

# Publication Guidelines for MoDOT Research Reports

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## Report Submission and Review Process

The Principal Investigator (PI) should submit the **draft final report** (with [line numbering enabled](#)) approximately **two (2) months** prior to the end of the project contract (see RFP or deliverable timeline for specifics) to the MoDOT Research Project Manager (PM) for review. A draft report should be submitted as a Microsoft Word document or a PDF document (the latter only if the PM agrees).

The **final report** should be submitted as a Microsoft Word document. Depending on the circumstance, appendices may be submitted as one or more PDF files. This must be agreed upon ahead of time with the PM.

The PI is expected to follow the report formatting guidelines in this document. If you are preparing a report using the Mid-America Transportation Center (MATC) [research report guidance and template](#), please see the [Templates section](#) of this document.

***Reports that are not properly formatted may be returned to the PI for reformatting and resubmission (even before review). Only well-written, properly formatted and complete reports following these guidelines will then be submitted for review by the technical panel.***

Once the PM has determined that the formatting and writing style of the report meet minimum satisfactory requirements, they will send the report to the technical panel members for review.

The PM and technical panel will communicate comments about the report’s content to the PI. In addition, the PM will indicate any changes that must be made prior to submission of the final report.

The PI should allow at least **two months** for the first review and revision cycle of a draft final report (one month for review and one month for revisions).

Subsequent revisions of the draft final report are due **within one to two weeks** of receiving report comments. All editing deadlines will be determined by the PM.

The review and revision cycle will be repeated as many times as necessary before the final deliverables are accepted as final.

The PI is responsible for ensuring that all comments and changes are incorporated into the final report, no matter who is actually making the changes in the document. Once the draft final

report has been submitted, UNLESS authorized by the project manager, **NO new or altered content** is to be added to the report.

The acceptance of a PI's final report will be made when the PM determines that ...

- The report fulfills project objectives
- The report meets minimum satisfactory requirements which mean adhering to the guidance in this document including [Section 508 accessibility](#), unless exceptions have been agreed upon by the PM who has the final say.
- All PM and technical panel comments have been addressed, all errors have been corrected and line numbering has been removed
- The report has been submitted in the agreed upon file format.

The PI should identify or provide one or more photographs (portrait orientation) in an image format (such as a .jpg or .png) that represent the project. The image will be used by MoDOT to incorporate into the report cover. The image should be one that can be used with permission by the copyright owner (e.g. if a member of the PI's team took the photo or it's a MoDOT photograph).

The PI should complete a Research Summary [template](#) for the project and submit it to the PM within a week or two after the final report has been submitted.

## Report Requirements

### Writing Guidelines

The PI is responsible for conducting a thorough review of the content, writing style and formatting of the report to make sure that it complies with MoDOT guidelines and requirements BEFORE submitting the report to the project manager for review. This includes checking for spelling, punctuation and grammar errors prior to submitting the report to the PM. This is even more important if more than one person (such as a co-PI or graduate assistant) has contributed to the report.

The report should conform to standards of good scientific and technical writing. The report should be written with the audience of the report in mind (transportation professionals). As such, the writing should be concise, well-organized and easy to read.

Any reports which are written with poor sentence structure or which contain multiple errors or inconsistencies in grammar, [syntax](#), spelling, and punctuation will be returned to the PI for correction and/or improvement. This will lead to delays in the MoDOT review and publishing process.

Use past tense for all sections (except the Introduction which should use present tense). The discussion or conclusions section may use present, past or future tenses (depending on the context).

The third person point of view should be used (not “I” or “we”).

### Style Guide

We do not specify that you follow a specific style manual. However, you must use an accepted or widely used style manual to format citations in text (use Author-Date system instead of footnotes) and in the reference list. The style must be consistently applied throughout the report (even if multiple authors have prepared separate sections of the report). If you are unsure of which style guide to use, then use [The Chicago Manual of Style](#).

### Copyright/Proprietary Information

It is the responsibility of all authors of the report to obtain (and retain) all permissions from the copyright owners **before** reprinting graphical material in the report. Examples: photographs, software screenshots, scans or screenshots of text, pictures, maps, tables, charts, and graphs from copyrighted sources. As a reminder, **content from [AASHTO](#) and TRB publications (such as [NCHRP reports](#), [TRR content on Sage website](#) and [pre-1996 papers](#)) is copyrighted**. You should seek reprint permission before including excerpts from copyrighted publications in your report. This stipulation does not apply if the producer of the text, chart or image is the performing organization or MoDOT itself. Any images should be **sourced or attributed** according to the style guide you are following. The authors will assume responsibility for any copyright violations.

### Accessibility

Your report should comply with [Section 508](#) federal requirements and state of Missouri requirements (see [Missouri ICT State Standards](#) and [Governing Laws](#)) as much as possible to increase accessibility for individuals with disabilities and to allow for screen reading using assistive devices. This is best accomplished while you are **creating the report in Microsoft Word** and not remediated afterwards. Use the [accessibility checker in Word](#) to identify and fix critical problems.

### Required

- Insert captions for every image, figure, table or graphic and add brief descriptions in the ALT-TEXT field.
- Use heading styles.

### Preferred

- Avoid using text boxes or Word Art. Avoid adding objects like lines or arrows.
- Avoid using color alone to ascribe meaning in a chart or table. Use appropriate [color contrast](#) in charts and tables.
- For tables, label the header row under Layout. Avoid creating complex tables. Avoid splitting or merging cells within a table since this makes it difficult for a screen reader to follow the intended order of how to “read” a table.

For further instructions, see section on [Images, Photos, Charts and Tables](#).

**NOTE: During the [document revision process](#), all accessibility tags will be lost if the original Word file is saved as a new Word file. Don't do a "File—Save As." Instead, copy the original file and rename the new file.**

## Templates

The PI may use their own template as long as the report also complies with the basic requirements outlined in this document. Please confer with your PM about this. You may vary from the guidelines only if your PM is in agreement.

OPTIONAL. If you plan to submit reports for a project receiving funding from both MoDOT and Mid-America Transportation Center (MATC), you may use their [final report template and formatting guidance for reports](#) which is part of their style guide. MoDOT's guidelines will take precedence for copyright/disclaimer text, report length, line numbering, report deadlines, accessibility requirements and criteria for a report's acceptance or rejection.

## Organization and Formatting

Submit the report in a single electronic file including the following sections. Please use the following sequential order as much as possible.

- Report cover – MoDOT will create and add its own report cover
- Technical Report Documentation Page (TRDP) – [template provided \(which includes an abstract\)](#)
- Title page (this is usually the report title page that the PI creates)
- Copyright – text provided in section below
- Disclaimer – text provided in section below
- Acknowledgments
- Abstract (if desired, use same one on the TRDP)
- Executive Summary
- Table of Contents
- [List or Table of Figures](#) (if applicable)
- [List of Tables](#) (if applicable)
- List of Abbreviations (if applicable)
- Body of Report
- References or Bibliography (if applicable)
- Appendices (if applicable, e.g. Appendix A, Appendix B, etc.)

## General Guidance

### Content

#### *Recommendations/Conclusions*

In a separate Recommendations section or as part of your Conclusions section, please make clear what the implications are of your research on MoDOT and the travelling public that it

serves. Please make suggestions as to how it could be incorporated or implemented within the agency or in our work with construction contractors. We would like to make the connection between the research that is performed and its potential applicability within the department at large and in the field.

### Styles

In Microsoft Word, you should assign a quick style for each heading level throughout the report. Headings can be defined as section titles, chapter titles or subchapter titles. This will allow a reader to navigate more easily through the report using the [navigation pane](#).

As a best practice, automatically generate enumeration for [headings, tables and figures](#) using quick styles in Microsoft Word.

Start each new chapter or appendix on a new page.

Avoid [widows or orphans](#) whenever possible.

Include appropriate paragraph spacing before and after as part of the style instead of using hard returns. This includes styles for figures and tables.

Use heading styles in order, e.g. H1, H2, H3, etc.

### Length

The maximum length for single-spaced reports is **100 pages** (not including appendices). If the template you are using (like MATC's) specifies double-spacing, then the maximum length is **150 pages**. Supplementary information should be included in one or more appendices. Any exceptions to the maximum length must be approved by the PM.

### Font Size

Use a font size no smaller than 11 point. Text should be left aligned.

### Spacing

Use single line spacing for the body text. Paragraphs should use double line spacing (or be separated by at least 12 point spacing if you are using 12 point font size). Set this up using [paragraph spacing](#) for body text. Avoid using hard returns for "line spacing" in between paragraphs.

The first word of a paragraph should not be indented.

### Margins

A minimum of 1 inch is preferred on all margins.

### Page Numbering

Center page numbers at the bottom of the page. Use Arabic numbers starting with the body of the report. Use lower case Roman numerals for front matter. Start new numbering with appendices (e.g. [A-1, A-2, etc. for Appendix A and B-1, B-2, etc. for Appendix B](#)). Although it is

counted, do not number the title page or the TRDP. Use [section breaks](#) to handle the change in numbering from front matter to the body of the report to the appendices.

### Abbreviations and Acronyms

Consider including a separate list of abbreviations in the report if there are a large number of them. Even if you include such a list, any abbreviations or acronyms should be fully defined the first time they are used in the report. The definition should be given first, followed by the abbreviated term in parentheses.

### Measurements

The usage of measurement units (when appropriate) should be consistent throughout the document. English (U.S.) units should be used unless a test method specifies metric.

### Mathematical Notations and Equations

Follow standard practice. Define variables in the report even though the variables may appear in an abbreviations or acronyms list. Equations created with Word's equations editor are not accessible. Preferred: create equations using regular text if possible.

### Images, Photos, Charts and Tables

See guidance under [Accessibility](#).

Whenever possible, these should be formatted as [wrapping "in line"](#).

Each figure should have a caption as well as a brief explanatory description in the ALT-TEXT field. Each table should have a title summary (added under Properties as ALT-TEXT).

Figure captions and table titles must be formatted consistently throughout the report. All figures and tables should be included as close as possible to their callout in the text.

Preferred: Figure captions should appear below figures. Table titles appear above tables. See [examples](#).

Do not use tables to layout your figures and captions side by side.

Use Insert Table feature in Word. In the layout ribbon, mark the header row as "Repeat Header Rows." Tables should be editable and not inserted as screenshots.

As much as possible,

- Avoid using color alone to ascribe meaning in a chart or table. Use appropriate [color contrast](#) in charts and tables.
- Avoid using text boxes or Word Art. Avoid adding objects like lines or arrows.
- Avoid creating complex tables.
- Avoid splitting or merging cells within a table

Embed any graphics in the report. Use a high enough resolution such as 200-300 dpi (particularly for screenshots) so that images are readable and not blurry.

## **By Section**

Front Matter (any pages preceding the body of the report)

### ***Technical Report Documentation Page***

Template provided. Use [AASHTO guidelines](#) for completing.

Authors should include their [ORCID](#) numbers in the Author box. Please register for one if you haven't already.

MoDOT will assign the MoDOT report number after receiving the report from you (but it can be generated ahead of time upon request). The librarian will add the MoDOT report number, the hypertext link for the Innovation Library and the [Transportation Research Thesaurus](#) (TRT) terms for the keyword field to the TRDP.

The abstract should be a brief factual summary of the most significant information, including the purpose, methods, results, and conclusions of the work. When appropriate, the abstract should include advice on how the results of the research can be used. For guidance, please see [ANSI/NISO Z39.14-1997 \(R2015\) Guidelines for Abstracts](#).

### ***Copyright Permissions***

Include the following text. If you do not, we will add it to the report.

Authors herein are responsible for the authenticity of their materials and for obtaining written permissions from publishers or individuals who own the copyright to any previously published or copyrighted material used herein.

### ***Disclaimer***

Include the following text. If you do not, we will add it to the report.

The opinions, findings, and conclusions expressed in this document are those of the investigators. They are not necessarily those of the Missouri Department of Transportation, U.S. Department of Transportation, or Federal Highway Administration. This information does not constitute a standard or specification.

### ***Acknowledgements***

Use your own language to acknowledge that MoDOT funded the research.

### ***Abstract***

If desired, include the abstract (same one used on the Technical Report Documentation Page). It should precede the Executive Summary. The text of the abstract and the executive summary should **not** be the same.

### *Executive Summary*

The executive summary should present the study’s primary objectives and scope or the reasons for writing the report. The techniques or approaches should be described only to the extent necessary for comprehension. The findings and conclusions should be presented concisely and informatively. The executive summary is **usually no longer than three pages**.

### *Table of Contents, List of Figures, List of Tables, and List of Abbreviations*

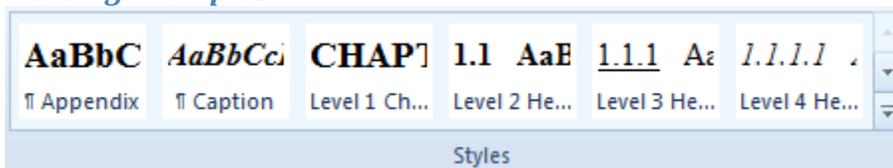
Please use style headings to generate your table of contents. Do not create it manually. Using the Word ribbon, use “References > Insert Table of Contents” or “References > Insert Table of Figures” (to insert a list of figures or a list of tables). Then when a heading is applied or a new figure or table is inserted in the report, the page number referenced can be updated automatically when the lists are updated. If the list of figures and tables are short, they may appear on the same page. Otherwise, start each list on a new page. The table of contents, list of figures and list of tables must use dot leaders and be linked to text within the report.

A list of abbreviations is optional.

### *Body of Report*

Headings should be organized and formatted using quick styles (instead of just changing the font style or size of the text).

### *Heading Examples*



**CHAPTER 2: LABORATORY STUDY** (chapter heading – Level 1)

Heading can be left-aligned or centered. All other headings below should be left-aligned.

**2.1 Products Tested** (Subchapter – Level 2 heading)

**2.2 Sample Preparation** (Subchapter – Level 2 heading)

2.2.1 Concrete Cylinders (Subchapter – Level 3 heading)

2.2.1.1 HMA (Subchapter – Level 4 heading)

### *Figure and Table Caption Examples*

Number every figure within each chapter or section, e.g. Figure 1.1, 1.2, 1.3, etc. in Chapter 1; Table 2-1, 2-2, etc. in Chapter 2. Use [sentence case](#) (the first letter of a sentence is capitalized; all other letters are lowercase unless the word is a proper noun). Caption titles should be bolded. If the figure or table must be centered, then the caption should be centered under the figure or above the table. Use [styles](#) to keep figure captions and table titles with their figures and tables respectively.

### *Figure 1.1 Laboratory HMA to PCCP bond strength results*

#### *Table 2-1 Laboratory average bond strength data*

Back Matter (any pages after the body of the report)

#### **References**

List all references in alphabetical order. Use a [hanging indent](#). Any accepted or well-known style manual may be used for formatting as long as it is consistently applied and basic relevant reference elements are included such as author(s), title, place of publication, publisher, publication year (or periodical volume and issue number). A report number helps identify a report but this is optional. Include a [DOI](#) or URL when appropriate. If in doubt as to which style manual to use, then [The Chicago Manual of Style](#) is preferred.

A URL by itself is not a reference.

#### **Appendices**

Number appendix pages separately (e.g. [A-1, A-2, etc.](#)) If the appendices are lengthy, discuss with your project manager if they should be published as separate documents.

#### **Document Revisions**

**IMPORTANT: In order NOT to lose any accessible tags have been added to a Word document when a document is being revised (e.g. tracked changes was used or comments were inserted), copy the old file and rename the new file. DO NOT DO A FILE-SAVE AS and then rename the file. This will blow away all your accessible tags. The PM will also follow this same guidance when creating a separate copy for comments and revision.**

#### **Report Publishing and Distribution**

The MoDOT Librarian assigns a MoDOT research report number (request one or it will be added after submittal), finalizes the technical report documentation page, produces a PDF (retaining as much accessibility as possible), adds metadata to the PDF, publishes the report on the [Innovation Library website](#), sends notification of publication to NTL, TRB, FHWA and other organizations as mandated by the FHWA, and updates the TRB RIP record. The report publication is announced on the MoDOT Research home page under Recent Reports and is announced on our [Report Announcements blog](#) and [RSS feed](#).

The National Transportation Library may reject a research report for ingestion in its repository if it is not Section 508 compliant.

## Help and Support

Although the Research Section can answer questions regarding the report guidance provided herein, more in-depth step-by-step instructions on how to use Microsoft Word may be best answered by your local experts at a University Writing Center or whoever handles writing, editing or publications support within your department or at your organization.

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### REVISION LOG

Originally published 20 August 2018

Revisions 27 December 2018:

- Avoid using complex tables. Avoid splitting table cells.
- Use before and after paragraph spacing as part of a style instead of using hard returns. Keep figure captions with figures and table titles with tables.
- Figures and tables don't have to be left-aligned.
- Use heading styles in order (H1, H2, H3, etc.)
- Equations created using Word's equations editor are not accessible. Try to use regular text to create equations if possible.
- The National Transportation Library will now reject document submissions to its repository if they are not Section 508 compliant.

Revisions 11 June 2019

- Avoid adding objects like lines or arrows.
- Avoid using color alone to ascribe meaning in a chart or table. Use appropriate [color contrast](#) in charts and tables.
- Avoid splitting or merging cells within a table
- Do not use tables to layout your figures and captions side by side.