

Moving Europe towards a sustainable and
safe railway system without frontiers.

ACCOMPANYING REPORT TO THE RECOMMENDATION ERA1218-2 OF THE EUROPEAN UNION AGENCY FOR RAILWAYS

on

*the amendment of Commission Implementing Regulation (EU)
2023/1695 (CCS TSI)*

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1 Introduction

This accompanying report complements the recommendation ERA 1218-2 of the European Union Agency for Railways on the amendment of the TSI revision package 2022 – Digital Rail and Green Freight.

It deals with the technical and organisational aspects, which lead to the text of the recommendation whereas another accompanying document to the recommendation - impact assessment note - deals with the related economic aspects.

In January 2020, the European Commission published the list of priority topics that the European Union Agency for Railways (“Agency”) should cover for the TSI package 2022.

The Agency delivered on June 2022 the recommendation, but there were missing 3 groups of technical documents, so it should be considered as a complement to recommendation ERA 1175-1218. The main objective of this recommendation is to include those missing documents in particular:

- SS-153 Exceptions for on-board reduced envelopes of ETCS system versions
- SS-151 ATO-OB/ATO-TS Test Specifications
- SS-076 and SS-094 on the Test Specifications for the ETCS on-board equipment.

There are also a number of additional corrections and clarifications included, due to the return of experience in the one year of application of the CCS TSI.

As the proposed changes does not have a direct impact on the social environment, working conditions of workers in the industry nor rail freight customers and passengers, it was not necessary to perform the consultation foreseen in Articles 6 and 7 of the Agency Regulation (2).

2 Working methods

2.1 Implementation of change control management

Change Control Management (CCM) (3) is a set of standardised tools, methods, and procedures that the Agency uses and will use further in order to control and manage the changes made to the TSIs. This has already been applied in the first recommendation and it is equally applied to this one.

2.2 Working parties

As per Article 5 of the Agency Regulation (2), “the Agency shall set up a limited number of working parties for the purpose of drawing up recommendations and, where relevant, guidelines, in particular relating to technical specifications for interoperability (‘TSIs’)”.

The CCS TSI WP was in charge of the drafting of this recommendation, without any working group input.

The Working Party held 6 meetings between 04th October 2023 (meeting #67) and 12th December 2024 (meeting #72), with hybrid and remote meetings.

The following representative bodies participated to the meetings (list of the organisations that participated at least to one meeting):

AERRL	CER	DG MOVE	EAL	EIM
ERJU	NB RAIL	UIC	UNISIG	UNITEL

The following NSAs participated to the meetings (list of the organisations that participated at least to one meeting):

NSA BE	NSA CH	NSA DE	NSA DK	NSA ES
NSA FI	NSA FR	NSA IT	NSA LU	NSA NL
NSA NO	NSA PL	NSA SE	NSA SI	NSA HU

The Working Party ensures the steering of the activities in coherence with the overall system planning, resources, and priorities. The main information exchange with the Working Party members was done through the ERA extranet ([link](#)) and the Clearquest tool.

2.3 CR discussed

This is the list of the 14 CRs considered for this recommendation:

TSI_C CR Id	Description	Status/Final version
CR 636	Missing cases of partial fulfilment	Rejected
CR 641	CCS TSI EU 2023/1695: Clarification in point 4.2.2 (8) and Table A1. Link between ETCS On-Board functionality and ATO	Analysis completed V1
CR 643	CCS TSI 2023/1695: Appendix B1.1	Analysis completed V7
CR 644	CCS TSI 2023/1695 Error correction process 7.2.10	Analysis completed V4
CR 647	CCS TSI EU 2023/1695: Modification of point 7.4.1	Analysis completed V2
CR 648	CCS TSI EU 2023/1695: Editorial corrections	Analysis completed V7
CR 649	CCS TSI 2023/1695: Adding reference to SS-153 v1.0.0 in Annex I Table A 2 Index 104	Analysis completed V5
CR 650	CCS TSI 2023/1695: Adding reference to SS-151 v1.0.0 in Annex I Table A 2 Index 98	Analysis completed V3
CR 651	CCS TSI 2023/1695: Adding reference to SS-076 and SS-094 v4.0.0 in Annex I Table A 2 Index 31 and 37	Analysis completed V3
CR 666	CCS TSI EU 2023/1695; Clarification in point 7.4.1.2 in conditions for former sets #2 or #3	Analysis completed V3
CR 682	Transition regime for partial fulfilment	Analysis completed V2
CR 685	CCS TSI EU 2023/1695: Updated version for EN 16494	Analysis completed V2
CR 696	CCS TSI EU 2023/1695: Simplification of Art 2/14/Chapter 7/Appendix B	Analysis completed V5
CR 697	CCS TSI EU 2023/1695: Clarification on ESC/RSC Assessment	Analysis completed V2

3 Activities and outcome of the working party

This section describes the activities and the working party and the outcomes for each CR discussed.

The reference document discussed in the working party meetings was the consolidated version of the CCS TSI articles, Annex I and Annex II, which are included as part of Appendix 4.

3.1 CR 636 - Missing cases of partial fulfilment

The problem description is:

“Appendix G of the CCS TSI 2023 includes exceptions (“deviations”) on basis of which partial fulfilment can still be applied. These exceptions are still incomplete.

There are further cases which are not relevant for interoperability and safety which have no impact on normal service for which deviations should be explicitly allowed.

E.g. Appendix G (3) reads: “Subset 34 options at interoperability constituent level: if functionally relevant to exclude certain signals or functions”.

Accordingly, further cases should be added to the table.

Further example without any impact on interoperability and safety: Guidance Curve”

The proposal provided was based on identifying functionalities not necessary for markets.

The technical reasons behind the request were discussed in the working party.

The final agreement of the WP is:

“It was agreed at the CCS TSI WP #70 that mandatory functionalities should be fully implemented in the products after the transition period. Any reconsideration about the optional/not needed for interoperability functions, should be tabled at EECT. The Interoperability Directive does not define markets, but one Single European Railway Area.

In the CCS TSI WP #71 it is indicated that the CR 682 will merge the transition regime for "Design phase started after Entry into Force" and "Design phase already started", with the compromise of not requesting more cases for partial fulfilment and respecting the deadline already agreed on 2030.”

This CR was rejected by the working party.

3.2 CR 641 - CCS TSI EU 2023/1695: Clarification in point 4.2.2 (8) and Table A1. Link between ETCS On-Board functionality and ATO

The problem description is:

“The current CCS TSI text includes the ETCS On-Board requirements inside SUBSET-026. SUBSET-026 includes paragraph 3.15.11 'Driving with Automatic Train Operation' and paragraph 4.4.16 'Automatic Driving', however indicating that the detailed requirements are listed in SUBSET-125.

As SUBSET-125 includes these detailed ETCS On-Board requirements for ATO, it is suggested that it would be clearer and more consistent to explicitly reference to SUBSET-125 in the CCS TSI point 4.2.2 (8) and to change the text similarly as is done in 4.2.2. (3) ‘Communicating with STM’.”

The proposal was to add the missing references to the point 4.2.2 and Table A.1.

The working party did not raise any comment to the solution proposed and it was agreed on version 1.

3.3 CR 643 - CCS TSI 2023/1695: Appendix B1.1

The problem description collects the different inputs, comments and return of experience of the application of the Appendix B1.1 on the vehicle authorization applications and of the transition regime for CCS TSI in general.

The proposal was to update all the tables on Appendix B to have a better and clearer definition of the different cases.

Several iterations and review cycles were organised, collecting and replying to the comments from the sector organisations.

Some further clarifications on the overall application of the transition regime and Appendix B are also considered in the CR 696.

In the meeting #72 it was considered as agreed in version 7.

3.4 CR 644 - CCS TSI 2023/1695 Error correction process 7.2.10

The problem description is:

“The delay on the availability of CCM questionnaires to the sector, specially to the IMs to execute the error correction process, make unfeasible to meet the deadline defined in 7.2.10.3.1 of 12 months for the IM to publish in RINF the list of applicable error CR for the lines.

Also, different deadlines and events for the error correction process are not directly link to each other, leading to some undefined situations on how to correctly execute the process.

The proposal is to have a more sequential approach, so more structure workflow can be proposed.”

Several iterations and review cycles were organised, collecting and replying to the comments from the sector organisations.

The CR was initially agreed as completed in the meeting #70 in version 3, but after some additional feedback from RISC #103 and editorial improvement, it was finally agreed in meeting #72 in version 4.

3.5 CR 647 - CCS TSI EU 2023/1695: Modification of point 7.4.1

The problem description is:

“The reference inside 7.4.1 needs to be revised since there are actions that are out of the scope of the CCS TSI and overlaps with the Interoperability Directive EU 2016/797 requirements. Task assigned to the Agency and to the NSAs and the mentioned to individual Subsets among the complete Annex I Table A 2 should be revised.”

Two alternative solutions were proposed:

- DG MOVE: Amending the text but keep the operational rules assessment in the scope of the trackside approval through the CCS TSI regulation.
- ERA: Removing the link between the operational rules assessment and the trackside approval in the CCS TSI regulation.

In the absence of an agreement, the ERA retained its proposal version 2 into the recommendation.

3.6 CR 648 - CCS TSI EU 2023/1695: Editorial corrections

The problem description of this CR was to collect all the editorial errors identified in the CCS TSI.

Some problems initially reported for the corrigendum of the translation were finally included into this CR.

Several iterations and review cycles were organised, collecting and replying to the comments from the sector organisations.

This CR was agreed to be open until the final steps of the recommendation to provide traceability of all the editorial changes.

Some comments were received after the meeting #72, and the Agency considered it agreed on version 7.

3.7 CR 649 - CCS TSI 2023/1695: Adding reference to SS-153 v1.0.0 in Annex I Table A 2 Index 104

The problem description for this CR is:

“As agreed at the time of the voting of the CCS TSI, it is necessary to amend the CCS TSI to include the reference to 3 technical documents not available at that time.

This CR will include the reference and the necessary updates for the SS-153 v1.0.0

Potentially, table A 1 may be revised.

Evolution and delivery of the documents to be followed at EECT, ERTMS Control Group and System Pillar.”

The initial proposal was to update the Table A.2 with the final version number of the SS-153.

During the processing of the CR, some misalignments between the ETCS and ATO system version were identified leading to the revision of SS-125 and SS-126 to v1.1.0. Those modifications were also included in this CR.

In the discussion on the working party, the transition regime for the inclusion of this new technical documents were discussed and it was agreed to include new Table B1.1b in the Appendix B, allowing a generic 6 month transition regime for the mandatory use of the new documents in the applications.

In the meeting #72 it was agreed in version 5.

3.8 CR 650 - C CS TSI 2023/1695: Adding reference to SS-151 v1.0.0 in Annex I Table A 2 Index 98

The problem description is:

“As agreed at the time of the voting of the CCS TSI, it is necessary to amend the CCS TSI to include the reference to 3 technical documents not available at that time.

This CR will include the reference and the necessary updates for the SS-151 v1.0.0.

Evolution and delivery of the documents to be followed at EECT, ERTMS Control Group and System Pillar.”

The initial proposal was to update the Table A.2 with the final version number of the SS-151.

In the discussion on the working party, the transition regime for the inclusion of this new technical documents were discussed and it was agreed to include new Table B1.1b in the Appendix B, allowing a generic 6 month transition regime for the mandatory use of the new documents in the applications.

In the meeting #72 it was agreed in version 3.

3.9 CR 651 - CCS TSI 2023/1695: Adding reference to SS-076 and SS-094 v4.0.0 in Annex I Table A 2 Index 31 and 37

The problem description is:

“As agreed at the time of the voting of the CCS TSI, it is necessary to amend the CCS TSI to include the reference to 3 technical documents not available at that time.

This CR will include the reference and the necessary updates for the SS-151 v1.0.0.

Evolution and delivery of the documents to be followed at EECT, ERTMS Control Group and System Pillar.”

The initial proposal was to update the Table A.2 with the final version number of the SS-076 and SS-094.

In the discussion on the working party, the transition regime for the inclusion of this new technical documents were discussed and it was agreed to include new Table B1.1b in the Appendix B, allowing a generic 6 month transition regime for the mandatory use of the new documents in the applications.

In the meeting #72 it was agreed in version 3, on the basis of the final delivery by EAL of the documents on the 18/12/2024.

The final deliverable for SS-076 and SS-094 was received by the Agency on the 18/12/2024. It is the common practice not to have a review by ERA or UNISIG of those deliverables and they are included to this recommendation as provided. The final validation of the test specifications can only be performed by the actual testing of the related products.

3.10 CR 666 - CCS TSI EU 2023/1695; Clarification in point 7.4.1.2 in conditions for former sets #2 or #3

The problem description is:

“In the CCS TSI 2023/1695 it has been identified and editorial error on the Point 7.4.1.2: "Set #2 AND Set #3". Is not possible to fulfil both, so the proposal was to change “AND” to “OR”.

In the discussion inside the CCS TSI WP, it has been proposed a deeper update of the section, which is more than editorial, modifying some of the conditions on the use of formers set #2 and #3, by removing the conditions that lines are implemented or in operation before the CCS TSI entry into force.”

Several iterations and review cycles were organised, collecting and replying to the comments from the sector organisations.

The CR was initially agreed as completed in the meeting #70 in version 2, but after some additional feedback from RISC #103, it was finally agreed in meeting #72 in version 3.

3.11 CR 682 - Transition regime for partial fulfilment

The problem description is:

“A relaxation of the time frame is necessary in which partial fulfilment in the meaning of CCS TSI 2016 is still allowed to be used.

The ETCS toolbox is too broad. The intention of the ERJU System Pillar is to reduce it in the System Pillar target system by making some functions optional or by deleting functions. Also, some functional enhancements of Baseline 4 have not yet proven maturity. The FRMCS specifications are still under development and impact on the ATP or ATO parts of the CCS subsystems cannot be excluded.

Therefore, and as long as

- the System Pillar Operational Design has not clarified which functionalities shall be part of the target system,
- the FRMCS specifications are not regarded as complete

partial fulfilment in the sense of CCS TSI 2016 shall still be applicable.

For implementing the full B4R1 SV2.1 more time is needed taking into account that there are also additional customer specific requirements to be considered in on-board developments. It would make no sense to add functionalities now to ETCS on-boards for being compliant with CCS TSI 2023 which are useful for certain markets, but which might be deleted later because they are not needed or are optional for the System Pillar target system.”

This CR was discussed bilaterally with UNISIG and then in the working party and it was agreed to extend the application of the partial fulfilment to projects starting after the entry into force of the current TSI, while keeping unchanged the final date for the transition period on the 30/09/2030. This will allow the suppliers and customer, additional time to get to fully compliant products/projects.

In the meeting #72 it was agreed in version 2.

3.12 CR 685 - CCS TSI EU 2023/1695: Updated version for EN 16494

The problem description is:

“The updated version of EN 16494 standard with the complete set of harmonised marker boards was not available at the time of the CCS TSI 2023/1695 recast. However, the work inside the Agency working party was completed, including the related engineering rules for the Appendix A Table A 2 Index 101 document. Still, it will have to be confirmed against the definitive version of EN 16494.

CEN has indicated that the official updated version of EN 16494 will be available at the appropriate time to be included in the CCS TSI 2025 amendment, so it is proposed to include both documents.”

The necessary changes into the CCS TSI were agreed in the meeting #70. However, CEN informed the Agency on some delays on the official publication of EN 16494:2025, beyond the initial plan.

The final availability of the EN 16494:2025 (Appendix A – Table A.2 - Index 38) and the related engineering rules v2- (Appendix A – Table A.2 – Index 101) is not yet ensured. The CR is included in this recommendation under the assumption that those 2 documents will be available at the time of adoption of the amendment of the CCS TSI. If the EN 16494:2025 is not available, the related changes, including the updated engineering rules v2-, should be withdrawn from the final text.

3.13 CR 696 - CCS TSI EU 2023/1695: Simplification of Art 2/14/Chapter 7/Appendix B

The problem description is:

“Item 1: the articles 2 and 14 of the CCS TSI are addressing similar items as some clauses in paragraph 7.2.4 which a not aligned wording.

Item 2: the text in 7.2.4.1 could be further clarified to indicate the relation between CCS subsystem and vehicle certificates, in particular if the columns of the transition regime apply to the CCS Subsystem and/or vehicle type/vehicle.

Item 3: it could be more pragmatic that in case the ‘former set of specifications’ from the previous TSI are allowed (see row 9 and 10 of Table B1.1 and row 7 of Table B2), it is also allowed to use the relevant parts of the previous CCS TSI 2016/919 (e.g. relevant chapters/tables) in order to avoid the administrative workload to modify certificates used according to the previous CCS TSI 2016/919.

Item 4: Double check that all mayor changes between TSI 2016 and 2023 are covered by Appendix B.”

Several iterations and review cycles were organised, collecting and replying to the comments from the sector organisations.

The main point of discussion was the alignment of two different approaches towards the transition regime that are in CCS TSI:

- **Art 14** indicates that the previous CCS TSI 2016/919 could be use “to the extend and for as long as” Appendix B indicates. This results in the full application of the CCS TSI 2023/1695, except for those points explicitly indicated in Appendix B.
- **Chapter 7**, in sections 7.2.4 and 7.4.1.2, provides a different approach, indicating that for those changes that are not referenced in Appendix B, the provisions of the previous CCS TSI 2016/919 leads to conformity to the new TSI.

After the internal and external discussions, the working party agreed to keep the second approach, which provides a complete description of the necessary additional assessment on top of the previous TSI are defined in appendix B. In the case of Art 14 approach, a case-by-case gap analysis is required, to compare the project situation with the application of CCS TSI 2023/1695.

In the working party a complete and exhaustive analysis of the relevant changes between CCS TSI 2016/919 including all amendments and CCS TSI 2023/1695 is performed, identifying additional elements mostly in chapter 4, 5, 6 and 7, that are now included in the Appendix B.

In order to improve clarity with the references to the different versions of the CCS TSI, it was indicated CCS TSI 2016/919 including all the amendments and the recast CCS TSI 2023/1695. After the amendment there will be a new version CCS TSI 2025 (formally CCS TSI 2023/1695 amended by 2025/xxxx). A better legal way to refer to the different legal version of the CCS TSI could be explored to improve the proper application of the regulation. It is important to highlight that the Appendix B gap analysis was done from CCS TSI 2016/919 including all amendments. So initial or earlier versions of CCS TSI 2016/919 cannot directly apply the Appendix B tables.

Some comments were received after the meeting #72, and the Agency considered it agreed on version 5.

3.14 CR 697 - CCS TSI EU 2023/1695: Clarification on ESC/RSC Assessment

The problem description is:

“The current wording in 4.2.17 it is unclear in which cases the Agency will analyse the new or modified ESC/RSC types, or those needs to be assessed by a Notify Body, as indicated in Table 6.3 row 10.”

An updated wording is proposed, with a clarification of the cases were the new or modified ESC/RSC types.

In the meeting #72 it was agreed in version 2, with the remark of further detailing the expected task for the NoBo assessment of the new or modified ESC/RSC types in the application guide and in the context of the future ESC TWG.

4 Economic evaluation

The economic evaluation of the recommendation is reported in a separate note, but it is based on the fact that this is a complementary recommendation and the principles of the initial recommendation has not been changed.

5 Position from stakeholders

5.1 CER

See Appendix 5.

5.2 EIM

EIM is pleased to see that the work to progress the amendment for the CCS TSI 2023 and to publish the documents, SS153, SS151, and SS76, which were missing from the original publication, is now complete. The opportunity to include some other change requests at the same time, to provide corrections and clarification on the original publication, is welcomed. EIM has actively participated in the review of the proposed changes via the CCS WP and found this to be a constructive process in making sure the proposed changes have been understood.

Having completed our reviews on the final set of updates EIM is pleased to support the publication of the amendment.

5.3 EPSF

We understand the need to move forward as quickly as possible for the publication of these documents, nevertheless we are unable to provide within the requested deadlines an opinion on the CCS recommendation REC 1218-2 for several reasons:

1. Failure to follow established processes: The usual consultation process for developing the recommendation was not followed. These steps are essential to ensure a thorough and rigorous analysis.
2. Insufficient review time: The deadlines of 3 days for reviewing the documents are largely insufficient to allow for a complete and constructive assessment. A thorough analysis requires time for reflection that these deadlines do not allow.
3. Outdated documents: The documents provided are not up to date or contain obsolete information, as we saw during WP CCS #72. This limits the relevance of the observations and makes a relevant and reliable assessment difficult.

Under these conditions, any position would be rushed and could prove to be inaccurate. We stress the importance of respecting the agreed processes to ensure quality contributions.

Concerning the argument of the departure of the Executive Director of the Agency at the end of the year to speed up the signature of the document, we understand that continuity would be ensured by the appointment of an interim Executive Director who could sign these documents after January 1st.

5.4 UNISIG

UNISIG appreciates the improvements made to the CCS TSI text, including the relaxations in Annex B. However, we see an increase in the overall complexity of the transitional regime with the different tables in Annex B. We believe that for organisations that have not been closely involved in the review of the legislative text proposals and the discussion in the CCS working party, the whole matter is difficult to understand and poses project risks, as misunderstandings could lead to wrong actions.

6 Conclusions and recommendations

As indicated in the section about CR 685 above, the final availability of the EN 16494:2025 (Appendix A – Table A.2 - Index 38) and the related engineering rules v2- (Appendix A – Table A.2 – Index 101) is not yet ensured. The CR is included in this recommendation under the assumption that those 2 documents will be available at the time of adoption of the amendment of the CCS TSI. If the EN 16494:2025 is not available, the related changes, including the updated engineering rules v2-, should be withdrawn from the final text.

On CR 651, the final deliverable for SS-076 and SS-094 was received by the Agency on the 18/12/2024. It is the common practice not to have a review by ERA or UNISIG of those deliverables and they are included to this recommendation as provided. The final validation of the test specifications can only be performed by the actual testing of the related products.

In CR 696, in order to improve clarity with the references to the different versions of the CCS TSI, it was indicated CCS TSI 2016/919 including all the amendments and the recast CCS TSI 2023/1695. After the amendment there will be a new version CCS TSI 2025 (formally CCS TSI 2023/1695 amended by 2025/xxxx). A better legal way to refer to the different legal version of the CCS TSI could be explored to improve the proper application of the regulation. It is important to highlight that the Appendix B gap analysis was done from CCS TSI 2016/919 including all amendments. So initial or earlier versions of CCS TSI 2016/919 cannot directly apply the Appendix B tables.

The European Commission requested a formal submission of all the technical documents in Appendix A, Table A.2, that were not included in the previous recommendation. They are provided as links to the ERA website for the not modified documents and as attachment to the recommendation for the new technical documents, except index 48 and 101 mentioned before.

The Agency recommends amending the CCS TSI as proposed in this recommendation.

7 Appendix 1: Abbreviations

Table 1: Table of abbreviations

<i>Abbreviation</i>	<i>Description</i>
CCM	Change Control Management
CR	Change Request
ESC	ETCS System Compatibility
IM	Infrastructure Manager
RSC	Radio System Compatibility
RU	Railway Undertaking
TSI	Technical Specification for Interoperability
TWG	Topical Working Group
WP	Working Party

8 Appendix 2: Reference documents

Table 1 : Table of reference documents

<i>N°</i>	<i>Title</i>	<i>Reference</i>	<i>Version</i>
[1]	Commission Delegated Decision (EU) 2017/1474 of 8 June 2017 supplementing Directive (EU) 2016/797 of the European Parliament and of the Council with regard to specific objectives for the drafting, adoption and review of technical specifications for interoperability	<i>OJ L 210, 15.8.2017, p. 5–15.</i>	<i>N./A.</i>
[2]	Recommendation ERA1175-1218 of the European Union Agency for Railways on the TSI package 2022 relating to the following TSIs: CCS, ENE, INF, LOC&PAS, NOI, OPE, PRM and WAG	<i>REC ERA1175-1218</i>	<i>30/06/2022</i>
[3]	Procedure Change Control Management	<i>PRO_CCM_002</i>	<i>2.2 – 21/10/2021</i>

9 Appendix 3: Reference legislation

Table 2 : Table of reference legislation

<i>N°</i>	<i>Title</i>	<i>Reference</i>	<i>Version</i>
[1]	Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system (Recast)	OJ L 138, 26.5.2016, p. 44.	N.A.
[2]	Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004	OJ L 138, 26.5.2016, p. 1.	N.A.
[3]	Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (Recast)	OJ L 138, 26.5.2016, p.102.	N.A.
[4]	Commission Implementing Regulation (EU) 2023/1695 of 10 August 2023 on the technical specification for interoperability relating to the control-command and signalling subsystems of the rail system in the European Union and repealing Regulation (EU) 2016/919	OJ L 222, 8.9.2023, p. 380–560.	N.A.

10 Appendix 4: Consolidated track changed documents of the CCS TSI Changes

See attached files:

- Annex 2 – Appendix 4 - ERA_solution_Articles consolidated v4.docx
- Annex 2 – Appendix 4 - ERA_solution_Annex I consolidated v6.docx
- Annex 2 – Appendix 4 - ERA_solution_Annex II consolidated v5.docx

11 Appendix 5: CER position paper

See attached file:

- Annex 2 – Appendix 5 - Position to be added to the Accompanying Report.pdf