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# MILITARY HANDBOOK

POLICY AND PROCEDURES FOR  
GUIDE SPECIFICATION PREPARATION



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ABSTRACT

This handbook covers policy and procedures for creating, revising, or amending Naval Facilities Engineering Command (NAVFACENGCOM) guide specifications which are used in preparing sections of project specifications.

MIL-HDBK-1006/2

MIL-HDBK-1006/2

FOREWORD

This handbook is one of a series developed for instruction on the preparation of Navy facilities engineering and design criteria documents. This handbook uses, to the maximum extent feasible, national and institute standards in accordance with Naval Facilities Engineering Command (NAVFACENGCOM) policy. Deviations from MIL-HDBK-1006/2 for NAVFACENGCOM guide specifications shall not be made without prior approval of NAVFACENGCOM Headquarters Code DS02.

Recommendations for improvement are encouraged from within the Navy, other Government agencies, and the private sector and should be furnished on the DOD Form 1426 provided inside the back cover to: Commanding Officer, Chesapeake Division, Naval Facilities Engineering Command, Code 406C, Building 212, Washington Navy Yard, Washington, D.C. 20374-2121; phone AUTOVON 288-3314 or commercial (202) 433-3314.

THIS HANDBOOK SHALL NOT BE USED AS A REFERENCE DOCUMENT FOR PROCUREMENT OF FACILITIES CONSTRUCTION. DO NOT REFERENCE IT IN MILITARY OR FEDERAL SPECIFICATIONS OR OTHER PROCUREMENT DOCUMENTS.

MIL-HDBK-1006/2

CRITERIA POLICY AND PROCEDURES MANUALS

<u>Criteria Manual</u>	<u>Title</u>	<u>PA</u>
MIL-HDBK-1006/1	Policy and Procedures for Project Drawing and Specification Preparation	CHESDIV
MIL-HDBK-1006/2	Policy and Procedures for Guide Specification Preparation	CHESDIV
MIL-HDBK-1006/3	Policy and Procedures for Engineering and Design Criteria Manual Preparation	HDQTRS
MIL-HDBK-1006/4	Policy and Procedures for Definitive and Standard Design and Standard Specification Preparation	CHESDIV

## MIL-HDBK-1006/2

POLICY AND PROCEDURES FOR  
GUIDE SPECIFICATION PREPARATION

## CONTENTS

	<u>Page</u>
Section 1	INTRODUCTION TO NAVFACENGGCOM CRITERIA PROGRAM ..... 1
1.1	Purpose ..... 1
1.2	NAVFACENGGCOM Criteria Program ..... 1
1.2.1	Criteria Sources ..... 2
1.3	NAVFACENGGCOM Guide Specifications (NFGS) ..... 2
1.4	Cancellation ..... 2
Section 2	MANAGING THE NAVFACENGGCOM GUIDE SPECIFICATION ..... 3
	PROGRAM ..... 3
2.1	Central Management ..... 3
2.2	Assignments ..... 3
2.3	EFD Management ..... 3
2.4	Engineering Criteria Management System (ECMS) ..... 3
2.5	Criteria Author ..... 3
Section 3	NAVFACENGGCOM GUIDE SPECIFICATION REVISION
	PROCESS ..... 4
3.1	SPECSINTACT ..... 4
3.2	Revision Streamlining ..... 4
3.2.1	Guide Specification Review Procedures ..... 4
3.3	Criteria Sharing ..... 9
3.3.1	Construction Criteria Base (CCB) ..... 9
3.3.2	Visual Search Microfilm File (VSMF®) ..... 9
3.4	Guide Specification Review Policy ..... 9
3.5	Government Review Distribution ..... 9
3.6	Industry Review ..... 10
3.7	Review Comments ..... 10
3.7.1	Reviewer Requirements ..... 10
3.8	Resolution of Comments ..... 10
3.8.1	Responsibility for Resolution of Comments ..... 10
3.9	Criteria Board of Senior Engineers and Architects (CBSEA) ..... 11
3.9.1	CBSEA Resolution ..... 11
3.9.2	Submittal of Unresolved Comments to NAVFACENGGCOM Code DS02 ..... 11
3.10	Acknowledgment of Comments ..... 11
3.11	Submittals ..... 11
3.12	Establishing and Retaining a Permanent Record ..... 12
3.13	Amending a Guide Specification ..... 12
3.13.1	Policy ..... 12
3.13.2	Format ..... 12
3.13.3	Procedures ..... 13
3.14	Retiring a Guide Specification ..... 13
3.15	Canceling a Guide Specification ..... 13
3.15.1	Cancellation Requirements ..... 13

## MIL-HDBK-1006/2

		<u>Page</u>
Section 4	CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI)	
	THREE-PART FORMAT .....	14
4.1	CSI 16-Division System .....	14
4.2	Advantage of the 16-Division System .....	14
4.3	Section Format and Attributes .....	14
4.4	Section Function .....	15
4.5	Section Titles .....	15
4.6	Numbers, Titles, and Function of Section Parts .....	15
4.7	Article and Paragraph Titles Included in Each Part of a Specification .....	16
4.8	Articles Included in PART 1 GENERAL .....	16
4.9	Articles Included in PART 2 PRODUCTS .....	17
4.9.1	Equipment .....	18
4.9.2	Source Quality Control .....	18
4.9.3	References to Other Sections .....	18
4.10	Articles Included in PART 3 EXECUTION .....	18
4.10.1	Field Quality Control .....	19
Section 5	DETAILED SECTION CONTENT .....	20
5.1	Format of a NAVFACENGCOM Guide Specification .....	20
5.1.1	Assignment of Section Numbers and Titles .....	20
5.1.2	Numbering of Sections .....	20
5.1.3	Exceptions to the CSI Three-Part Sectional Format .....	20
5.2	Guide Specification Identification .....	20
5.2.1	Banner .....	20
5.2.2	Header .....	21
5.3	Part and Subpart Titles .....	21
5.4	Text .....	21
5.5	Part 1 GENERAL .....	21
5.5.1	Summary .....	22
5.5.2	References .....	22
5.5.2.1	Order of Listing of Reference Publications .....	22
5.5.2.2	Use of Reference Publications .....	22
5.5.2.3	Options in Reference Publications .....	23
5.5.2.4	Titles of Reference Publications .....	23
5.5.2.5	Current Reference Publications .....	23
5.5.2.6	Revisions or Amendments to Reference Documents .....	24
5.5.2.7	Reference Document Designations in the Text of the Guide Specification .....	24
5.5.3	Definitions .....	24
5.5.4	System Description .....	24
5.5.5	Submittals .....	24
5.5.5.1	Automatic Extraction of Submittals List .....	24
5.5.5.2	Approval of Submittals .....	24
5.5.5.3	Government Approval of Submittals .....	24
5.5.5.4	Types of Submittals .....	25
5.5.5.5	Shop Drawings .....	25
5.5.5.6	Product Data .....	25
5.5.5.7	Samples .....	25
5.5.5.8	Administrative and Closeout Submittal .....	25
5.5.5.9	Testing Requirements .....	25
5.5.5.10	Factory Test Reports .....	25



## MIL-HDBK-1006/2

	<u>Page</u>	
5.5.5.11	Test Reports .....	25
5.5.5.12	Field Test Reports .....	26
5.5.5.13	Certificates of Compliance .....	26
5.5.5.14	Sample Panels or Sample Installations .....	26
5.5.5.15	Operation and Maintenance (O & M) Manuals .....	26
5.5.6	Quality Assurance .....	26
5.5.6.1	Experience Clauses .....	27
5.5.6.2	Experience or Qualification of Manufacturers and Construction Personnel .....	27
5.5.7	Delivery, Storage, and Handling .....	27
5.5.8	Project Conditions .....	28
5.5.9	Sequencing and Scheduling .....	28
5.5.10	Warranty Clauses .....	28
5.5.11	NAVFACENGCOM Design Criteria in a Guide Specification ..	28
5.5.12	Extra Materials .....	28
5.6	Part 2 PRODUCTS .....	28
5.6.1	Materials/Equipment .....	29
5.6.2	Proprietary Specifications .....	29
5.6.3	"Or Equal" Specifications .....	30
5.6.4	Trade Names .....	30
5.6.5	Government-Furnished Material .....	30
5.6.6	Methods of Specifying Materials and Equipment .....	31
5.6.7	Equipment .....	31
5.6.8	Mixes .....	31
5.6.9	Fabrication and Manufacture .....	31
5.7	Part 3 Execution .....	31
5.7.1	Inspection .....	31
5.7.2	Preparation .....	32
5.7.3	Installation, Application, and Erection .....	32
5.7.4	Field Quality Control .....	32
5.7.4.1	Tests .....	32
5.7.5	Adjustment .....	32
5.7.6	Demonstration .....	32
5.7.7	Cleaning .....	33
5.7.8	Protection .....	33
5.7.9	Schedules .....	33
5.8	Criteria Notes .....	33
5.8.1	General Notes .....	33
Section 6	SPECSINTACT AND GUIDE SPECIFICATIONS .....	34
6.1	SPECSINTACT .....	34
6.2	Criteria Notes .....	34
6.2.1	Standard Criteria Notes .....	34
6.2.2	Location of Criteria Notes .....	34
6.2.3	Criteria Notes for Articles or Paragraphs Requiring Selections .....	35
6.3	Simplified Writing .....	35
6.4	Use of Tokens .....	35
6.5	Use of Volkswriter Macro Commands .....	35
6.6	Related Requirements as Modified Herein .....	36
6.7	Definitions .....	36
6.8	System Description .....	36

## MIL-HDBK-1006/2

	<u>Page</u>	
6.8	System Description .....	36
6.9	Submittals .....	36
6.9.1	Definition and Use .....	36
6.9.2	Section 01300 .....	36
6.9.3	Submittal Groupings Used by NAVFAC .....	37
6.9.3.1	Shop Drawings .....	37
6.9.3.2	Product Data .....	37
6.9.3.3	Samples .....	37
6.9.3.4	Administrative and Closeout .....	37
6.9.4	Authorized Submittal Descriptions .....	37
6.9.4.1	Shop Drawings Submittal Descriptions .....	37
6.9.4.2	Product Data Submittal Descriptions .....	37
6.9.4.3	Samples Submittal Descriptions .....	37
6.9.4.4	Administrative and Closeout Submittal Descriptions .....	38
6.9.5	Submittal Policy Related to Individual NFGS's .....	38
6.9.5.1	Format Description .....	38
6.9.5.2	Guidelines .....	38
6.10	Part Numbering .....	38
6.11	Alternative Paragraphs .....	39
6.12	References .....	39
6.13	Quality Assurance .....	40
6.14	Delivery, Storage, and Handling .....	40
6.15	Maintenance .....	40
Section 7	PRINCIPLES OF SPECIFICATION WRITING .....	41
7.1	Role of Specifications .....	41
7.1.1	Relationship Between Specifications and Drawings .....	41
7.1.2	Precedence of Specifications .....	41
7.1.3	Coordination of Drawings and Specifications .....	41
7.1.4	Terminology Used in Drawings and Specifications .....	42
7.1.5	Cross-Reference to Drawings .....	42
7.1.6	Comprehension Level .....	42
7.1.7	Language .....	42
7.1.7.1	Imperative Mood .....	42
7.1.7.2	Articles .....	43
7.1.7.3	Subject/Verb Agreement .....	43
7.1.7.4	Strong Verbs .....	43
7.1.7.5	Parallel Construction .....	43
7.1.7.6	Prepositional Phrases .....	43
7.1.7.7	Repetition .....	43
7.1.7.8	Listing Multiple Requirements .....	43
7.1.7.9	Pronouns .....	44
7.1.8	Phraseology .....	44
7.1.8.1	Contract Clause and Division 1 Requirments .....	44
7.1.8.2	Open-Ended Requirments .....	45
7.1.8.3	Indeterminate Words and Phrases .....	45
7.1.8.4	Limitation .....	46
7.1.9	Vocabulary .....	46
7.1.9.1	Misused Words .....	46
7.1.9.2	Compound Words .....	47
7.1.9.3	Naval Jargon .....	47
7.1.10	Word Streamlining .....	47

## MIL-HDBK-1006/2

	<u>Page</u>
7.1.11 Capitalization, Spelling, Compound Words, Punctuation, Abbreviations, and Numerals .....	47
7.1.11.1 Commonly Confused Spellings .....	48
7.1.11.2 Hyphenated Compounds .....	48
7.1.12 Underlining and Capitalizing for Emphasis .....	48
7.1.13 Capitalization of Certain Terms .....	48
7.1.14 Footnotes .....	48
7.1.15 Exponents, Subscripts, and Superscripts .....	48
7.1.16 Numbers .....	48
7.1.17 Decimals and Fractions .....	48
7.1.18 Symbols, Abbreviations, and Acronyms .....	48
7.1.18.1 Symbols .....	49
7.1.18.2 Abbreviations .....	49
7.1.18.3 Acronyms .....	49
7.1.19 Priority of References .....	49
7.1.20 Magnetic Media Requirement for Graphics .....	49
7.1.20.1 Sketches .....	49
7.1.21.2 Figures .....	49
7.1.21 Forms .....	50
7.1.22 Numbered Text Headings .....	50
7.1.23 Referencing Military Handbooks .....	50
7.1.24 Insertions, Choices, and Options .....	50
7.1.24.1 Insertions .....	50
7.1.24.2 Choices .....	50
7.1.24.3 Options .....	50
7.1.25 Performance Requirements .....	51
7.1.26 Experience Clauses .....	51
7.1.27 Warranty Clauses .....	51
7.1.28 Safety and Health Requirements .....	51
7.1.29 Contractual Issues .....	51
7.1.29.1 Parties to the Contract .....	51
7.1.29.2 Conflicts With the Contract Clauses .....	52
7.1.29.3 Contractor Direction .....	52
7.1.30 Cross-Referencing to Other Sections .....	52
7.1.31 Cross-Referencing to Articles and Paragraphs .....	52

## APPENDICES

APPENDIX A	SAMPLE GUIDE SPECIFICATION .....	53
APPENDIX B	SPECSINSTACT COMPUTER OPERATIONS GUIDE .....	71
APPENDIX C	SAMPLES OF STANDARD LETTERS .....	95
APPENDIX D	PROPOSED SCHEDULE OF AN NFGS .....	107
APPENDIX E	NAVFAC FORM 11012/9 (5-86), "ENGINEERING AND DESIGN CRITERIA REVIEW" .....	109
APPENDIX F	EDITING NFGS PREPARED IN SPECSINTACT: CHECKLIST FOR EDITOR .....	111
APPENDIX G	CHECKLIST FOR OPERATOR PREPARING NFGS IN SPECSINTACT ...	125
APPENDIX H	RETIREMENT NOTICE .....	127
APPENDIX I	CANCELLATION NOTICE .....	129
APPENDIX J	EXAMPLE OF THE SUBMITTAL ARTICLE FOR A SECTION .....	131
REFERENCES	.....	135

## MIL-HDBK-1006/2

## Section 1: INTRODUCTION TO NAVFACENCOM CRITERIA PROGRAM

1.1 Purpose. The purpose of this military handbook is to explain the policies and procedures of the Naval Facilities Engineering Command (NAVFACENCOM) Guide Specification (NFGS) Program and to give guidance to specification writers for preparing NAVFACENCOM guide specifications.

1.2 NAVFACENCOM Criteria Program. NAVFACENCOM is the designated design agency for the construction of all Navy and Marine Corps shore facilities and is also responsible for the same functions for selected Air Force facilities. In order to carry out this mission, a body of engineering and design criteria for design and construction has been developed to govern the scope and quality of construction. The total criteria library includes four broad categories:

a) Definitive Drawings: Drawings which depict a generalized design for a facility type which delineate the functional requirements, utility needs, and generalized space relationships for a particular facility type. These drawings are used by architects and engineers as guidelines when developing a specific construction project.

b) Standard Drawings and Specifications: Complete working drawings and specifications for certain facility types. These drawings are incorporated into the working drawings and specifications for the specific construction project and are supplemented by site-specific drawings to form the complete construction contract documents.

c) Design Manuals and Military Handbooks: These documents fall into two categories:

(1) Specific design programming information for a facility type which guide the designer in the preparation of a construction project. Information is given on space requirements, spatial and functional relationships, mechanical and electrical requirements, and other facility-specific information which needs to be considered in the design project.

(2) Generalized design guidance for a specific design discipline. These include architectural, structural, civil, electrical, and mechanical design principles.

d) Guide Specifications: Manuscript specifications which are prepared for editing and incorporation into the contract documents of a specific construction project. A guide specification describes products and materials and the work necessary to incorporate them into a construction project. A guide specification facilitates the preparation of project specifications by standardizing products and processes and their order of presentation, allowing easy editing to adapt the guide specification to specific project requirements. A guide specification describes in detail:

- (1) The product or system to be provided;
- (2) The salient features of the product or system;

MIL-HDBK-1006/2

- (3) The quality of that product or system;
- (4) The methods used to verify the quality;
- (5) The method to be used to incorporate the product or system into the project;
- (6) The onsite quality control, i.e., testing and inspection;  
and
- (7) Other features necessary to satisfy project requirements.

1.2.1 Criteria Sources. A list of NAVFACENGCOM criteria, including guide specifications, is contained in Military Bulletin 34 (MIL-BUL-34), Engineering and Design Criteria for Navy Facilities. For a listing of definitive drawings, refer to NAVFAC P-272, Definitive Designs for Naval Shore Facilities. MIL-BUL-35, Matrix of Guide Specifications for Facilities Construction - Federal and Private, provides a cross-reference to guide specifications prepared by Department of Defense (DOD) agencies, other Government construction agencies, and privately produced guide specifications.

1.3 NAVFACENGCOM Guide Specifications (NFGS). NAVFACENGCOM has developed over 300 guide specifications for use in the construction of shore facilities. The goal of the NAVFACENGCOM Guide Specification Program is to have a guide specification library in which no guide specification is over 5 years old and which includes all the specification sections needed for the majority of Navy construction. The NAVFACENGCOM Design Support Office (DSO), Criteria Division, is responsible for maintaining the guide specification library; individual specification sections are assigned to the Engineering Field Divisions (EFD's).

1.4 Cancellation. This military handbook supersedes DM-6.02, Policy and Procedures for Guide Specification Preparation of May 1986.

## MIL-HDBK-1006/2

## Section 2: MANAGING THE NAVFACENGGCOM GUIDE SPECIFICATION PROGRAM

2.1 Central Management. The Criteria Division (Code DS02) of the Design Support Office, which reports to the Assistant Commander for Engineering and Design of NAVFACENGGCOM, has the responsibility for the management of the guide specification library. Code DS02 provides overall policy and guidance for the program, provides management resources, and coordinates the assignment of individual guide specifications to the EFD's and other NAVFACENGGCOM facilities.

2.2 Assignments. Code DS02 assigns individual guide specifications to the EFDs and other components of NAVFACENGGCOM. These assignments generally reflect the expertise of the EFD or component on the specific design discipline covered by the guide specification. The EFD or component is known as the preparing activity (PA) and has responsibility for the maintenance of the guide specification, providing direction on using the guide specification, correction of errors or problems in the guide specification, and ensuring that the guide specification reflects the current state of the art of the construction materials and methods used in the guide specification.

2.3 EFD Management. At the EFD or component level, a criteria coordinator/manager is responsible for the management of the total number of guide specifications assigned to the EFD. The criteria coordinator/manager is the interface between Code DS02 and the guide specification author and is responsible for the assignment of a specific specification to a knowledgeable author within the preparing activity. The criteria coordinator/manager monitors the progress of the preparation of the guide specification and reports progress to Code DS02 using the Engineering Criteria Management System (ECMS) database.

2.4 Engineering Criteria Management System (ECMS). The ECMS is a computer database which contains information on all the criteria managed by Code DS02. It is maintained by the Civil Engineering Support Office (CESO) on a Facilities Support Office (FAGSO) mainframe computer at Port Hueneme, CA and is accessed by terminals throughout NAVFACENGGCOM. The database contains information on funding and scheduling of each guide specification.

2.5 Criteria Author. The criteria author, referred to as the architect-in-charge/engineer-in-charge (AIC/EIC), to which a guide specification is assigned is responsible for the technical adequacy of the guide specification, meeting the assigned schedule, and maintaining the guide specification throughout its lifetime.

## MIL-HDBK-1006/2

## Section 3: NAVFACENGCOC GUIDE SPECIFICATION REVISION PROCESS

3.1 SPECSINTACT. NAVFACENGCOC has adopted a specifications processing system called "SPECSINTACT," an acronym for "Specifications-Kept-Intact." SPECSINTACT is included as part of the Construction Criteria Base (CCB). Guide specifications shall be revised and prepared utilizing SPECSINTACT. Appendix A contains an example of a guide specification prepared utilizing SPECSINTACT; the procedures for utilizing SPECSINTACT are explained in Appendix B.

3.2 Revision Streamlining. In order to conserve resources and to take advantage of the ability to rapidly change the CCB database, NAVFACENGCOC has adopted a policy which simplifies the procedures used in routinely updating guide specifications.

3.2.1 Guide Specification Review Procedures. Some guide specifications will not have been completely updated within the four year timeframe. Each January the PA's shall review NFGS's that will become 4 years old within the fiscal year. Based on these reviews, the PA shall select one of five courses of action:

- a) Revalidate the guide specification, making only updates to references and incorporate SPECSINTACT format changes. No technical changes are contemplated.
- b) Recommend minor technical changes and note proposed changes.
- c) Recommend major technical changes and note proposed changes.
- d) Recommend use of other agency criteria which more completely or accurately cover the subject reformat, with an adoption statement.
- e) Recommend retirement or cancellation of the guide specification due to lack of use or obsolescence because of new materials or methods.

The PA shall send the "Request for Concurrence With Proposed Action" (Appendix C, Letter No. 1) to other EFD's, NAVFACENGCOC Code DS02, and possibly other Navy components. NAVFACENGCOC Code DS02 may request that additional addressees be included. If appropriate, solicit comments from industry, as well, using Letter No. 2, Appendix C. The Visual Search Microfilm File (VSMF<sup>®</sup>) Information Handling Service, and others, provide an extensive source of potential industry reviewers. The PA shall collect responses (via telephone for late responses, if necessary) and collate the results. If the majority of responses concur with the proposed action, the PA shall send a "Notice of Proposed Action," along with copies of the annotated "Request for Concurrence With Proposed Action" to NAVFACENGCOC Code DS02 for each assigned guide specification. Include a copy of the proposed schedule to NAVFACENGCOC Code DS02 for approval and inclusion in the next fiscal year (FY) criteria workload using the schedule form (Appendix D).

The following schedules indicate recommended time periods for the possible criteria actions.



## MIL-HDBK-1006/2

## SCHEDULE FOR REVALIDATION OF AN NFGS OR ADOPTION OF SHARED GUIDE SPECIFICATIONS

<u>PHASE</u>	<u>LENGTH</u>	<u>ECMS ENTRY</u>
(A) START	_____	890101
(B) FIRST DRAFT	_____	890101
(C) REVIEW AND COMMENT	_____	890101
(D) RESOLUTION	30 days	890101
(E) FINAL DRAFT		890201
(F) SUBMIT TO DS02		890301
(G) APPROVAL		890401

---

TOTAL TIME 90 days

Revalidation and adoption require only minor formatting and reference changes.

Note that where a phase is not applicable, the preceding date is repeated to conform to ECMS database requirements.



## MIL-HDBK-1006/2

## SCHEDULE FOR MINOR REVISION OF AN NFGS

<u>PHASE</u>	<u>LENGTH</u>	<u>ECMS ENTRY</u>
(A) START	30 days	890101
(B) FIRST DRAFT	_____	890201
(C) REVIEW AND COMMENT	_____	890201
(D) RESOLUTION		890201
(E) FINAL DRAFT	30 days	890301
(F) SUBMIT TO DS02	30 days	890401
(G) APPROVAL	30 days	890501

---

TOTAL TIME 120 days

Minor technical changes will require format changes and reference updates as well as editing the technical text. If a formal review process is desired, use the schedule for a major revision.

Note that where a phase is not applicable, the preceding date is repeated to conform to ECMS database requirements.

## MIL-HDBK-1006/2

## SCHEDULE FOR CREATION OR A MAJOR REVISION OF AN NFGS

<u>PHASE</u>	<u>LENGTH</u>	<u>ECMS ENTRY</u>
(A) START	60 days	890101
(B) FIRST DRAFT	60 days	890301
(C) REVIEW AND COMMENT	30 days	890501
(D) RESOLUTION	30 days	890601
(E) FINAL DRAFT	30 days	890701
(F) SUBMIT TO DS02	30 days	890801
(G) APPROVAL		890901

---

TOTAL TIME 240 days

A creation or a major revision requires a period for review and resolution of comments.

MIL-HDBK-1006/2

## SCHEDULE FOR CANCELLATION OR RETIREMENT OF AN NFGS

<u>PHASE</u>	<u>LENGTH</u>	<u>ECMS ENTRY</u>
(A) START		890101
(B) FIRST DRAFT	_____	890101
(C) REVIEW AND COMMENT	_____	890101
(D) RESOLUTION	_____	890101
(E) FINAL DRAFT	_____	890101
(F) SUBMIT TO DS02	30 days	890201
(G) APPROVAL	30 days	890301
<hr/>		
TOTAL TIME	60 days	

A retirement or cancellation requires only the preparation of the required form and a letter of transmittal to NAVFACENGCOD Code DS02.

Note that where a phase is not applicable, the preceding date is repeated to conform to ECMS database requirements.

MIL-HDBK-1006/2

3.3 Criteria Sharing. Before proposing a major revision on a specific subject, conduct research to discover if more current and usable criteria are available from other Government construction agencies such as National Aeronautics and Space Administration (NASA) or the Army Corps of Engineers. If usable criteria are found, consider adopting the agency's document. If the document is to be formally a Shared Criterion, consult with NAVFAC DS02 and prepare the common version. The shared document is identified with the text shown below:

CRITERIA SHARING PROGRAM  
 Originated by [COE]  
 [CEGS-\_\_\_\_\_] ([Month] 19[\_\_\_\_])  
 (Change No. [\_\_\_\_] ([Mon] 19[\_\_\_\_]))

Three valuable tools for researching existing criteria are the CCB, the VSMF<sup>®</sup> systems, and MIL-BUL-35.

3.3.1 Construction Criteria Base (CCB). The CCB is a fully indexed package of Federal construction agency criteria libraries, including guide specifications, stored on Compact Disk Read-Only Memory (CD-ROM). The CD-ROM is computer readable and can store up to the equivalent of 250,000 pages of data (or 1,500 floppy diskettes). Data are stored in American Standard Code for Information Interchange (ASCII) code. The CCB currently contains the text of NAVFACENGCOM, the Army Corps of Engineers, NASA, and other agency guide specifications, as well as other criteria. Eventually the CCB will contain all Federal construction criteria and, possibly, non-Government voluntary standards and other construction industry data bases.

3.3.2 Visual Search Microfilm File (VSMF<sup>®</sup>). The VSMF<sup>®</sup> provides an extensive source of industry standards.

3.4 Guide Specification Review Policy. Review of a guide specification by Navy and industry is required only on newly created guide specifications or existing guide specifications with highly controversial changes or where differences of opinion are expected and input is desired. On other revisions and updates, review decisions shall be made by the preparing activity on a case-by-case basis.

The AIC/EIC shall provide a copy of the guide specification, along with NAVFAC Form 11012/9 (5-86), Engineering and Design Criteria Review, (Appendix E) to the criteria coordinator/manager for distribution to prospective reviewers. The AIC/EIC shall specify the time limit for responses by reviewers. The minimum time period shall be 60 calendar days. Reviewers shall submit comments on or before the date stipulated in the forwarding letter.

Review comments shall be addressed to the criteria coordinator/manager of the PA. The AIC/EIC may grant extensions if a longer time interval is requested by the reviewer. Guide specifications shall be reviewed for technical adequacy and adherence to policy.

3.5 Government Review Distribution. Use the standard distribution list included in forwarding Letter No. 3, Appendix C, with additional addressees as may be appropriate to the subject matter.

## MIL-HDBK-1006/2

3.6 Industry Review. The purpose of industry review is to obtain additional technical guidance and to ensure that, when completed, a guide specification is fully usable. Industry sources who are requested to review and comment should be compiled from a broad spectrum of the affected industry. The Information Handling Services' VSMF<sup>®</sup> service provides an extensive source of potential industry reviewers. When mailing a copy of a draft guide specification to industry, use forwarding Letter No. 4, Appendix C.

3.7 Review Comments. Reviewers shall adhere to the following guidelines on review comments:

- a) Comments shall be made on NAVFAC Form 11012/9 (5-86). Fill out the form completely.
- b) Define the problem and give specific recommendations for a solution. General, vague criticisms are unacceptable.
- c) Typed comments are preferred. If comments are not typed, they shall be lettered with a quality meeting drafting standards.
- d) When a rewrite is proposed, the comment shall be the proposed rewrite with a reasonably detailed reason for the comment.
- e) Plates, figures, and artwork included in the guide specification may be marked up to reflect comments.
- f) Response to a request for review shall be timely.

Comments received after the closing date may be incorporated or may be retained for consideration in a subsequent amendment or revision, at the discretion of the AIC/EIC.

3.7.1 Reviewer Requirements. Comments shall address technical requirements or provisions which must be adopted or reconciled if the guide specification is to be of use to the reviewing activity. Comments shall be justified, otherwise they may not be adopted. Comments shall be resolved to the satisfaction of both the AIC/EIC and the reviewer. If this cannot be accomplished, the procedures stated in paras 3.9 and 3.10 shall be followed.

3.8 Resolution of Comments. The AIC/EIC shall review the comments on the guide specification and shall make a decision on a course of action or a solution consistent with the results of consultation with the reviewer, technical requirements, and NAVFACENGCOM policy.

3.8.1 Responsibility for Resolution of Comments. The AIC/EIC to which the guide specification has been assigned is responsible for the technical adequacy of the guide specification. In this context, the AIC/EIC shall resolve all comments submitted as a result of the coordination process. The AIC/EIC shall consult with reviewers and have their assurances that comments have been resolved satisfactorily. Telephone contact between the AIC/EIC and reviewers to resolve comments is encouraged; costly conferences or extensive correspondence for resolution of differences are to be avoided. If the comments are voluminous, a unification meeting may be called to avoid recoordination.

## MIL-HDBK-1006/2

3.9 Criteria Board of Senior Engineers and Architects (CBSEA). Each PA Director of Design (Code 04) shall establish a Criteria Board of Senior Engineers and Architects (CBSEA). The charter of the CBSEA shall be to review the files, interview the parties involved in an unresolved comment, and reach a decision on the disposition of the comment, based on evidence and professional judgment.

3.9.1 CBSEA Resolution. If the AIC/EIC is unable to resolve a comment within a reasonable length of time, observe the following procedure:

a) Submit the files on the unresolved comment to the CBSEA. The CBSEA shall attempt to resolve the unresolved comment. If unsuccessful, the matter shall be referred to the PA Code 04.

b) The PA Code 04 shall personally review the unresolved comment and mediate between the AIC/EIC and the reviewer.

3.9.2 Submittal of Unresolved Comments to NAVFACENGCOM Code DS02. If, after having exhausted all other means to resolve a comment, the AIC/EIC is still unable to reach an agreement with the reviewer, the AIC/EIC shall forward the issue in contention, along with the PA's recommended action, to NAVFACENGCOM Code DS02 for a decision. The entire file on the guide specification shall accompany the transmission. Use forwarding Letter No. 8, Appendix C.

NAVFACENGCOM Code DS02 will make a final decision on the disposition of unresolved comments. If changes to the guide specification required by NAVFACENGCOM Code DS02 are minor, final revisions to the guide specification will be made by NAVFACENGCOM Code DS02. NAVFACENGCOM Code DS02 has the option of returning the entire guide specification file to the PA for incorporating the final resolution decisions prior to returning the guide specification to NAVFACENGCOM Code DS02 for approval.

3.10 Acknowledgment of Comments. As part of the process of completing the preparation of a guide specification, the AIC/EIC shall return a copy of NAVFAC Form 11012/9 (5-86) to the criteria coordinators/managers of the reviewing activities who provided comments, annotated to show the disposition of their comments. Use forwarding Letter No. 5, Appendix C. In addition, the AIC/EIC shall respond to those industry reviewers who provided comments, explaining the disposition of their comments. Use forwarding Letter No. 6, Appendix C. If a reviewer's comment has not been incorporated, an explanation shall be included explaining why the comment was not accepted.

3.11 Submittals. Submit the following to DS02.

- a) Diskette
- b) Hard copy with notes and tokens and a title sheet, signed.
- c) A completed Guide Specification Technical Review Checklist (Appendix F).
- d) A completed Guide Specification Editorial Review Checklist (Appendix G).

MIL-HDBK-1006/2

e) A completed NAVFAC 5720/6, Publications Security Review and Clearance form.

3.12 Establishing and Retaining a Permanent Record. The criteria coordinator/manager within the PA shall establish a permanent record of all actions affecting each assigned guide specification. These records are required to comply with the regulations in SECNAVINST P5212.5B, Disposal of Navy and Marine Corps Records, to resolve future problems and to be able to verify actions taken on inquiries related to the guide specification. A hard copy and floppy disk of the approved guide specification and all subsequent amendments shall be retained in the file. Supporting records accumulated in the creation or revision of a guide specification shall be retained until the completion of the third revision of the guide specification.

### 3.13 Amending a Guide Specification

3.13.1 Policy. Guide specifications shall be kept current. The use of CCB allows amendments to be made as necessary to maintain the technical adequacy of a guide specification. The use of CCB facilitates the amending of a guide specification, allowing amendments to be incorporated within 3 months. Amendments shall be substantive; updating the list of references within a guide specification alone is insufficient reason for an amendment unless the reference(s) affect the technical adequacy of the guide specification. The AIC/EIC shall determine if the modification of a guide specification is sufficient to warrant a review, and if the resulting changes are sufficient to result in a newly dated NFGS or an amendment. If so, the guide specification shall be revised, regardless of the date of the previous revision.

NAVFAC DSO2 may determine to initiate an amendment of an NFGS as a part of a global change or isolated impact from a source other than the technical material. Amendments so initiated will be coordinated with the AIC/EIC.

3.13.2 Format. Amendments will have the following changes, which are partially illustrated in Appendix A.

a) The text shall be revised as appropriate.

b) A note shall be added immediately following the "drawing coordination" note. The note will list the changes created by the amendment. This note may be supplemented by notes placed at the changes, reading as follows: "Note: The text below has been changed by Am-[\_\_\_\_\_] of [ date ]". A reason for the change may be added if it is useful.

c) All revisions of the text will be marked with the SPECSINTACT token \& at the beginning of the change and &\ at the end. Mark deletions with the tokens back-to-back, i.e., \&&\.

d) The date entered under the Section number and title shall be revised to read as the month and year of the amendment.

e) The banner will have a format according to the following example:

NFGS-16510 (30 November 1986)  
Amendment 1 (28 February 1988)

## MIL-HDBK-1006/2

f) A new signed title sheet with revised banner will be included.

3.13.3 Procedures. Enter the text of an amendment into the document as it appears on the CD-ROM. Submit amendments to NAVFAC DS02. Include the entire text on a floppy disk, as revised; the diskette should be labeled to indicate the date and number of the amendment. Include also a printed copy of the amended guide specification and a markup of the previous version showing exactly what the changes have been. Forward the material using Letter No. 10, Appendix C.

3.14 Retiring a Guide Specification. A guide specification shall be retired (placed in inactive status) when it falls into one or more of the following categories:

- a) The guide specification is seldom used over a period of 3 to 5 years.
- b) The guide specification is not state-of-the-art.
- c) Other materials or methods have obviated the need for the specification.
- d) The guide specification's use, although rare, precludes cancellation.

A guide specification shall be retired by the PA with the concurrence of NAVFACENGC0M Code DS02. Use Letter No. 7, Appendix C and the appropriate form (Appendix H) to retire a guide specification.

3.15 Canceling a Guide Specification. To cancel a guide specification is to delete the guide specification from the NAVFACENGC0M guide specification inventory.

3.15.1 Cancellation Requirements. A guide specification shall be canceled by the PA if it falls into one or more of the following categories:

- a) It has not been used for 3 to 5 years or during the first year of retirement.
- b) There is no anticipated need for it in the foreseeable future.
- c) It is technically obsolete.

A guide specification shall be canceled by the PA with the concurrence of NAVFACENGC0M Code DS02. Use Letter No. 7, Appendix C and the appropriate form (Appendix I) to cancel a guide specification.



## MIL-HDBK-1006/2

## Section 4: CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI) THREE-PART FORMAT

4.1 CSI 16-Division System. The CSI 16-division system consists of the following:

DIVISION 0 - Currently Not Used  
 DIVISION 1 - General Requirements  
 DIVISION 2 - Site Work  
 DIVISION 3 - Concrete  
 DIVISION 4 - Masonry  
 DIVISION 5 - Metals  
 DIVISION 6 - Wood and Plastics  
 DIVISION 7 - Thermal and Moisture Protection  
 DIVISION 8 - Doors and Windows  
 DIVISION 9 - Finishes  
 DIVISION 10 - Specialties  
 DIVISION 11 - Equipment  
 DIVISION 12 - Furnishings  
 DIVISION 13 - Special Construction  
 DIVISION 14 - Conveying Systems  
 DIVISION 15 - Mechanical  
 DIVISION 16 - Electrical

4.2 Advantage of the 16-Division System. The 16-division system provides an arrangement of architectural and engineering specification sections that, when applied, will produce a project specification which is consistent in appearance, organization, and completeness from one project to another.

The system facilitates writing sections in Divisions 2 through 16; however, its principles are applied to sections in Division 1, "General Paragraphs," as well.

4.3 Section Format and Attributes. Each section is placed within one of 16 divisions and is given a 5-digit number. NAVFAC policy is to utilize section numbers and titles as listed in the CSI document MP 2-1, Masterformat. NAVFAC also adheres to the CSI three-part format as outlined in the CSI document MP 2-2, Section Format. Attributes of the CSI 16-division and three-part format are as follows:

a) Provides a format having industry-wide application which consequently produces a project specification where all sections are consistent as to the location of types of information;

b) Facilitates locating specific information through consistent location of information;

c) Provides coordination of documentation within a project specification;

d) Defines a uniform framework for the three parts of each specification section; and

## MIL-HDBK-1006/2

e) Reduces the chance for omission or duplication of items by the use of consistent and repetitive procedures

f) Has been adopted by the construction industry as "the standard" for the United States and Canada.

4.4 Section Function. The section provides for recognition of a basic unit of work. A section must answer three fundamental questions:

a) What interrelationships have existed, do exist, or will exist between the unit of work, other work in the project, or with any portion of the project?

b) What is the product(s) involved in the unit of work?

c) How is the product(s) incorporated into the work?

4.5 Section Titles. For each division listed in CSI MP-2-1, a number of related broadscope, mediumslope, and narrowscope section titles are shown.

a) Broadscope section: A broadscope section specifies an all-inclusive unit of work, e.g., Section 16400, Service and Distribution.

b) Mediumscope section: A mediumscope section divides a broadscope section into two or more sections. For example, Section 16400, Service and Distribution, may be divided into mediumscope sections as follows:

(1) 16410 Power Factor Correction

(2) 16430 Metering

(3) 16440 Disconnect Switches

(4) 16450 Secondary Grounding

(5) 16470 Panelboards

(6) 16490 Switches.

c) Narrowscope section: A narrowscope section further divides the work into more narrow and specific units of work. For example, Section 16470, Panelboards, may be further divided as follows:

(1) 16472 Branch Circuit Panelboards

(2) 16474 Distribution Panelboards.

4.6 Numbers, Titles, and Function of Section Parts. Ultimately, a section is a subdivision of the complete project specification. A section describes a unit of work and consists of a carefully worded description of materials, equipment, and their installation in the form of instructions to a contractor. Numbers and titles are assigned to preserve a constant and logical order and to accommodate variables encountered between projects. A section is divided into three parts. The following paragraphs explain the content and order of the various parts.

## MIL-HDBK-1006/2

4.7 Article and Paragraph Titles Included in Each Part of a Specification. Each of the three parts is grouped into distinct categories of related information. This discipline in organization, combined with a consistent and uniform page format, comprises the organizational structure of a section. Adherence to this structure during the development of specification sections relieves one of the time-consuming task of organizing each individual section as it is being written. Thus, time can be spent more productively on the primary task of improving the text. Appropriate titles shall be selected from those listed under Parts 1 through 3, in the order listed. If a listed title is not required, omit it. Where a title fitting project requirements is not listed, develop an appropriate title and list it in logical sequence within the part.

4.8 Articles Included in Part 1 GENERAL. Part 1 covers general areas of concern which relate to the work and which define the general administrative and technical requirements specific to a particular section. Use the following articles, drawn from the CSI Manual of Practice, to the extent they are applicable. Paragraph designators normally appearing under these articles may become articles when appropriate.

- a) SUMMARY (See paragraph 5.5.1.)
- b) REFERENCES
- c) RELATED REQUIREMENTS (Not from CSI)
- d) DEFINITIONS
- e) SYSTEM DESCRIPTION
  - (1) Design Requirements
  - (2) Performance Requirements
- f) SUBMITTALS (See paragraph 6.9)
- g) QUALITY ASSURANCE
  - (1) Qualifications
  - (2) Regulatory Requirements
  - (3) Mockups
  - (4) Preinstallation Conference
- h) DELIVERY, STORAGE, AND HANDLING
  - (1) Packing and Shipping
  - (2) Acceptance at Site
  - (3) Storage and Protection

## MIL-HDBK-1006/2

- i) SITE CONDITIONS
  - (1) Environmental Requirements
  - (2) Existing Conditions
  - (3) Field Measurements
- j) SEQUENCING AND SCHEDULING
- k) WARRANTY
- l) MAINTENANCE
  - (1) Maintenance Service
  - (2) Extra Materials.

Do not include text under a "Summary" paragraph. This stricture includes use of "Summary," "Section Includes," "Description of Work," "[Title of Section]," "General Requirements," and "General" as an opportunity to list what the section includes or excludes.

4.9 Articles Included in Part 2 PRODUCTS. Part 2 defines, in detail, the acceptable equipment, materials, fixtures, mixes, and fabrications, i.e., "products" to be incorporated into the work. Use the following articles, which are drawn from the CSI Manual of Practice, to the extent they are applicable. Paragraph designators normally appearing under these articles may become articles when appropriate.

- a) MATERIALS
- b) MANUFACTURED UNITS
- c) EQUIPMENT
- d) COMPONENTS
- e) ACCESSORIES
- f) MIXES
- g) FABRICATION
  - (1) Shop Assembly
  - (2) Shop/Factory/Finishing
  - (3) Tolerances
- h) SOURCE QUALITY CONTROL
  - (1) Tests

## MIL-HDBK-1006/2

- (2) Inspection
- (3) Verification of Performance

Use key words (consistent terminology) for all components and materials. If the level of detail requires the phrase "composite plate and angle support bracket," use that term (with its repetitive modifiers) each time a composite plate and angle support bracket is mentioned. Likewise, if the section only requires a discussion of "supports," do not introduce new terms such as "support brackets" or other items.

If Part 2 is not used, insert the following:

"PART 2 PRODUCTS

Not used."

#### 4.9.1 Equipment

a) Include the article "Equipment" for items of equipment which are to be installed in the work.

b) Use of the article entitled "Equipment" for Contractor's equipment utilized to perform the work is discouraged. If unavoidable, such requirements should be specified in an article in Part 1, after the article "Site Conditions."

#### 4.9.2 Source Quality Control

a) Include and title an article "Source Quality Control" when testing and inspection of products are performed at the plant, factory, or shop.

b) Tokens indicating tests or other requirements (\+..+\) shall be inserted before and after factory tests requiring notification or presence of the Contracting Officer but need not be inserted before and after discussion of other factory tests. Tokens should encompass complete, not partial sentences with ending token being placed outside the period. Do not include paragraph titles within tokens.

#### 4.9.3 References to Other Sections

a) Where a product is referenced as being provided in this section but specified in another section it should be included as a separate article or paragraph in an appropriate sequence of the work. For example:

"2.X.X Metal Flashing

Provide integral stainless steel flashing conforming to Section \=07600=\, 'Flashing and Sheet Metal.'"

4.10 Articles Included in PART 3 - EXECUTION. Part 3 describes, in detail, the manner in which items covered by Part 2 are to be incorporated into the work. Use the following articles, which are drawn from the CSI

## MIL-HDBK-1006/2

Manual of Practice, to the extent they are applicable. Paragraph designators normally appearing under these articles may become articles when appropriate.

- a) EXAMINATION
  - (1) Verification of Conditions
- b) PREPARATION
  - (1) Protection
  - (2) Surface Preparation
- c) ERECTION or INSTALLATION or APPLICATION
  - (1) Special Techniques
  - (2) Interface With Other Products
  - (3) Tolerances
- d) FIELD QUALITY CONTROL
  - (1) Tests
  - (2) Inspection
  - (3) Manufacturer's Field Service
- e) ADJUSTING
- f) CLEANING
- g) DEMONSTRATION
- h) PROTECTION
- i) SCHEDULES

The articles "Examination," "Preparation," and "Installation" are separate articles and should be treated as such.

#### 4.10.1 Field Quality Control

- a) Include the article "Field Quality Control" when testing or inspecting work that has been installed and completed.
- b) Tokens indicating tests or other requirements shall be inserted before and after field tests, whether or not specific notification or presence of the Contracting Officer is required.
- c) Include in the article "Field Quality Control" under paragraph "Manufacturer's Field Services," requirements for the training of Government personnel by the manufacturer.

## MIL-HDBK-1006/2

## Section 5: DETAILED SECTION CONTENT

5.1 Format of a NAVFACENGCOCOM Guide Specification. NAVFACENGCOCOM guide specifications shall conform to the CSI 16-division system and three-part sectional format as presented in CSI documents MP-2-1 and MP-2-2, respectively, as modified for NAVFACENGCOCOM use.

5.1.1 Assignment of Section Numbers and Titles. Section numbers and titles for NAVFACENGCOCOM guide specifications are assigned by NAVFACENGCOCOM Code DS02 after consultation with the DOD representative responsible for assigning all section numbers for guide specifications. Do not start a new guide specification or update an existing guide specification until the official section number and title have been assigned or verified by NAVFACENGCOCOM Code DS02. This prevents assignment of more than one title to a section number and more than one section number to the same title. It cannot be assumed that the number and title assigned to an existing guide specification have not changed since the document was created.

5.1.2 Numbering of Sections. A five-digit numbering system is used. Guide specifications are given numbers for subjects likely to be included in a project specification. The first two digits of the section number indicate the particular division, and the last three digits indicate a predesignated unit of work.

5.1.3 Exceptions to the CSI Three-Part Section Format. The following exceptions apply:

a) For those sections providing options for either factory or field fabrication of components and systems, Part 1 would be "General" and Part 2 would combine "Products" and "Execution." Examples of this are metal fabrication and mechanical work such as refrigeration equipment.

b) For those sections not involving work on the site by the Contractor, Part 1 would be "General," Part 2, "Products," and "Part 3 Execution Not Used" would be entered for Part 3. Examples are:

(1) Sections covering materials furnished by the Contractor, but installed by others; or

(2) Materials furnished under one section are installed under another section. In this case, a cross-reference to another section by section title shall be made.

c) For those sections involving labor only, Part 1 would be "General" and Part 3, "Execution." Examples are "Clearing and Grubbing" or "Stripping of Topsoil." Part 2 Products would be listed as "Not Used."

## 5.2 Guide Specification Identification

5.2.1 Banner. Each guide specification is identified by a guide specification number located in the upper right-hand corner of page one by the initials "NFGS" followed by a hyphen and a five-digit number indicating the CSI division and section in which the work is specified. The guide

## MIL-HDBK-1006/2

specification number is followed by the guide specification preparation date (day, month, year), e.g., "NFGS-07110 (30 September 1987)." If the guide specification is a formal update of an existing guide specification, that information, i.e., guide specification number and previous preparation date, is supplied below the word "Superseding." Do not begin preparation of a guide specification until the number and title of the guide specification have been approved by NAVFACENGCOM Code DS02.

5.2.2 Header. The guide specification is further identified by a section number, title, and date (below the banner). The section number is identical to the NFGS number. The title shall be limited to 77 characters. Below the title, place the date of approval (month/year), e.g., "(12/88)," of the guide specification.

Refer to Appendix B, paragraph C.1, "Section Header," for further instructions regarding guide specification identification.

5.3 Part and Subpart Titles. The words "part" and "subpart" are used in SPECSINTACT processing. CSI nomenclature, i.e., "part," "article," and "paragraph," are used in SPECSINTACT notes and other cross-references. Refer to Appendix B, paragraph C.2, "Part and Subpart Titles," for further instructions regarding the use of "part" and "subpart" titles.

5.4 Text. Refer to Appendix B, paragraph C.3, "Section Text," for instructions regarding incorporating textual information into a guide specification.

5.5 Part 1 GENERAL. Part 1 includes procedural and administrative aspects relating to the work specified in the guide specification. Do not repeat the Contract Clauses or Division 1 requirements in Part 1, but address only general subject areas which relate to the guide specification. Prior to preparing the guide specification, review the latest Division 1 guide specifications and the Contract Clauses to avoid repetition or contradiction of requirements. Include the following articles in Part 1, as required:

- a) Summary
- b) References
- c) Related Requirements (Not from CSI)
- d) Definitions
- e) System Description
- f) Submittals
- g) Quality Assurance
- h) Delivery, Storage, and Handling
- i) Site Conditions
- j) Sequencing and Scheduling



## MIL-HDBK-1006/2

k) Warranty

l) Maintenance.

5.5.1 Summary. This article is not used by NAVFACENCOM. However, to facilitate the use of SPECSINTACT, it shall be article 1.1 in each guide specification. Place the following note: "This article is not used by the Naval Facilities Engineering Command, except in specialized cases. Delete this article when editing for project specifications." "Summary" articles are restricted as a matter of policy. This stricture includes use of "Summary," "Section Includes," "Description of Work," "[Title of Section]," "General Requirements," and "General" as an opportunity to list what the section includes or excludes.

5.5.2 References. Article 1.2 shall be entitled "References." To facilitate the use of SPECSINTACT, where there are no references, use the following title: "References (Not Used)." Where references are included, begin the article as follows:

"The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only."

Following this introductory paragraph, list the reference publications included in the guide specification. List each non-Government organization's title. Each referenced publication shall be identified by its alphanumeric designation, date, and title arranged in two columns. The alphanumeric designation shall be shown in the left-hand column; the title shall be shown in the right-hand column preceded by the document date and revision letter and amendment number, where appropriate. Refer to Appendix A for examples; refer to Appendix B, para. C.8, References to Publications and Other Documents, for further instructions regarding reference publications.

5.5.2.1 Order of Listing of Reference Publications. Arrange the list of reference publications in alphabetical order.

For reference publications that have no alphanumeric designation, create an acronym from the title and include it where the alphanumeric designator would normally be located blank, then list the year followed by the title. For example:

Name of organization

Acronym

date, Publication title

5.5.2.2 Use of Reference Publications. Review reference publications for applicability prior to use. Apply the following guidelines:

a) Make those choices and select those options which satisfy the minimum functional requirements of the Government at the least life-cycle cost. To clarify choices and options, insert Criteria Notes in the guide specification where appropriate.

## MIL-HDBK-1006/2

b) Tailor reference publications, where possible, to minimize the number of documents referenced in a guide specification. If only a small portion of a reference applies, extract the pertinent text from the reference publication and include it in the guide specification where appropriate.

c) Use nationally recognized industry and technical society specifications and standards to the maximum extent possible. Where none is available, use Federal and military specifications. When it is necessary to reference an entire publication, follow the reference with notations of applicable specific chapters, sections, paragraphs, or other subdivisions pertinent to the guide specification, where appropriate. Do not repeat the requirements of the reference documents in the text of the guide specification. Select references in the following order of precedence:

- (1) Non-Government standards
- (2) Commercial Item Descriptions (CID)
- (3) Federal specifications
- (4) Military specifications.

d) When nationally recognized industry and technical society specifications and standards or Federal and military specifications do not cover the requirements under consideration, specify materials and equipment that comply with good commercial standards and which are available from commercial sources.

5.5.2.3 Options in Reference Publications. Most reference documents contain a range of possible options, i.e., grades, styles, types, sizes, colors, and other classifications, which must be addressed in the guide specification. Select options in the reference document, where appropriate, and place specific requirements in the guide specification. Where possible, amplify options, e.g., "[Type 1, light duty]" in lieu of "[Type 1]."

5.5.2.4 Titles of Reference Publications. When listing the reference publications, repeat the titles of the reference publications verbatim, including capitalization, punctuation, and numerical designations. However, do not repeat introductory phrases, e.g., "Standard Specification for," "Test Method for," etc., common to reference publications in the listing of titles.

5.5.2.5 Current Reference Publications. Where possible, reference the most recent publication when preparing a guide specification. Research the Information Handling Services' VSMF, the DODISS, or other reliable sources to obtain a current reference publication. The listing of reference publications shall include all the reference publications referred to in the text of the guide specification and vice versa.

Review the current edition of a reference publication to ensure that it is compatible with the requirements of the guide specification. If the current issue of the reference publication is found to be unsatisfactory, seek another reference publication, or extract the required wording from a previous issue of the reference publication, if it has not been canceled.

## MIL-HDBK-1006/2

5.5.2.6 Revisions or Amendments to Reference Documents. Indicate revisions or amendments to reference publications by placing the required notation, e.g., "(Rev. A)," "(Int. Am. 1)," in parentheses in the right-hand column after the date of the reference publication.

5.5.2.7 Reference Document Designations in the Text of the Guide Specification. After the initial listing of references, do not repeat the title and date of the current reference publication in the text of the guide specification. When referred to in the text, Federal specifications shall have "FS" placed before the basic publication identifier, e.g., "FS WW-P-000." Military specifications shall appear as such: "MIL-A-0000." Non-Government publications, e.g., American Society for Testing and Materials (ASTM) and National Electrical Manufacturers Association (NEMA), shall be identified in the text by their publication identifier only, e.g., ASTM A36.

5.5.3 Definitions. If required, define words or terms used in the guide specification that are not commonly known or that could be misinterpreted. Verify definitions.

5.5.4 System Description. This is restricted to statements describing performance or design requirements and tolerances of a complete system. It is not a place to list the components that make up the system. Limit descriptions to composite and operational properties to the extent necessary to link multiple components of a system together and to interface with other systems.

5.5.5 Submittals. A submittal is information submitted for reviews and approval to demonstrate conformance with the design concept and the contract documents or to ensure that an administrative requirement of the project is being met. A submittal contains information describing the attributes of a product, its method of installation, a sample of the product, and other information to verify or prove that the product meets or exceeds the criteria stated in the guide specification. Details and instructions concerning data to be submitted by the Contractor before, during, and after construction which pertain to the work of a particular guide specification shall be included under this heading.

5.5.5.1 Automatic Extraction of Submittals List. The purpose of a submittals list is to provide a checklist of submittals required of the Contractor. The submittals list identifies the items, materials, and equipment, e.g., control panel, vinyl floor tile, pumps, etc., for which a submittal is required and the submittal type, e.g., shop drawings, samples, product data, etc., which is to be provided by the Contractor. The entire submittal list of each submittal type contained between asterisk tokens is extracted. Text clarifying submittal requirements, if included, follows the list but is not contained within tokens. Submittal paragraphs are to be developed in a specified format to facilitate the automatic preparation of a submittals list required of the Contractor.

5.5.5.2 Approval of Submittals. Except as provided for in para. 5.5.5.3, do not specify in a guide specification who will approve a submittal.

5.5.5.3 Government Approval of Submittals. When it is established by policy that all submittals called for by a Section are to be approved by the Government (even in a project with a Contractor Quality Control System), state

## MIL-HDBK-1006/2

"Submit the following [to the Contracting Officer,] in accordance with Section \=01300=\, 'Submittals.'" The note preceding this statement should read: "Retain the bracketed phrase only for projects which include the Contractor Quality Control System."

5.5.5.4 Types of Submittals. Submittal types shall be those listed in NFGS-01300. Use only the terminology (submittal descriptions) found in NFGS-01300 to identify submittals in the project specification and further limit the submittals descriptions to those listed in para. 6.9 of this handbook. Note that NFGS-01300 broadens the impact of FAR 52.236-21 to refer to all submittals.

5.5.5.5 Shop Drawings. This is any submittal prepared specifically for the contract. Specify the type of information required on shop drawings. Require only when drawings specifically prepared for the project are necessary.

5.5.5.6 Product Data. This is any submittal prepared from standard data. Use in lieu of shop drawings where standard catalog cuts, manufacturer's specifications, or other standard published data are sufficient. Where project size will determine the need for shop drawings versus product data, include both submittals and an explanatory note to the specifier to choose the appropriate paragraph on the basis of project complexity.

5.5.5.7 Samples. This is any submittal which is a physical example. List the quantity and size of each sample required, if different from the size specified in NFGS-01300. Allow full-size samples to be tagged and installed where feasible. Due to the expense of storage, the use of samples should be limited to items that cannot be evaluated and approved by some other method.

5.5.5.8 Administrative and Closeout Submittal. This is any submittal establishing an administrative requirement.

5.5.5.9 Testing Requirements. Three types of tests are anticipated.

- a) Factory Tests conducted specifically for the project.
- b) Field Tests done from material onsite.
- c) Tests done on prototypical material or products.

5.5.5.10 Factory Test Reports. Do not ask for unreasonable or meaningless tests, reports, or certifications, but rely to the maximum extent on the manufacturer's normally available quality control data. Do not call for first-article or factory-witnessed tests for minor items and off-the-shelf type of materials or equipment. The expense and time involved is considerable and cannot be justified except for large quantities of custom-made materials and equipment or highly critical items. This type of testing requires considerably more procurement time than for off-the-shelf items; therefore, if specified, there must be sufficient lead time in the construction schedule to accommodate the procedure.

5.5.5.11 Test Reports. List the test reports required so the Contractor can determine quickly what reports are to be provided. Test reports are to be provided for tests made within the previous 3 years on samples of the same

## MIL-HDBK-1006/2

types of materials which are to be incorporated into the work. If current tests are not required, omit the paragraph. Specify only those tests and the results to be achieved which are actually necessary to provide the essential level of quality required to satisfy Government functional requirements.

5.5.5.12 Field Test Reports In the past, considerable reliance has been placed on the Government to provide field sampling and testing of raw materials, paints, welding, etc. These services have generally been supplied through the use of separate engineering service contracts. The current policy is to phase out this type of contract. NFGS-01400 and NFGS-01401 state which party is responsible for conducting tests. Other guide specifications shall be neutral by not designating the responsibility for field and laboratory testing.

5.5.5.13 Certificates of Compliance. Certificates of compliance require a great deal of effort; specify only those certificates of compliance required to provide the essential level of quality required to satisfy Government functional requirements. List the different materials or equipment for which certificates are required.

5.5.5.14 Sample Panels or Sample Installations. A sample panel or sample installation, while not transportable, is considered a form of submittal, i.e., it is used in controlling the quality of construction. It is usually constructed at the jobsite where it is readily available for comparison with work installed in the facility being constructed. If a requirement to provide a sample panel is not included in a guide specification, it shall be noted. Specify the comments and features to be illustrated in the sample panel.

5.5.5.15 Operation and Maintenance (O & M) Manuals. Training in operation, maintenance, safety, and emergency procedures shall be specified in Part 3 under an article entitled "Training of Operating and Maintenance Personnel."

Divisions 11 (medical equipment), 15, and 16 have specific manual requirements. Manual requirements are specified for medical equipment in NFGS-11700, "General Requirements for Medical and Dental Equipment," for mechanical equipment in NFGS-15011, "Mechanical General Requirements," and for electrical equipment in NFGS-16011, "Electrical General Requirements."

5.5.6 Quality Assurance. Quality assurance is specified in NFGS-01400 or NFGS-01401; however, exceptions or additions to NFGS-01400 or NFGS-01401 applicable to other guide specifications may be included in Part 1. The guide specification shall state the quality level required for every item of work. When Federal, military, or non-Government specifications are referenced, the Contractor is sometimes given several options in the choice of materials or equipment which are acceptable to the Government. The referenced specifications shall be studied, and the exact type, class, grade, size, weight, finish, and other options listed which are required to be provided shall be selected and stated in the guide specification. The guide specification shall define that level of required quality. This can be accomplished through specified visual inspection, testing, or some other appropriate method. The type and degree of quality control specified depends on several considerations. These include:

## MIL-HDBK-1006/2

- a) Importance of function
- b) Structural integrity
- c) Hazards
- d) Maintenance potential
- e) Complexity and operation of equipment
- f) Size of component
- g) Construction operation
- h) Visual aesthetics.

5.5.6.1 Experience Clauses. Generally, experience clauses should not be included in guide specifications. When it is determined that special qualifications are required to perform the work of a guide specification satisfactorily, include a Contractor's experience clause. The experience clause shall state that the successful firm be one which is experienced in a particular type of work, is of an established reputation, and is generally recognized in the industry as having the level of capability required for the project. Provisions shall be included in the guide specification which establish the criteria to be used in verifying the qualifications of a firm to do the work. The guide specification shall not stipulate that a firm must have been in business for a stated period of time unless a Level 1 Contracting Officer approves the restriction. Except in rare cases, the experience requirements shall not be so restrictive as to limit participation to one firm. Maximum competition is paramount. When initially introducing an experience clause into a guide specification, submit "experience it clauses" to a Level 1 Contracting Officer for approval. Approval shall be accomplished as a part of the coordination review process. Prepare the justification for requiring an experience clause and submit it with a copy of the proposed guide specification to a Level 1 Contracting Officer. If approved, the Level 1 Contracting Officer will provide a certification of approval for the record.

5.5.6.2 Experience or Qualification of Manufacturers and Construction Personnel. Submit experience or qualification clauses for manufacturers and construction personnel to a Level 1 Contracting Officer for approval. Include experience or qualification clauses considered vital to the successful completion of the work. Include the qualifications of a testing agency when the required qualifications exceed those specified in NFGS-01400 and NFGS-01401.

5.5.7 Delivery, Storage, and Handling. Include paragraphs establishing the conditions under which products, materials, and components will be accepted and protected at the construction site. Include items such as:

- a) Delivery of materials
- b) Delivery of equipment
- c) Storage of materials, equipment, and fixtures



## MIL-HDBK-1006/2

- d) Handling of materials and equipment
- e) Security requirements.

5.5.8 Project Conditions. Grouped under this article are the provisions which establish the limitations, criteria, and coordination relating to the physical and environmental conditions under which the Contractor must perform, as they pertain to a particular guide specification. Subjects such as "existing conditions," and "environmental protection requirements," are to be included under this article. Division 1 guide specifications cite many project conditions which must be maintained. Do not duplicate those requirements in other guide specifications.

5.5.9 Sequencing and Scheduling. Under this article, state special requirements for coordinating work of a different section in a particular sequence or by a certain schedule.

5.5.10 Warranty Clauses. Generally, warranty clauses should not be included in guide specifications. When the one-year warranty contained in the Contract Clauses is considered inadequate for certain items of work, the terms should be modified in the guide specification to provide for a longer warranty period. Include warranties which pertain to the quality and performance of materials, composites, equipment, and finished construction (beyond that specified in the Contract Clauses). Submit warranty clauses for approval to a Level 1 Contracting Officer as a part of the coordination review process. Prepare the justification for requiring a warranty clause and submit it with a copy of the proposed guide specification to a Level 1 Contracting Officer. If approved, the Level 1 Contracting Officer will provide a certification of approval for the record. Do not use the term "guaranty" in lieu of "warranty."

5.5.11 NAVFACENGCOCM Design Criteria in a Guide Specification. Include NAVFACENGCOCM design criteria only where the Contractor is responsible for the design of a structure or system, e.g., prefabricated metal buildings, curtain wall construction, sprinkler systems, environmental chambers, etc.

5.5.12 Extra Materials. Maintenance materials are defined as those materials incorporated into a facility, which may not be available over the lifetime of the facility, but are necessary to make future repairs. Usually, this occurs where it is desirable to match the original type, colors, patterns, finishes, and quality of those materials incorporated into the construction of a facility, e.g., floor tile and acoustical tile. Since it is not possible to determine the need for these materials when preparing a guide specification, include a suitable article in Part 3 of the guide specification if there is a possibility that these materials would be required:

5.6 Part 2 PRODUCTS. Included as products are materials, mixes, fabrication, and manufacture. It is DOD policy to specify for military construction those materials, equipment, and methods that provide facilities at a minimum cost consistent with functional and aesthetic requirements, reasonable comfort, and sound architectural and engineering practice. Materials, equipment, and methods which provide the lowest life-cycle cost over the life expectancy of the facility shall be utilized. Wherever possible, materials, equipment, and methods specified shall be those used in the civilian construction industry, which have proven performance and life-cycle cost records.

## MIL-HDBK-1006/2

5.6.1 Materials/Equipment. Include articles describing in detail the requirements for the materials and accessories related to the work within the guide specification. When a variety of acceptable materials or equipment is available, include as many options as practical for the Contractor to select from in providing the facility. Options may be specified by reference standard or by performance standard (performance specification). From time to time, requests are made to consider the use of materials which are comparatively new. The fact that a product is new shall not, necessarily, preclude its use. However, guide specifications shall not be used as experimental vehicles for untested products. Conversely, a product's previous use shall not place it in a favored status. Usually, it is necessary to base judgments on products on laboratory tests. Such tests, in order to be accepted as authoritative, shall be made by reputable laboratories recognized by industry or Government as producing unbiased, complete tests and test reports.

5.6.2 Proprietary Specifications. Adhere to the following requirements of NAVFAC P-68, Contracting Manual, (para. 10.006(c)) concerning proprietary specifications.

"Proprietary or restrictive requirements shall not be used unless it is established conclusively that no substitute will serve the purpose. Specifications shall be written to permit bidding by any supplier whose equipment provides the functional, technical, and physical requirements of the project. Proprietary requirements shall not be included in specifications without written approval by a Level 1, Contracting Officer. The Contracting Officer shall document the basis of her/her decision in the official contract file. This requirement also applies to specifications prepared by other agencies for projects to be constructed by NAVFACENGCOM. In order to negate clauses such as 'Materials and Workmanship' and 'Brand Name or Equal', when specification of a proprietary item has been authorized, the specification must state: 'Notwithstanding any other provision of this contract, no other product will be acceptable.' The limitations pertaining to proprietary specifications do not apply to items on a qualified products list."

If authorization to use a proprietary product is granted, the description of the product should include the manufacturer's name, address, and phone number, catalog number, and other information which identifies the specific item required. This information shall be followed immediately by the following sentence.

"Notwithstanding any other provision of this contract, no other product will be accepted."

Unless this phrase is included, the Contract Clauses permit a Contractor to propose substitution of an item the Contractor considers equal to the one specified, even though it is specified by name, model number, type, size, and manufacturer. If the Contracting Officer agrees that the proposed substitution is equal, then the substitution will be allowed.

The PA Design Division Director (Code 04) shall provide the Contract Division Director the following information, in writing, to support an application to a Level 1 Contracting Officer for authority to include proprietary requirements in a guide specification.



## MIL-HDBK-1006/2

a) List the manufacturer, model number, address of manufacturer, and unit price of each proprietary item.

b) Provide justification for the proprietary item as follows:

- (1) Define the problem.
- (2) State the proposed action to solve the problem.
- (3) State the reasons why the proposed action is the most feasible solution to the problem.
- (4) State the technical features required.
- (5) Cite laws, regulations, or instructions requiring the necessary technical features.
- (6) Provide a statement of commercial availability.
- (7) Provide other relevant information supporting proprietary requirements.

5.6.3 "Or Equal" Specifications. Adhere to the following requirements of NAVFAC P-68 (para. 10.006(b) concerning "or equal" specifications.

"Specifying items by naming acceptable commercial products followed by the words 'or equal' is permitted under the following conditions: (a) there are no industry or Government-type specifications for the item, or (b) the item is a minor part of the work, or (c) the item cannot adequately be described because of its technically involved construction or composition. A minimum of three manufacturers shall be included in the description followed by the words 'or equal.' The essential features of the item must be set forth in sufficient detail to establish the basis upon which the equality of nonlisted products will be determined. 'Or equal' specifications will not be used unless written Level 1 Contracting Officer approval has been obtained. (See FAR 10.004(b)(3))"

5.6.4 Trade Names. Do not use trade names in specifying products or equipment except where project requirements dictate it, e.g., where a proprietary specification is required. Avoid using generic trade or brand names.

5.6.5 Government-Furnished Material. Items to be provided from Government stocks are to be included as Government-furnished material. Long lead time materials and equipment are prime candidates for inclusion as "Government-furnished material." Where Government-furnished materials or equipment are to be procured from a sole source, the AIC/EIC shall provide the same information as required when applying for authorization to prepare a proprietary guide specification. In addition, the item must be procured through the Supply System Command, which requires additional justification for sole-source procurement under the procurement regulations.

Procurement of such items is a lengthy and involved process; therefore, in a guide specification, it is advisable to avoid proprietary

## MIL-HDBK-1006/2

procurement requirements to the maximum extent possible. Avoid using trade names, copyrighted names, other proprietary names, manufacturers' part numbers, or drawing numbers applying exclusively to the product of one company, unless the item(s) cannot be described adequately due to technical involvement, construction, or composition. In such instances, follow the rules in para. 5.6.2.

5.6.6 Methods of Specifying Materials and Equipment. Include statements describing in detail the products and related accessories to be provided. Either specify the products with a reference publication or specify their required performance.

5.6.7 Equipment. Specify performance requirements in describing an item of equipment to be incorporated into the work. Do not use this paragraph to describe equipment used to execute the work.

5.6.8 Mixes. Mixing is a process which prepares the materials for use. Specify proportions or procedures in mixing materials.

5.6.9 Fabrication and Manufacture. Describe products which must be processed or created offsite before installing, e.g., precast or prestressed concrete.

5.7 PART 3 EXECUTION. This part incorporates the products specified in Part 2 into the project. Included in Part 3 are the "onsite" or "field" functions and requirements. Part 3 of a guide specification contains both general and specific provisions which contribute to the physical accomplishment and control of the work. The groupings are to be arranged in the chronological sequence normally occurring in the orderly progression of the work. Included in Part 3 are:

- a) Examination
- b) Preparation
- c) Installation/Application/Erection
- d) Field Quality Control
- e) Adjusting
- f) Cleaning
- g) Demonstration
- h) Protection
- i) Schedules

5.7.1 Examination. NFGS-01400 and NFGS-01401 specify a certain level of inspection requirements. If the requirements in NFGS-01400 and NFGS-01401 are considered insufficient, list additional requirements and the results to be achieved.

## MIL-HDBK-1006/2

5.7.2 Preparation. Include requirements which describe those preliminary actions necessary to prepare for the accomplishment of the work. The requirements can range from simple cleaning to elaborate technical efforts such as grading, etching, or establishing grades and levels. Examples of some provisions which may be included are protection of surrounding areas, and preparation of surfaces, such as fine grading.

5.7.3 Installation, Application, and Erection. Installation includes placing concrete, laying brick, framing floors, etc. Application includes applying roofing, paint, vinyl wall covering, etc. Performance includes site clearing, general excavating, structure excavating, rough grading, etc. Erection includes raising of structural steel, bar joists, trusses, etc.

5.7.4 Field Quality Control. Coordinate requirements under this article with the Contract Clauses and NFGS-01400 and NFGS-01401. The requirements included in this article are those tests at the site or tests on products made away from the site. These tests are primarily for control of the quality of products installed in the field. The test method, the frequency or number of tests per unit, and results to be accomplished are to be specified. Do not require excessive testing. Specify only those tests necessary to ensure that the product provided complies with requirements.

5.7.4.1 Tests. Review tests required by the reference publications. Require only those considered essential. Where standard methods have been established for performing tests or for taking samples in the field, they shall be referenced. Examples are soil compaction tests, concrete compressive strength tests, concrete slump tests, piping system leak tests.

5.7.5 Adjustment. Requirements for adjustments are specified in NFGS-15996, Testing/Adjusting/Balancing of Heating/Ventilating/Cooling Systems, and in Divisions 14, 15, and 16. Adjustments not specified in NFGS-15996 and Divisions 14, 15, and 16, but which are necessary to place an item of equipment in proper operating condition, shall be specified in this article.

5.7.6 Demonstration. Include an article pertaining to training operation and maintenance personnel where equipment, control systems, processes, etc., are sufficiently complicated or complex and are beyond the capability of operation and maintenance personnel and require instruction by the Contractor's or manufacturer's staff. Refer to the following example:

"Instructing Government Personnel"

"Upon completion of the work and at a time designated by the Contracting Officer, the services of a competent technician regularly employed or authorized by the manufacturer of the [\_\_\_\_\_] shall be provided for instructing Government personnel in the proper operation, maintenance, safety, and emergency procedures of the [\_\_\_\_\_]. The period of instruction shall be not less than [one] [\_\_\_\_\_] but not more than [two] [\_\_\_\_\_] 8-hour working day[s]. The training shall be conducted at the jobsite or at another location mutually satisfactory to the Government and the Contractor."

## MIL-HDBK-1006/2

Where applicable, a clause similar to the previous example shall be included in Division 16 guide specifications and in other guide specifications as deemed appropriate. Division 15 guide specifications shall comply with the provisions of NFGS-15011, Mechanical General Requirements, which relate to this subject. Include the following as a Criteria Note keyed to the previous paragraph:

"There are restrictions on the type and extent of training. Training is usually onsite, 2 days or less. Factory representatives or others provide basic instructions to facility maintenance and operation personnel. If more extensive training is required, i.e., student travel, special consultants, etc., consult the Contract Division Director and the head of the Comptroller Department for assistance."

5.7.7 Cleaning. When the cleaning requirements of a guide specification exceed the scope of cleaning established in the Contract Clauses, the additional requirements shall be included in Part 3. In many cases, cleaning shall be performed immediately and shall not be delayed until the completion of the project.

5.7.8 Protection. Generally, the Contractor is responsible for the protection of the work which is in place from damage by weather, persons, construction, etc. If special protection is required for some element of the construction, a suitable requirement shall be placed in Part 3. Ensure that the special requirement is in addition to protection requirements stated in the Contract Clauses.

5.7.9 Schedules. Schedules tell "where" to put "what." While every effort should be made to have schedules placed on the drawings, there are occasions where it is desirable to include them in the specifications. Since schedules are subject to change until the construction documents are released, it is desirable that they be the last item included in a guide specification. An example is the finished hardware schedule.

5.8 Criteria Notes. Criteria Notes are intended to provide supplemental information to the user of the guide specification. Refer to para. 6.2 for a discussion of Criteria Notes.

5.8.1 General Notes. General Notes provide nontechnical information applicable to the guide specification. General Notes are listed numerically. General Notes enable the user of the guide specification to evaluate certain generalities and direct the user of the guide specification in the use of the guide specification. General Notes are listed in MIL-HDBK-1006/1, Policy and Procedures for Project Drawing and Specification Preparation, and are also contained in the SPECSINTACT system. Include a copy of the general notes with any print copy of the guide specification.

## MIL-HDBK-1006/2

## Section 6: SPECSINTACT AND GUIDE SPECIFICATIONS

6.1 SPECSINTACT. SPECSINTACT is an automated project specification writing system now in use in NAVFACENCOM and other Government agencies. The system simplifies the assembly and editing of guide specifications to produce the final project specification as well as submittal, testing, and other reports. In order to fully utilize the system, the guide specifications used must be in a specific format, containing coding tokens and following certain conventions. The following paragraphs explain some of the special requirements of SPECSINTACT. For additional information, refer to the SPECSINTACT Computer Operations Guide.

6.2 Criteria Notes. Criteria Notes instruct the specifier in the type of action to take in editing a guide specification. Criteria Notes shall be sufficiently detailed, taking into account that the user of the guide specification may not be technically adept in the subject matter of the guide specification or may not be familiar with the Contract Clauses. However, to facilitate their use, attempt to limit Criteria Notes to 10 lines or less. Criteria Notes are to be deleted from the guide specification during the editing process. Notes that exceed 10 lines and notes repeated more than three times will be located in the rear as "Criteria Notes." See Appendix A for examples of Criteria Notes.

6.2.1 Standard Criteria Notes. All NFGSs have at least three notes.

- a. "Scope" note, placed immediately under the Section title. This note is placed in the text regardless of its length.
- b. A drawing coordination note, placed as the second note. It often becomes "Note A" at the rear of the text, because of its length. It contains the following text, followed by a listing of information: "The following information shall be shown on the project drawings: ..."
- c. An appeal to suggest improvements, placed as the last criteria note and used without a reference from the text.

"NOTE Y: Suggestions for improvement of this specification will be welcomed. Complete the attached DD Form 1426 and mail to:

Commander  
 Naval Facilities Engineering Command  
 Code DS02  
 200 Stovall Street  
 Alexandria, VA 22332-2300"

6.2.2 Location of Criteria Notes. Criteria Notes 10 lines or less shall be inserted in the text of the guide specification separated from the text by a line of asterisks above and below the Criteria Note. Insert Criteria Notes between the article, or paragraph title, and text to which they apply. Refer to Appendix B, para. C.4, "Notes," for further instructions regarding the insertion of Criteria Notes. Criteria Notes in excess of 10 lines and notes repeated more than 3 times shall be inserted at the end of the text of the

## MIL-HDBK-1006/2

guide specification under the heading "CRITERIA NOTES" and shall be listed alphabetically with a corresponding letter notation placed in the text of the guide specification. Insert the following note, where appropriate in the text, for Criteria Notes in excess of 10 lines. Insert the appropriate letter designation in the blank space; use bracket phrase when note is not below a paragraph header:

"NOTE: See Note [\_\_\_\_\_] located at rear of text  
[regarding the text below]."

6.2.3 Criteria Notes for Articles or Paragraphs Requiring Selections. When descriptions enabling the user of the guide specification to select types, sizes, styles, classes, etc., included in referenced publications are brief, they shall be included in the text of the guide specification. Lengthy descriptions shall be placed in Criteria Notes.

6.3 Simplified Writing. SPECSINTACT was developed for use by architects and engineers, who are not necessarily talented typists. There are a number of ways that the author can make the guide specification easier to use and edit, and in the process conform more closely to CSI recommendations on guide specification format. These include:

- a) Limited use of brackets.
- b) Use of lists, rather than involved paragraphs with internal choices.
- c) Restructuring of sentences and paragraphs to locate editing options at the end of the sentence or paragraph.
- d) Creation of optional paragraphs which incorporate a possible choice. The user can then delete the unused paragraph in a few keystrokes, avoiding involved internal editing.

6.4 Use of Tokens. Special tokens are used throughout the text to allow the SPECSINTACT system to perform various checks on format and to produce reports. For a complete list of the required tokens, refer to the SPECSINTACT Computer Operations Guide. These tokens are used in the following areas of a guide specification:

- a) In the first Criteria Note, which sets forth the scope of the specification;
- b) In the submittal description part;
- c) When referring to other specification sections;
- d) In the testing part; and
- e) Throughout the text when referring to reference documents.

6.5 Use of Volkswriter Macro Commands. These are used throughout the text to signal the system to print text in a predetermined way. They are used for the following, among others:



## MIL-HDBK-1006/2

- a) Part and subpart beginning
- b) Reference part beginning
- c) Submittals listed in NFGS-01300
- d) Tables
- e) Notes
- f) Dates of document.

For a complete list of the available macros, refer to Appendix B, the SPECSINTACT Computer Operations Guide.

6.6 Related Requirements as Modified Herein. This article is included in NAVFACENGCOM guide specifications only to make a location available to cross-reference related general sections other than Division 1 sections. Do not use the article for generalized discussion. Do not use the article when a specific reference from an appropriate location in the text is possible. The following text is appropriate:

"Section [\=11700=\, 'General Requirements for Medical and Dental Equipment'] [\=15011=\, 'Mechanical General Requirements'] [and] [\=16011=\, 'Electrical General Requirements'] applies to this section with additions and modifications specified herein."

6.7 Definitions. Refer to CSI's Manual of Practice (Part II, Chapter 1) on how this article is to be used.

6.8 System Description. Refer to CSI's Manual of Practice (Part II, Chapter 1) on how this article is to be used. Do not use this article merely to state the scope of the section.

#### 6.9 Submittals

6.9.1 Definition and Use. "Submittals" is the legal term for materials required of the construction Contractor for review and approval during construction contracts. Treat information required of the Contractor as a submittal only if it is intended to be for such review and approval. In general, limit the number of required submittals to those absolutely necessary to ensure compliance with the contract documents.

6.9.2 Section 01300. NFGS-01300 defines submittals in the context of their contractual meaning, and describes the general procedures regarding submittals. SPECSINTACT uses the Section 01300 to verify and define submittals. The "submittal list" of NFGS-01300 will be rebuilt by machine, if the project is processed in SPECSINTACT, to include only submittal descriptions (SD's) actually used.

6.9.3 Submittal Groupings Used by NAVFAC. By policy, there are four groupings of submittals defined in NFGS-01300. These groupings are aligned generally with terminology used in the private sector and are grouped to allow for discussion of common procedural requirements. The various submittal descriptions are classified by these groupings.

## MIL-HDBK-1006/2

6.9.3.1 Shop Drawings. Material prepared for the contract and relating to the physical work.

6.9.3.2 Product Data. Preprinted information relating to the physical work.

6.9.3.3 Samples. Physical examples of equipment, material or products to be incorporated into the physical work.

6.9.3.4 Administrative and Closeout. Material relating to the administrative functioning of the project, nevertheless intended for review and approval.

6.9.4. Authorized Submittal Descriptions. Not all submittal descriptions available in SPECSINTACT or used in current NFGS's are approved for use in updating guide specifications. Use the following submittal descriptions, available in SPECSINTACT for new NFGS's or for updated NFGS's. Convert other submittal descriptions to these when updating NFGS's. The definition of these submittal descriptions are in NFGS-01300.

6.9.4.1 Shop Drawings Submittal Descriptions. The submittal descriptions in the group Shop Drawings are as follows:

- a) SD-35, Drawings
- b) SD-13, Design Data
- c) SD-55, Schedules
- d) SD-66, Statements
- e) SD-73, Factory Test Reports
- f) SD-76, Certificates of Compliance
- g) SD-77, Field Test Reports

6.9.4.2 Product Data Submittal Descriptions. The submittal descriptions in the group Product Data are as follows:

- a) SD-17, Manufacturer's Catalog Data
- b) SD-41, Manufacturer's Standard Color Charts
- c) SD-44, Manufacturer's Instructions
- d) SD-70, Test Reports

6.9.4.3 Samples Submittal Descriptions. The submittal descriptions in the group Samples are as follows:

- a) SD-50, Samples
- b) SD-51, Color Selection Samples



## MIL-HDBK-1006/2

- c) SD-52, Sample Panels
- d) SD-53, Sample Installations

6.9.4.4 Administrative and Closeout Submittal Descriptions. The submittal descriptions in the group Administrative and Closeout are as follows:

- a) SD-80, Operation and Maintenance Manuals
- b) SD-93, Administrative or Closeout Submittals

6.9.5 Submittal Policy Related to Individual NFGS's. Each section requiring a submittal will have an article 1.X SUBMITTALS. Any submittal required in the section will be listed here and have the SD-number applied here only.

6.9.5.1 Format Description. Each "SUBMITTAL" article will have the format described in Appendix J attached.

6.9.5.2 Guidelines. The guidelines to apply to the format policy are as follows:

- a) Always include the note and the initial text referring to Section 01300.
- b) List submittal descriptions as paragraphs, in numerical order of SD numbers, and using the exact number and title for the description. Begin each with a backslash asterisk (\\*), to signify the beginning of the submittal list.
- c) Immediately following, list the items of work for which that type of submittal is required. Use terms (key words) used in the balance of the NFGS. End the list with an asterisk and backslash, (\*\).
- d) Follow each listing with paragraph text or subparagraphs - titled the same as to the entries of the list - to explain details required of individual submittals. Do not repeat information included in the FAR clauses or NFGS-01300. Cross reference may be made to other paragraphs (such as "Field Quality Control") where details of submittals are contained.
- e) All submittals should be listed in the article "Submittals." Discussion in other portions of the text may refer back to submittal action but should not add to submittal administrative requirements and should not have tokens.

6.10 Part Numbering. Two parts of the guide specification must always be in the following order:

- a) 1.1 SUMMARY: This article is used by other agencies but not by NAVFACENGCOM. However, so that specification sections can be used agency-wide, it must be included as the first article of every guide specification. Therefore, NAVFACENGCOM guide specifications carry the following note:

## MIL-HDBK-1006/2

\*\*\*\*\*  
 NOTE: This article is not used by the  
 Naval Facilities Engineering Command,  
 except in specialized cases. Delete  
 this article when editing for project  
 specifications.  
 \*\*\*\*\*

b) 1.2 REFERENCES: This article must always be 1.2, whether or not there are reference documents. If there are no references, the text following "REFERENCES" is: "(Not Used)."

6.11 Alternative Paragraphs. At alternative paragraphs which are designer's options (where the Wang document has had an "\*\*\* OR \*\*") use the following convention:

a) Make the two paragraphs bracketed text below one paragraph number and title and add the following note below the common number and title:

"Note: Choose one of the following options."

b) If the alternative paragraphs have different titles, put each title and text in bracket and add this note:

\*\*\*\*\*  
 Note: Choose this [article]  
 [paragraph] [and] [subparagraph]  
 or the [article] [paragraph] [and]  
 [subparagraph] below, entitled  
 [\_\_\_\_\_].  
 \*\*\*\*\*

c) If several subparts separate the two options, include the following note at the second choice:

\*\*\*\*\*  
 Note: Choose this [article]  
 [paragraph] [and] [subparagraph]  
 or the [article] [paragraph] [and]  
 [subparagraph] above, entitled  
 [\_\_\_\_\_].  
 \*\*\*\*\*

6.12 References. References shall include the full name of the issuing organization. The name of the organization must be exactly like it is listed in the current reference file.

Words such as "Practice for," "Specification for," etc., are not included in the listing of the title of reference documents.

When listing references which include the metric system, such as "ASTM A36/36M," the "\-ASTM A36/36M-\\" will be considered a separate reference entry and will be included as \-ASTM A36/36M-\ under "REFERENCES" and in the text.

## MIL-HDBK-1006/2

Documents adopted by American National Standards Institute (ANSI) from a sponsoring organization will be listed under the original sponsor.

Include the date of issue or designator of the current issue in the text with the title of the document. Place dates, if any, first and without parentheses; place the revision number or other designator, if any, following and in parentheses.

Include an acronym for the organization which will be used in the text. If the referenced document does not have a short designator, e.g., ASTM-A153, create an acronym from the title. Include the date and full title in the right column.

The U.S. Army Corps of Engineers (COE) is charged with maintaining an accurate listing with exact punctuation and edit policy so far as expression of dates of issue. NAVFAC will follow the guidance of that document, located on the current CD-ROM. Refer also to Appendix A, Sample Specification.

### 6.13 Quality Assurance

a) Refer to CSI's Manual of Practice (Part II, Chapter 1) for possible titles and the order of paragraphs.

b) In addition to the paragraphs listed under Quality Assurance in CSI's Manual of Practice, the following may sometimes need to be included first. Use only if applicable and after careful review of the references being cited:

#### "1..1 Modification of References

Accomplish work in accordance with [\_\_\_\_\_], except as modified by this section. Consider the advisory or recommended provisions to be mandatory, as though the word 'shall' had been substituted for the words 'should' or 'could' or 'may,' wherever they appear. Interpret reference to [the 'authority having jurisdiction,'] [the Administrative Authority,] [the Owner,] [or] [the Design Engineer] to mean the Contracting Officer."

6.14 Delivery, Storage, and Handling. Coverage of each of the three aspects is encouraged.

6.15 Maintenance. This article is seldom used and is normally used only for the Extra Materials paragraph, which can become the article title.

## MIL-HDBK-1006/2

## Section 7: PRINCIPLES OF SPECIFICATION WRITING

7.1 Role of Specifications

7.1.1 Relationship Between Specifications and Drawings. Specifications establish the quality of materials and workmanship, the methods of installation, the equipment functions, and the testing required for the product. Drawings indicate the dimensions of construction, the relationship of materials, the quantities, and the location and capacity of equipment.

7.1.2 Precedence of Specifications. The Contract Clause entitled "Specifications And Drawings For Construction" (Federal Acquisition Regulation (FAR) 52.236-21) states:

"Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing."

Do not include in a guide specification information which normally is shown on the drawings. In questionable situations, include Criteria Notes, as needed, to warn that a conflict could occur if the drawings are not prepared properly.

7.1.3 Coordination of Drawings and Specifications. Coordination, in this instance, is defined as comparing the drawings and specifications to confirm that:

- a) Everything shown on the drawings is specified properly in the specifications.
- b) Those requirements not shown on the drawings, but necessary to complete the work, are specified.
- c) Conflicts between the requirements of the drawings and the specifications are resolved.

Drawings and specifications are required to be thoroughly coordinated. Many of the claims made against the Government result from inconsistencies or ambiguities between specifications and drawings and, in some cases, within each of them. Information normally shown on drawings shall not be repeated in guide specifications.

Drawings shall depict:

- a) The architectural and engineering design;
- b) The plans, elevations, details, and essential dimensions;

## MIL-HDBK-1006/2

- c) The designation of each portion by title or symbol to allow referencing;
- d) The extent of the various materials by symbols or other means;
- e) Notes giving the basic design data, assumed loads, allowable stresses, design references, and requirements; and
- f) The quantity and limits of work.

Specifications shall provide information governing:

- a) Quality of materials and workmanship
- b) Quality controls
- c) Inspections and tests
- d) Supplementary contractual requirements
- e) Performance requirements.

7.1.4 Terminology Used in Drawings and Specifications. The terminology used in drawings and specifications shall be consistent.

7.1.5 Cross-Reference to Drawings. FAR 52.236-21 states:

"Where 'as shown', 'as indicated', 'as detailed', or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise."

Use of these terms is discouraged. They are redundant because the provision of items shown on the drawings is already part of the contract. To repeat the requirement creates a source of possible conflict or omission. The Contractor is not obligated to provide an item if it is not indicated on the drawings. If an item must be specified to be provided "as indicated," "as shown," or "as detailed," insert an appropriate Criteria Note to alert the user of the guide specification that where these terms occur, to ensure that the information is on the drawings and that the item on the drawings is the item being specified.

7.1.6. Comprehension Level. Specifications are utilized, primarily, by construction tradesmen. Therefore, guide specifications shall be written for the high school graduate level of comprehension.

7.1.7 Language. Guide specifications shall be clear, correct, complete, and concise and shall adhere to the style promulgated by the CSI Manual of Practice on specification language.

7.1.7.1 Imperative Mood. Where possible, use the imperative mood in lieu of the indicative mood, passive voice. For example:

INCORRECT: Piping and tubing shall be cut to required measurements.

CORRECT: Cut piping and tubing to required measurements.

## MIL-HDBK-1006/2

7.1.7.2 Articles. Omit articles, i.e., "the," "a," and "an," where possible.

7.1.7.3 Subject/Verb Agreement. The subject and the verb must agree in number. Use singular verbs with singular subjects and plural verbs with plural subjects. An error in number is easily made when a sentence is unnecessarily long and complicated. The singular subject of a sentence can be confused with a modifier that is plural. The subject of a sentence cannot be contained within a prepositional phrase. The wording of many sentences is such that the object of a preposition may be mistaken for the subject of the sentence.

INCORRECT: One of the elongated central fasteners are to be placed around the eye of the panel and bolted.

CORRECT: Bolt one elongated central fastener to panel.

The incorrect example uses a singular subject with a plural verb, is written in the indicative mood, and unnecessarily includes articles. The correct example has proper subject/verb agreement, is written in the imperative mood, and deletes the unnecessary articles.

7.1.7.4 Strong Verbs. Use strong verbs, not weak nouns.

INCORRECT: Make determination of pump replacement costs.

CORRECT: Determine pump replacement costs.

7.1.7.5 Parallel Construction. Good grammar requires the use of identical style in both parts of a compound subject or predicate. Use an identical style in a series of nouns, adverbs, or prepositional phrases.

INCORRECT: Perform tests to determine strength and establishing quality.

CORRECT: Perform tests to determine strength and establish quality.

INCORRECT: heating, ventilation, and air conditioning

CORRECT: heating, ventilating, and air conditioning

7.1.7.6 Prepositional Phrases. Sentences may be shortened by using modifiers in lieu of prepositional phrases.

CORRECT: top of platform

PREFERRED: platform top

7.1.7.7 Repetition. Reduce repetition of the subject by combining sentences, but avoid complicated compound sentences and stilted phraseology.

7.1.7.8 Listing Multiple Requirements. List multiple requirements in lieu of writing long sentences requiring extensive punctuation. List the requirements alphabetically (lowercase letter followed by a period). If a

## MIL-HDBK-1006/2

sublisting within a listing is required, list the requirements in the sublisting numerically (number enclosed in parentheses). Capitalize the first word in each listing, place a space between each listing and sublisting, and insert a period after the last listing. Adhere to the following format:

- "a. (First requirement),"
- "b. (Second requirement),"
  - "1. (First subrequirement under second requirement),"
  - "2. (Second subrequirement under second requirement),"
- "c. "(Third requirement)."

Where a series of words or very short phrases are listed, do not follow the listings with punctuation (except for the last listing).

Where a series of long phrases are listed, follow the listings, except the last one, with a semicolon. After the next to last listing, insert a semicolon, followed by the word "and" or "or." Insert a period after the last listing.

Where a series of sentences are listed, end each listing with a period. If a sentence is listed in a series that consists, otherwise, of phrases, follow each listing with a period.

7.1.7.9 Pronouns. Avoid using pronouns. Repeat the noun to avoid misinterpretation.

#### 7.1.8 Phraseology

7.1.8.1 Contract Clause and Division 1 Requirements. Do not use phrases such as:

- a) At no expense to the Government.
- b) At the expense of the Contractor.
- c) Tests and inspections shall be conducted in the presence of the Contracting Officer.
- d) The Contracting Officer reserves the right.

Specify Contractor requirements only. Technical sections are not to be used to instruct the Contracting Officer or to emphasize particular Contract Clause and Division 1 requirements. Repetition of Contract Clause and Division 1 requirements in a guide specification risks adversely affecting those requirements by inserting illegal requirements, omitting limiting conditions, and establishing a precedent of overemphasizing requirement conditions. Coordinate between the specification and the Contract Clauses, NFGS-01010, NFGS-01400, etc., to eliminate duplications and contradictions.

## MIL-HDBK-1006/2

7.1.8.2 Open-Ended Requirements. Avoid using open-ended, undefined requirements such as:

- a) As may be required
- b) As necessary
- c) An approved type
- d) As directed
- e) As approved
- f) Subject to approval
- g) Satisfactory to the Contracting Officer.

The Contractor cannot predict in advance what will be required, necessary, directed, approved, or satisfactory and, thus, must assume the risk that what he proposes will be acceptable. This risk translates into a higher bid price to cover that risk. Furthermore, the various bidders will be bidding on a different basis, each with associated risk factors reflected in the amounts bid.

Another example of an open-ended requirement is: "Provide core samples, as required." In this instance, bids must be based on coring 100 percent of the depth of each hole.

If depths of geologic structures are unknown or the core samples required cannot otherwise be defined, estimate the percentage of the hole length for which cores will be required. For example: "Provide core samples of 60 percent of hole depth."

7.1.8.3 Indeterminate Words and Phrases. "Unless otherwise specified" is often used to indicate an alternative course of action. This type of phrase is commonly called an "escape phrase," and its use usually results in problems. Do not use this phrase in a guide specification because it is impossible to determine how or where something will be specified otherwise. The phrase must be clarified by providing a definition and a specific reference to another part of the guide specification. The phrase shall not be used to refer to another guide specification. Specificity is essential, and indeterminate phrases shall be replaced with wording conveying specific intent. Examples of indeterminate words or phrases are:

- a) First class workmanship
- b) Securely
- c) Thoroughly
- d) Suitable
- e) Properly



## MIL-HDBK-1006/2

- f) Good working order
- g) Neatly
- h) Carefully
- i) Installed in a neat and workmanlike manner
- j) Intended purpose
- k) Etc.

7.1.8.4 Limitation. When limitation is required, use either "not greater than" or "maximum" or "not less than" or "minimum" to express degrees of limitation.

#### 7.1.9 Vocabulary

7.1.9.1 Misused Words. Misused words lead to misinterpretation and can result in litigation. If in doubt, refer to a dictionary, preferably unabridged, or a dictionary of construction terms for proper usage. Do not use slang or undefined terms. Review the following list of misused words.

"Amount" and "Quantity"	Use "amount" when writing about money. Use "quantity" when writing about number, linear measure, area, and volume.
"Any" and "All"	"Any" can mean a limited number selected at the discretion of the Contractor. In specification writing, "all" is implied, unless stated otherwise. Avoid using "any" and "all."
"And," "Or," and "And/Or"	"And" joins elements of equal grammatical value or of contrasting characteristics. "And" may also mean plus or added to the preceding quantity. "Or" is used to introduce possibilities in a series. Do not use "and/or."
"Balance" and "Remainder"	"Balance" refers to money. "Remainder" is "that which is left over."
"Either" and "Both"	"Either" implies a choice between two options. Do not use "either" when the intent is "both."
"Flammable" and "Inflammable"	These words are synonymous. However, use "flammable" in lieu of "inflammable."

## MIL-HDBK-1006/2

"Furnish," "Install," and  
"Provide"

"Furnish is to acquire and deliver. "Furnish does not imply "install." "Install" is to place in position for service or use. "Install" does not imply "furnish." "Provide" is to "furnish" and "install."

"Insure," "Assure," and "Ensure"

"Insure" is to issue or procure an insurance policy. "Assure" is to give confidence or convince. "Ensure" is to make certain. In most cases, use "ensure" when referring to actions of the Contractor.

"Shall," "Should," and "Will"

Use "shall" in reference to work required of the Contractor. Do not confuse "shall" and "should"; "should" does not require work of the Contractor. Use "will" to express a declaration of purpose on behalf of the Government.

7.1.9.2 Compound Words. Do not use compound words such as "hereinbefore" and "hereinafter." "Herein" may be used to reference other requirements contained within the guide specification. However, the reference shall be explicit, further identified by the article or paragraph title.

7.1.9.3 Naval Jargon. Do not use naval jargon. Review the following examples.

- a) "Wall," not "bulkhead."
- b) "Floor," not "deck."
- c) "Water closet" or "toilet," not "head."
- d) "Kitchen," not "galley."
- e) "Stairs," not "ladder."
- f) "Ceiling," not "overhead."
- g) "8 a.m.," not "0800" or "4 p.m.," not "1600."

7.1.10 Word Streamlining. Eliminate superfluous wording such as "conforming to."

INCORRECT: Aluminum paint conforming to FS TT-P-38.

CORRECT: Aluminum paint: FS TT-P-38.

7.1.11 Capitalization, Spelling, Compound Words, Punctuation, Abbreviations, and Numerals. Unless directed otherwise in this military handbook, adhere to the guidelines in the latest edition of the United States

## MIL-HDBK-1006/2

Government Printing Office Style Manual regarding capitalization, spelling, compound words, punctuation, abbreviations, and numerals.

7.1.11.1 Commonly Confused Spellings. There are instances where reference standards vary. For consistency, use the following:

a) Specify "gauge," not "gage," except when referencing a document where "gage" is used.

b) Specify "caulk," not "calk."

c) Specify "fascia," not "facia."

7.1.11.2 Hyphenated Compounds. Where two or more hyphenated compounds have a common, basic element and this element is omitted in all but the last term, the hyphens are retained. For example: "4- by 8-inch plate." (Note the space after "4-.")

7.1.12 Underlining and Capitalizing for Emphasis. Do not underline or capitalize for emphasis. All requirements are of equal importance in obtaining the desired product or service.

7.1.13 Capitalization of Certain Terms. Capitalize "Contractor," "Contracting Officer," "Government," and classification terms, e.g., "Type," "Grade," and "Class."

7.1.14 Footnotes. Do not use footnotes.

7.1.15 Exponents, Subscripts, and Superscripts. Avoid the use of exponents, subscripts, or superscripts. Spell out the appropriate word or term.

7.1.16 Numbers. Spell out numbers under 10, but use figures for numbers 10 and greater. However, units of time and measurement are always expressed in figures, except for "one" and "zero," which are always spelled out when used singly. Do not repeat a spelled-out number with a figure in parentheses, e.g., "nine (9)."

7.1.17 Decimals and Fractions

a) Use either fractions or decimals but not both. Generally, use decimals in a guide specification where engineering precision is implied. Use fractions in a guide specification where approximations to reasonable tolerances are implied.

b) Fractions serving as adjectives shall be expressed in the following form: "1 1/2-inch"; not "1-1/2 inch" or "1-1/2-inch."

c) Fractions expressed as nouns shall be expressed in the following form: "1 1/2 inches"; not "1-1/2 inches" or "1-1/2-inches."

7.1.18 Symbols, Abbreviations, and Acronyms

## MIL-HDBK-1006/2

7.1.18.1 Symbols. Do not use symbols within the text of a guide specification in lieu of words such as "foot," "inch," "degree," "percent," and "pound." Symbols, however, may be used in tables.

7.1.18.2 Abbreviations. Use only standard abbreviations. The United States Government Printing Office "Style Manual" shall be the primary source. Do not use abbreviations with more than one meaning. Spell out the meaning of unfamiliar abbreviations the first time they are used in the guide specification, followed by the abbreviation in parentheses. Thereafter, use only the abbreviation.

7.1.18.3 Acronyms. When acronyms are used, spell out the full title of the acronym the first time it is used in the guide specification, followed by the acronym in parentheses. Thereafter, use only the acronym.

7.1.19 Priority of References. When goods and services are procured using reference documents, observe the following order of priority in referencing established by the FAR:

a) Commercial standards and specifications satisfactory to the functional requirement of the Government;

b) Federal specifications (exclusive of military) where the requirement cannot be satisfied using commercial standards;

c) Military specifications, when commercial or Federal specifications do not exist or if commercial or Federal specifications do not satisfy the functional requirement of the Government;

d) Brand name or equal; then

e) Proprietary specifications.

7.1.20 Magnetic Media Requirement for Graphics. All graphics files shall be provided on 5 1/4 in. double-sided double-density (DSDD) or double-sided high-density (DSHD) diskettes. Maximum page size shall be 8 1/2 x 11 in. including all headers and footers with margins as required in para. 6.4.2 of MIL-HDBK-1006/3, Policy and Procedures for Engineering and Design Criteria Manual Preparation. The PA shall generate all graphics (graphs, figures, facility plates, etc.) as data exchange format (.DXF) files whenever possible. If the graphics will be edited later or incorporated into drawings, .DXF MUST be used. Some graphics packages that support .DXF are AUTOCAD, CADKEY, and VERSACAD. If .DXF is not used, submit camera-ready original artwork to Headquarters. Foldouts and halftones of drawings, photographs or pictures are not acceptable.

7.1.20.1 Sketches. Avoid using sketches in a guide specification. However, when it is necessary, place them at the end of the text preceding the Criteria Notes. Sketches shall be titled and consecutively numbered. If sketches are to be included in the contract documents, place a note on them requiring that they be included on the drawings.

7.1.20.2 Figures. The inclusion of figures in a guide specification is discouraged and will be permitted only under unusual circumstances. Reference figures within the text and place them at the end of the text preceding the

## MIL-HDBK-1006/2

Criteria Notes. Figures shall be titled and consecutively numbered. Place a note on the figures instructing the user of the guide specification not to include the figures in project specifications or drawings.

7.1.21 Forms. Avoid including forms in a guide specification. If forms are required, insert the word "SAMPLE" in capital letters diagonally across the face of the form. Place forms at the end of the text preceding the Criteria Notes. Forms are not included in project specifications, except in rare instances such as NFGS-01400, Contractor Quality Control (CQC) System. Here, a form is included with instructions to include it in the project specification as an example of the type of form to be used and the information the Contractor is required to submit after award of the contract. The Resident Officer in Charge of Construction (ROICC) administering the contract provides the actual forms to be used by the Contractor.

7.1.22 Numbered Text Headings. In lieu of CSI nomenclature regarding numbered text headings, i.e., "Part," "Article," and "Paragraph," the SPECSINTACT system uses the terms "Part" and "Subpart." Both systems allow up to four levels of numbering. All "Parts" and "Subparts" shall have titles. Refer to Appendix B, paragraph C.2, "Part and Subpart Titles," for procedures regarding numbered text headings.

7.1.23 Referencing Military Handbooks. Do not reference military handbooks (or design manuals) in the text of guide specifications. Military handbooks may be referenced in the Criteria Notes, when appropriate.

7.1.24 Insertions, Choices, and Options. Guide specifications are designed to be edited. Brackets are used in the editing process, indicating the need on the part of the user of the guide specification to insert additional information, to choose, or to exercise an option. Criteria Notes shall precede insertions, choices, and options, as appropriate. When specifying several choices or options, consider repeating entire sentences, with the appropriate changes therein, and placing each sentence within brackets; thereby avoiding the oftentimes complicated bracketing of the various choices or options within a single sentence.

7.1.24.1 Insertions. Where the user of the guide specification is to provide information, use the following format:

"Provide [\_\_\_\_\_] sets of maintenance tools."

7.1.24.2 Choices. Where the user of the guide specification is given a choice of using the information provided or of providing information, use the following format:

"Provide [two] [\_\_\_\_\_] sets of maintenance tools."

7.1.24.3 Options. Where the user of the guide specification is given an option of selecting from the information provided, use the following format:

"Provide [flush] [raised] panel doors."

## MIL-HDBK-1006/2

Where the Contractor is given an option of selecting from the information provided, word it as such:

"Provide flush-panel or raised-panel doors."

7.1.25 Performance Requirements. Performance requirements may be used in lieu of options. This method precludes the Contractor from placing the burden of responsibility on the Government. The parameters of the function to be performed or those of the products to be provided, or both, may be used. An essential part of a performance specification is the inclusion of the factors on which compliance of performance with the specification is determined. This method is used extensively in procurement actions, particularly in the procurement of equipment.

7.1.26 Experience Clauses. Generally, clauses requiring a Contractor to qualify for award of a project by demonstrating a stated level of experience shall not be included in specifications. Procurement regulations require the Government to award contracts to a "responsible bidder," and the Contract Clauses require the Contractor to maintain a competent superintendent and workforce on the job. However, situations occur where this prohibition is impractical. If experience clauses, in addition to the requirements in the Contract Clauses, are considered vital to a guide specification, application to a Level 1 Contracting Officer shall be made for permission to include them. The application must include the proposed experience clause and complete justification for the requirement.

7.1.27 Warranty Clauses. It is the policy of NAVFACENGCOM not to include special warranty clauses. Generally, warranty clauses, other than those provided in the Contract Clauses, i.e., a one-year warranty by the Contractor or a manufacturer's standard commercial warranty, shall not be included in a guide specification. If warranty clauses, in addition to the requirements in the Contract Clauses, are considered vital to a guide specification, application shall be made to a Level 1 Contracting Officer for permission to include them. The application must include the proposed warranty clause and complete justification for the requirement.

7.1.28 Safety and Health Requirements. Safety and health requirements are covered by the Contract Clauses and by Division 1 guide specifications. Do not include safety and health requirements in other guide specifications unless the Contract Clauses or the Division 1 guide specifications do not adequately cover safety and health requirements. In the event they do not, advise NAVFACENGCOM Code DS02, transmitting the proposed paragraph and justifying its use, await NAVFACENGCOM Code DS02's approval prior to inserting it in the guide specification, and include the requirement in Part 1.

#### 7.1.29 Contractual Issues

7.1.29.1 Parties to the Contract. There are only two parties to a Government contract: the Contracting Officer and the Contractor. No other terms shall be used to indicate parties to the contract, and no other individuals shall be introduced as though they were a party to the contract, e.g., ROICC, subcontractors, manufacturers, etc. The term "Government," i.e., Federal Government, may be used without implying that it is a party to the contract; "Government" may be used in the context of "Government Furnished Equipment (GFE)" or "Contractor furnished, Government installed" as a statement binding

## MIL-HDBK-1006/2

the Government to a specific obligation. Do not abbreviate Contracting Officer and do not refer to the Contractor as the "Prime Contractor" or the "General Contractor."

7.1.29.2 Conflicts With the Contract Clauses. Do not repeat the Contract Clauses in the technical sections, i.e., the specifications, of the contract. The Contract Clauses in the contract contain requirements which affect the general conduct of the work in the contract. If these are randomly modified within the specifications, it tends to weaken or void the Contract Clauses. If a particular condition requires a change in the Contract Clauses, direct reference shall be made to that provision by full title, and the necessary correction made by word description. Conversely, there are Contract Clauses which are dormant or inoperative (not included in the contract) unless activated by a provision in the specifications. Accordingly, these clauses shall be noted and particular attention shall be given to activate them when necessary.

7.1.29.3 Contractor Direction. Avoid the term "the Contractor shall," unless there would be confusion over responsibility being the Contractor's or the Government's. The Contractor is responsible for performing the work as shown and specified; therefore, there is no reason to use the phrase. Speak only to the Contractor, not the supplier or manufacturer. The Contractor cannot be directed through the manufacturer or supplier or vice versa. Stating "the manufacturer shall provide [\_\_\_\_\_]," could be interpreted as simply informing the Contractor that a party other than the Contractor is responsible, comparable to "the Government shall provide [\_\_\_\_\_]." Likewise, there is usually no reason to differentiate between actions expected of the "Contractor" and the Contractor's various suppliers; to attempt to do so borders closely on an assignment of work.

7.1.30 Cross-Referencing to Other Sections. Avoid cross-referencing to other sections in the text of a guide specification. However, cross-referencing in the Criteria Notes is acceptable. Cross-reference only to clarify the relationship of the requirements within or between specification sections and to avoid inconsistencies or repetition. While cross-references are convenient, their use may become a source of error when changes are made in one guide specification but not in another. When other sections are referenced, include the section number and title. Do not include the "NFGS" prefix. Note the following example.

"Section \=09900=\, 'Painting'"  
"Section [\=\_\_\_\_=\, \_\_\_\_]"

See Appendix B, paragraph C.7, "References To Other Sections," for further instructions regarding cross-referencing to other sections.

7.1.31 Cross-Referencing to Articles and Paragraphs. Avoid cross-referencing to articles or paragraphs within a guide specification. However, where absolutely unavoidable, use the following wording (in this context, use the word "paragraph" for articles and paragraphs): ". . . the paragraph entitled '(title of paragraph)'." Never refer to the article or paragraph by number; use the title only. Avoid repetition of article or paragraph titles within a guide specification, especially when cross-referencing.



APPENDIX A

SAMPLE GUIDE SPECIFICATION

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES  
ENGINEERING COMMAND  
GUIDE SPECIFICATION

NFGS-08110 (28 February 1986)  
Amendment 1 (31 August 1988)  
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Superseding  
NFGS-08110 (November 1981)

NFGS-08110

STEEL DOORS AND FRAMES

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## TABLE OF CONTENTS

## DOORS &amp; WINDOWS

## SECTION 08110

## STEEL DOORS AND FRAMES

## PART 1 GENERAL

- 1.1 SUMMARY
- 1.2 REFERENCES
- 1.3 DEFINITION
- 1.4 SUBMITTALS
  - 1.4.1 \\*SD-50, Samples
  - 1.4.2 \\*SD-76, Certificates of Compliance
- 1.5 QUALITY ASSURANCE
  - 1.5.1 Labels
  - 1.5.2 Oversized Doors
  - 1.5.3 Regulatory Requirements
- 1.6 DELIVERY, STORAGE, AND HANDLING

## PART 2 PRODUCTS

- 2.1 STANDARD STEEL DOORS
  - 2.1.1 Door Grades
    - 2.1.1.1 Standard Duty Doors
    - 2.1.1.2 Heavy Duty Doors
    - 2.1.1.3 Extra Heavy Duty Doors
- 2.2 CUSTOM HOLLOW METAL DOORS
- 2.3 INSULATED STEEL DOOR SYSTEMS
- 2.4 PLASTIC FOAM CORES
- 2.5 STANDARD STEEL FRAMES
  - 2.5.1 [Welded Frames
  - 2.5.2 [Knock-down Frames
  - 2.5.3 Mullions and Transom Bars
  - 2.5.4 Stops and Beads
  - 2.5.5 Terminated Stops
  - 2.5.6 Cased Openings
  - 2.5.7 Anchors
    - 2.5.7.1 Wall Anchors
    - 2.5.7.2 Floor Anchors
- 2.6 ACCESSORIES
  - 2.6.1 Shelves for Dutch Doors
  - 2.6.2 Louvers
  - 2.6.3 Astragals
  - 2.6.4 Moldings
- 2.7 WEATHERSTRIPPING
  - 2.7.1 Integral Gasket
- 2.8 HARDWARE PREPARATION
- 2.9 FINISHES
  - 2.9.1 Factory-primed Finish

- 2.9.2 Hot-dip Zinc-coated and Factory-primed Finish
- 2.9.3 Electrolytic Zinc-coated and Factory-primed Finish
- 2.9.4 Factory-applied Enamel Finish
- 2.10 FABRICATION
  - 2.10.1 Grouted Frames
- 2.11 SOURCE QUALITY CONTROL

PART 3 EXECUTION

- 3.1 INSTALLATION
  - 3.1.1 Frames
  - 3.1.2 Doors
  - 3.1.3 Fire Doors and Frames
- 3.2 PROTECTION
- 3.3 ADJUSTING
- 3.4 CLEANING

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SECTION 08110

STEEL DOORS AND FRAMES  
08/88

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*****
NOTE: This guide specification covers \@steel doors
and frames@\. Some paragraphs may need to be
supplemented to meet the project requirements.
\&This text is modified to serve as a policy and
editorial example of a guide specification and is
not intended to be used for construction. The
tokens normally included at the points where text
has changed in an amendment are not included in this
example, except in this note.&\
*****

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*****
NOTE: See Note A located at rear of text.
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PART 1 GENERAL

1.1 SUMMARY

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*****
NOTE: This article is not used by the Naval
Facilities Engineering Command except in specialized
cases. Delete this article when editing for project
specification.
*****

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1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- \-ASTM A526/526M-\ 1985 Steel Sheet, Zinc-Coated  
(Galvanized) by the Hot-Dip Process,  
Commercial Quality
- \-ASTM A591-\ 1977 (R 1983) Steel Sheet, Cold-Rolled,  
Electrolytic Zinc-Coated

- \-ASTM C578-\ 1987 Preformed, Cellular Polystyrene Thermal Insulation
- \-ASTM C591-\ 1985 Unfaced Preformed Rigid Cellular Polyurethane Thermal Insulation
- \-ASTM D2863-\ 1987 Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)

DOOR AND HARDWARE INSTITUTE (DHI)

- \-DHI A115.1-\ 1982 Preparation for Mortise Locks for 1 3/4 Inch and 1 3/4 Inch Doors
- \-DHI A115.2-\ 1980 Preparation for Bored Locks for 1 3/4 Inch and 1 3/8 Inch Doors
- \-DHI A115.4-\ 1982 Preparation for Lever Extension Flush Bolts
- \-DHI A115.5-\ 1982 Preparation for 181 Series and 190 Series Deadlock Strikes
- \-DHI A115.7-\ 1982 Preparation for Floor Closers -- Light Duty, Center Hung, Single or Double Acting; Center Hung, Single or Double Acting; Offset Hung, Single Acting
- \-DHI A115.12-\ 1982 Preparation for Offset Intermediate Pivots
- \-DHI A115.13-\ 1982 Preparation for Tubular Deadlocks
- \-DHI A115.14-\ 1982 Preparation for Open Back Strikes

MILITARY SPECIFICATIONS (MIL)

- \-DOD-P-21035-\ (Rev. A) Paint, High Zinc Dust Content, Galvanizing Repair (Metric)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- \-NFPA 80-\ 1983 Fire Doors and Windows
- \-NFPA 252-\ 1984 Fire Tests of Door Assemblies

STEEL DOOR INSTITUTE (SDI)

- \-SDI 100-\ 1985 Standard Steel Doors and Frames
- \-SDI 105-\ 1982 Erection Instructions for Steel Frames
- \-SDI 107-\ 1984 Hardware on Steel Doors

(Reinforcement - Application)

- \-SDI 111-B-\ Standard Details for Dutch Doors
- \-SDI 111-F-\ Completed Opening Anchors for Standard Steel Doors and Frames
- \-SDI A151.1-\ 1980 Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcing

UNDERWRITERS LABORATORIES INC. (UL)

- \-UL 10B-\ 1979 Fire Tests of Door Assemblies

1.3 DEFINITION

Oversize fire-rated doors are doors that are required to be fire rated but exceed the size of the test assemblies.

1.4 SUBMITTALS

\*\*\*\*\*  
 NOTE: In projects using the Contractor Quality Control System, add the words, "Submit to the Contracting Officer.", to submittals deemed sufficiently critical or complex or aesthetically significant to merit approval by the Government.  
 \*\*\*\*\*

Submit the following in accordance with Section \-01300-\, "Submittals."

- 1.4.1 \\*SD-50, Samples
  - a. Prefinished steel door finish\*\
- 1.4.2 \\*SD-76, Certificates of Compliance
  - a. Steel doors
  - b. Steel door frames
  - c. Accessories.\*\

Submit a certificate for each grade and model of steel doors.

1.5 QUALITY ASSURANCE

1.5.1 Labels

\*\*\*\*\*  
 NOTE: Delete if fire-rated doors and frames are not required.  
 \*\*\*\*\*

Fire doors and frames shall bear the label of Underwriters Laboratories, Inc. (UL), Factory Mutual Engineering Corporation (FM), or Warnock Hersey International (WHI) attesting to the rating required. Metal labels with raised letters with the name or file number of the door and frame manufacturer. Permanently affix labels at the factory to frames and to the hinge edge of the door. [Metal frames to receive labeled wood fire doors shall also be labeled.] Do not paint door labels.

1.5.2 Oversized Doors

\*\*\*\*\*  
NOTE: Delete if oversized doors are not required.  
\*\*\*\*\*

For fire doors and frames which exceed the size for which testing and labeling are available, furnish certificates stating that the doors and frames are identical in design, materials, and construction to a door which has been tested and meets the requirements for the class indicated.

1.5.3 Regulatory Requirements

- a. Provide doors and frames conforming to \-NFPA 80-\ and this specification. The requirements of \-NFPA 80-\ shall take precedence over details indicated and specified.
- [b. Astragal on pairs of labeled fire doors shall conform to \-NFPA 80-\ and UL requirements.]

1.6 DELIVERY, STORAGE, AND HANDLING

Deliver doors, frames, and accessories undamaged and with protective wrappings or packaging. [Strap welded frames in pairs, with one frame inverted, or provide temporary steel spreaders securely fastened to the bottom of each frame.] Store doors and frames on platforms under cover in clean, dry, ventilated, and accessible locations, with 1/4-inch airspace between doors. Remove damp or wet packaging immediately and wipe affected surfaces dry. Replace damaged materials with new.

PART 2 PRODUCTS

2.1 STANDARD STEEL DOORS

Conform to \-SDI 100-\, except as specified otherwise. Provide either hollow steel construction or composite construction. Undercut doors where indicated. Provide exterior doors with top edge closed flush. Provide 1 3/4-inch thick doors, unless otherwise indicated.

2.1.1 Door Grades

2.1.1.1 Standard Duty Doors

\*\*\*\*\*  
NOTE: See Note B located at rear of text.  
\*\*\*\*\*

Conform to \-SDI 100-\, Grade I, Model [1, 2,] 3, or 4, of sizes and designs indicated. Provide [where shown] [for doors No. [\_\_\_\_]].

2.1.1.2 Heavy Duty Doors

\*\*\*\*\*  
NOTE: See Note B located at rear of text.  
\*\*\*\*\*

Conform to \-SDI 100-\, Grade II, Model [1, 2,] 3, or 4, of sizes and designs indicated. Provide [where shown] [for doors No. [\_\_\_\_]]. Fill hollow steel exterior doors with mineral fiber insulation.

2.1.1.3 Extra Heavy Duty Doors

\*\*\*\*\*  
NOTE: See Note B located at rear of text.  
\*\*\*\*\*

Conform to \-SDI 100-\, Grade III, Model [1, 2,] 3, 4, or 5, of sizes and designs indicated. Provide [where shown] [for doors No. [\_\_\_\_]]. Fill hollow steel exterior doors with mineral fiber insulation.

2.2 CUSTOM HOLLOW METAL DOORS

\*\*\*\*\*  
NOTE: Custom hollow metal doors should be included in projects as a Contractor option to standard hollow metal doors. The cost of these doors is considered competitive with standard doors having comparable quality of construction.  
\*\*\*\*\*

Provide custom hollow metal doors where scheduled. At the Contractor's option, custom hollow metal doors may be provided in lieu of standard steel doors. Provide door sizes, design, materials, construction, gauges, and finish as specified for standard steel doors. Fill spaces between stiffeners with insulation. Close top and bottom edges with steel channels not lighter than 16 gauge. [Close tops of exterior doors flush with an additional channel.] [Undercut doors where indicated.] Provide 1 3/4-inch thick doors, unless otherwise indicated.

2.3 INSULATED STEEL DOOR SYSTEMS

\*\*\*\*\*  
NOTE: Insulated steel doors and frames are recommended for entrances to dwelling units. They may also be specified as a Contractor's option to Grade I standard hollow metal doors. Edit or delete the paragraph to suit the project.  
\*\*\*\*\*

[At the option of the Contractor, insulated steel doors and frames may be provided in lieu of Grade I standard steel doors and frames. Provide door sizes, design, and material as specified for standard steel doors.]

Provide insulated steel doors with a core of polyurethane foam and an R factor of 10.0 or more (based on a "k" value of 0.16). Provide face sheets, edges, and frames of galvanized steel not lighter than 23 gauge, 16 gauge, and 16 gauge respectively. Provide magnetic weatherstripping, nonremovable-pin hinges, thermal-break aluminum threshold, and vinyl door bottom. Provide doors and frames with phosphate treatment, rust-inhibitive primer, and baked acrylic enamel finish. Provide 1 3/4-inch thick doors. [Provide insulated steel doors and frames [at entrances to dwelling units] [where shown] [\_\_\_\_\_].]

## 2.4 PLASTIC FOAM CORES

- a. Rigid Polyurethane Foam: \-ASTM C591-\, Type 1 or 2, foamed-in-place or in board form, with an oxygen index of not less than 22 percent when tested in accordance with \-ASTM D2863-\; or
- b. Rigid Polystyrene Foam Board: \-ASTM C578-\, Type I or II.

## 2.5 STANDARD STEEL FRAMES

\*\*\*\*\*  
 NOTE: Designate whether frames shall be welded or knock-down field-assembled type. Welded frames must be built in. Slip-on drywall frames must be knock-down type. When both types are required for the project, modify paragraph to specify both types and locations where required. Lintels and reinforcement required to support walls or partitions above doors shall be indicated or specified in the appropriate section of the project specification.  
 \*\*\*\*\*

Conform to \-SDI 100-\, except as otherwise specified. Form frames to sizes and shapes indicated, with [welded corners] [or] [knock-down field-assembled corners]. Provide steel frames for doors, [transoms,] [sidelights,] [mullions,] [cased openings,] [and] [interior glazed panels,] unless otherwise indicated.

### 2.5.1 [Welded Frames

\*\*\*\*\*  
 NOTE: Choose this paragraph or the paragraph below, titled "Knock-down Frames."  
 \*\*\*\*\*

Continuously weld frame faces at corner joints. Mechanically interlock or continuously weld stops and rabbets. Grind welds smooth.]

### 2.5.2 [Knock-down Frames

Design corners for simple field assembly by concealed tenons, splice plates, or interlocking joints that produce square, rigid corners and a fit which maintains the alignment of adjoining members. Provide locknuts for bolted connections.]



2.5.3 Mullions and Transom Bars

Provide mullions and transom bars of closed or tubular construction connected to heads and jambs with butt-welds [or knock-down for field assembly]. Provide bottom of door mullions with adjustable floor anchors and spreader connections.

2.5.4 Stops and Beads

Form stops and beads from 20-gauge steel. Provide for glazed and other openings in standard steel frames. Secure beads to frames with oval-head, countersunk Phillips-head self-tapping sheet metal screws or concealed clips and fasteners. Space fasteners approximately 12 to 16 inches on centers. Miter molded shapes at corners. Butt or miter square or rectangular beads at corners.

2.5.5 Terminated Stops

\*\*\*\*\*  
NOTE: When stops (rabbet strips) are required to be terminated above the floor, they shall be indicated or specified. Generally, terminated stops are used in hospitals and similar buildings to eliminate projections on which wheels of beds and carts are caught and to eliminate small, dirt-catching corners.  
\*\*\*\*\*

Where indicated, terminate interior door frame stops 6 inches above floor. [Do not terminate stops of frames for lightproof, soundproof, or lead-lined doors.]

2.5.6 Cased Openings

Fabricate frames for cased openings of same material, gauge, and assembly as specified for metal door frames, except omit door stops and preparation for hardware.

2.5.7 Anchors

Provide anchors to secure the frame to adjoining construction. Provide steel anchors, zinc-coated or painted with rust-inhibitive paint, not lighter than 18 gauge.

2.5.7.1 Wall Anchors

Provide a minimum of three anchors for each jamb. Locate anchors opposite top and bottom hinges and midway between.

- a. Masonry: Provide anchors of corrugated or perforated steel straps or 3/16-inch diameter steel wire, adjustable or T-shaped;

\*\*\*\*\*  
NOTE: At the text below, modify the information to

limit discussion to the construction involved.

\*\*\*\*\*

- b. Stud Partitions: Weld or otherwise securely fasten anchors to backs of frames. Design anchors to be fastened [to wood studs with nails,] [to closed steel studs with sheet metal screws, and to open steel studs by wiring or welding];
- c. Completed Openings: Secure frames to previously placed concrete or masonry with expansion bolts in accordance with \-SDI 111-F-\; and
- d. Solid Plaster Partitions: Secure anchors solidly to back of frames and tie into the lath. Provide adjustable top strut anchors on each side of frame for fastening to structural members or ceiling construction above. Provide size and type of strut anchors as recommended by the frame manufacturer.

#### 2.5.7.2 Floor Anchors

\*\*\*\*\*

NOTE: Extension clips at bottom of frames are usually required in locations where floor fill occurs on top of structural slabs, and the metal frames and partitions are installed before the fill is placed. In such cases, the drawings or specifications should indicate the distance required between the rough slab and finished floor.

\*\*\*\*\*

Provide floor anchors drilled for 3/8-inch anchor bolts at bottom of each jamb member. [Where floor fill occurs, terminate bottom of frames at the indicated finished floor levels and support by adjustable extension clips resting on and anchored to the structural slabs.]

### 2.6 ACCESSORIES

#### 2.6.1 Shelves for Dutch Doors

Conform to \-SDI 111-B-\ . Fabricate shelves of steel not lighter than 16 gauge, [[\_\_\_\_\_] inches wide] [of the size indicated]. Provide stock-type brackets fabricated of the same metal used to fabricate shelves.

#### 2.6.2 Louvers

[Provide louvers for interior doors or metal frames of the stationary sightproof type.] [Louvers for lightproof doors shall not transmit light.] [Louvers for exterior doors shall be inverted Y type.] Weld or tenon louver blades to frame and fasten the entire louver assembly to the door with moldings. Provide detachable moldings on the room or nonsecurity side of the door. Provide moldings on the security side of the door as an integral part of the louver. Form louvers [of 20-gauge steel for interior doors and panels] [and] [of 16-gauge steel for exterior doors and panels]. [Provide louvers for exterior doors with steel-framed [insect] [bird] screens rigidly secured to louvers to permit ready removal.] Provide [aluminum wire cloth, 18 by 18 or 18 by 16 mesh, for insect screens]

[galvanized steel, 1/2- by 1/2-inch mesh hardware cloth, for bird screens]. Provide louvers, before screening, [except louvers for lightproof doors and exterior doors,] with a minimum of 25 percent net-free opening. [Provide louvers for lightproof doors with a minimum of 20 percent net-free opening.] [Provide louvers for exterior doors with a minimum of 30 percent net-free opening.]

### 2.6.3 Astragals

Provide overlapping steel astragals for pairs of exterior steel doors which will not have aluminum astragals or removable mullions, as specified in Section \=08710=\, "Finish Hardware."

### 2.6.4 Moldings

Provide moldings around glass and louvers. Provide nonremovable moldings on the outside of exterior doors and on the corridor side of interior doors. Other moldings may be stationary or removable. Secure inside moldings to the stationary moldings, or provide snap-on moldings. Interlock muntins at intersections and fit and weld to stationary molding.

## 2.7 WEATHERSTRIPPING

\*\*\*\*\*  
 NOTE: Weatherstripping is specified in Section  
 08710, "Finish Hardware," because it is usually  
 furnished by the hardware supplier. Delete the  
 bracketed subparagraph if it is not applicable.  
 \*\*\*\*\*

As specified in Section \=08710=\, "Finish Hardware."

### 2.7.1 Integral Gasket

Black synthetic rubber gasket with tabs for factory fitting into factory slotted frames, or extruded neoprene foam gasket made to fit into a continuous groove formed in the frame, may be provided in lieu of head and jamb seals specified in Section \=08710=\, "Finish Hardware." Insert gasket in groove after frame is finish painted.]

## 2.8 HARDWARE PREPARATION

Reinforce, drill, and tap doors and frames to receive finish hardware. Prepare doors and frames for hardware in accordance with the applicable requirements of \-SDI 107-\ and \-DHI A115.1-\, \-DHI A115.2-\, \-DHI A115.4-\ [, \-DHI A115.5-\] [, \-DHI A115.7-\] [, \-DHI A115.12-\] [, \-DHI A115.13-\ [, \-DHI A115.14-\]. Drill and tap for surface-applied hardware at the project site. Build additional reinforcing for surface-applied hardware into the door at the factory. Locate hardware in accordance with the requirements of \-SDI 100-\, as applicable. Punch door frames [, with the exception of frames that will have weatherstripping [or] [lightproof] [or] [soundproof] gasketing,] to receive a minimum of two rubber or vinyl door silencers on lock side of single doors and one silencer for each leaf at heads of double doors. Set lock strikes out to provide clearance for silencers.

2.9 FINISHES

2.9.1 Factory-primed Finish

\*\*\*\*\*  
NOTE: See Note C located at rear of text.  
\*\*\*\*\*

Unless specified otherwise, phosphate treat and factory prime metal doors and frames as specified in \-SDI 100-\.

2.9.2 Hot-dip Zinc-coated and Factory-primed Finish

\*\*\*\*\*  
NOTE: See Note C located at rear of text.  
\*\*\*\*\*

Fabricate doors and frames from galvanized steel, \-ASTM A526/526M-\, Coating Designation G60 or A60 (galvannealed). Repair damaged zinc-coated surfaces by the application of zinc dust paint conforming to \-DOD-P-21035-\, Phosphate treat and factory prime zinc-coated surfaces as specified in \-SDI 100-\, Provide for [exterior doors] [door openings No. [\_\_\_\_]].

2.9.3 Electrolytic Zinc-coated and Factory-primed Finish

\*\*\*\*\*  
NOTE: See Note C located at rear of text.  
\*\*\*\*\*

Fabricate doors and frames from electrolytic zinc-coated steel, \-ASTM A591-\, Commercial Quality, Coating Class A. Phosphate treat and factory prime zinc-coated surfaces as specified in \-SDI 100-\, Provide for [exterior doors] [door openings No. [\_\_\_\_]].

2.9.4 Factory-applied Enamel Finish

\*\*\*\*\*  
NOTE: One coat of factory-applied finish is readily available in standard colors. Two coats and special colors add to cost and to delivery time.  
\*\*\*\*\*

After factory priming, apply [one coat] [two coats] of [low-gloss] [medium-gloss] enamel to exposed surfaces. Separately bake or oven dry each coat. Drying time and temperature requirements shall be in accordance with the coating manufacturer's recommendations. Provide colors of finish coat [as indicated] [\_\_\_\_] and match approved samples.

2.10 FABRICATION

Provide finished doors and frames that are strong and rigid, neat in appearance, and free from defects, waves, scratches, cuts, dents, ridges, holes, warp, and buckle. Provide molded members shall be clean cut,

straight, and true, with joints coped or mitered, well formed, and in true alignment. Dress exposed welded and soldered joints smooth. Design door frame sections for use with the wall construction indicated. Provide corner joints well formed and in true alignment. Conceal fastenings where practicable. [Provide frames for use in solid plaster partitions of welded construction.] [On wraparound frames for masonry partitions, provide a throat opening 1/8 inch larger than the actual masonry thickness.] [Design [other] frames in exposed masonry walls or partitions to allow sufficient space between the inside back of trim and masonry to receive caulking compound.]

### 2.10.1 Grouted Frames

For frames to be installed in exterior walls and to be filled with mortar or grout, fill the stops with strips of rigid insulation to keep the grout out of the stops and to facilitate installation of stop-applied head and jamb seals.

### 2.11 SOURCE QUALITY CONTROL

\*\*\*\*\*  
 NOTE: Delete the test below if fire-rated doors are  
 not required.  
 \*\*\*\*\*

- a. \+Test label doors and frames in accordance with \-NFPA 252-\ or  
 \-UL 10B-\.+\  
 \*\*\*\*\*

\*\*\*\*\*  
 NOTE: Delete the test below if insulated doors are  
 not required.  
 \*\*\*\*\*

- b. \+Test insulated doors in accordance with \-SDI A151.1-\ and meet  
 the requirements of level C.+\  
 \*\*\*\*\*

## PART 3 EXECUTION

### 3.1 INSTALLATION

#### 3.1.1 Frames

Set frames in accordance with \-SDI 105-\ . Plumb, align, and brace securely until permanent anchors are set. Anchor bottoms of frames with expansion bolts or powder-actuated fasteners. Build in or secure wall anchors to adjoining construction. [Where frames require ceiling struts or overhead bracing, anchor frames to the struts or bracing.] [Backfill frames with mortar. When an additive is provided in the mortar, coat inside of frames with corrosion-inhibiting bituminous material. For frames in exterior walls, ensure that stops are filled with rigid insulation before grout is placed.]

### 3.1.2 Doors

Hang doors in accordance with clearances specified in \-SDI 100-\. After erection and glazing, clean and adjust hardware.

### 3.1.3 Fire Doors and Frames

Install fire doors and frames, including hardware, in accordance with \-NFPA 80-\.

## 3.2 PROTECTION

Protect doors and frames from damage. Repair damaged doors and frames prior to completion and acceptance of the project or replace with new, as directed. Wire brush rusted frames until all rust is removed, clean thoroughly, and apply an overcoat of rust-inhibitive paint of the same type used for shop coat.

## 3.3 ADJUSTING

Adjust hardware for smooth and balanced door movement.

## 3.4 CLEANING

Upon completion, clean exposed surfaces of doors and frames thoroughly. Remove mastic smears and other unsightly marks.

-- End of Section --

### CRITERIA NOTES

NOTE A: The following information shall be shown on the project drawings:

1. Sizes of door openings, thicknesses of doors, swings, and travels of doors, and design of doors, whether flush panel, full flush, paneled, glazed, or louvered. It is recommended that standard door-type nomenclature, SDI 106, be used to indicate designs (e.g., F, L, G, GL, etc., in lieu of A, B, C, etc.).
2. The side of wall or partition where door is to be located.
3. Details of nonstructural mullions, mullion covers, and removable mullions.
4. Type and thickness of glazing required; whether or not insulating glass units are required.
5. Method, type, and spacing required for anchoring door frames to adjoining construction.
6. The type of doors and frames required for various openings, and optional types of materials and construction, if any.
7. The type of shop finish on steel surfaces.
8. Indicate the free area for louvers in doors.
9. Indicate whether fire doors are required on one or both sides of the fire wall. When required on both sides of fire wall, provide adequate details.
10. The project designer is expected to (1) consult the "Building Materials Directory" of the Underwriters Laboratories, Inc. (UL) to determine the allowable size for vision panels in fire doors, (2) consult door manufacturers' literature to determine the size of vision panels meeting the allowable sizes of UL, and (3) indicate the selected sizes of vision panels on the project drawings.
11. Include a complete door schedule. The door schedule should assign a separate number for each opening and should indicate the door type and style, material, design, size, thickness, glazed or unglazed, class fire rating for fire doors, hardware set number, threshold material, if any, and material for frames, mullions, and

transom bars.

NOTE B: When a door grade is not required, delete the entire paragraph for that grade. Door grades for various locations should be determined in accordance with the following list and sound judgment.

Closet doors (without locks) .....	Grade I
Individual offices, storage rooms, classrooms, patients' rooms, bathrooms, and bedrooms (except BEQ bedrooms) .....	Grade II
Other locations .....	Grade III

Model designations are as follows:

Model 1, Full Flush --- Hollow Steel Construction  
 Model 2, Full Flush --- Composite Construction  
 Model 3, Seamless --- Hollow Steel Construction  
 Model 4, Seamless --- Composite Construction  
 Model 5 (Grade III only), Flush Panel --- Stile and  
 Rail Construction

Where appearance is important and edge seams are objectionable, delete Models 1 and 2. Otherwise, leave all models in as Contractor options.

NOTE C: Hot-dip zinc-coated steel should be specified for hollow metal doors and frames in severely corrosive locations, e.g., exterior openings in marine or industrial environments. Specify electrolytic or hot-dip zinc-coated steel for hollow metal doors and frames in mildly corrosive locations, e.g., other exterior doors. Uncoated steel is suitable for steel doors and frames in other locations, e.g., interior doors in most buildings. Specify field painting in Section 09900, "Painting."

NOTE D: Suggestions for improvement of this specification will be welcomed. Complete the attached DD Form 1426 and mail to:

COMMANDER  
 Naval Facilities Engineering Command  
 Code DS02  
 200 Stovall Street  
 Alexandria, VA 22332-2300

-- End --



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SPECSINTACT COMPUTER OPERATIONS GUIDE

Appendix C - SPECSINTACT Section Format

Each section produced using SPECSINTACT must have special codes embedded within the text in order for the SPECSINTACT system to be able to correctly format the text.

This appendix gives a brief description of the use of each feature within a SPECSINTACT document, an example of the feature as it appears while editing using Volkswriter (including dot dot commands), and a summary of tabs, margins, and layout information.

*NOTE: Layout information is only applicable to Volkswriter 3.*

It should be noted that, at the present time, specifications produced with SPECSINTACT are printed at 12 pitch (12 characters per inch). Attempting to print these specifications at 10 pitch (10 characters per inch) will cause the text to run-off the right margin. SPECSINTACT master text is designed for use with 12 pitch. Although sections pulled from a master could be reformatted to 10 pitch, this would be time-consuming and would create a specification in a non-standard format. SPECSINTACT was designed for use with 12 pitch to reduce the page count of the final document.

The tab and margin values are provided as a general guide. Previous releases of the SPECSINTACT system may use slightly different values. When the left margin is specified as "2", the left margin character for Volkswriter ("\\") will appear in the third column on the status line and that the text will be indented two spaces.

If the specification must be produced on a typewriter, you should add twelve to the margin and tab values in order to indent the text 1 inch from the left edge of the paper. It is important that 12 pitch type be used to keep the document compatible with SPECSINTACT format.

## C.1 Section Header

The section header of a section contains the following information:

- o General notes
- o Section number
- o Section title
- o Section date
- o Section notes

*General notes* may precede the section title. These notes usually identify the responsible organization of the text and whether the section is a revision or amendment to previous section text.

The *section number* designates the division and section of the section under CSI format. The section number should be chosen to reflect the subject and scope of the section text, as specified by the Masterformat. The section number is centered at the top of the section.

The *section title* is a one-line description of the subject content of the section. It is below the section number and is centered.

The *section date* is the date that the section text was originally created or last updated. For a section pulled from a master, this date reflects the last time the master section was updated. For a newtype section, it is the date that the section was created. In accordance with the NASA standard, this date should not be modified for a section that was pulled from the NASA master or local master file. The section date is centered and appears in boldface type.

*Section notes* are notes to the project specifier on the use of the section. They have the standard SPECSINTACT note format.

C.1.1 Example: Section Header

An example section header as it appears while editing using Volkswriter is displayed in Figure C.1. You should note the embedded dot dot commands.

..NOTE-ST
\*\*\*\*\*
NATIONAL AERONAUTIC AND 05700 (October 1985)
SPACE ADMINISTRATION
\*\*\*\*\*
..NOTE-END

SECTION 05700

..TITLE
ORNAMENTAL METAL

..SECTDT
10/85

..NOTE-ST
NOTE: THIS IS THE SECTION NOTE. IT CONTAINS
INFORMATION FOR THE SPECIFIER.

..NOTE-END

Figure C.1

C.1.2 Tabs, Margins, and Layouts

Section Header
Layouts (VW3): Multiple
Margins: LEFT: 0 RIGHT: 77
Tabs: N/A
Superkey Macros:
<Ctrl A> Inserts ..TITLE in text
<Ctrl B> Inserts ..SECTDT in text
Comments:
For Section NOTES see paragraph C.4

## C.2 Part and Subpart Titles

The SPECSINTACT system uses the terms "part" and "subpart" to designate the numbered text headings - these terms are used in place of the standard CSI terms "part", "article", "paragraph", and "sub-paragraph". Up to four levels of numbering may be used within SPECSINTACT as described below:

### SPECSINTACT vs. CSI Nomenclature - Headings

<u>Level</u>	<u>Example</u>	<u>SPECSINTACT</u>	<u>CSI</u>
1	PART 1	Part	Part
2	1.1	Subpart	Article
3	1.1.1	Subpart	Paragraph
4	1.1.1.1	Subpart	Sub-Paragraph

The part titles, per CSI standards, are as follows:

```
PART 1  GENERAL
PART 2  PRODUCTS
PART 3  EXECUTION
```

Subpart titles describe the text contained within the subpart. In order for the entire subpart title to appear in a section table of contents without truncation, the length of a subpart title is limited as follows:

<u>Level</u>	<u>Example</u>	<u>Length</u>
2	1.1	75
3	1.1.1	68
4	1.1.1.1	60

The title length is defined as the number of characters between the first character of the title and the last character before the paragraph mark or end of line. In the following example, the length of the subpart title is 30 characters.

#### 1.5.4 Operation and Maintenance Data

```
00000000011111111112222222223
123456789012345678901234567890
```



### C.2.3 Numbering and Renumbering Subparts

When new subparts are inserted into existing text, care must be taken to number the new subpart correctly. You should never renumber higher or lower numbered subparts when you have inserted a new subpart. If the SPECSINTACT conventions described below are followed, subparts will be automatically renumbered when the specification is printed.

*NOTE: The subparts will be renumbered only in the printed specification.  
The original subpart number will be unchanged in the edit file.*

This feature saves an immense amount of work and makes it possible to determine which parts of the original section were used and which were inserted.

When creating an entirely new section, either for a job specification or a master, the subparts should be numbered sequentially. In addition, you should number the text as if it was part of a master. This is especially important when creating new master sections. You cannot reliably pull a range of subparts from a section which has not been numbered correctly.

C.2.3.1 Added Subparts, Same Level

When you are adding a new subpart at the same level, the same subpart number should be used through the last decimal place with a 00 (zero zero) appended to it. An example of this procedure is shown in Figure C.3.

NOTE: IF YOU DO NOT FOLLOW THIS PROCEDURE, THERE IS A RISK THAT PARTS WILL BE OVERWRITTEN IF ANY PART OF THE SECTION IS EVER RE-PULLED. PARAGRAPHS WHICH ARE NOT IN THE MASTER TEXT MUST NEVER HAVE THE SAME PART NUMBER AS A MASTER TEXT PARAGRAPH.

-----  
ADDED PARTS, SAME LEVEL

<u>Master Text Parts</u>	<u>New Parts</u>	<u>As Automatically Renumbered during Final Print</u>
PART 1		PART 1
1.1		1.1
<-----{1.00		1.2
<-----{1.00		1.3
PART 2		PART 2
2.1		2.1
<-----{2.00		2.2
<-----{2.00		2.3
2.2		2.4
2.3		2.5
<-----{2.00		2.6
PART 3		PART 3
<-----{3.00		3.1
<-----{3.00		3.2
3.1		3.3
3.1.1		3.3.1
3.1.2		3.3.2
<-----{3.1.00		3.3.3
<-----{3.1.00		3.3.4
3.1.3		3.3.5
<-----{3.1.00		3.3.6
3.2		3.4

-----

Figure C.3

When each section is formatted for print, if you have selected the Renumber Paragraph option available on the Draft and Final Print Option screens, the SPECSINTACT software will sequentially renumber paragraphs within each part to account for deletions and additions of numbered paragraphs. There is no need for the specifier to perform this function.



C.2.3.2 Added Subparts, Lower Level

When adding new subparts at a lower level (numbers to be added in the middle of a sequence), use the previous part number and add a ".00" to it. For example, a new subpart added after part 2.3 would be appear as 2.3.00. A further example of this procedure is shown in Figure C.4.

NOTE: IF YOU DO NOT FOLLOW THIS PROCEDURE, THERE IS A RISK THAT PARTS WILL BE OVERWRITTEN IF ANY PART OF THE SECTION IS EVER RE-PULLED. PARAGRAPHS WHICH ARE NOT IN THE MASTER TEXT MUST NEVER HAVE THE SAME PART NUMBER AS A MASTER TEXT PARAGRAPH.

<u>Master Text Parts</u>	<u>New Parts</u>	<u>As Automatically Renumbered on Final Typing</u>
PART 1		PART 1
<-----{1.00		1.1
<-----{1.00		1.2
1.1		1.3
PART 2		PART 2
2.1		2.1
<-----{2.1.00		2.1.1
2.2		2.2
2.3		2.3
<-----2.3.00		2.3.1
<-----2.3.00		2.3.2
<-----2.3.00.1		2.3.2.1
<-----2.3.00.2		2.3.2.2
<-----2.3.00		2.3.3
2.4		2.4
2.5		2.5
<-----2.5.00		2.5.1
<-----2.5.00		2.5.2
<-----2.5.00.1		2.5.2.1
<-----2.5.00.2		2.5.2.2
PART 3		PART 3
3.1		3.1
3.2		3.2
3.2.1		3.2.1
<-----3.2.1.00		3.2.1.1
<-----3.2.1.00		3.2.1.2
3.2.2		3.2.2

Figure C.4

When each section is formatted for print, if you have selected the Renumber Paragraph option available on the Draft and Final Print Option screens, the SPECSINTACT software will sequentially renumber paragraphs within each part to account for deletions and additions of numbered paragraphs. There is no need for the specifier to perform this function.



## C.4 Notes

Notes are embedded within documents to give the specifier information on such items as editing the specification, manufacturing sources, and technical information.

Notes must be enclosed by the dot dot commands `..NOTE-ST` and `..NOTE-END`. These commands begin in column one on the line before the asterisk bars preceding the note and two lines after the asterisk bars that end the note. Notes, when printed, are always printed in *BOLDFACE* type. Notes should never be printed in the final job specification.

### C.4.1 Sample Entry: Notes

A sample of a note as it would appear while editing a section is displayed in Figure C.5.

```
-----
This is the end of the paragraph of text before the note.

..SUBPART
1.5 Example Note

..NOTE-ST
*****
      NOTE: This is a sample note. Notes are always
      printed in bold print. The left margin and right
      margins are inset from the normal text margins.
*****

..NOTE-END
This is the text following the sample note.
-----
```

Figure C.5

You should follow the line spacing convention for notes as shown in Figure C.5. When notes are removed from the section when it is being formatted for print, all lines between the `..NOTE-ST` and `..NOTE-END` are removed. To ensure that a blank line is left between paragraphs or between the subpart title and the text, there should be a blank line preceding the `..NOTE-ST`, and no blank line following the `..NOTE-END`.

**NOTE:** WHEN USING VOLKSWRITER 3, THE LAYOUT MUST BE SET TO LAYOUT 3 BEFORE ENTERING THE NOTE.



## C.5 Submittals

The SPECSINTACT software has the capability to extract and print items that the contractor must submit to the contracting officer. These items are called submittals and must be marked within the SPECSINTACT text in order for the submittal requirement verification option to work correctly.

Each submittal may have two parts. The first part contains the submittal number and title, the second part, which is optional, contains the narrative text.

The submittal number is a two digit number preceded by "SD-". The SPECSINTACT system requires the user to decide what submittal requirements will be assigned to each submittal number and then requires them to use the same numbers throughout the master text. The submittal title follows the submittal number and is a one line description of the type of submittal (e.g., Detail Drawings).

In addition, there may be an optional paragraph of text following the submittal title which gives additional information on the submittal requirement.

### C.5.1 Sample Entry: Submittals

There are two ways to mark submittal requirements within a SPECSINTACT document. The two samples of submittal requirements as they would appear when editing a section are displayed in Figures C.6 and C.7.

```

-----
..SUBPART
1.3 SUBMITTALS

    The following shall be submitted in accordance with Section \=01300=\,
    "Submittals":

..SUBMST
    SD-31,  Detail Drawings

..SUBMEND
..SUBMST
    SD-99,  Another Submittal

..SUBMEND
-----

```

Figure C.6  
EXAMPLE OF SUBMITTALS CODED IN 01300 SECTION

-----  
 ..SUBPART  
 1.3 SUBMITTALS

The following shall be submitted in accordance with Section \=01300=\,  
 "Submittals":

\\*SD-31, Detail Drawings\*\  
 \\*SD-99, Another Submittal\*\

-----  
 Figure C.7  
 EXAMPLE OF SUBMITTALS CODED OUTSIDE OF 01300 SECTION

It is mandatory that submittals are coded in the submittal 01300 section as shown in Figure C.6. Particular attention must be paid to where the ..SUBMST and ..SUBMEND are placed. A blank line should be placed before the ..SUBMST and ..SUBMEND command lines. Notice that back-to-back submittals have no lines between the ..SUBMEND and ..SUBMST. The remainder of the sections may be coded as shown in Figure C.7. An example of the submittal text displayed in Figures C.6 and C.7 as it would be printed is shown in Figure C.8.

-----  
 1.3 SUBMITTALS

The following shall be submitted in accordance with Section \=01300=\,  
 "Submittals":

SD-31 Detail Drawings  
 SD-99 Another Submittal

-----  
 Figure C.8  
 EXAMPLE OF PRINTED SUBMITTAL TEXT



## C.6 Tables

Tables frequently appear within SPECSINTACT sections. Other than some general guidelines, there is no set format for text within tables. The primary goal is for the table to be readable.

As a general guideline, tables should appear centered horizontally on the page with enough blank space between columns to make the table readable. Column headings should appear over the applicable column and should be underlined to distinguish the heading from the data.

The SPECSINTACT system provides table commands to assist in producing tables. The column headings and table title may be defined as a "table header". Table headers may be up to seven lines in length. Once the table header and the end of the table have been defined, SPECSINTACT will automatically format tables which span a page break. Table headers will never appear alone at the end of a page. A page break will be inserted in the text if there is not enough room left on the page for the table header and four lines of the table data. If a table does span a page break, the header will be printed at the top of the next page.

### C.6.1 Sample Entry: Table

A sample table as it would appear while editing is displayed in Figure C.9.

```

.....
..TBLHDR
    Service                Pressure (PSI)
..TBLHDR-END
    Steam                    250
    Hot Water                250
    Chilled water           250
..TABLE-END
.....

```

Figure C.9





### C.6.3 Hints On Entering Tables

- o Use table header keyboard codes to allow for the printing of headers on all pages in the event the table spans more than one page. <Alt> <H> will insert the command that tells the SPECSINTACT software that table header text follows. <Alt> <T> inserts the command that tells the SPECSINTACT software the table header text (maximum of 7 lines) has ended. The table header will then be printed on following pages when the table exceeds the page length. <Alt> <E> inserts the command that tells the SPECSINTACT software that table information has ended.
- o Enter the heading without underlining. After the table has been formatted correctly insert begin and end codes to underline as necessary.
- o Use the <Ctrl> <F3> Volkswriter format key as a back and forth toggle switch to display and not display the Volkswriter control characters. Turning the display of the characters off allows you to see how the table will look when printed.
- o Enter reference to section, reference to documents, and test requirement marks after the table is correctly formatted. Enter these marks with the cursor in insert mode. Do not delete spaces when these characters are entered, as they will be removed when the document is printed.
- o Remember that the reference to section, reference to documents, and test requirement tokens occupy space in the edit document but are removed before printing. Do not take these marks into account when spacing.
- o Remember that Volkswriter has column commands - column move and copy. These are very useful when making tables.

## C.7 References To Other Sections

The SPECSINTACT system allows you to encode references to other sections. The encoded references are called "references to other sections". If you select the Section Reference Verification option from the Draft or Final Print Option screen, the SPECSINTACT system will perform verification on these references and generate an exception report, listing any referenced sections that are not included in the job specification and the section and subpart where the reference occurred.

References to other sections are encoded within the edit file of the section by the backslash character and the equal sign. The characters used to delimit text in SPECSINTACT are called *tokens*. The section reference tokens should immediately precede and follow the five digit section number (i.e. \=03300=\).

The following are examples of incorrect placement of section reference tokens:

```
\=section 03300=\
section \=03300 =\
section \=03300.=\
```

In the first example, "section" has been included within the tokens. In the second example, an extra space has been inserted within the tokens. In the last example, a punctuation mark appears within the tokens.

### C.7.1 Sample: References To Sections

An example of references to other sections as they would appear when editing a section is displayed in Figure C.10.

```
-----
..PART
PART 1 GENERAL
```

```
..SUBPART
1.1 SUBMITTALS
```

```
The following shall be submitted in accordance with Section \=01300=\,
"Submittals":
```

```
..SUBMST
-----
```

Figure C.10



## C.8 References to Publications and Other Documents

References to technical publications and other documents are contained in SPECSINTACT text. These references are identified by the reference to publications tokens, "\-" and "-\". These tokens allow technical references to be cross-referenced against either the 002 Publications section for the respective division, or the 1.2 Reference article contained in the section, depending on your individual installation.

Technical references can appear in text, tables and notes. The reference tokens should immediately precede and follow the reference designation (i.e. \-MIL-P-474-\). Notice that no extra spaces or punctuation is contained within the reference tokens.

The following are examples of incorrect placement of reference tokens:

```
... shall conform to \- MIL-P-474-\.
... shall conform to \-MIL-P-474.-\
... shall conform to \-MIL-P-474 -\.
```

In the first and third examples, an extra space has been inserted within the reference tokens. In the second case, a punctuation mark (the period) has been placed inside the tokens.

Hyphens and other punctuation may be inside the reference tokens when they are part of the reference title as in:

```
\-MIL-P-474-\ for MIL-P-474
\ -ANSI Z55.1-\ for ANSI Z55.1
```

### C.8.1 Sample: References To Publications

An example of references to publications as they would appear when editing a section is displayed in Figure C.11.

```
-----
..PART
PART 2  PRODUCTS

..SUBPART
2.1  FILL MATERIALS

Fill material shall conform to the definition of satisfactory soil material
as defined in \-AASHTO M145-\, soil classification Groups A-1, A-2-4,
A-2-5, and A-3.

Proposed fill material shall be sampled and tested by an approved soil
testing laboratory, as follows:

Soil classification          \-AASHTO M145-\
-----
```

Figure C.11



C.9 Test and Other Requirements

Test and other requirements are identified within the text by the test requirement tokens, a "\+" before the test requirement and a "+\" after the requirement.

Test requirements can be extracted from the text and printed by selecting the Test Requirement report option available from the Draft and Final Print Option screen.

C.9.1 Sample Entry: Test Requirements

A sample test requirement as it would appear when editing a section is displayed in Figure C.12.

```

-----
3.1.5 Testing

\+All test requirements will have embedded control characters+\ which delimit
the test requirement. These codes are stripped out before final printing.
-----

```

Figure C.12

C.9.2 Tabs, Margins, and Layouts

```

                Öääääääääääääääääääääääääääääääääääää
                °      Test and Other Requirements      °
ÖääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääÇ
°   Layouts (VW3):   Depends on location                                °
°
°   Margins:         Depends on location                                °
°
°   Tabs:            Depends on location                                °
ÜääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääÇ
°   Superkey Macros:
°
°   <Ctrl T>         Inserts \+ into text.                              °
°   <Ctrl Y>         Inserts +\ into text.                              °
°
ÜääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääÇ
°   Comments:
°   (VW3) Depending on where test requirements occur, the layout may be °
°   different. You should not have to change layouts because of a test °
°   requirement.                                                    °
äääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääääi

```

## C.10 End of Section

Each section must have an end of section mark. There is no special dot dot command which is used to indicate the end of a section. A line must appear at the end of each section, according to the following rules:

The end of each section shall be designated with "-- End of Section --".

The end of section line should be indented 5 spaces and should be two lines below the last line of the section text.

In order to prevent the printing of widow lines, a ".NEEDxx" statement should be inserted before the end of each section. Fill in the "xx" with the number of lines needed.

Normally, you do not have to worry about end of section marks. The marks are automatically placed at the end of every section during the pull process, and are also present in the skeleton sections provided for newtype sections.

### C.10.1 Sample Entry: End of Section

A sample end of section as it would appear when editing a section is displayed in Figure C.13.

-----  
Contracting Officer prior to energizing the equipment at the system voltage  
for final operations tests.

..NEED04

The duration of final operations tests to prove satisfactory performance will  
be determined by the Contracting Officer.

-- End of Section --  
-----

Figure C.13





MIL-HDBK-1006/2

APPENDIX C

SAMPLES OF STANDARD LETTERS

MIL-HDBK-1006/2

LETTER NO. 1

REQUEST FOR CONCURRENCE WITH PROPOSED ACTION

[APPROPRIATE LETTERHEAD]

11012/7  
NFGS-\_\_\_\_\_

From: [APPROPRIATE PA]  
To: Distribution

Subj: NFGS-\_\_\_\_\_, "\_\_\_\_\_"

Encl: (1) NAVFAC Form 11012/9 (5-86), "Engineering and Design Criteria Review"

1. This activity is the preparing activity for NFGS-\_\_\_\_\_, "\_\_\_\_\_ " (month/year).

2. After review and consideration, this activity plans to:

Revalidate document with only SPECSINTACT format changes and update of references.

Update the current document with the following minor technical changes:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Completely revise the current document with numerous technical changes due to:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Adopt [Agency] (doc. no.), ("doc. title") (month/year).

Retire current document.

Cancel current document.

3. Please review subject document and concur or comment on the back of this page. Use enclosure (1) for additional comments, if required. PA point of contact is \_\_\_\_\_, phone: \_\_\_\_\_.

\_\_\_\_\_  
Criteria Coordinator/Manager

MIL-HDBK-1006/2

REVIEWING ACTIVITY RESPONSE

1. This activity has reviewed NFGS-\_\_\_\_\_, " \_\_\_\_\_,"  
(month/year) and recommends as follows:

Concurs with proposed PA action.

Recommends revalidation with only SPECSINTACT format changes.

Recommends additional technical changes as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Recommends complete revision for the following reasons:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Does not concur with following proposed technical changes:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Recommends retirement.

Recommends cancellation.

(Please note that if the consensus of reviewers concurs with the preparing activity, the PA may continue its action without further review.)

2. Reviewing Activity Point of Contact for further discussion:  
\_\_\_\_\_, phone: \_\_\_\_\_.

Distribution:

- NAVFACENGCOM (Code DS02) (8 copies)
- LANTNAVFACENGCOM (Code 04A4)
- PACNAVFACENGCOM (Code 406A)
- CHESNAVFACENGCOM (Code 406C)
- NORTHNAVFACENGCOM (Code 04AB)
- WESTNAVFACENGCOM (Code 406.2)
- SOUTHNAVFACENGCOM (Code 04A3)
- CBC Port Hueneme (CESO Code 156)
- NAVCIVENGLAB Port Hueneme (Code L30)
- NAVENENVSA Port Hueneme (Code 111A)
- NAVMEDCOM (Appropriate Region)
- OICC Trident Kings Bay (Code 04)

MIL-HDBK-1006/2

LETTER NO. 2

TO INDUSTRY REQUESTING COMMENTS PRIOR TO  
CREATING OR REVISING A GUIDE SPECIFICATION

(APPROPRIATE LETTERHEAD)

[APPROPRIATE ADDRESSEE]

NFGS-[\_\_\_\_\_]

Gentlemen:

NAVFACENGCOM Guide Specification NFGS-[\_\_\_\_\_, "\_\_\_\_\_,"] is to be [created] [revised] by [INSERT PA] during FY-[\_\_]. Guide specifications are used in the preparation of construction project specifications. You are invited to comment on the subject guide specification prior to the start of work. [A copy has been enclosed for your convenience.]

This is a solicitation for information on state-of-the-art items and operational requirements which [must be incorporated into] [are not present in or are inadequately covered in] the subject guide specification.

Comments should be placed on the enclosed NAVFAC Form 11012/9 (5-86). Local reproduction of the form is authorized, if required. A comment should cover requirements or provisions which must be adopted or reconciled if the document is to be usable by your organization. Comments should be accompanied by reasons to assist in their understanding and resolution.

Please respond within 60 calendar days from the date of this letter. Mail your response to:

[INSERT APPROPRIATE PA, ADDRESS, AND CODE]

Thank you.

Sincerely,

[APPROPRIATE SIGNATURE]

Encl: (1) [Copy of NFGS-[\_\_\_\_\_, "\_\_\_\_\_,"] of [\_\_\_\_\_ 19\_\_]]  
(2) Copy of NAVFAC Form 11012/9 (5-86), "ENGINEERING AND DESIGN CRITERIA REVIEW"

MIL-HDBK-1006/2

LETTER NO. 3

REQUEST FOR REVIEW OF GUIDE SPECIFICATION BY NAVY ACTIVITIES

(APPROPRIATE LETTERHEAD)

11012/7  
NFGS-[\_\_\_\_\_]

From: [APPROPRIATE PA]  
To: DISTRIBUTION

Subj: NFGS-[\_\_\_\_\_, "\_\_\_\_\_"]; COORDINATION OF

Encl: (1) Copy of subject guide specification  
(2) NAVFAC Form 11012/9 (5-86), "ENGINEERING AND DESIGN CRITERIA REVIEW"

1. Enclosure (1) is forwarded for review and comment. Place comments on enclosure (2).
2. Comments shall cover requirements or provisions which must be adopted or reconciled if the document is to be usable by the commenting activity. Comments shall be accompanied by reasons to assist in their understanding and resolution.
3. Please respond within 60 calendar days from the date of this letter. Comments received after the scheduled date for reply will be retained and considered when the subject guide specification is next amended or revised. Mail your response to:

[INSERT APPROPRIATE PA, ADDRESS, AND CODE]

[APPROPRIATE SIGNATURE]

Distribution:

NAVFACENGCOM (Code DS02) (8 copies)  
LANTNAVFACENGCOM (Code 04A4)  
PACNAVFACENGCOM (Code 406A)  
CHESNAVFACENGCOM (Code 406C)  
NORTHNAVFACENGCOM (Code 04AB)  
WESTNAVFACENGCOM (Code 406.2)  
SOUTHNAVFACENGCOM (Code 04A3)  
CBC Port Hueneme (CESO Code 156)  
NAVCIVENGLAB Port Hueneme (Code L30)  
NAVENENVSA Port Hueneme (Code 111A)  
NAVMEDCOM (Appropriate Region)  
OICC Trident Kings Bay (Code 04)

MIL-HDBK-1006/2

LETTER NO. 4

REQUEST FOR REVIEW OF GUIDE SPECIFICATION BY INDUSTRY

(APPROPRIATE LETTERHEAD)

11012/7

[APPROPRIATE ADDRESSEE]

Gentlemen:

The enclosed proposed NAVFACENGCOM Guide Specification NFGS-[\_\_\_\_\_,  
"\_\_\_\_\_"]," is forwarded for your review and comment. Guide specifications are used in the preparation of construction project specifications. The proposed guide specification, when completed, will be included in the Naval Facilities Engineering Command construction criteria library.

You are requested to submit comments on the enclosed NAVFAC Form 11012/9 (5-86). Local reproduction of the form is authorized, if required. Comments should cover requirements or provisions which must be adopted or reconciled if the document is to be usable by your organization. Comments should be specific and accompanied by reasons to assist in their understanding and resolution.

To facilitate completion of the document on schedule, please respond within 60 calendar days from the date of this letter. Comments received after the scheduled date for reply will be retained and considered when the subject document is next amended or revised. Mail your response to:

[INSERT APPROPRIATE PA, ADDRESS, AND CODE]

Sincerely,

[APPROPRIATE SIGNATURE]

Encl: (1) NFGS-[\_\_\_\_\_, "\_\_\_\_\_"] (Draft)  
(2) NAVFAC Form 11012/9 (5-86), "ENGINEERING AND DESIGN  
CRITERIA REVIEW"

MIL-HDBK-1006/2

LETTER NO. 5

TO A REVIEWING ACTIVITY ADVISING DISPOSITION OF COMMENTS

(APPROPRIATE LETTERHEAD)

11012/7  
NFGS-[\_\_\_\_\_]

From: [APPROPRRIATE PA]  
To: [REVIEWING ACTIVITY]

Subj: NFGS-[\_\_\_\_\_, "\_\_\_\_\_"]

Ref: (a) [REVIEWING ACTIVITY LETTER FORWARDING COMMENTS]

Encl: (1) Annotated copy of NAVFAC Form 11012/9 (5-86), "ENGINEERING AND DESIGN CRITERIA REVIEW"

1. Comments provided by reference (a) have been considered during the final draft of the subject document.

2. Comments have been resolved as annotated on enclosure (1).

[3. The following unresolved comments are being forwarded to NAVFACENGCOM Code DS02 for final resolution. You may expect a response from NAVFACENGCOM Code DS02 within the next 30 calendar days.

a. [COMMENT IDENTIFICATION]

b. [COMMENT IDENTIFICATION].]

4. The interest and concern expressed in the subject criteria have been of considerable value and benefit in development of the final draft of the document.

[APPROPRIATE SIGNATURE]



MIL-HDBK-1006/2

LETTER NO. 6

TO AN INDUSTRY REVIEWER ADVISING DISPOSITION OF COMMENTS

(APPROPRIATE LETTERHEAD)

NFGS-[\_\_\_\_\_]

[APPROPRIATE ADDRESSEE]

Gentlemen:

Comments on NAVFACENGCOM Guide Specification NFGS-[\_\_\_\_\_,  
"\_\_\_\_\_,"] provided by your letter of [\_\_\_\_\_] ,  
have been considered during the final draft of this document.

Comments have been resolved per the enclosed annotated copy of NAVFAC Form  
11012/9 (5-86).

[The following unresolved comments are being forwarded to Commander, Naval  
Facilities Engineering Command, Alexandria, Virginia for final resolution.  
You may expect a response from them within 30 calander days.

a. [COMMENT IDENTIFICATION]

b. [COMMENT IDENTIFICATION].]

The interest and concern expressed in the subject criteria have been of  
considerable value and benefit in development of the final draft of the  
document. Thank you for your participation.

Sincerely,

[APPROPRIATE SIGNATURE]

Encl: (1) Annotated Copy of NAVFAC Form 11012/9 (5-86), "ENGINEERING AND  
DESIGN CRITERIA REVIEW"

MIL-HDBK-1006/2

LETTER NO. 7

NOTICE OF PROPOSED ACTION

[APPROPRIATE LETTERHEAD]

11012/7  
NFGS-\_\_\_\_\_

From: [Preparing Activity]  
To: Commander, Naval Facilities Engineering Command (Code DS02), 200  
Stovall Street, Alexandria, VA 22332-2300

Subj: NFGS-\_\_\_\_\_, " \_\_\_\_\_ " (month/year)

Encl: (1) Reviewing activity responses

1. Subject document has been reviewed by this activity, and a "Request for Concurrence With Proposed Action" has been circulated.

2. This activity recommended the following action:

- Revalidation with only SPECSINTACT format changes.
- Minor revision.
- Major revision.
- Adoption of other criteria.
- Retirement.
- Cancellation.

3. The results of the request for concurrence of action were:

Revalidation.....*	_____*
Minor revision.....*	_____*
Major revision.....*	_____*
Adoption of other criteria.....*	_____*
Retirement.....*	_____*
Cancellation.....*	_____*

4. Reviewing activity responses are attached as enclosure (1).

5. Accordingly, this PA proposes to \_\_\_\_\_ subject document in accordance with the attached schedule.

6. For further information, contact \_\_\_\_\_, the PA Criteria Coordinator/Manager, at \_\_\_\_\_.

\_\_\_\_\_  
DESIGN DIVISION DIRECTOR

NAVFACENGCOM CODE DS02 ENDORSEMENT:

CONCUR  
 \_\_\_\_\_

\_\_\_\_\_  
CODE DS02

MIL-HDBK-1006/2

LETTER NO. 8

UNRESOLVED COMMENT

[APPROPRIATE LETTERHEAD]

11012/7  
NFGS-\_\_\_\_\_

From: [Preparing Activity]  
To: Commander, Naval Facilities Engineering Command (Code DS02), 200  
Stovall Street, Alexandria, VA 22332-2300

Subj: UNRESOLVED COMMENT ON NFGS-\_\_\_\_\_, "\_\_\_\_\_"

Encl: (1) Comment by \_\_\_\_\_ on draft of NFGS-\_\_\_\_\_

1. The attached comment (enclosure (1)) on proposed subject document was made by \_\_\_\_\_.

2. Because of the following reason(s) it could not be resolved to the satisfaction of the reviewer.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

3. PA recommends: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

4. Request NAVFACENCOM Code DS02 resolution of this comment.

5. Point of contact is \_\_\_\_\_.

MIL-HDBK-1006/2

LETTER NO. 9

FINAL SUBMISSION

[APPROPRIATE LETTERHEAD]

11012/7

NFGS-\_\_\_\_\_

From: [Preparing Activity]  
To: Commander, Naval Facilities Engineering Command (Code DS02), 200  
Stovall Street, Alexandria, VA 22332-2300

Subj: NFGS-\_\_\_\_\_, " \_\_\_\_\_ "

Encl: (1) [Insert appropriate information from paragraph 3.]

1. Subject document was scheduled for \_\_\_\_\_.
2. A formal request for comments on the document [was] [was not] warranted.  
[All comments have been resolved.]
3. Action on this document has been completed. The following documentation  
(enclosure (1)) is/are attached:

Formatted diskette with no technical change.

Formatted diskette with minor technical change.

Formatted diskette with major technical changes and annotated  
responses to those who commented upon document. All comments have  
been resolved.

Formatted diskette with adoption statement.

Hard copy with tokens and notes and signed title sheet.

Original copy of graphics incorporated in the NFGS.

Retirement notice.

Cancellation notice.

Coordination of Comments with resolution noted.

MIL-HDBK-1006/2

LETTER NO. 10

DOCUMENT CHANGE REQUEST

[APPROPRIATE LETTERHEAD]

11012/7

NFGS-\_\_\_\_\_

From: [REVIEWING ACTIVITY]

To: [PREPARING ACTIVITY]

Subj: NFGS-\_\_\_\_\_, "\_\_\_\_\_"

1. Proposed Change:

2. Reason:

---

3. Action Proposed by PA:

4. This form may be used in lieu of DD Form 1426, "Standardization Document Improvement Proposal." Mail a copy to:

NAVFACENGCOM  
Code DS02  
200 Stovall Street  
Alexandria, VA 22332-2300

## MIL-HDBK-1006/2

## APPENDIX D

## PROPOSED SCHEDULE OF AN NFGS

<u>PHASE</u>	<u>LENGTH</u>	<u>PROP. SCHED.</u>
(A) START	_____	_____
(B) FIRST DRAFT	_____	_____
(C) REVIEW AND COMMENT	_____	_____
(D) RESOLUTION	_____	_____
(E) FINAL DRAFT	_____	_____
(F) SUBMIT TO DS02	_____	_____
(G) APPROVAL	_____	_____
<hr/>		
TOTAL TIME	_____	

MIL-HDBK-1006/2

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<b>ENGINEERING AND DESIGN CRITERIA REVIEW</b>					<b>DATE</b>
NAVFAC 11012/9 (5-86)					
FROM (ACTIVITY AND CODE):			TO (ACTIVITY AND CODE):		
DOCUMENT NUMBER AND TITLE:					
REVIEWER NAME:			SIGNATURE:		
PE or RA? :		PHONE NO: AUTOVON		COMMERCIAL	
EFD	PAGE	PARA	E/S	COMMENT	RESOLUTION OF COMMENT

NAVFAC FORM 11012/9 (5-86) ENGINEERING AND DESIGN CRITERIA REVIEW  
 APPENDIX E

MIL-HDBK-1006/2

109

E-ESSENTIAL COMMENT S-SUGGESTED COMMENT

PAGE \_\_\_\_\_ OF \_\_\_\_\_



MIL-HDBK-1006/2

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APPENDIX F  
EDITING NFGS PREPARED IN SPECSINTACT: CHECKLIST FOR EDITOR

SECTION NUMBER: \_\_\_\_\_

TITLE: \_\_\_\_\_ DRAFT DATE: \_\_\_\_\_

AUTHOR: \_\_\_\_\_ PREPARING ACTIVITY: \_\_\_\_\_

GUIDE SPECIFICATIONS REVIEW CHECKLIST

The following checklist should be used during the review of guide specifications prepared in SPECSINTACT. Asterisks indicate especially important concerns which are prone to errors.

Review guide specification to ascertain that:	Type	Check	Remarks
0. General Requirements			
0.1 The section number and title conform to CSI Masterformat. Section title should be only one line (77 characters).	T		
0.2 The NFGS section number and page number are centered at the bottom of every page.	F		
0.3 The Table of Contents is correct and conforms to paragraphs in the text. Page numbers are not included in the table of contents.	F		
0.4 The NFGS banner at the top of page 1 has been marked off with asterisks and is BOLDFACED.	F		
0.5 When an NFGS is being adapted from a guide specification of another agency, include the following in the banner, immediately under the "superseding" data:  CRITERIA SHARING PROGRAM Originated by [COE] [CEGS-_____] ([Month] 19[____]) (Change No. [____] ([Mon] 19[____])	F		
0.6 A section date has been included immediately below the guide spec title, is BOLDFACED, and is centered.	F		

Review guide specification to ascertain that:	Type	Check	Remarks
0.7 The first note has been inserted following the section date and includes the scope of the section. The scope should be marked with the following tokens, "\@ @\". This entire note is placed in the section text, regardless of length. No other notes contain tokens, only the scope note.	F		
0.8 Immediately following the scope note, the project drawings note has been inserted. This note starts with the text, "The following information shall be shown on the project drawings ...". If this note is longer than ten lines it will be made Criteria Note A in the rear of the text and will be referred to in the section text.			
0.9 All notes (that are less than ten lines) have been inserted in their proper place in text, and are marked with asterisks and are in bold. Notes greater than ten lines and notes repeated more than three times should refer to the rear of the text where they will be in the "CRITERIA NOTES" section.	F		
0.10 At alternative paragraphs which are designer's options (where the Wang document has had an "*** or **") use the following convention.			
0.10.1 Make the two paragraphs bracketed text below one paragraph number and title and add a note below the common number and title:  ***** Note: Choose one of the following options. *****	F		

Review guide specification to ascertain that:	Type	Check	Remarks
<p>0.10.2 If the alternative paragraphs have different titles, put each title and text in bracket and add this note to the first of the two choices:</p> <p>*****            Note: Choose this [article] [paragraph] [and] [subparagraph] or the [article] [paragraph] [and] [subparagraph] below, entitled _____            *****</p>	F		
<p>0.10.3 If the alternatives span more than one subpart, the following note should also be included at the second choice:</p> <p>*****            Note: Choose this [article] [paragraph] [and] [subparagraph] or the [article] [paragraph] [and] [subparagraph] above, entitled _____            *****</p>	F		
<p>0.11 Any blank underlines [_____] should be five spaces long.</p>			
<p>0.12 All part and subpart numbers have been properly numbered and titled. Three spaces are between the number and the title with <u>no</u> hyphen in between.</p>	F		
<p>0.13 Paragraph text begins on second line below the number/title line, indented two spaces.</p>	F		
<p>0.14 There are <u>no</u> colons after the paragraph title.</p>	F		
<p>0.15 The paragraph title must be on only one line. If longer, create a new title and keep old title as part of the paragraph text. Place the old title at the beginning of the paragraph followed by a colon and the paragraph text.</p>			

Review guide specification to ascertain that:	Type	Check	Remarks
0.16 Paragraph text that is in outline form is "a.," "b.," and "c." at the first level and "(1)," "(2)," and "(3)" at the second level.	F		
0.17 Where several items are listed in a series, e.g., Red, White, or Blue, commas are placed after each item, including the one just prior to the conjunction.	F		
0.18 Fractions:			
0.18.1 Use either fractions or decimals but not both. Generally, use decimals in an NFGS where engineering precision is being implied. Use fractions in an NFGS where approximations to reasonable tolerances are implied.	T		
0.18.2 Fractions serving as adjectives should be expressed in the following form: "1 1/2-inch" (Not "1-1/2 inch" or "1-1/2-inch").	F		
0.18.3 Fractions serving as nouns should be expressed in the following form: "1 1/2-inch" (Not "1-1/2 inch" or "1-1/2-inch").	F		
0.19 Where two or more hyphenated compounds have a common basic element and this element is omitted in all but the last term, the hyphens are retained. Example: 4- by 8-inch plate.	F		
0.20 All reference numbers within the text have been marked with the following tokens, "\- -\," i.e., \-DOD-P-15328-\.	F		
0.21 All section references have been marked with the following tokens, "\- -\," i.e., \-09900-\.	F		
0.22 All test and other requirements (field engineering tests) have been marked with the following tokens, "\+ +\," i.e., \+Take test samples of the asphalt.+\'	F		

Review guide specification to ascertain that:	Type	Check	Remarks
0.23 Ambiguities such as "paint where required," "etc." are not used.	F		
0.24 Abbreviations that are understood, such as "psi," "cfm," "degree F," "degree C," and "KW" may be used.*	F		
0.25 There are no spelling and typographical errors.	F		
0.26 Contracting Officer is spelled with initial capitals, Contractor is spelled with a capital C and Government with a capital G.	F		
0.27 Except for deviations authorized by MILHDBK 1006/2, the CSI section format, including paragraph titles and order, has been followed.*	T		
0.28 Specified options are enclosed by bracket symbols. Minimize brackets and keep nested brackets at a minimum.	F		
0.29 Specifications are written in a clear and concise manner using the imperative mood when possible.*	T		
0.30 General, nondirect and inexplicit statements such as, "as shown," "as indicated," and "as detailed," etc., are used only when an appropriate "Technical Note" is included to warn the Specifier that this information should be shown on the drawings.	T		
0.31 Avoid the term "the Contractor shall..." unless there would be confusion over responsibility being the Contractor's or the Government's.	F		
0.31.1 Speak only to the Contractor, not the supplier, manufacturer, or any other party.	T		
0.31.2 Make every attempt not to use the same paragraph titles within a section, even in different parts.			

Review guide specification to ascertain that:	Type	Check	Remarks
<p>0.31.3 Cross references should be minimized, but where absolutely necessary should be in the following conventions. In this context, use the term "paragraph" for articles, paragraphs or subparagraphs.</p> <p>...Section \-09900-\, "Painting,"...</p> <p>...the paragraph entitled "Title of Article or Paragraph."</p>	F		
<p>0.32 "And/or," "any" and "etc.," have not been used.</p>	F		
<p>0.33 Terminology used to specify an item or system is consistent throughout the specification.*</p>	T		
<p>1. PART 1 - GENERAL</p>			
<p>1.1 Articles included in "PART 1 GENERAL": Use the following articles, which are drawn from the CSI <u>Manual of Practice</u>, to the extent they are applicable. Paragraph designators normally appearing under these articles may become articles when appropriate.</p> <ol style="list-style-type: none"> <li>1. SUMMARY</li> <li>2. REFERENCES</li> <li>3. RELATED REQUIREMENTS(Not from CSI)</li> <li>4. DEFINITIONS</li> <li>5. SYSTEM DESCRIPTION</li> <li>6. SUBMITTALS</li> <li>7. QUALITY ASSURANCE</li> <li>8. DELIVERY, STORAGE, AND HANDLING</li> <li>9. SITE CONDITIONS</li> <li>10. SEQUENCING AND SCHEDULING</li> <li>11. WARRANTY</li> <li>12. MAINTENANCE</li> </ol>			
<p>1.2 A summary paragraph 1.1 has been inserted with the following note: "This article is not used by the Naval Facilities Engineering Command except in specialized cases. Delete this article when editing for project specifications."</p>	F		

Review guide specification to ascertain that:	Type	Check	Remarks
1.3 "1.2 REFERENCES" paragraph has been included.	T		
1.4 All references are listed as paragraph 1.2 text in the following order:  Industry Associations listed alphabetically and interspersed with Federal and Military, in alphabetical order.  Federal Specifications listed first alphabetically and then numerically, with each alphabetical listing. Military Specifications listed numerically only.	F		
1.5 The reference publication source name has been included in all caps and is correct.			
1.6 The reference numbers follow the SPECSINTACT numbering conventions and are marked with the proper backslash tokens (\- -\). *	F		
1.7 Words such as "Practice for," "Specification for," etc., are not included in the listing of the title of reference documents.	F		
1.8 When listing references which include the metric system, such as "ASTM A36/36M," the "\-ASTM A36/36M-\\" should be included as a separate entry under "REFERENCES". Note that the complete reference "ASTM A36/36M" should be enclosed in tokens, i.e. \-ASTM A36/36M-\.	F		
1.9 Include the date of issue or designator of current issue in the right-hand columns of text, with the title of the document. Place dates, if any, first and without parentheses; place revision number or other designator, if any, following and in parenthesis. Example:  \ -NEMA MG 1- \    1978 (Rev. 1981) Motors and Generators	F		



Review guide specification to ascertain that:	Type	Check	Remarks
<p>1.10 In cases where a reference standard is not given an alphanumeric designator, create a designator, defining it and placing it in tokens in the "References" article and using it, in tokens, in the text. Example:</p> <p style="padding-left: 40px;">\-GMACNA GFSROMSPPS-\ September 1982, Guidelines for Seismic Restraints of Mechanical Systems and Plumbing Piping Systems</p>	F		
<p>1.11 Reference documents listed under the "References" paragraph are current. Spot check.</p>	F		
<p>1.12 Nationally recognized industry and technical society standards and specifications have been used to the maximum extent possible.</p>	T		
<p>1.13 The title of the publication listed in the "References" paragraph is the same as that on the publication. Spot check.</p>	T		
<p>1.14 Use "Related Requirements" to refer to NFGS-11700, 15011, or 16011.</p>	F		
<p>1.15 Submittals are listed in the "SUBMITTALS" paragraph, in ascending numerical order, have been marked with "\* *\" backslash tokens, and have been assigned a submittal number (SD-##) corresponding to the numbers in the submittal section NFGS 01300.</p>	F		

Review guide specification to ascertain that:	Type	Check	Remarks
<p>1.16 Submittals: Add the following note, which is a portion of Wang Technical Note "C" after the "SUBMITTALS" article. Note the change in preposition ("to") in the fourth line.</p> <p>*****  NOTE: In projects using the Contractor Quality Control System, add the words, "Submit to the Contracting Officer.", to submittals deemed sufficiently critical or complex or aesthetically significant to merit approval by the Government.  *****</p> <p>Paragraph text has been added stating:  "Submit the following in accordance with Section \-01300-\, "Submittals.""</p>	F		
<p>1.17 A scope paragraph has not been included.</p>	T		
<p>1.18 A listing of related subjects and where they are located has not been included.</p>	T		
<p>1.19 Statements which require items to be notarized are not included.</p>	T		
<p>1.20 Warranties, Experience and Qualification clauses have been approved by a level 1 Contracting Officer and note indicating such approval has been included in a note. Check for approval in (1) file or (2) superseded version. Check that wording of clauses approved by the Contracting Officer have been changed.</p>	T		
<p>2.0 PART 2 PRODUCTS</p>			
<p>2.1 If Part 2 is not used, insert the following:</p> <p>PART 2 PRODUCTS</p> <p>Not used.</p>	F		

Review guide specification to ascertain that:	Type	Check	Remarks
<p>2.2 Articles included in "PART 2 PRODUCTS": Use the following articles, which are drawn from the CSI <u>Manual of Practice</u>, to the extent they are applicable. Paragraph designators normally appearing under these articles may become articles when appropriate.</p> <ol style="list-style-type: none"> <li>1. MATERIALS</li> <li>2. MANUFACTURED UNITS</li> <li>3. EQUIPMENT</li> <li>4. COMPONENTS</li> <li>5. ACCESSORIES</li> <li>6. MIXES</li> <li>7. FABRICATION</li> <li>8. SOURCE QUALITY CONTROL</li> <li>9. SCHEDULES (Different location than CSI)</li> </ol>	T		
<p>2.3 Materials pertinent to NAVFAC Construction program are specified, referencing Industry, Technical Society and Federal Specifications and Standards.</p>	T		
<p>2.4 Materials required for a complete installation or assembly are specified.</p>	T		
<p>2.5 References to other sections:</p>			
<p>2.5.1 Where there is a reference to another section it should be included as a separate article or paragraph in appropriate sequence of the text. Example:</p> <p style="padding-left: 40px;">[2.1.1] Storefront Finish:</p> <p style="padding-left: 80px;">Provide finish matching in color and texture and conforming to the requirements of the finish system specified in Section \-08520-\, "Aluminum Windows."</p>	T		

Review guide specification to ascertain that:	Type	Check	Remarks
2.5.2 Do not include a paragraph which reads, "Concrete Construction: [Provide under] [Conform to requirements of] Section \-03300-\, Cast-In-Place Concrete." These wordings are no more than a "Related Sections" listing, not used by NAVFAC.	T		
2.6 Type, Grade, Class, etc., are required in brackets where a choice is to be made.	T		
2.7 The first letter of the Classification term is capitalized, e.g., Type, Grade, Class, etc.	F		
2.8 Referenced publications letter suffixes, amendment, and dates indicating specific issues are omitted from the text, when referenced in Part 2.	F		
2.9 Trade names do not appear in the specification, e.g., "Transite," "Formica," "Fiberglass," etc.	T		
2.10 Sole source procurement has been approved by a level 1, Contracting Officer.	T		
2.11 Use of the article entitled "Equipment" for Contractor's equipment utilized to perform the work is discouraged. If unavoidable, such requirements should be specified in an article in Part 1, after the article "site conditions."	T		
2.12 Tokens indicating tests or other requirements (\+..+\) should be inserted before and after factory tests requiring notification or presence of Contracting Officer but need not be inserted before and after discussion of other factory tests.	F		
2.13 Products specified in "Part 2 PRODUCTS" have been addressed in "Part 3 EXECUTION."	T		

Review guide specification to ascertain that:	Type	Check	Remarks
3.0 PART 3 EXECUTION			
3.1 If Part 3 is not used, insert the following:  PART 3 EXECUTION  Not used.	F		
3.2 Articles included in "PART 3 EXECUTION": Use the following articles, which are drawn from the CSI <u>Manual of Practice</u> , to the extent they are applicable. Paragraph designators normally appearing under these articles may become articles when appropriate.  1. EXAMINATION 2. PREPARATION 3. ERECTION or INSTALLATION or APPLICATION 4. FIELD QUALITY CONTROL 5. ADJUSTING 6. CLEANING 7. DEMONSTRATION 8. PROTECTION	T		
3.3 Condition of the substrate and joint preparation is specified, when required, under "PREPARATION."	T		
3.4 Inspection and testing clauses in the specifications have been coordinated with the "Contractor Inspection (CI) System" when the CI is included in Division I, and the "Contractor Quality Control (CQC) System" when the CQC is included in Division 1.	T		
3.5 Tokens indicating tests or other requirements (\+...+) should be inserted before and after field tests, whether or not specific notification or presence of the Contracting Officer is required.	F		

Review guide specification to ascertain that:	Type	Check	Remarks
3.6 Wording does not use the guide specification to direct the Contracting Officer. e.g. "...the Contracting Officer will act..."	F		
3.7 Cost is not referred to in the guide specification, e.g., use of phrases such as "at no cost to the Government" is not present.	T		
3.8 Phrases and statements, such as: "as instructed by the Architect," "as approved by the Architect, "by the Navy," "by the plumber/electrician/contractor/etc.", are not used.	T		
3.9 The end of the section text has been marked with "-- End of Section --".	F		
4.0 END AND NOTES			
4.1 The end of the document has been marked with "-- End --".	F		
4.2 Sketches included in the NFGS have a note requiring them to be placed on the project drawings and a note has been included requiring the Specifier to confirm that action.	T		
4.3 Criteria notes have been included in the rear of the text listed as NOTE A, NOTE B, NOTE C, etc.	F		
4.4 The criteria note referenced from article "References" has the standard wording. The phrase "and the P/A" is not included.	F		
4.5 The criteria notes, except the last one, are referred to in the text.	F		

Review guide specification to ascertain that:	Type	Check	Remarks
<p>4.6 The last criteria note should read as follows:</p> <p>[_]. Suggestions for improvement of this specification will be welcomed. Complete the attached DD Form 1426 and mail to:</p> <p style="padding-left: 40px;">COMMANDER Naval Facilities Engineering Command Code DS02 200 Stovall Street Alexandria, VA 22332-2300</p>	F		
5.0 SPECSINTACT REPORTS			
5.1 All references have been verified in the reference verification report.*	F		
5.2 All submittals are correctly listed in the submittal list.	F		
5.3 All test requirements are correctly listed in the test requirements report.	F		

\* \* \* E N D \* \* \*

APPENDIX G  
CHECKLIST FOR OPERATOR  
PREPARING NFGS IN SPECSINTACT

SECTION NUMBER: \_\_\_\_\_

TITLE: \_\_\_\_\_ DRAFT DATE: \_\_\_\_\_

AUTHOR: \_\_\_\_\_ PREPARING ACTIVITY: \_\_\_\_\_

1. Guide specifications prepared in SPECSINTACT need to be checked on the system to complete the QA process. Below is a checklist of items the operator should perform following the spec editor's QA check.

2. After receiving the floppy, retrieve the file into Volkswriter and perform the following checks:

Review guide specification to ascertain that:	Check	Remarks
a. The file name follows the SPECSINTACT file naming convention: #.sec where # - the NFGS section number.		
b. The NFGS banner is at the top of the document marked with asterisks and is <b>BOLDFACED</b> .		
c. The section title has been marked correctly with "..TITLE" and is centered.		
d. The section date has been marked correctly with "..SECTDT", is <b>BOLDFACED</b> , and is centered.		
e. All Part number/title lines have been correctly marked with "..PART" and three spaces separate the part number and the title.		
f. All Subpart number/title lines have been correctly marked with "..SUBPART" and three spaces separate the subpart number and the title.		
g. All notes have been correctly marked with "..NOTE-ST" and "..NOTE-END" and are in bold (incl. asterisks).		
h. In 1.2, all reference publication sources have been correctly marked with "..REFST" and "..REFEND".		



Review guide specification to ascertain that:	Check	Remarks
i. All reference publication sources are in all CAPS.		
j. All reference listings are properly tokenized and the reference title starts in column 37 with succeeding lines starting in column 33 using layout 6.		
k. All table headers have been correctly marked with "..TBLHDR" and "TBLHDR-END."		
l. The ends of all tables have been correctly marked with "..TABLE-END."		
m. Paragraph text is in SPECSINTACT layout 1.		
n. Part and subpart number/title lines and all ".." commands are in SPECSINTACT layout 2.		
o. Note text is in SPECSINTACT layout 3.		
p. Paragraph sublevels "a.", "b.", and "c." are in layout 4.		
q. Paragraph sublevels "(1)", "(2)", and "(3)" are in layout 5.		
r. All blank underlines (____) are five spaces long and are hard (not coded) underlines.		
s. "-- End of Section --" and "-- End --" both start in column 6. "-- End of Section --" should be on the second line below the end of the section text and "-- End --" should be on the second line below the end of the document (after Criteria Notes).		
t. Hard-copy of NFGS section matches what is on the floppy.		
u. Spelling is correct. Use Volkswriter Spell-Check.		
v. Run reference verification report, submittal list, and test requirement report for spec editor.		

MIL-HDBK-1006/2

APPENDIX H  
RETIREMENT NOTICE

\*\*\*\*\*  
DEPARTMENT OF THE NAVY  
                  NFGS-02831  
NAVAL FACILITIES  
                  CANCELLATION NOTICE  
ENGINEERING COMMAND  
                  June 1988  
GUIDE SPECIFICATION  
\*\*\*\*\*

SECTION 02831

FENCE, CHAIN LINK  
3/88

\*\*\*\*\*

NFGS-02831 of March 1988 has been declared obsolete, not in compliance with current NAVFAC Criteria Program standards, and not consistent with the state-of-the-art. Therefore, NFGS-02831 of March 1988 is canceled for distribution, stocking, or use. All stocks should be destroyed. A master copy and all files associated with the NFGS will be retained by the Preparing Activity, WESTNAVFACENGCOM, Naval Facilities Engineering Command, for future consideration for retention in the NAVFAC Criteria Inventory. When considered valid for retention, the document will require complete revision to bring it up to NAVFAC standards and the state-of-the-art before it will be released for use in project specifications. Informational copies may be obtained from the Preparing Activity for review; however, the document shall not be used in a project specification without the written consent of the Preparing Activity.

[INSERT ADDITIONAL INFORMATION OR INSTRUCTIONS AS REQUIRED]

MIL-HDBK-1006/2

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MIL-HDBK-1006/2

APPENDIX I

CANCELLATION NOTICE

\*\*\*\*\*  
 DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES  
 ENGINEERING COMMAND  
 GUIDE SPECIFICATION  
 \*\*\*\*\*

NFGS-02831  
 CANCELLATION NOTICE  
 June 1988

SECTION 02831

FENCE, CHAIN LINK  
3/88

\*\*\*\*\*

NFGS-02831 of March 1988 is canceled. All stocks should be destroyed and copies retained for historical purposes only.

This document will no longer be available from any stock point.

[INSERT ADDITIONAL INFORMATION OR INSTRUCTIONS AS REQUIRED.]

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APPENDIX J

EXAMPLE OF THE SUBMITTAL ARTICLE FOR A SECTION

\*\*\*\*\*  
 NOTE: The following text is for Article 1.4 for a  
 sample section. The article would be arranged in  
 accordance with the text that follows.  
 \*\*\*\*\*

SECTION 16301

UNDERGROUND ELECTRICAL WORK  
04/84

1.4 SUBMITTALS

\*\*\*\*\*  
 NOTE: In projects using the Contractor Quality  
 Control System, add the words, "Submit to the  
 Contracting Officer.", to submittals deemed  
 sufficiently critical or complex or aesthetically  
 significant to merit approval by the Government.  
 \*\*\*\*\*

Submit the following in accordance with Section \-01300-\, "Submittals."

1.4.1 \\*SD-17, Manufacturer's Catalog Data

- a. Conduit
- b. Splice box
- c. Insulating tape
- d. High voltage cables
- e. High voltage splice kits
- f. High voltage terminating kits
- g. Pothead
- h. Terminator
- i. Precast manhole and handhole
- j. Manhole frame and cover
- k. Handhole frame and cover
- l. Cable lubricants
- m. Sealing material for precast manhole and handhole joints

- n. Telephone cable and splices
- o. Ground megger
- [p. Signal and control]\*\

1.4.2 \\*SD-35, Drawings

- a. Conduit
- b. Splice box
- c. High voltage cables
- d. Pothead
- e. Terminator
- f. Precast manhole and handhole
- g. Manhole frame and cover
- h. Handhole frame and cover
- i. Telephone cable and splices
- [j. Signal and control]
- k. Poured in place manholes and handholes\*\

1.4.3 \\*SD-44, Manufacturer's Instructions

- a. High voltage splice kits
- b. High voltage terminating kits
- c. Ground megger\*\

Include manufacturer's directions for use of ground megger with proposed method indicated.

1.4.4 \\*SD-52, Sample Panels

- a. High voltage cable splice\*\

Each cable splicer shall make an approved dummy splice in the presence of the Contracting Officer in accordance with cable manufacturer's instructions, before the splicer is approved to splice cable covered by this specification. Material for dummy splices shall be furnished by the Contractor.

1.4.5 \\*SD-66, Statements

- a. Qualifications of cable splicers\*\

#### 1.4.5.1 Experience of Cable Splicer

Before assigning cable splicers to work covered by this section, submit the names of the cable splicers to be employed, proof that each splicer has had at least 3 years experience in splicing high-voltage cables and proof that experience is with the type and rating of cables to be spliced.

#### 1.4.5.2 Certificate of Competency of Cable Splicer

Submit high voltage cable Splicer/Terminator certification of competency and experience [30] [\_\_\_\_\_] days before splices or terminations are made in high voltage cables. Splicer/Terminator experience during the immediate past 3 years shall include performance in splicing and terminating cables of the type and classification being provided under this contract.

#### 1.4.6 \\*SD-70, Test Reports

- a. Arc-proofing test for cable fireproofing materials
- [b. High voltage cables of X-Y corona discharge plot]
- [c. \_\_\_\_\_]\*\

#### 1.4.7 \\*SD-76, Certificates of Compliance

- a. Precast [manhole] [handhole] and accessories.
- b. [Manhole] [Handhole] frame and cover.
- c. High voltage cable.
- d. High voltage terminator.\*\

-- End --



MIL-HDBK-1006/2

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## MIL-HDBK-1006/2

## REFERENCES

Construction Specifications Institute (CSI) publications are available from Construction Specifications Institute, 601 Madison Street, Alexandria, VA 22314.

## CSI Manual of Practice

MP-2-1	Masterformat - Master List of Section Titles and Numbers
MP-2-2	Three-Part Section Format for Construction Specifications

FEDERAL/MILITARY SPECIFICATIONS, STANDARDS, BULLETINS, HANDBOOKS, AND NAVFAC GUIDE SPECIFICATIONS:

The following specifications, standards, bulletins, and handbooks form a part of this document to the extent specified herein. Unless otherwise indicated, copies are available from Commanding Officer, Naval Publications and Forms Center, ATTENTION: NPODS, 5801 Tabor Avenue, Philadelphia, PA 19120-5099.

## BULLETINS

MIL-BUL-34	Engineering and Design Criteria for Navy Facilities
MIL-BUL-35	Matrix of Guide Specifications for Facilities Construction - Federal and Private

## HANDBOOKS

MIL-HDBK-1006/1	Policy and Procedures for Project Drawing and Specification Preparation
MIL-HDBK-1006/3	Policy and Procedures for Engineering and Design Criteria Manual Preparation

## NAVFAC GUIDE SPECIFICATIONS

NFGS-01400	Contractor Quality Control (CQC) System
NFGS-01401	Contractor Inspection System
NFGS-15996	Testing /Adjusting/Balancing of Heating/Ventilating/Cooling Systems
NFGS-02050	Demolition and Removal
NFGS-11700	General Requirements for Medical and Dental Equipment
NFGS-15011	Mechanical General Requirements

MIL-HDBK-1006/2

NFGS-16011	Electrical General Requirements
NAVFAC P-68	Contracting Manual
NAVFAC P-272	Definitive Designs for Naval Shore Facilities

OTHER GOVERNMENT DOCUMENTS AND PUBLICATIONS:

The following other Government Documents, drawings, publications and instructions form a part of this document to the extent specified herein.

Department of Defense Index of Specifications and Standards (DODISS). DODISS is available as follows:

Military Activities:

Commanding Officer  
Naval Publications and Forms Center (NPFC 105)  
5801 Tabor Avenue  
Philadelphia, Pennsylvania 19120

Government Civil Agencies and Non-Governmental Activities (subscription basis only):

Superintendent of Documents  
U.S. Government Printing Office  
Washington, DC 20402

Federal Acquisition Regulation, FAR 52.236-21, Specifications and Drawings for Construction. Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325.

SECNAVINST P5212.5B, Disposal of Navy and Marine Corps Records, available from Commanding Officer, Naval Publications and Forms Center, ATTENTION: Code 3015, 5801 Tabor Avenue, Philadelphia, PA 19120-5099.

United States Government Printing Office Style Manual available from Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325.

CUSTODIAN  
NAVY - YD

PREPARING ACTIVITY  
NAVY - YD

PROJECT NO.  
FACR-0273

## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER MIL-HDBK-1006/2		2. DOCUMENT TITLE POLICY AND PROCEDURES FOR GUIDE SPECIFICATION PREPARATION	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
b. ADDRESS (Street, City, State, ZIP Code)		<input type="checkbox"/> VENDOR <input type="checkbox"/> EFD/PWO <input type="checkbox"/> USER <input type="checkbox"/> AE <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> CONTRACTOR <input type="checkbox"/> OTHER (Specify): _____	
		5. PROBLEM AREAS	
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) - Optional		b. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8. DATE OF SUBMISSION (YYMMDD)	

(TO DETACH THIS FORM, CUT ALONG THIS LINE)