US Rail Partners, Ltd.

620 Kruk Street Lemont, IL 60439 1-847-824-1264

June 30th, 2013

Mrs. Cathy Potter, Executive Director
Port of Royal Slope
PO Box 147
Royal City, WA 99357

Dear Ms. Potter:

In accordance with Addendum #2 of our agreement regarding the Rehabilitation Project with the Port of Royal Slope ("Port"), US Rail Partners Ltd. ("USRPL") provides this final report summarizing our inspection of June 28th, 2013. I was accompanied by Mr. Bill Wolff, Eastern Washington Gateway Railroad Director of Maintenance. Separately, Commissioner Davey Miller and Washington State Department of Transportation's ("WSDOT") Chris Herman traveled behind us in Mr. Miller's speeder.

Before beginning our inspection, Mr. Miller, along with Commissioner Frank Mianecki, explained that the Port's contractor, Railworks, had substantially completed all work, including the additional work recommended in our interim reports and which had been detailed in the change orders, except for the remaining regulator pass up the hill from Lower Crab Creek Road. Mr. Miller added that Adams County had already added crossing signage to the Thacker and Davidson Road crossings.

During our inspection trip, we observed both tie count per thirty-nine foot segment as well as cross level as compared to requirements as specified in FRA 49 CFR 213.109 and FRA 49 CFR 213.63 (see attachments) so that we might determine for which Federal Railroad Administration ("FRA") Class of track the Royal Slope line might qualify. Further, we looked for what exceptions to Class might exist. Those few that we found are noted below. Lastly, Mr. Wolff and I separately counted the number of ties replaced and, after each track segment, compared our numbers and selected the higher number for inclusion in the attached spreadsheet which shows ties counted vs. original contract number. While we were as diligent as we could be, there were some sections of track (in particular, those previously silted) where the regulator has pushed sufficient dirt around so as to obscure some ties. As a result, the number of ties we counted might be more or might be less than Railworks claims.

I am pleased to report that it is our opinion that the Royal Slope line, once the remaining regulating work between Lower Crab Creek Road and Royal City is complete and vegetation is controlled, will be FRA Class 1 track with just three exceptions. We found less than a dozen ties which had been marked but not changed by Railworks and just a few ties (near MP 1996.55) whose cribs were not completely filled. We were particularly pleased by the condition of track at MP 1995.4, at the Ballast Retaining Structure, MP 1997.7, at MP 2001.5, at MP 2001.8, at MP 2002.0, at MP 2005.7, at MP 2009.0, at 2009.2 and at 2009.3 where additional ballast had been placed and the railroad had been surfaced.

The following photographs illustrate the generally excellent appearance of the Royal Slope line:

Photograph 1. MP 1995

Photograph 2. Near MP 2005.7

Photograph 3. Ballast Retaining Structure

Photograph 4. Signage, Thacker Road

Here are the defects we found. As recommended below, those defects concerning vegetation should be removed as a result of the vegetation control efforts. And, if the defects which require tie replacement can be corrected by the new operator within the first 30 days of operation, the track can remain in FRA Class 1:

Table 1: Potential FRA Defects – Class 1 Track

MP	Defect Code	Defect	Comments
1,992.50	**213.37C1**	Vegetation interferes with railroad employees performing normal trackside duties	Control vegetation
1,992.80	**213.109B2**	Crossties not effectively distributed to support a 39-foot segment of track	Replace 1 tie
1995.3 - 1995.4	**213.37C1**	Vegetation interferes with railroad employees performing normal trackside duties	Control vegetation
1,995.40	**213.109B2**	Crossties not effectively distributed to support a 39-foot segment of track	Replace 12 ties
1,996.50	**213.109B2**	Crossties not effectively distributed to support a 39-foot segment of track	Replace 2 ties

The following two photographs illustrate the vegetation control issues:

Photograph 5. Vegetation near MP 1992.5

Photograph 6. Vegetation near MP 1995.3

As the October, 2009, WSDOT Inspection report had indicated (pp. 12 – 13), ballast condition on the Royal Slope line is only fair. In those spots were silting of the track had occurred due to surface water overflows (most notably from the washout area, MP 2008.2 west to MP 2009), even though regulated, silt still remains, obscuring observation of tie condition. There is a possibility that an FRA inspector might issue a defect for one of the several ballast-related defects, such as defect code 213.103C (213.103A, fouled or insufficient ballast to transmit and distribute loading; 213.103B, fouled or insufficient ballast to

restrain the track laterally, longitudinally or vertically; 213.103C, fouled ballast failing to provide adequate drainage for the track; or, 213.103D, fouled or insufficient ballast failing to maintain proper geometry). But, given that the Port has had the adjacent areas of right of way ditched so as to channel water properly, it is unlikely that an inspector would issue such a defect. Further brooming of the silted track areas, addition of more ballast and further surfacing might be required if such a defect were issued. Again, the likelihood of this being cited as an exception is very small.

A copy of all of the FRA track inspection codes is attached.

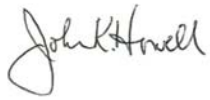
There is one other miscellaneous issue which needs to be addressed. Between MP 1989 and MP 1991, and at another location several miles further west, years of disuse have resulted in neighbors "extending" their fields or lots so as to encroach the right of way; WSDOT will need to "kindly advise" these landowners that they'll need to remove private property, dog runs, fence posts and the like from the right of way before operations can begin.

We recommend, just as soon as the Port is able, that a vegetation control contractor be selected and that the contractor treat the entire right of way so as to both kill vegetation now growing, particularly at MP 1992.5 and between MP 1995.3 and at 1995.4, as well as to prevent any new vegetative growth. Finally, we suggest that the Port urge track owner WSDOT to contact FRA to suggest that the main track of the Royal Slope line, from beginning of WSDOT ownership up to Royal City, is now ready for service and that, based on the opinion of the Port's consultant, should be considered FRA Class 1,

The Port is to be congratulated on the individual efforts of the Commissioners and the Executive Director to volunteer their own time and equipment in visiting legislators and WSDOT staff, securing the funding, developing the bid documents, making all of the phone calls, clearing rock slides, performing ditching, locating drainage ways and culverts, fixing pull-a-parts, etc. Together, all of you have demonstrated that a railroad, after years of disuse, with those individual efforts, coupled with the work of the contractor, Railworks, can be brought back to operating condition for a relatively modest investment.

Once again, if there are any questions, please do not hesitate to contact me.

Best regards,



John K. Howell, President

Attachments
cc: Mr. Bill Wolff

Track surface	Class of track				
	1 (inches)	2 (inches)	3 (inches)	4 (inches)	5 (inches)
The deviation from uniform profile on either rail at the mid-ordinate of a 62-foot chord may not be more than	3	2¾	2¼	2	1¼
The deviation from zero crosslevel at any point on tangent or reverse crosslevel elevation on curves may not be more than	3	2	1¾	1¼	1
The difference in crosslevel between any two points less than 62 feet apart may not be more than* [1,2]	3	2¼	2	1¾	1½
*Where determined by engineering decision prior to the promulgation of this rule, due to physical restrictions on spiral length and operating practices and experience, the variation in crosslevel on spirals per 31 feet may not be more than	2	1¾	1¼	1	¾

[1] Except as limited by §213.57(a), where the elevation at any point in a curve equals or exceeds 6 inches, the difference in crosslevel within 62 feet between that point and a point with greater elevation may not be more than 1½ inches. (Footnote 1 is applicable September 21, 1999.)

[2] However, to control harmonics on Class 2 through 5 jointed track with staggered joints, the crosslevel differences shall not exceed 1¼ inches in all of six consecutive pairs of joints, as created by 7 low joints. Track with joints staggered less than 10 feet shall not be considered as having staggered joints. Joints within the 7 low joints outside of the regular joint spacing shall not be considered as joints for purposes of this footnote. (Footnote 2 is applicable September 21, 1999.)

[63 FR 34029, June 22, 1998; 63 FR 45959, Aug. 28, 1998]

Subpart D—Track Structure

§213.101 Scope.

This subpart prescribes minimum requirements for ballast, crossties, track assembly fittings, and the physical conditions of rails.

§213.103 Ballast; general.

Unless it is otherwise structurally supported, all track shall be supported by material which will—

(a) Transmit and distribute the load of the track and railroad rolling equipment to the subgrade;

(b) Restrain the track laterally, longitudinally, and vertically under dynamic loads imposed by railroad rolling equipment and thermal stress exerted by the rails;

(c) Provide adequate drainage for the track; and

(d) Maintain proper track crosslevel, surface, and alinement.

§213.109 Crossties.

(a) Crossties shall be made of a material to which rail can be securely fastened.

(b) Each 39 foot segment of track shall have—

(1) A sufficient number of crossties which in combination provide effective support that will—

(i) Hold gage within the limits prescribed in §213.53(b);

(ii) Maintain surface within the limits prescribed in §213.63; and

(iii) Maintain alinement within the limits prescribed in §213.55.

(2) The minimum number and type of crossties specified in paragraphs (c) and (d) of this section effectively distributed to support the entire segment; and

(3) At least one crosstie of the type specified in paragraphs (c) and (d) of this section that is located at a joint location as specified in paragraph (f) of this section.

(c) Each 39 foot segment of: Class 1 track shall have five crossties; Classes 2 and 3 track shall have eight crossties; and Classes 4 and 5 track shall have 12 crossties, which are not:

(1) Broken through;

(2) Split or otherwise impaired to the extent the crossties will allow the ballast to work through, or will not hold spikes or rail fasteners;

(3) So deteriorated that the tie plate or base of rail can move laterally more than ½ inch relative to the crossties; or

(4) Cut by the tie plate through more than 40 percent of a ties' thickness.

(d) Each 39 foot segment of track shall have the minimum number and type of crossties as indicated in the following table (this paragraph (d) is applicable September 21, 2000).

Class of track	Tangent track and curves ≤2 degrees	Turnouts and curved track over 2 degrees
Class 1 track	5	6

Class of track	Tangent track and curves ≤2 degrees	Turnouts and curved track over 2 degrees
Class 2 track	8	9
Class 3 track	8	10
Class 4 and 5 track	12	14

(e) Crossties counted to satisfy the requirements set forth in the table in paragraph (d) of this section shall not be—

(1) Broken through;

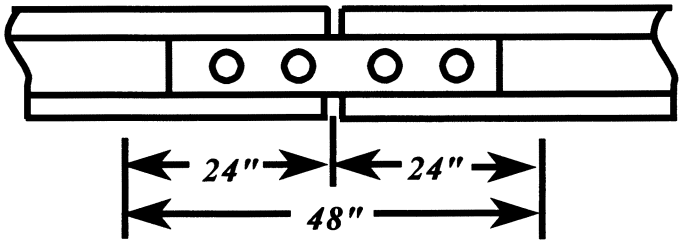
(2) Split or otherwise impaired to the extent the crossties will allow the ballast to work through, or will not hold spikes or rail fasteners;

(3) So deteriorated that the tie plate or base of rail can move laterally ½ inch relative to the crossties; or

(4) Cut by the tie plate through more than 40 percent of a crosstie's thickness (this paragraph (e) is applicable September 21, 2000).

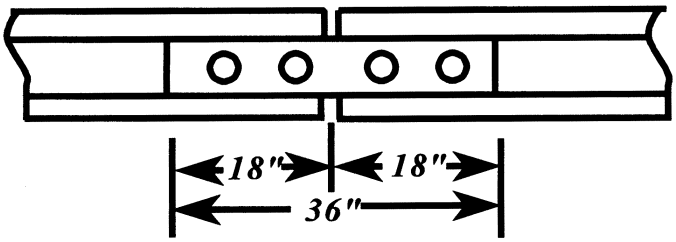
(f) Class 1 and Class 2 track shall have one crosstie whose centerline is within 24 inches of each rail joint location, and Classes 3 through 5 track shall have one crosstie whose centerline is within 18 inches of each rail joint location or, two crossties whose centerlines are within 24 inches either side of each rail joint location. The relative position of these ties is described in the following diagrams:

Classes 1 and 2

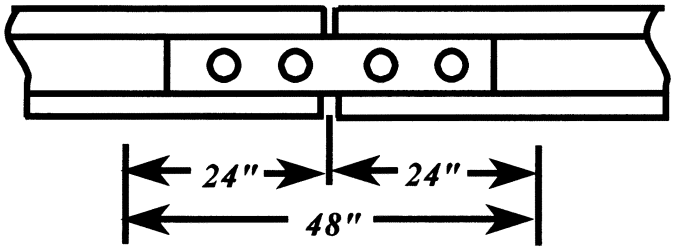


Each rail joint in Classes 1 and 2 track shall be supported by at least one crosstie specified in paragraphs (c) and (d) of this section whose centerline is within 48″ shown above.

Classes 3 through 5



Each rail joint in Classes 3 through 5 track shall be supported by either at least one crosstie specified in paragraphs (c) and (d) of this section whose centerline is within 36″ shown above, or:



Two crossties, one on each side of the rail joint, whose centerlines are within 24″ of the rail joint location shown above.

(g) For track constructed without crossties, such as slab track, track connected directly to bridge structural components and track over servicing pits, the track structure shall meet the requirements of paragraphs (b)(1)(i), (ii), and (iii) of this section.

[63 FR 34029, June 22, 1998; 63 FR 46102, Aug. 28, 1998]

§213.110 Gage restraint measurement systems.

(a) A track owner may elect to implement a Gage Restraint Measurement System (GRMS), supplemented by the use of a Portable Track Loading Fixture (PTLF), to determine compliance with the crosstie and fastener requirements specified in §§213.109 and 213.127 provided that—

(1) The track owner notifies the appropriate FRA Regional office at least 30 days prior to the designation of any line segment on which GRMS technology will be implemented; and

(2) The track owner notifies the appropriate FRA Regional office at least 10 days prior to the removal of any line segment from GRMS designation.

(b) Initial notification under paragraph (a)(1) of this section shall include—

(1) Identification of the line segment(s) by timetable designation, milepost limits, class of track, or other identifying criteria; and

(2) The most recent record of million gross tons of traffic per year over the identified segment(s).

(c) The track owner shall also provide to FRA sufficient technical data to establish compliance with the minimum design requirements of a GRMS vehicle which specify that—

(1) Gage restraint shall be measured between the heads of rail—

(A) At an interval not exceeding 16 inches;

(B) Under an applied vertical load of no less than 10,000 pounds per rail; and

(C) Under an applied lateral load which provides for a lateral/vertical load ratio between 0.5 and 1.25, and a load severity greater than 3,000 pounds but less than 8,000 pounds.

(d) Load severity is defined by the formula—S=L-cV

Where—

S=Load severity, defined as the lateral load applied to the fastener system (pounds).
L=Actual lateral load applied (pounds).
c=Coefficient of friction between rail/tie which is assigned a nominal value of (0.4).
V=Actual vertical load applied (pounds).

(e) The measured gage values shall be converted to a Projected Loaded Gage 24 (PLG 24) as follows—

by reason of conditional waivers granted by the Federal Railroad Administration, shall be considered to have successfully complied with the requirements of paragraph (d) of this section.

(g) A track owner or a railroad operating above Class 5 speeds, may request approval from the Federal Railroad Administrator to operate specified equipment at a level of cant deficiency greater than four inches in accordance with § 213.329(c) and (d) on curves in Class 1 through 5 track which are contiguous to the high speed track provided that—

(1) The track owner or railroad submits a test plan to the Federal Railroad Administrator for approval no less than thirty calendar days prior to any proposed implementation of the higher curving speeds. The test plan shall include an analysis and determination of carbody acceleration safety limits for each vehicle type which indicate wheel unloading of 60 percent in a steady state condition and 80 percent in a transient (point by point) condition. Accelerometers shall be laterally-oriented and floor-mounted near the end of a representative vehicle of each type;

(2) Upon FRA approval of a test plan, the track owner or railroad conducts incrementally increasing train speed test runs over the curves in the identified track segment(s) to demonstrate that wheel unloading is within the limits prescribed in paragraph (g)(1) of this section;

(3) Upon FRA approval of a cant deficiency level, the track owner or railroad inspects the curves in the identified track segment with a Track Geometry Measurement System (TGMS) qualified in accordance with § 213.333 (b) through (g) at an inspection frequency of at least twice annually with not less than 120 days interval between inspections; and

(4) The track owner or railroad operates an instrumented car having dynamic response characteristics that are representative of other equipment assigned to service or a portable device that monitors on-board instrumentation on trains over the curves in the identified track segment at the revenue speed profile at a frequency of at least once every 90-day period with not less than 30 days interval between inspections. The instrumented car or the portable device shall monitor a laterally-oriented accelerometer placed near the end of the vehicle at the floor level. If the carbody lateral acceleration measurement exceeds the safety limits prescribed in paragraph (g)(1), the railroad shall operate trains at curving speeds in accordance with paragraph (b) or (c) of this section; and

(5) The track owner or railroad shall maintain a copy of the most recent exception printouts for the inspections required under paragraphs (g)(3) and (4) of this section.

[63 FR 34029, June 22, 1998; 63 FR 54078, Oct. 8, 1998]

§ 213.59 Elevation of curved track; runoff.

(a) If a curve is elevated, the full elevation shall be provided throughout the curve, unless physical conditions do not permit. If elevation runoff occurs in a curve, the actual minimum elevation shall be used in computing the maximum allowable operating speed for that curve under § 213.57(b).

(b) Elevation runoff shall be at a uniform rate, within the limits of track surface deviation prescribed in § 213.63, and it shall extend at least the full length of the spirals. If physical conditions do not permit a spiral long enough to accommodate the minimum length of runoff, part of the runoff may be on tangent track.

§ 213.63 Track surface.

Each owner of the track to which this part applies shall maintain the surface of its track within the limits prescribed in the following table:

Track surface	Class of track				
	1 (inches)	2 (inches)	3 (inches)	4 (inches)	5 (inches)
The runoff in any 31 feet of rail at the end of a raise may not be more than.	3½	3	2	1½	1

Track surface	Class of track				
	1 (inches)	2 (inches)	3 (inches)	4 (inches)	5 (inches)
The deviation from uniform profile on either rail at the mid-ordinate of a 62-foot chord may not be more than	3	2¾	2¼	2	1¼
The deviation from zero crosslevel at any point on tangent or reverse crosslevel elevation on curves may not be more than	3	2	1¾	1¼	1
The difference in crosslevel between any two points less than 62 feet apart may not be more than* [1, 2]	3	2¼	2	1¾	1½
*Where determined by engineering decision prior to the promulgation of this rule, due to physical restrictions on spiral length and operating practices and experience, the variation in crosslevel on spirals per 31 feet may not be more than	2	1¾	1¼	1	¾

[1] Except as limited by §213.57(a), where the elevation at any point in a curve equals or exceeds 6 inches, the difference in crosslevel within 62 feet between that point and a point with greater elevation may not be more than 1½ inches. (Footnote 1 is applicable September 21, 1999.)

[2] However, to control harmonics on Class 2 through 5 jointed track with staggered joints, the crosslevel differences shall not exceed 1¼ inches in all of six consecutive pairs of joints, as created by 7 low joints. Track with joints staggered less than 10 feet shall not be considered as having staggered joints. Joints within the 7 low joints outside of the regular joint spacing shall not be considered as joints for purposes of this footnote. (Footnote 2 is applicable September 21, 1999.)

[63 FR 34029, June 22, 1998; 63 FR 45959, Aug. 28, 1998]

Subpart D—Track Structure

§213.101 Scope.

This subpart prescribes minimum requirements for ballast, crossties, track assembly fittings, and the physical conditions of rails.

§213.103 Ballast; general.

Unless it is otherwise structurally supported, all track shall be supported by material which will —

(a) Transmit and distribute the load of the track and railroad rolling equipment to the subgrade;

(b) Restrain the track laterally, longitudinally, and vertically under dynamic loads imposed by railroad rolling equipment and thermal stress exerted by the rails;

(c) Provide adequate drainage for the track; and

(d) Maintain proper track crosslevel, surface, and alinement.

§213.109 Crossties.

(a) Crossties shall be made of a material to which rail can be securely fastened.

(b) Each 39 foot segment of track shall have—

(1) A sufficient number of crossties which in combination provide effective support that will—

(i) Hold gage within the limits prescribed in §213.53(b);

(ii) Maintain surface within the limits prescribed in §213.63; and

(iii) Maintain alinement within the limits prescribed in §213.55.

(2) The minimum number and type of crossties specified in paragraphs (c) and (d) of this section effectively distributed to support the entire segment; and

(3) At least one crosstie of the type specified in paragraphs (c) and (d) of this section that is located at a joint location as specified in paragraph (f) of this section.

(c) Each 39 foot segment of: Class 1 track shall have five crossties; Classes 2 and 3 track shall have eight crossties; and Classes 4 and 5 track shall have 12 crossties, which are not:

(1) Broken through;

(2) Split or otherwise impaired to the extent the crossties will allow the ballast to work through, or will not hold spikes or rail fasteners;

(3) So deteriorated that the tie plate or base of rail can move laterally more than ½ inch relative to the crossties; or

(4) Cut by the tie plate through more than 40 percent of a ties' thickness.

(d) Each 39 foot segment of track shall have the minimum number and type of crossties as indicated in the following table (this paragraph (d) is applicable September 21, 2000).

Class of track	Tangent track and curves ≤2 degrees	Turnouts and curved track over 2 degrees
Class 1 track	5	6

Tie Counts

Demarcation point description	Port Label	Ties, verified	Contract ties	Contract MP	Contract Length	Comments
Start of WSDOT ownership (mid Hudson St)	ST			**1,989.03**		
	T1	14	**23**		**0.27**	
Potholes Canal East Maintenance Rd	C1			**1,989.30**		
Potholes Canal Bridge	B1	9	**0**		**0.03**	
Potholes Canal West Maintenance Rd	C2			**1,989.34**		
	T2	49	**75**		**1.06**	
Silage pit access Rd	C3			**1,990.40**		
	T3	49	**17**		**0.60**	
Thacker Rd	C4			**1,991.00**		
	T4	164	**202**		**1.58**	
Anson alternative Rd	C5			**1,992.57**		
	T5	20	**19**		**0.32**	
Anson Rd	C6			**1,992.89**		
	T6	341	**259**		**3.15**	
East Taunton siding switch	S1			**1,996.04**		10 switch ties replaced
	T7	52	**60**		**0.57**	
Danielson Rd	C7			**1,996.61**		
	T8	105	**76**		**0.57**	
West Taunton siding switch	S2			**1,997.18**		9 switch ties replaced
	T9	97	**87**		**0.49**	
Ballast Retaining Structure	BR	99		**1,997.67**		
	T10	162	**215**		**1.24**	
East BLM Access Rd	C8			**1,998.91**		
	T11	314	**235**		**2.39**	
West BLM Access Rd	C9			**2,001.30**		
	T12	305	**136**		**1.11**	
Corfu Rd	C10			**2,002.41**		
	T13	258	**184**		**2.26**	
Smyrna Bench Rd	C11			**2,004.67**		
	T14	46	**83**		**1.55**	
Motorcycle crossing	C12			**2,006.22**		
	T15	113	**142**		**1.12**	
Plugged Culvert location	CV			**2,007.34**		
Washout		95				
	T16	248	**140**		**2.21**	
Asher siding switch	S3			**2,009.56**		
	T17	1	**1**		**0.10**	

Tie Counts

Demarcation point description	Port Label	Ties, verified	Contract ties	Contract MP	Contract Length	Comments
Lower Crab Creek Rd	C13			**0.10**		
	T18				**0.34**	
Lower Crab Creek Bridge	B2			**0.45**	**0.04**	
	T19				**0.19**	
Stewart field access Rd	C14			**0.66**		
	T20				**0.24**	
Stewart Residance access Rd	C15			**0.91**		
	T21				**0.40**	
County Sand Pit access Rd	C16			**1.31**		
	T22				**0.18**	
Range access Rd	C17			**1.49**		
	T23				**0.26**	
Rocky Botton Gravel Pit access Rd	C18			**1.75**		
	T24				**0.99**	
Abandon Gravel Pit access Rd	C19			**2.74**		
	T25				**0.18**	
Red Rock Lake Rd	C20			**2.92**		
	T26				**1.69**	
Hiawatha Park Spur switch	S4			**4.61**		
	T27				**0.03**	
County Rd E SW	C21			**4.64**		
	T28				**0.75**	
End of Track	ET			**5.40**		
	T29				**0.14**	
County Rd 13.6 SW	C22			**0.14**		
	T30				**0.67**	
End of Hiawatha Park Spur	EH			**0.81**		
Tie count, totals		2,541	**1,954**			

Defect Codes for Code of Federal Regulations
Part 213 Track Safety Standards
Subparts A-F
Classes 1 through 5

213.4 – Excepted track

213.4A - EXCEPTED TRACK SEGMENT NOT IDENTIFIED IN APPROPRIATE RECORD.
213.4B - EXCEPTED TRACK SEGMENT LOCATED WITHIN 30 FEET OF AN ADJACENT TRACK SUBJECT TO SIMULTANEOUS OPERATION AT SPEEDS IN EXCESS OF 10 MPH.
213.4C - EXCEPTED TRACK NOT INSPECTED IN ACCORDANCE WITH 213.233(C) AND 213.235 AS SPECIFIED FOR CLASS 1 TRACK.
213.4D - TRAIN SPEED EXCEEDS 10 MPH ON EXCEPTED TRACK.
213.E1 - OCCUPIED PASSENGER TRAIN OPERATED ON EXCEPTED TRACK.
213.E2 - FREIGHT TRAIN OPERATED ON EXCEPTED TRACK WITH MORE THAN FIVE CARS REQUIRED TO BE PLACARDED IN ACCORDANCE WITH 49 CFR PART 172.
213.E3 - TRAIN WITH A CAR REQUIRED TO BE PLACARDED BY 49 CFR PART 172 OPERATED OVER EXCEPTED TRACK WITHIN 100 FEET OF A BRIDGE OR IN A PUBLIC STREET OR HIGHWAY.
213.F - FAILURE TO NOTIFY FRA OF REMOVAL OF TRACKAGE FROM EXCEPTED STATUS.

213.5 – Excepted track

213.5A - FAILURE OF OWNER TO EITHER BRING TRACK INTO COMPLIANCE, HALT OPERATIONS, OR OPERATE SUBJECT TO THE CONDITIONS OF THIS PART.

213.7 – Designation of qualified persons to supervise certain renewals and inspect track

213.7A - FAILURE OF TRACK OWNER TO USE QUALIFIED PERSONS TO SUPERVISE RESTORATIONS & RENEWALS.
213.7A2 - FAILURE OF TRACK OWNER TO HAVE PERSONS DEMONSTRATE REQUIRED KNOWLEDGE, ABILITY TO DETECT DEVIATIONS AND PRESCRIBE REMEDIAL ACTION, INSPECTION.
213.7A3 - FAILURE OF PERSON TO HAVE WRITTEN AUTHORIZATION FOR RESTORATION AND RENEWAL.
213.7B - FAILURE OF TRACK OWNER TO USE QUALIFIED PERSONS TO INSPECT TRACK.
213.7B2 - FAILURE OF TRACK OWNER TO HAVE PERSONS DEMONSTRATE REQUIRED KNOWLEDGE, ABILITY TO DETECT DEVIATIONS AND PRESCRIBE REMEDIAL ACTION, RESTORATION AND RENEWAL.
213.7B3 - FAILURE OF PERSON TO HAVE WRITTEN AUTHORIZATION FOR INSPECTION.
213.7C - FAILURE OF TRACK OWNER TO USE QUALIFIED PERSONS TO INSPECT, RESTORE OR RENEW CWR.
213.7C2 - FAILURE TO COMPLETE COMPREHENSIVE CWR TRAINING COURSE.
213.7C3 - FAILURE OF TRACK OWNER TO HAVE PERSONS DEMONSTRATE REQUIRED KNOWLEDGE, ABILITY TO DETECT DEVIATIONS, CWR.
213.7C4 - FAILURE OF PERSON TO HAVE WRITTEN AUTHORIZATION TO INSPECT, RESTORE OR RENEW CWR.
213.7D - FAILURE OF TRACK OWNER TO USE NOT FULLY QUALIFIED PERSONS TO PASS TRAINS OVER BROKEN RAILS OR PULL APARTS.
213.7D2 - TRAIN SPEED EXCEEDS 10 MPH OVER BROKEN RAILS OR PULL APARTS.
213.7D3 - PERSON NOT WATCHING OR PREPARED TO STOP TRAIN MOVEMENTS OVER BROKEN RAILS OR PULL APARTS.
213.7D4 - FAILURE TO PROMPTLY NOTIFY AND DISPATCH PERSON(S) FULLY QUALIFIED UNDER 213.7 TO THE LOCATION OF THE BROKEN RAIL OR PULL APART.
213.7E - FAILURE OF TRACK OWNER TO PROPERLY MAINTAIN WRITTEN RECORDS OF DESIGNATION AND BASIS FOR EACH DESIGNATION.

213.9 – Classes of track; operating speed limits

213.9B1 - FAILURE TO RESTORE OTHER THAN EXCEPTED TRACK TO COMPLIANCE WITH CLASS 1 STDS. WITHIN 30 DAYS AFTER A PERSON DESIGNATED UNDER 213.7(A) HAS DETERMINED THAT OPERATIONS MAY SAFELY CONTINUE OVER DEFECT(S) NOT MEETING CLASS 1 OR EXCEPTED TRACK STANDARDS.
213.9B2 - FAILURE OF TRACK OWNER TO ENFORCE, OVER CLASS 1 DEFECTS, THE LIMITING CONDITIONS IMPOSED BY PERSON DESIGNATED UNDER 213.7(A).

213.11 – Restoration or renewal of track under traffic conditions

213.11 - PROPER QUALIFIED SUPERVISION NOT PROVIDED AT WORK SITE DURING WORK HOURS WHEN TRACK IS BEING RESTORED OR RENEWED UNDER TRAFFIC CONDITIONS.

213.13 – Measuring track not under load

213.13 - FAILURE TO ADD DYNAMIC MOVEMENT TO STATIC MEASUREMENT

213.33 – Drainage

213.33A1 - DRAINAGE OR WATER-CARRYING FACILITY NOT MAINTAINED.
213.33A2 - DRAINAGE OR WATER-CARRYING FACILITY OBSTRUCTED BY DEBRIS.
213.33A3 - DRAINAGE OR WATER-CARRYING FACILITY COLLAPSED.
213.33A4 - DRAINAGE OR WATER-CARRYING FACILITY OBSTRUCTED BY VEGETATION.
213.33A5 - DRAINAGE OR WATER-CARRYING FACILITY OBSTRUCTED BY SILTING.
213.33A6 - DRAINAGE OR WATER-CARRYING FACILITY DETERIORATED TO ALLOW SUBGRADE SATURATION.
213.33A7 - - UNCONTROLLED WATER UNDERCUTTING TRACK STRUCTURE OR EMBANKMENT.

213.37 – Vegetation

213.37A - COMBUSTIBLE VEGETATION AROUND TRACK-CARRYING STRUCTURES.
213.37B1 - VEGETATION OBSTRUCTS VISIBILITY OF RAILROAD SIGNS AND FIXED SIGNALS.
213.37B2 - VEGETATION OBSTRUCTS VISIBILITY OF GRADE CROSSING WARNING SIGNS AND SIGNALS BY THE TRAVELING PUBLIC.
213.37C1 - VEGETATION INTERFERES WITH RAILROAD EMPLOYEES PERFORMING NORMAL TRACKSIDE DUTIES.
213.37C2 - VEGETATION OBSTRUCTS PASSING OF DAY AND NIGHT SIGNALS BY RAILROAD EMPLOYEES.
213.37C3 - EXCESSIVE VEGETATION IN TOEPATHS AND AROUND SWITCHES THAT INTERFERES WITH EMPLOYEES PERFORMING NORMAL TRACKSIDE DUTIES.
213.37D - VEGETATION PREVENTS PROPER FUNCTIONING OF SIGNAL AND/OR COMMUNICATION LINES.
213.37E1 - EXCESSIVE VEGETATION AT TRAIN ORDER OFFICE, DEPOT, INTERLOCKING PLANT, A CARMAN'S BUILDING, ETC., PREVENTS EMPLOYEES ON DUTY FROM VISUALLY INSPECTING MOVING EQUIPMENT WHEN THEIR DUTIES SO REQUIRE.
213.37E2 - EXCESSIVE VEGETATION AT TRAIN MEETING POINTS PREVENTS PROPER INSPECTION BY RAILROAD EMPLOYEES OF MOVING EQUIPMENT.
213.37E3 - VEGETATION BRUSHING SIDES OF ROLLING STOCK THAT PREVENTS EMPLOYEES FROM VISUALLY INSPECTING MOVING EQUIPMENT FROM THEIR NORMAL DUTY STATIONS.

213.53 – Gage

213.53A - GAGE MEASUREMENT IMPROPER
213.53B1 - GAGE DIMENSION ON TANGENT TRACK EXCEEDS ALLOWABLE.
213.53B2 - GAGE DIMENSION ON TANGENT TRACK.IS LESS THAN ALLOWABLE
213.53B3 - GAGE DIMENSION ON CURVED TRACK.EXCEEDS ALLOWABLE
213.53B4 - GAGE DIMENSION ON CURVED TRACK.IS LESS THAN ALLOWABLE
213.53B5 - GAGE DIMENSION FOR EXCEPTED TRACK.EXCEEDS ALLOWABLE

213.55 – Alinement

213.55A1 - ALINEMENT DEVIATION OF TANGENT TRACK FOR A 62-FOOT CHORD EXCEEDS ALLOWABLE
213.55A2 - ALINEMENT DEVIATION OF CURVED TRACK FOR A 62-FOOT CHORD EXCEEDS ALLOWABLE.
213.55A3 - ALINEMENT DEVIATION OF CURVED IN CLASS 3-5 TRACK FOR A 31-FOOT CHORD EXCEEDS ALLOWABLE.

213.57 – Curves; elevation and speed limitations

213.57A1 - MAXIMUM CROSSLEVEL ON A CURVE IN CLASS 1 AND 2 TRACK EXCEEDS ALLOWABLE.
213.57A2 - MAXIMUM CROSSLEVEL ON CURVE IN CLASS 3-5 TRACK EXCEEDS ALLOWABLE.
213.57B1 - OPERATING SPEED EXCEEDS ALLOWABLE FOR 3-INCHES OF UNBALANCE, BASED ON CURVATURE AND ELEVATION.
213.57C1 - OPERATING SPEED EXCEEDS ALLOWABLE FOR 4-INCHES OF UNBALANCE, BASED ON CURVATURE AND ELEVATION.
213.57D - OPERATING SPEED EXCEEDS ALLOWABLE FOR A FRA APPROVED UNBALANCE BASED ON CURVATURE AND ELEVATION FOR CONTIGUOUS HIGH SPEED TRACK EXCEEDS ALLOWABLE.

213.63 – Track surface

213.63A1 - RUNOFF IN ANY 31-FEET OF RAIL AT END OF RAISE EXCEEDS ALLOWABLE.
213.63A2 - DEVIATION FROM UNIFORM PROFILE ON EITHER RAIL EXCEEDS ALLOWABLE.
213.63A3 - DEVIATION FROM ZERO CROSSLEVEL AT ANY POINT ON TANGENT TRACK EXCEEDS ALLOWABLE
213.63A4 - REVERSE CROSSLEVEL ON CURVE TRACK EXCEEDS ALLOWABLE
213.63A5 - DIFFERENCE IN CROSSLEVEL (WARP) BETWEEN ANY TWO POINTS LESS THAN 62-FEET APART ON TANGENT TRACK EXCEEDS ALLOWABLE.
213.63A6 - DIFFERENCE IN CROSSLEVEL (WARP) BETWEEN ANY TWO POINTS LESS THAN 62-FEET APART ON CURVE TRACK BETWEEN SPIRALS EXCEEDS ALLOWABLE.
213.63A7 - DIFFERENCE IN CROSSLEVEL (WARP) BETWEEN ANY TWO POINTS LESS THAN 62-FEET APART ON SPIRAL TRACK EXCEEDS ALLOWABLE.
213.63A8 - VARIATION IN CROSSLEVEL PER 31-FEET ON A PHYSICALLY RESTRICTED LENGTH SPIRAL EXCEEDS ALLOWABLE.
213.63A9 - WHERE ELEVATION AT ANY POINT IN CURVE TRACK EQUALS OR EXCEEDS SIX INCHES, THE DIFFERENCE IN CROSSLEVEL WITHIN 62-FEET BETWEEN THAT POINT AND A POINT WITH GREATER ELEVATION EXCEEDS ALLOWABLE
213.63A10 - CROSSLEVEL DIFFERENCES IN ALL OF SIX OR MORE CONSECUTIVE PAIRS OF STAGGERED JOINTS IN CLASS 2-5 TRACK EXCEEDS ALLOWABLE.

213.103 – Ballast; general

213.103A - FOULED OR INSUFFICIENT BALLAST FAILING TO TRANSMIT AND DISTRIBUTE LOADING
213.103B - FOULED OR INSUFFICIENT BALLAST FAILING TO RESTRAIN THE TRACK LATERALLY, LONGITUDINALLY OR VERTICALLY.
213.103C - FOULED BALLAST FAILING TO PROVIDE ADEQUATE DRAINAGE FOR THE TRACK.
213.103D - FOULED OR INSUFFICIENT BALLAST FAILING TO MAINTAIN PROPER GEOMETRY.

213.109 – Crossties

213.109A - CROSSTIES MADE OF UNSOUND MATERIAL
213.109B2 - CROSSTIES NOT EFFECTIVELY DISTRIBUTED TO SUPPORT A 39-FOOT SEGMENT OF TRACK.
213.109B3 - NO EFFECTIVE SUPPORT TIES WITHIN THE PRESCRIBED DISTANCE FROM A JOINT.
213.109D1 - FEWER THAN MINIMUM ALLOWABLE NUMBER OF NON-DEFECTIVE TIES PER 39 FEET FOR TANGENT AND CURVED TRACK LESS THAN 2 DEGREES.
213.109D2 - FEWER THAN MINIMUM ALLOWABLE NUMBER OF NON-DEFECTIVE TIES PER 39 FEET FOR TURNOUTS AND CURVED TRACK OVER 2 DEGREES.
213.109G - TRACK CONSTRUCTED WITHOUT CROSSTIES DOES NOT EFFECTIVELY SUPPORT TRACK STRUCTURE.

213.110A - FAILURE TO MAINTAIN AND OPERATE GRMS WITHIN MINIMUM DESIGN REQUIREMENTS OVER DESIGNATED GRMS LINE SEGMENTS
213.110A1 - FAILURE TO NOTIFY FRA AT LEAST 30 DAYS PRIOR TO THE DESIGNATION OF A GRMS LINE SEGMENT
213.110A2 - FAILURE TO NOTIFY FRA AT LEAST 10 DAYS PRIOR TO THE REMOVAL OF A LINE SEGMENT FROM GRMS DESIGNATION
213.110B1 - FAILURE TO PROVIDE REQUIRED INFORMATION IDENTIFYING A GRMS LINE SEGMENT
213.110C - FAILURE TO PROVIDE SUFFICIENT TECHNICAL DATA TO ESTABLISH COMPLIANCE WITH MINIMUM GRMS DESIGN REQUIREMENTS
213.110G - FAILURE OF GRMS TO PROVIDE ANALOG TRACE OF SPECIFIED PARAMETERS
213.110H - FAILURE OF GRMS TO PROVIDE EXCEPTION REPORT LISTING OF SPECIFIED PARAMETERS
213.110I - FAILURE TO PROVIDE EXCEPTION REPORT LISTING TO PAR. 213.7 INDIVIDUAL PRIOR TO NEXT INSPECTION REQUIRED UNDER PAR. 213.333
213.110J1I - FAILURE TO MAINTAIN AND MAKE AVAILABLE DOCUMENTED CALIBRATION PROCEDURES ON GRMS VEHICLE
213.110J1II - FAILURE TO INITIATE A DAILY INSTRUMENT VERIFICATION PROCEDURE
213.110J2 - FAILURE TO MAINTAIN PTLF ACCURACY WITHIN FIVE-PERCENT OF 4,000 READING
213.110K - FAILURE TO MEET TRAINING REQUIREMENTS.
213.110L - FAILURE TO INITIATE REQUIRED REMEDIAL ACTION FOR EXCEPTIONS LISTED ON GRMS RECORD OF LATERAL RESTRAINT
213.110M1I - GAGE WIDENING EXCEEDS ALLOWABLE MEASURED WITH PTLF
213.110M5 - FAILURE TO PROVIDE FUNCTIONAL PTLF TO PAR. 213.7 INDIVIDUAL WHOSE TERRITORY IS SUBJECT TO REQUIREMENTS OF PAR. 213.110
213.110M6 - FAILURE TO RESTORE CONTACT BETWEEN RAIL AND LATERAL RAIL RESTRAINT COMPONENTS
213.110N - FAILURE TO KEEP GRMS RECORDS AS REQUIRED
213.110O - FAILURE TO CONDUCT GRMS INSPECTIONS AT REQUIRED FREQUENCY

213.113 – Defective rails

213.113A - OPERATION CONTINUED OVER DEFECTIVE RAIL WITHOUT REQUIRED REMEDIAL ACTION.
213.113B - RAIL DEFECT ORIGINATING FROM BOND WIRE ATTACHMENT [WHERE A DEFECT RESULTS FROM A BOND WIRE ATTACHMENT, FRA INSPECTORS MUST CITE THIS DEFECT CODE AND ALSO INCLUDE A DESCRIPTION OF THE APPLICABLE RAIL DEFECT AS DESCRIBED IN §213.113]
213.113B1 - TRANSVERSE FISSURE
213.113B2 - COMPOUND FISSURE
213.113B3 - HORIZONTAL SPLIT HEAD
213.113B4 - VERTICAL SPLIT HEAD
213.113B5 - SPLIT WEB
213.113B6 - PIPED RAIL
213.113B7 - BROKEN BASE
213.113B8 - DETAIL FRACTURE
213.113B9 - ENGINE BURN FRACTURE
213.113B10 - ORDINARY BREAK
213.113B11 - DAMAGED RAIL
213.113B12 - FLATTENED RAIL
213.113B13 - BOLT-HOLE CRACK
213.113B14 - BROKEN OR DEFECTIVE WELD
213.113B15 - HEAD WEB SEPARATION

213.122 – Torch cut rail

213.122AI - TORCH CUT RAIL APPLIED IN CLASS 3 THROUGH 5 TRACK FOR OTHER THAN EMERGENCY.
213.122AII - FAILURE TO REMOVE TORCH CUT RAILS WITHIN SPECIFIED TIME FRAME.
213.122B1 - FAILURE TO REMOVE NON-INVENTORIED TORCH CUT RAIL WITHIN 30 DAYS OF DISCOVERY.
213.122B2 - TRAIN SPEED EXCEEDS ALLOWABLE OVER NON-INVENTORIED TORCH CUT RAIL.

213.123 – Tie plates

213.123A - INSUFFICIENT TIE PLATES IN CLASS 3 THROUGH 5 TRACK.
213.123B - OBJECT BETWEEN BASE OF RAIL AND THE BEARING SURFACE OF THE TIE PLATE CAUSING CONCENTRATED LOAD.

213.127 – Rail fastenings

213.127A1 - FASTENERS IN A TRACK SEGMENT NOT EFFECTIVELY MAINTAINING GAGE.
213.127A2 - INSUFFICIENT FASTENERS IN A TRACK SEGMENT.
213.127A3 - INSUFFICIENT FASTENERS AT RAIL JOINT.

213.133 – Turnouts and track crossing generally

213.133A1 - LOOSE, WORN, OR MISSING SWITCH CLIPS.
213.133A2 - LOOSE, WORN, OR MISSING CLIP BOLTS (TRANSIT, SIDE JAW, ECCENTRIC, VERTICAL).
213.133A3 - LOOSE, WORN, OR DEFECTIVE CONNECTING ROD.
213.133A4 - LOOSE, WORN, OR DEFECTIVE CONNECTING ROD FASTENING.
213.133A5 - LOOSE, WORN, OR DEFECTIVE SWITCH ROD.
213.133A6 - LOOSE, WORN, OR MISSING SWITCH ROD BOLTS.
213.133A7 - WORN OR MISSING COTTER PINS.
213.133A8 - LOOSE OR MISSING RIGID RAIL BRACES.
213.133A9 - LOOSE OR MISSING ADJUSTABLE RAIL BRACES.
213.133A10 - MISSING SWITCH, FROG, OR GUARD RAIL PLATES.
213.133A11 - LOOSE OR MISSING SWITCH POINT STOPS.
213.133A12 - LOOSE, WORN, OR MISSING FROG BOLTS.
213.133A13 - LOOSE, WORN, OR MISSING GUARD RAIL BOLTS.
213.133A14 - LOOSE, WORN OR MISSING GUARD RAIL CLAMPS, WEDGE, SEPARATOR BLOCK, END BLOCK, OR OTHER COMPONENTS.
213.133A15 - TURNOUT OR TRACK CROSSING FASTENINGS NOT INTACT OR MAINTAINED.
213.133A16 - OBSTRUCTION BETWEEN SWITCH POINT AND STOCK RAIL.
213.133A17 - OBSTRUCTION IN FLANGEWAY OF FROG.
213.133A18 - OBSTRUCTION IN FLANGEWAY OF GUARD RAIL.
213.133B - INSUFFICIENT ANCHORAGE TO RESTRAIN RAIL MOVEMENT.
213.133C - FLANGEWAY LESS THAN 1 1/2 INCHES WIDE.

213.115 – Rail end mismatch

213.115A1 - RAIL-END MISMATCH ON TREAD OF RAIL EXCEEDS ALLOWABLE.
213.115A2 - RAIL-END MISMATCH ON TREAD OF RAIL EXCEEDS ALLOWABLE (CWR).
213.115A3 - RAIL-END MISMATCH ON GAGE SIDE OF RAIL EXCEEDS ALLOWABLE.
213.115A4 - RAIL-END MISMATCH ON GAGE SIDE OF RAIL EXCEEDS ALLOWABLE (CWR).

213.119 – Continuous welded rail (CWR); general

213.119A - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - INSTALLATION AND ADJUSTMENT
213.119B - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - ANCHORING OR FASTENING REQUIREMENTS
213.119C - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - JOINT INSTALLATION AND MAINTENANCE PROCEDURES
213.119D - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - MAINTAINING DESIRED RAIL INSTALLATION TEMPERATURE RANGE
213.119E - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - CURVED TRACK
213.119F - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - TRAIN SPEED
213.119G - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - PHYSICAL TRACK INSPECTIONS
213.119H - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - CWR JOINT INSPECTION
213.119I - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - TRAINING
213.119J - FAILURE TO COMPLY WITH WRITTEN CWR PROCEDURES - RECORDKEEPING
213.119K - CWR PROCEDURES AND REVISIONS NOT AVAILABLE AT JOB SITE OR MAINTAINED IN ONE MANUAL

213.121 – Rail joints

213.121A1 - RAIL JOINT NOT OF STRUCTURALLY SOUND DESIGN AND DIMENSION (JOINTED TRACK)
213.121A2 - RAIL JOINT NOT OF STRUCTURALLY SOUND DESIGN AND DIMENSION (CWR).
213.121B1 - CRACKED OR BROKEN JOINT BAR IN CLASSES 3 THROUGH 5 TRACK (OTHER THAN CENTER-BREAK) (JOINTED TRACK)
213.121B2 - CRACKED OR BROKEN JOINT BAR IN CLASSES 3 THROUGH 5 TRACK (OTHER THAN CENTERBREAK) (CWR)
213.121B3 - CRACKED OR BROKEN INSULATED JOINT BAR IN CLASSES 3 THROUGH 5 TRACK (OTHER THAN CENTERBREAK) (CWR)
213.121B4 - WORN JOINT BAR ALLOWS EXCESSIVE VERTICAL MOVEMENT OF RAIL IN JOINT IN CLASSES 3 THROUGH 5 TRACK (JOINTED TRACK)
213.121B5 - WORN JOINT BAR ALLOWS EXCESSIVE VERTICAL MOVEMENT OF RAIL IN JOINT IN CLASSES 3 THROUGH 5 TRACK (CWR).
213.121C1 - CENTER CRACKED OR BROKEN JOINT BAR (JOINTED TRACK)
213.121C2 - CENTER CRACKED OR BROKEN JOINT BAR (CWR).
213.121C3 - CENTER CRACKED OR BROKEN INSULATED JOINT BAR (CWR)
213.121D1 - LESS THAN 2 BOLTS PER RAIL AT EACH JOINT FOR CONVENTIONAL JOINTED RAIL IN CLASSES 2 THROUGH 5 TRACK.
213.121D2 - LESS THAN 1 BOLT PER RAIL AT EACH JOINT FOR CONVENTIONAL JOINTED RAIL IN CLASS 1 TRACK.
213.121E - LESS THAN 2 BOLTS PER RAIL AT ANY JOINT IN CONTINUOUS WELDED RAIL.
213.121F1 - LOOSE JOINT BARS (JOINTED TRACK)
213.121F2 - LOOSE JOINT BARS (CWR).
213.121G1 - TORCH-CUT OR BURNED-BOLT HOLE IN RAIL IN CLASSES 2 THROUGH 5 TRACK (JOINTED TRACK)
213.121G2 - TORCH-CUT OR BURNED-BOLT HOLE IN RAIL IN CLASSES 2 THROUGH 5 TRACK (CWR).
213.121H1 - JOINT BAR RECONFIGURED BY TORCH CUTTING IN CLASSES 3 THROUGH 5 TRACK (JOINTED TRACK)
213.121H2 - JOINT BAR RECONFIGURED BY TORCH CUTTING IN CLASSES 3 THROUGH 5 TRACK (CWR).

213.135 – Switches

213.135A1 - STOCK RAIL NOT SECURELY SEATED IN SWITCH PLATES.
213.135A2 - STOCK RAIL CANTED BY OVERTIGHTENING RAIL BRACES.
213.135B1 - IMPROPER FIT BETWEEN SWITCH POINT AND STOCK RAIL.
213.135B2 - EXCESSIVE LATERAL OR VERTICAL MOVEMENT OF SWITCH POINT.
213.135B3 - LATERAL OR VERTICAL MOVEMENT OF A STOCK RAIL ADVERSELY AFFECTING THE FIT OF THE SWITCH POINT TO THE STOCK RAIL.
213.135C - OUTER EDGE OF WHEEL CONTACTING GAGE SIDE OF STOCK RAIL
213.135D - HEEL OF SWITCH INSECURE.
213.135E1 - SWITCH STAND OR SWITCH MACHINE INSECURE OR OPERABLE WITH EXCESSIVE LOST MOTION.
213.135E2 - CONNECTING ROD INSECURE OR OPERABLE WITH EXCESSIVE LOST MOTION.
213.135F - THROW LEVER OPERABLE WITH SWITCH LOCK OR KEEPER IN PLACE.
213.135G - SWITCH POSITION INDICATOR NOT CLEARLY VISIBLE.
213.135H1 - UNUSUALLY CHIPPED OR WORN SWITCH POINT.
213.135H2 - IMPROPER SWITCH CLOSURE DUE TO METAL FLOW.
213.135I - USE OF TONGUE AND PLAIN MATE WHERE SPEEDS EXCEED CLASS ONE.

213.137 – Frogs

213.137A - INSUFFICIENT FLANGEWAY DEPTH.
213.137B - FROG POINT CHIPPED, BROKEN, OR WORN IN EXCESS OF ALLOWABLE.
213.137C - TREAD PORTION OF FROG WORN IN EXCESS OF ALLOWABLE.
213.137D - USE OF FLANGE BEARING FROG WHERE SPEED EXCEEDS THAT PERMITTED BY CLASS 1.
213.137E - SEVERE FROG CONDITION NOT OTHERWISE PROVIDED. (ADVISORY ONLY CANNOT BE USE SOLELY TO RECOMMEND VIOLATION)

213.139 – Spring rail frogs

213.139A - OUTER EDGE OF WHEEL CONTACTING SIDE OF SPRING WING RAIL.
213.139B - TOE OF WING RAIL NOT FULLY BOLTED AND TIGHT.
213.139B1 - TIES UNDER OR WING RAIL NOT SOLIDLY TAMPED.
213.139C1 - BOLT-HOLE DEFECT IN SPRING FROG.
213.139C2 - HEAD AND WEB SEPARATION IN SPRING FROG.
213.139D - INSUFFICIENT COMPRESSION IN SPRING TO HOLD WING RAIL AGAINST POINT RAIL.
213.139E - EXCESSIVE CLEARANCE BETWEEN HOLD-DOWN HOUSING AND HORN.

213.141 – Self-guarded frogs

213.141A - RAISED GUARD WORN EXCESSIVELY.
213.141B - FROG POINT REBUILT BEFORE RESTORING GUARDING FACE.

213.143 – Frog guard rails and guard faces; gage

213.143A1 - GUARD CHECK GAGE LESS THAN ALLOWABLE.
213.143A2 - GUARD FACE GAGE EXCEEDS ALLOWABLE.
213.143A3 - CRACKED OR BROKEN GUARD RAIL.

213.205 – Derails

213.205A - DERAIL NOT CLEARLY VISIBLE.
213.205B - DERAIL OPERABLE WHEN LOCKED.
213.205C1 - LOOSE, WORN, OR DEFECTIVE PARTS OF DERAIL.
213.205C2 - INSECURE DERAIL OR STAND
213.205D1 - IMPROPER SIZE DERAIL.
213.205D2 - IMPROPERLY INSTALLED DERAIL.

213.233 – Track inspections

213.233A - TRACK INSPECTED BY OTHER THAN QUALIFIED DESIGNATED INDIVIDUAL.
213.233B - TRACK BEING INSPECTED AT EXCESSIVE SPEED.
213.233B1 - ONE INSPECTOR INSPECTING MORE THAN TWO TRACKS OR INSPECTING TRACKS WITH CENTERS GREATER THAN ALLOWABLE.
213.233B2 - TWO INSPECTORS INSPECTING MORE THAN FOUR TRACKS OR INSPECTING TRACKS WITH CENTERS GREATER THAN ALLOWABLE.
213.233B3I - MAIN TRACK NOT TRAVERSED WITHIN THE REQUIRED FREQUENCY.
213.233B3II - SIDING TRACK NOT TRAVERSED WITHIN THE REQUIRED FREQUENCY.
213.233C - FAILURE TO INSPECT AT REQUIRED FREQUENCY.
213.233D - FAILURE TO INITIATE REMEDIAL ACTION FOR DEVIATIONS FOUND.

213.235 – Inspection of switches, track crossings, and lift rail assemblies or other transition devices on movable bridges

213.235A1 - FAILURE TO INSPECT TURNOUTS AT REQUIRED FREQUENCY.
213.235A2 - FAILURE TO INSPECT TRACK CROSSINGS AT REQUIRED FREQUENCY.
213.235A3 - FAILURE TO INSPECT LIFT RAIL ASSEMBLIES OR OTHER TRANSITION DEVICES ON MOVEABLE BRIDGES AT REQUIRED FREQUENCY.
213.235B - FAILURE TO OPERATE SPECIFIED SWITCHES IN CLASSES 3 THROUGH 5.
213.235C - SWITCH, TURNOUT, TRACK CROSSING OR TRANSITION DEVICE USED LESS THAN ONCE A MONTH AND NOT INSPECTED ON FOOT BEFORE USE
213.235C1 - TRACK USED LESS THAN ONCE A MONTH NOT INSPECTED ON FOOT BEFORE USE

213.237 – Inspection of rail

213.237A - FAILURE TO INSPECT RAIL FOR INTERNAL DEFECTS AT REQUIRED FREQUENCY.
213.237B - FAILURE OF EQUIPMENT TO INSPECT RAIL AT JOINTS.
213.237C - DEFECTIVE RAIL NOT MARKED PROPERLY.
213.237E - IMPROPER ACTION TAKEN AFTER EXPIRATION LIMITS OF PREVIOUS INTERNAL RAIL DEFECT SEARCH.

213.239 – Special inspections

213.239A - FAILURE TO CONDUCT SPECIAL INSPECTIONS WHEN REQUIRED.

213.241 – Inspection records

213.241A - FAILURE TO KEEP RECORDS AS REQUIRED.
213.241B1 - FAILURE OF INSPECTOR TO COMPLETE REPORT THE DAY OF THE INSPECTION.
213.241B2 - FAILURE OF INSPECTOR TO SIGN REPORT.
213.241B3 - FAILURE TO INDICATE THE NATURE OF DEVIATION.
213.241B4 - FAILURE OF INSPECTOR TO PROVIDE REQUIRED INFORMATION.
213.241B5 - FAILURE TO RECORD REQUIRED PERIODIC OR FOLLOW-UP CWR JOINT INSPECTION
213.241C - FAILURE OF RAIL INSPECTION RECORD TO PROVIDE REQUIRED INFORMATION.
213.241D - FAILURE TO MAKE RECORDS AVAILABLE FOR COPYING AND INSPECTION.
213.241E1 - ELECTRONIC SYSTEM DOES NOT MAINTAIN THE INTEGRITY OF EACH RECORD.
213.241E2 - ELECTRONIC STORAGE NOT INITIATED WITHIN 24 HOURS.
213.241E3 - ELECTRONIC SYSTEM ALLOWS RECORD OR AMENDMENTS TO BE MODIFIED.
213.241E4 - ELECTRONIC AMENDMENTS NOT STORED SEPARATELY FROM RECORD.
213.241E4I - ELECTRONIC AMENDMENTS NOT STORED SEPARATELY FROM RECORD.
213.241E5 - ELECTRONIC SYSTEM CORRUPTS OR LOSSES DATA.
213.241E6 - PAPER COPIES OF RECORDS NOT MADE AVAILABLE FOR INSPECTION AND COPYING.
213.241E7 - INSPECTION REPORTS NOT AVAILABLE TO INSPECTOR OR SUBSEQUENT INSPECTORS.