AIR FORCE RESEARCH LABORATORY (AFRL) AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/ NATIONAL INFORMATION STANDARDS ORGANIZATION (NISO)-BASED GUIDE TO FORMATTING TECHNICAL REPORTS

February 2018

HEADQUARTERS AFRL
DIRECTOR OF STAFF
INTEGRATION AND OPERATIONS DIVISION
INFORMATION MANAGEMENT
WRIGHT-PATTERSON AFB, OH 45433

Tailored for the use of AFRL/RD and AFRL/RV contractor and in-house authors.

TABLE OF CONTENTS

Section **Page**

List of Figures ii
List of Tables ii
List of Equations ii
1.0 COMPONENTS OF A TECHNICAL REPORT 1
2.0 FRONT MATTER 2
2.1 Cover Page 2
2.2 Pages Following Coversheet 4
2.3 SF 298 4
2.4 Table of Contents 6
2.5 List of Figures 6
2.6 List of Tables 7
3.0 BODY 8
3.1 Required Headings 8
3.2 References 8
3.2.1. Papers / Journal Articles / Conference Presentations or Proceedings 8
3.2.2. URLs 8
3.2.3. Technical Reports 8
3.2.4. Books 9
4.0 BACK MATTER 10
4.1 Appendices 10
4.2 Symbols, Abbreviations and Acronyms 10
5.0 FORMAT REQUIREMENTS. 11
5.1 Type (Font) and Headings (Section Titles) 11
5.2 Spacing 11
5.3 Margins 11
5.4 Numbering 11
6.0 PRESENTATION STYLES 12
6.1 Style for Equations, Figures, and Tables 12
6.1.1. Style for Equations 12
6.1.2. Style for Figure Captions 12
6.1.3. Style for Table Captions 12
7.0 BIBLIOGRAPHY 13
LIST OF ACRONYMS 14
APPENDIX A – Notice and Signature Pages 15
APPENDIX B – Notice to Accompany the Dissemination of Export Controlled Technical Data 20

LIST OF FIGURES

Page

Figure 1. Sample of a Cover Sheet 3
Figure 2. Sample SF 298 5
Figure 3. Table of Contents Example (border not required) 6
Figure 4. List of Figures Example (border provided for figure simulation only) 7
Figure 5. List of Tables Example (border provided for figure simulation only) 7
Figure 6. Example of Lists of Symbols, Abbreviations and Acronyms 10
Figure 7. Heading Formats 11
Figure 8. Figure Caption is on Same Line as Figure Number 12

LIST OF TABLES

Page

Table 1. Components of a Technical Report 1
Table 2. Cover Page Elements 2
Table 3. Explanation of SF 298 Components 4
Table 4. Table Caption is on Same Line as Table Number 12

LIST OF EQUATIONS

Page

Equation 1. Sample Equations 12

1.0 COMPONENTS OF A TECHNICAL REPORT

The United States Air Force uses ANSI/NISO Z39.18 as a formatting guide for technical reports. This guidance highlights fundamental formatting recommendations addressed in the ANSI/NISO standard, as shown in Table 1. Full component descriptions are available in the ANSI/NISO Z39.18 which can be found at the link below:
http://groups.niso.org/apps/group_public/download.php/12038/Z39_18_2005_R2010

Table 1. Components of a Technical Report

COMPONENT	RESPONSIBLE PARTY	INCLUSION STATUS
FRONT MATTER (page numbering sequentially with Roman numerals beginning with Table of Contents)		
Cover or Title	Government Work Unit Manager (WUM)	***Required***
Notice and Signature Page	Government WUM	***Required***
Notice to Accompany the Dissemination of Export-Controlled Technical Data (See Appendix B)	**Defense Technical information Center (DTIC) will add this to technical report.**	
Standard Form (SF) 298, *Report Documentation Page*	Report Author	***Required***
Table of Contents	Report Author	***Required***
List(s) of Figures and Tables	Report Author	Conditional *(include when there are more than five figures and/or tables)*
Foreword	Report Author	Optional
Preface	Report Author	Optional
Acknowledgements	Report Author	Optional
BODY (page numbering sequentially beginning with the Arabic numeral 1)		
Summary	Report Author	***Required***
Introduction	Report Author	***Required***
Methods, Assumptions, and Procedures	Report Author	***Required***
Results and Discussion	Report Author	***Required***
Conclusions	Report Author	***Required***
Recommendations	Report Author	Conditional *(include when purpose of report is to suggest a course of action)*
References	Report Author	Conditional (use if references are provided)
BACK MATTER (page numbering continues sequentially from body of report)		
Appendices	Report Author	Conditional ***(Include when needed to supplement Results and Discussion)***
Bibliography	Report Author	Conditional
List of Symbols, Abbreviations, and Acronyms	Report Author	Conditional ***(include if used in any other component of the report)***
Glossary of Terminology	Report Author	Conditional ***(Include if report incorporates terms unfamiliar to the intended audience)***
Index	Report Author	Optional
Distribution List	Report Author/Government WUM	Conditional ***(Some technology directorates control access)***
Back Cover	Report Author	Required for classified reports only

2.0 FRONT MATTER

2.1 Cover Page (see Table 2 and Figure 1) AFRL/RD and RV contractors see sample on p. 3

- AFRL Shield, upper left-hand corner
- Technical Report Document Number
- Main Title
- Subtitle (if applicable)
- Author Name(s) (First Name/Last Name)
- Wing/Technical Directorate or Prime Contractor Company Name (address can be added. Just be consistent).
- Subcontractor Company Name (if applicable) (address can be added, just be consistent).
- Report Date (Month followed by four-digit year)
- Type of Report (interim or final)
- Distribution Statement and reasons for the statement's assignment (see Department of Defense Instruction (DoDI) 5230.24).
- Warning Statement for Export Control (if applicable)
- Destruction Notice
- Pointer Text to other limits
- Sponsoring Directorate

Table 2. Cover Page Elements

Component	Explanation
AFRL Shield	Located in upper left-hand corner.
Technical Report Number	Assigned by the directorate Science & Technical Information (STINFO) Office upon receipt.
Main Title	Accurate and specific to describe the contents of the report.
Subtitle	If applicable; Used for a delivery or task order (DO-TO) or volume title in a series.
Author Name(s)	Full names to include middle initial(s).
Company Name	Primary performing company name.
Report Date	Month and four-digit year.
Special Report Type	i.e., Small Business Innovative Research (SBIR), Small Business Technology Transfer (STTR) Broad Agency Announcement (BAA), etc.
Distribution Statement	Per the contract.
Data Rights Notice	Whenever Proprietary Information appears as a reason in a distribution statement, a description of the type of data rights in the report is provided parenthetically after the reason- Limited Rights Data, SBIR Data Rights, Government Purpose Rights Data Restricted Rights, etc.
Warning	Standard export control warning (if applicable)
Destruction Notice	Standard destruction notice, one for unclassified data and a different one for classified data.
Classification Caveats	For classified documents, derived from and declassification information.
Sponsoring Directorate	Address supplied by your local STINFO Office.

AFRL shield here

AFRL-RH-WP-TR-2017-XXXX

Be consistent with the font size (i.e., Main Title-16 pt/Bold, all caps; Subtitle- 14 pt/bold)

MAIN TITLE*

Subtitle ***(if applicable)****

Author(s) First name/Last name*

Contractor Company Name ***(if applicable)****

Author(s) First name/Last name

Subcontractor Company Name ***(if applicable)***

Month/Year

Final Report*

For AFRL/RD and AFRL/RV contractor authors: provide items marked with *, as well as the contract number, on your cover; AFRL will prepare the final cover during our report compositing phase.

For AFRL/RD and AFRL/RV in-house authors: use the PRS cover templates on the RD/RV STINFO SharePoint page (ask your Division Liaison for assistance).

THIS IS A SMALL BUSINESS INNOVATION RESEARCH (SBIR) PHASE I REPORT

**

DISTRIBUTION STATEMENT B: Distribution authorized to U.S. Government agencies only; Proprietary Information (SBIR Data Rights), Critical Technology and Export Controlled; Month 2XXX. Other requests for this document shall be referred to 711 HPW/RHC, Wright-Patterson AFB, OH 45433.

WARNING: This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50 U.S.C., App. 2401, et seq. Violations of these export laws are subject to severed criminal penalties. Disseminate in accordance with the provisions of DoD Directive 5230.25. (Include this statement with any reproduced portions).

DESTRUCTION NOTICE – Destroy by any method that will prevent disclosure of contents or reconstruction of the document.

See additional restrictions described on inside pages.

AIR FORCE RESEARCH LABORATORY
711TH HUMAN PERFORMANCE WING
AIRMAN SYSTEMS DIRECTORATE
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433
AIR FORCE MATERIEL COMMAND
UNITED STATES AIR FORCE

Figure 1. Sample of a Cover Sheet

** Restrictive markings as required by your contracting instrument (border not required).

2.2 Pages Following Coversheet

- The appropriate Notice Page or Pages (see Appendix A). (This is prepared by AFRL.)
- Standard Form (SF) 298, *Report Document Page* (see Figure 2).
- Typically, three sections follow the SF 298 in this succession: Table of Contents, List of Figures, and List of Tables.

2.2.1. SF 298

The accuracy and completeness of the SF 298 are critical to the report so that the document will be more easily retrieved from Defense Technical Information (DTIC) or other databases. The Contractor/Author shall complete Blocks 1 – 5b, 6 – 8, 12 – 15 of SF 298 and submit per Contract Data Requirements List (CDRL) requirements. See Table 3 and Figure 2. Here is the link for SF 298: https://app_gsagov_prod_rdcgwaajp7wr.s3.amazonaws.com/SF%20298.pdf

Table 3. Explanation of SF 298 Components

Block No./Component	Explanation
1 Report Date	Month/year of the report, typically the month of or following the ending period of the performance month. Ensure this date matches the date on the cover.
2 Report Type	Final or Interim
3 Dates Covered (From-To)	The period during which the technical effort was performed.
4 Title/Subtitle	Should match the cover title/subtitle. Use a distinctive title and subtitle that distinguished the report from others that cover the same general topic, as when more than one report is produced that has the same overall title.
5a – 5b Contract and funding information	Information should be in the contract. If not, the AFRL Program Manager (PM) or STINFO Officer/Liaison will provide.
5c – 5f Contract information	AFRL WUM or STINFO Officer/Liaison will provide.
6. Authors	The author or authors' first and last names (initials are acceptable)
7. Performing Organization Name(s) and Address(es)	The organization(s) or company(ies) that performed the work. Most commonly, the name and address of only the prime contractor appears here.
8. Performing Organization Report Number	The number assigned to the document by the contractor or if in-house-authored, the number assigned to the document (see Block 11 description)
9. Sponsoring/Monitoring Agency (Name(s) and Address(es)	The organization providing technical oversight for the contract. Occasionally, an effort is co-sponsored, such as when an effort is co-funded by multiple government agencies, such as a division within the Defense Advanced Research Projects Agency (DARPA)
10. Sponsoring/Monitoring Agency Acronym(s)	Branch-level AFRL symbol or other controlling Department of Defense (DoD) office (CDO) descriptive acronym.
11. Sponsoring/Monitoring Agency Report Number(s)	The complete AFRL document number assigned by the directorate STINFO. Ex: AFRL-RD-PS-TR-2017-0010
12. Distribution/Availability Statement	See Appendix A.
13. Supplementary Notes	Export control notice; SBIR information; references to previous editions or related volumes; copyright notice; special grant numbers; references to related documents, etc.
14. Abstract	The overall purpose of the research and/or its applications, including major results and conclusions
15. Subject Terms	Terms and key words that make the report accessible, making it appear in search retrieval lists.
16. Security Classification	Blocks 16a, 16b & 16c only: classification of each identified section
17. Limitation of Abstract	Same as report (SAR) (Enter SAR). For Distribution A documents, use Unlimited.
18. Number of Pages	Total number of pages including front matter.
19a. Name of Responsible Person	Controlling DoD PM.
19b. Telephone Number	Controlling DoD PM. (Leave blank for Distribution A documents)

SAMPLE REPORT DOCUMENTATION PAGE*	*Form Approved OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE *(DD-MM-YYYY)* *	**2. REPORT TYPE** *	**3. DATES COVERED** *(From - To)* *
30-10-2016	Final Report	03 March 2015 – 11 December 2017

4. TITLE AND SUBTITLE *	**5a. CONTRACT NUMBER** *
Comparative Assessment of Torso and Seat Mounted Restraint Systems **(Ensure this title matches the cover sheet title exactly)**	FA8650-15-D-1111
	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER 65502F
6. AUTHOR(S) * all authors must be listed here First Name(s)/Last Name(s)	**5d. PROJECT NUMBER** 3005
	5e. TASK NUMBER 0001
	5f. WORK UNIT NUMBER H07L
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) * ABC Research 123 Any Street City, State Zip	**8. PERFORMING ORGANIZATION REPORT NUMBER** *(only if applicable)
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Air Force Research Laboratory Airman Systems Directorate Wright-Patterson Air Force Base 45433 **NOTE: If Block 7 is the same as Block 9, just fill in Block 7.**	**10. SPONSOR/MONITOR'S ACRONYM(S)** AFRL/RHC
	11. SPONSOR/MONITOR'S REPORT NUMBER(S) AFRL-RH-WP-TR-2017-0011

12. DISTRIBUTION / AVAILABILITY STATEMENT *

DISTRIBUTION STATEMENT B. Distribution authorized to U.S. Government agencies only; Proprietary Information (SBIR Data Rights), Critical Technology and Export Controlled; December 2017. Other requests for this document shall be referred to AFRL/RH, Wright-Patterson Air Force Base, OH 45433.

13. SUPPLEMENTARY NOTES

*SBIR or STTR topic # & title, if applicable

14. ABSTRACT

This report was developed under a SBIR contract for topic ABC.

15. SUBJECT TERMS *

SBIR, restraint systems, seat mounted restraint systems

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
a. REPORT *	**b. ABSTRACT** *	**c. THIS PAGE** *			AFRL WUM assigned to WU
Unclassified	Unclassified	Unclassified	SAR	78	**19b. TELEPHONE NUMBER** *(include area code)*

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

Figure 2. Sample SF 298

***Contractor authors complete only blocks marked with *.**

2.4 Table of Contents

Start pagination of Table of Contents with lower-case Roman numeral "i" as shown in Figure 3. Start listing contents that are in the Front Matter (e.g., List of Figures, List of Tables, Foreword, Preface, the Body of text, then Back Matter). Appendix labels should be in alphabetical order, and page numbers should continue from the previous section. If there is only one Appendix, just call it an Appendix. If a report contains more than five figures or tables, or some combination totaling more than five, a list of figures and/or tables is required. If less than five, it is optional.

TABLE OF CONTENTS

Section **Page**

List of Figures iv

List of Tables v

1.0 SUMMARY 1

2.0 INTRODUCTION 3

3.0 METHODS, ASSUMPTIONS, AND PROCEDURES 4

3.1 High Symmetry Hypervalent Structures (OF_6) 7

3.2 Azide-like Structures 9

3.2.1 $N(N_3)_3$, $HN(N_3)_2$, $N(N_3)_2^-$ 12

3.2.2 $N(N_3)_4^+$ 13

4.0 RESULTS AND DISCUSSION 15

5.0 CONCLUSIONS 35

6.0 REFERENCES 37

APPENDIX A - Publications and Presentations 40

APPENDIX B - Abstracts 51

LIST OF SYMBOLS, ABBREVIATIONS, AND ACRONYMS 59

i

Figure 3. Table of Contents Example (border not required)

2.5 List of Figures

Continue pagination with lower-case Roman numerals as shown in Figure 4. List all figures found in text, excluding those that appear in any appendix (list appendix figures at the front of each appendix, if applicable).

LIST OF FIGURES

Page

Figure 1 Overall View of Propulsion Vehicle……..……19
Figure 2 Motor Configuration……...……25
Figure 3 Apparatus Used to Make Nozzle Tubes……...…..26

Figure 4. List of Figures Example (border provided for figure simulation only)

2.6 List of Tables

Continue pagination with lower-case Roman numerals as shown in Figure 5. List all Tables found in text, excluding those that appear in any appendix (list appendix tables at the front of each appendix, if applicable.)

LIST OF TABLES

Page

Table 1 Some of the Upper-Stage Propulsion Options……..……19
Table 2 Results of Test Firing #1……...……25
Table 3 Results of Test Firing #2……...……26

Figure 5. List of Tables Example (border provided for figure simulation only)

3.0 BODY

3.1 Required Headings

Start the body of the text with the **Summary or Executive Summary (1.0)** and begin pagination with Page 1 (Arabic numerals) (see Figure 3).

3.2 References

References should be listed numerically, in the order they appear in the text. The Reference page should be at the end of the report *(not at the end of each section)*. For works that are generally referred to throughout the report, without citing specific references from the work, create a Bibliography (in alphabetical order by author's last name, if known, and if not, by title). Personal communications, unpublished speeches, or any other information not available for reference by the reader should not be included in the References – *footnote your citation instead*. References must be available to readers of the report. The examples below are a suggested format.

3.2.1. Papers / Journal Articles / Conference Presentations or Proceedings

Author's last name, then first name, Titles of papers are in quotation marks; Journal names or Conference names are in italics; Volume is bolded; Date follows comma (not within parenthesis); Page numbers (pp.) are last.

Examples:

Chidambaram, N., Dash, S., and Kenzakowski, D., "Scalar Variance Transport in the Turbulence Modeling of Propulsive Jets," *Journal of Propulsion and Power*, **17**, 1, Jan 2001, pp. 79-84.

Author(s), "Title of Article," Paper No. (if AIAA or CPIA paper, etc.), *Name of Conference,* Location, Date.

Chai, A.H., Cao, Z.T., Chen, H. P., "Monte Carlo Method Study of Terahertz Pulse, Propagation in Biological Tissue," *Proceedings of the 2005 IEEE, EMBS 27th Annual Conference,* Shanghai, China (2005).

3.2.2. URLs **(A URL only, without the other citation information, is unacceptable.)**

The URL or other path information appears instead of the volume and number cited for a conventional journal. It is frequently useful to the reader to know the date when the material was accessed. In such cases, "Accessed [date]" would be appropriate wording.

Virillio, Paul, "Speed and Information: Cyberspace Alarm!" CTHEORY, URL: http://www.freedonia.com/ctheory/, last modified 19 September 1995. Accessed 17 November 1999

3.2.3. Technical Reports

Enter Author's last name, then first; Titles of reports are in italics; Next is report number; DTIC Accession Number, Distribution Code and/or PA Clearance/Date, Name and address of performing agency/organization; Date is last.

Example:

Author(s), Title, AFRL-PR-ED-TR-20XX-XXXX, Company, Inc., City, State, Jan 2006

In-House Author Example

Gaitonde, Datta, Advances in High-Fidelity Multiphysics Simulation, AFRL-RB-WP-TR-2008-3019; ADB123456, Distribution B, Wright-Patterson AFB: AFRL Air Vehicles Directorate, 2008

Gaitonde, Datta, Advances in High-Fidelity Multiphysics Simulation, AFRL-RB-330 WP-TR-2008-3019, XXABW Cleared XX/XX/XXXX; XXABW-XXXX-331 XXXX, Wright-Patterson AFB: AFRL Air Vehicles Directorate, 2008

3.2.4. Books

Enter Author's last name, then first name; Title of book can be **Bolded** or <u>Underlined</u>; Publisher's name and location (city and state); Date of publication; Page numbers last.

Example:

Author(s), **Book Title,** Harper & Rowe, New York, NY, 1993, pp. 36-38, 77, 98-101

Wylie, C.R., **Advanced Engineering Mathematics**, 7th ed, McGraw-Hill, New York, NY, 2005, pp 15-18

4.0 BACK MATTER

Pagination continues from the body. Include conditional and optional Back Matter in the order listed in the components table on page 1: Appendices, Bibliography, List of Symbols, Abbreviations, and Acronyms, Glossary, Index, Distribution List, and Back Cover.

4.1 Appendices

If there is only one appendix, the title Appendix would be without an alphabet letter (i.e., Appendix A, Appendix B). All tables and figures in that appendix are prefixed with A-, the "A" representing the word, Appendix. Each appendix should be referred to in the body text. Any references cited in an appendix must be listed as the last page of the appendix. Appendix page numbering is a sequential continuation of the Arabic text page numbering. Number figures, tables, equations, and references in an appendix with the letter of the appendix, followed by a hyphen and a sequential number, starting at 1, e.g., Figure A-1, A-2, B-1, B-2 for appendix figures, Table A-1, A-2, B-1, B-2 for appendix tables and A-1, B-1 for reference citations.

4.2 Symbols, Abbreviations and Acronyms

When first introduced in the report (title or text), completely write out abbreviations and acronyms, followed by the abbreviation or acronym in parentheses, e.i., Small Business Innovation Research (SBIR). Thereafter, use only the acronym/ abbreviation in the body text; i.e., SBIR only if they are proper names (e.g., Department of Defense). See Figure 6. Create an acronym list that lists and defines all acronyms and symbols that appear in your report. List all terms alphabetically, beginning with those starting with capital letters, followed by lower case (e.g., H2, HEDM, hcp). Follow alphabetical entries with Greek or special symbols. Capitalize definitions only if they are proper names (e.g. Department of Defense).

LIST OF SYMBOLS, ABBREVIATIONS AND ACRONYMS

CAT	Computerized Axial Tomography
COMSAT	Communication Satellites
DMP-128	a Polaroid™ photopolymer
DoD	Department of Defense
Dcg	dichromated gelatin
H^2	hydrogen
HEDM	High Energy Density Matter
∀	Angle of Attack

Figure 6. Example of Lists of Symbols, Abbreviations and Acronyms (border not required)

5.0 FORMAT REQUIREMENTS.

5.1 Type (Font) and Headings (Section Titles)

The recommended font is 12-point Times New Roman or Arial throughout the report. Figure 7 shows an example (format and spacing) of headings:

1.0 HEADING 1 IS ALL UPPER CASE AND BOLDED

1.1 Heading 2 is Bolded, Same Font Size as Text, Upper and Lower Case, Flush with Left Margin

1.1.1. Heading 3 is Boldface, Upper and Lower Case Letters, *followed by a Period*. Then continue the copy.

Figure 7. Heading Formats

5.2 Spacing

Final reports should be single spaced. It isn't necessary to double-space between paragraphs if the first line of each paragraph is indented.

5.3 Margins

Leave 1-inch left, right, and top margins. Leave enough room at the bottom of each page to include page numbers and notices (applicable restrictive statements (i.e., Public Affairs (PA) Clearance, additional control markings, distribution statement, export control warning, etc., as applicable).

5.4 Numbering

Page numbers are centered at the bottom of the page, above the footer. Figure numbers and their captions are on the same line below figures, while table numbers and their captions are on the same line above the tables. (See Figure 4 and Figure 5).

6.0 PRESENTATION STYLES

6.1 Style for Equations, Figures, and Tables

All equations, figures and tables shall be crisp and easy to read as shown in Equation 1. Figure and Table Captions should be in at least an 8-point type (handwriting on figures and tables is not). List of figures and tables are numbered, worded, spelled and punctuated exactly as they are in the report.

6.1.1. Style for Equations

$$(1+x)^n = 1 + \frac{nx}{1!} + \frac{n(n-1)x^2}{2!} + \cdots \tag{1}$$

$$x = \frac{-b \pm \sqrt{b^2-4ac}}{2a} \tag{2}$$

Equation 1. Sample Equations

6.1.2. Style for Figure Captions

Figure captions should be in title case letters using a consistent font, as shown in Figure 8 below. The Figure Caption describes the content without giving background information, results, or comments about the figure. Reference to figures and tables must appear in the text before the actual figure or table appears in the report. Where possible, integrate figures and tables into text and place figure/table as soon after the first mention of it as possible, before beginning a new subject. There should be two blank lines between Figures or Tables and text.

Sample Representation Only
(border not required.)

Figure 8. Figure Caption is on Same Line as Figure Number

6.1.3. Style for Table Captions

Authors should use the style listed in section 4.1.2. As shown in Table 4, the caption line and caption number should be centered, bolded, with no period at the end of the caption.

Table 4. Table Caption is on Same Line as Table Number

NAME	ADDRESS	CITY, STATE

7.0 BIBLIOGRAPHY

ANSI/NISO Z39.18-2005 (R2010), Scientific and Technical Reports – Preparation, Presentation and Preservation, 13 May 2010.

Defense Federal Acquisition Regulation Supplement (DFARS) and Procedures, Guidance, and Information (PGI).

DoDI 5230.24, *Distribution Statements on Technical Documents*, 01 November 2017.

8.0 LIST OF ACRONYMS

AFRL – Air Force Research Laboratory
ANSI – American National Standards Institute
BAA – Broad Agency Announcement
CDO – Controlling DoD Office
CDRL – Contract Data Requirements List
DARPA – Defense Advanced Research Projects Agency
DoD – Department of Defense
DoDI – Department of Defense Instruction
DO-TO – Delivery – Task Order
DTIC – Defense Technical Information Center
NISO – National Information Standards Organization
PA – Public Affairs
PM – Program Manager
SAR – Same as Report
SBIR – Small Business Innovative Research
STINFO – Scientific & Technical Information
STTR – Small Business Technology Transfer
WUM – Work Unit Manager

APPENDIX A – Notice and Signature Pages (for AFRL use only; AFRL prepares)

The following example notice page description would be used for a document NOT cleared for public release and for use with Controlled Unclassified Information (CUI) to which the Government has unlimited rights.

NOTICE AND SIGNATURE PAGE

Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

Qualified requestors may obtain copies of this report from the Defense Technical information Center (DTIC) (http://www.dtic.mil).

AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION IN ACCORDANCE WITH THE ASSIGNED DISTRIBUTION STATEMENT.

Use Distribution Statements B, C, D, and E with this Notice and Signature Page.

The following example notice page description would be used for a document cleared for public release.

NOTICE AND SIGNATURE PAGE

Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

This report was cleared for public release by XXth Air Base Wing Public Affairs Office and is available to the general public, including foreign nationals. Copies may be obtained from the Defense Technical Information Center (DTIC) (http://www.dtic.mil).

AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION.

Use Distribution Statement A with this Notice and Signature Page.

The following example notice page description would be used for a document that is contracted fundamental research deemed exempt from public affairs Security and Policy Review.

NOTICE AND SIGNATURE PAGE

Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

This report is the result of contracted fundamental research deemed exempt from public affairs security and policy review in accordance with SAF/AQR memorandum dated 10 Dec 08 and AFRL/CA policy clarification memorandum dated 16 Jan 09. This report is available to the general public, including foreign nationals. Copies may be obtained from the Defense Technical Information Center (DTIC) (http://www.dtic.mil).

AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION.

Use Distribution A with this notice page if it is exempt from Public Affairs Security and Policy Review.

The following example notice page description would be used for a Government Purpose Rights (GPR) document.

NOTICE AND SIGNATURE PAGE

Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

Government Purpose Rights Legend

Contract Number:
Contractor Name:
Contractor Address:
Location of Government Purpose Rights Data: [enter pages, sections, figures, etc. (**THIS IS A REQUIREMENT**)]
Expiration of Government Purpose Rights (if applicable):

The Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data contained in this report are restricted by paragraph (b)(2) of the Rights in Technical Data – Noncommercial Items clause (DFARS 252.227-7013 (**Feb 2014**)) contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

Qualified requestors may obtain copies of this report from the Defense Technical Information Center (DTIC) (http://www.dtic.mil).

AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION IN ACCORDANCE WITH THE ASSIGNED DISTRIBUTION STATEMENT.

Use Distribution Statement B with this Notice and Signature Page in order to prevent the information from being available outside of the Government.

The following example notice page description would be used for a Limited Rights document.

NOTICE AND SIGNATURE PAGE

Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

Limited Rights Legend

Contract Number:
Contractor Name:
Contractor Address:
Location of Limited Rights Data: [insert pages, sections, figures, etc. (**THIS IS A REQUIREMENT**)]

The Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data contained in this report are restricted by paragraph (b)(3) of the Rights in Technical Data – Noncommercial Items clause (DFARS 252.227- 7013 (**Feb 2014**)) contained in the above identified contract. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such data must promptly notify the above named contractor.

Qualified requestors may obtain copies of this report from the Defense Technical Information Center (DTIC) (http://www.dtic.mil).

AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION IN ACCORDANCE WITH ASSIGNED DISTRIBUTION STATEMENT.

Use Distribution Statement B with this "Notice Page" to prevent information from being available outside of the Government or E to prevent information from being available outside of the DoD.

The following example notice page description would be used for a SBIR document.

NOTICE AND SIGNATURE PAGE

Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

SBIR Data Rights Legend

Contract Number:
Contractor Name:
Contractor Address:
Location of SBIR Data Rights Information: [insert pages, sections, figures, etc. (**THIS IS A REQUIREMENT**)]
Expiration of SBIR Data Rights: Expires five years after completion of project work for this or any follow-on SBIR contract, whichever is later

The Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software contained in this report are restricted by paragraph (b)(4) of the Rights in Noncommercial Technical Data and Computer Software - Small Business Innovation Research (SBIR) Program clause (DFARS 252.227-7018 (Feb 2014)) contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of technical data, computer software, or portions thereof marked with this legend must also reproduce the markings.

Qualified requestors may obtain copies of this report from the Defense Technical Information Center (DTIC) (http://www.dtic.mil).

AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION IN ACCORDANCE WITH ASSIGNED DISTRIBUTION STATEMENT.

Use Distribution Statement B with this "Notice Page" to prevent information from being available outside of the Government or E to prevent information from being available outside of the DoD.

The following example notice page description would be used for a Restricted Rights document.

NOTICE AND SIGNATURE PAGE

Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

Restricted Rights Legend

Contract Number:
Contractor Name:
Contractor Address:
Location of Restricted Rights Software:

The Government's rights to use, modify, reproduce, release, perform, display, or disclose computer software contained in this document are restricted by paragraph (b)(3) of the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause (DFARS 252.227-7014 (**Feb 2014**)) contained in the above identified contract. Any reproduction of computer software or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such software must promptly notify the above named contractor.

Qualified requestors may obtain copies of this report from the Defense Technical Information Center (DTIC) (http://www.dtic.mil).

AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION IN ACCORDANCE WITH ASSIGNED DISTRIBUTION STATEMENT.

Use Distribution Statement B with this "Notice Page" to prevent information from being available outside of the Government or E to prevent information from being available outside of the DoD.

Some government information can contain copyrighted material (i.e. quote, chart, photograph, drawing, etc.) when used with permission. Copyrighted material incorporated in government work retains its copyright protection. The copyright statement is displayed under the distribution statement.

DISTRIBUTION STATEMENT B. Distribution authorized to U.S. Government Agencies only; Proprietary Information (Limited Rights Data), Critical Technology; 10 February 2017. Other requests for this document shall be referred to XXX/XXXX, Wright-Patterson Air Force Base, OH 45433.

DESTRUCTION NOTICE – Destroy by any method that will prevent disclosure of contents or reconstruction of the document.

See additional restrictions described on inside pages

© 2005 ACME Corp. This work is copyrighted

APPENDIX B – Notice to Accompany the Dissemination of Export Controlled Technical Data

Export of the attached information (which includes, in some circumstances, release to foreign nationals within the United States) without first obtaining approval or license from the Department of State for items controlled by the International Traffic in Arms Regulation (ITAR), or the Department of Commerce for items controlled by the Export Administration Regulation (EAR) may constitute a violation of law.

Under 22 U.S.C. 2778, the penalty for unlawful export of items or information controlled under the ITAR is up to ten years imprisonment, or a fine of $1,000,000, or both. Under 50 U.S.C., appendix 2410, the penalty for unlawful export of items or information controlled under the EAR is a fine of up to $1,000,000, or five times the value of the exports, whichever is greater; or for an individual, imprisonment of up to 10 years, or fine of up to $250,000, or both.

In accordance with your certification that establishes you as a "qualified U.S. contractor," unauthorized dissemination of this information is prohibited and may result in your disqualification as a qualified U.S. contractor, and may be considered in determining your eligibility for future contracts with the Department of Defense.

The U.S. Government assumes no liability for direct patent infringement, or contributory patent infringement, or misuse of technical data.

The U.S. Government does not warrant the adequacy, accuracy, currency, or completeness of the technical data.

The U.S. Government assumes no liability for loss, damage, or injury resulting from manufacture or use of any purpose of any product, article, system, or material involving reliance upon any or all technical data furnished in response to the request for technical data.

If the technical data furnished by the Government will be used for commercial manufacturing or other profit potential, a license for such use may be necessary. Any payments in support of the request for data do not include or involve any license rights.

A copy of this notice shall be provided with any partial or complete reproduction of these data that are provided to qualified U.S. contractors.