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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.

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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 Code DS03.

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, Naval Facilities Engineering Command, Code DS02, 200 Stovall Street, Alexandria, VA, 22332-2300; phone commercial (202) 325-0450.

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

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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	HDQTRS
MIL-HDBK-1006/2A	Policy and Procedures for Guide Specification Preparation	HDQTRS
MIL-HDBK-1006/3B	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	HDQTRS

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POLICY AND PROCEDURES FOR
GUIDE SPECIFICATION PREPARATION

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Section 1: INTRODUCTION TO NAVFACENGCOM GUIDE SPECIFICATION PROGRAM

1.1 Purpose. This handbook provides policy and procedures for the Naval Facilities Engineering Command (NAVFACENGCOM) guide specification program and gives guidance to specification writers for preparing Naval Facilities Guide Specifications (NFGS).

1.2 Cancellation. This military handbook supersedes MIL-HDBK-1006/2, Policy and Procedures for Guide Specification Preparation of 31 January 1989.

1.3 NAVFACENGCOM Criteria Program. NAVFACENGCOM is the designated design agency for the construction of Navy and Marine Corps shore facilities and is also responsible for the same functions for selected Air Force facilities. A list of NAVFACENGCOM criteria, including guide specifications, is contained in Military Bulletin 34 (MIL-BUL-34), Engineering and Design Criteria for Navy Facilities.

1.4 NAVFACENGCOM Guide Specifications (NFGS)

1.4.1 Nature and Use of Guide Specifications. Guide specifications are manuscripts which are prepared for editing and incorporation into the contract documents of a specific construction project. A guide specification describes products and materials needed for construction projects. A guide specification facilitates the preparation of project specifications by standardizing products and processes and their order of presentation, allowing editing to adapt the guide specification to specific project requirements. A guide specification describes in detail:

- a) The product or system to be provided;
- b) The salient design features or performance requirements of the product or system;
- c) The quality of that product or system;
- d) The methods used to ensure the quality, including on-site and off-site testing;
- e) The method used to incorporate the product or system into the project; and
- f) Other features and activities necessary to satisfy project requirements.

1.4.2 Purposes of Guide Specifications. NAVFACENGCOM has developed over 300 guide specifications for use in the construction of shore facilities. The goals of the NAVFACENGCOM Guide Specification program are:

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- a) To include all the specification sections needed for the majority of Navy construction;
- b) To standardize the acquisition of facilities by offering specification sections which can be used as a basis for all construction projects;
- c) To ensure the use of materials and methods which meet the essential needs of the Government at the lowest life-cycle cost;
- d) To maintain a guide specification library in which each document is considered a "living document," reflecting the latest appropriate technology available in the marketplace.
- e) To reflect an ever increasing quality and consistency in applying NFGS policy and format, to facilitate consistent and problem-free project specifications.
- f) To implement and comply with Federal Acquisition Regulation (FAR), Part 10, and the Defense Standardization and Specification Program (DSSP), as applicable for facilities construction, including the application of commercial practice as promulgated by the Construction Specifications Institute (CSI).

1.5 SPECSINTACT. NAVFACENGCOM uses a specifications format and processing system called "SPECSINTACT," an acronym for "Specifications-Kept-Intact." SPECSINTACT is a part of the Construction Criteria Base (CCB) - a compact disc with a read-only memory (CD-ROM) published quarterly. The CCB also contains the text of the guide specifications, the reference specifications cited in them, and other criteria related to facilities construction. Prepare and revise NAVFAC Guide Specifications using SPECSINTACT.

1.6 Role of 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. 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. Since project drawings and specifications must be thoroughly coordinated, the author of a guide specification must consider the appropriate role of the drawings and specifications to confirm that:

- a) Everything which will be appropriately shown on the drawings is specified properly in the specifications.

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b) Those requirements not appropriately shown on the drawings, but necessary to complete the work, are specified.

c) Potential conflicts between the requirements of the drawings and the specifications are anticipated and minimized.

d) Information normally shown on the drawings is not specified, but is listed in the "drawings include" note.

1.6.1 Drawing Requirements. 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. Drawings depict:

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

1.6.2 Specification Requirements. The specification provides information governing:

- a) The product or system to be provided;
- b) The salient design features or performance requirements of the product or system;
- c) The quality of that product or system;
- d) The methods used to ensure the quality, including on-site and off-site testing;
- e) The method to be used to incorporate the product or system into the project; and
- f) Other features and activities necessary to satisfy project requirements.

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Section 2: MANAGING THE NAVFACENGCOM GUIDE SPECIFICATION PROGRAM

2.1 Central Management. The NAVFACENGCOM Design Support Office (DSO), which reports to the Assistant Commander for Engineering and Design, has the responsibility for the management of the guide specification program.

2.1.1 NAVFACENGCOM Code DS03 Functions. DS03 provides overall guidance for and execution of the NFGS portion of the NAVFACENGCOM engineering and design criteria. DS03:

- a) Ensures the technical adequacy of each NFGS and establishes and implements procedural and format requirements for the guide specifications.
- b) As input to the NAVFACENGCOM criteria development program, determines the scope of each NFGS and determines the need for updating, cancelling, preparing new, and revalidating NFGS, including those to be acted upon by DS03 and those to be acted upon by the assigned preparing activities. DS03 updates guide specifications, except those assigned to the preparing activities for update.
- c) Reviews, approves, issues, revalidates, and cancels guide specifications; arbitrates resolution of technical conflicts; and performs technical, policy, and format quality control on revisions prepared by the various preparing activities.
- d) Responds to suggestions for changes to the guide specifications.
- e) Ensures market research, informal criteria sharing, and technical feedback from within NAVFACENGCOM.
- f) Prepares amendments to guide specifications, in consultation with the preparing activities.
- g) Maintains the SPECSINTACT library of NFGS, the database of NFGS graphics, and various indexes and changes lists, sending a quarterly update to the National Institute of Building Sciences and other distribution outlets.
- h) Maintains the Engineering Criteria Management System (ECMS) with respect to NFGS, consulting with DS02 regarding planning entries and assignments of preparing activities.
- i) Maintains a telephone "hotline" to answer questions regarding the NFGS program on specific NFGS.
- j) Through Civil Engineer Support Office (CESO) Code 158H, provides support regarding the SPECSINTACT computer programming.

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k) Serves as the chairman of the Agency SPECSINTACT Configuration, Control, and Coordinating Board (ACCCB) of NAVFACENGCOM.

2.1.2 NAVFACENGCOM Code DS02 Functions. DS02:

a) Manages the NAVFACENGCOM criteria development program, including the acquisition and distribution of resources.

b) In the context of the criteria development program and based on the input from DS03 and others, prepares 5-year criteria plans as well as the more detailed 1-year plans for the creation, cancellation, updating, and revalidation of NFGS; assignment of the updating responsibilities; and determination of the scopes of work for the affected NFGS.

c) Provides long range planning with respect to overall policy for all criteria related to facilities engineering and design, and associated interface of the specifications with the standardization of drawings and computer-aided design programs.

d) Manages the program of formal criteria sharing with other agencies;

e) Monitors application of commercial practice;

f) Manages reference standards programs;

g) Provides interface with other agencies, DOD, and non-Government standard setting bodies in regards to policy issues;

h) Assigns the preparing activity responsibility for each NFGS, to a NAVFACENGCOM Engineering Field Division (EFD) or other NAVFACENGCOM activity and maintains ECMS in this respect;

i) Prepares and maintains MIL-HDBK-1006/2.

2.1.3 NAVFACENGCOM Code DS01 Functions. DS01 is responsible for Construction Criteria Base (CCB) policy and activities, and SPECSINTACT computer-related policies and procedures. DS01 identifies and implements training needed in regard to SPECSINTACT processing, and provides computer system consultation to DS03 regarding SPECSINTACT.

2.2 Preparing Activity Management. NAVFACENGCOM Code DS02 assigns each NFGS to a preparing activity, which is an EFD or other NAVFACENGCOM activity. These assignments generally reflect the expertise of the EFD or activity in the specific design discipline or subject matter covered by the guide specification. The preparing activity maintains the expertise in the subject area and supports DS03 in an ongoing, consulting basis regarding the NFGS.

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When so designated in the 1-year update plan, the preparing activity serves as the author of an NFGS, from an initial draft through a final submission to DS03.

2.2.1 Criteria Manager/Coordinator Functions. At the EFD or other NAVFACENGCOM activity, a criteria manager/coordinator is responsible for the management of the guide specifications assigned to the EFD or activity. The criteria manager/coordinator is the interface between NAVFACENGCOM, other preparing activities, and the EFD or unit regarding NFGS's. The criteria manager/coordinator reports the assignment of a specific guide specification to a knowledgeable architect-in-charge/engineer-in-charge (AIC/EIC) within the preparing activity and reports the progress and status of each NFGS using the ECMS. The criteria manager/coordinator ensures local procedures are in place for the updating process, including coordination and resolution of comments, to the extent required. The CM maintains the preparing activity portion of the ECMS.

2.2.2 Architect-in-Charge/Engineer-in-Charge Functions. The AIC/EIC to whom a guide specification is assigned is responsible for advising DS03 as to the technical adequacy of the guide specification. When an NFGS is being updated by the preparing activity, the AIC/EIC serves as the author, meeting the assigned schedule and performing the duties from initial draft through final submission which the EFD or activity procedures require of the author.

2.3 Engineering Criteria Management System (ECMS). The ECMS is a computer database which contains information on all the criteria managed by DS02, including the guide specifications. It is the management tool used in the engineering and design criteria program. It can be accessed by terminals throughout NAVFACENGCOM.

2.4 Assignment of Section Numbers and Titles. DS03 assigns titles and numbers for NAVFACENGCOM guide specifications based on CSI Masterformat for the scope established in the criteria development program. Do not start a new guide specification or update an existing guide specification until the section number and title have been assigned or verified by DS03. This prevents assignment of more than one title to a section number and more than one section number to the same title. Do not assume that the number and title assigned to an existing guide specification have not changed since the document was created.

2.5 Revisions to NFGS. NFGS are dynamic, changing documents maintained to reflect current reference standards, building technology and industry capabilities, Navy requirements, and NAVFACENGCOM policy and format. NAVFACENGCOM uses the following definitions.

2.5.1 Revision. A published, changed NFGS, indicated by a postscript in the banner of the NFGS, e.g., NFGS-02551B, superseding NFGS-02551A. The two types of revisions used for NFGS are updates and amendments.

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2.5.1.1 Update. The process and product of reviewing and rewriting a NFGS, during which the author considers all aspects and portions of the NFGS. The product of the process is a revision which DS03 records in ECMS with a change to both the "Issue Date" and "Document Date."

2.5.1.2 Amendment. The process and product of rewriting an NFGS during which the author considers only one issue or a limited number of issues. The product of the process is a revision which DS03 records in ECMS with a change only to the "Document Date."

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Section 3: THE NFGS AS LIVING DOCUMENTS; AMENDMENTS

3.1 Ongoing Review. NAVFACENGCOM Code DS03 regularly reviews the currentness of each NFGS. Revisions of reference documents, feedback from DD Form 1426, Standardization Document Improvement Proposal, and other vehicles of comment, feedback from the DS03 "hotline" for interactive NFGS questions, and appraisals by the preparing activity indicators of appropriate focus of the ongoing reviews.

3.2 Revalidation of Guide Specifications. DS03 is responsible for yearly revalidation of the guide specifications by updating the references, inputting technical changes, incorporating SPECSINTACT format changes, and obtaining new preparing and approval signatures from the preparing activity for any specification that has a NAVFACENGCOM approval date of one year or older.

3.3 Quarterly Updating. DS03 prepares amendments, directly or through action by the preparing activity. DS03 publishes amendments as revisions in the CCB and distributes them in the format required for Navy Publications on Demand System (NPODS), to the Navy Publications and Forms Center (NPFC). DS03 actions include consultations with the preparing activity.

3.4 Procedures for Amendments. Submit proposed amendments or changes to DS03 in any one of the following ways:

a) Call the guide specification "Hotline" and give the proposed change and reason for change to the appropriate DS03 personnel (e.g. Civil, Structural, Mechanical, Electrical Engineer or Architect).

b) Submit a mark-up of the specification showing exactly what the changes are along with sufficient documentation to support the proposed change.

c) Send a letter describing the changes being suggested and their reasons, naming a point of contact for further discussion.

d) Use DD Form 1426.

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Section 4: GUIDE SPECIFICATION UPDATES

4.1 Determining the NFGS Update Plan. Procedures for determining the NFGS yearly update plan are as follows:

4.1.1 PA Responsibilities

a) By 15 November of each year, the PA will develop and submit to DSO2 a listing of NFGS for which it is the preparing activity, by order of need for update. The listing should reflect the relative success of each NFGS in meeting the goals for the NFGS program as stated in paragraph 1.4. Apply the following guidelines:

(1) Place documents scheduled to be under revision at the end of the then-current fiscal year at the top of the listing.

(2) Note documents recommended for cancellation.

(3) Include and note recommendations for new guide specifications, also indicating if the listing activity would be available to serve as the preparing activity for the proposed guide specification.

(4) Note documents requiring revalidation, i.e., those not recommended for update, and place them at the end of the listing.

(5) Include work hours and cost for each NFGS, including those requiring revalidation.

b) Each activity may also submit a separate listing of other NFGS which it views as in need of update, such as when an update could incorporate a regional requirement.

c) Funding requests anticipate support for amendments, coordinations, and consultations and maintenance of technical expertise. These functions are integral parts of the duties of the preparing activities under the 1-year plan; requests for such actions are not changes to the plan on an individual basis. However, a preparing activity may make or accept subsequent additions or deletions to the 1-year plan as resources permit, and if endorsed by DSO3 and approved by DSO2.

4.1.2 DSO3 Responsibilities. By 15 November DSO3 will develop and submit to DSO2 a listing of NFGS's in recommended update order, based on technical evaluation and information from feedback mechanisms. Include all NFGS's that require validation.

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4.1.3 DSO2 Responsibilities

a) By 30 December, DSO2 will compile a preliminary 1-year plan, consisting of a consolidated list of NFGS which will be the subjects of update in the next fiscal year, in priority order. The preparing activities will be asked to comment and DSO3 and other NAVFACENGCOM headquarter codes will be asked for comment or approval. DSO3 review will include a decision as to which NFGS will be updated by DSO3 and which by the preparing activities.

b) By 15 February, DSO2 will provide a finalized 1-year plan for the upcoming fiscal year to DSO3 for concurrence.

c) By 1 April of each year, DSO2 will forward the funding request, resulting from the finalized plan to the NAVFACENGCOM comptroller. Concurrently, DSO2 will disseminate the 1-year plan to the preparing activities.

4.2 Scheduling NFGS Updates. By 1 June of each year, the activity updating the document, enters the planned schedule of each document into ECMS. The updating activity may revise the planned schedules as approved by DSO3, and enter the actual milestones as phases are begun. The following schedules indicate recommended time periods for the possible criteria actions.

SCHEDULE FOR ADOPTION OF SHARED GUIDE SPECIFICATIONS

<u>PHASE</u>		<u>ELAPSED DAYS</u>	<u>ECMS ENTRY</u>
(A)	START		901001
		30	
(B)	FIRST DRAFT		901101
		0	
(C)	COORDINATION		901101
		90 days	
(D)	RESOLUTION		910201
		60 days	
(E)	FINAL DRAFT		910401
		30 days	
(F)	SUBMIT		910501
		30 days	
(G)	APPROVAL		910601
TOTAL TIME		240 days	

Adoption requires only minor formatting and reference changes but requires a coordination since the specification is new to the NAVFACENGCOM System. Note that where a phase is not applicable, the preceding date is repeated to conform to ECMS database requirements.

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SCHEDULE FOR AN UPDATE WITHOUT A COORDINATION

<u>PHASE</u>		<u>ELAPSED DAYS</u>	<u>ECMS ENTRY</u>
(A)	START		901001
		60 days	
(B)	FIRST DRAFT		901201
		0	
(C)	COORDINATION		901201
		0	
(D)	RESOLUTION		901201
		30 days	
(E)	FINAL DRAFT		910101
		30 days	
(F)	SUBMIT		910201
		30 days	
(G)	APPROVAL		910301
TOTAL TIME		150 days	

An update without a coordination may include informal consultations with other activities as appropriate and must include a market survey of industry during the first draft. Note that where a phase is not applicable, the preceding date is repeated to conform to ECMS database requirements.

SCHEDULE FOR CREATION OF A NFGS OR FOR AN UPDATE INCLUDING COORDINATION

<u>PHASE</u>		<u>ELAPSED DAYS</u>	<u>ECMS ENTRY</u>
(A)	START		901001
		60 days	
(B)	FIRST DRAFT		901201
		60 days	
(C)	COORDINATION		901201
		90 days	
(D)	RESOLUTION		910501
		60 days	
(E)	FINAL DRAFT		910701
		30 days	
(F)	SUBMIT		910801
		30 days	
(G)	APPROVAL		910901
TOTAL TIME		330 days	

A creation or an update with a coordination requires a period for review and resolution of comments.

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SCHEDULE FOR CANCELLATION OF A NFGS

<u>PHASE</u>		<u>ELAPSED DAYS</u>	<u>ECMS ENTRY</u>
(A)	START	0	901001
(B)	FIRST DRAFT	0	901001
(C)	COORDINATION	60 days	901001
(D)	RESOLUTION	30 days	901201
(E)	FINAL DRAFT	30 days	910101
(F)	SUBMIT	30 days	910201
(G)	APPROVAL	30 days	910301

TOTAL TIME 150 days

A cancellation requires only the preparation of the required form and a letter of transmittal by the preparing activity to DSO3. DSO3 will cancel in accordance with DOD Manual 4120.3M, Defense Standardization and Specification Program Policies, Procedures and Instructions (DSSPP). Note that where a phase is not applicable, the preceding date is repeated to conform to ECMS database requirements.

4.3 Update Procedure. An update always includes:

- a) A reconsideration to cancel the NFGS;
- b) A verification of the appropriateness of the NFGS number, title, and scope;
- c) A review to see if criteria sharing is possible;
- d) A market survey of the state of the industry using letter No. 2 of Appendix C;
- e) A redrafting of the NFGS;
- f) Contact with industry to verify the market survey;
- g) A final draft;
- h) A quality control review by the preparing activity;
- i) A submission of the draft; and

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j) A final review and approval of the draft by DSO3. New NFGS are considered as updates insofar as their processing procedures. The update of new or sensitive, controversial NFGS will include coordination among industry, other agencies, and NAVFACENGCOM.

4.3.1 "Start" Phase. The primary activity of this phase is the initial research to write the NFGS. In preparation, reconsider the option to cancel the NFGS; verify the number and title of the NFGS with DSO3 and the scope with DSO2; review and determine the appropriate needs of the Navy; review guide specifications of other agencies to see if criteria sharing is possible; and survey the marketplace to assess the state-of-the-art of the products available.

4.3.2 "First Draft" Phase. The primary activity of this phase is the actual rewriting of the NFGS. If the author does not intend to enter the SPECSINTACT text and coding personally, it is the period of typing from a rough draft created in the preceding phase. Unless the document is to be the subject of a coordination, the author seeks industry review at the conclusion of this phase, as a confirmation and testing of the market survey.

4.3.3 "Coordination" Phase. Coordination of a guide specification consists of seeking comments from Navy, other Government agencies, and industry, and resolving the essential comments to the satisfaction of the commenter. Use the process 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. Decide to seek a coordination on a case-by-case basis.

4.3.3.1 Request for Comments. When coordination is required, provide a copy of the guide specification, along with NAVFACENGCOM Form 11012/9 (5-90), Engineering and Design Criteria Review, (Appendix D) as enclosures to the letter to each prospective reviewer. Specify the time limit for responses by reviewers. The minimum time period is 60 calendar days.

4.3.3.2 Government Coordination 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. Note that DSO2 will seek comments from NAVFACENGCOM Headquarters codes (except DSO3), and other Government agencies; do not contact these reviewers but do alert DSO2 to instances of known interest by reviewers in those categories.

4.3.3.3 Industry Coordination. The purpose of industry review is to obtain additional technical guidance and to ensure that, when completed, a guide specification is usable. Compile industry sources from a broad spectrum of the affected industry. Several building industry catalog publishers provide 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.

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4.3.3.4 Coordination Comments. Follow these guidelines in providing NAVFACENGCOM comments:

- a) Make comments on NAVFACENGCOM Form 11012/9 (5-90) or an electronic version thereof. Fill out the form completely.
- b) Give specific recommendations for a solution, followed by a reason which defines the problem. General, vague criticisms are unacceptable.
- c) Type or generate comments by computer. If comments are not typed, letter them with quality meeting drafting standards.
- d) To clarify comments, mark-up the paper copy of plates, figures, and artwork included in the guide specification.
- e) Label comments as "Essential" only if the comments address technical or policy issues which must be adopted or reconciled if the guide specification is to be of use to the reviewing activity. Accompany essential comments with a reason. Suggested comments are comments which the reviewer does not require for the guide specification to be of use to the reviewing activity and comments dealing with typographical errors or format.

4.3.3.5 Return of Coordination Comments. Address comments to the criteria manager/coordinator or to DSO3 as applicable, using Letter No. 5, Appendix C. Respond to a request for review by the date stipulated in the forwarding letter. The unit preparing the update may grant extensions if a reviewer requests a longer time interval. If comments received after the closing date would delay the update, they may be incorporated or considered in a subsequent amendment or revision, at the discretion of the author.

4.3.4 "Resolution" Phase. For an update with a coordination, the principal activity of this phase is the formal resolution of the comments. For an update with only industry comment, the period is for the resolution of the industry comments and further review and correction of the initial draft by the author.

4.3.4.1 Responsibility for Resolution of Comments. The author has a responsibility to resolve all comments submitted as a result of the coordination process. Review the comments on the guide specification and resolve each comment consistent with the results of consultation with the reviewer, technical requirements, and NAVFACENGCOM policy.

4.3.4.2 Resolution Procedures. Consult with reviewers and obtain their assurances that comments have been resolved satisfactorily. Telephone contact between the author and reviewers to resolve comments is encouraged; avoid costly conferences or extensive correspondence for resolution of differences. If the comments are voluminous, the author may request a meeting of the commenters and the author to avoid recoordination.

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4.3.4.3 Acknowledgment of Comments. Return a copy of NAVFACENGCOM Form 11012/9 (5-90) to the criteria coordinators/managers of the reviewing activities who provided comments, annotated to show the disposition of the comments. Use forwarding Letter No. 6, Appendix C. In addition, respond to those industry reviewers who provided comments, explaining the disposition of their comments. Use forwarding Letter No. 7, Appendix C. If a reviewer's comment was not incorporated, include an explanation of why the comment was not accepted.

4.3.5 "Final Draft" Phase. The principal activity during this phase is the correction of the text as required by the resolved comments from coordination, industry review comments, and further rewriting by the author. The phase also includes a quality review of the text, using the checklists which appear as Appendices E and F. Some SPECSINTACT coding checks may be made by diagnostic programs available at each preparing activity and NAVFACENGCOM Codes DSO1 and DSO3.

4.3.6 "Submittal" Phase. Submit the following to DSO3, using letter No. 9, Appendix C.

- a) 5 1/4-inch diskette with the NFGS text in SPECSINTACT.
- b) Paper copy with notes and tokens and a signed title sheet.
- c) Diskette and paper copy of graphics, if any.
- d) Coordination comments with resolution noted, if any.
- e) A completed "NFGS Prepared in SPECSINTACT: Checklist for Technical, Policy, and Format" (Appendix E).
- f) A completed "NFGS Prepared in SPECSINTACT: Checklist for Machine Function" (Appendix F).

4.3.7 "Approval" Phase. DSO3 reviews final drafts for technical, policy, and format issues. If changes to the guide specification required by DSO3 are minor, revisions to the guide specification will be made by DSO3 as a part of its final review. DSO3 has the option of returning the guide specification to the preparing activity for incorporating corrections resulting from the final review.

4.4 General Procedural Issues

4.4.1 Referral of Unresolved Comments to NAVFACENGCOM Code DSO3. 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 preparing activity's recommended action, to DSO3 for a decision. Send the entire file on the guide

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specification. Use forwarding Letter No. 8, Appendix C. DS03 will make a final decision on the disposition of unresolved comments.

4.4.2 Establishing and Retaining a Permanent Record. The preparing activity must establish and maintain 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. Retain a hard copy of the approved guide specification and all subsequent amendments in the file. Retain supporting records accumulated in the creation or revision of a guide specification until the completion of the third subsequent update of the guide specification.

4.4.3 Criteria Sharing. Criteria sharing of guide specifications is the use of common text between two or more agencies. NAVFACENGCOM recognizes two levels of criteria sharing.

a) Formal criteria sharing: The text of an NFGS and another agency specification are identical, except that the respective banners identify the document as a part of the guide specification library of each agency. The special requirements of each agency are identified in the common text and presented in guide specifications of both agencies.

b) Informal criteria sharing: An NFGS is based on the text of a published or proposed guide specification of another agency, but without a formal attempt to retain the precise wording.

4.4.3.1 Formal Criteria Sharing. Identify documents to be involved in the program of formally shared criteria in the 1-year criteria plan. If the document is to be formally shared criteria, consult with DS02 and prepare the common version. Particular protocol and procedures apply as developed by DS02. Identify the shared document, in the banner, as shown below:

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

or

CRITERIA SHARING PROGRAM
 Shared with U.S. Army COE
 CECS-_____

4.4.3.2 Informal Criteria Sharing. During the initial preparation of an update, conduct research to discover if more current and usable criteria are available from other Government agencies such as the National Aeronautics and

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Space Administration (NASA) or the Army Corps of Engineers (COE). If usable criteria are found, consider adapting the agency's document. Apply the order of information and the standard policy and format issues of the NAVFACENGCOM guide specification to such documents.

4.4.3.3 Recording Sharing Actions. Record formal or informal decisions to share criteria in ECMS "Job Notes" as follows: "[Entry date] Criteria-shared document: [other agency document and date]." Enter this note at the time of decision for a criteria-shared use, whether formal or informal; concurrently notify DS02 of the decision to share criteria.

4.4.4 Canceling a Guide Specification. To cancel a guide specification is to delete the guide specification from the NAVFACENGCOM guide specification inventory. The suggestion to cancel an NFGS must be a coordination action, using the Letter No. 1 of Appendix C. DS03 will cancel guide specifications using the appropriate Defense Standardization and Specification Program (DSSP) form, if it falls into one or more of the following categories:

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

The preparing activity may use Letter No. 1, Appendix C, to suggest the cancelling of a guide specification.

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Section 5: CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI) FORMAT

5.1 Attributes of CSI System. NAVFAC policy is to use 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;
- b) Facilitates locating specific information as a result of the 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;
- e) Reduces the chance for omission or duplication of items by the use of consistent and repetitive procedures; and
- f) Serves as "the standard" for specifications by the construction industries of the United States and Canada.

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

	- Bidding Requirements and Contract Documents
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

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5.3 CSI Section Function. A section is a subdivision of the complete project specification, describing a unit of work for a construction project in the form of instructions to a Contractor. CSI places each section within one of 16 divisions and gives it a 5-digit number. The section provides for recognition of a basic unit of work. A section must answer three fundamental questions:

- a) What interrelationships will exist between the unit of work, other work on 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?

5.3.1 Section Titles and Numbers. Numbers and titles are assigned to preserve a constant and logical order and to accommodate variables encountered between projects. For each division, CSI MP-2-1 lists a number of related broadscope, mediumslope, and narrowscope section titles.

5.3.2 Section Parts. A section is divided into three parts as follows:

- a) Part 1: General
- b) Part 2: Products
- c) Part 3: Execution.

5.4 Article and Paragraph Titles Included in Each Part of a Section. 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 tasks 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. Select appropriate titles 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.

5.4.1 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 6.4.1)

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- b) REFERENCES
- c) RELATED REQUIREMENTS (not from CSI)
- d) DEFINITIONS
- e) SYSTEM DESCRIPTION
 - (1) Design Requirements
 - (2) Performance Requirements
- f) SUBMITTALS (see paragraphs 6.3.6 through 6.3.9.6)
- 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
- 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

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5.4.2 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
 - (2) Inspection
 - (3) Verification of Performance

5.4.3 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 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

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- (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; treat them as such.

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Section 6: SECTION CONTENT AND POLICIES

6.1 Contractual Issues

6.1.1 Parties to the Contract. There are only two parties to a Government contract: the Contracting Officer and the Contractor. Do not use other terms to indicate parties to the contract, and do not introduce other individuals 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 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."

6.1.2 Conflicts With the Contract Clauses. Do not repeat the Contract Clauses in the guide specifications. 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, make direct reference 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 may be occasions when the author of a guide specification should anticipate the need to activate these clauses.

6.1.3 Contractor Direction. Avoid the term "the Contractor shall." 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. Avoid using the guide specification to instruct the Contracting Officer.

6.2 Application of the CSI Three-Part Section Format. Always express the three parts in the section text. The following special cases occur:

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.

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b) For those sections not involving work on the site by the Contractor, Part 1 would be "General" and Part 2, "Products." 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, make a cross-reference to another section by section title.

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."

d) For those sections involving administrative requirements, and have no requirements for material or site labor, "Part 2" and "Part 3" are both listed as "Not Used."

6.3 Guide Specification Identification

6.3.1 Banner. Identify each guide specification by a guide specification number located in the upper right-hand corner of page one and on the title page. See paragraph 7.2 for sample formats.

6.3.2 Header. Further identify each guide specification by a section number, title, and date (below the banner).

6.4 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

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- h) Delivery, Storage, and Handling
- i) Site Conditions
- j) Sequencing and Scheduling
- k) Warranty
- l) Maintenance.

6.4.1 Summary. NAVFACENGCOM does not use this article. However, to facilitate the use of SPECSINTACT, show it as article 1.1 in each guide specification. "Summary" articles are restricted as a matter of policy. Do not include text under a "Summary" paragraph. This prohibition includes use of such an article or paragraph ("Summary," "Section Includes," "Description of Work," "[Title of Section]," "General Requirements," and "General") anywhere in the guide specification as an opportunity to list what the section includes or excludes.

6.4.2 References. Always include an Article 1.2 entitled "References." Follow the formatting requirements prescribed in Section 7; list each publication referred to in the text of the guide specification.

6.4.2.1 Ensure Applicability of References. Review reference publications for applicability prior to use.

6.4.2.2 Minimize References. Minimize the number of references, conforming to a NAVFACENGCOM goal of reducing marginally used references. Delete marginally useful references; if only a small portion of a reference applies, extract the pertinent text from the reference publication and include it in the guide specification.

6.4.2.3 Follow Order of Preferences for References. Use nationally recognized industry and technical society specifications and standards to the maximum extent possible. Where none is available, use Federal and military specifications. In the text of the guide specification, do not repeat the requirements of the documents referenced. Select references in the following order of precedence:

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

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6.4.2.4 Tailor References. Tailor reference standards, as follows:

- a) Select types, styles and classes and other "ordering information" which is to appear in the contract. Where possible amplify options, e.g., "[Type 1, light duty]" in lieu of "[Type 1]."
- b) Limit the application to the specific aspect, citing the paragraph title or subject area intended to be applied.
- c) Invoke only a portion by taking exception to the unnecessary portion.
- d) Eliminate those tests and other quality assurance provisions which are not actually necessary to provide the essential level of quality required to satisfy Government functional requirements.

6.4.2.5 Avoid Tiering of References. Avoid tiering by the following means:

- a) Limit application of secondary documents through tailoring.
- b) Cite, in the guide specification, preferences which are necessary but would otherwise be cited in the fourth tier or lower.
- c) Cite, in the guide specification, references which contain responsibilities normally fulfilled by the prime Contractor but which would otherwise be cited in the second tier or lower.

6.4.2.6 Use Current References. Refer to the most recent publication when preparing a guide specification. Use the U.S. Army Corps of Engineers (COE) Single Master Reference List, Information Handling Services VSMF, the Department of Defense Index of Specifications and Standards (DODISS), or other reliable sources to obtain a current reference publication.

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.

6.4.2.7 References to Military Handbooks and Design Criteria. Do not use Military Handbooks (or NAVFAC Design Manuals) as references in the text of guide specifications. Do not use other NAVFAC design criteria as references in the text of guide specifications. These documents may be referred to in the Criteria Notes, when appropriate.

6.4.2.8 References to Qualified Products Lists (QPL). Do not use QPL directly as references. QPL may be invoked by reference to their associated referenced specification.

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6.4.3 Related Requirements. Include this article 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."

6.4.4 Definitions. Refer to CSI's Manual of Practice (Part II, Chapter 1) for how to use this article. If required, define words or terms used in the guide specification that are not commonly known or that could be misinterpreted. Verify definitions.

6.4.5 System Description. Restrict use of this article 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 of composite and operational properties to the extent necessary to link multiple components of a system together and to interface with other systems. Refer to CSI's Manual of Practice (Part II, Chapter 1) for how to use this article. Do not use this article merely to state the scope of the section.

6.4.5.1 NAVFACENGCOM Design Criteria in a Guide Specification. Include NAVFACENGCOM 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.

6.4.6 Submittals. "Submittals" is the legal term for materials required of the construction Contractor for review and approval during construction contracts, to demonstrate conformance with the design concept and the contract documents or to ensure that an administrative requirement of the project is being met. Treat information required of the Contractor as a submittal only if it is intended to be for review and approval. Under this article, include details and instructions which pertain to the data to be submitted before, during, and after construction, if the information is unique to the particular guide specification.

6.4.6.1 Approval of Submittals. Do not specify in a guide specification who will approve a submittal. See paragraph 7.5.2.2 for various options to designate review procedures.

6.4.6.2 Limiting Quantity of Submittals. Limit the number of required submittals to those absolutely necessary to ensure the quality of the work and

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compliance with the contract documents. Encourage the deletion of extensive submittals intended for the largest of projects with brackets and explanatory notes.

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

6.4.7.1 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.

6.4.7.2 Product Data. This is any submittal prepared from standard data preprinted by a product's manufacturer. Use where standard catalog cuts, manufacturer's specifications, or other standard published data are sufficient.

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

6.4.7.4 Administrative and Closeout Submittal. This is any submittal establishing an administrative requirement. Material relating to the administrative functioning of the project, nevertheless intended for review and approval, is included. Also included are submittals of evidence of Contractor's permits, etc., if the author wishes to encourage the review and approval of such records.

6.4.8 Submittal Descriptions. 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 paragraph 7.10.2 of this handbook. Note that NFGS-01300 broadens the impact of FAR 52.236-21, Specifications and Drawings for Construction, to refer to all submittals.

6.4.9 Meanings of Certain Types of Submittals

6.4.9.1 Testing Reporting Requirements. NAVFACENGCOM guide specifications may require the submittal of reports for three types of tests:

a) Test Reports for tests done on prototypical material or products;

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b) Factory Test Reports for tests conducted specifically for the project on material prior to its installation; and

c) Field Test Reports for tests done from material on-site or after its installation.

6.4.9.2 Test Reports. List the test reports if submittal of reports for tests required in specifications or referenced documents is desired. Test reports are to be for tests made within the previous 3 years on samples of the same types of materials which are to be incorporated into the work.

6.4.9.3 Factory Test Reports and Field Test Reports. The guide specification should list the tests required in the "Source Quality Control" or "Field Quality Control," if the Contractor is to perform the testing (assumed to be the case). Although test reports usually echo the testing required in "Source Quality Control" or "Field Quality Control," please note that it is acceptable to require factory or field testing without requiring the submittal of a report.

6.4.9.4 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. Be aware that certificates of compliance are accompanied by reports of all tests required by references or in the specification, unless an exception is made.

6.4.9.5 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. Specify the content and features to be illustrated in the sample panel.

6.4.9.6 Operation and Maintenance (O & M) Manuals. Coordinate requirements with NFGS-01730, Operation and Maintenance Data. Specify a particular data package and the precise product or system to be the subject of operation and maintenance data. Do not repeat requirements of NFGS-01730. Specify training in operation, maintenance, safety, and emergency procedures in Part 3 under an article entitled "Demonstration."

6.4.10 Quality Assurance. General and administrative functions regarding quality assurance is specified in NFGS-01400, Contractor Quality Control (COC) System, or NFGS-01401, Contractor Inspection System; however, the author of another NFGS may include exceptions or additions to NFGS-01400 or NFGS-01401 not applicable to other guide specifications in Part 1. The guide specification must state the quality level required for its item of work. Although usually established by application of reference specifications,

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submittals, testing, or product and field description, some general quality assurance methods are specified here when applying the CSI Manual of Practice.

6.4.10.1 Experience Clauses. Generally, do not include in a guide specification experience clauses which require a Contractor to demonstrate a stated level of experience. Include a Contractor's experience clause only if special qualifications are required to perform the work of a guide specification satisfactorily. 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. Include provisions in the guide specification which establish the criteria to be used in verifying the qualifications of a firm to do the work. Do 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 the proposed text to a Level 1 Contracting Officer for approval, 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 memorandum of approval for the record. Note that the submittal of evidence of acceptable experience is not in the article "Quality Assurance" but is a part of the article "Submittals."

6.4.10.2 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.

6.4.11 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
- d) Handling of materials and equipment
- e) Security requirements.

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6.4.12 Site Conditions. Group under this article 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. Discuss subjects such as "existing conditions," and "environmental protection requirements" under this article. Division 1 guide specifications cite many project conditions which must be maintained; do not duplicate those requirements in other guide specifications.

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

6.4.14 Warranty. It is the policy of NAVFACENGCOM not to include special warranty clauses, other than those provided in the Contract Clauses, i.e., a 1-year warranty by the Contractor or a manufacturer's standard commercial warranty. If the author considers a warranty clause, in addition to the requirements in the Contract Clauses considered vital to a guide specification, submit proposed warranty clauses for approval to a Level 1 Contracting Officer as a part of the coordination process. Prepare the justification for requiring a warranty clause and submit it with a copy of the proposed guide specification. If approved, the Level 1 Contracting Officer will provide a memorandum of approval for the record. Do not use the term "guaranty" in lieu of "warranty."

6.4.15 Maintenance. This article is seldom used; normally it is used only for the Extra Materials paragraph, which can become the article title.

6.4.15.1 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 if there is a possibility that these materials would be required.

6.5 Part 2 PRODUCTS. Included as products are materials, mixes, fabrication, and manufacture. For military construction, it is DOD policy to specify those materials, equipment, and methods that provide facilities at a minimum life-cycle cost consistent with functional and aesthetic requirements, reasonable comfort, and sound architectural and engineering practice. Use materials, equipment, and methods which provide the lowest life-cycle cost over the life expectancy of the facility. Wherever possible, specify materials, equipment, and methods used in the civilian construction industry, which have proven performance and life-cycle cost records. Include the following articles in Part 2, as required:

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

6.5.1 Materials/Manufactured Units/Equipment/Components/Accessories.

Include articles describing in detail the requirements for the materials, manufactured units, equipment, components, or accessories in accordance with CSI Manual of Practice. 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.

6.5.1.1 New Products. From time to time, requests are made to consider the use of materials which are new. The fact that a product is new does not, necessarily, preclude its use. However, do not use guide specifications as experimental vehicles for untested products. Conversely, a product's previous use does not place it in a favored status. Usually, it is necessary to base judgments of products on laboratory tests. Accept such tests as authoritative only if they have been made by reputable laboratories recognized by industry or Government as producing unbiased, complete tests and test reports.

6.5.1.2 Methods of Specifying Materials and Equipment. Include statements describing in detail the products and related accessories to be provided. Specify the products with a reference publication, design requirements, or

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their required performance. In rare instances proprietary specifications or "or equal" specifications may be allowable.

6.5.1.3 Specifying by Reference Publication. Establish requirements by referring to one or more references, tailored to the greatest extent possible.

6.5.1.4 Specifying by Design Requirement. List the physical features of the product and establish tolerances and ranges of variation that may be tolerated. Specify testing and level of results required for the test.

6.5.1.5 Specifying by Performance Requirements. In specifying performance requirements, state the parameters of the function to be performed or those of the products to be provided, or both. The three essential features of a performance specification is the inclusion of the factors on which compliance of performance with the specification is determined, a test method to evaluate whether those factors are satisfied, and a level of performance under the test method that must be met. This method is used extensively in procurement actions, particularly in the procurement of equipment. This method precludes the Contractor from placing the burden of responsibility for product design on the Government.

6.5.1.6 Proprietary Specifications. Adhere to the following requirements of NAVFAC P-68, Contracting Manual, (paragraph 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 his/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 a Contracting Officer authorizes use of a proprietary product, 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 by the following sentence.

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"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 preparing activity 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.

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.

6.5.1.7. "Or Equal" Specifications. Adhere to the following requirements of NAVFAC P-68 (paragraph 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

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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))"

6.5.1.8 Trade Names. Do not use trade names in specifying products or equipment except where requirements dictate it. 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 cannot be described adequately due to technical involvement, construction, or composition.

6.5.1.9 Government-Furnished Material. In the rare cases in which a guide specification speaks of items provided from Government stocks, it refers to the item as Government-furnished material. Long lead time materials and equipment are prime candidates for inclusion as "Government-furnished material" in a project specification but designation of an item as Government-furnished in a guide specification should be avoided.

6.5.1.10 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; specify such requirements in an article in Part 1, after the article "Site Conditions."

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

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

6.5.4 Source Quality Control. Include and title an article "Source Quality Control" when testing and inspection of products are performed at the plant, factory, or shop. Do not ask for unreasonable or meaningless tests, 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, the guide specification notes should warn of the need for lead time in the construction schedule to accommodate the procedure.

6.6 Part 3 EXECUTION: This part states the requirements for incorporating the products specified in Part 2 into the project. Included in Part 3 are the "on-site" 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

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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

6.6.1 Examination. Following CSI Manual of Practice, separate out the requirements to verify an existing condition or substrate previously placed by the Contractor as acceptable for placing the product. Note that these requirements are not "field tests" and normally are not a matter of concern to the Contracting Officer.

6.6.2 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. Note that "preparation" is separate from "installation."

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

6.6.4 Field Quality Control. The requirements included in this article are those tests at the site or tests on samples of installed products, made away from the site. These tests are primarily for control of the quality of products installed in the field. Specify the test method, the frequency or number of tests per unit, and results to be accomplished. Do not require excessive testing. Specify only those tests necessary to ensure that the

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product or installation provided complies with requirements. Review tests required by the reference publications; require only those considered essential. Coordinate requirements under this article with the Contract Clauses and NFGS-01400 and NFGS-01401.

6.6.4.1 Test Methods. Refer to established methods for performing tests or for taking samples in the field, where standard methods are available. Examples are soil compaction tests, concrete compressive strength tests, concrete slump tests, piping system leak tests.

6.6.4.2 Testing. In the past, the Government provided field sampling and testing through the use of separate engineering services 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. Do not designate the responsibility for field and laboratory testing in other guide specifications.

6.6.4.3 Manufacturer's Field Service. Include in the article "Field Quality Control," under paragraph "Manufacturer's Field Services," requirements for the routine training of Government personnel by the manufacturer.

6.6.5 Adjustment. Requirements for adjustments are specified in NFGS-15996, Testing/Adjusting/Balancing of Heating/Ventilating/Cooling Systems, NFGS-15011, Mechanical General Requirements, and NFGS-16011, Electrical General Requirements. Specify adjustments not required in those guide specifications, but necessary to place an item in proper operating condition, in this article.

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

6.6.7 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. Demonstration can encourage the use of video and other media presentation. Ensure Division 15 guide specifications comply with the provisions of NFGS-15011 which relate to this subject. Refer to the following example:

"Instructing Government Personnel"

"\+Upon completion of the work and at a time designated by the Contracting Officer, make available the services of a technician regularly employed or authorized by the manufacturer of the [____],

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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]. Conduct the training at the jobsite or at another location mutually satisfactory to the Government and the Contractor.+\"

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 on-site, 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."

6.6.8 Protection. The Contractor is responsible for the protection of the work which is in place from damage by weather, persons, construction, etc. Place requirements for special protection for some element of the construction in Part 3. Ensure that the special requirement is in addition to protection requirements stated in the Contract Clauses.

6.6.9 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, they are the last item included in a guide specification. An example is the finish hardware schedule.

6.7 Sketches and Forms

6.7.1 Sketches. The inclusion of sketches in a guide specification is discouraged and will be permitted by NAVFACENGCOM Code DS03 only under unusual circumstances. When they are included, place them at the end of the text preceding the Criteria Notes. Title and consecutively number sketches. Do not refer to sketches within the text of a guide specification; only refer to them in notes. If sketches are to be included in the contract documents, place a note on them requiring that they be included on the drawings.

6.7.2 Forms. Avoid including forms in a guide specification. 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, and NFGS-01300.

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6.8 Criteria Notes. Criteria Notes are intended to provide supplemental information to the user of the guide specification. Refer to paragraph 7.5 for a discussion of Criteria Notes.

6.8.1 General Notes. General Notes provide nontechnical information applicable to the guide specification. General Notes enable the user of the guide specification to evaluate certain generalities and direct the user in its use. 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 printed copy of the guide specification, immediately preceding the DD Form 1426.

6.9 General Policies

6.9.1 Use of Key Words. Use key words (consistent terminology) for all components and materials. Also, use key words which will be appropriate for use on project drawings. In applying these principles, 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.

6.9.2 System of Measurement. Wherever possible, prepare guide specifications using the International System of Units (SI). This policy applies unless interface problems would ensue or market research indicates metric products cannot be made available. For details of the proper use of SI units, use ASTM E380, Standard Practice for Use of the International System of Units (SI), for general uses and ASTM E621, Standard Practice for the Use of Metric (SI) Units in Building Design and Construction, for uses related to engineering and design. Follow principles for presentation cited in ASTM E621, with the exception of the spelling of "metre" and "litre." These are to be spelled "meter" and "liter."

6.9.3 Safety and Health Requirements. Safety and health requirements are covered by the Contract Clauses and by Division 1 guide specifications. Further, such requirements are often a matter of law, and should not be restated contractually. Do not include safety and health requirements in guide specifications unless the Contract Clauses of the Division 1 guide specifications do not adequately cover safety and health requirements for the subject matter of the guide specification. In the event they do not, send the proposed paragraph and a justification for its use to DS03, await DS03's approval prior to inserting it in the guide specification, and include the requirement in Part 1.

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Section 7: DETAILED FORMAT OF GUIDE SPECIFICATIONS

7.1 SPECSINTACT. SPECSINTACT is an automated project specification writing system now in use in NAVFACENGCOM 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. 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," Appendix B.

7.2 Banner Format. Examples are as follows:

a) A newly updated or amended NFGS superseding a previous NFGS without a revision designator:

DEPARTMENT OF THE NAVY	NFGS-09999A
NAVAL FACILITIES	30 April 1989
ENGINEERING COMMAND	-----
GUIDE SPECIFICATION	Superseding NFGS-0999 (6/85)

b) A newly updated or amended NFGS superseding a previous basic with an Amendment, as formerly defined:

DEPARTMENT OF THE NAVY	NFGS-09999A
NAVAL FACILITIES	30 April 1989
ENGINEERING COMMAND	-----
GUIDE SPECIFICATION	Superseding NFGS-09999 (6/85) and Amendment 1 (7/85)

c) A newly updated or amended NFGS, superseding a previous NFGS with a revision designator:

DEPARTMENT OF THE NAVY	NFGS-09999B
NAVAL FACILITIES	31 May 1989
ENGINEERING COMMAND	-----
GUIDE SPECIFICATION	Superseding NFGS-09999A (4/89)

d) A renumbered NFGS:

DEPARTMENT OF THE NAVY	NFGS-09998
NAVAL FACILITIES	31 March 1990
ENGINEERING COMMAND	-----
GUIDE SPECIFICATION	Superseding NFGS-09999B (5/89)

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- e) A revised version of regional, if used in lieu of a basic NFGS:

DEPARTMENT OF THE NAVY	NFGS-S-09999
SOUTHERN DIVISION	31 July 1988
NAVAL FACILITIES	-----
ENGINEERING COMMAND	Use in lieu of
GUIDE SPECIFICATION	NFGS-09999 (30 June 1985)

- f) An amendment or update of a regional used in lieu of a basic NFGS:

DEPARTMENT OF THE NAVY	NFGS-S-09999A
SOUTHERN DIVISION	31 August 1989
NAVAL FACILITIES	-----
ENGINEERING COMMAND	Use in lieu of
GUIDE SPECIFICATION	NFGS-09999 (30 April 1985)

- g) A revision of a regional without a comparable basic NFGS:

DEPARTMENT OF THE NAVY	NFGS-S-09996A
SOUTHERN DIVISION	31 August 1989
NAVAL FACILITIES	-----
ENGINEERING COMMAND	Superseding
GUIDE SPECIFICATION	NFGS-S-09996

For regionals, if the statements "use in lieu of..." and "superseding..." are both valid, use "use in lieu of...."

7.3 Header Format. Include section number, section title, and section date. The section number is identical to the NFGS number. Limit the title to 64 characters. Below the title, place the date of approval (month/year), e.g., "(12/88)," of the guide specification. This date changes with each amendment and is always coincident with the date in the banner.

7.4 Part and Subpart Titles. The words "part" and "subpart" are used in SPECSINTACT processing but not in NFGS text and notes. Use CSI nomenclature, i.e., "part," "article," "paragraph," and "subparagraph" in NFGS notes. Use "paragraph" for cross-references in NFGS text.

7.4.1 Unused Part 2 or Part 3. If Part 2 or Part 3 is not used, insert the following:

"PART [2] [3] [PRODUCTS] [EXECUTION]

Not used."

7.5 Notes and Criteria Notes. Notes instruct the specifier in the type of action to take in editing a guide specification. Make notes sufficiently

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detailed; take 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 Notes to 10 lines or less.

a) Separate notes from the text of the guide specification or other notes by a line of asterisks.

b) Insert notes between the article or paragraph title and text to which they apply.

c) Locate notes that exceed 10 lines or repeat more than three times in the rear as "Criteria Notes, and designate them alphabetically."

7.5.1 Standard Opening Notes. Three standard notes appear in Naval Facilities Guide Specifications:

a) Scope note;

b) Revision note; and

c) Drawing coordination note.

7.5.1.1 Scope Note. Include it in all NFGS. Follow the example in Appendix A. Place scope tokens (\@ - @\) surrounding a short description of the scope of the document, excluding such phrasings as "covers the requirements of..." and ending punctuation. This note is placed in the text regardless of its length.

7.5.1.2 Revision Note. Use it, except for a guide specification which does not supersede a guide specification of the same number. Follow the format required in paragraph 7.14.1.

7.5.1.3 Drawing Coordination Note. Place a drawing coordination note as the third 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:...."

7.5.2 Standard Notes in Text. These standard notes appear in NFGS, as applicable:

a) Summary article note.

b) Submittal article notes (three options).

c) Notes indicating a design option.

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7.5.2.1 Summary Article Note. Place the following note:

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

7.5.2.2 Submittal Notes. Include one of the four standard notes, and associated text.

a) The usual wording:

 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."

b) Where the guide specification author wants to ensure Contracting Officer review, in a CQC project:

 NOTE: Retain the bracketed phrase
 only for projects which include
 the Contractor Quality Control
 System.

Submit the following [to the
 Contracting Officer] in accordance
 with Section 01300, "Submittals."

c) In fire protection specifications, to establish review by the fire protection engineer, which establishes a longer review period:

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 NOTE: Retain the bracketed phrase
 only for projects which include
 the Contractor Quality Control
 System.

Submit the following [to the
 Contracting Officer] in accordance
 with Section 01300, "Submittals."
 The Fire Protection Engineer,
 [] Division, Naval Facilities
 Engineering Command will review
 submittals required by this Section.

d) In specifications with a special review, to establish review by
 that individual, which may or may not have special conditions:

 NOTE: Retain the bracketed
 phrase, "to the Contracting
 Officer," only for projects which
 include the Contractor Quality
 Control System. Retain the
 second, bracketed sentence
 when ...(enter description)....

Submit the following [to the
 Contracting Officer] in accordance
 with Section 01300, "Submittals."
 [The [] specialist at []
 Division, Naval Facilities
 Engineering Command will review
 submittals required by this section.]

7.5.2.3 Reference to Criteria Notes. Insert the following note, where
 appropriate in the text, to refer to Criteria Notes. Insert the Criteria
 Note's letter designation in the blank space; use bracket phrase when note is
 not below a paragraph title:

"NOTE: [Regarding the text below,] see Note []
 located at rear of text."

7.5.2.4 Notes for Articles or Paragraphs Requiring Selections.
 Descriptions enabling the user of the guide specification to select types,
 sizes, styles, classes, etc., included in referenced publications are
 encouraged.

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7.5.2.5 Note Indicating a Design Option. At alternative paragraphs which are designer's options 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, at the first option:

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

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

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

7.5.3 Standard Criteria Notes. All NFGSSs have at least one "Criteria Note," an appeal to suggest improvements, placed as the last Criteria Note, it is the only Criteria Note 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:

Naval Construction Battalion Center
Civil Engineer Support Office
Code DS03
Port Hueneme, CA 93043-5000"

7.6 References to Other Sections. On rare occasions, a guide specification refers to a product as being provided but specified in another section. In these cases, include the cross-reference as a separate article or paragraph, in the appropriate sequence of the work. For example:

"2.X.X Metal Flashing

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

7.7 Articles Always Used in NFGSSs. Only two articles of the guide specification must always be included. They are titled and included in the following order:

1.1 SUMMARY

1.2 REFERENCES

7.8 "Summary" Article. This article is used by other agencies but not by NAVFACENGCOM. However, so that specification sections can be used Government-wide, include it as the first article of every guide specification.

7.9 "References" Article

a) 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."

b) 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."

7.9.1 Reference Articles Format. Following the introductory paragraph, list the reference publications included in the guide specification.

7.9.1.1 General Guidance

a) The U.S. Army Corps of Engineers (COE) is charged with maintaining an accurate listing of the current issue of all referenced standards, with exact punctuation and edit policy so far as expression of dates of issue. NAVFACENGCOM follows the guidance of that document, located on the current CD-ROM and titled Single Master Reference List.

b) Refer to Appendix A as an example of reference publication list; refer to Appendix B for further instructions regarding the SPECSINTACT coding for reference publications.

7.9.1.2 Name of Organizations

a) List name and designator of each non-Government standards organization's name as it appears in the Single Master Reference List unless a different indicator is established in the existing NFGS series.

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b) List name and designator of each federal and military document series as it appears in the Single Master Reference List unless different indicator is established in the NFGS series.

c) Arrange list of reference bodies and Government document series in one alphabetical order, by full-text name.

7.9.1.3 List of Documents. Identify each referenced publication in the order of its alphanumeric designation. Show the alphanumeric designation in a left-hand column; show the title in a right-hand column preceded by the document date and revision letter and amendment number, where appropriate. Apply the following guidelines:

a) Except as required otherwise by the guidelines below, precisely follow the Single Master Reference List.

b) Except as required otherwise by the guidelines below, precisely follow the wording established in existing NFGS which will continue.

c) Precisely follow the wording of the reference document, except words such as "Practice for," "Specification for," etc., are not included in the listing of the title of reference documents.

d) When listing references which include the metric system, such as "ASTM A36/A36M," the "\-ASTM A36/A36M-\ " will be considered a separate reference entry and will be included as "\-ASTM A36/A36M-\ " under "References" and in the text.

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

f) 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.

g) 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, then list the year followed by the title. For example:

Name of organization
Acronym

date, Publication title

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h) 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. Respect the distinction between "Revisions "(Rev.) and revalidations (R) used by some non-Government standards organizations.

7.9.1.4 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 referring to a reference standard in the text, use the exact designator encompassed by the reference tokens of the "References" article.

7.10 Submittals

7.10.1 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.

7.10.2 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.

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

- a) SD-13, Design Data
- b) SD-35, Drawings
- 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

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

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- 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

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

- a) SD-50, Samples
- b) SD-51, Color Selection Samples
- c) SD-52, Sample Panels
- d) SD-53, Sample Installations

7.10.2.4 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

7.10.3 Submittal Format 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.

7.10.3.1 Format Description. Each "Submittal" article will have the format described in Appendix G attached.

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

- a) Always include the appropriate standard 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, (*\).

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d) Follow listing with paragraph text or subparagraphs - titled the same as to the entries of the list - if any explanation is 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.

7.10.3.3 Automatic Extraction of Submittals List. SPECSINTACT produces a submittals list to provide a checklist of submittals required of the Contractor. The submittals list identifies the products or systems for which a submittal is required and the submittal type to be provided. The submittal list consists of the text between asterisk tokens. Text clarifying submittal requirements, if included, follows the list but is not contained within tokens. Develop submittal paragraphs in a specified format to facilitate the automatic preparation of a submittals list.

7.11 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 clarification is necessary when citing some reference standards. 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."

7.12 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

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Appendix B, 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 article entitled "Submittal," in Part One;
- c) \=: When referring to other specification sections;
- d) \+: Throughout the document to denote tests or other requirements. Tokens should encompass complete, not partial sentences with ending token being placed outside the period. Do not include paragraph titles within tokens.
 - (1) Insert tokens indicating tests or other requirements before and after factory tests requiring notification or presence of the Contracting Officer; they are not necessary before and after discussion of other factory tests.
 - (2) Insert tokens indicating tests or other requirements before and after field tests, whether or not specific notification or presence of the Contracting Officer is required.
 - (3) Use tokens indicating tests and other requirements for any notice or action which should command the attention of the Contracting Officer.
- e) \-: Throughout the text when referring to reference documents.
- f) \&: Throughout the text of an amended guide specification to denote changed wording from the previous edition.

7.13 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:

- a) Part and subpart beginning
- b) Reference part beginning
- c) In NFGS-01300, the list of submittal descriptions
- d) Tables
- e) Notes
- f) Dates of document.

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

7.14 Revisions. Guide specifications are reissued as revisions, either after an update or for an amendment.

7.14.1 Revision Note. Include note to list the changes in each reissued NFGS or regional NFGS. This will be true for both "amendments" and "updates." Place the note immediately following the scope note and before the "drawings includes" note. This note is to afford users a quick reference as to the scope of changes contained in a revised issue of the NFGS.

a) The following is the text for an "update" note, to be used without variation.

```
*****
Note: This revision "_" to
NFGS-_____ follows a complete review
of the previous version. The text is
revised throughout, according to that
review.
*****
```

b) The following are alternative texts to be used as guidance for an "amendment" note. The first version is preferred, except when the listing would create a note longer than 10 lines or when only one paragraph changes. In these notes, list the issue of the last revision as the "amended" issue, even if that issue was itself an amendment.

```
*****
NOTE: This revision "_" to NFGS-_____
amends the text of the issue dated
_____ [at the following paragraphs]
[in the following respects]:
1. [_____]
2. [_____]
3. [_____]
*****
```

```
*****
NOTE: This revision "_" to NFGS-_____
amends the issue dated _____ by
[changing] [adding] [deleting] [_____].
*****
```

7.14.2 Use of Revision Tokens. Use tokens only to indicate revisions in the text of amended NFGSs. Tokens are to indicate only the changes of the current amendment; tokens from previous amendments must be deleted.

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7.14.3 Location of Revision Tokens.

- a) Added or Revised Text: Before and after text.
- b) Deleted Text: Back-to-back (\&\).
- c) Added Subpart: In blank line before beginning of subpart and at end of added text.
- d) Deleted Subpart: Back-to-back, in blank line between remaining subparts.
- e) Numerous minor changes may be grouped; tokens may span several added or changed subparts.
- f) Article 1.2, "References" shall not include tokens even on the blank line following the last reference.

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Section 8: STYLE AND FORM OF SPECIFICATION WRITING

8.1 Language and Style

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

8.1.2 Comprehension Level. Ultimately, specifications are for use by construction tradesmen. Therefore, write guide specifications for the high school graduate level of comprehension.

8.1.3 Language. Write guide specifications clearly, and concisely; adhere to the style promulgated by the CSI Manual of Practice on specification language.

8.1.3.1 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.

8.1.3.2 Articles. Omit articles, i.e., "the," "a," and "an," where sentences would not be awkward or lose their intent.

8.1.3.3 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. Do not confuse the singular subject of a sentence with a modifier that is plural. Do not confuse the subject of a sentence with the object of a prepositional phrase.

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

CORRECT: Bolt an elongated central fastener around the eye of each 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.

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

INCORRECT: Make determination of pump replacement costs.

CORRECT: Determine pump replacement costs.

8.1.3.5 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

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

CORRECT: top of platform

PREFERRED: platform top

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

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

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- 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.

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

8.1.4 Phraseology

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

- a) At no additional expense to the Government.
- b) At the expense of the Contractor.
- c) Conduct tests and inspections in the presence of the Contracting Officer. (Requiring notice of a pending test is the appropriate means to encouraging the witnessing of a test.)
- d) The Contracting Officer reserves the right.

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

- a) As may be required
- b) As necessary
- c) An approved type

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- 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."

8.1.4.3 Escape Phrases. "Unless otherwise specified" is often used to indicate an alternative course of action. It can result in problems because it is impossible to determine how or where something will be specified otherwise. If used, the phrase must be clarified by providing a definition and a specific reference to another part of the guide specification. Do not use the phrase to refer to another guide specification.

8.1.4.4 Indeterminate Words and Phrases. Specificity is essential; replace indeterminate phrases with wording conveying specific intent. Examples of indeterminate words or phrases are:

- a) First class workmanship
- b) Securely
- c) Thoroughly
- d) Suitable
- e) Properly
- f) Good working order
- g) Neatly

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h) Carefully

i) Installed in a neat and workmanlike manner

j) Intended purpose

k) Not limited to

l) Highest quality

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

8.1.5 Vocabulary

8.1.5.1 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," "Every," and "All": "Any" can mean a limited number selected at the discretion of the Contractor. In specification writing, "all" and "every" is implied, unless stated otherwise. Avoid using "any," "every," 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."

"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."

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"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.

"Replace": Use "Remove existing and provide new" if that is the intent.

"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.

8.1.5.2 Compound Words. Do not use compound words such as "hereinbefore" and "hereinafter." The author of a guide specification may use "herein" to refer to other requirements contained within the guide specification. However, make the reference explicit, further identified by the article or paragraph title.

8.1.5.3 Navy Jargon. Do not use Navy 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."

8.1.6 Style. Unless directed otherwise in this military handbook, adhere to the guidelines in the latest edition of the United States Government Printing Office (GPO) Style Manual regarding capitalization, spelling, compound words, punctuation, abbreviations, and numerals.

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

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

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

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

- a) Specify "gage," not "gauge."
- b) Specify "caulk," not "calk."
- c) Specify "fascia," not "facia."

8.1.6.3 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-".)

8.1.6.4 Underlining and Capitalizing for Emphasis. Do not underline or capitalize for emphasis. All requirements are equally important in obtaining the desired product or service.

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

8.1.6.6 Footnotes. Do not use footnotes.

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

8.1.6.8 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)."

8.1.6.9 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) Express fractions serving as adjectives in the following form: "1 1/2-inch"; not "1-1/2 inch" or "1-1/2-inch."

c) Express fractions serving as nouns in the following form: "1 1/2 inches"; not "1-1/2 inches" or "1-1/2-inches."

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8.1.6.10 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.

8.1.6.11 Abbreviations. Use only standard abbreviations. The GPO Style Manual is 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.

8.1.6.12 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.

8.2 General Formatting Requirements

8.2.1 Graphics. Provide all graphics (sketches and forms) as DXF formatted MS-DOS files whenever possible. If the graphics will be edited later or incorporated into drawings, the DXF format must be used. Some graphics packages that support the DXF format are AUTOCAD, CADKEY, and VERSACAD. Halftone drawings, photographs, pictures, and foldouts are not acceptable.

8.2.2 Numbered Text Headings. Use text headings and numbers for all elements of text, i.e., "Part," "Article," "Paragraph," and "Subparagraph." The SPECSINTACT system allows up to four levels of numbering. Refer to Appendix B for procedures regarding numbered text headings.

8.2.3 Use of Brackets. 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. Ensure Criteria Notes precede insertions, choices, and options, as appropriate. Consider the ease of machine editing when placing brackets. For example, when specifying several options, structure each option as a choice in a separate sentence, thereby avoiding the complicated bracketing of the various options within a single sentence.

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

"Provide [_____] sets of maintenance tools."

8.2.3.2 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."

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8.2.3.3 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."

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

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

8.2.4 Cross-References

8.2.4.1 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 examples.

"Section \-09900-\, 'Painting'"

"Section [\-____-\, ____]"

8.2.4.2 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.

8.2.4.3 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. If an item must be specified to be provided "as indicated," "as shown," or "as detailed," use the term "as indicated" and list the requirement in the "drawings include" note. Additionally, the author may insert a specific note to alert the user of the guide specification of the need for coordination.

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APPENDIX A

SAMPLE GUIDE SPECIFICATION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES
ENGINEERING COMMAND
GUIDE SPECIFICATION

NFGS-08110A
31 November 1990

Superseding NFGS-08110 (08/88)

NFGS-08110

STEEL DOORS AND FRAMES

*

* Preparing Activity: LANTNAVFACENGCOM *

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* Typed Name & Reg	Signature	Date	*
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* Division Director *

* * *

* * *

* Approved for NAVFAC: _____

* Carl E. Kersten, R.A. *

* * *

* Any changes or revisions to this document since the date of the

* original approval for NAVFAC, have been performed by the Guide *

* Specifications Division (Code DS03). *

* * *

* Changes or Revisions *

* Approved for NAVFAC: _____

* Carl E. Kersten, R.A. *

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APPENDIX A (CONTINUED)

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DEPARTMENT OF THE NAVY                                NFGS-08110A
NAVAL FACILITIES                                       31 November 1990
ENGINEERING COMMAND                                     -----
GUIDE SPECIFICATION                                   Superseding NFGS-08110 (08/88)
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GUIDE SPECIFICATION                      Superseding NFGS-08110 (08/88)
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SECTION 08110

STEEL DOORS AND FRAMES
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*****
NOTE: This guide specification covers \@steel
doors and frames@\. 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 at the paragraph entitled "Submittals,"
where they are placed to illustrate possible
locations.
*****

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*****
NOTE: This revision "A" to NFGS-08110 amends
the issue dated 31 August 1988 by changing the
paragraph entitled "Submittals."
*****

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

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1.1 SUMMARY

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

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APPENDIX A (CONTINUED)

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

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APPENDIX A (CONTINUED)

\-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)
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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
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1.3 DEFINITION

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

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APPENDIX A (CONTINUED)

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. Steel doors
- b. Steel frames
- c. Steel door and frame accessories*\&\

1.4.2 *SD-50, Samples

- a. Prefinished steel door finish*\

1.4.3 *SD-73, Factory Test Reports

- a. Insulated steel door tests*\&\

1.4.4 *SD-76, Certificates of Compliance

- a. Steel doors
- b. Steel door frames*\

Submit 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.

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APPENDIX A (CONTINUED)

Provide fire doors and frames bearing 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. Honor the requirements of \-NFPA 80-\ over details indicated and specified.
- [b. Ensure astragal on pairs of labeled fire doors conforms 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

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APPENDIX A (CONTINUED)

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.

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APPENDIX A (CONTINUED)

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

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APPENDIX A (CONTINUED)

 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.

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APPENDIX A (CONTINUED)

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 metals 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;

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APPENDIX A (CONTINUED)

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.

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APPENDIX A (CONTINUED)

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."

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APPENDIX A (CONTINUED)

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

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APPENDIX A (CONTINUED)

\-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.]

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APPENDIX A (CONTINUED)

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 labeled 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.

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APPENDIX A (CONTINUED)

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 --

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APPENDIX A (CONTINUED)

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.

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APPENDIX A (CONTINUED)

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, bathrooms	
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: Specify hot-dip zinc-coated steel 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:

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APPENDIX A (CONTINUED)

Naval Construction Battalion Center
Civil Engineering Support Office
Code DS03
Port Hueneme, CA 93043-5000

-- End --

SECTION 08110A PAGE 17

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CUSTODIANS:
ARMY - CE
AIR FORCE - 04
NAVY - YD

PREPARING ACTIVITY
NAVY - YD

USERS:
VA
GSA
BUREAU OF RECLAMATION

PROJECT NUMBER
FACR-xxxx

SECTION 08110A PAGE 18

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APPENDIX B
SPECSINTACT COMPUTER OPERATIONS GUIDE

CSI/SPECSINTACT SECTION FORMAT

Several fundamentals must be understood before creating or modifying a section. This appendix will cover the CSI/SPECSINTACT format consisting of dot dot (...) commands, layouts, tokens, and macros. These formatting commands are used to access the automatic features of SPECSINTACT.

An example section is used to explain dot dot commands, layouts, and tokens. Macros are discussed following the example. The example has been specially printed to show the correct placement of dot dot commands required for utilizing SPECSINTACT special features. These dot dot commands will not print in your documents because Volkswriter recognizes them as comment lines since they begin in column one. Tokens are printed in the document if selected from the SPECSINTACT print option screen.

It should also be noted that specifications produced with SPECSINTACT are printed at twelve pitch (12 characters per inch). Therefore, a unique section must also be 12 pitch to be compatible with existing master text.

SPECSINTACT provides pre-set layouts that assist in document creation. There are seven standard layouts that ensure the correct placement of section text and formatting commands.

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APPENDIX B (CONTINUED)

B.1 EXAMPLE SECTION

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APPENDIX B (CONTINUED)

..NOTE-ST

```

*****
AGENCY NAME                ANGS-????? (Month 19XX)
GUIDE SPECIFICATION        AGENCY
                           -----
                           Superseding
                           ANGS-????? (Month 19XX)
*****

```

..NOTE-END

SECTION ?????

..TITLE

ENTER SECTION TITLE

..SECTDT

MM/YY

..NOTE-ST

```

*****
NOTE: This master text guide specification
section covers the requirements for \@a sample
to provide information on the CSI/SPECSINTACT
formatting of a section@\.

A descriptive note, such as the one above is always
used following the section title. The descriptive
note consists of a short description (section
scope) of the work covered by the section and
includes enough information to permit the user to
quickly determine whether or not the master text
guide section is required for the project being
specified.
*****

```

..NOTE-END

..PART

PART 1 GENERAL

..SUBPART

1.1 SUMMARY

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APPENDIX B (CONTINUED)

..NOTE-ST

NOTE: The paragraph "SUMMARY" is required in all master text guide specification sections in order to make them compatible with master text guide specification sections of other agencies within the SPECSINTACT system. If this paragraph is not applicable to the section, it will not be included in the section.

A similar note as the above note must appear at this location in all master text guide specification sections..

Preparation of master text guide specification sections and project sections will follow the CSI/SPECSINTACT format. Each section will contain a banner with pertinent agency information as indicated within the first set of asterisk bars above. Following the banner is the section number, title, and date also shown above.

The industry standard CSI 3-PART format is utilized for preparation of master text guide specification sections and project sections. Each section will always contain 3-PARTS, e.g., "PART 1 GENERAL", "PART 2 PRODUCTS", and "PART 3 EXECUTION". If one of the parts are not applicable to the section, the part number and title will be entered and the statement "(Not Applicable)" in parenthesis, for NASA and ARMY, will be included after the title. For NAVY, "Not used." is placed at the beginning of the paragraph text.

Within each of the 3-PARTS SPECSINTACT will only accept three lower levels used for organization of text as follows:

ARTICLES	(First Tier Paragraphs)
Paragraphs	(Second Tier Paragraphs)
Subparagraphs	(Third Tier Paragraphs)

All articles, paragraphs, and subparagraphs must have titles which are entered three spaces after the number. Titles must be keyed in as follows:

1.1	ARTICLE
1.1.1	Paragraph
1.1.1.1	Subparagraph

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APPENDIX B (CONTINUED)

Each section should always contain two standard articles, e.g., "1.1 SUMMARY" and "1.2 REFERENCES" within "PART 1 GENERAL". If one of the above articles are not applicable to the section, the article will not be included in the section.

SPECSINTACT is limited within some of its entries. Limits are as follows:

Section Number	5 Characters
Section Title	64 Characters
Section Date	5 Characters
Article Title	71 Characters
Paragraph Title	68 Characters
Subparagraph Title	60 Characters

..SUBPART

1.1.1 Section Number

The section number designates the CSI MASTERFORMAT division and section numbers. The section number is centered directly below the first ..NOTE-END comment line of each section.

When another section is referenced within a section, the section number will be entered with \- before the number and -\ at the end of the number. After the section number, the title of the section is entered. The format for each agency is as follows:

NASA and NAVY Example: Section \-01300-\, "Submittals"

ARMY Example: Section \-01300-\ SUBMITTALS

..SUBPART

1.1.2 Section Title

A section title is a one-line entry and is a description of the subject contents of the section that should conform to MASTERFORMAT-Broadscope Section Titles. The section title is centered directly below the ..TITLE comment line of each section.

..SUBPART

1.1.3 Section Date

A section date is the date that the master text guide specification section was approved or revised by the sponsoring agency (e.g., NAVY, NASA, ARMY).

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APPENDIX B (CONTINUED)

For a new project section (newtype), a section date will be entered to indicate the month and year the section was created. This date should not be edited for a section when a project is produced. The section date is centered and bolded directly below the ..SECTDT comment line of each section.

..SUBPART

1.1.4 Section Note

..NOTE-ST

 NOTE: See _____ Note A.

..NOTE-END

The section notes are indented in the master text guide specification sections for use by the specifier to aid in editing the section for new master text, updates or project sections. Notes are not printed for a final project specification. All notes are surrounded by bolded asterisk bars and are keyed between the ..NOTE-ST and ..NOTE-END comment lines.

..SUBPART

1.1.5 Volkswriter

The SPECSINTACT System utilizes the commercial word processing package "Volkswriter". This software package has a "UTILITIES" option which allows the conversion of ASCII files to Volkswriter files, retrieve "DOS", etc., as needed. Volkswriter uses dot dot commands as comment lines as described below.

..SUBPART

1.1.5.1 Dot Dot Commands

The embedded ..commands are used to format a file for printing and to send instructions to the printer. SPECSINTACT uses the dot dot comment capability to identify in the text the specialized SPECSINTACT print commands such as ..TITLE, ..NOTE-ST, etc. These codes are treated as comments by Volkswriter, but are used by the SPECSINTACT custom software. All ..commands must start in column one and will not be printed at time of print.

..SUBPART

1.1.5.2 Layouts

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APPENDIX B (CONTINUED)

Seven Volkswriter layouts are used for the format of a section. The following describes when each layout is used and their respective margins and tabs.

- a. Layout 1 - (Left Margin 3, Right Margin 77, Tabs 7, 11, 16)
 - Articles, paragraphs, and subparagraphs text
 - Asterisks bars
 - -- End of Section -- (Column 6 - NASA & NAVY, Column 7 - ARMY)
 - -- End --
- b. Layout 2 - (Left Margin 1, Right Margin 77)
 - .. Commands
 - Part, article, paragraph and subparagraph numbers and titles
- c. Layout 3 - (Left Margin 16, Right Margin 67)
 - Specifier Notes
- d. Layout 4 - (Left Margin 11, Right Margin 77, Outdent 7, Tab 16)
 - a., b., c., etc.
- e. Layout 5 - (Left Margin 16, Right Margin 77, Outdent 11)
 - (1), (2), (3), etc.
 - Sponsoring Organization Title and/or Address
- f. Layout 6 - (Left Margin 33, Right Margin 77, Outdent 3, Tab 37)
 - 1.2 Reference Articles, 002 Sections, Master and Supplemental Reference Lists
- g. Layout 7 - (Left Margin 1, Right Margin 80, Tabs 10, 20, 30, 40, 50, 60, 70)
 - Tables - (Automatic reformatting turned off)

..SUBPART
1.2 REFERENCES

..NOTE-ST

NOTE: Issue (date) of references included in project specifications need not be more current than

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APPENDIX B (CONTINUED)

provided by the latest change (e.g., revised, notice) to the guide section.

If the master text guide specification utilizes the "REFERENCES" article a note similar to the above should appear in this location and a leading paragraph will exist within 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.

..NOTE-END

For master text entry, the Sponsoring Organization, street address, city and state will always be entered in capital letters. This text will be entered on column 11 (Layout 5). The text below the publication's address is the references of this publication. The reference number will always be entered with \- at the beginning of the reference number and -\ at the end of the number. The \ is entered in column 3 (Layout 6). To the right of the reference number is the date and title of the reference. The first line of text for the title is entered on column 37. The second line of text is entered on column 33.

..REFST

SPONSORING ORGANIZATION (SO)
STREET ADDRESS
CITY, STATE ZIP CODE
(XXX) XXX-XXXX

..REFEND

\-SO X XXX-\

Designation, date, title and other
identifier as shown on the reference

..REFST

SPONSORING ORGANIZATION (SO)

..REFEND

\-SO X XXX-\

Designation, date, title and other
identifier as shown on the reference

..SUBPART

1.3 SUBMITTALS

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APPENDIX B (CONTINUED)

..NOTE-ST

NOTE: Submittals must be limited to those sufficiently critical or complex or aesthetically significant to merit review, approval or retention for record purposes by the Government.

If the master text guide specification utilizes the "SUBMITTALS" article a note similar to the above should appear in this location and a leading paragraph will exist within the article as follows:

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

..NOTE-END

Submittals within the paragraph "SUBMITTALS" must be entered with * at the beginning of the Submittal and *\ at the end of the submittal. Samples are as follows:

- 1.3.1 *SD-##, Title*\, or
- 1.3.1 *SD-##, Title
- Text for submittals.*\

Submittals within other paragraphs which are not in the "SUBMITTALS" paragraph can be tokenized to process special submittal reports as follows:

SD-##, Text for submittals\

..PART

PART 2 PRODUCTS

..SUBPART

2.1 ARTICLE TITLE

This paragraph contains text concerning the above article.

All articles, paragraphs, and subparagraphs may also contain submittal requirements, references, test requirements, references to other sections, and change notices. SPECSINTACT items should be surrounded with the appropriate tokens as follows:

- \@section scope@\
- *SD-##, submittal requirements*\
- \-technical references-\
- \+test requirements+\

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APPENDIX B (CONTINUED)

- \-section references-\
- \&change notices&\

Sections have numerous bracketed options throughout. These bracketed options give the specifier an option to choose from and after the choice has been made, the brackets should be removed. SPECSINTACT also has the capability to produce a report indicating any brackets left in the project specification, at time of print.

..SUBPART

2.1.1 Paragraph Title

The paragraph is used when an article is subdivided into two or more paragraphs. Thus, at least a paragraph 2.1.2 would be required.

..SUBPART

2.1.1.1 Subparagraph Title

The subparagraph is used when a paragraph is subdivided into two or more paragraphs. Thus, at least a subparagraph 2.1.1.2 would be required.

..PART

PART 3 EXECUTION

..SUBPART

3.1 ARTICLE TITLE

This contains text for the article above. Below is a sample of a formatted table.

..NOTE-ST

```
*****
NOTE:  One line above the table header enter
..TBLHDR.  One line below the header enter a blank
line and then enter ..TBLHDR-END.  One line below
the text at the end of the table enter ..TBL-END.
These ..commands enable the header to automatically
print on the next page when part of the table
appears on the next page.
*****
```

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APPENDIX B (CONTINUED)

..NOTE-END

..TBLHDR

REQUIREMENTTEST METHODVALUE

..TBLHDR-END

Coating weight,
exclusive of
fabric backing\-FED-STD-191-\,
Test 5041Not less than
ounces per square
yardAdhesion of
coating to
fabric backing

\-ASTM D751-\

Not less than 3
pounds pull per
inch of width

..TABLE-END

..SUBPART

3.2 ARTICLE TITLE

Article titles are entered utilizing the ..commands of Volkswriter. The codes are mandatory in order for the SPECSINTACT system to work properly. The codes are as follows:

..TITLE	Designates the specification title
..SECTDT	Designates the specification date
..NOTE-ST	Designates the beginning of a note
..NOTE-END	Designates the end of a note
..PART	Designates a part number and title
..SUBPART	Designates an article, paragraph or subparagraph number and title
..SUBMST	Designates the beginning of a submittal requirement within the "01300 SUBMITTAL" section only
..SUBMEND	Designates the end of a submittal requirement within the "01300 SUBMITTAL" section only
..TBLHDR	Designates the beginning of a table header
..TBLHDR-END	Designates the end of a table header and the start of the table
..TABLE-END	Designates the end of a table
..NEEDnn	Designates that the following number (nn) lines of text must appear together on the same page
..REFST	Designates the beginning of the sponsoring organization's title and/or address in reference articles, 002 sections, master and supplemental reference lists
..REFEND	Designates the end of a sponsoring organization's title and/or address in reference articles, 002 sections, master and supplemental reference lists

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APPENDIX B (CONTINUED)

In general, Volkswriter dot dot commands such as: ..page, ..print, ..pgno, and ..verb should not be used. Especially, the Volkswriter command ..page should not be used in an attempt to control pagination - the SPECSINTACT software automatically does this and the two methods will interact unpredictably. The only exception to using ..page occurs when NAVY uses Specifier notes listed at the end of a section. These notes should be printed on a separate page. Therefore, a ..page command is required. At the end of each section, a ..NEEDnn command should be used to keep a minimum number of lines together on the last page.

-- End of Section --

..PAGE

..NOTE-ST

NOTES

NOTE A: Technical notes to the specifier will be consistent and are placed in the text immediately preceding the text to which they apply. Notes to the specifier should be brief and limited. Long notes and detailed technical notes will be placed at end of text. Notes placed at the end of text will have an indicator placed in the appropriate place within the body of the text to direct the user to the notes at the end of the text.

NOTE B: -- End of Section -- must be at the bottom of each section starting on column six, for NASA and NAVY, as shown below. For ARMY, it is placed in column seven.

..NOTE-END

-- End --

B.2 SPECSINTACT MACROS

SPECSINTACT provides pre-set macros to assist in placing text in the correct format. These macros were created using the commercial software package SuperKey. A file named SPECS.MAC is distributed with the SPECSINTACT software and contains these macros. Macros have been created for dot dot commands, tokens, and text indentations. Refer to Appendix E - SuperKey Macros paragraph E.3 List Of Macros By Function for further details.

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APPENDIX B (CONTINUED)

B.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.

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 below.

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

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APPENDIX B (CONTINUED)

B.3 NUMBERING AND RENUMBERING SUBPARTS (continued)

<u>Master Text Parts</u>	<u>New Parts</u>	<u>As Automatically Renumbered during Final Print</u>
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
<----- (3.003.1		
<----- (3.003.2		
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

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.

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 below.

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.

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APPENDIX B (CONTINUED)

ADDED PARTS. LOWER LEVELS

<u>Master Text Parts</u>	<u>New Parts</u>	<u>As Automatically Renumbered during Final Print</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

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.

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APPENDIX C

SAMPLES OF STANDARD LETTERS

PAGE C-1

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APPENDIX C (CONTINUED)

LETTER NO. 1
REQUEST FOR CONCURRENCE WITH PROPOSED CANCELLATION

[APPROPRIATE LETTERHEAD]

11012/7

NFGS-_____

[DATE]

From: [APPROPRIATE P/A]

Subj: NFGS-[_____, "_____"]

Encl: (1) NAVFAC Form 11012/9 (5-90), "Engineering and Design Criteria Review"

1. This activity is the preparing activity for NFGS-[_____, "_____
_____]". (MONTH/YEAR).

2. After review and consideration, this activity recommends cancelling the NFGS.

3. Please review subject document and concur or comment on the proposed action. Use enclosure (1) for additional comments, if required. Our point of contact is [_____] , phone: [_____].

[APPROPRIATE SIGNATURE]

Distribution:

NAVFACENGCOM CBC Port Hueneme (Code DS03) (2 copies)

NAVFACENGCOM (Code DS02) (8 copies)

LANTNAVFACENGCOM (Code 04A4)

PACNAVFACENGCOM (Code 406A)

WESTNAVFACENGCOM (Code 406.2)

NORTHNAVFACENGCOM (Code 04AB)

CHESNAVFACENGCOM (Code 406C)

SOUTHNAVFACENGCOM (Code 04A3)

SOWESTNAVFACENGCOM (Code 406)

NAVCIVENGLAB Port Hueneme (Code L30PM)

NAVENENVSA Port Hueneme (Code 111C1)

MIL-HDBK-1006/2A

APPENDIX C (CONTINUED)

LETTER NO. 2
TO INDUSTRY REQUESTING COMMENTS PRIOR TO
CREATING OR REVISING A GUIDE SPECIFICATION

(APPROPRIATE LETTERHEAD)

[APPROPRIATE ADDRESSEE]

11012/7
NFGS-[_____] [DATE]

Gentlemen:

This letter invites you to comment on Naval Facilities Guide Specification NFGS [_____, "_____"]. [Enclosed is a copy for your convenience.] We hope you will furnish information on state-of-the-art items and operational requirements which [we need to incorporate into] [are not present in or are inadequately covered in] the guide specification.

[INSERT P/A] will be [creating] [revising] NFGS-[_____] during [YEAR]. Eventually, Architect/Engineers will use the guide specification to prepare construction project specifications.

Please make your comments cover requirements which must be adopted or reconciled if the document is to meet the appropriate needs of the Navy at the minimum lifetime cost. Accompany your comments with reasons to assist in their understanding and resolution.

So that we will receive your comments prior to the start of our redraft, we look forward to your response within 60 calendar days from the date of this letter. Mail your response to:

[INSERT APPROPRIATE P/A, ADDRESS AND CODE]

Sincerely,

[APPROPRIATE SIGNATURE]

- Encl: (1) [Copy of NFGS-[_____, "_____"] of [_____] 19__]]
(2) Copy of NAVFAC Form 11012/9 (5-90), Engineering and Design Criteria Review

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APPENDIX C (CONTINUED)

LETTER NO. 3
REQUEST FOR REVIEW OF GUIDE SPECIFICATION BY NAVY ACTIVITIES
(APPROPRIATE LETTERHEAD)

11012/7

NFGS - [_____]

[DATE]

From: [APPROPRIATE P/A]

Subj: NFGS-[_____, "_____"]; COORDINATION OF

Encl: (1) Copy of subject guide specification
(2) NAVFAC Form 11012/9 (5-90), Engineering and Design Criteria Review

1. We are forwarding enclosure (1) for review and comment. Please comment on enclosure (2).
2. Please make your comments cover requirements or provisions which must be adopted or reconciled if the document is to be usable by the commenting activity. Accompany your comments with reasons, in order to assist in their understanding and resolution.
3. Please respond within 60 calendar days from the date of this letter. We will retain comments received after the scheduled date, and consider them for inclusion in subject guide specification when amended or revised. Mail your response to:

[INSERT APPROPRIATE P/A, ADDRESS, CODE, AND TELEPHONE NUMBER.]

[APPROPRIATE SIGNATURE]

Distribution:

NAVFACENGCOM, CBC-Port Hueneme
(Code DSO3) (2 copies)
NAVFACENGCOM (Code DSO2) (8 copies)
LANTNAVFACENGCOM (Code 04A4)
PACNAVFACENGCOM (Code 406A)
WESTNAVFACENGCOM (Code 406C)
NORTHNAVFACENGCOM (Code 04AB)
CHESNAVFACENGCOM (Code 406.2)
SOUTHNAVFACENGCOM (Code 04A3)
SOWESTNAVFACENGCOM (Code 406)
NAVCIVENGLAB Port Hueneme (Code L30PM)

NAVENENVSA Port Hueneme (Code 111C1)
[NAVMEDCOM (Appropriate Region)]
[NAVFACENGCOM OSH Support Office
(Code 09K), NPWL, Norfolk].

Note: Only send guide specifications with a health or safety impact to the bracketed activities.

MIL-HDBK-1006/2A

APPENDIX C (CONTINUED)

LETTER NO. 4
REQUEST FOR REVIEW OF GUIDE SPECIFICATION BY INDUSTRY

(APPROPRIATE LETTERHEAD)

11012/7
NFGS-[____]
[DATE]

[APPROPRIATE ADDRESSEE]

Gentlemen:

This is to invite you to comment on the Navy Facilities Guide Specification for [INSERT SUBJECT]. We are enclosing the proposed NFGS-[____, "____"]*. Architect/Engineers will use the completed guide specification to prepare construction project specifications.

Please submit your comments on the enclosed NAVFAC Form 11012/9, which may be reproduced as required. Also, please make your comments specific and accompany them with reasons, in order 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. We will retain comments received after the scheduled date, and consider them for inclusion in the subject guide specification when amended or revised. Mail your response to:

[INSERT APPROPRIATE P/A, ADDRESS, AND CODE AND TELEPHONE NUMBER.]

Sincerely,

[APPROPRIATE SIGNATURE]

Encl: (1) NFGS-[____, "____"] (Draft)
(2) NAVFAC Form 11012/9 (5-90), Engineering and Design Criteria Review

MIL-HDBK-1006/2A

APPENDIX C (CONTINUED)

LETTER NO. 5
TO A PREPARING ACTIVITY
(APPROPRIATE LETTERHEAD)

11012/7
NFGS-[____]
[DATE]

From: [REVIEWING ACTIVITY]
To: [PREPARING ACTIVITY]

Subj: NFGS-[____, "____"]"; COORDINATION COMMENTS

Ref: (a) [PREPARING ACTIVITY LETTER FORWARDING REQUEST]

Encl: (1) Comments on NAVFAC form 11012/9, Engineering and Design
Criteria Review

1. We are forwarding enclosure (1) as requested by reference (a).

[APPROPRIATE SIGNATURE]

Note: Use of this letter is optional; an appropriate form transmittal or memo
is an acceptable alternative.

MIL-HDBK-1006/2A

APPENDIX C (CONTINUED)

LETTER NO. 6

TO A REVIEWING ACTIVITY ADVISING DISPOSITION OF COMMENTS

(APPROPRIATE LETTERHEAD)

11012/7
NFGS - [_____]
[DATE]

From: [APPROPRIATE P/A]
To: [REVIEWING ACTIVITY]

Subj: NFGS- [_____, " _____"]

Ref: (a) [REVIEWING ACTIVITY MEMORANDUM OR LETTER FORWARDING COMMENTS]
(b) [PHONCON IN WHICH COMMENTS WERE RESOLVED]

Encl: (1) Annotated copy of NAVFAC Form 11012/9, Engineering and Design Criteria Review

1. We have considered the comments provided by reference (a) during the final draft of the subject document. As noted in reference (b), we have resolved your comments as annotated on enclosure (1).

[2. We are forwarding the following unresolved comments to NAVFACENGCOM Code DS03 for final resolution. You may expect a response from Code DS03 within the next 30 calendar days.

a. [COMMENT IDENTIFICATION]

b. [COMMENT IDENTIFICATION].]

3. Your interest in the subject criteria was of considerable value and benefit in development of the final draft of the document.

[APPROPRIATE SIGNATURE]

MIL-HDBK-1006/2A

APPENDIX C (CONTINUED)

LETTER NO. 7
TO AN INDUSTRY REVIEWER ADVISING DISPOSITION OF COMMENTS

(APPROPRIATE LETTERHEAD)

11012/7

NFGS-[_____]

[DATE]

[APPROPRIATE ADDRESSEE]

Gentlemen:

Thank you for your comments on NAVFACENGCOM Guide Specification NFGS-[_____, "_____,"] provided by your letter of [_____]. As noted in our discussions with [you] [your NAME] we have resolved your comments per the enclosed annotated copy of NAVFAC Form 11012/9.

[We are forwarding the following unresolved comments to Commander, Naval Facilities Engineering Command (Code DSO3), for final resolution. You may expect a response from them within 30 calendar days.

- a. [COMMENT IDENTIFICATION]
- b. [COMMENT IDENTIFICATION].]

Your interest in the subject criteria was 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 Engineering and Design Criteria Review

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APPENDIX C (CONTINUED)

LETTER NO. 8
UNRESOLVED COMMENT

[APPROPRIATE LETTERHEAD]

11012/7

NFGS-_____

[DATE]

From: [PREPARING ACTIVITY]

To: Commanding Officer, Naval Construction Battalion Center, Port Hueneme
(CESO Code 158)

Subj: UNRESOLVED COMMENT ON NFGS-[_____, "_____
]"

Encl: (1) Comment by [_____] on draft of NFGS-[_____
]

1. [INSERT COMMENTER] made the comment on enclosure (1) concerning the
proposed subject document.

2. Because of the following reason(s), we could not resolve it to the
satisfaction of the reviewer.

3. We recommend: [INSERT SUGGESTED FURTHER ACTION NEEDED TO RESOLVE ISSUES]

4. We request NAVFACENGCOM Code DS03 resolution of this comment.

5. Our point of contact is [INSERT NAME, CODE, PHONE].

[APPROPRIATE SIGNATURE]

Copy to: [COMMENTER]

MIL-HDBK-1006/2A

APPENDIX C (CONTINUED)

LETTER NO. 9
FINAL SUBMISSION

[APPROPRIATE LETTERHEAD]

11012/7
NFGS-_____
[DATE]

From: [PREPARING ACTIVITY]
To: Commanding Officer, Naval Construction Battalion Center, Port
Hueneme, CA (CESO Code 158)
Subj: NFGS-[_____, "_____] "
Ref: (a) MIL-HDBK 1006/2, "Policy and Procedures for Guide Specification
Preparation"
Encl: [INSERT APPROPRIATE INFORMATION FROM BELOW.]
1. Subject document was updated as a part of the FY-[_____] criteria
program.
[2. Because [difficult or controversial issues were being considered]
[the guide specification is new], a formal request for comments on the
document was warranted. All comments have been resolved.]
3. Action on this document has been completed. Enclosures (1) through
(____) are submitted as required by reference (a), paragraph 4.3.6.

[APPROPRIATE SIGNATURE]

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APPENDIX C (CONTINUED)

LETTER NO. 9 (CONTINUED)
FINAL SUBMISSION

Note: The following enclosures will be required, depending on the nature of the action:

- ☐ Diskette of subject document in SPECSINTACT with no technical change.
- ☐ Diskette of subject document in SPECSINTACT with minor technical change.
- ☐ Diskette of subject document in SPECSINTACT with major technical changes.
- ☐ Diskette of subject document in SPECSINTACT, adopted from [____].
- ☐ Hard copy with tokens and notes and signed title sheet. (REQUIRED FOR A REVISION)
- ☐ Magnetic medium copy of graphics (AS APPROPRIATE. REQUIRED IF A REVISION AND IF THERE ARE SKETCHES)
- ☐ Original copy of graphics. (AS APPROPRIATE. REQUIRED IF A REVISION AND IF THERE ARE SKETCHES)
- ☐ Coordination Comments, with resolution noted. (ALWAYS REQUIRED IF COMMENTS HAVE BEEN SUBMITTED)
- ☐ Checklist for Technical, Policy and Format, with approval noted. (ALWAYS REQUIRED FOR A REVISION)
- ☐ Checklist for Machine Function (ALWAYS REQUIRED FOR A REVISION)

MIL-HDBK-1006/2A

APPENDIX D

NAVFAC FORM 11012/9 (5/90) ENGINEERING AND DESIGN CRITERIA REVIEW

[illegible]

MIL-HDBK-1006/2A

APPENDIX E

NFGS PREPARED IN SPECSINTACT: CHECKLIST FOR TECHNICAL, POLICY, AND FORMAT

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. Technical and policy issues are indicated with a "T," format issues with an "F."

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 (65 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 BOLD F A C E D .	F		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
<p>0.5 When an NFGS is being adapted from a guide specification of another agency, the following is included in the banner, immediately under the "superseding" data:</p> <p style="padding-left: 40px;">CRITERIA SHARING PROGRAM Originated by [COE] [CEGS-_____] ([Month] 19[____]) (Change No. [____] ([Mon] 19[____]))</p>	F		
<p>0.6 A section date has been included immediately below the guide spec title, is BOLDFACED, and is centered.</p>	F		
<p>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.</p>	F		
<p>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.</p>	F		
<p>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.</p>	F		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
0.10 At alternative paragraphs which are designer's options, the following conventions are used.			
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		
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: ***** Note: Choose this [article] [subparagraph] or the [article] [paragraph] [subparagraph] below, entitled _____ *****	F		
0.10.3 If the alternatives span more than one subpart, the following note should also be included at the second choice: ***** Note: Choose this [article] [para- graph] [and] [subparagraph] or the [article] [paragraph] [and] [sub- paragraph] above, entitled _____ *****	F		
0.11 Any blank underlines [] are five spaces long.	F		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
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.	F		
0.13 Paragraph text begins on second line below the number/title line, indented two spaces.	F		
0.14 There are <u>no</u> colons after the paragraph title.	F		
0.15 The paragraph title must be on only one line, of a length to allow title to appear in the Table of Contents.	F		
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 Either fractions or decimals are used, 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 are expressed in the following form: "1 1/2-inch" (Not "1-1/2 inch" or "1-1/2-inch").	F		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
0.18.3 Fractions serving as nouns are 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		
0.23 Ambiguities such as "paint where required," "etc." are not used.	F		
0.24 Only abbreviations that are understood, such as "psi," "cfm," "degree F," "degree C," and "kW" are used.*	F		
0.25 There are no spelling or 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		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
0.27 Except for deviations authorized by MIL-HDBK 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 Use of the term "the Contractor shall..." is avoided, unless there would be confusion over responsibility being the Contractor's or the Government's.	F		
0.31.1 The NFGS speaks only to the Contractor, not the supplier, manufacturer, or any other party.	T		
0.31.2 Every attempt was made not to use the same paragraph titles within a section, even in different parts.	F		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
<p>0.31.3 Cross references are minimized, but where absolutely necessary in the following conventions. In this context, use the term "paragraph" for articles, paragraphs or subparagraphs.</p> <p>...Section \-09900-\, "Painting,"... ...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"> 1. SUMMARY 2. REFERENCES 3. RELATED REQUIREMENTS(Not from CSI) 4. DEFINITIONS 5. SYSTEM DESCRIPTION 6. SUBMITTALS 7. QUALITY ASSURANCE 8. DELIVERY, STORAGE, AND HANDLING 9. SITE CONDITIONS 10. SEQUENCING AND SCHEDULING 11. WARRANTY 12. MAINTENANCE 	T		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
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."	F		
1.3 "1.2 REFERENCES" paragraph has been included.	T		
1.4 All references are listed as article 1.2 text in the following order: Industry Associations are listed alphabetically and interspersed with Federal and Military references in alphabetical order. Federal Specifications are listed first alphabetically and then numerically, with each alphabetical listing. Military Specifications are 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		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
<p>1.8 When listing references which include the metric system, such as "ASTM A36/A36M," the "\-ASTM A36/A36M-\ " is included as a separate entry under "REFERENCES". Note that the complete reference "ASTM A36/A36M" should be enclosed in tokens, i.e. \-ASTM A36/A36M-\.</p>	F		
<p>1.9 The date of issue or designator of current issue is included 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:</p> <p style="padding-left: 40px;">\ -NEMA MG 1-\ 1978 (Rev. 1981) Motors and Generators</p>	F		
<p>1.10 In cases where a reference standard is not given an alphanumeric designator, a designator is created, defined, and placed in tokens in the "References" article and used, 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		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
1.13 The title of the publication listed in the "References" article is the same as that on the publication. Spot check.	T		
1.14 "Related Requirements" is used only to refer to Section 11700, 15011, or 16011.	T		
1.15 Submittals are listed in the "Submittals" article, 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.	F		
1.16 Submittals: The following note, (or one of the alternative notes for special reviewers) which is a portion of Wang Technical Note "C" after the "SUBMITTALS" article is added. ***** 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. ***** Paragraph text has been added stating: "Submit the following in accordance with Section \-01300-\, "Submittals.""	F		
1.17 A scope paragraph is not included.	T		
1.18 A listing of related subjects and where they are located is not included.	T		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
1.19 Statements which require items to be notarized are not included.	T		
1.20 Warranties, Experience and Qualification clauses are approved by a level 1 Contracting Officer Officer and approval has been indicated by 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.	T		
2.0 PART 2 PRODUCTS			
2.1 If Part 2 is not used, the following is stated: PART 2 PRODUCTS Not used.	F		
2.2 Articles included in "PART 2 PRODUCTS" use the following articles, which are drawn from the <u>CSI Manual of Practice</u> , to the extent they are applicable. Paragraph designators normally appearing under these articles may become articles when appropriate. 1. MATERIALS 2. MANUFACTURED UNITS 3. EQUIPMENT 4. COMPONENTS 5. ACCESSORIES 6. MIXES 7. FABRICATION 8. SOURCE QUALITY CONTROL 9. SCHEDULES (Different location than CSI)	T		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
2.3 Materials pertinent to NAVFAC construction program are specified, referencing non-Government, Federal Specifications, or Military Specifications.	T		
2.4 All materials required for a complete installation or assembly are specified.	T		
2.5 References to other sections:			
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: [2.1.1] Storefront Finish: Provide finish matching in color and texture and conforming to the requirements of the finish system specified in Section \-08520-\, "Aluminum Windows."	T		
2.5.2 No paragraph is included which reads such as, "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		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
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," "Fiberglas," etc.	T		
2.10 Sole source procurement is approved by a level 1, Contracting Officer.	T		
2.11 If unavoidable, requirements for Contractor's equipment utilized to perform the work are specified in an article in Part 1 after the article "site conditions."			
2.12 Tokens indicating tests or other requirements (\+...+\) are 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		
3.0 PART 3 EXECUTION			
3.1 If Part 3 is not used, the following is stated:			
PART 3 EXECUTION	F		
Not used.			

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
<p>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.</p> <ol style="list-style-type: none"> 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 I.	T		
3.5 Tokens indicating tests or other requirements (\+...+\) are inserted before and after field tests, whether or not specific notification or presence of the Contracting Officer is required.	F		

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APPENDIX E (CONTINUED)

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 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 is marked with "-- End of Section --".	F		
4.0 END AND NOTES			
4.1 The end of the document is 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 is included requiring the Specifier to confirm that action.	T		
4.3 Criteria notes are included in the rear of the text listed as NOTE , 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		

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APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
4.6 The last criteria note reads as follows:			
<p>[]. Suggestions for improvement of this specification will be welcomed. Complete the attached DD Form 1426 and mail to:</p> <p>Naval Construction Battalion Center Civil Engineer Support Office Code DS03 Port Hueneme, CA 93043-5000</p>	F		
5.0 SPECSINTACT REPORTS			
5.1 All references have been verified in 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		

Signatures or Initials

AIC/EIC_____
P/A Branch Manager_____
P/A Division Director_____
NAVFAC DS03

* * * E N D * * *

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APPENDIX F

NFGS PREPARED IN SPECSINTACT:
CHECKLIST FOR MACHINE FUNCTION.

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 specification 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 BOLDFACED .		
c. The section title is marked correctly with "...TITLE" and is centered.		
d. The section date is marked correctly with "...SECTDT", is BOLDFACED , and is centered.		
e. All Part number/title lines are correctly marked with "...PART" and three spaces separate the part number and the title.		
f. All Subpart number/title lines are correctly marked with "...SUBPART" and three spaces separate the subpart number and the title.		

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APPENDIX F (CONTINUED)

Review guide specification to ascertain that:	Check	Remarks
g. All notes are correctly marked with "...NOTE-ST" and "...NOTE-END" and are in bold (incl. asterisks).		
h. In 1.2, all reference publication sources are correctly marked with "...REFST" and "...REFEND".		
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 are correctly marked with "...TBLHDR" and "TBLHDR-END."		
l. The ends of all tables are 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.		

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APPENDIX F (CONTINUED)

Review guide specification to ascertain that:	Check	Remarks
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. Reference verification report, submittal list, and test requirement report have been run.		

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APPENDIX G
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 16375

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

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APPENDIX G (CONTINUED)

- 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. Underground electrical distribution system*\

Include the layout of the system, including the structures and features provided as manufacturer's catalog data. Show details of splice boxes, manholes and handholes with the frame and cover for each.

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*\

Have each cable splicer 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. Furnish material for dummy splices.

1.4.5 *SD-66, Statements

- a. Qualifications of cable splicers*\

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APPENDIX G (CONTINUED)

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. Cable fireproofing materials arc-proof test
- [b. High voltage cables X-Y corona discharge test]
- [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 --

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REFERENCES

NOTE: THE FOLLOWING REFERENCED DOCUMENTS FORM A PART OF THIS HANDBOOK TO THE EXTENT SPECIFIED HEREIN. UNLESS OTHERWISE SPECIFIED IN THE TEXT, USERS OF THIS HANDBOOK SHOULD UTILIZE THE LATEST REVISIONS OF THE DOCUMENTS CITED HEREIN.

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 Naval Publishing and Printing Office (NPPSO), Standardization Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

BULLETINS

MIL-BUL-34	Engineering and Design Criteria for Navy Facilities.
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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-01300	Submittals.
NFGS-01400	Contractor Quality Control (CQC) System.
NFGS-01401	Contractor Inspection System.
NFGS-01730	Operation and Maintenance Data
NFGS-11700	General Requirements for Medical and Dental Equipment.
NFGS-15011	Mechanical General Requirements.
NFGS-15996	Testing /Adjusting/Balancing of Heating/Ventilating/Cooling Systems.
NFGS-16011	Electrical General Requirements.

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NAVY MANUALS, DRAWINGS, P-PUBLICATIONS, AND MAINTENANCE OPERATING MANUALS:

Available from Commanding Officer, Naval Publications and Forms Center (NPFC), 5801 Tabor Avenue, Philadelphia, PA 19120-5099. To order these documents: Government agencies must use the Military Standard Requisitioning and Issue Procedure (MILSTRIP); the private sector must write to NPFC, ATTENTION: Cash Sales, Code 1051, 5801 Tabor Avenue, Philadelphia, PA 19120-5099.

NAVFAC P-68

Contracting Manual.

NAVFAC P-272

Definitive Designs for Naval Shore Facilities.

NAVY DEPARTMENTAL INSTRUCTIONS: Available from Commanding Officer, Naval Publications and Forms Center, ATTN: Code 3015, 5801 Tabor Avenue, Philadelphia, PA 19120-5099.

SECNAVINST P5212.5B

Disposal of Navy and Marine Corps Records.

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 (DOD)

Department of Defense Index of Specifications and Standards (DODISS).

Available from:

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)

FAR 52.236-21

Specifications and Drawings for Construction.

Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325.

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UNITED STATES GOVERNMENT PRINTING OFFICE

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

U.S. ARMY CORPS OF ENGINEERS (COE)

Single Master Reference List.

Available from U.S. Army Corps of Engineers, ATTN: CE-HND-ED-ES, Huntsville, AL.

NON-GOVERNMENT PUBLICATIONS:

The following publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the Department of Defense Index of Specifications & Standards (DODISS):

CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI)

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. |

Unless otherwise indicated, copies are available from the Construction Specifications Institute (CSI), 601 Madison Street, Alexandria, VA 22314.

CUSTODIAN
NAVY - YD

PREPARING ACTIVITY
NAVY - YD

PROJECT NO.
FACR-0605

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.

2. The submitter of this form must complete blocks 4, 5, 6, and 7.

3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER

MIL-HDBK-1006/2A

2. DOCUMENT DATE (YYMMDD)

900815

3. DOCUMENT TITLE

Policies and Procedures for Guide Specification Preparation

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle, Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d. TELEPHONE (Include Area Code)

7. DATE SUBMITTED (YYMMDD)

(1) Commercial

(2) AUTOVON (If applicable)

8. PREPARING ACTIVITY

a. NAME

Commanding Officer

Naval Facilities Engineering Command

b. TELEPHONE (Include Area Code)

(1) Commercial

202 325-0450

(2) AUTOVON

221-0450

c. ADDRESS (Include Zip Code)

Code DS02

200 Stovall Street

Alexandria, VA 22332-2300

IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:

Defense Quality and Standardization Office

5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466

Telephone (703) 756-2340 AUTOVON 289-2340