



NMRA Technical Reference	
S & C Documents and Formatting	
Jun 17, 2024	TR-1-2020

1 General

This Technical Reference explains the use of the Standards & Conformance Department NMRA Template to create documents. This template is applicable only to Standards & Conformance Department Standards, Recommended Practices, Technical Notes, Technical Information, Technical Procedures, and Technical Reference documents. It is based on that template itself. Many fields are automatically filled in from the document properties.

2 Standards & Conformance Department Documents

10 The NMRA Corporate Policies & Procedures Manual (CPPM) is the guiding document for the operation of the NMRA. The Standards & Conformance Department section outlines the responsibilities of the Standards & Conformance Department and documents for which the department is responsible.

2.1 Document Types

The Standards & Conformance Department maintains many types of documents; the most visible are the NMRA Standards (S) and Recommended Practices (RP), which define the requirements for NMRA Conformance.

Type	Description	Public
Standard (S)	Define mandatory requirements for NMRA Conformance.	Yes
Recommended Practice (RP)	Define optional requirements for NMRA Conformance.	Yes
Technical Note (TN)	Clarify the thought process behind the contents of Standards and Recommended Practices.	Yes
Technical Information (TI)	Contain supplemental information that may be of interest. TI documents are the equivalent of the NMRA Data Sheets (maintained by the Education Department).	Yes
Technical Procedure (TP)	Test plans which contain the procedures and checklists for determining if a particular product conforms to the Standards and Recommended Practices.	Yes
Technical Equipment (TE)	Describe the theory and construction of Conformance and Inspection test equipment.	Yes
Technical Reference (TR)	For the use of the Standards & Conformance Department and general membership, and contain formulas and department procedures. Historically, many TR's were published in the NMRA Bulletin and are somewhat public.	No

2.2 Document Numbering Conventions

Type	Numbering Convention
Standard (S)	S-n
Recommended Practice (RP)	RP-n
Technical Note (TN)	TN-n
Technical Information (TI)	TI-n
Technical Procedure (TP)	TP-n
Technical Equipment (TE)	TE-n-yyyy
Technical Reference (TR)	TR-n-yyyy

2.3 Document Phases

20 A document must undergo several phases during its development.

Phase	S	RP	TN	TP	TI	TE	TR
Draft	X	X	X	X	X	X	X
Department Chair Approval	X	X	X	X	X	X	X
Published for Comment	X	X					
Proposed	X	X					
Board of Directors Approval	X	X					

2.4 File Naming Conventions

Each document is named by its Document Number followed by the document title. The term “Draft” should not be in the filename. If the document is a draft, then the “Draft” suffix shall only be added to the document property field for “Title”, see section 3 below. In addition a DRAFT watermark shall be applied to the document until it is approved. See 3.1 below.

Upon publication, a date suffix may optionally be added to the filename. This may aid archival tracking and publishing of specific revisions of a given document to the NMRA website.

3 Setting the Document Properties

30 The template uses Word “Quick Parts” for the visible document property fields. The advantage of this is that the text can be edited inline, and all other locations where the same “Quick Part” field is used within the document will automatically be updated. The document property fields are found in the first page header and each page footer of the template.

The following document property fields should be updated when a document is newly created from the template:

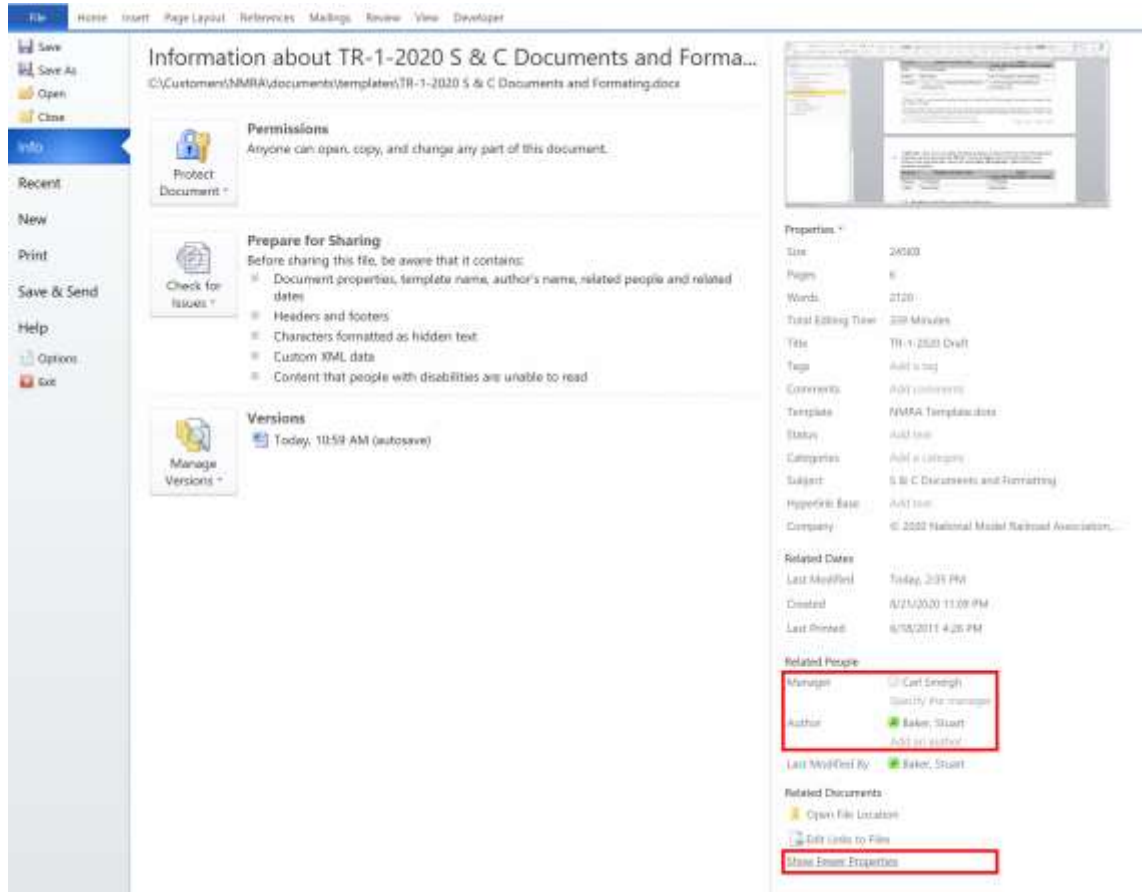
Property	Template Starting Value	Values (Using This Document as an Example)
Title	X-9.99.99 Draft ¹	TR-1-2020
Subject	Brief Desc.	S & C Documents and Formatting
Company	© yyyy – yyyy ² National Model Railroad Association, Inc.	© 2020 National Model Railroad Association, Inc.

40 Additionally, the template contains two invisible document properties. In Microsoft Word 2010, these document properties can be found under the **File** tab. Choose the **Info** section on the left toolbar. On the bottom of the right hand pane, choose the option **Show All Properties**. Update the following document properties:

Property	Template Starting Value	Values (Using This Document as an Example)
Manager	Carl Smeigh	Carl Smeigh
Author	Stuart Baker	Stuart Baker

¹ The text “Draft” is only present when the document is in draft format. If the document is an approved document, omit the “Draft” text suffix.

² If the document is newly created, only one year will be present. If the document is being updated in a subsequent year beyond the year the document was created, then both the creation and the last updated years are present: © 2020 – 2021.



3.1 Adding Watermarks

Until a document is approved a DRAFT watermark shall be applied. To apply a watermark go to the DESIGN tab. In some cases a CONFIDENTIAL watermark may apply. Once the document is approved for publication the watermarks shall be removed.

3.2 Modifying the Document Date Property

50 The Document date can be found in the upper right corner of the first page header. It is also found on the lower right hand corner footer on every page. The standard document property field of “Publish Date” is used, and is designed for manual update.

The “Published Date” field can be updated by clicking on any of the date fields in the document and choosing a new date from the pop up calendar. Changing any one of the document date fields should result in all of the document date fields being changed.

The date shall be manually updated to the current date at the following times:

1. When sending the document out for a formal review. Reviewers shall note the date of the document under review when providing their feedback.
2. Prior to sending the document out for final voting approval if, and only if, changes have been made since the last formal review.

60 The date may optionally be manually updated to the current date at the following times:

1. Whenever the document is edited.

The date shall not be updated after voting approval. The only change to the document after voting approval and before publishing shall be to remove the “Draft” suffix to the “Title” document property.

4 Document Contents

Each document should have a short introductory paragraph describing the contents and related documents, i.e. other Standards, Recommended Practices, Technical Notes, etc...

Each top-level document heading should be identical between Standards, Recommended Practices, Technical Notes, etc... to aid in cross-referencing documents.

70 4.1 Standards Content

The NMRA Corporate Policies & Procedures Manual (CPPM) describes Standards as:

NMRA Standards Shall be limited to only those things that are critical to the satisfactory operation (function) and interchange of equipment between layouts, and for which no satisfactory alternative is available.

It further describes the following criteria for inclusion:

- That it will include all dimensional and other requirements to effect interchange and satisfactory performance.
- That it will exclude all not so required.
- That it be accurate and clearly stated.

80 4.2 Recommended Practice Content

The NMRA CPPM describes Recommended Practices as follows:

Recommended practices shall define and SPECIFY the dimensional and DCC and LCC configuration requirements and/or symbols pertaining to model railroad construction, equipment, and supplies to facilitate improved performance and interchange of components within units. Recommended Practices shall conform to and supplement appropriate Standards.

It further states:

Recommended Practices shall conform to and supplement appropriate Standards.

4.3 Technical Note Content

90 The Standards and Conformance Department describes Technical Notes as companion documents to Standards & RPs to communicate complex reasoning and departmental thoughts on particular parts of Standard and RP sections.

5 Generating Portable Document Format (PDF) Version

Documents are published to the public and uploaded to NMRAS.ORG in PDF form. It is recommended that during the PDF generation process, a navigation pane be generated to more easily navigate the document. Please use the following steps within Microsoft Word to generate a PDF version with navigation pane:

1. Select the **File** menu.
2. On the left-hand pane, select **Export**.
3. Choose **Create PDF/XPS**.
4. Choose **Options...**
5. Ensure that **Create bookmarks using: Headings** is selected, click **OK**.
6. Click **Publish**

6 Document History

Date	Description
Feb 7, 2021	First approved revision. The document is labeled TR-1- <u>2020</u> instead of TR-1- <u>2021</u> because the first draft was created in <u>2020</u> .
Jun 17, 2024	NMRA Corporate Policies & Procedures Manual (CPPM) replaced Executive Handbook (EHB). Added section 5 how to create PDF versions. Grammatical improvements and added instructions for watermarks.

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NMRA's development of NMRA Standards documents involves the review of documents in English only. In the event that an NMRA Standards document is translated, only the English version published by NMRA is the approved NMRA Standards document.

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