BROTHERHOOD OF LOCOMOTIVE ENGINEERS AND TRAINMEN

A DIVISION OF THE RAIL CONFERENCE
INTERNATIONAL BROTHERHOOD OF TEAMSTERS

SAFETY TASK FORCE

INDEPENDENCE, OHIO

BEFORE THE NATIONAL TRANSPORTATION SAFETY BOARD

NTSB Accident Number: RRD21MR017

Class: Major

September 25, 2021

Proposed findings, probable cause, and safety recommendations, in connection with the derailment of Amtrak Passenger Train No. 7, near Joplin, Montana

S. J. Bruno, BLET-Safety Task Force, National Chairman
B.H. Fransen, BLET-Safety Task Force, Party Spokesman

Final Submission

The Brotherhood of Locomotive Engineers and Trainmen ("BLET"), a division of the International Brotherhood of Teamsters ("IBT"), was granted party status by the Board in the above-referenced investigation. BLET respectfully submits these proposed, findings, probable cause, and safety recommendations to the Board for consideration.

Accident Synopsis

On September 25, 2021, at approximately 3:56 p.m. Mountain Standard Time ("MST") [1], Amtrak Passenger Train No. 7 derailed near Joplin, Montana. A total of eight (8) railcars were derailed. The train consisted of two (2) locomotives and ten (10) cars. There were 141 passengers, four (4) operating crewmembers, and nine (9) on-board personnel for a total of 154 people on the train. Three (3) passengers who were riding in the lounge car were fatally injured [2].

There were an additional twenty-eight (28) passengers and crew members transported and treated for injuries, with eleven (11) requiring hospitalization. According to local weather reports, the weather was partly cloudy and approximately 85 ° F.

Figure 1 – Aerial photo of derailment *(Photo courtesy of Fox 4 – WDAF TV)*

[1] All times throughout this report will be Mountain Standard Time.
[2] A "lounge car" (sometimes referred to as a buffet lounge, buffet car, club car or grill car) is a type of passenger car on a train, in which riders can purchase food and drinks.

Accident Narrative

Train Information:

Amtrak Train No. 7 had two (2) locomotives and ten (10) passenger cars, with the Amtrak ("ATK") No. 74 being used as the controlling locomotive. The train was 988 feet in length and weighed 1,069 tons.

Amtrak Train No. 7 operates between Chicago, Illinois and Seattle, Washington. The rear four (4) cars of the train are removed at Spokane, Washington. These four (4) cars continue to Portland, Oregon as Amtrak Train No. 27, with the remaining portion of the train continuing towards its final destination of Seattle, Washington. Amtrak Train No. 7 operating crew consisted of a Locomotive Engineer, Assistant Locomotive Engineer, Conductor, and Assistant Conductor.

Method of Operation:

Amtrak Train No. 7 was operating on the Hi Line Subdivision on the Montana Division of the Burlington Northern Santa Fe ("BNSF") transportation network.[3] The Hi Line Subdivision extends from milepost ("MP") 964.8 in Havre, Montana to MP 1217.5 in Whitefish, Montana. This Subdivision consists of mostly single main track with multiple siding tracks. Centralized Traffic Control ("CTC") [4] , and the entire Hi Line Subdivision has active Positive Train Control ("PTC")[5] which governs train authority and movements. The maximum authorized speed ("MAS") for passenger trains on this portion of track is 79 miles per hour ("MPH").

Amtrak and BNSF Railway Documents for Train, Yard & Engine Employees ("TY&E"):

Below is the list of the documents governing TY & E employees provided by Amtrak and BNSF Railway for this accident investigation:

[3] See Appendix A at the end of this report for the relevant portions of the BNSF Timetable.
[4] "Centralized Traffic Control" is a signaling system that uses block signal systems to authorize train movements.
[5] "Positive Train Control" is a system of functional requirements for monitoring and controlling train movements and is a type of train protection system.

- General Code of Operating Rules ("GCOR") – 8th Edition - *effective April 1, 2020*
- BNSF Montana Division Timetable No. 2 - *effective April 21, 2021*
- BNSF System Special Instructions No .2 – *effective August 4, 2021*
- BNSF Air Brake and Train Handling Rules No. 7 – *effective February 1, 2018*
- General Track Bulletins for Amtrak Train No. 7

Figure 2 – Photo of derailed railcars *(Photo courtesy of NTSB)*

Movements of Amtrak Train No. 7:

Amtrak Train No. 7's crew went on duty at 8:21 a.m. on September 25, 2021, in Minot, North Dakota. The train crew stated that when they reported for duty, they contacted the BNSF Train Dispatcher for General Track Bulletins and completed a job safety briefing to discuss the upcoming trip.[6] The train departed Minot, North Dakota at 9:06 a.m.

The Locomotive Engineer and Assistant Locomotive Engineer alternated the operation of the train several times between stations over the course of their trip. At Havre, Montana, they alternated for the last time as they began the run to Shelby, Montana. The Locomotive Engineer was operating the train at the time of the accident. Amtrak Train No. 7 was operating on a Clear signal indication (Green) as it approached East Buelow (MP 1014.8). The PTC display showed Clear signals through East Buelow as well.

[6] The BNSF train dispatcher is in Fort Worth, Texas.

Generally, railroad signals indicate to the operating crew, the condition of the track between signals. The length of track between signals is known as a "block". Clear signals, displayed as wayside signals in the field or on a PTC display screen, indicate to the operating crew, that the block ahead is clear of rail traffic, and that the continuity of the rail is unbroken. Unless otherwise restricted, Clear signals authorize the train to operate at the maximum authorized speed.

In this accident the block ahead of Train No. 7 was clear of rail traffic and the rail was intact. However, this accident reveals a certain limitation of signal systems. Here, the signal system was incapable of providing a warning of the failing track geometry at milepost 1014.57, which was the primary cause of the derailment.[7]

Signal systems have failed to detect the underlying cause other recent accidents, specifically:

- The January 31, 2018, accident near Crozet, Virginia in which a passenger train was operating on Clear signal indications and struck a garbage truck that had become stranded on a highway crossing directly on the tracks.

- The February 13, 2020, derailment of a CSX loaded bulk commodity train near Draffin, Kentucky. The derailed train had been operating on Clear signals when they encountered a land slide that had washed out the tracks in front of their train.[8]

A review of the event recorder from the Amtrak Train No. 7's lead locomotive (ATK No. 74), establishes that at 3:55 p.m., the throttle handle was in position No. 8 (full power) and the speed of the train was 79 MPH. The Locomotive Engineer had just verified the Clear signal at East

[7] In addition, signal systems in general do not convey information to the operating crew about the condition of the underlying infrastructure of the track and/or non-rail traffic or obstructions along the right of way. For example, washed out track bed, compromised bridge structures, rockslides, or highway traffic on tracks are not detectable by the regulated signal systems. Existing signal systems are essential blind to such occurrences. Indeed, if the rail remains intact, the signal system will convey a proceed indication to the operating crew.

The Rail Safety Improvement Act of 2008 ("RSIA") mandated the Secretary of Transportation to "…prescribe standards, guidance, regulations, or orders governing the development, use, and implementation of rail safety technology in dark territory". The Act defined dark territory as "…any territory in a railroad system that does not have a signal or train control system installed or operational.". The Act further identified seven specific types of appliances to be evaluated and an eighth catch all for other similar technologies. FRA eventually declined to issue any guidance, regulations, or orders for any appliances in dark territory. (See Appendix E)

[8] Although these accidents did not occur in "Dark Territory" some of the appliances referenced in the RSIA 2008 could have alerted the crew to the hazards sooner and possibly prevented the accidents.

Buelow and checked his speed, when he felt a severe "jerk" to the right, then back to the left, and then back to the right. According to data from the Locomotive event recorder, at that time (15:56:04 in the event recorder log), the train was traveling at 77 MPH when a trainline induced emergency application of the brakes occurred. [9]

As Amtrak Train No. 7 came to a stop, the Locomotive Engineer placed the locomotive's automatic brake valve into the emergency position and called out "emergency, emergency, emergency" on the radio as required by the rules.[10] Event recorder data indicated that after the trainline induced emergency, the portion of Amtrak Train No. 7 that had remained on the rail had traveled 875 feet in nineteen (19) seconds before coming to a complete stop.

One of the purposes of accident investigations is to discover how similar accidents may be prevented in the future. It is merely a matter of time before an undetected infrastructure failure results in another catastrophic accident. Accident prevention in non- signaled territory has been addressed in legislation before. The Rail Safety Improvement Act of 2008 ("RSIA") mandated the Secretary of Transportation to "…prescribe standards, guidance, regulations, or orders governing the development, use, and implementation of rail safety technology in dark territory". The Act defined dark territory as "…any territory in a railroad system that does not have a signal or train control system installed or operational.". The Act further identified seven specific types of appliances to be evaluated and an eighth catch all for other similar technologies. FRA eventually declined to issue any guidance, regulations, or orders for any appliances in dark territory.[11]

We believe it is appropriate for the Federal Railroad Administration to revisit the value of guidance, regulations or orders for currently unregulated appliances, that may mitigate or prevent similar accidents in the future. The scope of such an evaluation should include not only dark territory but also locations where compromised track infrastructure has recurred in the past, especially where passenger operations are frequent.

[9] "Emergency" refers to the emergency application of a train's air brakes. Emergency application of the brakes is caused by the rapid exhaust of the trains brake pipe air system. This action results in maximum braking effort on a train.
[10] See Appendix B.
[11] See Appendix E.

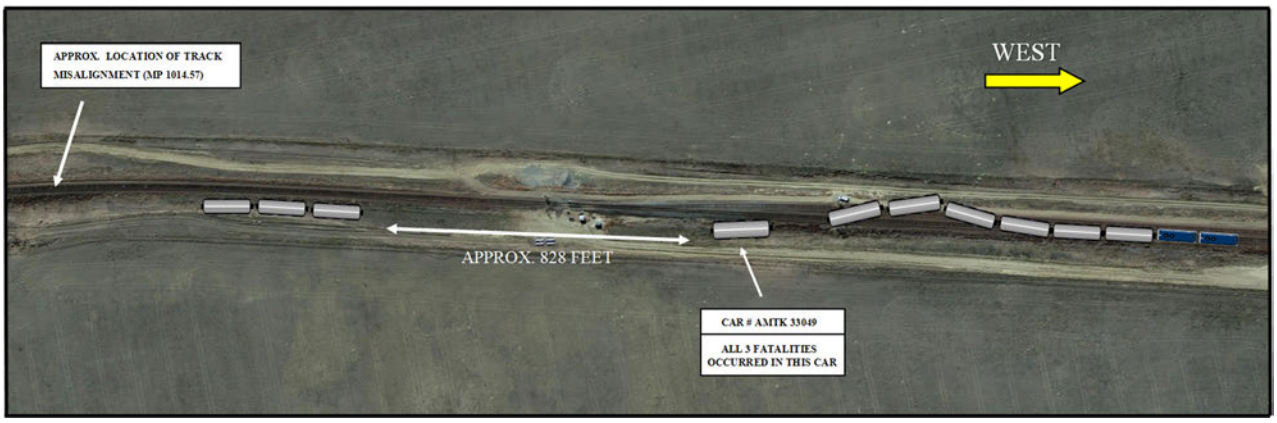

Figure 3 – Schematic of accident site *(Courtesy of BLET)*

Track Image Recorder ("TIR") / Outward Facing Camera Footage:

The investigative group observed the TIR or outward facing camera footage from the lead locomotive of Amtrak Train No. 7 (ATK locomotive No. 74), as well as outward facing camera footage from two (2) BNSF trains that traveled through the area prior to Amtrak Train No. 7.

The first footage was from eastbound BNSF Q PTLCHC3 23, which traversed the area at approximately 2:47 p.m. while traveling at a speed of 35 MPH. At approximately MP 1014.5 a misalignment in the track was recorded. As the train traversed the misaligned track there was a lateral rocking of the locomotive that was apparent.

The second footage was from the eastbound BNSF Z SSECHC7 24, which traversed the area at approximately 2:30 p.m. traveling at 40 MPH. The footage verified the misaligned track. When the train traversed the track misalignment, the train experienced similar lateral movement.

Lastly, the group observed the outward facing camera footage from Amtrak Train No. 7. which shows Amtrak Train No. 7 approaching the same area and, it was apparent that the misalignment had worsened. While attempting to pass over the area, Amtrak Train No. 7 shook laterally to the right, then left, then right again. At this point the train began to slow, and eventually stopped.

Passenger trains on freight tracks has been a safety concern of the industry for years. It is apparent that the condition of the misaligned rail worsened when the two freight trains passed over the area in the hour preceding the arrival of Amtrak train No. 7 at MP 1014.57. The FRA requires that main track be inspected twice per week with at least one day between the two required inspections. FRA regulations are minimum requirements. In the absence of technology or an appliance that could alert an operating crew to compromised track or its infrastructure, more frequent inspections where regular passenger operations are scheduled over freight tracks is indicated.

Point of Derailment:

The point of derailment ("POD") was measured and confirmed to be at milepost 1014.57 and all eight (8) of the derailed railcars came to rest to the west of that approximate location.

Figure 4 – Still image taken from the outward facing camera footage from the lead locomotive of Amtrak Train No. 7. This image was taken seconds before the train derailed. *(Photo courtesy of Amtrak)*

Locomotive Event Recorder and Train Handling evaluation:

As part of the investigation, the locomotive event recorder data was reviewed from the following BNSF trains that traversed the area prior to the arrival of Amtrak No. 7:

TIME	DIRECTION OF TRAVEL	TRAIN SYMBOL
6:16:19 a.m.	WEST	Z CHCPTL6 23W
7:00:24 a.m.	EAST	X VAWDYO9 22H
9:20:33 a.m.	EAST	V TACLPC1 22F
10:15:11 a.m.	WEST	G AGMKAL9 22H
10:55:49 a.m.	EAST	Z PTLCHC7 24A
11:56:41 a.m.	EAST	X PASULE9 22H
12:11:01 p.m.	EAST	Q SSECHC1 23A
12:40:18 p.m.	WEST	G PBNVAW9 23A
2:30:50 p.m.	EAST	Z SSECHC7 24A
2:47:19 p.m.	EAST	Q PTLCHC3 23A

These locomotive event recorder data established that the train handling methods utilized by the ten (10) Locomotive Engineers were consistent within the normal operating procedures for the area and excessive braking did not contribute to the misalignment of the rail. However, it is obvious that the weight and length of the two freight trains did exacerbate the misaligned condition of the track.

Additionally, the locomotive event recorder data from the lead locomotive of Amtrak Train No. 7 (ATK No. 74) was reviewed [12] which established: At 3:57:03 p.m., the throttle was in notch No. 8 and the speed of the train was 78 MPH.

- Between 3:57:03 p.m., and 3:57:35 p.m., the Locomotive Engineer changed throttle positions multiple times.

- A train-line induced emergency application of the brakes occurred at 3:57:35 p.m., with the train was traveling at 77 MPH. When the train-line induced emergency brake application occurred, the throttle position was changed from notch No. 8 to notch No. 2.

- At the time of the emergency brake application, the independent brake cylinder pressure began to build, but then shows being released.

- Six (6) seconds after the emergency application of the brakes, the locomotive event

[12] See Appendix C at the end of this report

recorder establishes that the Locomotive Engineer initiated emergency application of the brakes by moving the automatic brake valve handle to the emergency position.

- Nine (9) seconds after the trainline induced emergency, blended braking begins to show up on the locomotive event recorder.[13]

- After the trainline emergency application of the brakes at 3:57:35 p.m., the head end portion of Amtrak Train No. 7 travelled 875 feet in nineteen (19) seconds.

The locomotive event recorder data from the lead locomotive (ATK No. 74) established that the train handling methods utilized by the Locomotive Engineer were within the normal operating procedures for the area and no exceptions were taken.

Post-accident actions by Amtrak Train No. 7's Crew:

Following the accident, the Locomotive Engineer made an emergency call by radio to the BNSF Train Dispatcher and reported that the train had derailed and requested emergency services to respond. The Assistant Locomotive Engineer immediately took steps to turn off the HEP generator.[14] After the HEP generator was disabled, he did a ground inspection of the locomotives to ensure that there were no fuel leaks or any visible damage to the locomotives.

The Locomotive Engineer stated that he remained in the cab of the lead locomotive to maintain radio contact with emergency responders and the BNSF Train Dispatcher. The Locomotive Engineer remained on the train for approximately 2.5 to 3 hours after the accident occurred, relaying communications, and waiting to be relieved. During this time frame, the Assistant Locomotive Engineer, the Conductor, and the Assistant Conductor began evacuation and recovery efforts.

[13] "Blended braking" refers specifically to the use of the train brakes and the dynamic brakes on the locomotive at the same time.
[14] The term "HEP generator" refers to the" head-end power" and is also known as the electric train supply ("ETS"). It is the electrical power distribution system on a passenger train. The power source, usually a locomotive or a generator car is typically located at the front or "head end" of a train, and provides the electricity used for heating, lighting, electrical and other "hotel" needs.

It should also be noted that several passengers left the accident area and found transportation away from the accident. This complicated the tasks of determining the extent of the injuries by first responders

Crew Information:

Locomotive Engineer:

The Locomotive Engineer was a 44-year-old male who began his railroad career in 2010. He had been working as a Locomotive Engineer for approximately five (5) years. His last physical had been performed in June of 2021 and he was determined to be fit for duty.

Assistant Locomotive Engineer:

The Assistant Locomotive Engineer was a 50-year-old male who was hired by Amtrak in 2007. He was promoted to Locomotive Engineer in 2016. His last physical had been performed in March of 2021 and he was determined to be fit for duty.

Conductor:

The Conductor was a 61-year-old male who was hired out by Amtrak in 2004. He began his career as an Assistant Conductor and had been working as a promoted Conductor for the last ten (10) years. He has worked his entire career in Shelby, Montana and he was determined to be fit for duty.

Assistant Conductor:

The Assistant Conductor began his railroad career in 2007. He had been working as a Brakeman on Amtrak for the last two (2) years and was determined to be fit for duty.

Post-Accident Toxicological Testing:

The toxicological specimens of the train crew of Amtrak Train No. 7 were sent for post-accident testing which determined all four (4) employees were negative for alcohol and drugs.

Cell Phone Records:

The mobile phone records of the train crew of Amtrak Train No. 7 were obtained and reviewed. Their phone records indicated that there was no record of phone activities for the Locomotive Engineer, Assistant Locomotive Engineer, and Assistant Conductor in the time frame of interest. The mobile phone records for the Conductor indicated that there was an outgoing text message sent at 3:38 p.m.

Operational Testing and Internal Oversight:

On December 4, 2015, President Obama signed into law the Fixing America's Surface Transportation ("FAST") Act. Following enactment of the FAST Act, Sec. 11406 (Speed Limit Action Plans),[15] each railroad carrier that provides intercity rail passenger transportation or commuter rail passenger transportation was required to survey it's entire system and identify each main track location where there is a reduction of more than twenty (20) MPH from the approach speed to a curve, bridge, or tunnel as well as the maximum authorized operating speed for passenger trains at that curve, bridge, or tunnel. After identifying the locations, the carrier was required to submit an action plan. The action plan detailed the locations, described the appropriate actions to enable warning and enforcement of the MAS for passenger trains at each location, as well as provided target dates and/or milestones for implementing each appropriate action described. The requirements contained within the FAST Act led to increased speed related operational testing on passenger operations.

Also, because of the FAST Act requirements, Amtrak conducts tests and observations of its employees in accordance with federal regulations to determine their level of compliance with railroad operating rules. Investigators reviewed Amtrak's efficiency testing program and requested specific data regarding efficiency tests for the train crew of Amtrak Train No. 7

The Amtrak program contains specific information for testing officers to be used when setting up and conducting tests. Federal regulations require that each test be described in the program including the means and methods used to conduct the tests. Amtrak has established a program of operational testing which contains the required information by regulation which is needed to

[15] See Appendix D at the end of this report

maintain consistency among its testing officers. A review of the efficiency testing results for the crew of Amtrak No. 7 revealed the following:

- During the calendar year 2021, the Locomotive Engineer was operationally tested eighty-two (82) times, of which twenty-two (22) of those tests were for compliance with maximum authorized train speeds and other speed restrictions. The Locomotive Engineer was found to be in compliance during all of the eighty-two (82) operational tests and zero (0) failures were noted.

- During the calendar year 2021, the Assistant Engineer was operationally tested sixty-two (62) times, of which nine (9) of those tests were for compliance with maximum authorized train speeds and other speed restrictions. The Assistant Engineer was found to be in compliance during all of the sixty-two (62) operational tests and zero (0) failures were noted.

- During the calendar year 2021, the Conductor was operationally tested twenty-one (21) times and the Assistant Conductor was operationally tested thirty-two (32) times. Both employees were found to be in compliance during the operational testing conducted in calendar year 2021 and zero (0) failures were noted.

Probable Cause

The Brotherhood of Locomotive Engineers and Trainmen concludes that the probable cause of the September 25, 2021, derailment of Amtrak Passenger Train No. 7 was the track misalignment at MP 1014.57. Amtrak Train No. 7 was travelling at the maximum authorized speed of 79 MPH when it approached the area of the track misalignment and failed to pass through the affected area safely.

Proposed Recommendations

To BNSF:

1. Increase the frequency for main track inspections where regular passenger operations are scheduled over BNSF tracks until regulations or guidance are published for appliances that could alert an operating crew to compromised track or its infrastructure.

To Amtrak:

1. Enhance the training program to include the post-accident actions of the crew of Amtrak Train No. 7 as an example.
2. Develop and implement a program to ensure all emergency medical equipment (rubber medical gloves, gauze, etc.) is supplied in sufficient quantities to treat multiple passengers in case of emergency.
3. Expand Emergency training to inform operating crews and on board employees of the behavior of the passengers following this accident.

To the Federal Railroad Administration:

1. Implement a rule making to revisit the value of guidance, regulations or orders for currently unregulated appliances, that may mitigate or prevent similar accidents in the future such as;
    - switch position monitoring devices or indicators
    - radio, remote control, or other power-assisted switches;
    - hot box, high water, or earthquake detectors;
    - remote control locomotive zone limiting devices;
    - slide fences;
    - grade crossing video monitors;
    - track integrity warning systems; and
    - other similar rail safety technologies
2. Until regulations or guidance are published for appliance that could alert an operating crew to compromised track or its infrastructure, increase the minimum required frequency for main track inspections where regular passenger operations are scheduled over freight tracks.

CERTIFICATE OF SERVICE

I certify that on March 14, 2022 I have electronically served upon Mr. James Southworth (southwj@ntsb.gov), Investigator in Charge, National Transportation Safety Board, a complete and accurate copy of these proposed findings regarding the September 25, 2021 derailment of Amtrak Train No. 7 near Joplin, MT (NTSB Docket No. RRD21MR017). An electronic copy of same was also forwarded to the individuals listed below in this certificate of service, as required by 49 CFR § 845.27 (Proposed Findings)

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Respectfully submitted,

[redacted]

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Appendix A

TOC Home

WESTWARD ↓	Length of Siding (Feet)	Station Nos.	Mile Post	Siding Switch	Hi Line Subdivision MAIN LINE STATIONS	Rule 4.3	Type of Oper.	Line Seg.	Miles to Next Stn.	EASTWARD ↑
End Hi Line Sub MT, MP 964.8 / Begin Milk River Sub MT, MP 964.8 Information for Pacific Jct is located in the Milk River sub timetable.										
	8,431	01356	971.0	969.7 971.5	BURNHAM		CTC		9.0	
	8,493	01365	980.0	979.0 980.7	KREMLIN				8.9	
		01375	988.9		GILDFORD		CTC 2MT		5.3	
			994.2		HINGHAM CENTER	X			5.5	
			999.7		HINGHAM WEST	X(2)			2.3	
	8,520	01387	1002.0	1001.3 1003.1	RUDYARD (MT2)				4.7	
			1006.7		INVERNESS	X(2)			5.2	
			1011.9		JOPLIN				4.1	
	9,580	01400	1016.0	1014.8 1016.7	BUELOW		CTC		6.2	
			1022.2		CP 1022				1.8	
	8,460	01407	1024.0	1023.1 1024.8	CHESTER				12.0	
	8,585	01420	1036.0	1034.7 1036.5	LOTHAIR				11.0	
	8,480	01432	1047.0	1046.3 1048.1	DEVON				10.0	
	8,980	01441	1057.0	1056.1 1058.0	DUNKIRK				8.5	
			1065.5		SHELBY EAST				0.3	
		01451	1065.8		SHELBY Adj. Sub: Great Falls, MP 1065.6	BJTX			1.2	
			1067.0		SHELBY CENTER		CTC 2MT		1.2	
			1068.2		TETON Adj. Sub: Sweet Grass, MP 1068.2	X(2)			19.9	
			1088.1		CUT BANK EAST	X(2)			1.9	
		01475	1090.0		CUT BANK	B	CTC		0.6	
			1090.6		CUT BANK CENTER		CTC 2MT		0.4	
			1091.0		CUT BANK WEST				15.5	
		01491	1106.5		PIEGAN	X(2)		36	9.9	
		01501	1116.4		BLACKFOOT	T			6.6	
	11,075	01508	1123.0	1121.9 1124.1	BROWNING		CTC		9.0	
		01517	1132.0		SPOTTED ROBE		CTC 2MT		4.1	
			1136.1		GRIZZLY				1.9	
	4,513	01522	1138.0	1137.3 1138.4	GLACIER PARK	T	CTC		6.0	
	9,591	01525	1144.0	1142.7 1145.0	BISON				5.8	
		01534	1149.8		SUMMIT				1.9	
			1151.7		MARIAS	T	CTC 2MT		6.0	
		01540	1157.7		BLACKTAIL				7.5	
		01548	1165.2		JAVA EAST		CTC		1.0	
			1166.2		JAVA WEST				4.1	
		01552	1170.3		ESSEX	TX(2)	CTC 2MT		2.9	
		01558	1173.2		PINNACLE		CTC		4.3	
			1177.5		PAOLA				7.7	
		01568	1185.2		RED EAGLE	TX	CTC 2MT		2.7	
			1187.9		NYACK				8.1	
	10,257	01578	1196.0	1195.0 1197.1	BELTON		CTC		7.0	
	10,237	01586	1203.0	1202.3 1204.3	CORAM				5.7	
		01590	1208.7		CONKELLEY				3.0	
		01593	1211.7		COLUMBIA FALLS Adj. Sub: Kalispell, MP 1211.7	JT X(2)	CTC 2MT		1.5	
			1213.2		CP 1213.1	X(2)			4.3	
		01601	1217.5		WHITEFISH	BT X(2)			250.5	
End Hi Line Sub MT, MP 1217.5 / Begin Kootenai River Sub MT, MP 1217.5 Information for Whitefish is located in the Kootenai River sub timetable.										

Mountain Continental Time in effect on Hi Line Subdivision

Radio Call-In		
Radio Channel 076 in service Pacific Jct to Cut Bank		
Havre - 27(X)	Rudyard - 28(X)	Lothair - 29(X)
Shelby - 30(X) Great Falls YM - 306	Cut Bank - 31(X) Great Falls YM - 316	
Radio Channel 076 in service Cut Bank to W Whitefish		
Piegan - 42(X)	Browning - 32(X)	Glacier Park - 34(X)
Summit - 35(X)	Blacktail - 36(X)	Java - 46(X)
Essex - 37(X)	Pinnacle - 47(X)	Red Eagle - 38(X)
Tunnel 3.7 - 48(X)	Belton - 39(X)	Coram - 49(X)
Conkelley - 50(X)		
Radio Channel 070 in service Columbia Falls / Whitefish		
Columbia Falls - 41(X)		
Radio Channel 087 in service at Whitefish Yard		
Glacier DISPR - 51(X)	Boyer E DISPR - 41(X)	
Emergency - Call 911		
Dispatcher X=0, RFE Desk X=1, Mechanical Desk X=2, Customer Support X=3, Railroad Police X=4, Detector Desk X=5, PTC Desk X=9		

Dispatcher Information

Pacific Jct to Cut Bank—817-867-7035, Fax 817-352-7014
Cut Bank to Whitefish—817-867-7069, Fax 817-352-7015

1. Speed Regulations

See Item 1 of the System Special Instructions for additional speed restrictions.

1(A). Speed—Maximum

Main Track	Psgr	Frt * Under 100 TOB	Frt * 100 TOB & Over
MP 964.8 to MP 1217.5	79	60	55

Exception to System Special Instructions, Item 1, Speed Restrictions: Trains consisting entirely of loaded double stack equipment may operate at 60 MPH if under 105 TOB.

* Work trains engaged in snow service may observe the Snow Plow speed when instructed by the MW EIC. These trains may observe, and PTC will enforce the Passenger Speed on Form A Track Bulletins but not to exceed 45 mph.

	Snow Plow
MP 964.8 to MP 1217.5	45

1(B). Speed—Permanent Restrictions

	Psgr	Frt	Snow Plow
MP 964.8 to MP 967.2	55	50	45
MP 992.6 to MP 993.3	70	60	45
MP 1023.0 to MP 1022.4, EWD, HER	70	60	45
MP 1040.3 to MP 1046.1	70	60	45
MP 1062.6 to MP 1065.1	70	60	45
MP 1065.1 to MP 1066.1	45	45	45
MP 1066.1 to MP 1068.7	65	45	45
MP 1068.7 to MP 1075.1	55	50	45
MP 1080.1 to MP 1082.4	70	60	45
MP 1082.4 to MP 1083.1	55	50	45
MP 1083.1 to MP 1090.0	70	60	45
MP 1090.0 to MP 1090.6	30	30	40
MP 1090.6 to MP 1095.0	50	45	45
MP 1111.4 to MP 1112.7	55	50	45
MP 1117.2 to MP 1122.4	70	60	45
MP 1122.4 to MP 1126.9	55	50	45

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	Psgr	Frt	Snow Plow
MP 1126.9 to MP 1135.1	65	50	45
MP 1135.1 to MP 1138.4	45	40	45
MP 1138.4 to MP 1140.7	35	30	45
MP 1140.7 to MP 1145.7	50	45	45
MP 1145.7 to MP 1151.3	40	35	45
MP 1151.3 to MP 1166.5	30	25	40
MP 1151.7 to MP 1153.0, WWD, HER	30	15 *	40
MP 1166.5 to MP 1169.1	35	30	45
MP 1169.1 to MP 1173.7	45	40	45
MP 1173.7 to MP 1180.7	50	40	45
MP 1180.7 to MP 1184.2	40	35	45
MP 1184.2 to MP 1185.0	60	45	45
MP 1188.2 to MP 1190.2	50	45	45
MP 1190.2 to MP 1195.9	45	40	45
MP 1195.9 to MP 1204.4	60	50	45
MP 1204.4 to MP 1207.3	55	50	45
MP 1207.3 to MP 1208.9	40	35	45
MP 1208.9 to MP 1210.8	70	60	45
MP 1210.8 to MP 1212.9	70	45	45
MP 1212.9 to MP 1217.5	70	60	45

* The 15 MPH head end restriction is for balance braking conditioning purposes only for the descending grade. From April through October this restriction does not apply to trains under 105 TOB. This restriction is not enforced by PTC.

1(C). Speed—Sidings and Main Track Switches and Turnouts

Trains and engines must not exceed 10 MPH through turnouts unless otherwise indicated. Trains and engines using sidings must not exceed the siding turnout speed unless otherwise indicated.

	Psgr	Frt		Snow Plow
		Under 100 TOB	100 TOB & Over	
MP 971.0, Burnham, siding turnouts	35	35	35	35
MP 980.0, Kremlin, siding turnouts	35	35	35	35
MP 988.9, Gildford, turnout	50	50	50	45
MP 994.2, Hingham Center, crossovers	35	35	35	35
MP 999.7, Hingham West, crossovers	35	35	35	35
MP 1002.0, Rudyard, siding turnouts	35	35	35	35
MP 1006.7, Inverness, crossovers	40	40	40	40
MP 1011.9, Joplin, turnout	50	50	50	45
MP 1016.0, Buelow, siding turnouts	35	35	35	35
MP 1024.0, Chester, siding turnouts	35	35	35	35
MP 1036.0, Lothair, siding turnouts	35	35	35	35
MP 1047.0, Devon, siding turnouts	35	35	35	35
MP 1057.0, Dunkirk, siding turnouts	35	35	35	35
MP 1065.5, Shelby East, MT1 turnout	35	35	35	35
MP 1068.2, Teton, crossovers	50	50	40	45
MP 1088.1, Cut Bank East, crossovers	35	35	25	35
MP 1090.6, Cut Bank Center, turnout	35	35	25	35
MP 1091.0, Cut Bank West, crossovers	35	35	25	35
MP 1106.5, Piegan, crossovers	35	35	35	35
MP 1116.4, Blackfoot, turnout	50	50	50	45
MP 1123.0, Browning, siding turnouts	40	40	40	40
MP 1132.0, Spotted Robe, turnout	35	35	35	35
MP 1136.1, Grizzly, turnout	35	35	35	35
MP 1144.0, Bison, siding turnouts	35	35	35	35
MP 1149.8, Summit, turnout	35	35	35	35
MP 1165.2, Java East, turnout	30	25	25	30
MP 1166.2, Java West, turnout	30	25	25	30
MP 1170.3, Essex, crossovers	35	35	35	35
MP 1173.2, Pinnacle, turnout	35	35	35	35
MP 1177.5, Paola, turnout	35	35	35	35
MP 1185.2, Red Eagle, crossovers	35	35	35	35
MP 1187.9, Nyack, turnout	50	50	50	45
MP 1196.0, Belton, siding turnouts	35	35	35	35
MP 1203.0, Coram, siding turnouts	35	35	35	35
MP 1208.7, Conkelley, turnout	35	35	35	35
MP 1213.2, CP 1213.1, crossovers	50	50	50	45

1(D). Speed—Other

Trains and engines must not exceed 10 MPH through turnouts unless otherwise indicated. Trains and engines must not exceed 10 MPH on other than main track (GCOR 6.28) unless otherwise indicated.

	Psgr	Frt	
		Under 100 TOB	100 TOB & Over
Shelby Yard, track 2916	5	5	5

2. Bridge and Equipment Weight Restrictions

Maximum Gross Weight of Car

Pacific Jct to Whitefish ..... 143 tons, Restriction A

Location	Track Name	Track No.
Six-axle locomotives and six-axle derricks are not permitted on:		
	Summit Balloon Track	
	Stoltze Lumber Industry Track	

3. Type of Operation

Main Track

MP 964.8 to MP 964.7	CTC, 2MT
MP 964.7 to MP 988.8	CTC
MP 988.8 to MP 1012.0	CTC, 2MT
MP 1012.0 to MP 1065.4	CTC
MP 1065.4 to MP 1090.7	CTC, 2MT
MP 1090.7 to MP 1091.0	CTC
MP 1091.0 to MP 1116.5	CTC, 2MT
MP 1116.5 to MP 1131.9	CTC
MP 1131.9 to MP 1136.1	CTC, 2MT
MP 1136.1 to MP 1149.8	CTC
MP 1149.8 to MP 1165.2	CTC, 2MT
MP 1165.2 to MP 1166.1	CTC
MP 1166.1 to MP 1173.2	CTC, 2MT
MP 1173.2 to MP 1177.5	CTC
MP 1177.5 to MP 1188.0	CTC, 2MT
MP 1188.0 to MP 1208.7	CTC
MP 1208.7 to MP 1217.5	CTC, 2MT

4. Subdivision Specific Rules Information

Safety Overlay Systems in Effect

- Positive Train Control (PTC)
- Hi-Rail Limits Compliance System (HLCS)

Energy Management Systems in Effect

- Trip Optimizer (TO)
  - TO/PTC Interface Mode (TO/PTC-IM)

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GCOR 5.8.2—Within the State of Montana, the locomotive whistle is to be sounded at all public crossings marked with whistle posts, and otherwise in compliance with GCOR 5.8.2.

Locomotive whistles should be sounded at only those private crossings marked with whistle posts and in the other circumstances described in GCOR 5.8.2.

GCOR 6.3—Main Track Authorization - When receiving verbal authority from the Glacier Dispatcher to proceed west to west end of Whitefish (MP 1219.9) crew must ascertain that the Boyer East Dispatcher has also granted authority to proceed west of the control point.

All movements beginning at the eastward control signal at West Whitefish (MP 1219.9) and continuing east will be authorized by the Glacier Dispatcher.

GCOR/MWOR 6.19—When flagging is required, the distance will be 2.0 miles, except from MP 1164.0 to MP 1150.0 when flagging against eastward trains the distance will be 1.0 mile.

GCOR/MWOR 8.3—The normal position of the MT switch Great Falls subdivision main track / Shelby south yard switch is lined and locked for main track movement toward the Hi Line Subdivision.

GCOR/MWOR 8.12—At Shelby the normal position for the east crossover switch Sweet Grass subdivision MT to MT2, Hi Line subdivision is lined and locked for track South No. 1. The target has been changed to reflect green when the switch is lined for South yard and red when the switch is lined for a crossover move to Main 2.

SSI 47(A) 1.— Solid loaded bulk commodity trains operating on the Hi Line subdivision may operate in a 1x3 DP configuration only in the event of a locomotive failure within the lead engine consist. SSI 47(A)1, 8 RPA differential from rear to head-end DP consist does not apply. When required, rear-end helper placement in a 1x3 configuration also applies.

Helping Stalled DP Trains that cannot be assisted from the rear—Stalled trains on the Hi Line Subdivision must add helpers to the head end of the train under the direction of the Road Foreman and operate as outlined below.

ABTH Rules 102.11, 102.11.3 and 102.11.4 are amended only for this specific move to read:

ABTH 102.11 Helper Operations—When adding helpers to the head end of a DP train, the control of all locomotives couple together must be transferred to the DP road locomotive engineer by plugging in the MU cable, whenever practical. When more than one locomotive is attached to a train, the engineer of the DP road locomotive must control the train's air brakes. The engineer in the lead locomotive consist is in charge of train movement. The engineer in charge will communicate with and direct the engineer on the DP road locomotive as follows:

1. Identify speed restrictions and locations where a stop is to be made at least 2 miles in advance.
2. Communicate clearly the name or aspect of signals affecting the train's movement as soon as the signals become visible or audible.

Note: The helper engineer is responsible to comply with whistle requirements and may utilize the ABV handle, even though cut out, to initiate an emergency application of the brakes should any emergency situation occur requiring this action. The speed for a train in this configuration must not exceed 20 MPH.

ABTH 102.11.3, Adding Manned Helper to Head End of Train—When a manned helper is coupled on the head end of the train, the helper engineer will transfer control of the air brakes (and throttle with MU cable) to the road engineer as follows:

1. Before opening angle cocks between the road locomotive and the manned helper, the engineer on the helper locomotive will:
   a. Communicate with the road engineer to determine the brake pipe reduction currently applied to the train.
   b. The helper engineer must make a reduction 2 psi more than the current reduction applied to the train.
   c. After brake pipe exhaust has ceased, cut out the automatic brake valve and place handle in the release position.
   d. Notify the engineer on the road locomotive of the amount of brake pipe pressure reduction.
   e. The independent brake valve must be left cut in on the helper locomotive. Place the independent brake valve handle in the release position and actuate to fully release the brakes on the helper locomotive consist.
2. The engineer on the road locomotive will:
   a. After opening the angle cocks between the helper and the road locomotive, increase the brake pipe reduction to at least 20 psi and the helper crew will observe that the brakes apply on the helper consist by visual inspection.
   b. When the train is ready to depart, perform a DP train check to check brake pipe continuity as brakes are released as per ABTH Rule 105.5. Also observe by visual inspection that the brakes release on the helper consist.

ABTH 102.11.4, Removing Manned Helper From Head End of Train—When a manned helper will be detached from the head end of the train, do the following:

1. The engineer in control of the road locomotive will:
   a. Make not less than a 6 psi brake pipe reduction.
   b. Notify the helper engineer when ready to detach the manned helper after closing the angle cocks between the helper consist and the road locomotive and removing the MU cable
2. The helper engineer will cut in the Automatic Brake Valve after the angle cocks are closed between the consists.
3. After the helper consist is detached, the Engineer on the road locomotive will increase the brake reduction on the train to not less than 15 psi before the train departs.

Job Briefing for Helper Operation—The following job briefing is to be used for helper operations:

1. Dispatcher is to determine the location of helper application, realizing that helper limits should be maintained between Essex and Summit, if at all possible.
2. Dispatcher is to notify train to be helped no later than when the train is passing Paola of information about the location of where helpers are to be applied and specific instructions of how that move is to be made, i.e. train clears electric lock switch or dual control switch or crossover, and who the responsible party is for stopping train movement by helper ID or engine number.
3. Dispatcher will notify helper crew which train is to be helped, including train identification, location of where work is to be done. Information should also be included as to where helpers will be taken off the train to be helped.
4. Helper crews are required to perform job briefings with trains to be helped to clearly define work to be done through positive identification of train ID and location. Job briefing should include where and how helpers will be taken off the train.

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5. Helpers assisting trains must operate from cab forward locomotive nearest the direction of movement. This method of operation should allow for improved train inspections under GCOR 6.29.2.

5. Trackside Warning Devices (TWD)

See System Special Instructions for additional Trackside Warning Device (TWD) information

MP	Device	Recall Code	Notes
Type A. Locations protecting bridges, tunnel or other structures			
1086.3 *	DED	863	WWD
1077.8		317	WWD
1099.0		318	EWD
1131.8	DED	327	WWD
1142.5	DED	358	EWD
1162.1	DED	368	WWD
1170.3	DED	377	
1188.0	DED	388	WWD
1198.9		398	
1208.4		087	EWD
Type B. Locations			
969.7	DED		Exception reporting
986.1	DED		Exception reporting
981.7		278	
991.7	DED		Exception reporting, MT1
997.7	DED		Exception reporting, MT1
1002.3	DED		Exception reporting
1009.3		288	
1014.7	DED		Exception reporting
1030.8		298	
1059.3		308	
1077.8		317	EWD
1086.3	DED	863	EWD
1099.0		318	WWD
1119.1		328	
1125.9	DED		Exception reporting
1131.8	DED	327	EWD
1137.1	DED		Exception reporting
1138.8		347	
1142.5	DED	358	WWD
1145.5		348	
1149.8	DED		Exception reporting
1157.2	DED	367	
1153.9	DED		Exception reporting
1162.1	DED		EWD
1165.1		658	
1166.1	DED		Exception reporting
1175.1		378	
1180.1	DED		Exception reporting
1185.1		858	
1188.0	DED	388	EWD
1192.2	DED		Exception reporting
1204.4	DED		Exception reporting
1208.4		087	WWD
1212.9		408	

* While passing over the detector, a pre-alarm message indicating "You have a defect" will be transmitted if a defect is detected. When this pre-alarm message is transmitted, immediately stop the train consistent with good train handling.

If train is stopped on top of the detector, a post train alarm message will be transmitted summarizing defect(s) detected followed by "out". Upon moving the train, defect detection will continue for the remainder of the consist. Additional defects may be identified and transmitted with invalid axle designation. Inspect remainder of the train from the last reported defect.

6. FRA Excepted Track—None

7. Special Conditions

Shelby—All trains must announce arrivals to Shelby westward at Peavey Elevator and eastward at Teton. Train announcement will include locomotive number direction and location. Signs are placed at Peavey Elevator and both sides at Teton.

When staging trains on South One at Shelby, Eastbound trains must stop across from the South 2/3 Switch and the rear of Westbound trains must clear the east end of the South 2/3 Switch to allow access to manual crossover from Main 2 to Main 1 Shelby Center - Shelby East.

The house track switch must be left lined for the house track when not in use. This switch provides derail protection to the main track from tracks 3, 4, and 5.

The normal position for the east loop track switch and the east leg of the wye switch located on the Butte Pass is lined and locked for the Loop Track.

Track 2949 (north leg of the wye) is restricted to 10 cars or less. No coal cars, loaded or empty, are allowed on this track. No locomotives are allowed on Track 2985.

Columbia Falls—Trains from the Kalispell Subdivision must not enter the main track on the Hi Line Subdivision until permission is received from train dispatcher.

Whitefish—Amtrak trains will receive a new General Track Bulletin with new track bulletins at Whitefish.

When road crews come on-duty at Whitefish, they will use the following process:

1. Inform the dispatcher they are on the property using intercom in on-duty building.
2. Receive a General Track Bulletins from the dispatcher following notification in number 1 above.
3. Board train and notify the dispatcher when they are prepared to depart.

Road crews arriving at Whitefish on trains that do not pickup or set out at Whitefish will leave a copy of their train list (wheel report) on the engineer's console of the lead locomotive.

To avoid blocking road crossings, eastward trains must not pass State Park Crossing without dispatcher permission. AMTK is exempt from stopping at the State Park crossing for instructions from the dispatcher due to there being no footage issue if stopping at West Whitefish.

Westward trains departing or working at Whitefish must make every effort not to block the crossing at MP 1220.2 for more than 10 minutes.

Eastward trains at Whitefish can change crews at the Shanty when both the inbound / outbound crews and Glacier Dispatcher have a clear understanding that the outbound crew is ready to go and the crew change can be accomplished in 10 minutes or less, if not the inbound crew must pull the train down to the east end.

Whitefish Fueling Facility—TY&E employees will not deliver or receive their power directly at the fueling facility. Power inbound to the fueling facility will be tied up on the Old Fuel Track. Outbound power will not be boarded until Mechanical Department personnel have moved it off the fueling facility.

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Work Train Instructions—These instructions apply to all work trains operating on the Hi Line Subdivision. All mountain grade train handling rules outlined under ABTH Rule 103.7 apply to work trains. All movements, including switching movements, must be made with the air brakes on all cars being handled cut in and charged. All cars left standing on the main track (in addition to securing with hand brakes) will be left in emergency when locomotive is detached.

Mountain Grade Operation—Air Brake and Train Handling Rules for mountain grade operation apply on mountain grade between Summit MP 1151.0 and Java East MP 1165.2. Eastward trains must not exceed 11,500 tons.

Ruling grade descending westward is 1.8.

Heavy grade descending eastward between MP 1146.0 and MP 1141.0 (Bison) is 1.2.

The maximum number of powered axles in head end consist ascending mountain grades must not exceed 36.

Recommended minimum HPT for 1.8% grade:
- Conventional trains may ascend mountain grade with 2.3 HPT
- DP/Helper trains 2.0 HPT

For exceptions to the above contact local supervisor.

Dynamic brake requirements for westward freight trains, MP 1151 to MP 1165—Before descending the grade westward, Summit to Java West, MP 1151 to MP 1165, it must be known that the locomotive consist(s) has the minimum number of operative axles of dynamic brake. If train does not meet the minimum requirement as outlined below, train must not proceed. Helper consist may be added to meet this requirement. For the purpose of this rule, the weight of locomotives with inoperative brakes is to be included in train's total trailing tonnage. Dynamic brake limitation is now 28 axles per consist for all trains on BNSF, per Air Brake and Train Handling Rule 103.2.1, Dynamic brake rate for each locomotive may be found in the BNSF System Special Instructions 2(B).

Operative Axles of Dynamic Brake	Tons Per Operative Brake						
Total Trailing Train Tonnage	85 or less	86 to 95	96 to 105	106 to 115	116 to 125	126 to 135	136 & above
4,000 or less	4	4	6	6	8	8	10
4,001 to 5,000	6	6	8	8	10	10	12
5,001 to 6,000	10	10	10	10	12	12	14
6,001 to 7,000	10	10	10	12	14	14	16
7,001 to 8,000	10	10	12	14	16	18	20
8,001 to 9,000	10	10	12	14	16	18	20
9,001 to 10,000	10	10	12	16	18	20	22
10,001 to 12,000	10	10	14	18	20	22	24
12,001 to 14,000	10	10	16	20	24	26	28
14,001 & above	10	12	18	22	26	28	32

EXCEPTION:

In reference to the Dynamic Brake Chart

1. Unit Bulk commodity trains (coal, grain, taconite, potash, etc) may be operated above 14,000 tons and 125 TOB with a minimum of 24 axles of Dynamic Brakes provided total trailing tonnage does not exceed 15,760. Trains exceeding 15,760 tons must have authorization from the Road Foreman of Engines to descend Marias Pass.

When mechanical personnel makeup locomotive consists and/or perform daily inspection of locomotive consists:

1. Where locomotive consists are made up by mechanical personnel, mechanical personnel will set up the locomotive consist in compliance with the 28-axle dynamic brake limitation along with other consist setup procedures for each locomotive in the consist.
2. During that inspection, mechanical personnel will note all defective dynamic brakes in the consist when the consist is initially made up and leave this information on the controlling locomotive for the locomotive engineer.
3. Local terminal operating supervision at Havre, Spokane, and Seattle will communicate to mechanical personnel the minimum dynamic brake requirements for locomotive consists being built for trains requiring a minimum number of DB axles for heavy grade territories.

In order to comply with minimum dynamic brake requirements for trains on the Hi Line Subdivision, crews on such trains before departing Havre, Montana, and Sandpoint, Idaho, must:

1. Inspect the locomotive consist before departing locations outlined above and determine if any locomotives in the consist have dynamic brakes cut out and/or are tagged defective. (Cut out traction motor(s) on DC locomotives results in inoperative dynamic brake.)
   Note: Before cutting in a dynamic brake found cut out but not tagged defective, contact the Mechanical Help Desk and be governed by that supervisor's instruction.
2. If any locomotive in the consist is found not to have an operative dynamic brake, immediately report this fact to local mechanical forces and the Mechanical Help Desk.
3. Any dynamic brake failure that occurs enroute thereafter must be reported to the Mechanical Help Desk.
4. All relieving locomotive engineers must be advised of defective dynamic brakes in the locomotive consist either verbally or with a note left on the control stand.

   Note: This inspection of the locomotive consist is not required if this information concerning dynamic brakes of the consist is left on the controlling locomotive.

Westward trains descending mountain grade between Summit (MP 1151) and Java East (MP 1165.2) must plan train braking to control train speed and make an emergency brake application without hesitation if train speed should exceed 5 MPH over the train's maximum authorized speed.

Temperature Reading—Temperature reading at Snow Slip located between Summit and Java is available by pressing *1 on BNSF Radio Channel 076.

Wind Restrictions—In addition to the restrictions in Item 33 of the System Special Instructions, the dispatcher may give other excessive wind instructions which could include the following:

Between Sundance MP 1099 and Marias MP 1151.7
There are no wind restrictions for light engines, empty bulk commodity unit trains consisting of tank cars containing loaded buffer cars (if equipped) weighing 75 tons or greater, loaded ribbon rail trains and loaded bulk commodity unit trains as defined in the Air Brake and Train Handling Rules glossary.

Non-bulk commodity trains consisting of all loads and empty grain trains:

1. Wind speeds above 60 MPH to 70 MPH, reduce to 30 MPH
2. Wind speeds above 70 MPH, stop until wind speeds fall below 70 MPH for 30 minutes

All other trains and trains handling cars with two empty containers stacked on top of one another:

1. Wind speeds above 55 MPH to 65 MPH, reduce to 30 MPH
2. Wind speeds above 65 MPH, stop until wind speed falls below 65 MPH for 30 minutes.

Passenger Trains (includes Amtrack and trains consisting entirely of passenger cars):

1. Wind speeds above 55 MPH to 70 MPH, reduce to 30 MPH
2. Wind speeds above 70 MPH, stop until wind speeds fall below 70 MPH for 30 minutes

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No Clearance Locations

Location	Track Name	Track No.	Obstruction
Kremlin	General Mills Inc	2901	Building both sides
		2902	Standing pipe
Gildford	General Mills Inc	3002	Elevator
Hingham	General Mills Inc	3102	Elevator Dock
Rudyard	Columbia Grain Inc	3201, 3203	Elevator
Inverness	Elevator	3302	Elevator
Chester	Ag Wise Distributors	2301, 2302	Dock
	West Loop Track Elevator	2304	Elevator
	South Side Elevator	2310	Elevator
	East Loop Track Elevator	2311	Elevator
Tiber	General Mills Inc	2411	Elevator
Lothair	Westermark Grain	2512	Elevator
Devon	Hi Line Grain	2714	Elevator
Dunkirk	South Side Elevator	2815	Elevator
Cut Bank	East & West end of grain elevator track	3116	Grain silos
	North side of track	3199	Grain silos
Pardue	Herbert Sammons	1704	Elevator
Meriwether	Columbia Grain Inc	1805	East elevator
Columbia Falls	Great North. Bark	3202	Loading ramp
	Volcon	3205	Loading area
	Old House Trk.	3207	Loading ramp
Half Moon	Stolize Loading	3301	Loading area

Close Track Centers

Location	Track Name	Tracks
Essex	Roundhouse	2711-2712

Missing Mileposts

MP 1127 is missing. The distance between MP 1126 and MP 1128 is 4,967 feet.

Short Mile

The distance from MP 990 to MP 991 is 2,348 feet.

Test Miles

MP 973.0 to MP 974.0
MP 1005.0 to MP 1006.0
MP 1020.0 to MP 1021.0
MP 1030.0 to MP 1031.0
MP 1059.0 to MP 1060.0
MP 1077.0 to MP 1078.0
MP 1105.0 to MP 1106.0
MP 1146.0 to MP 1147.0
MP 1157.0 to MP 1158.0
MP 1182.0 to MP 1183.0
MP 1207.0 to MP 1208.0
MP 1213.6 to MP 1214.6

SSI—Switch Control/Monitoring Systems

- Turnouts Equipped with Two Switch Machines - Movable Point Frogs/Swing Nose Frogs (MPF), Derail (D)

Location	Mile Post	Device	Notes
CP 1022	1022.2	D	
Blackfoot	1116.2	MPF	
W Belton	1197.1	MPF	

Flash Flood Critical Areas

MP 1184.0 to MP 1195.0

8. Line Segments

Segment No.	Limits	Mileposts
Road Line Segments		
36	Pacific Jct to Whitefish	

9. Other Location Information

Station No.	Name	Mile Post	Capacity in Feet	Switch Opens
01375	Gildford	989.7	1,959	Both MT2
01381	Hingham	997.0	1,854	Both MT2
01389	Set Out Tracks	1004.1		East MT2
	Set Out Tracks	1004.1		East MT1
01394	Inverness	1008.4		Both MT2
01413	Tiber (2 tracks)	1027.3	1,923	Both
01464	Ethridge MT2	1078.7	1,659	East
01486	Pardue Sammons Spur	1101.3	1,130	East MT2
01495	Meriwether (2 tracks)	1110.5		Both MT2
01596	Halfmoon (East Track)	1214.9	2,576	West

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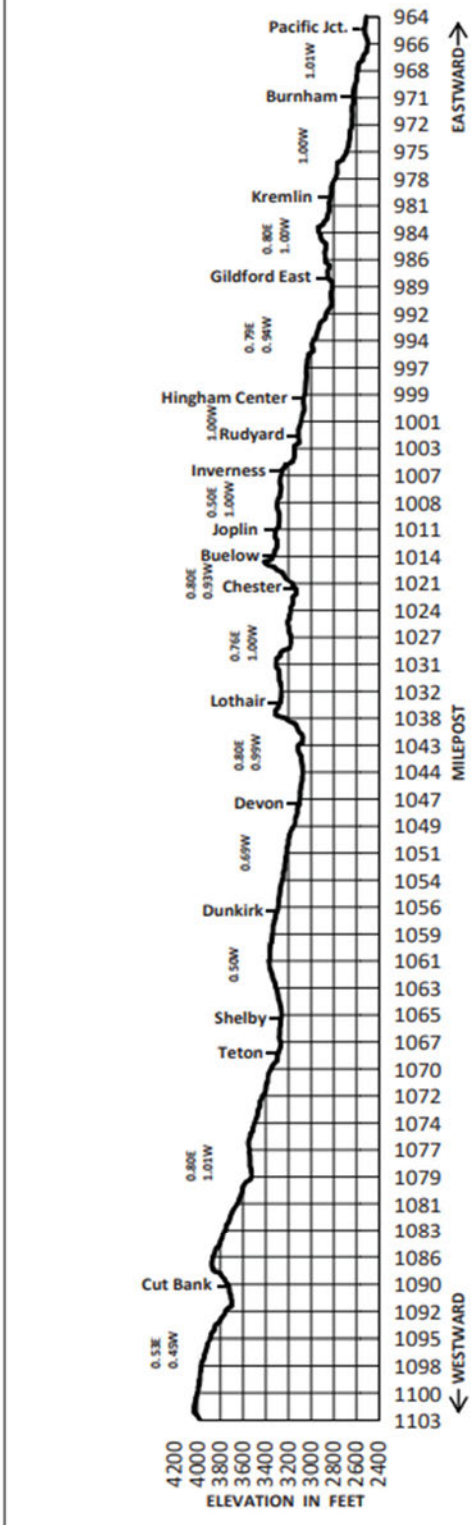
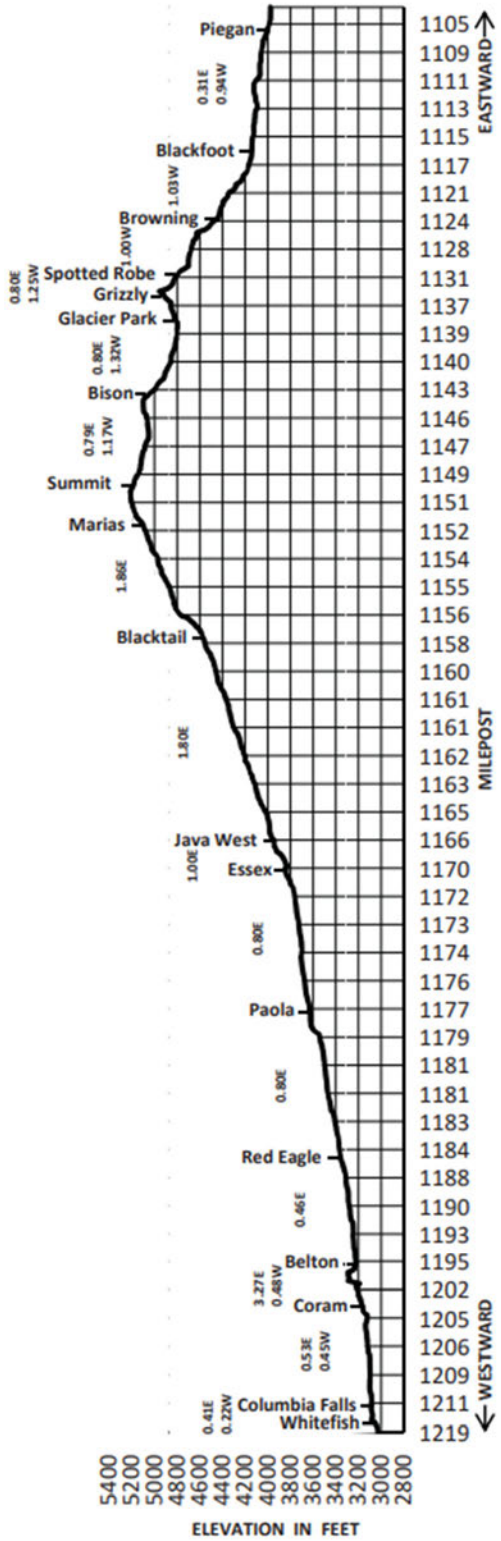
10. Grade Chart





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2.10 Emergency Calls

Emergency calls will begin with the words "Emergency, Emergency, Emergency". These calls will be used to cover initial reports of hazardous conditions which could result in death or injury, damage to property or serious disruption of railroad operations such as:

- Derailments.
- Collisions.
- Storms.
- Washouts.
- Fires.
- Track obstructions.

or

- Emergency brake applications.

In addition, emergency calls must be made for the following:

- Overrunning limits of authority.

or

- Overrunning Stop indications.

Emergency calls must contain as much complete information on the incident as possible.

All employees must give absolute priority to an emergency communication. Unless they are answering or aiding the emergency call, employees must not transmit until they are certain no interference will result.

2.11 Prohibited Transmissions

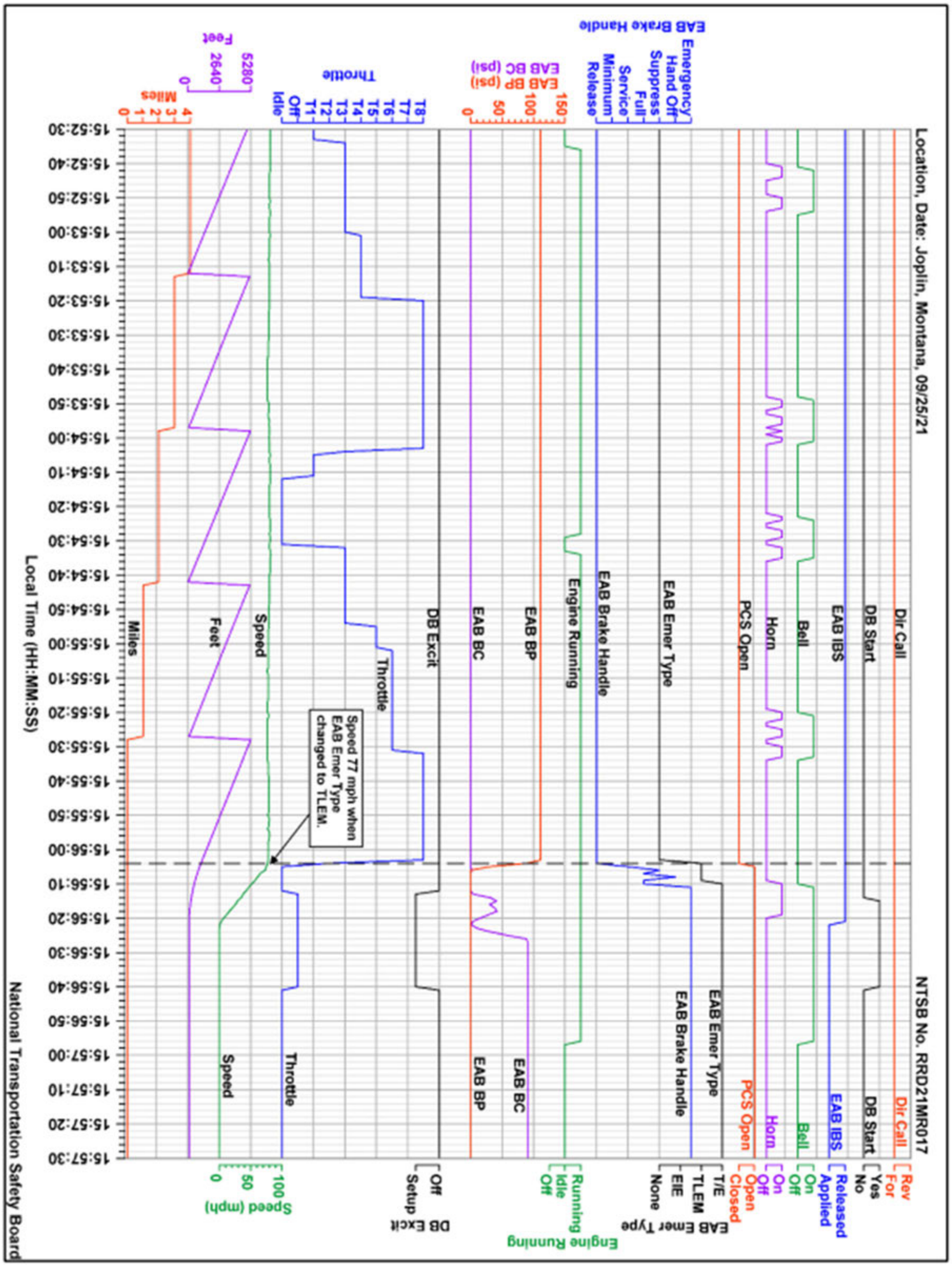
Employees must not transmit a false emergency, or an unnecessary or unidentified communication. Employees must not use indecent language over the radio. Employees must not reveal the existence, contents, or meaning of any communication (except emergency communications) to persons other than those it is intended for or those whose duties may require knowing about it.

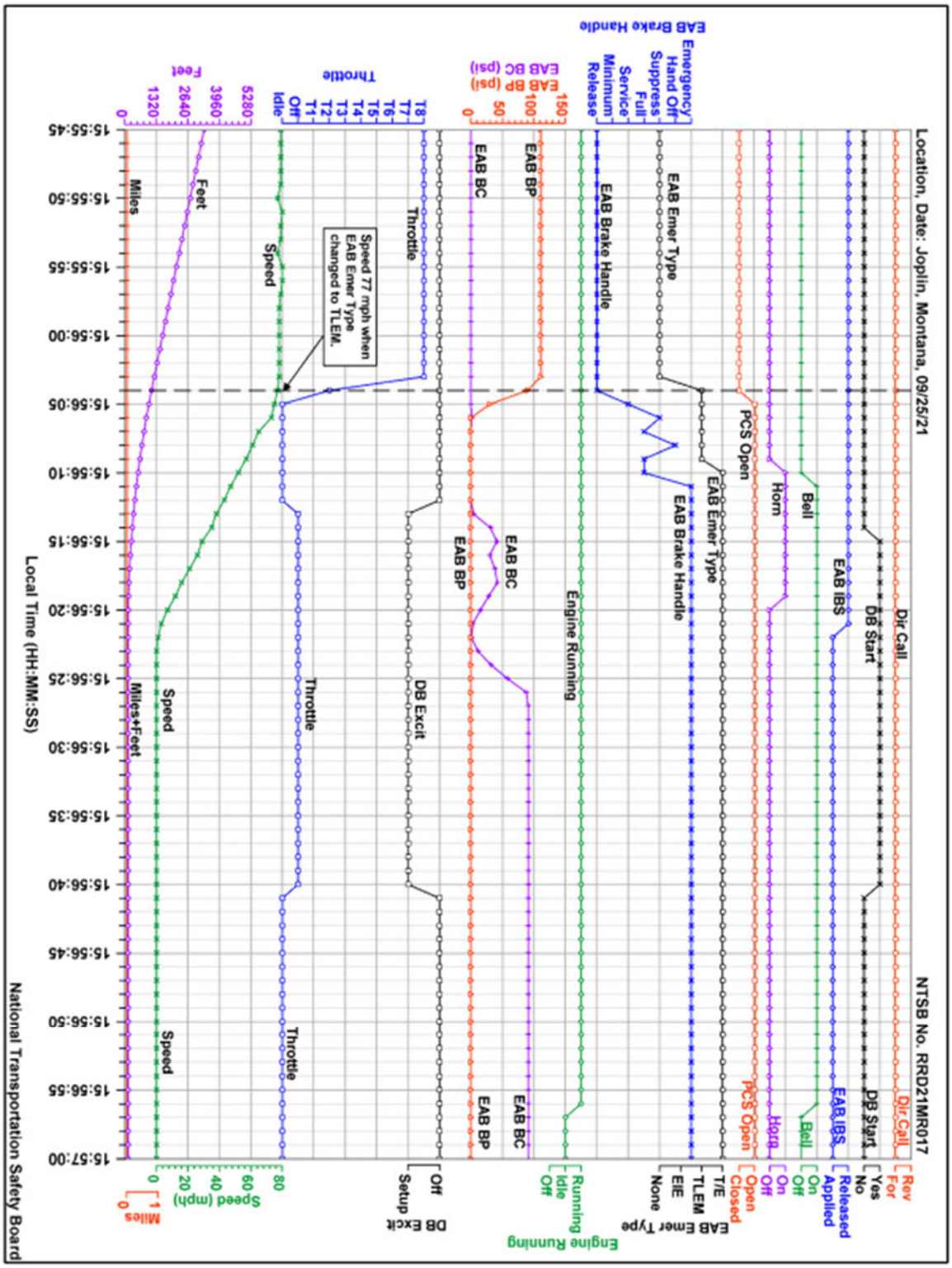
2.12 Fixed Signal Information

Employees must not use the radio to give information to a train or engine crew about the name, position, aspect, or indication displayed by a fixed signal, unless the information is given between members of the same crew or the information is needed to warn of an emergency.

2.13 Not Used

Appendix C


Location, Date: Joplin, Montana, 09/25/21
NTSB No. RRD21MR017
Speed 77 mph when EAB Emer Type changed to TLEM.
Local Time (HH:MM:SS)
National Transportation Safety Board
Dir Call
DB Start
EAB IBS
Bell
Horn
PCS Open
EAB Emer Type
EAB Brake Handle
Engine Running
EAB BP
EAB BC
DB Excit
Throttle
Speed
Feet
Miles
Speed (mph)
EAB BP (psi)
EAB BC (psi)


Location, Date: Joplin, Montana, 09/25/21
NTSB No. RRD21MR017
National Transportation Safety Board
Local Time (HH:MM:SS)
Rev For
Dir Call
DB Start
EAB IBS
Bell
Horn
PCS Open
EAB Emer Type
EAB Brake Handle
Engine Running
DB Excit
Throttle
Speed
Miles
Feet
Miles+Feet
EAB BP
EAB BC
EAB Brake Handle
Emergency Hand Off Suppress Full Service Minimum Release
EAB BP (psi)
EAB BC (psi)
Throttle
Speed (mph)
Miles
Engine Running
DB Excit
EAB Emer Type
Speed 77 mph when EAB Emer Type changed to TLEM.

Appendix D

"(C) PROVISION OF REPORT.—The Secretary shall provide to a State or political subdivision of a State a public version of a bridge inspection report submitted under subparagraph (B).

"(D) TECHNICAL ASSISTANCE.—The Secretary, upon the reasonable request of State or political subdivision of a State, shall provide technical assistance to such State or political subdivision of a State to facilitate the understanding of a bridge inspection report.".

SEC. 11406. SPEED LIMIT ACTION PLANS.

(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, each railroad carrier providing intercity rail passenger transportation or commuter rail passenger transportation, in consultation with any applicable host railroad carrier, shall survey its entire system and identify each main track location where there is a reduction of more than 20 miles per hour from the approach speed to a curve, bridge, or tunnel and the maximum authorized operating speed for passenger trains at that curve, bridge, or tunnel.

(b) ACTION PLANS.—Not later than 120 days after the date that the survey under subsection (a) is complete, a railroad carrier described in subsection (a) shall submit to the Secretary an action plan that—

(1) identifies each main track location where there is a reduction of more than 20 miles per hour from the approach speed to a curve, bridge, or tunnel and the maximum authorized operating speed for passenger trains at that curve, bridge, or tunnel;

(2) describes appropriate actions to enable warning and enforcement of the maximum authorized speed for passenger trains at each location identified under paragraph (1), including—

(A) modification to automatic train control systems, if applicable, or other signal systems;

(B) increased crew size;

(C) installation of signage alerting train crews of the maximum authorized speed for passenger trains in each location identified under paragraph (1);

(D) installation of alerters;

(E) increased crew communication; and

(F) other practices;

(3) contains milestones and target dates for implementing each appropriate action described under paragraph (2); and

(4) ensures compliance with the maximum authorized speed at each location identified under paragraph (1).

(c) APPROVAL.—Not later than 90 days after the date on which an action plan is submitted under subsection (b), the Secretary shall approve, approve with conditions, or disapprove the action plan.

(d) ALTERNATIVE SAFETY MEASURES.—The Secretary may exempt from the requirements of this section each segment of track for which operations are governed by a positive train control system certified under section 20157 of title 49, United States Code, or any other safety technology or practice that would achieve an equivalent or greater level of safety in reducing derailment risk.

(e) REPORT.—Not later than 6 months after the date of enactment of this Act, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that describes—

(1) the actions railroad carriers have taken in response to Safety Advisory 2013–08, entitled "Operational Tests and Inspections for Compliance With Maximum Authorized Train Speeds and Other Speed Restrictions";

(2) the actions railroad carriers have taken in response to Safety Advisory 2015–03, entitled "Operational and Signal Modifications for Compliance with Maximum Authorized Passenger Train Speeds and Other Speed Restrictions"; and

(3) the actions the Federal Railroad Administration has taken to evaluate or incorporate the information and findings arising from the safety advisories referred to in paragraphs (1) and (2) into the development of regulatory action and oversight activities.

(f) SAVINGS CLAUSE.—Nothing in this section shall prohibit the Secretary from applying the requirements of this section to other segments of track at high risk of overspeed derailment.

SEC. 11407. ALERTERS.

(a) IN GENERAL.—The Secretary shall promulgate a rule to require a working alerter in the controlling locomotive of each passenger train in intercity rail passenger transportation (as defined in section 24102 of title 49, United States Code) or commuter rail passenger transportation (as defined in section 24102 of title 49, United States Code).

(b) RULEMAKING.—

(1) IN GENERAL.—The Secretary may promulgate a rule to specify the essential functionalities of a working alerter, including the manner in which the alerter can be reset.

(2) ALTERNATE PRACTICE OR TECHNOLOGY.—The Secretary may require or allow a technology or practice in lieu of a working alerter if the Secretary determines that the technology or practice would achieve an equivalent or greater level of safety in enhancing or ensuring appropriate locomotive control.

SEC. 11408. SIGNAL PROTECTION.

(a) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Secretary shall initiate a rulemaking to require that on-track safety regulations, whenever practicable and consistent with other safety requirements and operational considerations, include requiring implementation of redundant signal protection for maintenance-of-way work crews who depend on a train dispatcher to provide signal protection.

(b) ALTERNATIVE SAFETY MEASURES.—The Secretary shall consider exempting from any final requirements of this section each segment of track for which operations are governed by a positive train control system certified under section 20157 of title 49, United States Code, or any other safety technology or practice that would achieve an equivalent or greater level of safety in providing additional signal protection.

SEC. 11409. COMMUTER RAIL TRACK INSPECTIONS.

(a) IN GENERAL.—The Secretary shall evaluate track inspection regulations to determine if a railroad carrier providing commuter

(b) LOCOMOTIVE CAB ENVIRONMENT.—The Secretary may also study other elements of the locomotive cab environment and their effect on an employee's health and safety.

(c) REPORT.—Not later than 6 months after the completion of any study under this section, the Secretary shall issue a report on the study to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Transportation and Infrastructure.

(d) AUTHORITY.—Based on the conclusions of the study required under (a), the Secretary of Transportation may prohibit the use of personal electronic devices, such as cell phones, video games, or other electronic devices that may distract employees from safely performing their duties, unless those devices are being used according to railroad operating rules or for other work purposes. Based on the conclusions of other studies conducted under subsection (b), the Secretary may prescribe regulations to improve elements of the cab environment to protect an employee's health and safety.

SEC. 406. DEVELOPMENT AND USE OF RAIL SAFETY TECHNOLOGY.

(a) IN GENERAL.—Subchapter II of chapter 201, as amended by section 402 of this division, is further amended by adding at the end the following new section:

"§ 20164. Development and use of rail safety technology

Deadline. Standards. Guidance. Regulations. Orders.

"(a) IN GENERAL.—Not later than 1 year after enactment of the Railroad Safety Enhancement Act of 2008, the Secretary of Transportation shall prescribe standards, guidance, regulations, or orders governing the development, use, and implementation of rail safety technology in dark territory, in arrangements not defined in section 20501 or otherwise not covered by Federal standards, guidance, regulations, or orders that ensure the safe operation of such technology, such as—

"(1) switch position monitoring devices or indicators;

"(2) radio, remote control, or other power-assisted switches;

"(3) hot box, high water, or earthquake detectors;

"(4) remote control locomotive zone limiting devices;

"(5) slide fences;

"(6) grade crossing video monitors;

"(7) track integrity warning systems; or

"(8) other similar rail safety technologies, as determined by the Secretary.

"(b) DARK TERRITORY DEFINED.—In this section, the term 'dark territory' means any territory in a railroad system that does not have a signal or train control system installed or operational.".

(b) CONFORMING AMENDMENT.—The chapter analysis for chapter 201, as amended by section 402 of this division, is amended by inserting after the item relating to section 20163 the following:

"20164. Development and use of rail safety technology.".

SEC. 407. UNIFIED TREATMENT OF FAMILIES OF RAILROAD CARRIERS.

49 USC 20102.

Section 20102(3), as redesignated by section 2(b) of this division, is amended to read as follows:

"(3) 'railroad carrier' means a person providing railroad transportation, except that, upon petition by a group of commonly controlled railroad carriers that the Secretary determines is operating within the United States as a single, integrated