2—The following rule is added:

GCOR 2.14.2 Before Reporting Clear of Authority Limits

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 2.21—is changed to read:

GCOR 2.21 Electronic Devices

This rule outlines the requirements for use of electronic devices. As used in this rule, the following definitions apply:

Electronic Device—means an electronic or electrical device used to conduct oral, written, or visual communication; place or receive a telephone call; send or read an electronic mail message or text message; look at pictures; read a book or other written material; play a game; navigate the Internet; navigate the physical world; play, view, or listen to a video; play, view or listen to a television broadcast; play or listen to music; execute a computational function; or, perform any other function that is not necessary for the health or safety of the person and that entails the risk of distracting the employee or another employee from a safety-related task.

Railroad Operating Employee—means an individual who is:

- Engaged in or connected with the movement of a train including a hostler,
- A train employee providing commuter or intercity rail passenger transportation,
or
- Subject to hours of service governing train service employees.

The use of any electronic device is prohibited if that use would interfere with an employee's performance of safety-related duties.

A. Personal or Railroad-Supplied Electronic Devices

Personal or railroad-supplied electronic devices may be used as necessary:

- To respond to an emergency situation involving the operation of the railroad
- To respond to an emergency encountered while on-duty
- As a communication device in the event of radio malfunction
- To refer to a railroad rule, special instruction, timetable or other directive using the digital storage and display function while inside the controlling cab of a locomotive, train or on-track equipment after there has been a job safety briefing and all crew members agree that it is safe to do so.

Other than railroad operating employees may use electronic devices in the body of a business car or passenger train when it will not interfere with an employee's performance of safety-related duties.

B. Personal Electronic Devices

Except when deadheading in other than a controlling locomotive, railroad operating employees on duty (including supervisors) must have each electronic device turned off and stowed out of sight with any earpiece removed from the ear when:

- On moving rolling equipment or on track equipment unless device is being used to reference a railroad rule, special instruction, timetable or other directive,
- Any member of the crew is on the ground performing safety-related duties,
or
- Any employee is assisting in preparation of the train, engine(s) or on-track equipment.

A railroad operating employee may use an electronic device only for voice communication, texting or emailing when:

- Rolling and on track equipment is stopped,
- A job safety briefing is conducted with all crew members to confirm that it will not interfere with any safety-related or required duty,
- No member of crew will foul any track.

When communication has been completed turn device off and stow out of sight.

A personal stand-alone camera may be used to take a photograph of a safety hazard or a violation of a rail safety law, regulation, order, or standard, provided that:

- A job safety briefing is conducted among all crew members and any other individuals in the controlling cab of moving equipment,
- It is turned off immediately after the photograph has been made;
- It is not used by an employee at the controls of moving equipment.

A personal stand-alone calculator, digital watch whose only purpose is as a timepiece and medical devices that are consistent with the railroad's standards may be used as necessary in the performance of duties.

C. Railroad-Supplied Electronic Devices

After a job safety briefing including all members of the crew determines railroad-supplied devices can be used safely, railroad operating employees may use such devices to send or receive work related information with:

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- Railroad supervisors
- Railroad customers
- Railroad dispatchers
- Railroad customer service employees or
- Other railroad employees as necessary in the performance of their duties.

Railroad operating employees must not use a railroad-supplied electronic device for purposes other than which it was intended or while:

- Operating the controls of a moving locomotive unless device is being used to reference a railroad rule, special instruction, timetable or other directive.
- On the ground within 4 feet of any track.
- On the ground and engaged in an active switching operation.
- Riding rolling equipment during a switching operation.
- At the controls of the locomotive and any other employee is assisting in the preparation of the train, engine(s), or on-track equipment, including testing of railroad equipment or brakes.
- Inside the controlling cab of a locomotive, train or on-track equipment, unless there has been a job safety briefing and all crew members agree that it is safe to do so.
- Verbally obtaining or releasing mandatory directives when railroad radio communication is available.

GCOR 4.3 Timetable Characters, Supplemental Instruction

- 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

GCOR 5.3.3 Signal Disappearance—is changed to read:

If a person disappears who is giving the signal to back or shove a train, engine, or car, or the light being used disappears, employees must stop movement.

GCOR 5.4.2 Display of Yellow Flag—“Less than Two Miles Ahead of Restricted Area” under “A. Restriction is in Effect” 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 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 5.5 Permanent Speed Signs, Supplemental Instruction

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

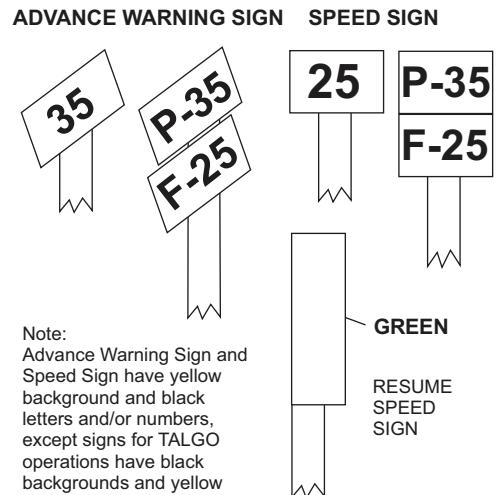
The Advance Warning sign will be placed two miles in advance of the location where the lower speed takes effect. At the point where the reduced speed applies, a speed sign will repeat the permissible speed. The lower speed will be in effect until a Resume Speed sign or another Speed sign is displayed.

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. Signs reading “K-END” indicate the end of Key Train municipal area limits. Resume speed signs are not displayed at the end of Key Train municipal area limits.

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:



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 preceded by the letter K apply to Key Trains.

Figures not preceded by a letter apply to all trains.

GCOR 5.8.1 Ringing Engine Bell—the following is added as a fourth bullet:

- When whistle signal (7) is required.

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GCOR 5.8.2 Sounding Whistle—the Indication for Sound (8) is changed to read:

Sound	Indication
(8) — o	<p>Regardless of any whistle prohibitions: Approaching men or equipment or other individuals on or near the track.</p> <p>After sounding initial warning for men or equipment or other individuals, sound whistle signal (4) intermittently until the head end of train has passed the men or equipment or other individuals.</p> <p>Whistle warning is not required:</p> <ul style="list-style-type: none"> When there is an adjacent track and men or equipment or other individuals are beyond the farthest rail of the adjacent track. For members of the same crew associated with movement of their engine unless necessary to warn or alert a crew member <p>Do not sound whistle in designated mechanical servicing and repair facilities, unless for an emergency or when approaching roadway workers.</p>

GCOR 5.8.4 Whistle Quiet Zone—the following is added:

An employee 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 employee'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.
- An automatic horn system 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 and bell requirements remain in effect.

GCOR 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 5.11 Engine Identifying Number, Supplemental Instruction

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.

Where PTC is in effect, passenger trains operated from a cab control car on the leading end of the movement will be identified by the cab control car initials and number, adding the direction when required.

Metrolink engines or cab control cars with no initials stenciled on the side will be identified as SCAX units.

GCOR 5.13 Blue Signal Protection of Workmen

Item B. How to Provide Protection—is changed as follows:

On a Main Track is changed to read:

On a Main Track. A blue signal must be displayed at each end of the rolling equipment and, if the rolling equipment to be protected includes one or more locomotives, a blue signal must be displayed on the controlling locomotive(s).

Section titled **On Other than a Main Track** is changed as follows:

The following is added after item 1:

Use the following sequence when applying blue signal protection:

- Line and lock the switch
- Display blue signal at or near the switch and;
- If the rolling equipment to be protected includes one or more locomotives, a blue signal must be displayed on the controlling locomotive(s).

Use the following sequence when removing blue signal protection:

- Remove blue signal from locomotive(s), if applied (remove any blue signal inside the cab before removing the blue signal visible from the outside on the engineer's side of the locomotive)
- Remove the blue signal at or near the switch
- Remove the lock from the switch and replace the hook or hasp, if equipped.

Item 2 is changed to read:

- A derail capable of restricting access to the track where work will occur must be locked in derailing position with an effective locking device and:
 - Positioned at least 150 feet from the rolling equipment to be protected.
 - or
 - Positioned at least 50 feet from the end of rolling equipment on a designated engine servicing track or car shop repair track where speed is limited to not more than 5 MPH. A blue signal must be displayed at each derail.

Use the following sequence when applying blue signal protection:

- Lock the derail in the derailing position
- Display blue signal at the derail and;
- If the rolling equipment to be protected includes one or more locomotives, a blue signal must be displayed on the controlling locomotive(s).

Use the following sequence when removing blue signal protection:

- Remove blue signal from locomotive(s), if applied (remove any blue signal inside the cab before removing the blue signal visible from the outside on the engineer's side of the locomotive)
- Remove the blue signal at the derail
- Remove the effective locking device from the derail and ensure derail is in the proper position.

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The following is added to the end of item 3:

After the switch operator informs the employee in charge of workmen that switches have been lined against movement onto track and devices controlling the switch have been secured, display required blue signals on controlling locomotive(s).

Use the following sequence when removing blue signal protection:

- a. Remove blue signals from locomotive(s), if applied (remove any blue signal inside the cab before removing the blue signal visible from the outside on the engineer's side of the locomotive)
- b. Employee in charge to notify the switch operator when it is safe to remove switch-locking devices.

Item 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 6.2.2 PTC Electronic Display—The following is added:

PTC Electronic Display

A. Authority/Restrictions Electronically Displayed

Employees may receive authority/restrictions as information only via an approved electronic display such as a computer, printer or other device where PTC is used.

B. Loss of Electronic Display Functionality

Should the electronic display become inoperable, or if the hand written copy of a verbal instruction, does not correspond to the associated PTC displayed information:

- immediately stop the train
- contact the Train Dispatcher or Control Operator, and be governed by his/her instructions.

C. Trains must not continue movement until:

- The electronic display returns to normal operation for the PTC on board system "Normal Operations" would be that the PTC device shows "Cut In" and "Active" on the display screen and the authority/restriction text becomes viewable and correct or
- Train dispatcher or control operator gives permission for the train to proceed with PTC cut out.

GCOR 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 the train must not occupy the overlapping limits until permission is received to enter the overlapping limits from the employees listed on the authority.

GCOR 6.4 Reverse Movements—The following is added:

When making a reverse movement where PTC is in effect, the Restricted Speed requirement is not enforced by PTC when moving into the next signaled block.

GCOR 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 (Back Up Movements).
- 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 "back up".
- 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 6.6 Back Up Movements—is changed to read:

After obtaining permission from the train dispatcher, a train may back up on any main track or on any track where CTC is in effect under the following conditions:

1. The train dispatcher must verify the following within the same or overlapping limits:
 - a. Another authority is not in effect unless conflicting movements are protected.
 - b. A track bulletin Form B is not in effect.
 - c. A main track is not removed from service by a track bulletin.
 - d. Permission to leave a switch in the reverse position has not been granted.

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2. The crew ensures movement will not:
 - a. Exceed the limit of the train's authority.
 - b. Exceed the train's length.
 - c. Enter or foul a private or public crossing except as provided by Rule 6.32.1 (Providing Warning Over Road Crossings).
 - d. Be made into or within yard limits, restricted limits, interlocking limits, drawbridges, railroad crossings at grade or track bulletin Form B limits.

Before requesting or making a back up move, a job safety briefing between all members of the crew must be conducted that confirms:

- Train is intact, verified either visually or by determining that brake pipe continuity exists using end of train device or distributed power telemetry.
- Distance to be shoved. (Note: Train must not move outside of authority limits.)
- Distance from the end of the train to the end of authority limits is sufficient to accomplish the planned back up movement (E.g. 30 cars from the end of the rear car to next controlled signal or 30 cars from the end of the rear car to MP 30, where tack warrant authority ends, etc.).
- Location of nearest affected road crossing in direction of movement.
- Movement will not be made into or within yard limits, restricted limits, interlocking limits, drawbridges, railroad crossings at grade or track bulletin Form B limits.

Before permission is granted, a job safety briefing between a crew member and the train dispatcher or control operator must determine what track authority is needed to accomplish the planned movement. If additional track authority is necessary to make the 6.6 movement, a crew member must request additional authority.

When movement is made under these conditions, restricted speed does not apply.

GCOR 6.7 Remote Control Zone, A. Entering Remote Control Zone—is changed as follows:

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 6.21.3 Track Obstruction / Unusual Conditions—is changed to read:

When a train is advised in the words, "Between (location) and (location) be governed by Rule 6.21.3", within the specified limits trains must:

- Not exceed 20 MPH HER, and
- Be prepared to stop for slides, rocks, washouts, debris or obstructions on the track.

Train crews are reminded to regulate speed where visibility is limited (ex. curvature of track, lighting, weather, etc.) and must report to the train dispatcher conditions encountered, or if none are encountered, within the limits.

GCOR 6.21.4—The following rule is added:

GCOR 6.21.4 Activation of Shifted Load or Dragging Equipment Detector

When a train or engine actuates a shifted load or dragging equipment detector, and an adjacent main track or controlled siding may be obstructed, immediately:

- Warn other trains by radio, stating the exact location and status of the train and repeat as necessary.
- Place lighted fusees on adjacent main tracks and controlled sidings.
- Notify the train dispatcher or control operator and, when possible, foreign line railroads if necessary.

Warning to other movements is no longer necessary when:

- It is known adjacent main tracks and controlled sidings are not obstructed.
- or
- The train dispatcher or control operator advises the crew that protection is provided on adjacent tracks.

Train on Adjacent Track

A train on an adjacent track that receives radio notification must pass the location specified at restricted speed and be prepared to stop for obstructions on the track. When advised that the track is clear and it is safe to proceed, this restriction no longer applies.

GCOR 6.23 Emergency Stop or Severe Slack Action—the part titled "Inspection of Cars and Units" is changed to read:

Visual inspection must ensure no derailment or damage has occurred to cars, units, equipment or track to the end of the train. If physical characteristics such as a bridge with no walkway prevent complete inspection, the train may be moved the distance necessary not exceeding 5 MPH to complete the inspection. Stop movement immediately if excessive power is required to start or keep the train moving and discontinue further inspection until a safe alternative to complete inspection is identified by either a job safety briefing or coordination through the train dispatcher.

Exception—The following trains (excluding key trains) are relieved of visual inspection required by emergency brake application if no severe slack action occurred while stopping and brake pipe pressure is restored as indicated by the caboose gauge, end-of train telemetry device (ETD) or distributed power telemetry:

- Solid loaded bulk commodity train,
- Train consisting entirely of doublestack and/or articulated spine car equipment,
- Any train where emergency application occurs above 20 MPH, or
- Any train that is 5000 tons or less.

Train types in the exception are relieved of further visual inspection after a defect is corrected, such as recoupling an air hose, and brake pipe pressure is restored as indicated by the caboose gauge, end-of-train telemetry device (ETD) or distributed power telemetry.

GCOR 6.26 Use of Multiple Main Tracks, Supplemental Instruction

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.

GCOR 6.27 Restricted Speed, Supplemental Instruction

Where PTC is in effect, PTC will enforce a 16 MPH maximum speed when entering authorized limits requiring restricted speed, and a 20 MPH maximum speed while moving within authorized limits requiring restricted speed (e.g., non-signaled Yard Limits, Restricted Limits or block signal requiring restricted speed). The actual speed which

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allows trains to stop within 1/2 the range of vision will not be enforced. The crew is required to make the movement at the appropriate speed for compliance with this rule.

GCOR 6.29.1 Inspecting Passing Trains—"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 6.32.2 Automatic Warning Devices—Part A. Automatic Warning Devices Malfunctioning, text in the first column and second row of the table is changed to read:

The crew is notified that the crossing warning system is malfunctioning due to a false or partial activation, and an equipped flagger is not at the crossing to provide warning.

GCOR 6.32.2 Automatic Warning Devices—the following is added:

C. Power Off Indicators

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 6.32.2 Automatic Warning Devices, Supplemental Instruction

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.

GCOR 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 a job briefing, to ensure equipment left unattended is properly secured and a sufficient number of hand brakes are applied to prevent movement. If hand brakes are not adequate, block the wheels.

GCOR 7.7.1 Gravity Switch Moves—is changed to read:

A gravity switch move is permitted only at locations where specifically indicated by individual subdivision special instructions or when approved by a supervisor due to circumstances such as mechanical failure, etc.

Before performing a gravity switch move, 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.

When performing a gravity switch move:

- Not more than five cars may be handled at one time.
- Sufficient hand brakes must be manned by crew members to insure that the movement can be controlled and stopped.
- Using the hand brake on cars with shiftable loads must be avoided.
- Cars must not be allowed to couple to other equipment.

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 8.9.1 Testing Spring Switch

That part reading:

Before a train or engine makes a facing point movement over a spring switch, the switch must be tested when any of the following conditions exist:

1. A block signal governing movement over the switch indicates:
 - Stop.
 - Stop and Proceed.
 - or
 - Restricted Proceed.

Is changed to read:

Before a train or engine makes a facing point movement over a spring switch, the switch must be tested when any of the following conditions exist:

1. A block signal governing movement over the switch indicates:
 - Stop
 - Stop and Proceed
 - Restricting
 - or
 - Restricted Proceed

GCOR 8.19 Automatic Switches—the following paragraph is added:

In non-signaled 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 9.5.1 Changing Established Route—The first paragraph is changed to read:

Except to avoid an accident, after a controlled signal has been cleared for a closely approaching train, the control operator must not change the signal to a Stop indication before the approaching train's engineer has confirmed that a Stop indication can be complied with at that location. Do not establish or authorize a conflicting route until communicating with the approaching train's crew and ensuring that the train has stopped clear of the conflicting route.

GCOR 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 a next governing signal does not exist, trains operating on the main track must move at restricted speed for two miles or until leading wheels pass the opposing distant signal.

GCOR 9.15.2 Clearing Track Permits—the following 4th bullet is added:

- Position of hand operated main track switches.

GCOR 9.16 Stop and Proceed Indication—Item 2.e. is changed to read:

- e. Continue on the main track when proceeding at restricted speed due to rule or previous signal indication.

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GCOR 10.1.1—The following rule is added:

GCOR 10.1.1 Leaving the Main Track

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 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 10.3 Track and Time, Supplemental Instruction Requesting Track and Time

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.

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.

GCOR 13.1.4 Cab Signals Cut In and Out—is changed as follows:

The following sentence is deleted from the last paragraph:

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

The following is added after the last paragraph:

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

GCOR 13.3.1 Cab Signal and Block Signal Do Not Agree—the exception is deleted:

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 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 14.3 Operating With Track Warrants—is changed as follows:

The following is added to Items 1 and 2:

The location of the specific point must be indicated on the track warrant form.

The following last paragraph is added:

After Arrival Authority

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.

GCOR 14.7 Reporting Clear of Limits—the following paragraph is deleted:

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 14.7 Reporting Clear of Limits, Supplemental Instruction

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.
- Engineer and conductor will communicate with the train dispatcher.
- Communication will use the following format:

Conductor will state: “Conductor (Name), locomotive initial, number, (direction), regarding track warrant (Number), reports clear of (mile post/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? - Over.”

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

GCOR 14.9 Copying Track Warrants

Item A. Transmitting Track Warrants—is changed to read:

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).”

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4. The train dispatcher will check the repeat and, if all information including the summary is correct, will state the following:

“Track Warrant (number) to (engine ID) (direction) is OK at (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:

“Track Warrant (number), to (engine ID) (direction) with after arrival of (engine ID) (direction) at (location) is OK at (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.

Item B. In Effect—the last sentence is changed to read:

Rules qualified employees may relay track warrants.

GCOR 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 or releasing a portion 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 14.11 Changing Track Warrants—the last paragraph is changed to read:

When the limits or instructions of a track warrant must be changed, a new track warrant must be issued showing, “Void Authority _____” and the number of the track warrant being changed.

GCOR 14.13 Mechanical Transmission of Track Warrants, Supplemental Instruction

Mechanical Issuance

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.

GCOR 15.1 Track Bulletins, Supplemental Instruction

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.

GCOR 15.2 Protection by Track Bulletin Form B—the following are added:

C. Stop Column

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 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 employee in charge.

D. Entering Within Limits

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 15.9 Mechanical Transmission of Track Bulletins, Supplemental Instruction

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.

GCOR 15.12 Relief of Engineer or Conductor During Trip

The following last paragraph is added:

Comparison of Information:

Where PTC is in effect, engineer will compare track warrants and track bulletins held with those shown on the PTC display and report findings to the train dispatcher.

GCOR 15.13.1—The following rule is added:

GCOR 15.13.1 Voiding General Track Bulletins or Restrictions

A bulletin or restriction or an entire GTB may be voided by the train dispatcher communicating the following:

1. “Restriction (number) ____ reading ____ is void.”

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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 Abbreviations—the following abbreviations are added:

AS.....	Absolute Signal
CNT.....	Connection
EBCS.....	Eastbound Controlled Signal
EE.....	East End
EXO.....	East Crossover
ICS.....	Independently Controlled Switch
NA.....	Not Applicable
NBCS.....	Northbound Controlled Signal
NE.....	North End
NXO.....	North Crossover
POS.....	Protect Open Switch
PTC.....	Positive Train Control
RCPS.....	Remote Control Power Switch
RESTRN.....	Restriction
RL.....	Restricted Limits
RP.....	Release Point
SBCS.....	Southbound Controlled Signal
SE.....	South End
SPMS.....	Switch Point Monitoring System
SS.....	Station Sign
SW-N.....	Switch No
SW-Y.....	Switch Yes
SXO.....	South Crossover
TFND.....	Track Flags Not Displayed
TID.....	Track Integrity Down
TIWS.....	Track Integrity Warning System
WBCS.....	Westbound Controlled Signal
WE.....	West End
WXO.....	West Crossover

GCOR Glossary—the following glossary terms are added:

General Track Bulletin

A notice containing track bulletin restrictions and other conditions affecting train movement.

Positive Train Control

A safety overlay system that enforces limits of authority and restrictions that pertain to train movement on main tracks, controlled sidings, and other tracks where CTC is in effect.

15. **Currently Not Used**

16. **Currently Not Used**

17. **Positive Train Control (PTC)**

The Positive Train Control System (PTC) is a safety enhancement system designed to monitor and stop train movement before the train:

- Moves into a section of track for which the train does not hold an authority;
- Moves into a section of track under the control of a maintenance employee in charge without permission;
- Operates over an improperly lined main track switch, or;
- Exceeds the maximum permissible speed.

Subdivisions where PTC is in effect are identified in the timetable or general order.

PTC establishes no authority or restrictions for train movement. Only existing GCOR methods of authorizing movement will be used.

Information viewed on the PTC system is currently for display purposes only. Any discrepancy between information on the PTC display versus what is actually conveyed by track warrants, track bulletins and/or signal aspects must be reported to the train dispatcher.

Locomotive Engineers must not rely on PTC as a means of train braking. When the system determines enforcement is necessary, PTC will apply the train brakes with a penalty brake application. Controlling the train, including proper braking remains the responsibility of the Locomotive Engineer.

PTC Display Indicates Braking In Progress

When display indicates braking is in progress, report the situation to the train dispatcher.

Initial Training/Qualification

All BNSF train crews operating where PTC is in effect will be provided initial training on the system by a Designated Supervisor of Locomotive Engineers (DSLE), engineer mentor, or other qualified employee and will also be provided a qualified PTC engineer pilot while operating a locomotive, or locomotive simulator equipped with PTC during their qualification check ride.

Note: Only properly trained and qualified employees should attempt to utilize PTC equipment. Engineers who have received the classroom training and completed their PTC check ride are considered qualified. Train crew members who have received the PTC classroom training are considered qualified. Crew member qualification has no expiration date.

PTC qualified BNSF train crew members should have 'P1' and engineers should have 'P2' displayed in the individual employee Class Code/Qualification Data Screen within the TSS system.

Job Safety Briefing

PTC qualified train crews are required to conduct a job safety briefing at the beginning of each tour of duty regarding their PTC equipment and at any time PTC is initialized, re-initialized or cut out en route.

The job safety briefing will include, but is not limited to, the following:

- Verify PTC Status.
- Verify the PTC and MCC circuit breakers are in the ON position when the controlling locomotive is PTC equipped and the train is operating where PTC is in effect.
- Verify that PTC safety devices have not been cut out. (Crew members must not cut out, tamper with, or defeat a safety device without permission from the proper authority.)
- Review PTC requirements and functionality.
- Mutual understanding of each other's knowledge and experience with the PTC System.

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PTC Equipped Lead Locomotives

At all originating locations where a locomotive consist is assembled or a locomotive is added to an existing consist, and a PTC-ready lead-qualified locomotive is available or in the consist, a PTC-ready locomotive must be placed in lead position. Departure of a train with such a locomotive in the consist but not in lead position must be approved by a local supervisor, or train dispatcher if local supervisor is not on-duty. The local supervisor or train dispatcher will obtain authorization from the Assistant General Superintendent of Transportation (AGST) or their designee before granting approval.

PTC-ready locomotives are identified in TSS with a % symbol following the number of that locomotive (i.e., BNSF 5796%). In case of doubt or uncertainty regarding the status of PTC-equipped locomotive, contact the PTC Desk.

Departure Test

A departure test must be performed:

- When prompted by the PTC system
 - When instructed to do so by the train dispatcher.
- or
- Anytime the PTC computer is power-cycled.

Ensuring PTC is Initialized

The engineer must initialize the PTC system when any of the following occurs when operating within PTC designated limits:

- The crew is ready to receive authority and/or depart their initial station
- A PTC equipped locomotive (or cab control car in passenger service) is placed in the lead position
- The engineer first takes charge of the train
- When instructed by the train dispatcher

Initializing PTC

Prior to initializing PTC, a crew member must verify that the lead locomotive (or lead cab control car in passenger service) is the identifying unit.

Verify the PTC and MCC circuit breakers are in the ON position. When PTC screen is illuminated, select the "INIT" button to INITIALIZE the system. (Prompts will display advising of the progress of the initialization.) If initialization fails, contact the train dispatcher and be governed by his/her instructions.

After successfully initializing, confirm that the most current information regarding the train's consist is displayed by the PTC system. Verify the following:

- Total number of locomotives in the consist and isolation status
- Total number of loaded and empty cars in the train
- Train's tonnage and length
- Total braking force (ensure value is not zero) and operative brake count
- Lowest of any speed restriction imposed on equipment in the train

If any of the above information is not correct, inform the train dispatcher and be governed by their instructions.

In order to ensure that trains experiencing issues initializing the PTC system receive all available technical support, and to minimize train delay; if system cannot be initialized within 10 minutes, notify train dispatcher or PTC desk and be governed by their instructions.

Consist Updates

After setting out or picking up cars or locomotives the train dispatcher must be notified and the train consist updated for proper PTC operation.

After receipt of consist update, verify the following:

- Total number of locomotives in the consist
- Total number of loaded and empty cars in the train,
- Train's tonnage and length,
- Total braking force (ensure value is not zero) and operative brake count,
- Lowest of any speed restriction imposed on equipment in the train,
and
- Form A and B restrictions

If any of the above updated information is not correct, inform the train dispatcher and be governed by his/her instructions.

Tons per Operative Brake (TOB) Speed Restrictions

Current PTC programming adds isolated locomotive tonnage to a train's trailing tonnage when calculating TOB. An enhancement to correct this issue is being developed. To prevent this from unnecessarily reducing train speed when operating a train with PTC active; if required to isolate a locomotive due to outbound (OB) locomotive isolation instructions for fuel conservation provided on the train profile, such instructions can be ignored if they will cause PTC to improperly restrict train speed due to incorrect on board TOB calculation.

Restrictions and Authorities

After successful initialization and before departing, the engineer and conductor must compare displayed Form A and Form B restrictions shown on the PTC screen with the paper copy of the GTB issued to the train. Authorities received onboard PTC must be compared to the paper copy of the authority. Any discrepancies must be reported to the train dispatcher.

The dispatcher may deliver crossing notifications and temporary restrictions after the train has departed but prior to encountering the restriction. Once the restrictions are verbally delivered to the train crew, the restrictions must then be compared to the onboard PTC system.

When permitted by the Train Dispatcher, PTC mentor or PTC Desk, PTC may be cut out for, but not limited to, the following reasons:

- It becomes defective, or
- It prohibits train movement that should be allowed

When cutting out PTC, the locomotive engineer must:

- Stop the train/locomotive
- Place PTC in Cut Out Mode using the soft keys on the PTC screen
- Record the date, time, reason and who authorized the system to be cut out on the PTC trip report

The following may give permission to cut out PTC or depart without PTC functioning as intended:

- Train Dispatcher
- PTC Desk
- PTC Mentor
- Other supervisor

When instructed to cut out PTC or to proceed without PTC functioning as intended, contact the train dispatcher to provide the reason and who authorized.

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The engineer must report the following conditions and occurrences to the train dispatcher:

- Any time PTC indicates train braking in progress
- The train is stopped due to a PTC warning
- PTC is suspected of not providing a warning when it should have:
- A mandatory directive is received in writing which is not reflected on the PTC system
- PTC enforcement for a restriction which has not been received in writing

When making a report to the train dispatcher, include the following information:

- Locomotive or control cab car initials/number
- Time and location of occurrence
- Any unusual occurrence, which may have attributed to the problem

Unusual Conditions

When information displayed by PTC and aspects of the wayside signal system or information received in writing do not correspond, the following will apply:

- The engineer must operate according to the most restrictive information.
- The engineer must promptly report the following to the train dispatcher:
 - time and location of incident.
 - signal identification (i.e. number plate on intermediate signal).
 - location when PTC initially provided conflicting information related to the wayside signal aspects or written information.

Any train experiencing a PTC Enforced Braking Event which results in an occupied locomotive stopping in a tunnel or other enclosed structure, in addition to current instructions, immediately place Enforcement Cut-Out Switches located in the nose of the locomotive to the Cut-Out position. If operating conditions allow, recover brake pipe and exit the location.

Notify Train Dispatcher and contact the PTC Desk immediately and be governed by their instructions.

PTC Desk

The PTC desk is manned 24 hours a day, 7 days a week as a resource to assist crews with PTC issues such as initialization failures, braking events, or any other PTC-related exceptions. Contacting the PTC desk does not relieve the requirement for the engineer to contact the train dispatcher as stated above under "Unusual Conditions".

Train crews experiencing PTC issues such as initialization failures, braking events, or any other PTC-related exceptions may contact the PTC desk to assist with troubleshooting and coordination with the train dispatcher as necessary.

Radio Call-In code "9" has been established to contact the PTC desk. To contact the PTC Desk by radio, set the radio to the assigned AAR road channel and use the three digit code for the nearest radio tower as indicated in the timetable Radio Call-In chart. For the PTC Desk, X=9.

The PTC desk can also be contacted via telephone by calling 817-593-5900, Option 3.

Submitting a Trip Report

The engineer must submit a trip report upon completion of any trip experiencing unusual conditions related to PTC. The report will be placed in the designated location at the destination terminal upon tie-up. At least once per day, a designated person at each location will transmit all submitted trip reports to the PTC desk and retain the originals.

List any of the following on report:

- PTC indicates Braking in Progress
- Any unusual conditions
- Anytime PTC is cut-out, name and title of authorizing person
- When unable to INIT, name and title of person authorizing operating with PTC cut-out.

Report will include, but not limited to:

- Date and time
- Train ID
- Locomotive Consist
- Loads
- Empties
- Tons
- Length
- A description of any unusual or safety-related events
- Engineers name and signature
- Location of occurrence
- Name and title of employee authorizing PTC cutout

The "PTC Trip Report" is available at on duty locations, and can also be printed from System General Notices.

18. Currently Not Used

19. Currently Not Used

20. Currently Not Used

21. Currently Not Used

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- Employees assigned to a remote control crew are governed by the BNSF Remote Control Operating Instructions and must have a current copy accessible while on duty.
- Only certified operators or students who have been trained in remote control operations may operate an Operator Control Unit of a Remote Control Locomotive.
- Division Timetable Special Instructions will designate limits of Remote Control Zones (RCZ). RCZ signs may also be posted at zone access locations.
- 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.
- When a remote control operations system radio broadcasts "Operator Down", movements on adjacent tracks must move prepared to stop in half the range of vision until the safety of all members of the remote control crew is confirmed.

23. Automatic Cab Signals

Cab signal equipment must be cut out except on suburban equipment on the Chicago Subdivision.

24. Switch Tender Instructions

The train dispatcher and switch tender are required to have a job safety 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 practical, a car set out between terminals due to mechanical defect should be left where it can be accessed by truck for making repairs. If the car set out is a military shipment or Rail Sensitive Security Material (RSSM), the Resource Operation Center, Fort Worth must be promptly notified at 817-593-7200 or 800-832-5452, Option 3. The PBX/MRAS radio system may be used for this communication.

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:

- Ensure the safety of crew members, accident victims, and the public.
- Meet the requirements of GCOR 6.23.
- Contact the dispatcher or any other available radio contact and advise:
 - Exact location, and
 - What emergency services are needed. Be sure to include alternate routes for the emergency vehicles if your train is blocking road crossings.
- Assess the damage to the vehicle and train to determine if there is any danger to your crew or the public.
- Assign a crew member to monitor a radio to provide further information for emergency assistance.
- If it is safe, render assistance to accident victims. It is important not to move the victim unless a life threatening situation exists.
- 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.
- Only give information to:
 - The investigating officer, or

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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. During work activities the engineer may accept train movement instructions only from a designated individual identified in the job safety briefing before commencing work. The individual designated to provide train movement instructions to the engineer will be a member of the train crew except during work activities requiring precision train movement, such as rail recovery. An individual of the work group may be designated to communicate directly with the engineer for precision train movements under the supervision of the conductor.

The engineer will respond to all stop signals.

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 safety briefing will be conducted before commencing work and additional job safety briefings must be held at intervals not to exceed four 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 safety briefing must be conducted before commencing work. Employees who subsequently work in the vicinity of a work train after such job safety briefings have been held, must not commence work until they have received a job safety 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 safety briefings are complete.

Job safety 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.

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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 term “until traversed” may be used in place of communicating the expiration time of the warning when notifying trains and MW authority holders of wind warnings. Until traversed means the rear of the train is clear of the limits. 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 ribbon rail trains and loaded bulk commodity unit trains as defined in the Air Brake and Train Handling Rules Glossary.	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 and Critical Areas

Weather information received by BNSF from AccuWeather Enterprise Solutions, Inc., 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 AccuWeather 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.

Flash Flood Critical Areas are designated in the Division Timetable. Division Engineers will identify “critical” areas by subdivision, segmented by mile post 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.

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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	All subdivisions
Chicago	Beardstown and Yates City subdivisions
Heartland	Afton, Amory, Birmingham, Cherokee, Cuba, Ft. Scott, Hannibal, River, Thayer North, and Thayer South subdivisions
Kansas	Arkansas City, Douglass, Emporia, Hereford, La Junta, Panhandle, Strong City, and Topeka subdivisions
Northwest	All subdivisions
Red River	All subdivisions
Southwest	All subdivisions

Region 2 contains the following divisions:

Chicago	All subdivisions excluding Beardstown and Yates City
Heartland	Bayard, Council Bluffs, Creston, Napier, Omaha, and St. Joseph subdivisions
Kansas	Boise City, Dalhart, and Twin Peaks subdivisions
Montana	All Subdivisions
Powder River	All subdivisions
Twin Cities	All subdivisions

Cold Weather Train Speeds:

The Engineering Department has identified two factors which require Cold Weather Train Speeds---Low Temperature Threshold and Temperature Differential Threshold, as follows:

Low Temperature Threshold:

In Region 1, this threshold is 0 degrees Fahrenheit. In Region 2, this threshold is -20 degrees Fahrenheit.

Unless further restricted by individual subdivision Special Instructions, be governed by the following:

When ambient (air) temperature drops below the Low Temperature Threshold trains must not exceed the following speeds:

In non-signalized territory:
40 MPH for all trains.

In block signal system limits:

Trains 100 tons per operative brake and greater.	40 MPH
Key trains	
Trains less than 100 tons per operative brake.	50 MPH
Passenger trains, Z-symbol intermodal trains, or single level loaded intermodal trains.	65 MPH

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:

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.

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 a subdivision timetable for extreme air temperature operating instructions, 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.

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- 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 AccuWeather website or other available means.

Earthquake Instructions

When an earthquake is reported, the train dispatcher will do the following: (See Decision Table, next column)

- 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.
- 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

Duplicate mile posts on a subdivision are identified by an alpha suffix (e.g. MP 345X, MP 420Z). Timetable individual subdivision special instructions will list where duplicate mile posts are in effect.

35. Switching and Handling Business Cars

- Business Cars must be handled as outlined in accordance with GCOR 7.3, 7.6, and 7.9.
- Air Brakes—The Business Car air brake system must be connected to the locomotive and the automatic air brake used in controlling movements during switching.
- 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 or no car moving under its own momentum should be allowed to couple to them.

- 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 communication connections.
- 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.
- 480 Volt electrical jumper 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 disconnections are to be performed by authorized Mechanical Personnel Only.
- Cars are to be considered occupied at all times whether they are moving in the train or parked.
- When cars or trains are parked, protection must be established as outlined in GCOR 5.12. Local Transportation Department will coordinate with local Mechanical Department to provide required protection.
- White “Occupied Camp Car” signs will be available on Business Cars through Business Car personnel.
- All hand brakes must be fully released before moving Business Cars. If a hand brake is not accessible on an enclosed vestibule, the on board Mechanical Rider or Mechanical Supervisor must be contacted to allow access or verify that hand brakes have been released.
- Business Cars cannot be moved until vestibule steps are raised. Vestibule steps must not be lowered until Business Cars have come to a complete stop.

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 ABTH 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 , BNSF 920230 through 920249, and BNSF 920280 through 920299 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

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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.

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.

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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. Key Train and Key Train Commodity Securement Requirements

Do not leave a Key Train or rail cars meeting the Key Train definition unattended on a main track or siding unless permitted by the train dispatcher.

The train dispatcher may only grant permission to leave the train or car(s) at locations specified by timetable/special instructions or when otherwise necessary, after consulting with Assistant General Superintendent Transportation, Corridor Superintendent, Assistant Corridor Superintendent, or Chief Dispatcher to evaluate operating circumstances.

When permission to leave the train or car(s) is received from the train dispatcher:

- Job brief between members of the crew to review all applicable securement requirements.
- Secure equipment as required by all securement requirements of the employing railroad.
- Include the following in a job safety briefing with the train dispatcher, who will verify information is provided:
 - Tonnage and length of train (or total number of individual cars) left unattended,
 - Grade of track at the location as indicated by timetable grade chart.
 - Whether equipment secured is located on curve or straight track,
 - Any inclement weather conditions (e.g., precipitation, high wind),
 - Total number of hand brakes applied,
 - Confirmation the train or car(s) is secure. Communication to include statement, "Conductor and engineer agree securement requirements have been met."

Note: These requirements do not apply when a portion of the train or car(s) is left properly secured and the on-duty crew is:

- Picking up, setting out, or repositioning cars at an industry,
- Switching cars to/from tracks adjacent to main track or siding,
- Adding, removing, or repositioning locomotives, or
- Moving part of a train when doubling a hill or cutting crossings.

38. Inhalation Hazard Car Handling Instructions

A crew operating with one or more loaded tank car(s) containing materials that require the notation "Poison (Toxic) Inhalation Hazard" and "Inhalation Hazard" (TIH/PIH) in their train on a foreign railroad must, at the earliest opportunity, notify the foreign railroad's train dispatcher that the train is transporting inhalation hazard car(s), unless relieved of the requirement by the BNSF train dispatcher.

Any foreign line carrier operating with loaded TIH/PIH tank car(s) in their train must, at the earliest opportunity, notify the BNSF train dispatcher that the train is transporting inhalation hazard car(s).

BNSF Work Order documents and other TSS commands identify inhalation hazard shipments with the "IH" SCHI code.

BNSF train list and profile will contain the banner wording of "IH TRAIN" when operating in non-sigaled track warrant control territory and transporting two or more loaded TIH/PIH tank cars on the restricted portion of the following subdivisions:

- Amory Subdivision - Between Amory and Columbus
- Beatrice Subdivision - Between Crete and Beatrice
- Conroe Subdivision - Between Silsbee and Somerville
- Silsbee Subdivision - Between Beaumont and Silsbee
- Sweet Grass Subdivision - Between Shelby and Sweet Grass
- Zap Line Subdivision - Between Mandan and Republic

The following instructions are in effect for IH Trains on the restricted portion of the subdivisions listed:

- The main track route (except in Restricted Limits) must be evaluated prior to an IH Train operating. The IH Train must be the next movement on the main track after the evaluation. If an authority is granted after the route evaluation has been performed and the IH Train has not passed the 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 TIH/PIH shipments will hold the main track.
- When meeting an IH train, a train on the siding must stop before the IH Train passes on the main track. If a train on the siding cannot clear the main track due to length, the IH Train must stop on the main track before the train on the siding proceeds. Dispatchers will advise IH Train conductors of meeting points and the conductors will verify that the train on the siding is stopped before the IH Train passes, or that the IH Train is stopped before the train on the siding proceeds.
- 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.

39. Train Inspection Due to Track Indication

A BNSF or foreign line carrier crew instructed by the train dispatcher/control operator to inspect their train due to track indication(s) must promptly stop the train consistent with good train handling procedures and inspect both sides of the entire train. During inspection, particular focus must be given to wheels, axles, trucks or other parts of the train that may cause track damage.

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When conditions permit, inspection is to be performed while the train is moving, not exceeding 5 MPH to afford the inspector opportunity to hear a defect such as a broken wheel. To complete inspecting the entire train, inspection may also be performed while backing up not exceeding 5 MPH when all requirements of GCOR 6.6 (Back Up Movements) can be met.

Any side or portion of the train that cannot be inspected while the train is moving must be inspected while the train is stopped. Discontinue inspection if it cannot be completed safely until an alternative is identified by job safety briefing or coordination through the train dispatcher/control operator and/or supervisor.

Notify the train dispatcher/control operator of any defects and when inspection is complete.

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."

Multi-platform 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 available at on-duty points must contain at least the minimum requirements shown on the standard form. These forms may contain additional subdivision-specific information as approved by the Division General Manager. When subdivision specific signal awareness/position of switch forms are not available, crew members may request a standard form be included with the GTB. In addition to observing and calling signals as required by GCOR 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, switch point 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 safety 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:

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- “(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 members of crew must job safety 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 Detector Exception	Signal Name						*Speed	*Time Passed Time at Required Speed	Flag Location and Name	
	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	1548	
WSS Anna		X					60 MPH	1715		
TWD MP 566.5	Exception - Main 1, Hot Journal, Axle 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, Y/R - Yellow-Red Flag										

Position of Switch/Flag Location							
Subdivision(s)							
Flag Location	Flag Name	MPH	Switch/Derail/Switch Point Lock Name and Location	Time/Initials Operated	Time/Initials Restored	Engineer's Initials	Conductor's Initials
Examples:							
MP 21	Y	30					
			W House Track SW Bess	1800 LGW	1935 LGW	KDW	DET
			ESS Anna	2100 LGW	Box 13	KDW	DET
The following abbreviations may be used: Y - Yellow Flag, Y/R - 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 - Corporate Safety Department
 - 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://employee.bnsf.com/safety/Pages/report-unsafe-motorist-trespasser.aspx>

Emergencies must not be reported on the Corporate Safety Department number. Emergencies must be reported as follows:

- Radio/telephone contact with train dispatcher.
- Radio/telephone/verbal contact with local BNSF Police personnel or to the Resource Operations Call Center at 1-800-832-5452.

45. Network Operations Center Notification Requirements

BNSF timetable individual subdivision special instructions 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 individual subdivision 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 HTD/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 HTD/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 and/or HTD/ETD defects (on either ROAD or YARD locomotives) must immediately 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-817-352-2840, Co. Line 8-352-2840 Operations South-817-352-2836, Co. Line 8-352-2836

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

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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
 QH Hazmat Hold—Do Not Transport
 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

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- SD Car Sold
- SE..... Hold for Seasonal Storage
- SF..... Feed Now
- SH OPPL 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
- TC..... Tank Car, Meets CPC-1232 standards
- TN..... Tank Car, Non - CPC-1232 standards
- 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 on any of the following locations:

- 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)
- Gateway Subdivision
- Hannibal Subdivision—Burlington to West Quincy
- Helena Subdivision
- Kettle Falls Subdivision—Danville, WA, to San Poil
- Laurel Subdivision

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- Lester Subdivision
- New Westminster Subdivision
- 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
- 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).

47. Train Makeup 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 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 test cars BNSF 82/83 and 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 makeup 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 makeup 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 makeup 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.

Military Train

Unit military trains containing shipments on cars with end of car-cushioning, shown on the train profile as 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 Coiled Steel Cars

Loaded coiled steel cars are limited to a maximum of 50 cars on any train type.

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Exceptions

Trains which are exempt from the above train makeup instructions will be identified on Division General Order.

UPRR trains operated on BNSF may operate in compliance with UPRR train makeup rules with the exception of distributed power train length limitations as outlined in 47(A).

47(A). Train Makeup Instructions and Locomotive Requirements Applicable to Conventional, Distributed Power and 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. Maximum Rated Power Axle (RPA) Limitations for Conventional, Distributed Power and Manned Helper Placement

Train Type	Head End	Cut In DP/Helper	Rear end DP/Helper
Manifest	42	24	16
Intermodal	48	24	16
Empty Bulk Commodity	24	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). In addition, total RPA of the rear DP/Helper locomotive remote consist must not exceed 8 RPA of the head end locomotive consist.

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

Distributed Power and ETD Length Limitations	
Train description	Maximum length allowed, excluding locomotives
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)
Solid intermodal, manifest, or bulk commodity trains 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.	8,000 ft between each DP remote consist.
Solid intermodal train operating with two DP remote consists, cut in and and on rear	12,000 ft between lead consist and rear remote DP consist

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3. System Distributed Power and Manned Helper Train Makeup 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
		TTFX cars (4-unit, drawbar connected 2 axle equipment.
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)		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).
		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.
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.	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.)
		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. Also applies to twin flat cars (solid-drawbar connected flat cars TTEX & RTTX series) with a single trailer/container on either segment/platform.
		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.

4. Additional Train Makeup 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.	Coiled steel shipments identified by car kind code GOS or GRS are limited to 5 cars (Does not apply to loaded unit coiled steel trains.)
Restricted cars listed must not be placed within 5 cars or platforms/wells of DP/Helper consist. (cut in and/or on rear end)	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.)
	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).
	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 & RTTX series) with a single trailer/container on either segment/platform.
	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.
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)	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).
	No more than 20 cars with end of car cushioning. (Does not apply to solid loaded bulk commodity unit trains with cars equipped with end of car cushioning.)
	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.)

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 makeup requirements next to DP remote consist outlined above are met.

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Exception: Does not apply to solid loaded intermodal trains. The DP remote consist must not be cut in closer to the head end than mid-train, by car count.

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.

Exception - Solid intermodal trains operating with two DP remote consists must not have the cut in DP remote consist further than 8000 feet from the head end of train (excludes locomotive lengths). In addition, the cut in DP remote consist must not be cut in closer to the head end than mid-train, by car count.

6. Limiting Tractive Effort When Using Manned Helpers with Trains Not in Compliance with Train Makeup 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 makeup 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 makeup 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.

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 6.27 Restricted Speed,
- GCOR 6.28 Movement On Other Than Main Track, or
- MWOR 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. Responsibilities and Certification

Engineers

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.

Before beginning each shift or tour of duty, all engineers must ensure their CFR Part 240 certificate is in their possession and that it is valid. If there is any doubt about the validity of their certificate, certified employees must contact a supervisor before 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 Conductors must possess their certificate and display it at the request of a company manager or FRA representative while on duty.
- d. Engineers and Conductors must report any conviction for a motor vehicle DUI, DWI, or refusal to test by calling the DUI Reporting Hotline at 913-319-3990 within 48 hours of conviction. The following must be reported:
 - Conviction for operating a motor vehicle while under the influence or impaired by alcohol or a controlled substance. This includes DUI, DWI, DWAI convictions, etc.
 - Conviction for refusal to undergo testing when requested by a law enforcement officer, who suspects the individual is operating a motor vehicle while under the influence of alcohol or a controlled substance.

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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.

If unsure whether a conviction should be reported, engineer must call the DUI Hotline for verification.

After reporting, employee will receive a letter of referral to the Employee Assistance Program (EAP) via certified mail. If the referral is not received within ten business days of the report of conviction, please contact the Manager of Certification at 913-319-2612.

- b. FRA certified employees must report changes in their hearing and/or vision status before working in certified service to the Medical Department, Fort Worth, TX and the Technical Training Certification Group, Overland Park, KS.

Changes must be reported when:

1. Hearing or vision has deteriorated and no longer meets the minimum requirements or now requires a medical device (corrective lenses or hearing aid) to meet the minimum requirement
2. Employees with a current hearing aid or corrective lens restriction attain permanent improvement to the extent that their hearing and/or vision now meets the minimum requirements without any corrective device.

The minimum hearing and vision requirements are:

1. The average hearing threshold at 500 Hz, 1,000 Hz, and 2,000 Hz in the better ear is less than or equal to 40 decibels
2. Distant vision acuity is 20/40 or better in each eye
3. Field of vision in the horizontal meridian is 70 degrees in each eye
4. Ability to recognize and distinguish between railroad color signals

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. Before 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 before 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 months:

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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.

Conductors

In the application of the following guidelines, the term "conductor" applies to a crew member in charge of a train or yard crew and passenger conductor who has received emergency preparedness training.

Before beginning each shift or tour of duty, all conductors must ensure their CFR Part 242 certificate is in their possession and that it is valid. If there is any doubt about the validity of their certificate, certified employees must contact a supervisor performing service as a conductor.

1. General Responsibilities (applies to any person with certification as a Conductor)

Any person certified as a Conductor is responsible for and must maintain their certification.

- a. Conductors must certify according to federal regulations (49 CFR Part 242) and BNSF Railway certification requirements and programs.
- b. Conductors must possess their certificate and display it at the request of a company manager or FRA representative while on duty.
- c. Conductors must report any conviction for a motor vehicle DUI, DWI, or refusal to test by calling the DUI Reporting Hotline at 913-319-3990 within 48 hours of conviction. The following must be reported:

- Conviction for operating a motor vehicle while under the influence or impaired by alcohol or a controlled substance. This includes DUI, DWI, DWAI convictions, etc.
- Conviction for refusal to undergo testing when requested by a law enforcement officer, who suspects the individual 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.

If unsure whether a conviction should be reported, conductor must call the DUI Hotline for verification.

After reporting, employee will receive a letter of referral to the Employee Assistance Program (EAP) via certified mail. If the referral is not received within ten business days of the report of conviction, please contact the Manager of Certification at 913-319-2612.

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d. FRA certified employees must report changes in their hearing and/or vision status before working in certified service to the Medical Department, Fort Worth, TX and the Technical Training Certification Group, Overland Park, KS.

Changes must be reported when:

1. Hearing or vision has deteriorated and no longer meets the minimum requirements or now requires a medical device (corrective lenses or hearing aid) to meet the minimum requirement.
2. Employees with a current hearing aid or corrective lens restriction attain permanent improvement to the extent that their hearing and/or vision now meet the minimum requirements without any corrective device.

The minimum hearing and vision requirements are:

1. The average hearing threshold at 500 Hz, 1,000 Hz, and 2,000 Hz in the better ear is less than or equal to 40 decibels
2. Distant vision acuity is 20/40 or better in each eye
3. Field of vision in the horizontal meridian is 70 degrees in each eye
4. Ability to recognize and distinguish between railroad color signals

2. Maintaining Conductor Route Familiarization

Certified employees must maintain proficiency as a conductor as it pertains to route familiarization.

Route Familiarization

Route familiarization is required in order to perform service as a certified conductor without the assistance of a pilot. Once initially qualified on a specific route by making the required number of familiarization trips as specified by local supervisor, route familiarization is maintained by observing the route biennially based on the calendar year when performing service in any capacity (engineer or trainman). If the route has not been observed once in a 24 month period, qualification will expire at the end of the calendar year. Other methods of maintaining route familiarization may also be available as specified by local supervisor.

Conductors assigned to new routes or who become unqualified on current assigned routes are required to contact their local supervisor who will advise the number of trips required to qualify or re-qualify on that route. If and when a conductor is qualified at the completion of these trips, a supervisor will then authorize the conductor 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 main track with an average grade of greater than 1% over 3 continuous miles and:

1. The maximum distance the locomotive or train will be operated will not exceed one mile, or
2. The maximum authorized speed for any operation on the track does not exceed 20 MPH, or
3. 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.

3. Route Familiarization Pilots

Employees will be assisted by a pilot if called to perform service as a conductor on a route lacking territory qualification:

- a. When a conductor lacks main track territory qualification, the pilot must be a certified employee and meets the territory qualification requirements for the main track physical characteristics and is not an assigned member of the crew.
- b. When a conductor was previously qualified on the main track, but qualifications have expired, the pilot can be an assigned member of the crew, other than the locomotive engineer who meets the territorial qualification requirement for main track physical characteristics.

If a conductor is called and lacks territorial qualification on other-than-main track and the assistance of a certified employee pilot is not practicable, the conductor must reference an appropriate job aid to satisfy this requirement.

50. Rail Security Sensitive Material (RSSM) Instructions Chain of Custody Documentation for Rail Security Sensitive Material

When RSSM shipments in BNSF custody are set out en route due to mechanical defect, the Resource Operations Center, Fort Worth must be promptly notified at 817-593-7200 or 800-832-5452, Option 3, who will arrange for attendance. The PBX/MRAS radio system may be used for this communication.

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.

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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.

If an RSSM shipment is delivered by connecting carrier and left on the interchange transfer unattended, transfer of custody information must show connecting carrier employee's name as "unattended".

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 first six digits of the employee's ID (e.g. b123456)
2. The date and time of the actual custody transfer.
3. The station at which the "RC" cars are transferred.
4. The person's first and last name 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 BNSF locations have been designated as HTUAs.

Anaheim	Kansas City	Riverside, CA
Bakersfield, CA	Los Angeles	San Antonio
Bay Area	Memphis	Sacramento
Chicago	New Orleans	San Diego
Dallas/Ft Worth	Oklahoma City	Seattle
Denver	Omaha	St Louis
El Paso	Phoenix	Tulsa
Houston	Portland	Twin Cities

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

Attendance Requirements

Shipments identified as "RSSM" must be attended at all times while inside an HTUA. RSSM shipments inside an HTUA are considered attended when:

- Located at an industry, when plant personnel have accepted chain of custody.
- Located in a yard which is staffed 24 hours per day.
 - Employees in the 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.

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Appendix A - Track Flagging Examples

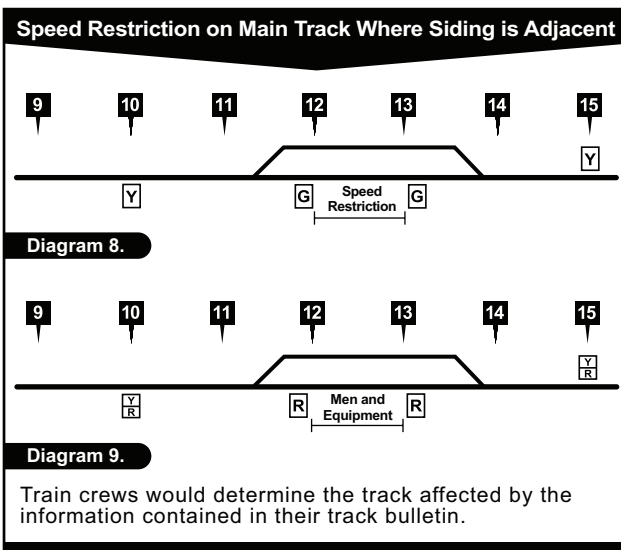
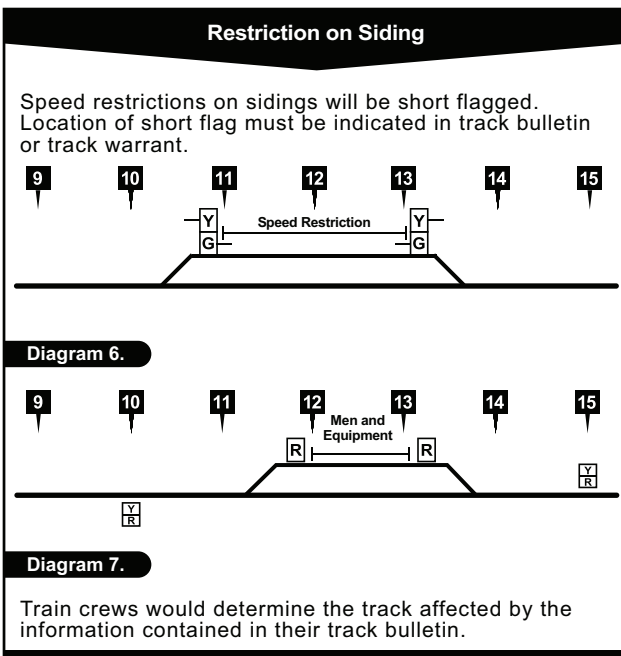
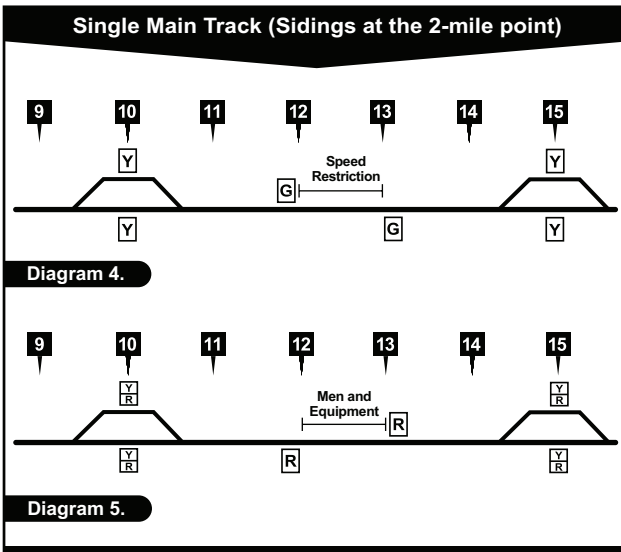
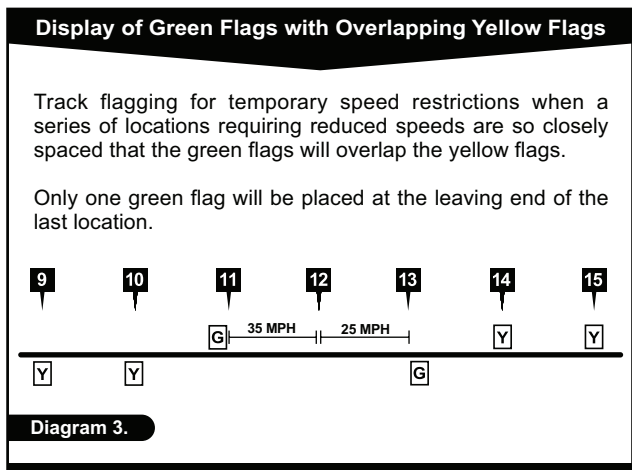
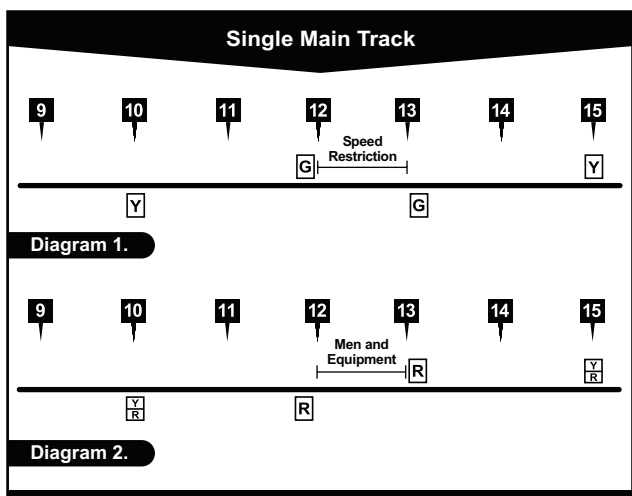
The figures in the appendix provide examples for protecting temporary speed restrictions and people or equipment working on or near the track. When reviewing these examples, keep in mind the following:

- The examples provided do not cover every situation.
- The distances shown are those specified by rule.

In multiple main track territory, when a restriction is placed on a crossover, or in single main track territory when a restriction is placed on a turnout not affecting the main track, 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.



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Speed Restriction When Flag Cannot Be Placed 2 Miles in Advance

Location of short flag must be indicated in track bulletin or track warrant.

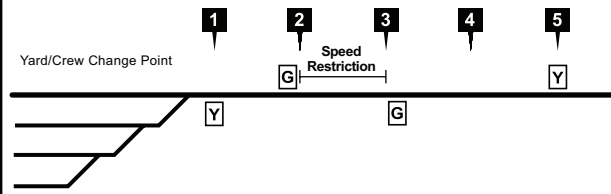


Diagram 10.

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.

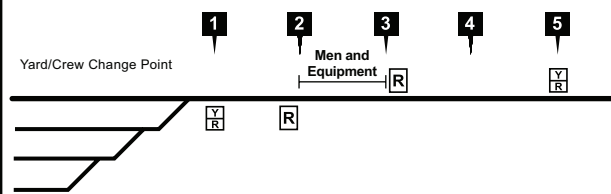


Diagram 11.

Speed Restriction at Foreign Line Junction

Location of short flag must be indicated in track bulletin or track warrant.

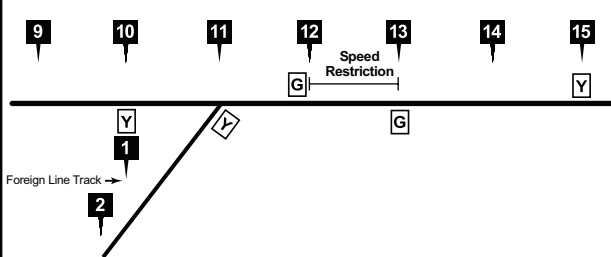


Diagram 12.

Foreign Line junction Near Men and Equipment

Location of short flag must be indicated in track bulletin or track warrant.

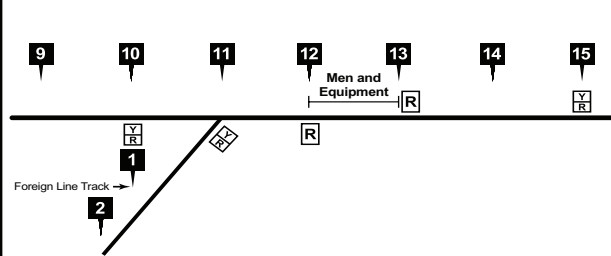


Diagram 13.

Speed Restriction at BNSF Junction

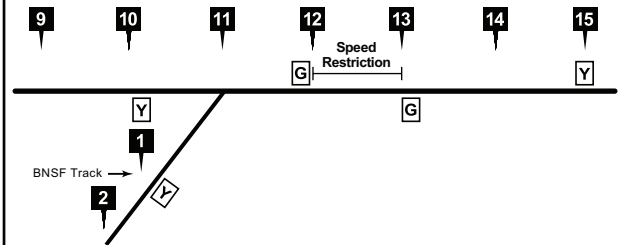


Diagram 14.

BNSF Junction Near Men and Equipment

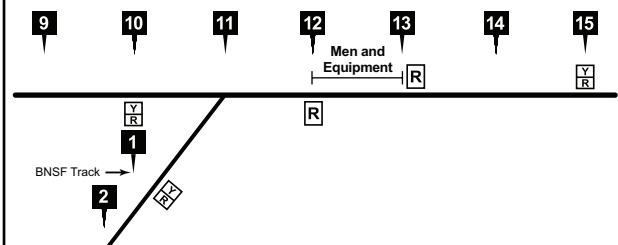


Diagram 15.

Speed Restriction Just Beyond Turnout to Third Main Track

Train crews would determine the track affected by the information contained in their track bulletin.

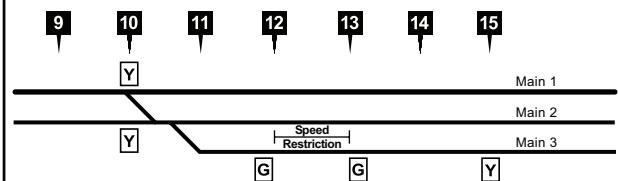


Diagram 16.

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.

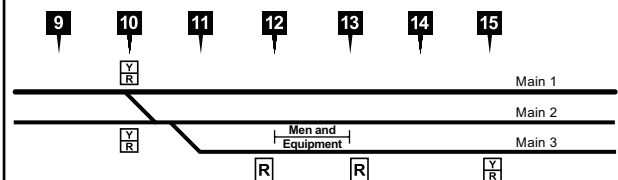


Diagram 17.

Speed Restriction Just Beyond Turnout to Main 1

Train crews would determine the track affected by the information contained in their track bulletin.

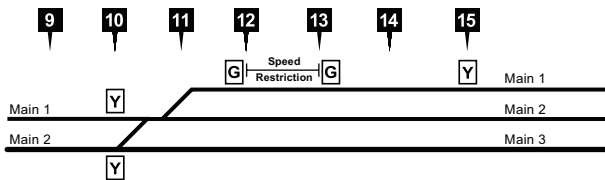


Diagram 18.

Men and Equipment Just Beyond Turnout to Main 1

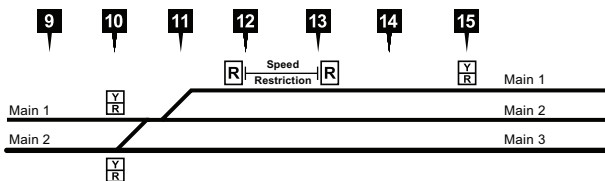


Diagram 19.

Speed Restriction on Multiple Main Track

Train crews would determine the track affected by the information contained in their track bulletin.

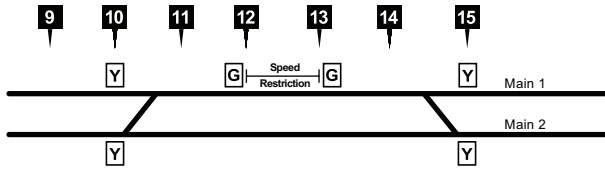


Diagram 20.

Men and Equipment on Multiple Main Track

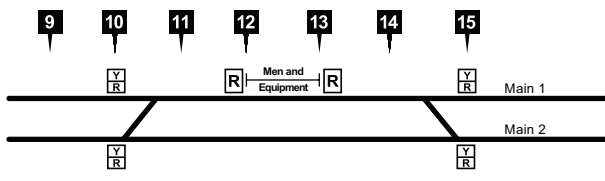


Diagram 21.

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.

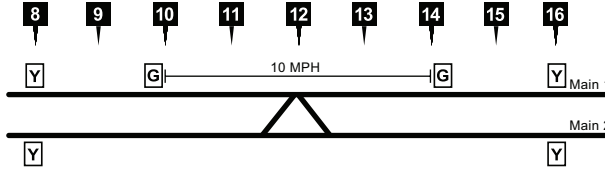


Diagram 22.

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.

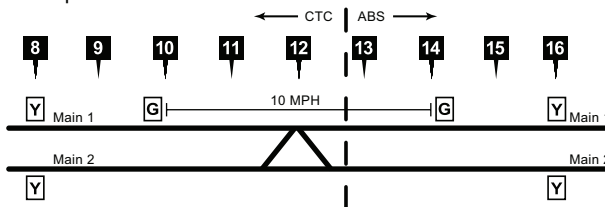


Diagram 23.

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.

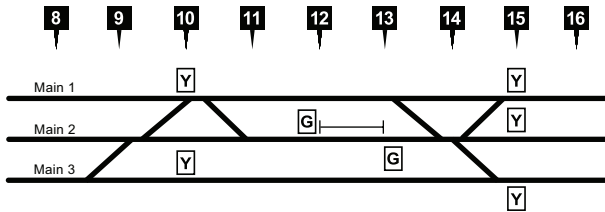


Diagram 24.

Men and Equipment on Multiple Main Tracks (3 or More Main Tracks)

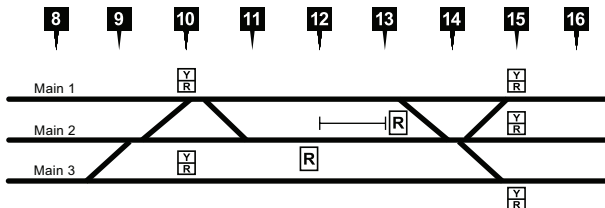


Diagram 25.

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Appendix B - Roadway Signs

Spring Switch Rule 8.9

One-Mile Switch

Crossing Signal Start Rule 6.32.2

NO CLEARANCE
No Clearance

NO CLEARANCE

Derail Rule 8.20

TEST MILE **END TEST**

Begin Test Mile and End Test Mile

BEGIN A.B.S. **END A.B.S.**

Begin and End A.B.S.

WESTWARD SIDING

WESTWARD SIDING or Eastward Siding Rule 6.28.1

TRACK AND TIME POINT 1

Defines Limits of Track & Time

Crest of Grade
Black on yellow reflective background

BEGIN C.T.C. **END C.T.C.**

Begin and End C.T.C.

NO ENGINE BEYOND THIS POINT

No Engine Beyond This Point

END DOUBLE TRACK

End Double Track

STOP **STOP**

STOP Signs

RRX 800 FT.

Railroad Crossing Rules 6.16 and 6.18

END OF OVERLAP **SIGNAL OVERLAP**

End of Overlap Rule 9.21

Signal Overlap Rule 9.21

Flanger

R

Restricted Limits Rule 6.14

J 800 FT.

Junction Rule 6.18

FP Yellow

Fouling Point

Y

Yard Limits Rule 6.13

DRAW 1-MILE

One-Mile Draw Span Rule 6.16

Track Flag

Track Flag * Red

* 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

POS 1 MILE

Protect Open Switch
Check track warrant. Switch may be open 1 mile ahead.

POS 2 MILES

Protect Open Switch
Check track warrant. Switch may be open 2 miles ahead.

OS Red

Protect Open Switch
This switch left open when visible.

25 ATS

Inert ATS Inductors

W

Whistle Board/Crossing Sign

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

REMOTE CONTROL ZONE ACTIVATED **REMOTE CONTROL ZONE 1**

RCZ 1

RCZ1 Switch Stand Target

Example of an RCZ Sign attached to a switch stand below the target

Remote Control Zone (RCZ) Signs

Appendix C - Division/Subdivision Index

Division Subdivisions

California Alameda Corridor
 Bakersfield
 Cajon
 Harbor
 Lucerne Valley
 Mojave
 Needles
 San Bernardino
 San Diego
 Stockton

Chicago Aurora
 Barstow
 Beardstown
 Brookfield
 Chicago
 Chillicothe
 Des Moines
 Marceline
 Mendota
 Ottumwa
 Peoria
 St. Croix
 Thomas Hill
 Yates City

Heartland Afton
 Amory
 Bayard
 Birmingham
 Cherokee
 Council Bluffs
 Creston
 Cuba
 Fort Scott
 Hannibal
 Napier
 Omaha
 River
 St. Joseph
 Thayer North
 Thayer South

Kansas Arkansas City
 Boise City
 Dalhart
 Douglass
 Emporia
 Hereford
 La Junta
 Panhandle
 Plainview
 Slaton
 Strong City
 Topeka
 Twin Peaks

Montana Big Sandy
 Broadview
 Choteau
 Circle
 Colstrip
 Copper City
 Crosby
 Dickinson
 Fairfield
 Forsyth
 Ft. Benton
 Glasgow

Montana (cont'd) Great Falls
 Grenora
 Helena
 Hettinger
 Hi Line
 Kootenai River
 Laurel
 Lewistown
 Milk River
 Mobridge
 Niobe
 Sarpy Line
 Scobey
 Sidney Line
 Sweet Grass
 Valier

Northwest Bellingham
 Cherry Point
 Coeur d'Alene
 Columbia River
 Fallbridge
 Gateway
 Kettle Falls
 Lakeside
 New Westminster
 Oregon Trunk
 Scenic
 Seattle
 Spokane
 Stampede
 Sumas
 Yakima Valley

Powder River Akron
 Angora
 Beatrice
 Bellwood
 Big Horn
 Black Hills
 Brush
 Butte
 Campbell
 Canyon
 Casper
 Cody
 Dutch
 Front Range
 Giltner
 Golden
 Hastings
 Lester
 Orin
 Pikes Peak
 Pueblo
 Ravenna
 Raton
 Sand Hills
 Spanish Peaks
 Valley
 Wymore

Red River Avarad
 Bay City
 BBRX
 Chickasha
 Conroe
 Creek
 DFW

Red River (cont'd)..... Ft. Worth
 Galveston
 Houston
 Lafayette
 Lampasas
 Longview
 Madill
 Mykawa
 Plainview
 Red River Valley
 Red Rock
 Slaton
 Silsbee
 Sooner
 Venus
 Wichita Falls

Southwest Clovis
 Coronado
 Defiance
 El Paso
 Gallup
 Glorieta
 Lee Ranch
 Phoenix
 Seligman
 Springerville

Twin Cities Aberdeen
 Allouez
 Appleton
 Brainerd
 Browns Valley
 Canton
 Casco
 Clifford Line
 Corson
 Devils Lake
 Drayton
 Glasston
 Grand Forks
 Hanley Falls
 Hannah
 Hib Tac
 Hillsboro
 Hinckley
 Jamestown
 KO
 Lakes
 Madison
 Marshall
 Mayville
 Midway
 Mitchell
 Monticello
 Moorhead
 Morris
 Noyes
 O'Neill
 Prosper
 Rolla
 Sioux City
 St. Paul
 Staples
 Warwick
 Watertown
 Wayzata
 Westhope
 Zap Line

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Subdivision Index

Subdivision	Division				
Aberdeen.....	Twin Cities	Douglass.....	Kansas	Napier.....	Heartland
Afton.....	Heartland	Drayton.....	Twin Cities	Needles.....	California
Akron.....	Powder River	Dutch.....	Powder River	New Westminster.....	Northwest
Alameda Corridor.....	California	El Paso.....	Southwest	Niobe.....	Montana
Allouez.....	Twin Cities	Emporia.....	Kansas	Noyes.....	Twin Cities
Amory.....	Heartland	Fallbridge.....	Northwest	Omaha.....	Heartland
Angora.....	Powder River	Fairfield.....	Montana	O'Neill.....	Twin Cities
Appleton.....	Twin Cities	Forsyth.....	Montana	Oregon Trunk.....	Northwest
Arkansas City.....	Kansas	Fort Scott.....	Heartland	Orin.....	Powder River
Aurora.....	Chicago	Front Range.....	Powder River	Ottumwa.....	Chicago
Avard.....	Red River	Ft. Benton.....	Montana	Panhandle.....	Kansas
Bakersfield.....	California	Ft. Worth.....	Red River	Peoria.....	Chicago
Barstow.....	Chicago	Gallup.....	Southwest	Phoenix.....	Southwest
Bay City.....	Red River	Galveston.....	Red River	Pikes Peak.....	Powder River
Bayard.....	Heartland	Gateway.....	Northwest	Plainview.....	Red River
BBRX.....	Red River	Giltner.....	Powder River	Prosper.....	Twin Cities
Beardstown.....	Chicago	Glasgow.....	Montana	Pueblo.....	Powder River
Beatrice.....	Powder River	Glasston.....	Twin Cities	Raton.....	Powder River
Bellingham.....	Northwest	Glorieta.....	Southwest	Ravenna.....	Powder River
Bellwood.....	Powder River	Golden.....	Powder River	Red River Valley.....	Red River
Big Horn.....	Powder River	Grand Forks.....	Twin Cities	Red Rock.....	Red River
Big Sandy.....	Montana	Great Falls.....	Montana	River.....	Heartland
Birmingham.....	Heartland	Grenora.....	Montana	Rolla.....	Twin Cities
Black Hills.....	Powder River	Hanley Falls.....	Twin Cities	San Bernardino.....	California
Boise City.....	Kansas	Hannah.....	Twin Cities	San Diego.....	California
Brainerd.....	Twin Cities	Hannibal.....	Heartland	Sand Hills.....	Powder River
Broadview.....	Montana	Harbor.....	California	Sarpy Line.....	Montana
Brookfield.....	Chicago	Hastings.....	Powder River	Scenic.....	Northwest
Browns Valley.....	Twin Cities	Helena.....	Montana	Scobey.....	Montana
Brush.....	Powder River	Hereford.....	Kansas	Seattle.....	Northwest
Butte.....	Powder River	Hettinger.....	Montana	Seligman.....	Southwest
Cajon.....	California	Hi Line.....	Montana	Sidney Line.....	Montana
Campbell.....	Powder River	Hib Tac.....	Twin Cities	Silsbee.....	Red River
Canton.....	Twin Cities	Hillsboro.....	Twin Cities	Sioux City.....	Twin Cities
Canyon.....	Powder River	Hinckley.....	Twin Cities	Slaton.....	Red River
Casco.....	Twin Cities	Houston.....	Red River	Sooner.....	Red River
Casper.....	Powder River	Jamestown.....	Twin Cities	Spanish Peaks.....	Powder River
Cherokee.....	Heartland	Kettle Falls.....	Northwest	Spokane.....	Northwest
Cherry Point.....	Northwest	KO.....	Twin Cities	Springerville.....	Southwest
Chicago.....	Chicago	Kootenai River.....	Montana	St. Croix.....	Chicago
Chickasha.....	Red River	La Junta.....	Kansas	St. Joseph.....	Heartland
Chillicothe.....	Chicago	Lafayette.....	Red River	St. Paul.....	Twin Cities
Choteau.....	Montana	Lakes.....	Twin Cities	Stampede.....	Northwest
Circle.....	Montana	Lakeside.....	Northwest	Staples.....	Twin Cities
Clifford Line.....	Twin Cities	Lampasas.....	Red River	Stockton.....	California
Clovis.....	Southwest	Laurel.....	Montana	Strong City.....	Kansas
Cody.....	Powder River	Lee Ranch.....	Southwest	Sumas.....	Northwest
Coeur d'Alene.....	Northwest	Lester.....	Powder River	Sweet Grass.....	Montana
Colstrip.....	Montana	Lewistown.....	Montana	Thayer North.....	Heartland
Columbia River.....	Northwest	Longview.....	Red River	Thayer South.....	Heartland
Conroe.....	Red River	Lucerne Valley.....	California	Thomas Hill.....	Chicago
Copper City.....	Montana	Madill.....	Red River	Topeka.....	Kansas
Coronado.....	Southwest	Madison.....	Twin Cities	Twin Peaks.....	Kansas
Corson.....	Twin Cities	Marceline.....	Chicago	Valier.....	Montana
Council Bluffs.....	Heartland	Marshall.....	Twin Cities	Valley.....	Powder River
Creek.....	Red River	Mayville.....	Twin Cities	Venus.....	Red River
Creston.....	Heartland	Mendota.....	Chicago	Warwick.....	Twin Cities
Crosby.....	Montana	Midway.....	Twin Cities	Watertown.....	Twin Cities
Cuba.....	Heartland	Milk River.....	Montana	Wayzata.....	Twin Cities
Dalhart.....	Kansas	Mitchell.....	Twin Cities	Westhope.....	Twin Cities
Defiance.....	Southwest	Mobridge.....	Montana	Wichita Falls.....	Red River
Des Moines.....	Chicago	Mojave.....	California	Wymore.....	Powder River
Devils Lake.....	Twin Cities	Monticello.....	Twin Cities	Yakima Valley.....	Northwest
DFW.....	Red River	Moorhead.....	Twin Cities	Yates City.....	Chicago
Dickinson.....	Montana	Morris.....	Twin Cities	Zap Line.....	Twin Cities
		Mykawa.....	Red River		

Speed Tables

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