

<b>Notes:</b>		
- Any relevant change to already supplied documentation requires the respective documents to be re-supplied.		
- Any Re-Submission for a stage must cover all aspects of that stage.		
- Color coding indicating the stage where an issue must be submitted as part of a stage:		Initial submission to RSC
		subsequent and more detailed update

<b>PART 1 (Management of APIS Process)</b>								
No.	National Requirement in the State (NTR for APIS process)	Detailed Requirement	Stage 1 Concept	Stage 2 Preliminary Design (Optional)	Stage 3 Overall (Detailed) Design	Stage 4 Testing	Stage 5 Interim Operation (Optional)	Stage 6 Operation
<b>00.01</b>	<b>Project Submissions</b>							
00.01.01	Project Submission	Project Safety Plan in accordance with Annex 1 of RSC-G-009						
00.01.02	Project Submission	Proposal on level of significance in accordance to CSM-RA 352/2009 (may be included within Safety Plan)						
00.01.03	Project Submission	Project Hazard Record in accordance with Annex 2 of RSC-G-009						
00.01.04	Project Submission	Project Safety- and Compliance Matrix in accordance with Annex 4 of RSC-G-009						
00.01.05	Project Submission	Generic Product Safety Case (optional)						
00.01.06	Project Submission	Generic Application Safety Case (optional)						
00.01.07	Project Submission	Application Specific Project Safety Case (NWA) - Stage 4 in accordance with Annex 3 of RSC-G-009						
00.01.08	Project Submission	Application Specific Project Safety Case (NWA) - Stage 5 in accordance with Annex 3 of RSC-G-009						
00.01.09	Project Submission	Application Specific Project Safety Case (NWA) - Stage 6 in accordance with Annex 3 of RSC-G-009						
00.01.10	Project Submission	EC-Intermediate Statement(s) of Verification (ISV) (2008/57/EC) (if used)						
00.01.11	Project Submission	EC-Certificate(s) of Verification (2008/57/EC)						
00.01.12	Project Submission	EC-Declaration, including all declarations for constituents and subsystems, Combined Technical File elements, other evidence as appropriate						
00.01.13	Project Submission	EC-Declaration relating to other EU requirements as appropriate (for each Stage leading to operation on the Network in the State)						
<b>00.02</b>	<b>Assessment Reporting - in case of RSA-APIS</b>							
00.02.01	Independent Assessor Reporting	IA Review Report on overall project at each stage (if used)		(as applicable)	(as applicable)	(as applicable)	(as applicable)	(as applicable)
00.02.02	Other Assessment Reporting	e.g. RU/IM self assessment						
<b>00.03</b>	<b>Assessment Reporting - in case of combined RSA-IOD-APIS</b>							
00.03.01	NoBo Intermediate Reporting	NoBo ISV with associated report and EC-Technical File (as applicable) (if used)		(as applicable)	(as applicable)	(as applicable)	(as applicable)	(as applicable)
00.03.02	DeBo Intermediate Reporting (2011/217/EU)	DeBo N-ISV with associated report and N-Technical File (as applicable) (if used)		(as applicable)	(as applicable)	(as applicable)	(as applicable)	(as applicable)
00.03.03	NoBo final Reporting	NoBo EC Certificates with associated reports and Technical File (as applicable)						
00.03.04	DeBo final Reporting (2011/217/EU)	DeBo N-Certificates with associated report and N-Technical File						
<b>00.04</b>	<b>Assessment Reporting - relating to CSM 352/2009</b>							
00.04.01	CSM-AB Reporting	Status reporting and associated evidence for each stage		(recommended, not mandatory)	(recommended, not mandatory)			
<b>00.05</b>	<b>Management of Works</b>							
00.05.01	Project Submission	Proposed concept on Enabling Works						
00.05.02	Project Submission	Proposed concept of protection of operational railway and other parties during works						

PART 2 List of Parameters for INF & related OPE/MAI Sub-System aspects			National requirements in the State	TSI-requirements + associated mandatory and voluntary standards (for information)			TSI-specific cases (for Information)
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Ref.	Parameter	Detailed Parameter	NTR for INF & related OPE/MAI Sub-System aspects	Relevant CR TSI and other EU requirements	Mandatory Standards	Voluntary Standards	Specific Cases
<b>01.00</b>	<b>General Information on project scope</b>						
01.01	general	Summary of General Arrangement and Type and Purpose of Project (e.g. Line, chainage/ section, Project boundary, Location/ class/ type/length of: track, switches, crossings, stations, platforms, structures, RST-depots, freight hubs, permitted parths, stabling tracks)	TSI INF CR 4.2.13.1 TSI INF CR annex D EN 13803-1:2010 EN 13803-2:2006 +A1:2009 UIC 700 +add. NTR: TBD	TSI INF CR 4.2.13.1 TSI INF CR annex D		EN 13803-1:2010 EN 13803-2:2006 +A1:2009 UIC 700	
01.02	general	Definition of Scope relating New Build/ Upgrade / Renewal (general description and description in the context of any applicable TSI)	TSI INF CR 2 TSI PRM 1.1+7.3 TSI SRT 1.1+4.1+7+7.2 +add. NTR: TBD	TSI INF CR 2 TSI PRM 1.1+7.3 TSI SRT 1.1+4.1+7+7.2			
01.03	general	Declaration of intended design life for each aspect of the project	+add. NTR: TBD				
01.04	general	Data sheet containing Infrastructure Register information according to applicable TSIs and to 2011/633/EU	TSI INF CR 4.8 TSI INF CR annex D TSI PRM 4.1.8 TSI SRT 4.8.1 TSI SRT annex A TSI OPE CR 4.8.1 TSI OPE CR AppD 2011/633/EU +add. NTR: TBD	TSI INF CR 4.8 TSI INF CR annex D TSI PRM 4.1.8 TSI SRT 4.8.1 TSI SRT annex A TSI OPE CR 4.8.1 TSI OPE CR AppD 2011/633/EU			
01.05	general	absence and/or control of hazardous materials during installation, operation, maintenance, de-commissioning. At min. declaration on absence of Asbestos, PCB, radioactive material, etc.	1907/2006 REACH +add. NTR: TBD	1907/2006 REACH			
<b>02.00</b>	<b>Track Layout (Line Layout)</b>						
02.01	Track layout	TSI Category and Performance Parameters of the section of line	TSI INF CR 4.2.1+(SC) TSI INF CR 4.2.2 TSI INF CR 4.2.3 EN15528:2008 EN15273-1:2009(SC) EN15273-3:2009(SC) TSI INF CR 7.6.4.1 +add. NTR: TBD	TSI INF CR 4.2.1+(SC) TSI INF CR 4.2.2 TSI INF CR 4.2.3	EN15528:2008 EN15273-1:2009(SC) EN15273-3:2009(SC)		TSI INF CR 7.6.4.1
02.02	Track layout	National TSI Category and Performance Parameters of the section of line	TSI INF CR 4.2.1+(SC) TSI INF CR 4.2.2 TSI INF CR 4.2.3 EN15528:2008 EN15273-1:2009(SC) EN15273-3:2009(SC) TSI INF CR 7.6.4.1 +add. NTR: TBD	TSI INF CR 4.2.1+(SC) TSI INF CR 4.2.2 TSI INF CR 4.2.3	EN15528:2008 EN15273-1:2009(SC) EN15273-3:2009(SC)		TSI INF CR 7.6.4.1
02.03	Track layout	Evidence of available Structure Gauge	TSI INF CR 4.2.4.1(SC) TSI INF SG 6.2.4.1(SC) EN15273:2009 EN15273-1:2009 EN15273-3:2009 TSI INF CR 7.6.4.2 +add. NTR: TBD	TSI INF CR 4.2.4.1(SC) TSI INF SG 6.2.4.1(SC)	EN15273:2009	EN15273-1:2009 EN15273-3:2009	TSI INF CR 7.6.4.2
02.04	Track layout	Distance between track centres	TSI INF CR 4.2.4.2(SC) TSI INF SG 6.2.4.1(SC) EN15273:2010 EN15273-1:2009 TSI INF CR 7.6.4.3 +add. NTR: TBD	TSI INF CR 4.2.4.2(SC) TSI INF SG 6.2.4.1(SC)	EN15273:2010	EN15273-1:2009	TSI INF CR 7.6.4.3
02.05	Track layout	Maximum gradients	TSI INF CR 4.2.4.3 +add. NTR: TBD	TSI INF CR 4.2.4.3			
02.06	Track layout	Minimum radius of horizontal curve	TSI INF CR 4.2.4.4 EN 13803-1:2010 EN 13803-2:2006 +A1:2009 +add. NTR: TBD	TSI INF CR 4.2.4.4		EN 13803-1:2010 EN 13803-2:2006 +A1:2009	
02.07	Track layout	Geometric limits of Reverse Curve	TSI INF CR 4.2.4.4(4) EN13803-2:2006 EN 13803-1:2010 EN 13803-2:2006 +A1:2009 +add. NTR: TBD	TSI INF CR 4.2.4.4(4)	EN13803-2:2006	EN 13803-1:2010 EN 13803-2:2006 +A1:2009	

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Ref.	Parameter	Detailed Parameter	NTR for INF & related OPE/MAI Sub-System aspects	Relevant CR TSI and other EU requirements	Mandatory Standards	Voluntary Standards	Specific Cases
02.08	Track layout	Minimum radius of vertical curve	TSI INF CR 4.2.4.5 EN 13803-1:2010 EN 13803-2:2006 +A1:2009 +add. NTR: TBD	TSI INF CR 4.2.4.5		EN 13803-1:2010 EN 13803-2:2006 +A1:2009	
<b>03.00</b>	<b>Track parameters</b>						
03.01	Track parameters	Nominal track gauge	TSI INF CR 4.2.5.1+(SC) EN 13848-1:2003 +A1:2008 TSI INF CR 7.6.4.4 +add. NTR: TBD	TSI INF CR 4.2.5.1+(SC)		EN 13848-1:2003 +A1:2008	TSI INF CR 7.6.4.4
03.02	Track parameters	Cant	TSI INF CR 4.2.5.2 EN 13803-1:2010 EN 13803-2:2006 +A1:2009 EN 14363:2005 +NTR (for design limits) +add. NTR: TBD	TSI INF CR 4.2.5.2		EN 13803-1:2010 EN 13803-2:2006 +A1:2009 EN 14363:2005 +NTR (for design limits)	
03.03	Track parameters	Rate of change of cant (as a function of time/ distance)	TSI INF CR 4.2.5.3 +add. NTR: TBD	TSI INF CR 4.2.5.3			
03.04	Track parameters	Permitted Cant deficiency (plain track, switches, crossings, operation of trains with cant deficiency compensation systems, abrupt change of cant deficiency in switches)	TSI INF CR 4.2.5.4 (OP for 1600mm) EN 13803-1:2010 EN 13803-2:2006 +A1 EN 14363:2005 +NTR (for design limits) +add. NTR: TBD	TSI INF CR 4.2.5.4 (OP for 1600mm)		EN 13803-1:2010 EN 13803-2:2006 +A1 EN 14363:2005 +NTR (for design limits)	
03.05	Track parameters	specific requirements for operation of trains with higher cant deficiency (It is recommended that a specific safety case is developed, which shall identify based on the technical solution chosen any related Parameters for Evaluation)	TSI INF CR 4.2.5.4.1(3) (OP for 1600mm) TSI INF CR 6.2.4.3 UIC 518-1 EN15273-3:2009 prEN15686:2009 +add. NTR: TBD	TSI INF CR 4.2.5.4.1(3) (OP for 1600mm) TSI INF CR 6.2.4.3		UIC 518-1 EN15273-3:2009 prEN15686:2009	
03.06	Track parameters	Equivalent conicity - design limits	TSI INF CR 4.2.5.5+(SC) TSI INF CR 6.2.4.4 EN 15302:2008 EN 13848-1:2003+A1:2008 TSI INF CR 7.6.4.5 +add. NTR: TBD	TSI INF CR 4.2.5.5+(SC) TSI INF CR 6.2.4.4		EN 15302:2008 EN 13848-1:2003+A1:2008	TSI INF CR 7.6.4.5
03.07	Track parameters	Rail head profile for plain line	TSI INF CR 4.2.5.6 TSI INF CR 5.3.1.1 EN13674-1:2003+A1:2007 EN13674-2:2006 +add. NTR: TBD	TSI INF CR 4.2.5.6 TSI INF CR 5.3.1.1		EN13674-1:2003+A1:2007 EN13674-2:2006	
03.08	Track parameters	moment of inertia of rail cross section	TSI INF CR 5.3.1.2 +add. NTR: TBD	TSI INF CR 5.3.1.2			
03.09	Track parameters	rail hardness	TSI INF CR 5.3.1.3 +add. NTR: TBD	TSI INF CR 5.3.1.3			
03.10	Track parameters	Rail inclination (plain line)	TSI INF CR 4.2.5.7 +add. NTR: TBD	TSI INF CR 4.2.5.7			
03.11	Track parameters	rail fastening systems (static longitudinal loads, dynamic loads, definition of interfaces for application)	TSI INF CR 5.3.2 EN 13146-1:2002 EN 13146-4:2002 +A1:2006 EN 13146-7:2002 EN 13146-8:2002 +A1:2006 EN 13146-9:2009 EN 13481-2:2002 +A1:2006 EN 13481-3:2002 +A1:2006 EN 13481-8:2006 +add. NTR: TBD	TSI INF CR 5.3.2		EN 13146-1:2002 EN 13146-4:2002 +A1:2006 EN 13146-7:2002 EN 13146-8:2002 +A1:2006 EN 13146-9:2009 EN 13481-2:2002 +A1:2006 EN 13481-3:2002 +A1:2006 EN 13481-8:2006	

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03.12	Track parameters	track sleepers (geometry, resistance to applied loads, permitted combinations with rail, rail inclination, rail fastening systems, permitted axle loads, permitted bending moments)	TSI INF CR 5.3.3 EN 13230-1:2009 EN 13230-2:2009 EN 13230-3:2009 EN 13145:2001 +add. NTR: TBD	TSI INF CR 5.3.3		EN 13230-1:2009 EN 13230-2:2009 EN 13230-3:2009 EN 13145:2001	
03.13	Track parameters	Track stiffness	TSI INF CR 4.2.5.8(OP) +add. NTR: TBD	TSI INF CR 4.2.5.8(OP)			
<b>04.00</b>	<b>Switches, crossings, expansion devices, derailment devices</b>						
04.01	Switches and crossings	Rail inclination (switches, crossings)	TSI INF CR 4.2.5.7 +add. NTR: TBD	TSI INF CR 4.2.5.7			
04.02	Switches and crossings	Means of locking	TSI INF CR 4.2.6.1 EN 13232-4:2005 +A1:2011 +add. NTR: TBD	TSI INF CR 4.2.6.1		EN 13232-4:2005 +A1:2011	
04.03	Switches and crossings	geometry -design values	TSI INF CR 4.2.6.2+(SC) TSI INF CR 6.2.4.7 EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +A1 EN15273-3:2009 TSI INF CR 7.6.4.7 +add. NTR: TBD	TSI INF CR 4.2.6.2+(SC) TSI INF CR 6.2.4.7		EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +A1 EN15273-3:2009	TSI INF CR 7.6.4.7
04.04	Switches and crossings	Maximum unguided length of fixed obtuse crossings	TSI INF CR 4.2.6.3 TSI INF CR 6.2.4.7 EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-8:2007 EN 13232-9:2006 EN 13803-2:2006 +A1 +add. NTR: TBD	TSI INF CR 4.2.6.3 TSI INF CR 6.2.4.7		EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-8:2007 EN 13232-9:2006 EN 13803-2:2006 +A1	
04.05	expansion devices	geometry -design values	EN13232-8:2007 +add. NTR: TBD				EN13232-8:2007
04.06	derailment devices (derailers)	geometry -design values means of locking	+add. NTR: TBD				
<b>05.00</b>	<b>Track resistance to applied loads</b>						
05.01	Track resistance to applied loads	Track resistance to vertical loads	TSI INF CR 4.2.7.1 TSI INF CR 6.2.5 TSI RST HS TSI LOC&PAS CR EN 13803-1:2010 EN 14363:2005 +add. NTR: TBD	TSI INF CR 4.2.7.1 TSI INF CR 6.2.5	TSI RST HS TSI LOC&PAS CR	EN 13803-1:2010 EN 14363:2005	
05.02	Track resistance to applied loads	Longitudinal track resistance (including compibility with braking systems)	TSI INF CR 4.2.7.2 TSI INF CR 6.2.5 TSI RST HS TSI LOC&PAS CR EN 13803-1:2010 EN 14363:2005 +add. NTR: TBD	TSI INF CR 4.2.7.2 TSI INF CR 6.2.5	TSI RST HS TSI LOC&PAS CR	EN 13803-1:2010 EN 14363:2005	
05.03	Track resistance to applied loads	Lateral track resistance	TSI INF CR 4.2.7.3 TSI INF CR 6.2.5 TSI RST HS TSI LOC&PAS CR EN 13803-1:2010 EN 13803-2:2006 EN 14363:2005 +add. NTR: TBD	TSI INF CR 4.2.7.3 TSI INF CR 6.2.5	TSI RST HS TSI LOC&PAS CR	EN 13803-1:2010 EN 13803-2:2006 EN 14363:2005	

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<b>06.00</b>	<b>Structures resistance to applied loads</b>						
<b>06.01</b>	<b>general requirements for any new or modified structure</b>						
06.01.01	general requirements for any new or modified structure	vertical loading for earthworks and earth pressure effects	TSI INF CR 4.2.8.2 EN1991-2:2003 +add. NTR: TBD	TSI INF CR 4.2.8.2	EN1991-2:2003		
06.01.02	general requirements for any new or modified structure	Aerodynamic effects on structures caused by trains	TSI INF CR 4.2.8.3 EN1991-2:2003(6.6) +add. NTR: TBD	TSI INF CR 4.2.8.3	EN1991-2:2003(6.6)		
<b>06.02</b>	<b>New bridges/viaducts over the railway or other new structures over or adjacent to track</b>						
06.02.01	New bridges/viaducts over the railway or other new structures over or adjacent to track	Resistance of sub structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8	EN1991-2:2003 EN1990:2002 +A1:2005		
06.02.02	New bridges/viaducts over the railway or other new structures over or adjacent to track	Resistance of super structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8	EN1991-2:2003 EN1990:2002 +A1:2005		
06.02.03	New bridges/viaducts over the railway or other new structures over or adjacent to track	Parapet containment / safety barriers	EN1317 NRA TD 19/07 +add. NTR: TBD			EN1317 NRA TD 19/07	
06.02.04	New bridges/viaducts over the railway or other new structures over or adjacent to track	Parapet height	+add. NTR: TBD				
06.02.05	New bridges/viaducts over the railway or other new structures over or adjacent to track	Measures to protect the railway from vandalism	+add. NTR: TBD				
06.02.06	New bridges/viaducts over the railway or other new structures over or adjacent to track	Containment of safety barriers on approaches	+add. NTR: TBD				
06.02.07	New bridges/viaducts over the railway or other new structures over or adjacent to track	Resistance of supports to rail vehicle impact	+add. NTR: TBD				
06.02.08	New bridges/viaducts over the railway or other new structures over or adjacent to track	Requirements for maintenance	+add. NTR: TBD				
<b>06.03</b>	<b>Modification of existing bridges/viaducts over the railway</b>						

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06.03.01	Modification of existing bridges/viaducts over the railway	Resistance of sub structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9 TSI INF CR AnnexE EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9	TSI INF CR AnnexE	EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005	
06.03.02	Modification of existing bridges/viaducts over the railway	Resistance of super structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9 TSI INF CR AnnexE EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9	TSI INF CR AnnexE	EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005	
06.03.03	Modification of existing bridges/viaducts over the railway	Parapet containment	+add. NTR: TBD				
06.03.04	Modification of existing bridges/viaducts over the railway	Parapet height	+add. NTR: TBD				
06.03.05	Modification of existing bridges/viaducts over the railway	Measures to protect the railway from vandalism	+add. NTR: TBD				
06.03.06	Modification of existing bridges/viaducts over the railway	Containment or safety barriers on approaches	+add. NTR: TBD				
06.03.07	Modification of existing bridges/viaducts over the railway	Resistance of supports to rail vehicle impact	+add. NTR: TBD				
06.03.08	Modification of existing bridges/viaducts over the railway	Requirements for maintenance	+add. NTR: TBD				
<b>06.04 New bridges/viaducts under the railway</b>							
06.04.01	New bridges/viaducts under the railway	Resistance of sub structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8	EN1991-2:2003 EN1990:2002 +A1:2005		
06.04.02	New bridges/viaducts under the railway	Resistance of super structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.1 TSI INF CR 6.2.4.8	EN1991-2:2003 EN1990:2002 +A1:2005		
06.04.03	New bridges/viaducts under the railway	Resistance of structures(sub/super to fixtures (e.g. OHLE support, signals, inspection walkway)	+add. NTR: TBD				
06.04.04	New bridges/viaducts under the railway	Derailment containment	+add. NTR: TBD				
06.04.05	New bridges/viaducts under the railway	Provision of walkway	+add. NTR: TBD				
06.04.06	New bridges/viaducts under the railway	Provision of handrails	+add. NTR: TBD				
06.04.07	New bridges/viaducts under the railway	Head room for public road bridges	+add. NTR: TBD				
06.04.08	New bridges/viaducts under the railway	Protection of supports from road, water, rail vehicles, etc.	+add. NTR: TBD				
06.04.09	New bridges/viaducts under the railway	Protection of supports and sub structure from the effects of water or subsidence	+add. NTR: TBD				
06.04.10	New bridges/viaducts under the railway	Requirements for maintenance	+add. NTR: TBD				

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Ref.	Parameter	Detailed Parameter	NTR for INF & related OPE/MAI Sub-System aspects	Relevant CR TSI and other EU requirements	Mandatory Standards	Voluntary Standards	Specific Cases
<b>06.05</b>	<b>Modification of existing bridges/viaducts under the railway</b>						
06.05.01	Modification of existing bridges/viaducts under the railway	Resistance of sub structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9 TSI INF CR AnnexE EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9	TSI INF CR AnnexE	EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005	
06.05.02	Modification of existing bridges/viaducts under the railway	Resistance of super structure to relevant loads (vertical, nosing, traction/braking forces, resulting track twist, etc.)	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9 TSI INF CR AnnexE EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005 +add. NTR: TBD	TSI INF CR 4.2.8.4 TSI INF CR 6.2.4.9	TSI INF CR AnnexE	EN 14363:2005 EN15528:2008 EN1991-2:2003 EN1990:2002 +A1:2005	
06.05.03	Modification of existing bridges/viaducts under the railway	Resistance of structures(sub/super to fixtures (e.g. OHLE support, signals, inspection walkway)	+add. NTR: TBD				
06.05.04	Modification of existing bridges/viaducts under the railway	Derailment containment	+add. NTR: TBD				
06.05.05	Modification of existing bridges/viaducts under the railway	Provision of walkway	+add. NTR: TBD				
06.05.06	Modification of existing bridges/viaducts under the railway	Provision of handrails	+add. NTR: TBD				
06.05.07	Modification of existing bridges/viaducts under the railway	Head room for public road bridges	+add. NTR: TBD				
06.05.08	Modification of existing bridges/viaducts under the railway	Protection of supports from road, water, rail vehicles, etc.	+add. NTR: TBD				
06.05.09	Modification of existing bridges/viaducts under the railway	Protection of supports and sub structure from the effects of water or subsidence	+add. NTR: TBD				
06.05.10	Modification of existing bridges/viaducts under the railway	Requirements for maintenance	+add. NTR: TBD				
<b>06.06</b>	<b>Embankments</b>						
06.06.01	Embankments	Resistance to vertical loading and earth pressure effects or other applied loads	TSI INF CR 4.2.8.2 TSI INF CR 6.2.8.4 EN1991-2:2003 +add. NTR: TBD	TSI INF CR 4.2.8.2 TSI INF CR 6.2.8.4	EN1991-2:2003		
06.06.02	Embankments	Drainage	+add. NTR: TBD				
<b>06.07</b>	<b>Cuttings</b>						
06.07.01	Cuttings	Resistance to vertical loading and earth pressure effects or other applied loads	TSI INF CR 4.2.8.2 TSI INF CR 6.2.8.4 EN1991-2:2003 +add. NTR: TBD	TSI INF CR 4.2.8.2 TSI INF CR 6.2.8.4	EN1991-2:2003		
06.07.02	Cuttings	Protection of track from falling material, road vehicles etc	+add. NTR: TBD				
06.07.03	Cuttings	Drainage	+add. NTR: TBD				
<b>06.08</b>	<b>Retaining Walls</b>						
06.08.01	Retaining Walls	Resistance to vertical loading and earth pressure effects or other applied loads	TSI INF CR 4.2.8.2 TSI INF CR 6.2.8.4 EN1991-2:2003 +add. NTR: TBD	TSI INF CR 4.2.8.2 TSI INF CR 6.2.8.4	EN1991-2:2003		
06.08.02	Retaining Walls	Parapet/handrail details/vehicle containment	+add. NTR: TBD				
<b>06.09</b>	<b>Tunnels and Underground structures</b>						



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Ref.	Parameter	Detailed Parameter	NTR for INF & related OPE/MAI Sub-System aspects	Relevant CR TSI and other EU requirements	Mandatory Standards	Voluntary Standards	Specific Cases
06.09.01	Tunnels and Underground structures	Resistance to vertical loading and earth pressure effects or other applied loads	+add. NTR: TBD				
06.09.02	Tunnels and Underground structures	Drainage	+add. NTR: TBD				
06.09.03	Tunnels and Underground structures	ventilation	+add. NTR: TBD				
06.09.04	Tunnels and Underground structures	staff and workers access and egress, walkways, steps/stairs, handrails	+add. NTR: TBD				
<b>07.00</b>	<b>Stations and Platforms</b>	<b>Planning criteria, levels of service, provision for PRM</b>	<b>Note: TSI PRM 4.3 must also be adhered to</b>	<b>Note: TSI PRM 4.3 must also be adhered to</b>			
07.01	Stations and Platforms	Passenger flow data	+add. NTR: TBD				
07.02	Stations and Platforms	Communication Facilities	UIC 413 +add. NTR: TBD			UIC 413	
07.03	Stations and Platforms	Concourse(unpaid side)	UIC 140 UIC 413 +add. NTR: TBD			UIC 140 UIC 413	
07.04	Stations and Platforms	Control room(safety/security)	+add. NTR: TBD				
07.05	Stations and Platforms	Staff facilities	+add. NTR: TBD				
07.06	Stations and Platforms	Commercial facilities	UIC 413 +add. NTR: TBD			UIC 413	
07.07	Stations and Platforms	Parking facilities for PRM	TSI PRM 4.1.2.2 UIC 413 +add. NTR: TBD	TSI PRM 4.1.2.2		UIC 413	
07.08	Stations and Platforms	Obstacle free route	TSI PRM 4.1.2.3 UIC 140 UIC 413 CEN/TS 15209:2008 +add. NTR: TBD	TSI PRM 4.1.2.3		UIC 140 UIC 413 CEN/TS 15209:2008	
07.09	Stations and Platforms	Doors and Entrances	TSI PRM 4.1.2.4 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.4		UIC 140	
07.10	Stations and Platforms	Floor surfaces	TSI PRM 4.1.2.5 UIC 140 CEN/TS 15209:2008 +add. NTR: TBD	TSI PRM 4.1.2.5		UIC 140 CEN/TS 15209:2008	
07.11	Stations and Platforms	Transparent obstacles	TSI PRM 4.1.2.6 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.6		UIC 140	
07.12	Stations and Platforms	Toilets and baby changing facilities	TSI PRM 4.1.2.7 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.7		UIC 140	
07.13	Stations and Platforms	Furniture and free standing devices	TSI PRM 4.1.2.8 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.8		UIC 140	
07.14	Stations and Platforms	Ticketing, Ticket Control, Information Desks and Customer assistance points	TSI PRM 4.1.2.9 UIC 140 UIC 413 +add. NTR: TBD	TSI PRM 4.1.2.9		UIC 140 UIC 413	
07.15	Stations and Platforms	Lighting, Emergency Lighting	TSI PRM 4.1.2.10 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.10		UIC 140	
07.16	Stations and Platforms	Visual information, Signage, Tactile Information, Audible information	TSI PRM 4.1.2.11 TSI PRM AnnexN ISO 3864-1 EN 81-70:2003 Appendix E.4(for tactile signage lifts) UIC 140 UIC 413 EN 81-70:2003 part70 ISO TR 7239:1984 +add. NTR: TBD	TSI PRM 4.1.2.11	TSI PRM AnnexN ISO 3864-1 EN 81-70:2003 Appendix E.4(for tactile signage lifts)	UIC 140 UIC 413 EN 81-70:2003 part70 ISO TR 7239:1984	
07.17	Stations and Platforms	Spoken Information	TSI PRM 4.1.2.12 IEC 60268-16 part 16 UIC 140 UIC 413 +add. NTR: TBD	TSI PRM 4.1.2.12	IEC 60268-16 part 16	UIC 140 UIC 413	



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07.18	Stations and Platforms	Emergency Exits, Alarms	TSI PRM 4.1.2.13 UIC 140 UIC 413 +add. NTR: TBD	TSI PRM 4.1.2.13		UIC 140 UIC 413	
07.19	Stations and Platforms	Geometry of Footbridges and Subways	TSI PRM 4.1.2.14 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.14		UIC 140	
07.20	Stations and Platforms	Stairs	TSI PRM 4.1.2.15 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.15		UIC 140	
07.21	Stations and Platforms	Handrails	TSI PRM 4.1.2.16 UIC 140 +add. NTR: TBD	TSI PRM 4.1.2.16		UIC 140	
07.22	Stations and Platforms	Ramps, escalators, lifts, travelators	TSI PRM 4.1.2.11.1 TSI PRM 4.1.2.17+TSI PRM 4.1.4 EC lift directive EC machinery directive EC pressure equipment directive EN 81-70:2003, clause 5.3.2.1 table 1 EN 81-70:2003 Appendix E.4(for tactile signage lifts) UIC 140 UIC 413 EN 81-70:2003 part70 +add. NTR: TBD	TSI PRM 4.1.2.11.1 TSI PRM 4.1.2.17+TSI PRM 4.1.4 EN 81-70:2003 Appendix E.4(for tactile signage lifts)	EN 81-70:2003, clause 5.3.2.1 table 1 EN 81-70:2003 Appendix E.4(for tactile signage lifts)	UIC 140 UIC 413 EN 81-70:2003 part70	
07.23	Stations and Platforms	Boarding Aids for PRM (ramps, platform lifts)	TSI PRM 4.1.2.21.2 UIC 140 UIC 413 +add. NTR: TBD	TSI PRM 4.1.2.21.2		UIC 140 UIC 413	
07.24	Stations and Platforms	Level track crossings (not permitted in IRL)	(not permitted in IRL)	TSI PRM 4.1.2.22 (not permitted in IRL)			
07.25	Stations and Platforms	Drainage	+add. NTR: TBD				
<b>08.00</b>	<b>Platforms (specific additional requirements)</b>		<b>Note: TSI PRM 4.3 must also be adhered to</b>	<b>Note: TSI PRM 4.3 must also be adhered to</b>			
08.01	Platforms	Track layout at platform	TSI INF CR 4.2.4.4(3) TSI PRM 4.1.2.18.3 +add. NTR: TBD	TSI INF CR 4.2.4.4(3) TSI PRM 4.1.2.18.3			
08.02	Platforms	Gradient(longitudinal and lateral)	TSI INF CR 4.6.4.3 (2)+(6) +add. NTR: TBD	TSI INF CR 4.6.4.3 (2)+(6)			
08.03	Platforms	Usable length of platform	TSI INF CR 4.2.10.1 +add. NTR: TBD	TSI INF CR 4.2.10.1			
08.04	Platforms	Width and edge of platform	TSI INF CR 4.2.10.2 TSI PRM 4.1.2.19 UIC 140 +add. NTR: TBD	TSI INF CR 4.2.10.2 TSI PRM 4.1.2.19		UIC 140	
08.05	Platforms	End of platforms	TSI INF CR 4.2.10.3 TSI PRM 4.1.2.20 +add. NTR: TBD	TSI INF CR 4.2.10.3 TSI PRM 4.1.2.20			
08.06	Platforms	Height of platforms	TSI INF CR 4.2.10.4 TSI PRM 4.1.2.18.1(SC) TSI PRM 7.4.1.1 +add. NTR: TBD	TSI INF CR 4.2.10.4 TSI PRM 4.1.2.18.1(SC)			TSI PRM 7.4.1.1
08.07	Platforms	Offset of platforms from track	TSI INF CR 4.2.10.5 TSI PRM 4.1.2.18.2(OP) TSI PRM 4.1.2.21.1 EN15273-3:2006 +add. NTR: TBD	TSI INF CR 4.2.10.5 TSI PRM 4.1.2.18.2(OP) TSI PRM 4.1.2.21.1	EN15273-3:2006		
08.16	Platforms	Drainage	+add. NTR: TBD				
<b>09.00</b>	<b>RST-Depots/ Freight Hubs/ Other railway buildings</b>						
09.01	RST-Depots/ Freight Hubs/ Other railway buildings	Communications	+add. NTR: TBD				

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09.02	RST-Depots/ Freight Hubs/ Other railway buildings	Control room(safety/security)	+add. NTR: TBD				
09.03	RST-Depots/ Freight Hubs/ Other railway buildings	Staff facilities (staff areas, sanitary equipment, HSE)	+add. NTR: TBD				
<b>10.00</b>	<b>Fixed installations for Servicing Trains</b>						
10.01	Fixed installations for Servicing Trains	toilet discharge	TSI INF CR 4.2.13.2 TSI LOC&PAS CR TSI RST HS +add. NTR: TBD	TSI INF CR 4.2.13.2	TSI LOC&PAS CR TSI RST HS		
10.02	Fixed installations for Servicing Trains	external train cleaning	TSI INF CR 4.2.13.3 +add. NTR: TBD	TSI INF CR 4.2.13.3			
10.03	Fixed installations for Servicing Trains	internal train cleaning	+add. NTR: TBD				
10.04	Fixed installations for Servicing Trains	water restocking	TSI INF CR 4.2.13.4 TSI LOC&PAS CR TSI RST HS 98/83/EC +add. NTR: TBD	TSI INF CR 4.2.13.4	TSI LOC&PAS CR TSI RST HS 98/83/EC		
10.05	Fixed installations for Servicing Trains	refuelling	TSI INF CR 4.2.13.5 TSI LOC&PAS CR +add. NTR: TBD	TSI INF CR 4.2.13.5	TSI LOC&PAS CR		
10.06	Fixed installations for Servicing Trains	electrical shore supply	TSI INF CR 4.2.13.6 TSI LOC&PAS CR TSI RST HS IE CME 307 +add. NTR: TBD	TSI INF CR 4.2.13.6	TSI LOC&PAS CR TSI RST HS	IE CME 307	
10.07	Fixed installations for Servicing Trains	inspection track (roof inspection, pit lane)	+add. NTR: TBD				
<b>11.00</b>	<b>Health, Safety and Environment</b>						
11.01	provisions for operation	Occupational Health & Safety	2008/57/EC(15)2 2004/49/EC TSI INF CR 4.4.3 TSI OPS +add. NTR: TBD	2008/57/EC(15)2 2004/49/EC TSI INF CR 4.4.3 TSI OPS			
11.02	Health, Safety and Environment	max. pressure variation in tunnels/ underground structures	TSI INF CR 4.2.11.1 TSI INF CR 6.2.4.6 EN 14067-4:2005 EN 14067-5:2006 +add. NTR: TBD	TSI INF CR 4.2.11.1 TSI INF CR 6.2.4.6		EN 14067-4:2005 EN 14067-5:2006	
11.03	Health, Safety and Environment	protection of workers from aerodynamic effects	TSI INF CR 4.4.3 TSI LOC&PAS CR TSI WAG TSI RST HS EN 14067-4:2005 +add. NTR: TBD	TSI INF CR 4.4.3	TSI LOC&PAS CR TSI WAG TSI RST HS	EN 14067-4:2005	
11.04	Health, Safety and Environment	aerodynamic effects on safety equipment in tunnels/ underground structures produced by passing trains	TSI SRT 4.2.2 +add. NTR: TBD	TSI SRT 4.2.2			
11.05	Health, Safety and Environment	noise and vibration suppression	TSI INF CR 4.2.11.2(OP) +add. NTR: TBD	TSI INF CR 4.2.11.2(OP)			
11.06	Health, Safety and Environment	protection against electric shock	TSI INF CR 4.2.11.3 TSI ENE CR +add. NTR: TBD	TSI INF CR 4.2.11.3	TSI ENE CR		
11.07	Health, Safety and Environment	effects of crosswinds	TSI INF CR 4.2.11.5 (OP) EN 14067-6:2010 +add. NTR: TBD	TSI INF CR 4.2.11.5 (OP)		EN 14067-6:2010	
11.08	Health, Safety and Environment	lineside walkways, positions of safety, access and egress, signage	+add. NTR: TBD				
<b>12.00</b>	<b>provisions for operation</b>						
12.01	provisions for operation	distance markers	TSI INF CR 4.2.12.1 +add. NTR: TBD	TSI INF CR 4.2.12.1			
12.02	provisions for operation	gradient markers	+add. NTR: TBD				
12.03	provisions for operation	foul point markers	+add. NTR: TBD				

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12.04	provisions for operation	operating rules/ specific training requirements for normal operations + degraded operations + emergency operations relating to this INF (network/route)  To cover at least documentation relating to the safety critical tasks of: -train preparation, -train despatch, -authorisation for train movement (e.g. signalman), -driving of train, -accompanying a train	TSI INF CR 4.3.4 TSI INF CR 4.4 TSI INF CR 4.4.2 TSI PRM 4.1.4 TSI PRM 4.1.5 TSI PRM 4.1.6 TSI OPE CR 2.1 TSI OPE CR 2.2.1 TSI OPE CR 4.2.1.1 TSI OPE CR 4.2.3.6.2 TSI OPE CR 4.6.1 TSI OPE CR 4.6.1.1b TSI OPE CR 4.6.1.2 TSI OPE CR App J.2.4+J.3 TSI OPE CR App L.2.3+L.3 TSI OPE CR App B TSI OPE CR App C3.4 UIC 413 +add. NTR: TBD	TSI INF CR 4.3.4 TSI INF CR 4.4 TSI INF CR 4.4.2 TSI PRM 4.1.4 TSI PRM 4.1.5 TSI PRM 4.1.6 TSI OPE CR 2.1 TSI OPE CR 2.2.1 TSI OPE CR 4.2.1.1 TSI OPE CR 4.2.3.6.2 TSI OPE CR 4.6.1 TSI OPE CR 4.6.1.1b TSI OPE CR 4.6.1.2 TSI OPE CR App J.2.4+J.3 TSI OPE CR App L.2.3+L.3 TSI OPE CR App B TSI OPE CR App C3.4 4.6.1.1b TSI OPE CR 4.6.1.2	TSI OPE CR App J.2.4+J.3 TSI OPE CR App L.2.3+L.3 TSI OPE CR App B TSI OPE CR App C3.4	UIC 413	
12.05	provisions for operation	training and examination requirements relating to this INF (analysis of training needs, training content, content of examinations)	TSI OPE CR 4.6.3.1.B+C TSI OPE CR 4.6.3.2 TSI OPE CR App J.2.3+J.3 TSI OPE CR App L.2.2+L.3 +add. NTR: TBD	TSI OPE CR 4.6.3.1.B+C TSI OPE CR 4.6.3.2	TSI OPE CR App J.2.3+J.3 TSI OPE CR App L.2.2+L.3		
12.06	provisions for operation	Safety Assessment of comprehensiveness and suitability of operating rules/ specific training requirements for normal and degraded operations	TSI OPE CR 2.2.1 RSD+CSM 352/2009 +add. NTR: TBD	TSI OPE CR 2.2.1	RSD+CSM 352/2009		
12.07	provisions for operation	INF specific IM network access requirements (Technical/ Operational)	TSI OPE CR 4.1 +add. NTR: TBD	TSI OPE CR 4.1			
12.08	provisions for operation	INFspecific IM information for Drivers Rule Book - normal, degraded, emergency situations - safety assessment to ensure completeness and accuracy of information	TSI OPE CR 4.2.1.2.1 +add. NTR: TBD	TSI OPE CR 4.2.1.2.1			
12.09	provisions for operation	INFspecific IM information for Route Book - normal, degraded, emergency situations - safety assessment to ensure completeness and accuracy of information	TSI OPE CR 4.2.1.2.2 +add. NTR: TBD	TSI OPE CR 4.2.1.2.2			
12.10	provisions for operation	INF specific IM Route Book Real Time Information for drivers	TSI OPE CR 4.2.1.2.3 +add. NTR: TBD	TSI OPE CR 4.2.1.2.3			
12.12	provisions for operation	operating rules for boarding aids	TSI PRM 4.1.2.21.1 TSI OPE +add. NTR: TBD	TSI PRM 4.1.2.21.1 TSI OPE			
12.13	provisions for operation	operating rules for track brakes	TSI INF CR 4.3.4 TSI OPE +add. NTR: TBD	TSI INF CR 4.3.4 TSI OPE			
12.14	provisions for operation	Changes to existing SMS, to interfaces to other SMS	2008/57/EC(15)2 2004/49/EC TSI OPS +add. NTR: TBD	2008/57/EC(15)2 2004/49/EC TSI OPS			
12.15	provisions for operation	new/changed operational procedures	2008/57/EC(15)2 2004/49/EC TSI OPS +add. NTR: TBD	2008/57/EC(15)2 2004/49/EC TSI OPS			
12.16	provisions for operation	Training/ operational handbook	2008/57/EC(15)2 2004/49/EC TSI OPS +add. NTR: TBD	2008/57/EC(15)2 2004/49/EC TSI OPS			
12.17	provisions for operation	Procedures relating prolonged stop in tunnel	TSI SRT 2.2.3 TSI OPE +add. NTR: TBD	TSI SRT 2.2.3 TSI OPE			
12.18	provisions for operation	Tunnel specific competence of staff	TSI SRT 4.6.1 TSI OPE +add. NTR: TBD	TSI SRT 4.6.1 TSI OPE			
<b>13.00</b>	<b>Maintenance Requirements and Maintenance Plan</b>						
<b>13.01</b>	<b>general requirements</b>						

<b>PART 2 List of Parameters for INF &amp; related OPE/MAI Sub-System aspects</b>			<b>National requirements in the State</b>	<b>TSI-requirements + associated mandatory and voluntary standards (for information)</b>			<b>TSI-specific cases (for Information)</b>
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Ref.	Parameter	Detailed Parameter	NTR for INF & related OPE/MAI Sub-System aspects	Relevant CR TSI and other EU requirements	Mandatory Standards	Voluntary Standards	Specific Cases
13.01.01	general requirements	All limits for INF must be co-ordinated with RST requirements.	TSI INF CR 4.2.9.1(3) TSI LOC&PAS CR TSI WAG CR TSI RST HS EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(3)	TSI LOC&PAS CR TSI WAG CR TSI RST HS	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.01.02	general requirements	For each immediate action limit, the intended measures to be taken (speed restriction, repair time) must be stated	TSI INF CR 4.5.1 TSI INF CR 4.5.2 EN 13803-1:2010 EN 13803-2:2006+A1:2009 EN13848-1:2003+A1:2008 EN1323-9:2006 +add. NTR: TBD	TSI INF CR 4.5.1 TSI INF CR 4.5.2		EN 13803-1:2010 EN 13803-2:2006+A1:2009 EN13848-1:2003+A1:2008 EN1323-9:2006	
<b>13.02 lateral alignment</b>							
13.02.01	lateral alignment	standard deviations - alert limit	TSI INF CR 4.2.9.1(a) EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(a)	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.02.02	lateral alignment	isolated defects -mean to peak- alert limit	TSI INF CR 4.2.9.1(c) EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(c)	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.02.03	lateral alignment	isolated defects -mean to peak- intervention limit	TSI INF CR 4.2.9.1(c) EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(c)	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.02.04	lateral alignment	isolated defects -mean to peak- immediate action limit	TSI INF CR 4.2.9.1(c) TSI INF CR 4.5.1 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(c) TSI INF CR 4.5.1	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
<b>13.03 longitudinal level</b>							
13.03.01	longitudinal level	standard deviations - alert limit	TSI INF CR 4.2.9.1(b) EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(b)	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.03.02	longitudinal level	isolated defects -mean to peak- alert limit	TSI INF CR 4.2.9.1(d) EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(d)	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.03.03	longitudinal level	isolated defects -mean to peak- intervention limit	TSI INF CR 4.2.9.1(d) EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(d)	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.03.04	longitudinal level	isolated defects -mean to peak- immediate action limit	TSI INF CR 4.2.9.1(d) TSI INF CR 4.5.1 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(d) TSI INF CR 4.5.1	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
<b>13.04 track twist</b>							

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13.04.01	track twist	isolated defects -zero to peak- alert limit	TSI INF CR 4.2.9.1(e) normal EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(e) normal	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.04.02	track twist	isolated defects -zero to peak- intervention limit	TSI INF CR 4.2.9.1(e) TSI INF CR 4.2.9.2 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(e) TSI INF CR 4.2.9.2	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.04.03	track twist	isolated defects -zero to peak- immediate action limit	TSI INF CR 4.2.9.1(e) TSI INF CR 4.2.9.2 TSI INF CR 4.5.1 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(e) TSI INF CR 4.2.9.2 TSI INF CR 4.5.1	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
<b>13.05</b>	<b>variation of track gauge</b>						
13.05.01	variation of track gauge	isolated defects -normal to peak- alert limit	TSI INF CR 4.2.9.1(f) TSI INF CR 4.2.9.3 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(f) TSI INF CR 4.2.9.3	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.05.02	variation of track gauge	isolated defects -normal to peak- intervention limit	TSI INF CR 4.2.9.1(f) TSI INF CR 4.2.9.3 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(f) TSI INF CR 4.2.9.3	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.05.03	variation of track gauge	isolated defects -normal to peak- immediate action limit	TSI INF CR 4.2.9.1(f) TSI INF CR 4.2.9.3 TSI INF CR 4.5.1 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(f) TSI INF CR 4.2.9.3 TSI INF CR 4.5.1	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.05.04	variation of track gauge	Mean track gauge over any 100m length - normal to peak- immediate action limit	TSI INF CR 4.2.9.1(f) TSI INF CR 4.2.5.5.2(3) (SC) TSI INF CR 4.5.1 TSI INF CR 6.2.4.5 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 TSI INF CR 7.6.4.6 +add. NTR: TBD	TSI INF CR 4.2.9.1(f) <del>TSI INF CR 4.2.5.5.2(3)</del> (SC) TSI INF CR 4.5.1 TSI INF CR 6.2.4.5	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	TSI INF CR 7.6.4.6
<b>13.06</b>	<b>Cant</b>						
13.06.01	Cant	isolated defects -design to peak- alert limit	TSI INF CR 4.2.9.1(h) TSI INF CR 4.2.9.4 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(h) TSI INF CR 4.2.9.4	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	

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13.06.02	Cant	isolated defects -design to peak- intervention limit	TSI INF CR 4.2.9.1(h) TSI INF CR 4.2.9.4 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(h) TSI INF CR 4.2.9.4	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
13.06.03	Cant	isolated defects -design to peak- immediate action limit	TSI INF CR 4.2.9.1(h) TSI INF CR 4.2.9.4 EN13848-1:2003+A1:2008 EN 13803-1:2010 EN13848-1:2003+A1:2008 +add. NTR: TBD	TSI INF CR 4.2.9.1(h) TSI INF CR 4.2.9.4	EN13848-1:2003+A1:2008	EN 13803-1:2010 EN13848-1:2003+A1:2008	
<b>13.07</b>	<b>control of equivalent concity in service</b>						
13.07.01	control of equivalent concity in service	Requirements for controlling equivalent concity in service - immediate action limit (incl. investigation of reported instability)	TSI INF CR 4.2.5.5.2(1)(OP) TSI INF CR 4.5.1 EN13848-1:2003+A1:2008 TSI INF CR 7.6.4.6 +add. NTR: TBD	TSI INF CR 4.2.5.5.2(1)(OP) TSI INF CR 4.5.1		EN13848-1:2003+A1:2008	TSI INF CR 7.6.4.6
<b>13.08</b>	<b>in service geometry of switches and crossings</b>						
13.08.01	in service geometry of switches and crossings	isolated defects -design to peak- alert limit	TSI INF CR 4.2.6.2+(SC) EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +AC2007 TSI INF CR 7.6.4.7 +add. NTR: TBD	TSI INF CR 4.2.6.2+(SC)		EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +AC2007	TSI INF CR 7.6.4.7
13.08.02	in service geometry of switches and crossings	isolated defects -design to peak- intervention limit	TSI INF CR 4.2.6.2+(SC) EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +AC2007 TSI INF CR 7.6.4.7 +add. NTR: TBD	TSI INF CR 4.2.6.2+(SC)		EN 13232-2:2003 EN 13232-4:2005 +A1:2011 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +AC2007	TSI INF CR 7.6.4.7
13.08.03	in service geometry of switches and crossings	isolated defects -design to peak- immediate action limit	TSI INF CR 4.2.6.2+(SC) EN 13232-2:2003 EN 13232-4:2005 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +AC2007 TSI INF CR 7.6.4.7 +add. NTR: TBD	TSI INF CR 4.2.6.2+(SC)		EN 13232-2:2003 EN 13232-4:2005 EN 13232-5:2005 EN 13232-7 EN 13232-9:2006 EN 13803-2:2006 +AC2007	TSI INF CR 7.6.4.7
<b>13.09</b>	<b>platform edge</b>						
13.09.01	platform edge	lateral position, intervention limit/ alert limit/ immediate action limit	TSI INF CR 4.5 +add. NTR: TBD	TSI INF CR 4.5			
13.09.02	platform edge	horizontal position, intervention limit/ alert limit/ immediate action limit	TSI INF CR 4.5 +add. NTR: TBD	TSI INF CR 4.5			
<b>13.10</b>	<b>Maintenance for PRM aspects</b>						
13.10.01	Maintenance for PRM aspects	alternative provisions for PRM during maintenance, replacement, repair	TSI PRM 4.1.5 +add. NTR: TBD	TSI PRM 4.1.5			

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<b>13.11</b>	<b>provisions for maintenance/maintenance plan</b>						
13.11.01	provisions for maintenance	Occupational Health & Safety, specific training	2008/57/EC(15)2 2004/49/EC TSI OPS TSI INF CR 4.5.2 (1b+c) +add. NTR: TBD	2008/57/EC(15)2 2004/49/EC TSI OPS TSI INF CR 4.5.2 (1b+c)			
13.11.02	Safety Critical Maintenance	Concept on scope, intervals, maintenance records, tools, training	2008/57/EC(15)2 2004/49/EC TSI OPS TSI INF CR 4.2.9.2(3) TSI INF CR 4.5.2 (1a+b+c+d) EN 13848-1:2003 +A1:2008 EN 13232-9:2006 EN 13803-1:2010 EN 13803-2:2006 +A1:2009	2008/57/EC(15)2 2004/49/EC TSI OPS TSI INF CR 4.2.9.2(3) TSI INF CR 4.5.2 (1a+b+c+d)		EN 13848-1:2003 +A1:2008 EN 13232-9:2006 EN 13803-1:2010 EN 13803-2:2006 +A1:2009	
13.11.03	Traceability of Safety Critical Components, Configuration Management	Component identifiers (unique ID, type, version, origin)	2008/57/EC(15)2 2004/49/EC TSI OPS +add. NTR: TBD	2008/57/EC(15)2 2004/49/EC TSI OPS			
13.11.04	Traceability of SW Components	Software identifiers (unique ID, type, version, origin)	2008/57/EC(15)2 2004/49/EC TSI OPS +add. NTR: TBD	2008/57/EC(15)2 2004/49/EC TSI OPS			
13.11.05	specific provisions for tunnel maintenance	Tunnel specific competence of staff	TSI SRT 4.6.1 TSI INF CR 4.5.2 (1b+c) UIC 779-10 +add. NTR: TBD	TSI SRT 4.6.1 TSI INF CR 4.5.2 (1b+c)		UIC 779-10	
<b>14.00</b>	<b>Protection of systems</b>						
14.01	Protection of systems	environmental factors	+add. NTR: TBD				
14.02	Protection of systems	mechanical enclosure, temper/vandalism protection	+add. NTR: TBD				
14.03	Protection of systems	locking arrangement and access management to safety related equipment	+add. NTR: TBD				
14.04	Protection of systems	CCTV, intrusion detection	+add. NTR: TBD				
<b>15.00</b>	<b>Electrical/ Electromagnetical Safety</b>						
15.01	EMC (Emissions and Susceptability)	Compatibility with operating environment, rolling stock, own and other signalling and telecommunication system equipment and other railways, specific requirements for special locations, evaluation to include credible fault conditions (incl. EMC plan)	EMC Directive (89/336/EC) EN 50121series +add. NTR: TBD	EMC Directive (89/336/EC)		EN 50121series	
15.02	Electrical/ Electromagnetical Safety	electrical safety (e.g. touch potential, protection of electric equipment/ cabling against damage, isolation coordination, cable sizing, circuit protection, RCD, etc.)	+add. NTR: TBD				
15.03	Electrical/ Electromagnetical Safety	bonding, earthing concept (incl. lightning protection and earthing of equipment near OHL equipment)	+add. NTR: TBD				
15.04	Electrical/ Electromagnetical Safety	Shielding from electromagnetic radiation	+add. NTR: TBD				
<b>16.00</b>	<b>Fire protection, detection, suppression, safe degradation requirements for all structures</b>						
16.01.01	general concept	Overall fire performance evaluation, concept of fire barriers and concept of evacuation (e.g. Emergency Plan)	TSI SRT 4.2.2.11 TSI SRT 4.2.2.13 TSI SRT 4.2.3.3 TSI SRT 6.2.7.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.11 TSI SRT 4.2.2.13 TSI SRT 4.2.3.3 TSI SRT 6.2.7.5		UIC 779-9	
16.01.02	safe degradation	Overall concept of safe degradation of safety critical equipment in case of fire	UIC 779-9 +add. NTR: TBD			UIC 779-9	



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16.01.03	Fire detection & suppression	Fixed fire detection & suppression equipment	UIC 779-9 +add. NTR: TBD			UIC 779-9	
16.01.04	Fire detection & suppression	Portable fire-fighting equipment	UIC 779-9 +add. NTR: TBD			UIC 779-9	
16.01.05	Specification, application conditions	specific requirements, type of telecommunication system and permitted (normal) operational conditions (e.g. Telephone, Radio, Fax, data-transmission)	UIC 779-9 +add. NTR: TBD			UIC 779-9	
<b>16.02</b>	<b>Safety in railway tunnels and underground structures</b>		<b>Note: TSI INF CR 4.2.11.4</b>	<b>Note: TSI INF CR 4.2.11.4</b>			
16.02.01		underground stations / tunnels -safe areas	TSI SRT 1.1.4 TSI SRT 4.2.2.6.1 national fire safety rules UIC 779-9 +add. NTR: TBD	TSI SRT 1.1.4 TSI SRT 4.2.2.6.1	national fire safety rules	UIC 779-9	
16.02.02		aerodynamic effects on safety equipment in tunnels	TSI SRT 4.2.2 UIC 779-9 EN 14067-5:2005 +add. NTR: TBD	TSI SRT 4.2.2		UIC 779-9 EN 14067-5:2005	
16.02.03		Installation of switches and crossings in tunnels	TSI SRT 4.2.2.1 TSI SRT 6.2.7.1 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.1 TSI SRT 6.2.7.1		UIC 779-9	
16.02.04		Preventing unauthorised access to emergency exits and equipment rooms	TSI SRT 4.2.2.2 TSI SRT 6.2.7.2 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.2 TSI SRT 6.2.7.2		UIC 779-9	
16.02.05		Fire protection requirements for structures	TSI SRT 4.2.2.3 TSI SRT 6.2.7.3 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.3 TSI SRT 6.2.7.3		UIC 779-9	
16.02.06		Fire safety requirements for building material	TSI SRT 4.2.2.4 EN 13501-1:2002 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.4	EN 13501-1:2002	UIC 779-9	
16.02.07		Fire detection	TSI SRT 4.2.2.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.5		UIC 779-9	
16.02.09		emergency communications	TSI SRT 4.2.2.6.1 TSI SRT 4.2.2.10 TSI SRT 4.2.3.5 TSI SRT 6.2.7.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.6.1 TSI SRT 4.2.2.10 TSI SRT 4.2.3.5 TSI SRT 6.2.7.5		UIC 779-9	
16.02.10		emergency access and egress	TSI SRT 4.2.2.6.3 TSI SRT 4.2.2.11 TSI SRT 6.2.7.5 TSI SRT 6.2.8.1 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.6.3 TSI SRT 4.2.2.11 TSI SRT 6.2.7.5 TSI SRT 6.2.8.1		UIC 779-9	
16.02.11		cross-passages between tubes	TSI SRT 4.2.2.6.4 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.6.4		UIC 779-9	
16.02.12		walkways	TSI SRT 4.2.2.7 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.7		UIC 779-9	
16.02.13		emergency lighting	TSI SRT 4.2.2.8 TSI SRT 4.2.3.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.8 TSI SRT 4.2.3.5		UIC 779-9	
16.02.14		escape signage	TSI SRT 4.2.2.9 92/58/EC ISO 3864-1 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.9	92/58/EC ISO 3864-1	UIC 779-9	
16.02.15		rescue areas	TSI SRT 4.2.2.12 TSI SRT 6.2.7.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.12 TSI SRT 6.2.7.5		UIC 779-9	
16.02.16		Emergency Water Supply	TSI SRT 4.2.2.14 TSI SRT 6.2.7.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.2.14 TSI SRT 6.2.7.5		UIC 779-9	
16.02.17		Emergency Electrical Power Supply	TSI SRT 4.2.3.3 TSI SRT 6.2.7.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.3.3 TSI SRT 6.2.7.5		UIC 779-9	

<b>PART 2 List of Parameters for INF &amp; related OPE/MAI Sub-System aspects</b>			<b>National requirements in the State</b>	<b>TSI-requirements + associated mandatory and voluntary standards (for information)</b>			<b>TSI-specific cases (for Information)</b>
TSI INF CR refers to 2011/275/EU (applicable from 01.06.2011(Art 9)) TSI SRT refers to 2008/163/EC (applicable from 01.07.2008 (Art 3)) TSI PRM refers to 2008/164/EC (applicable from 01.07.2008(Art 4)) TSI OPE CR refers to 2011/314/EU (applicable from 1.1.2012(Art 6+7)) Projects in the Scope of HS TSI must request an updated list from RSC.				Items marked with (SC) are replaced by a Specific Case. (OP) refers to an Open Point.			
Ref.	Parameter	Detailed Parameter	NTR for INF & related OPE/MAI Sub-System aspects	Relevant CR TSI and other EU requirements	Mandatory Standards	Voluntary Standards	Specific Cases
16.02.18		electrical cables in tunnels	TSI SRT 4.2.3.4 EN50267-2-1:1998 EN50267-2-2:1998 EN50268-2:1999 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.3.4	EN50267-2-1:1998 EN50267-2-2:1998 EN50268-2:1999	UIC 779-9	
16.02.19		reliability of electrical installation	TSI SRT 4.2.3.5 UIC 779-9 +add. NTR: TBD	TSI SRT 4.2.3.5		UIC 779-9	
16.02.20		smoke extraction/ emergency ventilation	UIC 779-9 +add. NTR: TBD			UIC 779-9	
<b>17.00</b>	<b>Provisions during construction work</b>						
17.01		health and safety at worksite	+add. NTR: TBD				
17.02		protection of passengers/ running rail traffic/ other parties during execution of work	+add. NTR: TBD				
17.03		protection of environment	+add. NTR: TBD				
17.04		structural evaluation of scaffolding or any non-permanent structural works or earthworks during construction	+add. NTR: TBD				
17.04		specific operating rules update during pre-planned work (temporary modifications to route book) (informing the driver in real time)	TSI SRT 4.4.1 TSI OPE CR 4.2.1.2.2.2 TSI OPE CR 4.2.1.2.2.3 +add. NTR: TBD	TSI SRT 4.4.1 TSI OPE CR 4.2.1.2.2.2 TSI OPE CR 4.2.1.2.2.3			