

**RESTRICTED**

Serial No. \_\_\_\_\_

GENERAL INFORMATION BOOK

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U.S.S. BAGLEY	DD386
U.S.S. BLUE	DD387
U.S.S. HELM	DD388
U.S.S. MUGFORD	DD389
U.S.S. RALPH TALBOT	DD390
U.S.S. HENLEY	DD391
U.S.S. PATTERSON	DD392
U.S.S. JARVIS	DD393

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Information relative to construction and equipment, and a description of electrical and other auxiliaries under the cognizance of the Bureau of Construction and Repair, Navy Department, Washington, D.C.

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Construction and Repair Drawing Room  
Norfolk Navy Yard, Portsmouth, Va.

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**BUREAU OF SHIPS**  
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## SECTION A-1

GENERAL

The Designer's Waterline (D.W.L.) is the Normal Waterline, namely, that which corresponds to designed normal load and draft.

The Forward Perpendicular (F.P.) is located at the extreme forward end of the designer's waterline.

The After Perpendicular (A.P.) is located at the extreme after end of the designer's waterline or 15 inches aft of frame 191.

The Middle Perpendicular (M.P.) is located midway between the forward and the after perpendiculars or 9 inches aft of frame 95.

The Molded Base Line (B.L.) is located  $3/4$  inches above the bottom of the midship portion of the flat keel.

Drafts are measured from the bottom of the midship portion of the flat keel extended forward and aft.

The Designer's waterline is  $10'-7\frac{1}{2}"$  above the molded base line and parallel to the same and is  $10'-8\frac{1}{4}"$  above the bottom of the midship portion of the flat keel.

## PROJECTIONS BELOW BOTTOM OF KEEL

Description	Projection above or below keel	LOCATION		
		Frame	From C/L	Side
Propeller	$4'-3\frac{3}{4}"$ Below	181	$8'-6"$	Port
Propeller	$4'-3\frac{3}{4}"$ Below	181	$8'-6"$	Stbd

General A-1

PROJECTIONS BELOW BOTTOM OF KEEL (Continued)

Description	Projection above or below keel	LOCATION		
		Frame	From C/L	Side
Rudder	2-5/16" Above	184-190	on C/L	C/L
Rotating Supersonic Transceivers	See Note	27	17"	Port
Rotating Supersonic Transceivers	See Note	27	17"	Stbd.

NOTE:

Bottom of Projectors, when in operating position are 25½" below bottom of keel.

PRINCIPAL DIMENSIONS (DESIGNED)

Length over all . . . . .	341'-3-5/8"
Length between perpendiculars. . . . .	334'-0"
Extension of vessel beyond F.P. . . . .	5'-0¼"
Extension of vessel aft of A.P. outside. . . . .	2'-3-3/8"
Midship Section (at M.P.) aft of Fr. #95 . . . . .	9"
Length of Designer's Waterline . . . . .	334'-0"
Breadth, molded, Maximum, of D.W.L. (Fr. 108). . . . .	34'-11-3/4"
Breadth, extreme, to outside of shell plating. . . . .	35'-5-1/4"
DD386 to 391, Incl. (16'-0" Waterline Frame 108)	
DD392 & 393 (15'-9½" Waterline Frame 108). . . . .	35'-6"
Depth, molded, M.P., Main Deck at Center . . . . .	20'-7-3/4"
DD386 to 391, Incl.	
Depth, molded, M.P., Main Deck at Center . . . . .	20'-7-7/8"
DD392 & 393	
Depth, molded, M.P., Main Deck at side . . . . .	19'-7-7/8"
Freeboard at bow, molded . . . . .	21'-5"

PRINCIPAL DIMENSIONS (DESIGNED) Cont'd.

Freeboard at stern, molded . . . . .	10'-7½"
Displacement, Standard (Designed). . . . .	1500 Tons
Displacement to D.W.L. DD386 to 391, Incl. . . . .	1725 Tons
Displacement to D.W.L. DD392 & 393 . . . . .	1715 Tons
Bottom of Keel Below Molded Base Line. . . . .	3/4"
Draft to D.W.L. . . . .	10'-8¼"

FRAME SPACING

Frames are numbered from 0 at the forward perpendicular to 191, which is fifteen inches forward of the after perpendicular.

The principal framing of this vessel is longitudinal. Transverse framing exists but not at each numbered location.

Two part frames in the forward overhand are designated as "A" and "B", and are respectively 21" and 42" forward of the forward perpendicular.

<u>Extent</u>	<u>Space between Successive Frames</u>
From F.P. to Frame 107. . . . .	21"
From Frame #107 to #111 . . . . .	22½"
From Frame #111 to #119 . . . . .	21-3/8"
From Frame #119 to #123 . . . . .	21"
From Frame #123 to #131 . . . . .	19-7/8"
From Frame #131 to #179 . . . . .	21"
From Frame #179 to #191 . . . . .	19½"

General A-1

FRAME SPACING (Cont'd.)

<u>Extent</u>	<u>Space between Successive Frames</u>
From #191 to A. P. . . . .	15"
From F.P. to "A" . . . . .	21"
From "A" to "B". . . . .	21"

APPROXIMATE CAPACITIES

Oil, Fuel, full load . . . . .	501.4 Tons
Oil, Fuel, normal load . . . . .	196.3 Tons
Gasoline . . . . .	15 Gallons
Reserve feed water, full load. . . . .	58 Tons
Reserve feed water, normal load. . . . .	25 Tons
Fresh (potable) water, full load . . . . .	28 Tons
Fresh (potable) water, normal load . . . . .	18.6 Tons
Diesel oil, full capacity. . . . .	37.3 Tons
Diesel oil, normal capacity . . . . .	6 Tons
Lubricating oil, full capacity . . . . .	6.95 Tons
Lubricating oil, normal capacity . . . . .	4.9 Tons

MISCELLANEOUS DATA

TOURING TUBES
Quadruple Mount No. 1, Fts. 103-118, Sdbd., Axis of
Quadruple Mount No. 2, Fts. 103-118, Port, Axis of
Quadruple Mount No. 3, Fts. 119-130, Sdbd., Axis of
Quadruple Mount No. 4, Fts. 119-130, Port, Axis of
BATTERY CONTROL AND OBSERVATION FEATURES
Range Finders, Port and Sdbd., Center line of
5-inch Gun Director, Center line of
Torpedo Directors, Port and Sdbd., Center line of
24-inch Searchlight, Sdbd., Center line of
24-inch Searchlight, Port, Center line of
36-inch Searchlight, Sdbd., Center line of
36-inch Searchlight, Port, Center line of
MISCELLANEOUS DATA
NAVIGATION AND SIGNALING FEATURES
Top of Flag and Pendant Mast, Cas Foremast
Center of Truck Light on Foremast
Signal Yard on Foremast
12-inch Signal Searchlight, Port
12-inch Signal Searchlight, Sdbd.
Center of Range Light on Foremast
Center of Towing Light on Stub-Mast
Center of Masthead Light on Stub-Mast
Center of Speed Light on After Deck House

MISCELLANEOUS DATA

TORPEDO TUBES
Quadruple Mount No. 1, Frs. 103-118, Stbd., Axis of
Quadruple Mount No. 2, Frs. 103-118, Port, Axis of
Quadruple Mount No. 3, Frs. 119-130, Stbd., Axis of
Quadruple Mount No. 4, Frs. 119-130, Port, Axis of
BATTERY CONTROL AND OBSERVATION FEATURES
Range Finders, Port and Stbd., Center Line of
5-inch Gun Director, Center Line of
Torpedo Directors, Port and Stbd., Center Line of
24-inch Searchlight, Stbd., Center Line of
24-inch Searchlight, Port, Center Line of
36-inch Searchlight, C.L., Center Line of
NAVIGATION AND SIGNALING FEATURES
Top of Flag and Pennant Staff, Cap Foremast
Center of Truck Light on Foremast
Signal Yard on Foremast
12-inch Signal Searchlight, Port
12-inch Signal Searchlight, Stbd.
Center of Range Light on Foremast
Center of Towing Light on Stub-Mast
Center of Masthead Light on Stub-Mast
Center of Speed Light on After Deck House

HEIGHTS ABOVE DESIGN DRAFT, 10 FT. 8 1/4-INCH W.L.

DD386	DD387	DD388	DD389	DD390	DD391	DD392	DD393
12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"
12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"
12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"
12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"	12'-5 1/2"
THE BASIC DESIGN DATA FOR THIS TYPE OF							
46'-8"	46'-8"	46'-8"	46'-5 3/4"	46'-5 3/4"	46'-9"	46'-7 1/2"	46'-7 1/2"
51'-7.32"	51'-7.32"	51'-7.32"	51'-6 3/4"	51'-6 3/4"	51'-7 5/16"	51'-7 1/2"	51'-7 1/2"
41'-5 7/8"	41'-5 7/8"	41'-5 7/8"	41'-3 3/4"	41'-3 3/4"	41'-5"	41'-5 1/4"	41'-5 1/4"
46'-10 1/2"	46'-10 1/2"	46'-10 1/2"	46'-10 1/4"	46'-10 1/4"	46'-11 1/2"	47'-1 1/8"	47'-1 1/8"
47'-0 1/2"	47'-0 1/2"	47'-0 1/2"	46'-11 3/4"	46'-11 3/4"	47'-1 1/4"	47'-2 1/2"	47'-2 1/2"
36'-10 1/2"	36'-10 1/2"	36'-10 1/2"	36'-10 3/4"	36'-10 3/4"	38'-1 1/4"	37'-1 1/4"	37'-1 1/4"
THE BASIC DESIGN DATA FOR THIS TYPE OF							
99'-7 1/2"	99'-7 1/2"	99'-7 1/2"	99'-2 1/2"	99'-2 1/2"	99'-7 1/2"	99'-7"	99'-6 3/4"
95'-0 1/2"	95'-0 1/2"	95'-0 1/2"	95'-1"	95'-1"	95'-0 1/2"	95'-2"	95'-1 3/4"
84'-1 1/2"	84'-1 1/2"	84'-1 1/2"	84'-0 3/4"	84'-0 3/4"	84'-1 1/2"	84'-0 7/8"	84'-0 7/8"
47'-7 1/2"	47'-7 1/2"	47'-7 1/2"	47'-10 3/4"	47'-10 3/4"	47'-7 1/2"	42'-0"	42'-0"
48'-0"	48'-0"	48'-0"	48'-0 1/4"	48'-0 1/4"	48'-0"	42'-0"	42'-0"
69'-7 1/2"	69'-7 1/2"	69'-7 1/2"	69'-8 3/4"	69'-8 3/4"	69'-8 1/2"	69'-7 1/2"	69'-7 3/8"
47'-0 1/4"	47'-0 1/4"	47'-0 1/4"	46'-11 3/4"	46'-11 3/4"	47'-0 1/4"	47'-0 1/2"	47'-0 3/8"
53'-0 1/4"	53'-0 1/4"	53'-0 1/4"	52'-11 3/4"	52'-11 3/4"	53'-0 1/4"	53'-0 1/4"	53'-0 1/4"
27'-0"	27'-0"	27'-0"	26'-11 1/4"	26'-11 1/4"	27'-0 1/2"	26'-11 7/8"	27'-0"



General A-1

MISCELLANEOUS DATA

Inclination of Propeller Shafts, Down and Aft, Per Foot
Divirgence of Propeller Shafts, Outbd. and Aft, Per Foot
Area of Rudder (Projected), Sq. Ft.
C.L. of Foremast from F.P. at Main Deck (Frame No. 75)
There is a battle flag gaff, which is located between Frames 123-124 and extends approximately 15 Feet above the searchlight platform.
Length of Signal Yard (Between Speed Cone Eyes)
MAIN BATTERY
5-Inch Gun No. 1, Axis of
5-inch Gun No. 2, Axis of
5-inch Gun No. 3, Axis of
5-inch Gun No. 4, Axis of
SECONDARY BATTERY
0.50-inch Gun No. 1, Axis of
0.50-inch Gun No. 2, Axis of
0.50-inch Gun No. 3, Axis of
0.50-inch Gun No. 4, Axis of
MISCELLANEOUS
Top of Smoke Stack
PLATFORMS (UPPER SIDE OF PLATING AT C.L. OF SHIP)
Second Platform Below Design at Frame No. 1
Second Platform Below Design at Frame No. 49
First Platform at F.P.
First Platform at Frame No. 68

DD386	DD387	DD388	DD389	DD390	DD391	DD392	DD393
.61714	.61714	.61714	.61714	.61714	.61714	.61714	.61714
.02286	.02286	.02286	.02286	.02286	.02286	.02286	.02286
84	84	84	84	84	84	84	84
131'-3"	131'-3"	131'-3"	131'-3"	131'-3"	131'-3"	131'-3"	131'-3"
(9103 50 .J.S 72 0K1245 50 5272 21270) .519 .20275 .272							
21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	20'-9 $\frac{3}{4}$ "	20'-9 $\frac{3}{4}$ "
HEIGHTS ABOVE DESIGN DRAFT, 10 FT 8 $\frac{1}{2}$ -INCH W.L.							
26'-0 $\frac{13}{16}$ "	26'-0 $\frac{13}{16}$ "	26'-0 $\frac{13}{16}$ "	26'-0"	26'-0"	26'-0 $\frac{13}{16}$ "	26'-0 $\frac{3}{8}$ "	26'-0 $\frac{1}{4}$ "
33'-4"	33'-4"	33'-4"	33'-3 $\frac{1}{4}$ "	33'-3 $\frac{1}{4}$ "	33'-4"	33'-4 $\frac{1}{8}$ "	33'-4"
23'-5 $\frac{1}{4}$ "	23'-5 $\frac{1}{4}$ "	23'-5 $\frac{1}{4}$ "	23'-4 $\frac{1}{2}$ "	23'-4 $\frac{1}{2}$ "	23'-5 $\frac{1}{4}$ "	23'-5 $\frac{1}{2}$ "	23'-5 $\frac{5}{8}$ "
16'-0 $\frac{7}{8}$ "	16'-0 $\frac{7}{8}$ "	16'-0 $\frac{7}{8}$ "	16'-0 $\frac{1}{4}$ "	16'-0 $\frac{1}{4}$ "	16'-0 $\frac{7}{8}$ "	16'-1 $\frac{1}{2}$ "	16'-1 $\frac{5}{8}$ "
30'-7 $\frac{5}{8}$ "	30'-7 $\frac{5}{8}$ "	30'-7 $\frac{5}{8}$ "	30'-7 $\frac{1}{4}$ "	30'-7 $\frac{1}{4}$ "	30'-9"	30'-8 $\frac{1}{8}$ "	30'-8 $\frac{5}{8}$ "
30'-7 $\frac{5}{8}$ "	30'-7 $\frac{5}{8}$ "	30'-7 $\frac{5}{8}$ "	30'-7 $\frac{1}{4}$ "	30'-7 $\frac{1}{4}$ "	30'-9"	30'-8 $\frac{1}{8}$ "	30'-8 $\frac{5}{8}$ "
29'-5 $\frac{3}{4}$ "	29'-5 $\frac{3}{4}$ "	29'-5 $\frac{3}{4}$ "	29'-6 $\frac{3}{4}$ "	29'-6 $\frac{3}{4}$ "	29'-6 $\frac{1}{2}$ "	29'-5 $\frac{1}{8}$ "	29'-5 $\frac{7}{8}$ "
29'-5 $\frac{3}{4}$ "	29'-5 $\frac{3}{4}$ "	29'-5 $\frac{3}{4}$ "	29'-6 $\frac{3}{4}$ "	29'-6 $\frac{3}{4}$ "	29'-6 $\frac{1}{2}$ "	29'-5 $\frac{1}{2}$ "	29'-5 $\frac{7}{8}$ "
49'-4 $\frac{5}{16}$ "	49'-4 $\frac{5}{16}$ "	49'-4 $\frac{5}{16}$ "	49'-1 $\frac{1}{2}$ "	49'-1 $\frac{1}{2}$ "	49'-5"	49'-4 $\frac{3}{4}$ "	49'-4 $\frac{7}{8}$ "
1'-5 $\frac{5}{8}$ "	1'-5 $\frac{5}{8}$ "	1'-5 $\frac{5}{8}$ "	1'-5 $\frac{5}{8}$ "	1'-5 $\frac{5}{8}$ "	1'-5 $\frac{5}{8}$ "	1'-5 $\frac{5}{8}$ "	1'-5 $\frac{5}{8}$ "
3'-0 $\frac{1}{2}$ "	3'-0 $\frac{1}{2}$ "	3'-0 $\frac{1}{2}$ "	3'-0 $\frac{1}{2}$ "	3'-0 $\frac{1}{2}$ "	3'-0 $\frac{1}{2}$ "	3'-0 $\frac{1}{2}$ "	3'-0 $\frac{1}{2}$ "
4'-6 $\frac{3}{4}$ "	4'-6 $\frac{3}{4}$ "	4'-6 $\frac{3}{4}$ "	4'-6 $\frac{3}{4}$ "	4'-6 $\frac{3}{4}$ "	4'-6 $\frac{3}{4}$ "	4'-6 $\frac{3}{4}$ "	4'-6 $\frac{3}{4}$ "
2'-6 $\frac{1}{8}$ "	2'-6 $\frac{1}{8}$ "	2'-6 $\frac{1}{8}$ "	2'-6 $\frac{1}{8}$ "	2'-6 $\frac{1}{8}$ "	2'-6 $\frac{1}{8}$ "	2'-6 $\frac{1}{8}$ "	2'-6 $\frac{1}{8}$ "

MISCELLANEOUS DATA

MISCELLANEOUS
PLATFORMS (UPPER SIDE OF PLATING AT C.L. OF SHIP)(Cont'd.)
First Platform at Frame No. 131
First Platform at A.P.
DECKS, BRIDGES, etc. (UPPER SIDE OF PLATING AT C.L. OF SHIP)
Main Deck at F.P.
Main Deck at Frame No. 95
Main Deck at Frame No. 125
Main Deck at Frame No. 150
Main Deck at A.P.
Forecastle Deck at F.P.
Forecastle Deck at Frame No. 66
Top of Midship Deck House, Frame No. 102
Top of Fan House, Frame No. 120
Top of Gun Crew Shelter, Frame No. 138
Top of Gun Crew Shelter, Frame No. 150
Superstructure Deck, 6 inches Aft Frame No. 37
Superstructure Deck, Aft Frame No. 52
Navigating Bridge
Top of Pilot House at Frame No. 66

HEIGHTS ABOVE DESIGN DRAFT, 10 FT. 8 $\frac{1}{2}$ -INCH W.L.

DD-386	DD387	DD388	DD389	DD390	DD391	DD392	DD393
1'-9 $\frac{1}{2}$ "	1'-9 $\frac{1}{2}$ "	1'-9 $\frac{1}{2}$ "	1'-9 $\frac{1}{2}$ "	1'-9 $\frac{1}{2}$ "	1'-9 $\frac{1}{2}$ "	1'-9 $\frac{1}{2}$ "	1'-9 $\frac{1}{2}$ "
2'-7 $\frac{5}{16}$ "	2'-7 $\frac{5}{16}$ "	2'-7 $\frac{5}{16}$ "	2'-7 $\frac{5}{16}$ "	2'-7 $\frac{5}{16}$ "	2'-7 $\frac{5}{16}$ "	2'-7 $\frac{5}{16}$ "	2'-7 $\frac{5}{16}$ "
12'-6 $\frac{7}{8}$ "	12'-6 $\frac{7}{8}$ "	12'-6 $\frac{7}{8}$ "	12'-6 $\frac{7}{8}$ "	12'-6 $\frac{7}{8}$ "	12'-6 $\frac{7}{8}$ "	12'-6 $\frac{7}{8}$ "	12'-6 $\frac{7}{8}$ "
10'-0 $\frac{1}{2}$ "	10'-0 $\frac{1}{2}$ "	10'-0 $\frac{1}{2}$ "	10'-0 $\frac{1}{2}$ "	10'-0 $\frac{1}{2}$ "	10'-0 $\frac{1}{2}$ "	10'-0 $\frac{1}{2}$ "	10'-0 $\frac{1}{2}$ "
9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "
9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{7}{8}$ "	9'-9 $\frac{7}{8}$ "	9'-9 $\frac{5}{8}$ "	9'-9 $\frac{3}{4}$ "	9'-9 $\frac{3}{4}$ "
10'-7 $\frac{1}{4}$ "	10'-7 $\frac{1}{4}$ "	10'-7 $\frac{1}{4}$ "	10'-7 $\frac{1}{4}$ "	10'-7 $\frac{1}{4}$ "	10'-7 $\frac{1}{4}$ "	10'-7 $\frac{1}{4}$ "	10'-7 $\frac{1}{4}$ "
21'-1 $\frac{1}{8}$ "	21'-1 $\frac{1}{8}$ "	21'-1 $\frac{1}{8}$ "	21'-1 $\frac{1}{8}$ "	21'-1 $\frac{1}{8}$ "	21'-1 $\frac{1}{8}$ "	21'-1 $\frac{1}{8}$ "	21'-1 $\frac{1}{8}$ "
18'-0 $\frac{3}{4}$ "	18'-0 $\frac{3}{4}$ "	18'-0 $\frac{3}{4}$ "	18'-0 $\frac{1}{2}$ "	18'-0 $\frac{1}{2}$ "	18'-1 $\frac{1}{4}$ "	18'-1 $\frac{1}{4}$ "	18'-1 $\frac{1}{4}$ "
17'-1 $\frac{5}{8}$ "	17'-1 $\frac{5}{8}$ "	17'-1 $\frac{5}{8}$ "	17'-1 $\frac{5}{8}$ "	17'-1 $\frac{5}{8}$ "	17'-1 $\frac{5}{8}$ "	17'-1 $\frac{5}{8}$ "	17'-1 $\frac{5}{8}$ "
24'-7 $\frac{5}{8}$ "	24'-7 $\frac{5}{8}$ "	24'-7 $\frac{5}{8}$ "	24'-7 $\frac{5}{8}$ "	24'-7 $\frac{5}{8}$ "	24'-7 $\frac{5}{8}$ "	24'-7 $\frac{5}{8}$ "	24'-7 $\frac{5}{8}$ "
24'-9 $\frac{3}{4}$ "	24'-9 $\frac{3}{4}$ "	24'-9 $\frac{3}{4}$ "	24'-9 $\frac{3}{4}$ "	24'-9 $\frac{3}{4}$ "	24'-9 $\frac{3}{4}$ "	24'-9 $\frac{3}{4}$ "	24'-9 $\frac{3}{4}$ "
17'-3 $\frac{3}{4}$ "	17'-3 $\frac{3}{4}$ "	17'-3 $\frac{3}{4}$ "	17'-3 $\frac{1}{2}$ "	17'-3 $\frac{1}{2}$ "	17'-3 $\frac{1}{2}$ "	17'-3 $\frac{3}{4}$ "	17'-3 $\frac{3}{4}$ "
26'-5 $\frac{5}{16}$ "	26'-5 $\frac{5}{16}$ "	26'-5 $\frac{5}{16}$ "	26'-5 $\frac{5}{8}$ "	26'-5 $\frac{5}{8}$ "	26'-6"	26'-5 $\frac{5}{16}$ "	26'-5 $\frac{5}{16}$ "
26'-0 $\frac{11}{16}$ "	26'-0 $\frac{11}{16}$ "	26'-0 $\frac{11}{16}$ "	26'-0 $\frac{1}{2}$ "	26'-0 $\frac{1}{2}$ "	26'-0 $\frac{3}{4}$ "	26'-0 $\frac{3}{4}$ "	26'-0 $\frac{3}{4}$ "
35'-6 $\frac{11}{16}$ "	35'-6 $\frac{11}{16}$ "	35'-6 $\frac{11}{16}$ "	35'-6 $\frac{1}{2}$ "	35'-6 $\frac{1}{2}$ "	35'-6 $\frac{11}{16}$ "	35'-6 $\frac{11}{16}$ "	35'-6 $\frac{11}{16}$ "
43'-0 $\frac{11}{16}$ "	43'-0 $\frac{11}{16}$ "	43'-0 $\frac{11}{16}$ "	43'-1 $\frac{1}{2}$ "	43'-1 $\frac{1}{2}$ "	43'-1 $\frac{11}{16}$ "	43'-1 $\frac{11}{16}$ "	43'-1 $\frac{11}{16}$ "

Data relative to traverse and longitudinal datums. Heights are given in the latest "Booklet of Inclining Data" (see "Data").

General A-1

DD386 to DD393, Inclusive

CALCULATED DATA AT DESIGN DRAFT, 10'-8 $\frac{1}{2}$ " W.L.

Tons per inch immersion	20.58
Area of waterplane	8625 sq.ft.
C.G. of waterplane aft of frame 95	19.67 feet
Moment to change trim one inch (Approx.)	390 ft. tons
C.B. above bottom of keel	6.57 feet
C.B. aft of M.P. (9" aft fr. 95)	4.48 feet
Transverse metacenter above C.B. (Designed)	11.05 feet
Longitudinal metacenter above C.B. (Designed)	9.08 feet
Area of greatest section (Station 23)	300 sq.ft.
Wetted surface	13,600 sq.ft.
Ratio length between perpendiculars to beam, molded	9.43 to 1 ft.
Block coefficient	0.4827
Greatest Section (Station 23) coefficient	0.8011
Prismatic Coefficient	0.6025
Waterplane coefficient	0.7385

Note:

Coefficient of fineness is figured on a basis of W.L. beam over shell at midship section of 35'-0-3/8".

Data relative to transverse and longitudinal metacentric heights are given in the latest "Booklet of Inclining Experiment Data".

PROPELLING MACHINERYBoilers

Number Four

Manufacturer (DD386-7-8) Norfolk Navy Yard and Babcock and Wilcox  
 (DD389-90) Boston Navy Yard and Babcock and Wilcox  
 (DD391) Mare Island Navy Yard and Babcock and Wilcox  
 (DD392-3) Puget Sound Navy Yard and Babcock and Wilcox

Type Express Type with Superheaters, Economizers and Desuperheaters.

Designed Working Pressure 465 lbs.

Turbines

Number 2 H.P., 2 L.P., and astern combined, and 2 cruising.

Manufacturer (DD386-7-8) Norfolk Navy Yard and General Electric Co.  
 (DD389-90) Boston Navy Yard and General Electric Co.  
 (DD391) Mare Island Navy Yard and General Electric Co.  
 (DD392-3) Puget Sound Navy Yard and General Electric Co.

Type Curtis

Number of Stages per turbine H.P.-12, L.P.-7, 7 Expansion Ahead (double flow), 1 stage astern (single rotor), and cruising--8.

R.P.M. (Designed)  
 (DD386-7-8) H.P.--5705, L.P.--4805, Cruising 4493.  
 (DD389 - 393, incl.) H.P.--5850, L.P.--4926, Cruising 4493.

PROPELLING MACHINERY (Cont'd.)Propellers

Number	1 right hand and 1 left hand
Type	True screw, solid wheel, manganese bronze
Manufacturer	(DD386-7-8-9-90) Philadelphia Navy Yard (DD391) Mare Island Navy Yard (DD392-3) Puget Sound Navy Yard
Number of blades	3
Diameter	11'-3"
Pitch	12'-4 $\frac{1}{2}$ "
Shaft diameter	15 $\frac{1}{4}$ "
Projected area	57.01 sq.ft.
Developed area	66.94 sq.ft.
R.P.M. (Maximum)	400

Shafting

Number	2 - 1 stbd. and 1 port
Total length	100'-10-13/16"
No. of sections	3 (line shaft, stern tube shaft, and propeller shaft.)
Rake	Downward 0".61714 per foot and outboard 0".02268 per foot.

Line Shaft

Number	2 - 1 stbd. and 1 port
Length overall, each	20'-6 $\frac{1}{4}$ "
Diameter	14-5/8"

Stern Tube Shaft

Number	2 - 1 stbd. and 1 port
Length overall, each	45'-0-3/4"
DD386, 387, 388, 389, 390, 392, & 393	
DD391	45'-0 $\frac{1}{4}$ "
Diameter	15 $\frac{1}{4}$ "

Propeller Shaft

Number	2 - 1 stbd. and 1 port
Length overall, each	35'-3-13/16"
Diameter Shaft	15 $\frac{1}{4}$ "
Diameter Sleeve	16-5/8"

PROPELLING MACHINERY (Cont'd.)

Complete information and instructions concerning the propelling machinery may be ascertained from the "Booklet of Instructions for the Operation of Machinery", which is furnished the vessel by the contractor in accordance with the requirements of the General Specifications of Machinery.

Removable plates and girders are provided in the main deck for unshipping or removing various main and auxiliary machinery units.

STABILITY AND BALLASTING

The vessel when light, namely, Condition II of the Inclining Experiment, has a reduced displacement and righting arm. The nearest approach to this condition in service, with the vessel intact, is obtained when fuel, reserve feed water, ammunition, and stores are practically expended. This condition is aggravated if the top side load is increased for any reason. As a general guide, under such conditions, the policy should be to use fuel and water from the lowest tanks last. For further information regarding ballasting; attention is invited to the Booklet of Inclining Experiment Data and the Damage Control Book.

Attention is also invited to the instructions contained in the Damage Control Book relative to fuel oil loading and transfer for operating displacement.

The following table indicates the capacities of fuel oil and ballast tanks, for capacities of other tanks, see Section U-9, herein:

## FUEL OIL CONTENTS

<u>Tank No.</u>	<u>Normal Load Tons</u>	<u>Full Load Tons (95%)</u>
A-2-F (F.O.)	4.7	122.10
A-3-F (F.O.)	34.50	34.50
A-4-F (F.O.)	34.50	34.50
D-6-F (F.O.)	20.22	20.22
D-7-F (D.O.)	18.06	18.06
D-8-F (F.O.)	-----	26.06
D-9-F (F.O.)	-----	26.06
D-10-F (F.O.)	-----	38.05
D-11-F (F.O.)	-----	38.05



BATTLE CONDITION DATA

Complete information and instructions on battle conditions may be ascertained from the Damage Control Book.

Removable plates and gaskets are provided in the main deck for unshipping or removing various main and auxiliary machinery units.

STABILITY AND BALASTING

The vessel when light, namely, Condition II of the Inclining Experiment, has a reduced displacement and righting arm. The nearest approach to this condition is service with the vessel intact, is obtained when fuel, reserve fuel, water, ammunition, and stores are practically expended. This condition is approximated if the top side load is increased for any reason. As a general guide, under such conditions, the policy should be to use fuel and water from the lowest tanks first. For further information regarding ballasting, attention is invited to the booklet of Inclining Experiment Data and the Damage Control Book.

Attention is also invited to the instructions contained in the Damage Control Book relative to fuel oil loading and transfer for emergency displacement.

The following table indicates the capacities of fuel oil and ballast tanks, for capacities of other tanks, see Section U-9, hereinafter.

FUEL OIL CAPACITIES

Tank No.	Normal Load Tons	Fuel Load Tons (1975)
A-2-F (F.O.)	4.7	182.10
A-3-F (F.O.)	34.50	34.50
A-4-F (F.O.)	34.50	34.50
D-6-F (F.O.)	20.22	20.22
D-7-F (D.O.)	18.06	18.06
D-8-F (F.O.)	---	26.06
D-9-F (F.O.)	---	26.06
D-10-F (F.O.)	---	38.02
D-11-F (F.O.)	---	38.02

SECTION A-5

ORDNANCE AND ORDNANCE OUTFIT

MAIN BATTERY

Gun No.	Bore	Caliber	LOCATION			Elevation	Depression	Train
			Deck	Frame	Side			
1	5"	38	Forecastle	30	C.L.	85°	15°	300°
2	5"	38	Super-Structure	41	C.L.	85°	15°	300°
3	5"	38	Top of Aft Dk. House	3" Ford. of 150	C.L.	85°	15°	300°
4	5"	38	Main Deck	3" Ford. of 166	C.L.	85°	15°	300°

SECONDARY BATTERY (A.A. MACHINE GUNS)

Gun No.	Bore	Caliber	LOCATION			From C/L of Ship	Elevation	Depression	Train
			Deck	Frame	Side				
1	".50	63.8	Super-structure	53	Stbd.	6'-7½"	80°	15°	360°
2	".50	63.8	DO.	53	Port	6'-7½"	80°	15°	360°
3	".50	63.8	Top of Gun Crew Shelter	140-141	Stbd.	4'-0"	80°	15°	360°
4	".50	63.8	DO.	140-141	Port	4'-0"	80°	15°	360°

A 5" loading machine, Mark X, Mod. II, is located on the loading machine platform, between Frames 105-110, on the starboard side of the ship.

ORDNANCE AND ORDNANCE OUTFIT (Cont'd.)

TORPEDO TUBES

Torpedo Tube No.	Diameter Torpedo	Length of Torpedo Without Head	LOCATION			TRAIN	
			Deck	Frame	Side	Fore	Aft
1 Quadruple	21"	22'-6"	Main	3"Fore of 110	Stbd.	60°	60°
2 Quadruple	21"	22'-6"	Main	3"Fore of 110	Port	60°	60°
3 Quadruple	21"	22'-6"	Main	10"Fore of 129	Stbd.	60°	60°
4 Quadruple	21"	22'-6"	Main	10"Fore of 129	Port	60°	60°

SMALL CALIBER GUNS

Quantity	Caliber	Name	STOWAGE LOCATION			Remarks
			Deck	Frame	Side	
DD386, 387, 388, 391 and 393						
1	1 Pdr.	Sub Caliber Gun	Fcle.	57-58	Stbd.	Abt. 3'-1½" Off C.L.
1	1 Pdr.	Sub Caliber Gun	Fcle.	57-58	Stbd.	Abt. 3'-10½" Off C.L.
DD389 and 390						
2	1 Pdr.	Sub Caliber Gun	Fcle.	43	Stbd.	3'-1½" Off C/L
DD392						
2	1 Pdr.	Sub Caliber Gun	1st. Plat.	163	C.L.	In #4 Gun Foundation