NOTICE OF CHANGE

MIL-HDBK-1006/2A
NOTICE 1
1 MARCH 1991

MILITARY HANDBOOK

POLICIES AND PROCEDURES FOR

GUIDE SPECIFICATION PREPARATION

TO ALL HOLDERS OF MIL-HDBK-10062/A:

1. THE FOLLOWING PAGES OF MIL-HDBK-1006/2A HAVE BEEN REVISED AND SUPERSEDE THE PAGES LISTED:

NEW PAGE	DATE	SUPERSEDED PAGE	DATE
ix	1 March 1991	ix	15 AUGUST 1990
x	1 March 1991	x	REPRINTED WITHOUT CHANGE
29	1 March 1991	29	15 AUGUST 1990
30	1 March 1991	30	REPRINTED WITHOUT CHANGE
37	1 March 1991	37	15 AUGUST 1990
38	1 March 1991	38	REPRINTED WITHOUT CHANGE
39	1 March 1991	39	REPRINTED WITHOUT CHANGE
40	1 March 1991	40	15 AUGUST 1990
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42	1 March 1991	42	REPRINTED WITHOUT CHANGE
43	1 March 1991	43	15 AUGUST 1990
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46	1 March 1991	46	REPRINTED WITHOUT CHANGE
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51a	1 March 1991	51	15 AUGUST 1990
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DISTRIBUTION STATEMENT A. APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED

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2. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

3. Holders of MIL-HDBK-1006/2A will verify that all changes indicated above have been made. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the military handbook is completely revised or canceled.

CUSTODIAN:
NAVY-YD

PREPARING ACTIVITY:
NAVY-YD

PROJECT NO.
FACR-1053

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. Certificates, formerly called certificates of compliance, require a great deal of effort; specify only those certificates 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.

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, Quality Control; however, the author of another NFGS may include exceptions or additions to NFGS-01400 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,

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.

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.

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 states 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 [____],

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 DSO3 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.

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.

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-09999 (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)
```

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 NFGS-S-09996 (8/85)
GUIDE SPECIFICATION	

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 65 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

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.

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: Where a "G" in asterisk tokens follows a
submittal item, it indicates Government approval
for that item. Add "G" in asterisk tokens following
any added or existing submittal items deemed
sufficiently critical, complex, or aesthetically
significant to merit approval by the Government.
Submittal items not designated with a "G" will
be approved by the CQC organization.
******************************************************

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

b) Where the guide specification author wants to ensure Contracting Officer review for each submittal.

```
******************************************************
NOTE: The "G" in asterisk tokens following each
submittal item indicates Government approval and
should be retained. Add "G" in asterisk tokens
following any added submittals that are determined
to require Government approval. Submittal items
not designated with a "G" will be approved by the
CQC organization.
******************************************************

Submit the following 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:

****
NOTE: The "G" in asterisk tokens following each submittal item indicates Government approval and should be retained. Add "G" in asterisk tokens following any added submittals. Submittal items not designated with a "G" will be approved by the CQC organization.
****

Submit the following 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: The "G" in asterisk tokens following each submittal item indicates Government approval and should be retained as long as a special reviewer is cited. Add "G" in asterisk tokens following any added submittals that are determined to require review by another organization and Government approval. Submittal items not designated with a "G" will be reviewed and approved by the CQC organization. If a special reviewer is cited, retain the second bracketed sentence.
****

Submit the following 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.

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, use two paragraph numbers, 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 NFGSs 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 DSO3
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

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

7.7 Articles Always Used in NFGSs. 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.

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

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

a) SD-02, Manufacturer's Catalog Data

b) SD-03, Manufacturer's Standard Color Charts

c) SD-06, Instructions

d) SD-10, Test Reports

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

a) SD-04, Drawings

b) SD-05, Design Data

c) SD-07, Schedules

d) SD-08, Statements

e) SD-11, Factory Test Reports

f) SD-12, Field Test Reports

g) SD-13, Certificates

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

a) SD-14, Samples

b) SD-15, Color Selection Samples

c) SD-16, Sample Panels

d) SD-17, 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-18, Records

b) SD-19, Operation and Maintenance Manuals

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. These guidelines are to allow the SPECSINTACT software to create a submittal register for the project and to ensure consistent treatment of submittal requirements. 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. Surround each with an asterisk token (*...*\).

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. Again, surround each item in the list with an asterisk token.

d) If the Government needs to review the submittal for a particular item, locate a "*G*\" immediately following that item, on the same line .

e) If any explanation is required of individual submittals, follow the listing of items with paragraph text or subparagraphs - titled the same as to the entries of the list. 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.

f) The wording between asterisk tokens at the "Submittal" article defines an item to be submitted, but also establishes the key word for that item. At the one most important location in the text where the item (product, system, tests, or requirement) appears, surround the key word with the asterisk token at this second location.

g) 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 except to mark the keywords.

7.10.3.3 Automatic Extraction of Submittals Register. SPECSINTACT produces a submittals register to provide a checklist of submittals required of the Contractor. The submittals register identifies the products or systems for which a submittal is required and the submittal type to be provided, notes the Section number, whether the review is by the CQC manager or by Government, and what paragraph contains the most salient requirements for the items. The register also has blank columns which may be used to track the processing of the submittal during the course of construction. 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 the 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

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 to designate submittal types, submittal items, and Government reveiwer. Throughout at key words repeating the terms used for submittal items, in the paragraphs defining the requirements for submittal items;

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.

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.

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

	Typed Name & Reg	Signature	Date
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Approved by:	C. R. Rose, P.E. Branch Manager	/s/	02/19/86
Approved by:	K. E. Godfrey, P.E. Division Director	/s/	02/20/86
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.

****

AMSC=N/A AREA FACR

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

APPENDIX A (CONTINUED)

****

DEPARTMENT OF THE NAVY
NAVAL FACILITIES
ENGINEERING COMMAND
GUIDE SPECIFICATION

NFGS-08110A
31 November 1990

Superseding NFGS-08110 (08/88)

****

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STEEL DOORS AND FRAMES

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****

DEPARTMENT OF THE NAVY
NAVAL FACILITIES
ENGINEERING COMMAND
GUIDE SPECIFICATION

NFGS-08110A
31 November 1990

Superseding NFGS-08110 (08/88)

****

SECTION 08110

STEEL DOORS AND FRAMES
11/90

****

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.

****

****

NOTE: This revision "A" to NFGS-08110 amends the issue dated 31 August 1988 by changing the paragraph entitled "Submittals," and to introduce selected key words.

****

****

NOTE: See Note A located at rear of text.

****

1.1 SUMMARY

****

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.

****

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

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)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

\-NFPA 80-\ 1983 Fire Doors and Windows

\-NFPA 252-\ 1984 Fire Tests of Door Assemblies

STEEL DOOR INSTITUTE (SDI)

\-SDI 100-\ 1985 Standard Steel Doors and Frames

\-SDI 105-\ 1982 Erection Instructions for Steel Frames

\-SDI 107-\ 1984 Hardware on Steel Doors (Reinforcement - Application)

\-SDI 111-B-\ Standard Details for Dutch Doors

\-SDI 111-F-\ Completed Opening Anchors for Standard Steel Doors and Frames

\-SDI A151.1-\ 1980 Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcing

UNDERWRITERS LABORATORIES INC. (UL)

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

1.3 DEFINITION

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

APPENDIX A (CONTINUED)

1.4 SUBMITTALS

****
\&NOTE: Where a "G" in asterisk tokens follows a submittal item, it indicates Government approval for that item. Add "G" in asterisk tokens following any added or existing submittal items deemed sufficiently critical, complex, or aesthetically significant to merit approval by the Government. Submittal items not designated with a "G" will be approved by the CQC organization. &
****

Submit the following in accordance with Section \=01300=\, "Submittals."
\&
1.4.1 *SD-02, Manufacturer's Catalog Data*\

a. *Steel doors*\

b. *Steel frames*\

c. *Steel door and frame accessories*\

1.4.2 *SD-11, Factory Test Reports*\

a. *Insulated steel door tests*\

1.4.3 *SD-13, Certificates*\&\

a. *Steel doors*\
\&&\
b. *Steel frames*\

Submit for each grade and model of steel doors.
&\
1.4.4 *SD-14, Samples*\

a. *Prefinished steel door finish*\ *G*\

1.5 QUALITY ASSURANCE

1.5.1 Labels

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

APPENDIX A (CONTINUED)

Provide fire doors and frames bearimg 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*\

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.
****

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*\

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.

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. Milter 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;

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

\&Provide the following *steel door and frame accessories*\ where indicated.&\

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.

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."

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

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.]

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. \+\&Perform *insulated steel door tests*\&\ in accordance with \-SDI A151.1-\ and meet the requirements of level C.+\

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Frames

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

3.1.2 Doors

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

3.1.3 Fire Doors and Frames

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

3.2 PROTECTION

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

3.3 ADJUSTING

Adjust hardware for smooth and balanced door movement.

3.4 CLEANING

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

-- End of Section --

APPENDIX B

SPECSINTACT USER'S 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 the Editor 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.

APPENDIX B (CONTINUED)

B.1 EXAMPLE SECTION

APPENDIX B (CONTINUED)

```
..NOTE-ST
  ********************************************************************************
                                                        ANGS-????? (Month 19XX)
  AGENCY NAME                                           AGENCY
  GUIDE SPECIFICATION                                   ----------
                                                        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
```

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.

****

..NOTE-END

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

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).

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 The Editor

The SPECSINTACT System utilizes the Editor as its text processing package. This package has a "UTILITIES" option which allows the conversion of ASCII files to Editor files, retrieve "DOS", etc., as needed. The Editor 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 comments by the Editor, 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

APPENDIX B (CONTINUED)

Seven SPECSINTACT 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

APPENDIX B (CONTINUED)

```
..NOTE-ST
 ************************************************************************
        NOTE:    Issue (date) of references included in project
        specifications need not be more current than 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
```

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+\
```

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.
  ************************************************************************
```

APPENDIX B (CONTINUED)

```
..NOTE-END
..TBLHDR
          REQUIREMENT              TEST METHOD          VALUE

..TBLHDR-END
          Coating weight,          \-FED-STD-191-\,     Not less than
          exclusive of             Test 5041            ounces per square
          fabric backing                                yard

          Adhesion of              \-ASTM D751-\        Not less than 3
          coating to                                    pounds pull per
          fabric backing                                inch of width
..TABLE-END

..SUBPART
3.2   ARTICLE TITLE
```

Article titles are entered utilizing the ..commands of the Editor. 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
..TBLHDRD	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

APPENDIX B (CONTINUED)

In general, SPECSINTACT dot dot commands such as: ..page, ..print, ..pgno, and ..verb should not be used. Especially, the SPECSINTACT 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. The SuperKey package is optional and the macros are only available if SuperKey is installed. 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 for further details.

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

Master Text Parts	New Parts	As Automatically Renumbered during Final Print
PART 1		PART 1
1.1		1.1
<----------	(1.00	1.2
<----------	(1.00	1.3
PART 2		PART 2

APPENDIX B (CONTINUED)

B.3 NUMBERING AND RENUMBERING SUBPARTS

Master Text Parts	New Parts	As Automatically Renumbered during Final Print
2.1		2.1
<----------	(2.00	2.2
<----------	(2.00	2.3
2.2		2.4
2.3		2.5
<----------	(2.00	2.6
PART 3		PART 3
<----------	(3.00	3.1
<----------	(3.00	3.2
3.1		3.3
3.1.1		3.3.1
3.1.2		3.3.2
<----------	(3.1.00	3.3.3
<----------	(3.1.00	3.3.4
3.1.3		3.3.5
<----------	(3.1.00	3.3.6
3.2		3.4

When each section is formatted for print, if you have selected the Renumber Paragraph option available on the Print Options screen, 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.

APPENDIX B (CONTINUED)

ADDED PARTS, LOWER LEVELS

Master Text Parts	New Parts	As Automatically Renumbered during Final Print
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 Print Options screen, 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.

APPENDIX C

SAMPLES OF STANDARD LETTERS

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 DSO3) (2 copies)
NAVFACENGCOM (Code DSO2) (8 copies)
LANTNAVFACENGCOM (Code 04A4)
PACNAVFACENGCOM (Code 406A)
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NORTHNAVFACENGCOM (Code 04AB)
CHESNAVFACENGCOM (Code 406C)
SOUTHNAVFACENGCOM (Code 04A3)
SOWESTNAVFACENGCOM (Code 406)
NAVCIVENGLAB Port Hueneme (Code L30PM)
NAVENENVSA Port Hueneme (Code 111C1)

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

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 DS03) (2 copies)
NAVFACENGCOM (Code DS02) (8 copies)
LANTNAVFACENGCOM (Code 04A4)
PACNAVFACENGCOM (Code 406A)
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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), 1^U*^T Norfolk]

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

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

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 no 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 no 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		

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 Each keyword used for submittal items reused, surrounded by *...*\ tokens, at one paragraph where the requirements for that submittal is given.	F		
0.22 All section cross references have been marked with the following tokens, "\= =\," i.e., \=09900=\.	F		
0.23 All test and other requirements (field engineering tests) have been marked with the following tokens, "\+ +\", i.e., \+Take test samples of the asphalt.+\	F		
0.24 Ambiguities such as "paint where required," "etc." are not used.	F		
0.25 Only abbreviations that are understood, such as "psi," "cfm," "degree F," "degree C," and "kW" are used.*	F		
0.26 There are no spelling or typographical errors.	F		
0.27 Contracting Officer is spelled with initial capitals, Contractor is spelled with a capital C and Government with a capital G.	F		

APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
0.28 Except for deviations authorized by MIL-HDBK 1006/2, the CSI section format, including paragraph titles and order, has been followed.*	T		
0.29 Specified options are enclosed by bracket symbols. Minimize brackets and keep nested brackets at a minimum.	F		
0.30 Clarity of language.			
0.30.1 Specifications are written in a clear and concise manner using the imperative mood when possible.*	T		
0.30.2 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 Addressing the Contractor.			
0.31.1 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		
0.31.2 The NFGS speaks only to the Contractor, not the supplier, manufacturer, or any other party.	T		
0.32 Every attempt was made not to use the same paragraph titles within a section, even in different parts.	F		

APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
0.33 Cross references are minimized, but where absolutely necessary in the following conventions. In this context, use the term "paragraph" for articles, paragraphs or subparagraphs. ...Section \=09900=\, "Painting,"... ...the paragraph entitled "Title of Article or Paragraph."	F		
0.34 "And/or," "any" and "etc.," have not been used.	F		
0.35 Terminology used to specify an item or system is consistent throughout the specification.*	T		
1. PART 1 - GENERAL			
1.1 Articles included in "PART 1 GENERAL" 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. 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		

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: Where a "G" in asterisk tokens follows a submittal item, it indicates Government approval for that item. Add "G" in asterisk tokens following any added or existing submittal items deemed sufficiently critical, complex, or aesthetically significant to merit approval by the Government. Submittal items not designated with a "G" will be approved by the CQC organization. ************************************** 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		

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 CSI Manual of Practice, 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		

APPENDIX E (CONTINUED)

Review guide specification to ascertain that:	Type	Check	Remarks
4.6 The last criteria note reads as follows: [_]. 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 DSO3 Port Hueneme, CA 93043-5000	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 register.	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 DSO3

* * * E N D * * *

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.		

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: Where a "G" in asterisk tokens follows a submittal item, it indicates Government approval for that item. Add "G" in asterisk tokens following any added or existing submittal items deemed sufficiently critical, complex, or aesthetically significant to merit approval by the Government. Submittal items not designated with a "G" will be approved by the CQC organization.
****

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

1.4.1 *SD-02, 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*\

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-04, 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-06, 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-08, Statements*\

a. *Qualifications of cable splicers*\

1.4.4.1 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.

1.4.4.2 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.

1.4.5 *SD-10, Test Reports*\

a. *Cable fireproofing materials arc-proof test*\

[b. *High voltage cables X-Y corona discharge test*\]

[c. *_____*\]

1.4.6 *SD-13, Certificates*\

a. *Precast [manhole] [handhole] and accessories*\

b. *[Manhole] [Handhole] frame and cover*\

c. *High voltage cable*\

d. *High voltage terminator*\

1.4.7 *SD-16, Sample Panels*\

a. *High voltage cable splice**G*\

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.

-- End --

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.

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.