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VOLUME 2

SL720-AA-MAN-020

**TECHNICAL SPECIFICATION**

**TITLE: SHIP SELECTED RECORD DRAWINGS**

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## SHIPS SELECTED RECORD DRAWINGS

### 1. SCOPE

1.1 Introduction. This specification establishes the procedures for preparation of technically adequate Selected Record Drawings (SRDs) and consistent format and revision methodology for all active fleet ships of the U. S. Navy. This specification does not apply to Selected Record Drawings under the technical cognizance of NAVSEA 08.

### 2. APPLICABLE DOCUMENTS

2.1 General. The following documents of the issue in effect on the date specified in the data of the tasking correspondence form a part of this specification to the extent specified herein.

2.1.1 Government documents.

2.1.2 Specifications, standards, and handbooks. The following specifications, standards, and handbooks of the exact revision listed below form a part of this document to the extent specified herein.

### SPECIFICATIONS

MIL-DTL-31000	Technical Data Packages, General Specifications for.
NAVSEA Technical Specification 9090-600	Ship Alteration Drawing Preparation, Technical Specification

### STANDARDS

DOD-STD-100	Engineering Drawing Practices
MIL-STD-129	Marking for Shipment and Storage

2.1.3 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications of the exact revision level shown form a part of this document to the extent specified herein.

### MANUALS

NAVSEA 0902-018-2010	General Overhaul Specifications for Deep Diving SSN/SSBN Submarines
NAVSEA SL720-AA-MAN-010	Fleet Modernization Program Management and Operations Manual

NAVSEA 0924-LP-062-0010	Submarine Safety Requirements Manual
NAVSEA S9040-AA-IDX-020/SWBS 5D	Expanded Ship Work Breakdown Structure
NAVSEA S9AAO-AA-GSO-010	General Specifications for Overhaul of Surface Ships (GSO) Including the Aegis Supplement
NAVSEA 0902-LP-041-2010	Standard Specification for U. S. Navy Craft

## INSTRUCTIONS

NAVSEAINST 9085.2	Naval Sea Systems Command Engineering Drawing Management Program (EDMP): Policy and Responsibilities for
SECNAVINST 5510.36	Department of the Navy (DON), Information Security Program (ISP)
SECNAVINST 5510.30	Department of Navy Personnel Security Program
COMSCINST 9000.1	Preparation, Maintenance and Distribution of Selected Record Plans and Booklets for MSC Ships (USNS)

2.2 Precedence. In the event of conflict between the requirements of this specification and the documents referenced herein, the requirements of this specification shall apply; except that in the event of conflict between the requirements of this specification and the requirements of NAVSEA 0902-018-2010, NAVSEA 0902-LP-041-2010, or NAVSEA S9AA0-AB-GOS-010, the requirements of those documents shall apply.

## 3. REQUIREMENTS

3.1 General. SRDs are a group of ships drawings specifically selected for their reference value which illustrate important features, systems and arrangements applicable to an individual ship, which are maintained current throughout the life of the ship. Appendix A specifies the drawings required for each ship type.

The increasing sophistication of ships systems and equipment requires that the supporting SRDs be as clear, accurate and complete as possible. Figure I is an example of drawing detail required.

Ships Selected Record Drawings (SRDs) shall conform to the applicable documents listed and additional requirements specified herein. Within the requirements of DOD-STD-100,

MIL-DTL-31000, NAVSEA S9AA0-AB-GOS-010 (Sect 085), and the direction contained herein, Planning Yards shall provide Selected Record Drawings services as tasked.

Selected Record Data for ships operated by the Military Sealift Command shall be in accordance with COMSCINST 9000.1.

3.2 Responsibilities. The Planning Yard for each ship class is the Engineering Design Agent for SRDs. Unless otherwise directed by NAVSEA, the Planning Yard is responsible for the development, maintenance and update of SRDs.

### 3.3 Drawing Requirements and Guidelines.

3.3.1 General. Selected record drawings shall be prepared for each ship. Each drawing shall show the official number of that ship only. Individual NAVSEA drawing numbers shall be assigned to each drawing for each ship. Selected record drawings shall be validated to ensure they reflect the as-delivered configuration of the ship. SRDs shall be drawn to show the actual arrangement, configuration of systems, and other technical data, following a configuration validation trackwalk onboard the individual ship. (Some SRDs, such as Tank Capacity Drawings, may have to be developed from other documentation instead of trackwalked.)

SRDs shall be drawn for each specified propulsion plant system and arrangement and statements such as *Similar for Engine Room No. 2* or such an equivalent note or sketch are not acceptable.

SRDs shall be user oriented in that they provide sufficient detail and engineering support data for operational, testing, inspection, maintenance, training, and consulting purposes to individual ship's forces, fleet commands, shipyard personnel, and other activities.

3.3.1.1 Format. Physical layout shall be correct to the precision required for such a drawing; i.e., proper relationship of ships systems and equipment and include bulkhead numbers and compartment and deck identification, by name and number. The format for Title Blocks shall be in accordance with NSTS 9090-600, Sections 3.5.4.1 and 3.5.4.2 excepting drawing title information specified in Section 3.5.4.1(a). Drawing titles shall be in accordance with Appendix A of this specification.

3.3.1.2 "F" and "H" drawings. New SRDs of ships systems and arrangements shall be developed on size "F" (28" x 40") sheet(s) for most large drawings. Drawings which must be prepared as a single continuous drawing (not multiple sheets) such as some complex piping and wiring system diagrams, docking drawings, and compartment and access drawings which would exceed the length of size "F" sheets, shall be prepared as size "H" drawings. Size "H" drawings shall only be used for drawings which must display information on one continuous sheet or would be confusing if prepared as a multiple sheet drawing. Size "A" or "B" sheets may be used for intermediate size drawings, such as *Flexible Connections List*, where the data is not appropriate for, or the quantity of information does not justify size "F" sheets.

3.3.1.3 Level of detail. General guidelines for determining the level of detail required for development of SRDs shall be similar, but not limited to those indicated in example system categories listed below:

- a. **Piping.** A single-line drawing shall be used to depict the diagrammatic configuration of the system, showing valves, special fittings and components in their proper relationship. Additional features to be incorporated shall normally include the following:
  1. Pipe size identification (e.g., 1 1/2", 2", 2 1/2", etc.)
  2. Component identification numbers (e.g. 1MS-V1, 1MS-F25, IMS-GA10, 1MS-TH15, etc.)
  3. Component List (See 3.3.1.4)
  4. Identification of all interface systems
  5. System flow arrows if appropriate (Not appropriate where system flow direction varies under different operating conditions.)
  6. List of Symbols
  7. List of Applicable References
  
- b. **Ventilation.** A single-line drawing shall be used to depict ventilation and air conditioning recirculation system showing locations of fans, heaters and cooling coils and areas served by the system. Additional features to be incorporated shall include the following:
  1. Fan Data Table (with following)
    - a) Fan number and size
  2. List of Applicable References
  
- c. **Electrical.** A single-line diagram shall be used to depict the ships power system and shall also include enough specific data as follows:
  1. **60 and 400 Hertz Power Systems.** Single-line diagram to power panels and distribution boxes with loads stubbed off.
  2. **60 and 400 Hertz Metering and Control.** Single-line diagram between switchboards and wiring diagram.
  3. Index of sheets
  4. List of Applicable References
  
- d. **Tank Capacity.** Curves of capacity, centers of gravity and moments of inertia for Main Ballast Tank, Bow Tank, Fuel Oil, Auxiliary, Trim, Negative, Water Around Torpedo Tubes (WRT), Hydraulic Oil, Lubricating Oil, Potable Water, Sanitary and Fresh Water shall be provided as follows for use in determining ship stability:
  1. Capacity
  2. Vertical center of gravity
  3. Longitudinal center of gravity
  4. Transverse center of gravity

5. Moment of Inertia (where applicable)
  6. Residual Water including Items 1-4 inclusive (where applicable)
  7. Cavity Drain including items 1-4 inclusive (where applicable)
- e. **Naval Architecture Characteristics.** Various drawings that depict the principal static naval architectural characteristics of a submarine should include:
1. Displacement and Other Curves
  2. Lead Ballast stowage
  3. Moment Diagram
  4. Longitudinal *Flotational* Diagram
- f. **Hull/Structural.** Hull/Structural drawings shall provide such things as deck superstructure components, compartment arrangements, accesses, ladders, fittings, mast, etc. These drawings shall also include compartment/tank numbers, tank service identification, deck heights, etc.
- g. **Flexible Connections List.** Format shall be similar to Figure 3-3 of NAVSEA manual 0924-062-0010 and contain as a minimum the following:
1. Service and system in which installed
  2. Location (pipe" or equipment)
  3. Size (normal)
  4. Required replacement date
  5. Appropriate specifications
  6. Vendor model and part numbers for parts in assemblies.
- h. **Special Drawings.** Sub-Safe Certification mapping drawings, Sub-Safe Penetration drawings, Asbestos Removal drawings, Noise Review road maps, and other Special Drawings shall be as specified by NAVSEA 0902-018-2010, NAVSEA S9AA0-AB-GOS-010, or S9AA0-AA-SPN-010/GEN-SPEC, as applicable.
- i. **Arrangement Drawings.** Arrangement drawings shall be prepared in accordance with NAVSEA Technical Specification 9090-600, Section 3.5.9.

3.3.1.4 **Component List.** A Component List shall be incorporated into the applicable SRDs. This includes, functionally significant piping, valves, fittings, special fittings, instrument list, etc., as defined by NAVSEA S9040-AA-IDX-020/SWBS 5D.

- a. The format for the Component List shall include the following:
1. Piece number (ex. 1MS-V33A, 1MS-F42, 1MS-GA55)
  2. Quantity of pieces identified by quantity of one.
  3. Description of item size and noun name (ex. 5", gate valve)
  4. Expanded Ship Work Breakdown Structure (ESWBS) 5 digit number for configuration worthy items as identified in NAVSEAINST 4790. 1A.
  5. Functional description/service (1MS-33A Mn Stm COV. #1 Mn Fd Pmp)



\* When authorized and invoked by the Ships Logistics Manager (SLM) or Ship Acquisition Project Manager (SHM).

3.3.1.5 General notes. SRDs shall contain a complete list of General Notes. The first general note shall read similar to the following:

"This is a Selected Record Drawing developed from conditions existing on the USS (SHIP NAME & HULL NUMBER) during shipcheck on (DATE) and includes all modifications up to and including the FY (YEAR. TYPE of Availability)."

3.3.1.6 Ship Drawing Index (SDI). Each Selected Record Drawing shall be listed in the Ships Drawing Index (SDI) under BSCI/SWAB/SWBS number "000" in addition to the applicable BSCI/SWAB/SWBS number assigned to drawing.

3.3.1.7 Shipcheck block. As each Selected Record Drawing is updated, the Shipcheck Block on the drawing above the title block shall also be updated to indicate that the drawing has been checked and corrected to show conditions actually existing on the ship.

3.3.2 Safeguarding Classified Information and Unclassified Information. SRDs and associated lists containing classified information shall be marked in accordance with SECNAVINST 5510.36 and SECNAVINST 5510.30. Further, those drawings and associated lists containing Naval Nuclear Propulsion Information, as defined in Enclosure (1) of NAVSEAINST C5511.32, shall be marked pursuant to the requirements established in NAVSEAINST C5511.32.

3.3.3 Guidelines for Updating SRDs. The following guidelines should be followed to determine the action required in the updating of SRDs.

- a. A revised drawing is authorized if the following conditions are met: The original tracing of the drawing is available and reproduction quality is acceptable. In preparing the revision, the original tracing shall be revised if alteration changes can clearly be shown without the loss of existing clarity, detail and engineering support data and the original meets the drawing requirements specified herein.
- b. A superseding drawing is required if any of the following conditions apply:
  1. The original tracing of the drawing is missing or is not available.
  2. The original tracing does not meet the drawing requirements specified herein and changes to the drawing are required to suit the subject ship. SRDs are not to be redrawn for the sole purpose of meeting the drawing requirements specified herein.
  3. Whenever the original of an SRD, because of age, extensive corrections or other reasons, deteriorates so that legible prints cannot be made, a new drawing must be prepared. When preparing new drawings for any of the above reasons and the original does not meet the drawing requirements herein, they shall be developed in accordance with these requirements and the drawings assigned a new NAVSEA drawing number.

- c. A new drawing is authorized when alterations have been accomplished that would normally require correction of SRDs as specified herein, but where these drawings have not been previously prepared, the following procedures shall be adhered to:
  - 1. Where only a class drawing exists, a reproducible copy is to be made provided it can be corrected to meet the drawing requirements specified herein and to reflect the specific hull configuration (Class Docking Drawings excepted per NSTM, Chapter 997 - Docking Instructions and Routine Work in Drydock (NAVSEA S9086-7G-STM-000)). This drawing shall be assigned a new NAVSEA drawing number and designated as the SRD applicable only to the subject ship.
  - 2. When a specific SRD does not exist or was never provided by the Planning yard or the ship, a new original drawing shall be prepared in accordance with the drawing requirements specified herein by the Planning Yard (Class Docking Drawings excepted per NSTM, Chapter 997 - Docking Instructions and Routine Work in Drydock (NAVSEA S9086-7G-STM-000)).

3.3.3.1 Inactive Ships SRD Preparation. When inactive ships are being activated for assignment to the active fleet, the SRDs are to be corrected as necessary to suit requirements specified herein.

3.3.3.2 Nuclear-Powered Ship Docking Drawing. Docking drawing for nuclear-powered ships must be prepared and/or revised in conformance with the requirements of Naval Ships Technical Manual, Chapter 997 - Docking Instructions and Routine Work in Drydock (NAVSEA S9086-7G-STM-000) and additional requirements of FMP Manual SL720-AA-MAN-010.

3.3.3.3 Reactor Plant SRD Requirements. Requirements relative to Reactor Plant Selected Record Drawings are provided in Subsection 4.13 of FMP Manual SL720-AA-MAN-010.

3.3.3.4 Submarine Rescue and Salvage Drawings. The Salvage System Arrangement and Booklet of General Drawings for submarines are designated as Rescue and Salvage Drawings. These drawings must be accurate and available at all times for use in the event of a submarine disaster. The Booklet of General Drawings is to be modified to include a compartment flooding effect tabulation and bulkhead holding depths as follows:

- a. Each main watertight compartment
- b. Floodable volume of each compartment in gallons and tons
- c. Vertical and horizontal centers of gravity for specific flooding levels for each main compartment
- d. Maximum holding depth for which the internal main division bulkheads are designed

Whenever changes affecting the Rescue and Salvage Drawings are made by a shipyard, the shipyard will furnish prints of such drawings to the Commanding Officer of the submarine concerned. The Commanding Officer will be responsible for certifying that these prints either conform to the actual arrangement, or are marked up to show differences, and then return them to the shipyard. Prior to the submarine's departure, the shipyard will furnish the Commanding Officer two reproducible copies of the corrected drawing and additional prints as requested. If an

alteration is made by Forces Afloat, the Commanding Officer of the submarine will mark up his drawing accordingly, submit the drawing to the Planning Yard for update and distribution, and notify operational commands as specified by Type Commanders. To avoid confusion in identifying revisions by alteration number, the reproducible copies of Rescue and Salvage Drawings will not be altered except by shipyards.

### 3.3.4 SRD Revisions.

3.3.4.1 General. Revisions to SRDs shall be made in accordance with DOD-STD-100 with particular attention to areas amplified herein.

3.3.4.2 Revision Methods. Revisions shall be made by erasure, addition of information, or by redrawing. Revisions to CAD-generated drawings shall be developed by CAD systems only.

3.3.4.3 Identifying Revisions on SRDs. Revision locations shall be identified by all of the following methods:

- a. Revision symbols on field of drawing.
- b. Description in the revision block.
- c. Zone in the zone column within the revision block.
- d. Revision authorization document referenced on drawing.

3.3.4.4 Multiple Changes. All changes to a SRD incorporated at one time shall be identified by the same revision letter. The changes shall be numbered sequentially to permit ready identification of a specific change. In this case, the appropriate sequence number will appear as a suffix to the revision letter.

3.3.4.5 Required Revisions. Any change to an SRD shall be recorded as a revision. When security classification is changed on a drawing, this will also constitute a revision to the drawing.

3.3.4.6 Recording Revision Description on SRDs. Revision description shall be written as briefly and concisely to provide sufficient detail as necessary to accurately define the change in the description column.

3.3.4.6.1 Zoning. When changes are recorded by zoning, the zone in which each change is made shall be entered in the zone column on the same line as the description of the change.

### 3.3.4.7 Revision Of Multi.Sheet SRDs.

3.3.4.7.1 Requirement. Concurrent changes made upon any or all sheets of a multiple-sheet drawing shall be identified on each sheet so revised by the same revision letter. Each revision affecting any or all sheets shall be identified on the revision record sheet or status of sheets block.

### 3.3.4.7.2 Procedure.

- a. Revision upon any sheet of the drawing shall be made and recorded in the usual manner except that the sequence of revision letters and serial suffixes shall apply to the drawings as a whole rather than to each individual sheet. Sheet 1 shall include a tabulation to indicate the revision status of each sheet comprising the group. Whenever a change is made on any sheet, the revision letter applicable to that change shall be entered in the revision status block on Sheet 1, both in the column for the revised sheet and for Sheet 1 (regardless of whether there is any other change on Sheet 1). No revision symbols are required to indicate these entries in the revision status block. For each other sheet, the last applicable revision letter shall be entered in the appropriate column of the revision status block. For all sheets that have never been revised, a dash shall be entered in the appropriate columns.
- b. In the case of computer prepared multi-sheet drawings all sheets shall be identified by the same revision letter regardless of which sheet the revision applies to.

3.3.5 Signature Responsibilities. SRDs shall have (as a minimum) the signature entries listed below in the title block region of the drawing as delineated by NAVSEA Technical Specification 9090-600. The person signing for each of the signature entries is responsible for the following functions:

- a. Drawn or Prepared by. This shall consist of the printed name of the person who prepared the drawing.
- b. Reviewed or Checked by. This shall consist of the printed name of the person who reviewed or checked the drawing and the responsible Technical Code Number.
- c. Approved by. This shall consist of the signature of the person responsible for the lead on the project in the Planning Yard Technical Code (i.e., Lead Engineer, Group Leader, or Supervisor). This person shall: (a) be responsible for properly invoking the engineering and technical requirements (i.e., MIL-STD, MIL-SPECS, etc.); (b) ensure compliance with engineering drawings standards; (c) be knowledgeable of the ships system configuration validation shipcheck and initial drawing preparation; and (d) perform the final independent review of the completed SRD for all aspects of quality (i.e., procedural, technical, engineering, and incorporation of shipcheck information).

If the SRD is prepared by a Contractor, the approval line shall be signed by the senior Navy person responsible (see (c) above) for the content of the drawings. In all cases a Navy Title Block shall be used.

3.3.5.1 Product quality. Personnel responsible for SRD preparation, reviewing or checking and approval shall utilize drawing checklists and audits, as necessary, to ensure product quality in accordance with specifications herein and established procedures for other drawings in consonance with governing requirements (e.g., NAVSEA TL855-AA-STD-010 - Shipyard Quality Program Manual).

3.3.5.2 Overall quality. In the event that SRD preparation is performed by an activity (Government or Private) other than the cognizant Planning yard, the overall quality of the SRD effort remains the responsibility of the Planning Yard.

3.3.5.3 Submarines. For submarines, the above does not relieve the overhaul shipyard of the responsibility, as set forth in NAVSEA 0902-018-2010, to:

- a. furnish the ship prior to fast cruise with one full sized print of each selected record drawing reflecting the end of overhaul configuration.
- b. provide written certification, prior to fast cruise, to the submarine commanding officer, with copies to the appropriate Type Commander and Squadron Commander and NAVSEA, that the selected record drawings affected during overhaul/conversion have been updated and reflect, as a minimum, all accomplished SHIPALTs and all changes wrought by the Ship's Force.

3.3.6 SRD Distribution. SRDs shall be distributed in accordance with NAVSEA SL720-AA-MAN-010.

#### 4. QUALITY ASSURANCE

4.1 Responsible For Inspection. Unless otherwise specified in the tasking documentation or contract, the Planning Yard shall be responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the tasking documentation or contract, the Planning Yard may use its own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by NAVSEA. NAVSEA reserves the right to perform any of the applicable inspections set forth in the documents referenced herein, which are deemed necessary to assure engineering drawings and associated lists conform to prescribed requirements.

4.1.1 Sampling. NAVSEA will normally perform inspection of drawings on a sampling basis and will normally use the evidence of this sampling as indicating performance or nonconformance to these specifications.

4.1.2 Planning Yard's Drawing Control System. The Planning Yard shall provide and maintain a system for the detailed examination and technical review of all engineering drawings and associated lists to be supplied under the terms of the contract or tasking documentation. The system shall assure the conformance of the engineering drawings and associated lists to all requirements specified herein. The system including the procedures shall be documented and shall be subject to review by NAVSEA or its designated representative. The control system is subject to the disapproval of NAVSEA or its designated representative, whenever it can be demonstrated that it fails to assure conformance to the requirements specified herein.

4.1.2.1 Availability of Supporting Data. The Planning Yard shall permit NAVSEA to review the supporting data normally retained by the Planning Yard in the original format that the Planning Yard used to make its design decisions, in order to aid the NAVSEA representative in the review of the Planning Yard's design.

4.1.2.2 Drawing Control Procedures. The Planning Yard's drawing control procedures shall cover:

- a. Assignment of responsibility for detail examination, review, and signature authority of drawings for the Planning Yard.
- b. Required qualifications of personnel performing detail examination, review, and signature authority of drawings for the Planning Yard.
- c. Procedural flow of drawings and other associated documentation.
- d. Check lists to be used in the detail examination and review of drawings. The check lists shall specify each examination to be performed to verify conformance of drawings to the applicable requirements of this specification and the contract or tasking documentation.
- e. Method of safeguarding classified information.
- f. Methods providing for the prevention and ready detection of discrepancies and for timely and positive corrective action.
- g. Method of safe storage of Selected Record Drawings, reference drawings, and other ship design documentation.
- h. Methods providing for controlled issue of drawing copies, both reproducible and non-reproducible.

## 4.2 Nonconforming Data Items.

4.2.1 Format Defects. There may be random sampling by NAVSEA for quality of drawing format of all Planning Yard drawings as they are issued. When numerous format defects are discovered on Planning Yard drawings, the Planning Yard shall correct its process to prevent recurrence of defects found, but need not correct or redraw drawings or portions of drawings already issued unless they are illegible, do not meet the reproducibility requirements, or affect usability.

4.2.2 Engineering/Technical Defects. Selected drawings subordinate to each system diagram or system drawing may be reviewed by NAVSEA to determine whether they describe a system which will meet the specified requirements.

4.2.2.1 Significant Engineering/Technical Defects. When, as a result of this review, it is determined that a drawing contains significant engineering/technical defects, such defects will be identified to the Planning Yard, which shall review all other drawings subordinate to the next higher level of drawing (for example, system diagram or system drawing), for similar defects and then correct promptly all defects found.

4.2.2.2 Minor Engineering/Technical Defects. When, as a result of this review, it is determined that a drawing contains minor engineering/technical defects, such defects will be identified to the Planning Yard, which shall correct them.

4.2.2.3 Numerous Engineering/Technical Defects. Numerous engineering/technical defects, whether significant or minor, will be considered as an indication of poor Planning Yard quality control, and the Planning Yard shall correct its process. The Planning Yard shall advise NAVSEA of the results of its process review, including drawings examined, the number of like deficiencies found, and the steps taken to prevent recurrence.



4.2.3 Microfilm. Those microfilm system elements described herein which, after inspection by NAVSEA or its designated representative, are found not to be in compliance with specification requirements shall be replaced at no additional cost to the Government.

4.3 Inspection of Preparations for Delivery. Packaging and packing of documents to be delivered under this specification shall be inspected to insure that the preparation for-delivery requirements are met.

## 5. PREPARATION FOR DELIVERY

5.1 Packaging. All drawings and lists delivered under this specification shall be packaged for mailing or shipping in accordance with Level A requirements of MIL-PRF-5480, except that blue-line prints of size "D", "F" or "H" drawings forwarded to NAVSEA, its designated representative, or an installing activity shall be folded, accordion fashion, to 8 1/2" by 11" height, with the title block completely visible.

5.1.1 Classified Material. Classified material shall be packaged in accordance with SECNAVINST 5510.36.

5.1.2 Packing. All drawings and lists delivered under this specification shall be packed in accordance with level C of MIL-PRF-5480.

5.2 Marking of Shipments. Identification and address markings for interior packages and shipping containers shall be in accordance with MIL-STD-129.

## 6. NOTES

6.1 Intended Use. Ship Selected Record drawings are used to provide a record of important features, systems and arrangements applicable to an individual ship, which are maintained current throughout the life of the ship.

6.2 Ordering Data.

6.2.1 Procurement Requirements. Procurement documents should specify:

- a. Title, number and date of this specification.
- b. When Government design activity drawing numbers are to be assigned, identify the assigning activity, and if Government drawing formats are to be supplied, identify the source.
- c. The applicable Data Item Description (DID).
- d. That the metric system shall not be used.
- e. Whether company drafting standards are accepted.
- f. Kinds of associated lists required.
- g. Drawing assembly level at which associated lists will be prepared.
- h. Identify whether the mono-detail system will be used.

- i. Selection of types of engineering drawings if different from MIL-DTL-31000.
- j. Quantity and type of reproduction.
- k. Whether microfilm is required, and if so, what type is required.
- l. Whether delivery of original drawings and undimensional drawings are required.
- m. What special packaging of originals, when ordered, is required.
- n. Delivery schedule, and to whom the engineering drawings and supporting documents are to be delivered.

6.2.2 Data Requirements. When this specification is used in a contract procurement, the provisions of 52.277-7015 (Rights in Technical Data-Specific Acquisition) of the Department of Defense (DOD) supplement to the Federal Acquisition Regulation (FAR) shall be invoked and the data requirements identified below will be developed as specified by an approved Data Item Description (DID) (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (CDRL) (DD Form 1423) incorporated into the contract. Deliverable data required by this specification is cited in the following paragraphs:

<b>Paragraph</b>	<b>Data Requirement</b>	<b>Applicable DID</b>
3.3	Selected Record Drawings	DI-E-7031

(Copies of Data Item Descriptions required by the contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)





APPENDIX A TO NSTS 9090  
SELECTED RECORD DRAWINGS FOR SHIP CLASSES

**Table I**  
**Section A**  
AOE-AS

**Section B**  
CG-DDG

**Section C**  
LCC-MHC

**Table II**  
CV, CVN

**Table III**  
SS, SSN, SSBN

**Table IV**  
Other Ships



**TABLE I, SECTION A  
SELECTED RECORD DRAWINGS**

**(Note: For MSC operated ships, refer to COMSCINST 9000.1)**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>AOE 1</b>	<b>AOE 6(TBD)</b>	<b>ARS 50</b>	<b>AS /39</b>
Docking Drawings		X		X	X
Booklet of General Drawings		X		X	X
Schedules of Watertight Integrity Tests & Inspections		X		X	X
Tank Capacity and Vertical Center of Gravity Curves		X		X	X
Booklet of Tank Sounding Tables		X		X	X
Running, Signal and Anchor Lights (Location drawing) (To be included in Booklet of General Drawings.)		X		X	X
Main Steam Systems Diagrams		X			X
Auxiliary Steam System Diagram		X			X
High Pressure Steam Drain Systems Diagram		X			X
Condensate System Diagrams		X			X
Feed System Diagrams and Reserve and Makeup Feed		X			X
Main Sea Water Cooling System Diagrams		X			X
Auxiliary Sea Water Cooling System Diagrams		X			X
Steam Operated Distilling System		X			X

**TABLE I-A-1**

**TABLE I, SECTION A  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>AOE 1</b>	<b>AOE 6</b>	<b>ARS 50</b>	<b>AS 39</b>
Steering Gear Hydraulic Systems Diagram		X			X
High Pressure Air System Diagrams (Ind MP)		X		X	X
60HZ A.C. Power Distrn System Diagrams		X		X	X
400 HZ A.C. Power Distrn System Diagrams		X		X	X
Low Pressure Steam Drain System Diagrams		X			X
Fresh Water Drain Collecting System Diagrams		X			X
Steam Plant Control System Diagrams (Including Steam Plant Control Panel and Benchboards)		X			X
Ships Service Auxiliary Cooling Water Diagrams		X			X
Ships Service Power Sources Diagram (Including equipments such as SSTGs, SSMGs, CTG, Diesel Generators, Batteries that are not included in Power Distribution Systems above)		X			X
Main Lube Oil System Diagrams		X		X	X

**TABLE I-A-2**

**TABLE 1. SECTION A  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>AOE 1</b>	<b>AOE 6</b>	<b>ARS 50</b>	<b>AS 39</b>
Lube Oil Fill, Transfer and Purification System Diagrams		X		X	X
Ships Service Circulating Water System Diagrams (Those portions associated with the Propulsion Plant)		X			X
Steam Plant Salinity Indicator System Diagrams		X			X
Service and Control Air Systems Diagrams (Those portions associated with the propulsion plant)		X			X
Asbestos Removal Drawings		X			X
HVAC Diagrammatic and System Control Drawings		X			X
Ordnance Handling Drawings		X			
Fire Fighting Systems Diagrams		X			X
Electronic Cooling Water Systems Diagrams		X			X
Helo Landing and Signal Lighting System Diagrams		X			X
H.P. Auxiliary Steam System Diagrams		X			X
Auxiliary Exhaust Steam System Diagrams		X			X

**TABLE I-A-3**

**TABLE I, SECTION A  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>AOE 1</b>	<b>AOE 6</b>	<b>ARS 50</b>	<b>AS 39</b>
Gland Sealing Steam System Diagrams		X			X
Auxiliary Gland Leak-Off System Diagrams		X			X
Air Vent Piping System Drawings		X			X
LP Air System Diagrams		X			X
Flooding Effect and Liquid Loading		X			X
Sub-Division First Platform and Below		X			X
Sub-Division Main Deck and Above		X			X
JP-5 Filling, Transfer, and Overflow Systems		X			X
Casualty Power Supply Systems		X			X
Casualty Communications Systems		X			X
Vital DMG CTL Elect Eqpt and Power Supply Chart		X			X
Communications Directory		X			X
Potable (Propulsion Plant) Support Water Fill, Transfer Service and Purification System		X			X
Chilled Water Systems Drawings		X			X

**TABLE I-A-4**

**TABLE I, SECTION A  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>AOE 1</b>	<b>AOE 6</b>	<b>ARS 50</b>	<b>AS 39</b>
Main and Secondary Drainage System Drawings		X			X
Oily Water Transfer System Drawings		X			X
CIC Arrangement of Eqpt		X			X
Boiler Blow System Diagrams		X			X
Pilot House and Bridge Wing Arrangement of Eqpt		X		X	X
Computer Room Arrangement of Eqpt					X
Communications Central Arrangement of Eqpt		X		X	X
Topside Arrangement Drawings		X		X	X
Compartment and Access Drawings		X			X
Topside Ant Sys Arrangement		X			X
Deep Submergence System (DSS) Drawings (as specified in Certification Milestones)				X	
Fuel Oil Transfer Systems Diagrams		X			X
Fuel Oil Stripping System Diagrams		X			X
Fuel Oil Service System		X			X
Electrical Load Analysis		X			X

**TABLE I-A-5**



**TABLE I, SECTION A  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>AOE 1</b>	<b>AOE 6</b>	<b>ARS 50</b>	<b>AS 39</b>
Pumping, Drainage and Ballasting System Drawings		X			X
H.P. Air Start System Drawings (Gas Turbine and Diesel Propulsion Only)					
Dirty Oil Drain System Drawings (Gas Turbine and Diesel Propulsion Only)					
Air Inlet System Drawings (Gas Turbine and Diesel Propulsion Only)					
Air Inlet Separator System Drawings (Gas Turbine and Diesel Propulsion Only)					
Muffler System Drawings (Gas Turbine and Diesel Propulsion Only)					
ACC/FWC Systems Diagrams		X			X
Underway Replenishment Drawings (AO, AOR, AOE, AFS,AE)		X			

**TABLE I A-6**

**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
Docking Drawings		X	X	X
Booklet of General Drawings		X	X	X
Schedules of Watertight Integrity Tests & Inspections (except service craft)		X	X	X
Tank Capacity and Vertical Center of Gravity Curves		X	X	X
Booklet of Tank Sounding Tables		X	X	X
Flexible Connections List		X	X	X
Running, Signal and Anchor Lights (Location drawing) (To be included in Booklet of General Drawings)		X	X	
Main Steam Systems Diagrams				
Auxiliary Steam System Diagrams				
High Pressure Steam Drain Systems Diagrams				
Condensate System Diagrams				
Feed System Diagrams and Reserve and Makeup Feed				
Main Sea Water Cooling System Diagrams		X	X	
Auxiliary Sea Water Cooling System Diagrams	X	X	X	

**TABLE I-B-1**

**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
Steam Operated Distilling System		X	X	
Steering Gear Hydraulic Systems Diagrams		X	X	X
High Pressure Air System Diagrams (Incl MP)		X	X	X
60 HZ A.C. Power Distrn System Diagrams		X	X	X
400 HZ A.C. Power Distrn System Diagrams		X	X	X
Low Pressure Steam Drain System Diagrams				
Fresh Water Drain Collecting System Diagrams				
Steam Plant Control System Diagrams (Including Steam Plant Control Panel and Benchboards)				
Ships Service Auxiliary Cooling Water Diagrams				
Ships Service Power Sources Diagram (Including equipments such as SSTGs, SSMGs, CTG, Diesel Generators, Batteries that are not included in Power Distribution Systems above)		X	X	X

**TABLE I-B-2**

**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
Electric Plant Temperature Monitoring System Diagrams				
Electric Plant Control System Diagrams (Including Electric Plant Control Panel and Benchboard)		X	X	X
Main Lube Oil System Diagrams		X	X	X
Lube Oil Fill, Transfer And Purification System Diagrams		X	X	X
Propulsion Plant Temperature Monitoring System Diagrams				
Propulsion Speed Indicator System Diagrams				
Steam Plant Alarm System Diagrams				
Steam Plant Salinity Indicator System Diagrams				
Air Conditioning System and Ventilation Diagrams (Those portions associated with propulsion spaces less reactor compartment)				
Steam Plant Pneumatic Control Air System Diagrams				

**I-B-3**

**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
Service and Control Air Systems Diagrams (Those portions associated with the propulsion plant)				
Displacement And Other Curves				
Tank Capacity Curves, Curves of Center of Gravity, and Curves of Moments of Inertia				
Asbestos Removal Drawings		X	X	
HVAC Diagrammatic and System Control Drawings		X	X	X
Ordnance Handling Drawings		X	X	
Fire Fighting Systems Diagrams		X	X	
Electronic Cooling Water Systems Diagrams		X	X	X
Helo Landing and Signal Lighting System Diagrams		X	X	X
H.P. Auxiliary Steam System Diagrams				
Dirty Drain System Diagrams				
Auxiliary Exhaust Steam System Diagrams				
Gland Sealing Steam System Diagrams				

**TABLE I-B-4**

**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
Auxiliary Gland Leak-Off System Diagrams				
Air Vent Piping System Drawings				
LP Air System Diagrams			X	X
Flooding Effect and Liquid Loading		X	X	
Sub-Division First Platform and Below		X	X	
Sub-Division Main Deck and Above		X	X	
JP-5 Filling, Transfer, and Overflow Systems		X	X	X
Casualty Power Supply Systems		X		
Casualty Communications Systems		X	X	
Vital DMG CTL Elect Eqpt and Power Supply Chart		X	X	
Communications Directory			X	
Potable (Propulsion Plant) Support Water Fill, Transfer, Service and Purification System (Mchry Space)		X	X	
Chilled Water Systems Drawings		X	X	X
Main and Secondary Drainage System Drawings			X	X

**TABLE I-B-5**

**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
Oily Water Transfer System Drawings		X	X	
Auxiliary Boiler Support System Drawings		X	X	
Reboiler Systems Diagrams				
CTC Arrangement of Equipment		X	X	X
Boiler Blow Systems Diagram			X	
Pilot House and Bridge Wing Arrangement of Eqpt		X	X	X
Computer Room Arrangement of Eqpt		X	X	
Communications Central Arrangement of Eqpt		X	X	X
Topside Arrangement Drawings		X	X	
Compartment and Access Drawings		X	X	X
Topside Ant Sys Arrangement		X	X	X
Ships Service Circulating Water System Diagrams (Those portions associated with the Propulsion Plant)				
Deep Submergence System (DSS) Drawings (as specified in Certification Milestones)				
Lead Ballast Stowage Arrangement Drawings		X	X	

**TABLE I-B-6**

**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
Propulsion Control System Diagrams		X	X	
Service Air System Diagrams (Those Portions Associated with the Propulsion Plant)		X	X	
150 #Auxiliary Steam System Diagrams		X	X	
Fuel Oil Transfer Systems Diagrams		X	X	
Fuel Oil Stripping System Diagrams		X	X	
Fuel Oil Service System		X	X	
Prairie/Masker Compressed Air System Drawings		X	X	
Waste Heat Hot Water Circulating System Drawings		X	X	
Electrical Load Analysis		X	X	X
Equipment Removal Route and Instructions Drawings		X	X	X
Pumping, Drainage and Ballasting System Drawings		X	X	
Auxiliary Thrust Bearing Assembly and Detail Drawings		X	X	
Bleed Air System Drawings (Gas Turbine Propulsion Only)		X	X	

**TABLE I-B-7**



**TABLE I, SECTION B  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CG 47</b>	<b>DD 963</b>	<b>DDG 51</b>
H.P. Air Start System Drawings (Gas Turbine and Diesel Propulsion Only)		X	X	
Dirty Oil Drain System Drawing (Gas Turbine and Diesel Propulsion Only)		X	X	
Air Inlet System Drawings (Gas Turbine and Diesel Propulsion Only)		X	X	X
Air Inlet Separator System Drawings (Gas Turbine and Diesel Propulsion Only)		X	X	X
Muffler System Drawings (Gas Turbine and Diesel Propulsion Only)				
Seawater service systems (firemain, sprinkling, washdown SSGTG cooling) systems diagrams				X
Machinery Centralized Control System major function drawings				X
Door, hatch and scuttle list				X
SSGTG cooling system diagrams				X
Gas turbine mounts and measurements list				X
Potable water (propulsion plant support) and vital space protection support, fill, transfer, service and purification systems diagrams				X

	X
PRAIRIE/MASKER, bleed, anti-icing and starting air systems diagrams	
Fill connection drawing	X
Sonar dome pressurization system control panel drawings	X
Remote monitoring and control panel mimic and indicator layout drawing for fuel transfer	X
Hose list drawing	X
Centralized seawater cooling systems drawings	X
Oily waste drain collecting system diagram	X
Oily waste transfer system drawing	X
Chart Room – arrangement of equipment	X
Radio communication system block diagram	X
CSER #1 and Sonar Control Room – arrangement of equipment	X
CSER # 2 and TOMAHAWK Equipment Room – arrangement of equipment	X
CSER #3 – arrangement of equipment	X
Sea connections drawings	X
Ships fuel fill, transfer, service and compensating systems diagram	X
Panama canal drawing	X
Ships Signal Exploitation Space (SSES) – arrangement of equipment	X

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Arrangement of special coating materials	X
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**TABLE I-B-8**

**TABLE I, SECTION C  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: LCC 19</b>	<b>LHA</b>	<b>LHD 1(TBD)</b>	<b>LHD 8(TBD)</b>	<b>LPD</b>	<b>LPD 17(TBD)</b>	<b>LSD 36</b>	<b>LSD 41/49</b>	<b>MCM</b>	<b>MHC (TBD)</b>	<b>MSO</b>
Docking Drawings	X	X			X		X	X	X		X
Booklet of General Drawings	X	X			X		X	X	X		X
Schedules of Watertight Integrity Tests & inspections	X	X			X		X	X	X		X
Tank Capacity and Vertical Center of Gravity Curves	X	X			X		X	X	X		X
Booklet of Tank Sounding Tables	X	X			X		X	X	X		X
Running, Signal and Anchor Lights (Location Drawing) (To be included in Booklet of General Drawings.)	X	X			X		X	X	X		X
Main Steam Systems Diagrams	X	X			X		X				
Auxiliary Steam System Diagrams	X	X			X		X	X			X
High Pressure Steam Drain Systems Diagrams	X	X			X		X				
Condensate System Diagrams	X	X			X		X				
Feed System Diagrams and Reserve and Makeup Feed	X	X			X		X				
Main Sea Water Cooling System Diagrams	X	X			X		X	X	X		X
Auxiliary Sea Water Cooling System Diagrams	X	X			X		X	X	X		X
Steam Operated Distilling System	X	X			X		X	X			X

**TABLE I-C-1**

**LEGEND: X = Required by FMP Manual**

**TABLE I, SECTION C  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: LCC 19</b>	<b>LHA</b>	<b>LHD 1</b>	<b>LHD 8(TBD)</b>	<b>LPD 17</b>	<b>LPD 17</b>	<b>LSD 36</b>	<b>LSD 41/49</b>	<b>MCM</b>	<b>MHC</b>	<b>MSO</b>
Steering Gear Hydraulic Systems Diagrams	X	X			X		X	X			X
High Pressure Air System Diagrams (Inci MP)	X	X			X		X	X			X
60 HZ A.C. Power Distrn System Diagrams	X	X			X		X	X	X		X
400 HZ A.C. Power Distrn System Diagrams	X	X			X		X	X	X		X
Low Pressure Steam Drain System Diagrams	X	X			X		X				
Fresh Water Drain Collecting System Diagrams	X	X			X		X				
Steam Plant Control System Diagrams (Including Steam Plant Control Panel and Benchboards)	X	X			X		X				
Ships Service Power Sources Diagram (Including equipments such as SSTGs, SSMGs, CTG, Diesel Generators, Batteries that are not included in Power Distribution Systems above)	X	X			X		X	X	X		X
Main Lube Oil System Diagrams	X	X			X		X	X			X
Lube Oil Fill, Transfer And Purification System Diagrams	X	X			X		X	X			X

**TABLE I-C-2**

**TABLE I, SECTION C  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: LCC 19</b>	<b>LHA</b>	<b>LHD 1</b>	<b>LHD 8(TBD)</b>	<b>LPD</b>	<b>LPD 17</b>	<b>LSD 36</b>	<b>LSD 41/49</b>	<b>MCM</b>	<b>MHC</b>	<b>MSO</b>
Ships Service Circulating Water System Diagrams (Those Portions associated with the Propulsion Plant)	X	X			X		X	X			X
Steam Plant Salinity Indicator System Diagrams	X	X			X		X				
Service and Control Air Systems Diagrams (Those portions associated with the propulsion plant)	X	X			X		X	X			
Asbestos Removal Drawings	X	X			X		X	X			X
HVAC Diagrammatic and System Control Drawings	X	X			X		X	X	X		X
Ordnance Handling Drawings		X			X		X	X			
Fire Fighting Systems Diagrams	X	X			X		X	X	X		X
Electronic Cooling Water Systems Diagrams	X	X			X		X	X			
Helo Landing and Signal Lighting System Diagrams	X	X			X		X	X			
H.P. Auxiliary Steam System Diagrams	X	X			X		X	X			X
Dirty Drain System Diagrams											
Auxiliary Exhaust Steam System Diagrams	X	X			X		X	X			X
Gland Sealing Steam System Diagrams	X	X			X		X				

**TABLE I-C-3**

**LEGEND: X = Required by FMP Manual**

**TABLE I, SECTION C  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: LCC 19</b>	<b>LHA</b>	<b>LHD</b>	<b>LHD 8(TBD)</b>	<b>LPD 17</b>	<b>LPD 17</b>	<b>LSD 36</b>	<b>LSD 41/49</b>	<b>MCM</b>	<b>MHC</b>	<b>MSO</b>
Automated Assault System Drawings (All LHA Ships Only)		X									
Automated Propulsion System Drawings (All LHA Ships Only)		X									
Auxiliary Gland Leak-Off System Diagrams	X	X			X		X				
Air Vent Piping System Drawings	X	X			X		X	X			
LP Air System Diagrams	X	X			X		X	X			X
Flooding Effect and Liquid Loading	X	X			X		X	X			X
Sub-Division First Platform and Below	X	X			X		X	X			X
Sub-Division Main Deck and Above	X	X			X		X	X			X
JP-5 Filling, Transfer, and Overflow Systems	X	X			X		X	X			
Casualty Power Supply Systems	X	X			X		X	X			X
Casualty Communications Systems	X	X			X		X	X			
Vital DMG CTL Elect Eqpt and Power Supply Chart	X	X			X		X	X			
Communications Directory	X	X			X		X	X			

**TABLE I-C-4**

**TABLE I, SECTION C  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: LCC 19</b>	<b>LHA</b>	<b>LHD</b>	<b>LHD 8(TBD)</b>	<b>LPD</b>	<b>LPD 17</b>	<b>LSD 36</b>	<b>LSD 41/49</b>	<b>MCM</b>	<b>MHC</b>	<b>MSO</b>
Potable (Propulsion Plant) Support Water Fill, Transfer, Service and Purification System (Mchry Space)	X	X			X		X	X	X		X
Chilled Water Systems Drawings	X	X			X		X	X			
Main and Secondary Drainage System Drawings	X	X			X		X	X			
Oily Water Transfer System Drawings	X	X			X		X	X			X
CIC Arrangement of Eqpt	X	X			X		X	X	X		
Boiler Blow System Diagram	X	X			X		X	X			X
Pilot House and Bridge Wing Arrangement of Eqpt	X	X			X		X	X	X		X
Computer Room Arrangement of Eqpt	X	X									
Communications Central Arrangement of Eqpt	X	X			X		X	X	X		X
Topside Arrangement Drawings	X	X			X		X	X	X		X
Compartment and Access Drawings	X	X			X		X	X	X		X
Topside Ant Sys Arrangement	X	X			X		X	X	X		X
Propulsion Control System Diagrams									X		
150 # Auxiliary Steam System Diagrams											

**TABLE I-C-5**

**LEGEND: X = Required by FMP Manual**



**TABLE I, SECTION C  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: LCC 19</b>	<b>LHA</b>	<b>LHD</b>	<b>LHD 8(TBD)</b>	<b>LPD 17</b>	<b>LSD 36</b>	<b>LSD 49</b>	<b>MCM</b>	<b>MHC</b>	<b>MSO</b>
Fuel Oil Transfer Systems Diagrams	X	X			X	X	X			X
Fuel Oil Stripping System Diagrams	X	X			X	X	X			X
Fuel Oil Service System	X	X			X	X	X			X
Prairie/Masker Compressed Air System Drawings										
Electrical Load Analysis	X	X			X	X	X	X		X
Bleed Air System Drawings (Gas Turbine Propulsion Only)										
H.P. Air Start System Drawings (Gas Turbine and Diesel Propulsion Only)							X			
Dirty Oil Drain System Drawings (Gas Turbine and Diesel Propulsion Only)							X			
Air Inlet System Drawings (Gas Turbine and Diesel Propulsion Only)							X			
Air Inlet Separator System Drawings (Gas Turbine and Diesel Propulsion Only)							X			
Muffler System Drawings (Gas Turbine and Diesel Propulsion Only)							X			

**TABLE I-C-6**

**TABLE I, SECTION C  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: LCC 19</b>	<b>LHA</b>	<b>LHD</b>	<b>LHD 8(TBD)</b>	<b>LPD</b>	<b>LPD 17</b>	<b>LSD 36</b>	<b>LSD 41/49</b>	<b>MCM</b>	<b>MHC</b>	<b>MSO</b>
Sonar, MNV and Electronics Room Arrangement of Equipment									X		
Degaussing Coils Location Drawings									X		
Mine Countermeasures Handling									X		
ACC/FWC System Diagrams	X	X			X		X				

**TABLE I-C-7**

**LEGEND: X = Required by FMP Manual**



**TABLE II  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CV ALL</b>	<b>CVN ALL</b>
Docking Drawings		X	X
Booklet of General Drawings		X	X
Tank Capacity and Vertical Center of Gravity Curves		X	X
Booklet of Tank Sounding Tables		X	X
Steering Gear Hydraulic System Diagrams & Related I.C. Systems Diagrams		X	X
High Pressure Air System Diagrams (Including MP)		X	X
60HZ A.C. Power Distribution System Diagrams (From Load Center Boards to Vital Service Panels)		X	X
400HZ A.C. Power Distribution System Diagrams & Aircraft Servicing Diagram		X	X
Ships Service Power Sources Diagram (Including equipment such as SSTGs, SSMGs, CTGs, Diesel Generators, Batteries that are not included in Power Distribution Systems above. Generators to Main Boards to Load CTR Boards)		X	X
Electric Plant Control System Diagrams (Including Electric Plant Control Panel and Benchboard)		X	X
Main Lube Oil System Diagrams		X	X
Control Air System Diagrams (Steam Plant)		X	X
Asbestos Removal Drawings		X	X

**TABLE II-1**

**TABLE II  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>CV ALL</b>	<b>CVN ALL</b>
HVAC Diagrammatic & System Control Drawings		X	X
JP-5 Service Diagram (From Service Pump Disch to Aircraft Fuel Stations)		X	X
Firemain System Diagram		X	X
Firefighting System Diagrams (Fixed Systems including AFFF, Flight Deck Conflagration, Hangar Deck Sprinkling, Mchry Space Halon Systems and C02 Hose Reel w/50# Bottles)		X	X
Visual Landing Aids & Signal Lighting System Diagrams		X	X
Auxiliary Steam System Diagrams (CV; Propulsion Plant Support, no hotel services. CVN: Includes reduced pressure steam and auxiliary exhaust, escape & extraction steam)		X	X
LP Air System Diagrams		X	X
Fuel Oil Service System Diagram		X	
CIC Arrangement of Equipment		X	X
CATCC (ICA) Arrangement of Equipment		X	X
Pilot House & Bridge Wing Arrangement of Equipment		X	X
Communication Central Arrangement of Equipment		X	X
Fly Control Arrangement of Equipment		X	X
Tactical Flag Command Center Arrangement of Equipment (TFCC)		X	X
Aircraft and Weapons Elevator System Hydr & Elect Control Diagrams		X	X

**TABLE II-2**

**TABLE II  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CV CLASS: ALL</b>	<b>CVN ALL</b>
Catapult Steam System Diagram	X	X
Catapult Blowdown Steam Drain/Steam Blowdown System Diagram	X	X
Catapult Fill Valve Control System Diagram	X	X
Lifeboat Arrg't & Stowage Drawing	X	X
Ordnance Handling Diagrams (Including Stowage in space and route of weapons in/out)	X	X
Most Recent Catapult Slot Expansion Data	X	X
Low Pressure Steam Drain System Diagrams		X
		X
Steam Plant Control System Diagrams (Including Steam Plant Control Panel and Switch Boards)	X	X
Electric Plant Temperature Monitoring System Diagrams	X	X
Shaft Lube Oil System Diagrams	X	X
Propulsion Plant Temperature Monitoring System Diagrams	X	X
Propulsion Speed Indicator System Diagrams	X	X
Steam Plant Alarm System Diagrams	X	X

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Steam Plant Salinity Indicator System Diagrams

X

X

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**TABLE II-3**

**TABLE II**  
**SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CV</b> <b>CLASS: ALL</b>	<b>CVN</b> <b>ALL</b>
Topside Antenna Arrangement Diagram	X	X
Electric Load Analysis	X	X
Displacement & Other Curves		X

**TABLE II-4**





**TABLE III  
SELECTED RECORD DRAWINGS**

<b>SHIP: CLASS:</b>	<b>SSBN 726</b>	<b>SSN /637</b>	<b>SSN 688/21/774</b>
<b>DRAWING TITLE</b>			
Docking Drawings	X	X	X
Booklet of General Drawings	X	X	X
Compartment and Tank-Testing Requirements	X	X	X
Tread Ballast Stowage Arrangement Drawings	X	X	X
Salvage System Drawings and Diagrams	X	X	X
Escape and Rescue Arrangement (Note: Where this information is duplicated by a corresponding diagram in the General Information Book (GIB) or Ship Information Book (SIB) this drawing is not required)	X	X	X
SUBSAFE Mapping Drawings	X	X	X
Flexible Connections List	X	X	X
Consolidated Hull Zinc List	X	X	X
Running, Signal and Anchor Lights (Location drawing) (To be included in Booklet of General Drawings.)	X	X	X
Main Steam Systems Diagrams	X	X	X
Auxiliary Steam System Diagrams	X	X	X
High Pressure Steam Drain Systems Diagrams	X	X	X
Condensate System Diagrams	X	X	X
Feed System Diagrams	X	X	X
Main Sea Water Cooling System Diagrams	X	X	X

**TABLE III-1**

**LEGEND: X = Required by FMP Manual**  
**\* = SUBSAFE**

**TABLE III  
SELECTED RECORD DRAWINGS**

<b>SHIP: CLASS:</b>	<b>SSBN 726</b>	<b>SSN 637</b>	<b>SSN 688/21/774</b>
<b>DRAWING TITLE</b>			
Auxiliary Sea Water Cooling System Diagrams	X	X	X
Steam Operated Distilling System Diagrams	X	X	X
Test Data On Items Subject To Sea Pressure	X	X	X
Hydraulic System Diagrams (Main Vital and External)	X	X	X
Hydraulic System Diagrams Missile (SSBNs Only)	X		
Steering and Diving Gear Hydraulic Systems Diagrams	X	X	X
Main Oxygen System Diagrams	X	X	X
Trim and Drain Systems Diagrams	X	X	X
High Pressure. Air System Diagrams	X	X	X
High Pressure Ballast Tank Blow System Diagrams	X	X	X
60 HZ A.C. Power Distrn System Diagrams	X	X	X
400 HZ A.C. Power Distrn Systems Diagrams	X	X	X
DC and Propulsion Power Distrn System Diagrams	X	X	X
Low Pressure Steam Drain System Diagrams	X	X	X
Fresh Water Drain Collecting System Diagrams	X	X	X
Steam Plant Control System Diagrams (Including Steam Plant Control Panel and Benchboards)	X	X	X

**TABLE III-2**

**LEGEND: X = Required by FMP Manual**

**TABLE III  
SELECTED RECORD DRAWINGS**

<b>SHIP: CLASS:</b>	<b>SSBN 726</b>	<b>SSN 637</b>	<b>SSN 688/21/774</b>
<b>DRAWING TITLE</b>			
Ships Service Circulating Water System Diagrams (Those portions associated with the Propulsion Plant)	X	X	X
Engine Room Fresh Water Coolant System (Auxiliary Fresh Water) Diagrams	X	X	X
Ships Service Power Sources Diagrams (Including equipments such as SSTGs, SSMG, CTGs, Diesel Generators, Batteries that are not included in Power Distribution Systems above)	X	X	X
Electric Plant Temperature Monitoring System Diagrams	X	X	X
Electric Plant Control System Diagrams (Including Electric Plant Control Panel and Benchboard)	X	X	X
Main Lube Oil System Diagrams	X	X	X
SSTG Lube Oil System Diagrams	X	X	X
Shaft Lube Oil System Diagram's	X	X	X
Clutch Control Oil System Diagrams	X	X	X
Lube Oil Fill, Transfer and Purification System Diagrams	X	X	X
Propulsion Plant Temperature Monitoring System Diagrams	X	X	X
Propulsion Speed Indicator System Diagrams	X	X	X

**TABLE III-3**

**TABLE III  
SELECTED RECORD DRAWINGS**

<b>SHIP: CLASS:</b>	<b>SSBN 726</b>	<b>SSN 637</b>	<b>SSN 688/21/774</b>
<b>DRAWING TITLE</b>			
Steam Plant Alarm System Diagrams	X	X	X
Steam Plant Salinity Indicator System Diagrams	X	X	X
Air Conditioning System and Ventilation Diagrams (Those portions associated with reactor compartment and other propulsion spaces)	X	X	X
Service Air System Diagrams (Those portions associated with the Propulsion Plant)	X	X	X
Steam Plant Pneumatic Control Air System Diagrams	X	X	X
Depth Detecting System Diagrams	X	X	X
Noise Review Road Map for Noise Critical Systems	X	X	X
Control Air Systems Diagrams (Those portions associated with the propulsion plant)	X	X	X
Moment Diagram and Ship's Polygon	X	X	X
Displacement and Other Curves	X	X	X
Tank Capacity Curves, Curves of Center of Gravity and Curves of Moments of Inertia	X	X	X
Asbestos Removal Drawings(except 21 & 774 cl)	X	X	X
Propulsion Lube Oil Diagrams		X	
Gland Seal and Exhaust Diagrams	X		X
Composite Hull Penetration Drawings	X		X

**TABLE III-4**

**LEGEND: X = Required by FMP Manual**

**TABLE III  
SELECTED RECORD DRAWINGS**

<b>DRAWING TITLE</b>	<b>SHIP: CLASS:</b>	<b>SSBN 726</b>	<b>SSN 637</b>	<b>SSN 688/21/774</b>
Missile Tube Capacity and Other Curves		X		X
List of Resilient Mounts		X		X
List of Grease Fittings		X		
List of Throated Plugs in Sea Connected Systems		X		X
Defensive Weapon Handling and Launching Systems		X		
Strategic Weapon Fluid System Diagrams		X		
Strategic Weapon Electrical System Diagrams		X		
Strategic Weapon Electrical System Wiring Tables		X		
Low Pressure Ballast Tank Blow Diagrams		X		X
Diesel Generator Sea Water Cooling Diagrams		X		X
Potable Water Diagrams		X		
Electronics and Auxiliary Fresh Water Cooling Diagrams		X		
Refrigeration Diagrams		X		
Chilled Water Diagrams		X		
Fuel Oil Diagrams		X		
Compensating Systems Diagrams		X		
Plumbing Diagrams		X		
Vertical Launch System Flood and Drain System Diagram				X
Towed Sonar Array Stowage Tube Arrangement				X

**TABLE III-5**



**TABLE IV**  
**SELECTED RECORD DRAWINGS FOR**  
**ALL SHIPS NOT SPECIFIED IN TABLES I THRU III**

Docking Drawings	X
Schedules of Watertight Integrity Tests and Inspections (except service craft)	X
Tank Capacity and Vertical Center of Gravity Curves	X
Booklet of Tank Sounding Tables	X
Booklet of General Drawings	X
Asbestos Removal Drawings	X
Underway Replenishment Drawings (UNREP)*	X