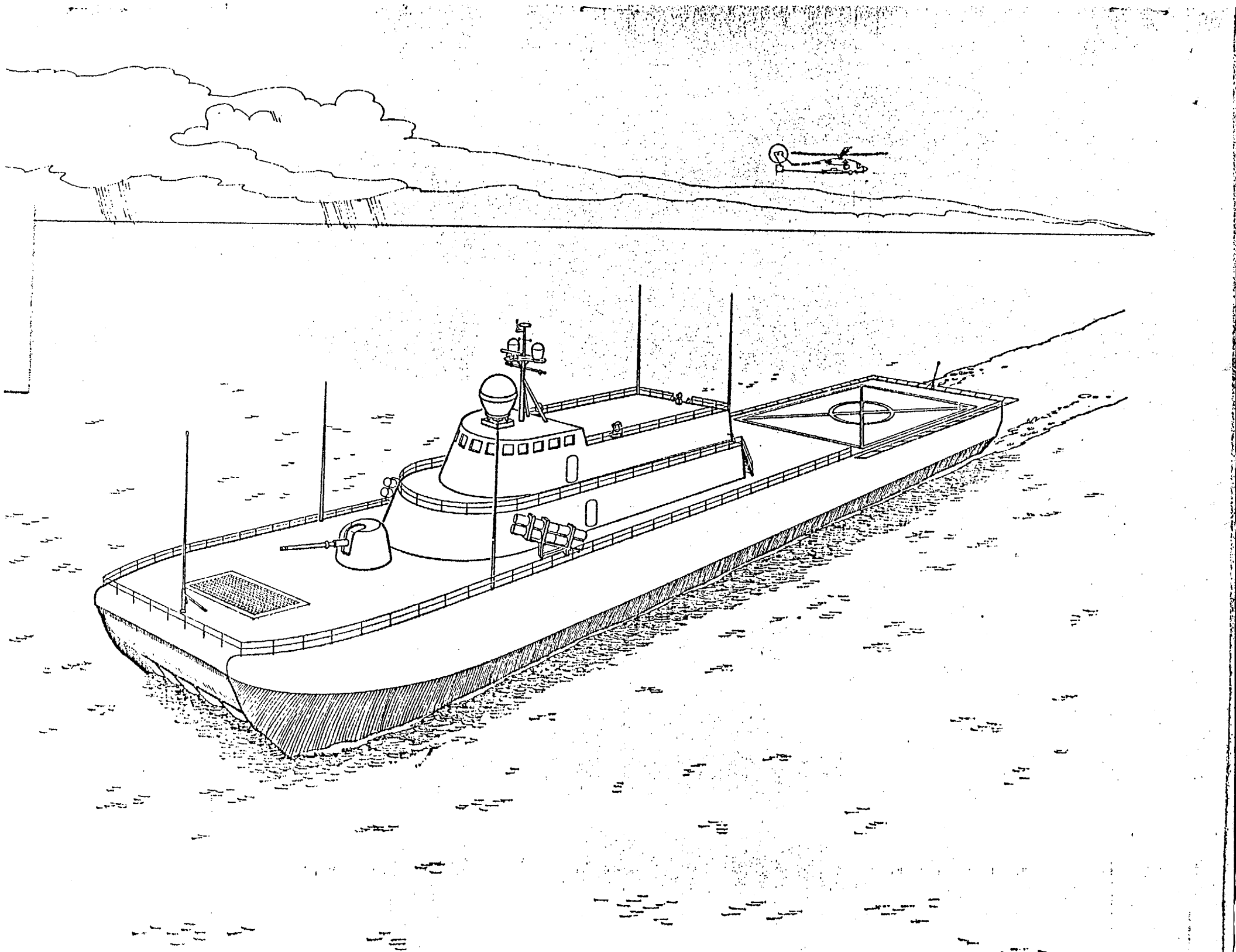

220 FT. SES CORVETTE

Principal Features

Dimensions

Overall Length	217' - 00"
Overall Beam	50' - 00"
Cushion Length	197' - 09"
Cushion Beam	30' - 06"
Height to Masthead	66' - 00"
Height to Bridgetop	46' - 00"
Draft Cushionborne	7'
Draft Hullborne	12'

Weights

Full Load Displacement - Nominal - 500 Long Tons
Maximum - 700 Long Tons

Available Accommodations - 50 persons

SES Characteristics

L/B - 6.5

Cushion Height - Variable to 16'

Cushion Pressure - 190 PSF

$w/\sqrt{A'} = 2.4$

$P/L = 0.94$

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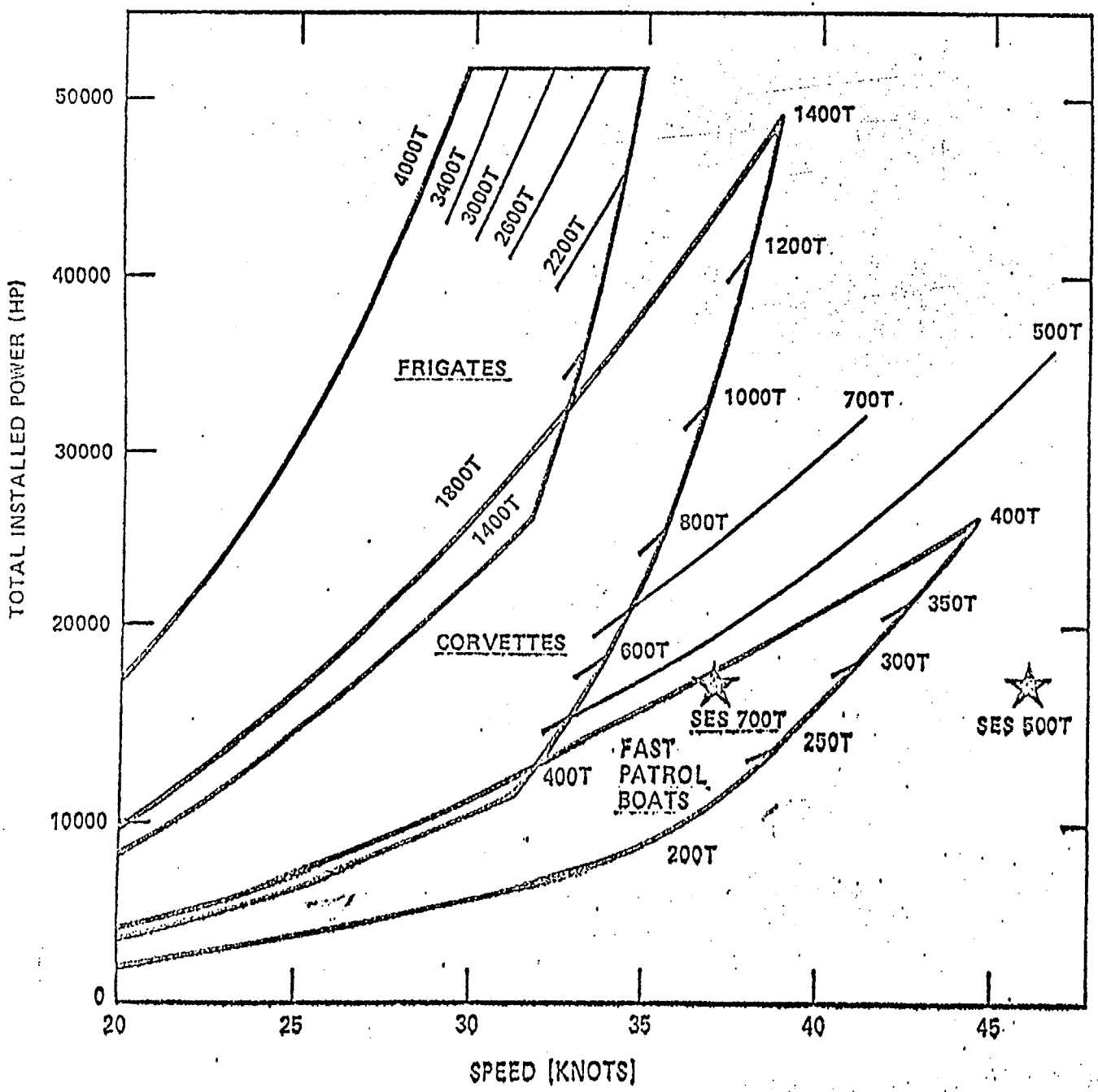

220 FT. SES CORVETTE

220 FT. SES CORVETTE

Preliminary Weight Balance
2/14/80

SWBS		UNARMED PROTOTYPE	ARMAMENT* Δ	COMBATANT
100	Hull	182		182
200	Propulsion	72.5		72.5
300	Electrics	25		25
400	Command & Control	2.5	+ 30	32.5
500	Auxiliaries	25		25
567	Lift	15.5		15.5
600	O&F	25	+ 2	27
700	Weapons	0	+25	25
Margin		35	+ 5	40
Light Ship		382.5		444.5
Loads	Crew & Stores	4.7	+ 3.9	8.6
	Fluids	5.0	+ 3.4	8.4
	Disposable Payload	.7	+13	13.7
LAMPS I Helo & Support		0	+16.5	16.5
	Fuel	107.1	+101.2	208.3
FLD		500 LT		700 LT
	Overload Fuel & Payload	200		
CLD		700 LT		700 LT

*Possible selection for fast strike surface and ASW operations.

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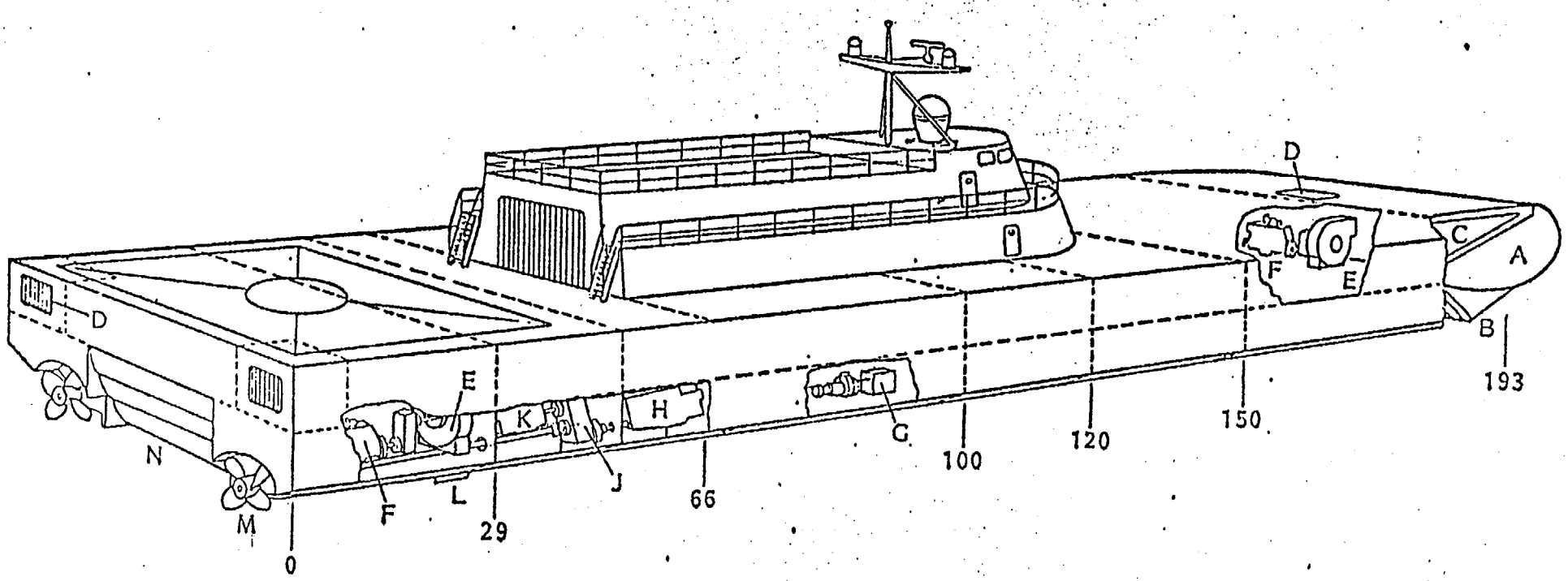
220 FT. SES CORVETTE

MAIN FEATURES



A. BOW SEAL BAG
B. BOW SEAL FINGERS
C. LIFT AIR PLENUM
D. LIFT AIR INLET
E. LIFT FAN
F. 750 SHP DIESEL
G. 60 & 400 HZ. GENERATOR
H. 4500 SHP DIESEL
J. COMBINING GEARBOX
K. 2700 SHP DIESEL
L. RUDDER
M. CONTROLLABLE PITCH PROPELLER
N. STERN SEAL

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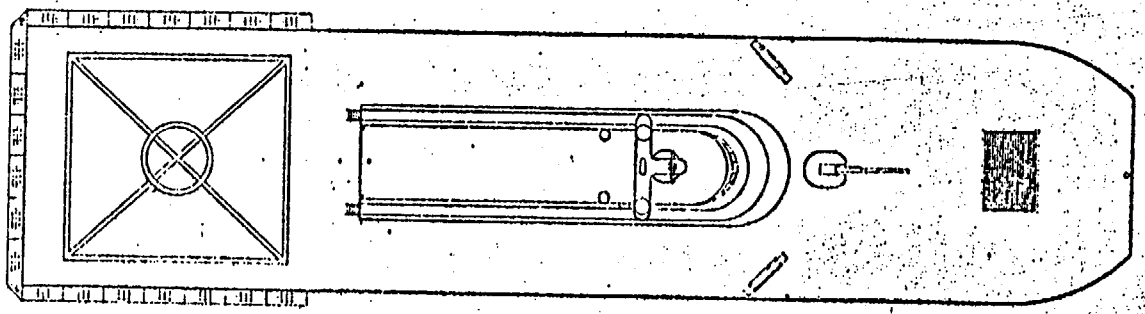
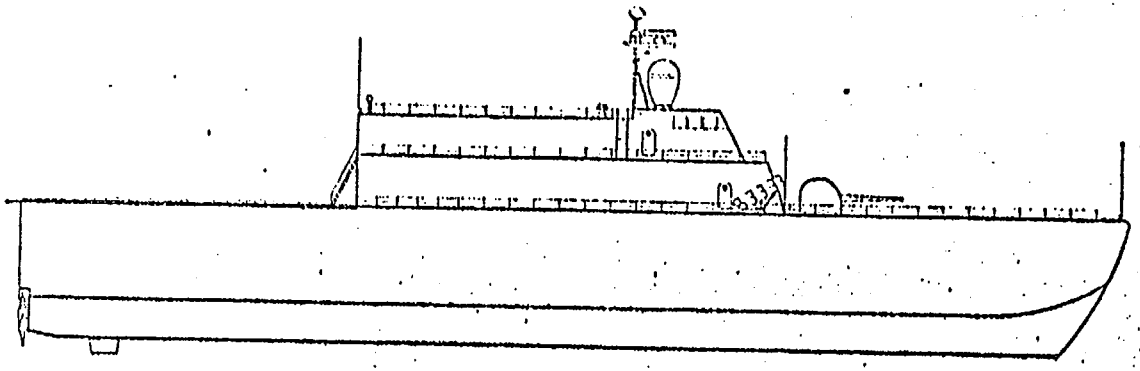
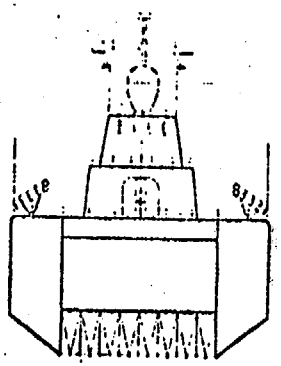


TOP VIEW



OUTBOARD PROFILE



BOW VIEW

220FT SES CORVETTE
EXTERNAL VIEW

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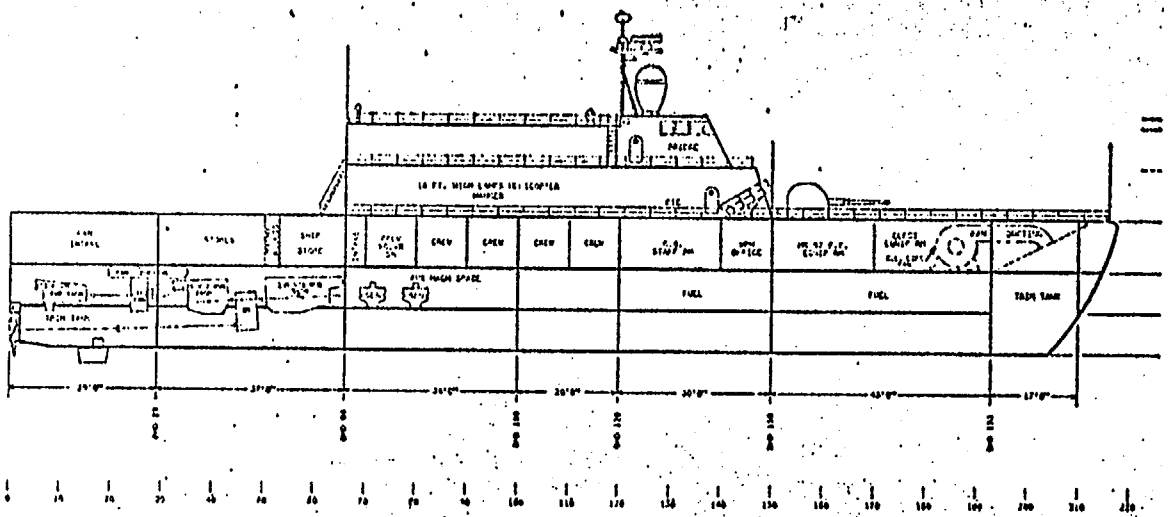
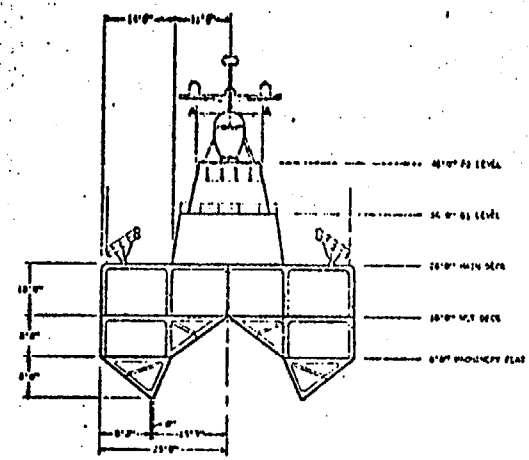


INBOARD
PROFILE
AT STBD SIDE HULL



STA 150 LOOKING AFT
CROSS-SECTION

220FT SES CORVETTE
SECTION VIEW

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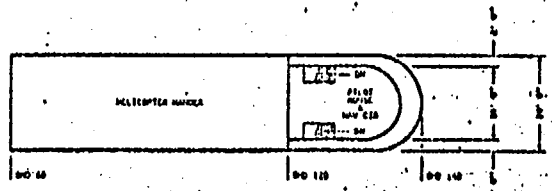
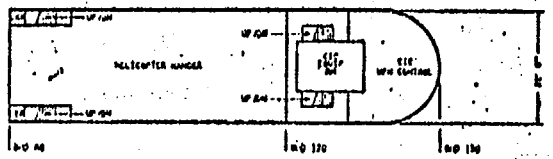
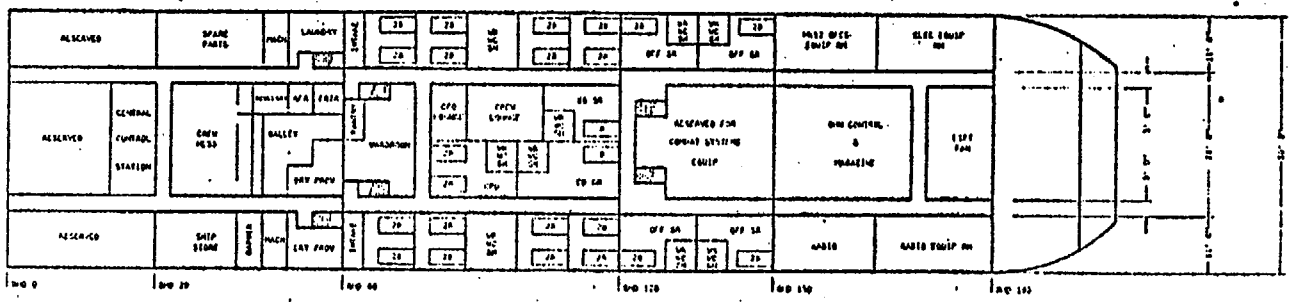


01 LEVEL

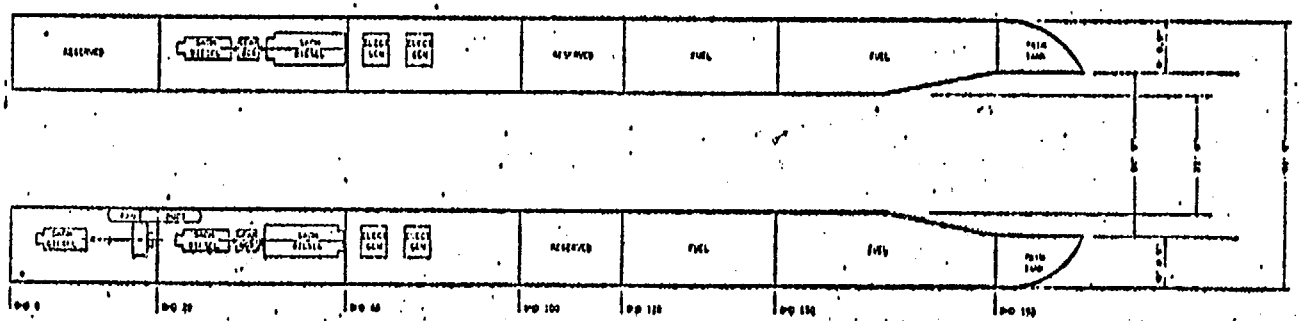
500 TON SES
SPACE ARRANGEMENT



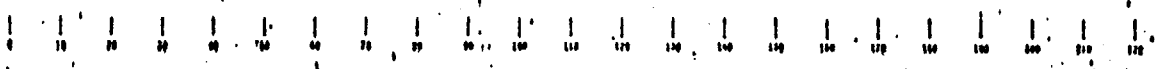
MAIN DECK



WET DECK
REVISION III



MACHINERY FLAT
STBD SIDE



220FT SES CORVETTE
DECK ARRANGEMENT

3 March 1980

220 FT. SES CORVETTE

Structural Weight Details

DISPLACEMENT = 500 - 700 LT

LENGTH O.A. = 217"

BEAM O.A. = 50"

MATERIAL: Plate: 5456 - H 116/H 117 AL
Extrusion: 5456-H111 AL
Tubing (Stanchions) 5086-H32

Estimated Weight Mid-Ship Section = 0.67 LT/FT

• Shell & Frames & Long'l BHD	= 124 L.T.
• Transverse BHD	= 11 L.T.
• Helo Landing Pad	= 12 L.T.
• Deck House	= 18 L.T.
	165 L.T.
10% for Foundations & appendages	17 L.T.
Estimated Total	182 L.T.

Estimated Structural Weight Fraction For:

500 L.T. = 36%

700 L.T. = 29-31%

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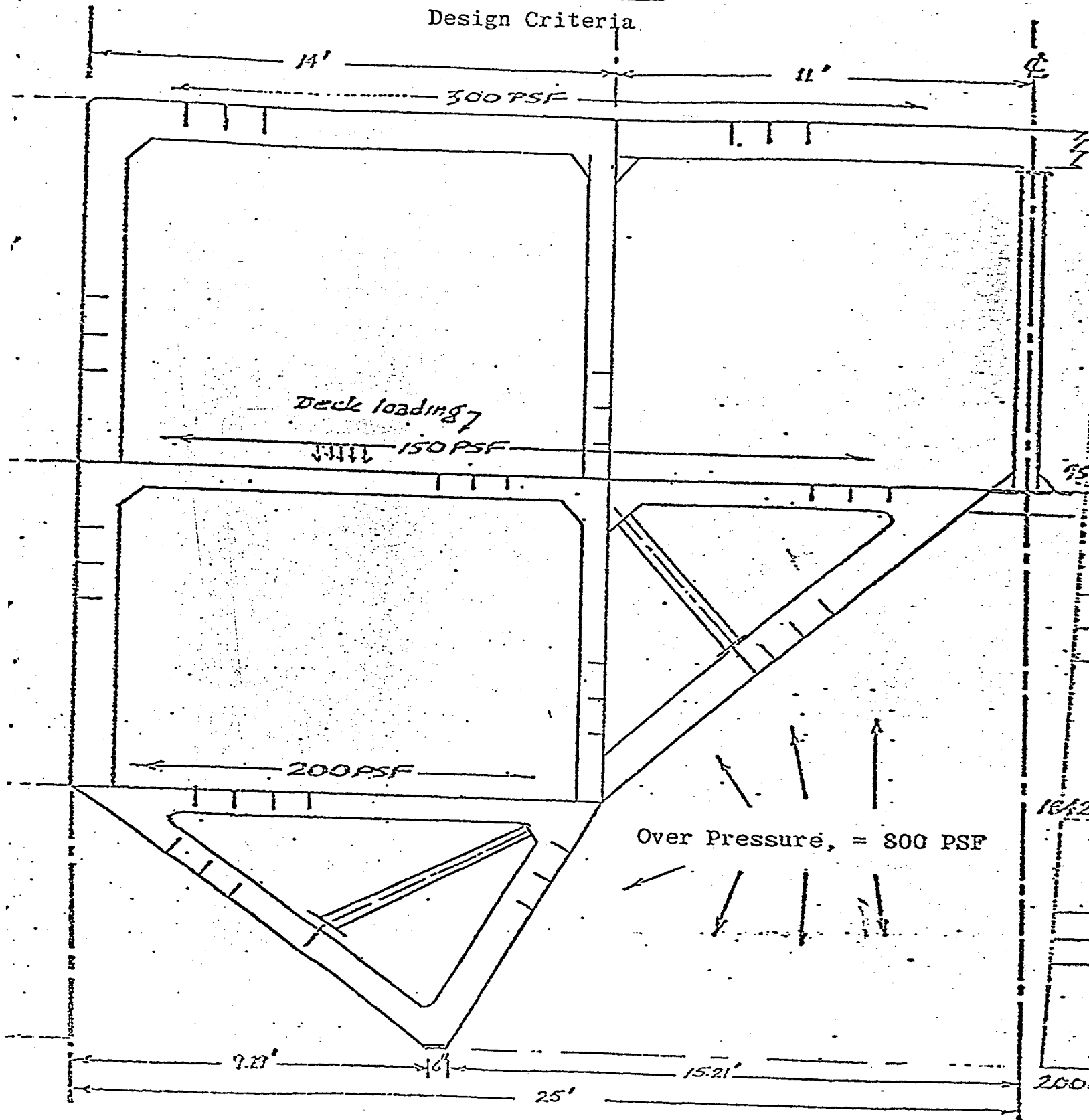
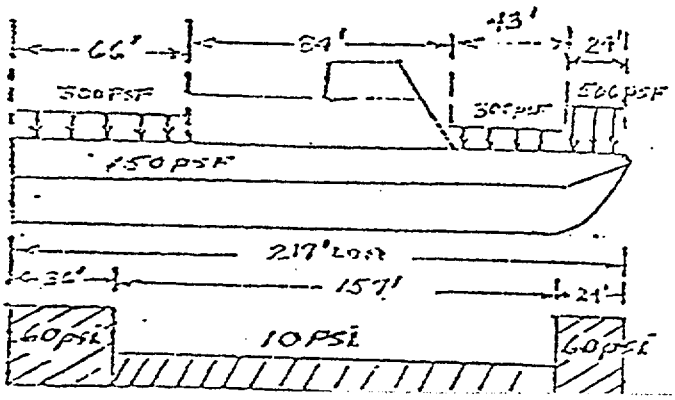
220 FT. SES CORVETTE

Design Criteria





BENDING MOMENT = 19,600 FT. L.T.

Note:
- Use 70% for frame design
- S.F. = 1.2 for yield (B.M.)
  = 1.0 for slamming
- S.F. = 1.5 for buckling

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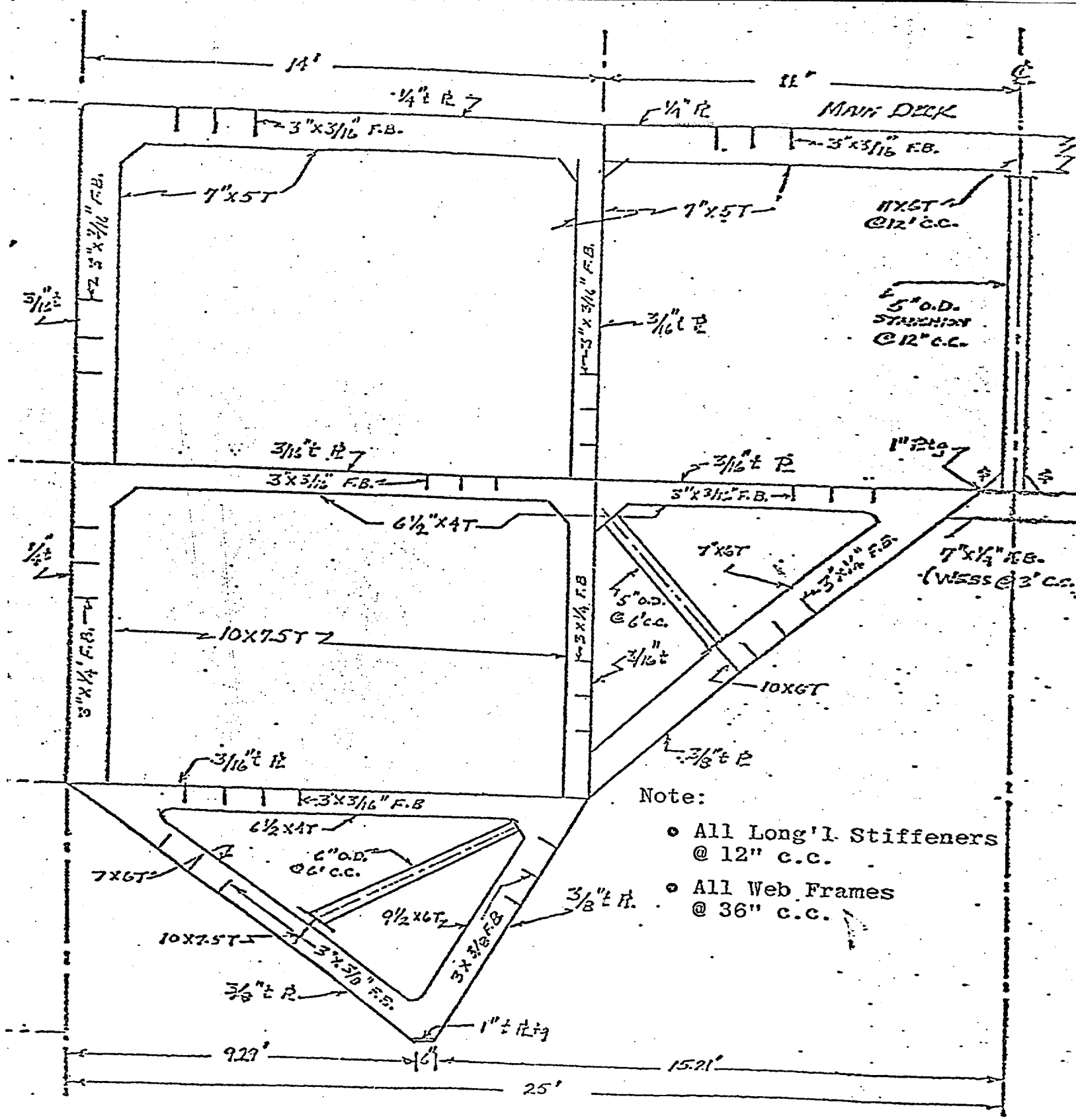

220 FT. SES CORVETTE

Mid-Ship Section

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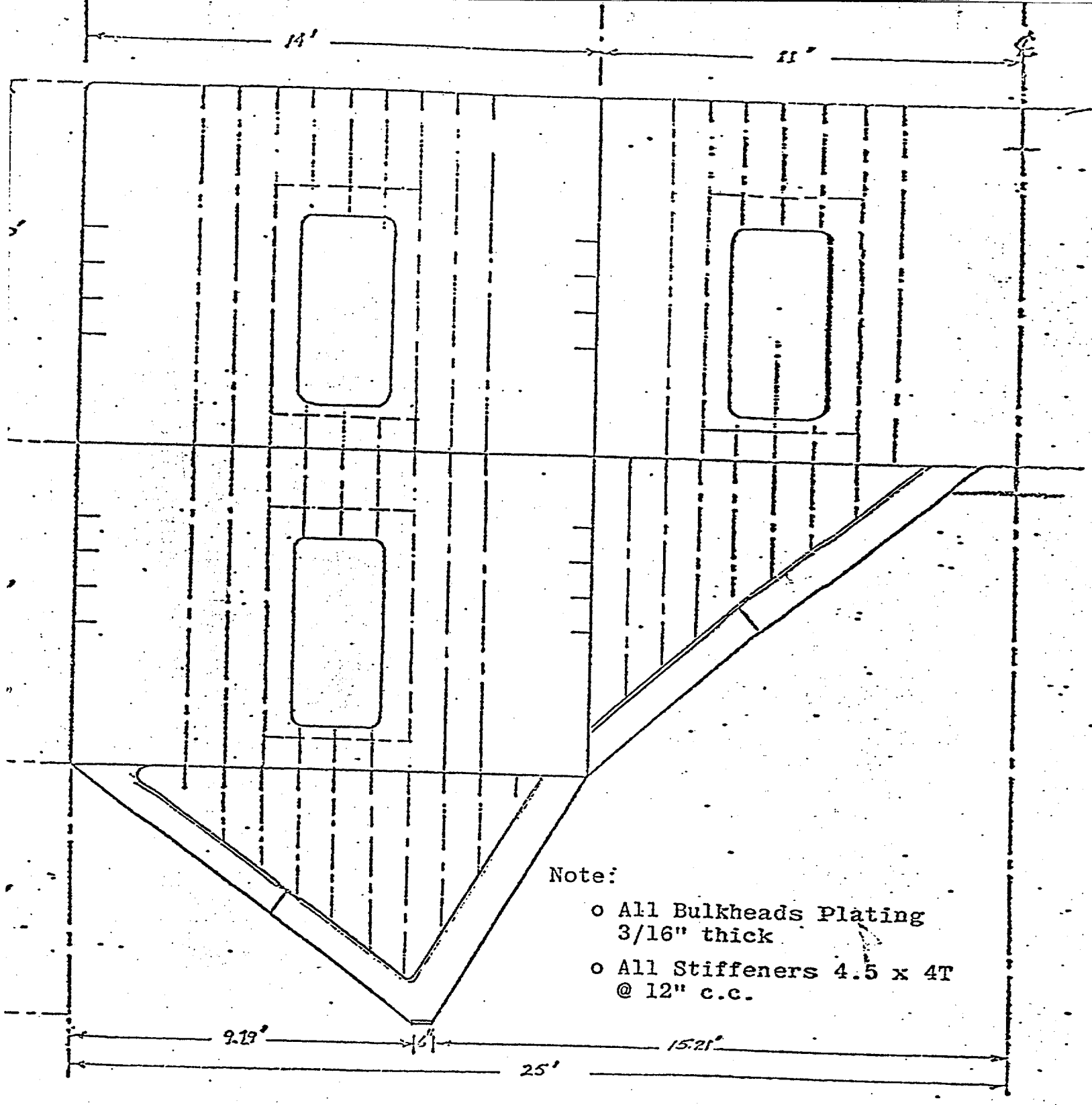

220FT. SES CORVETTE

Transverse Bulkhead

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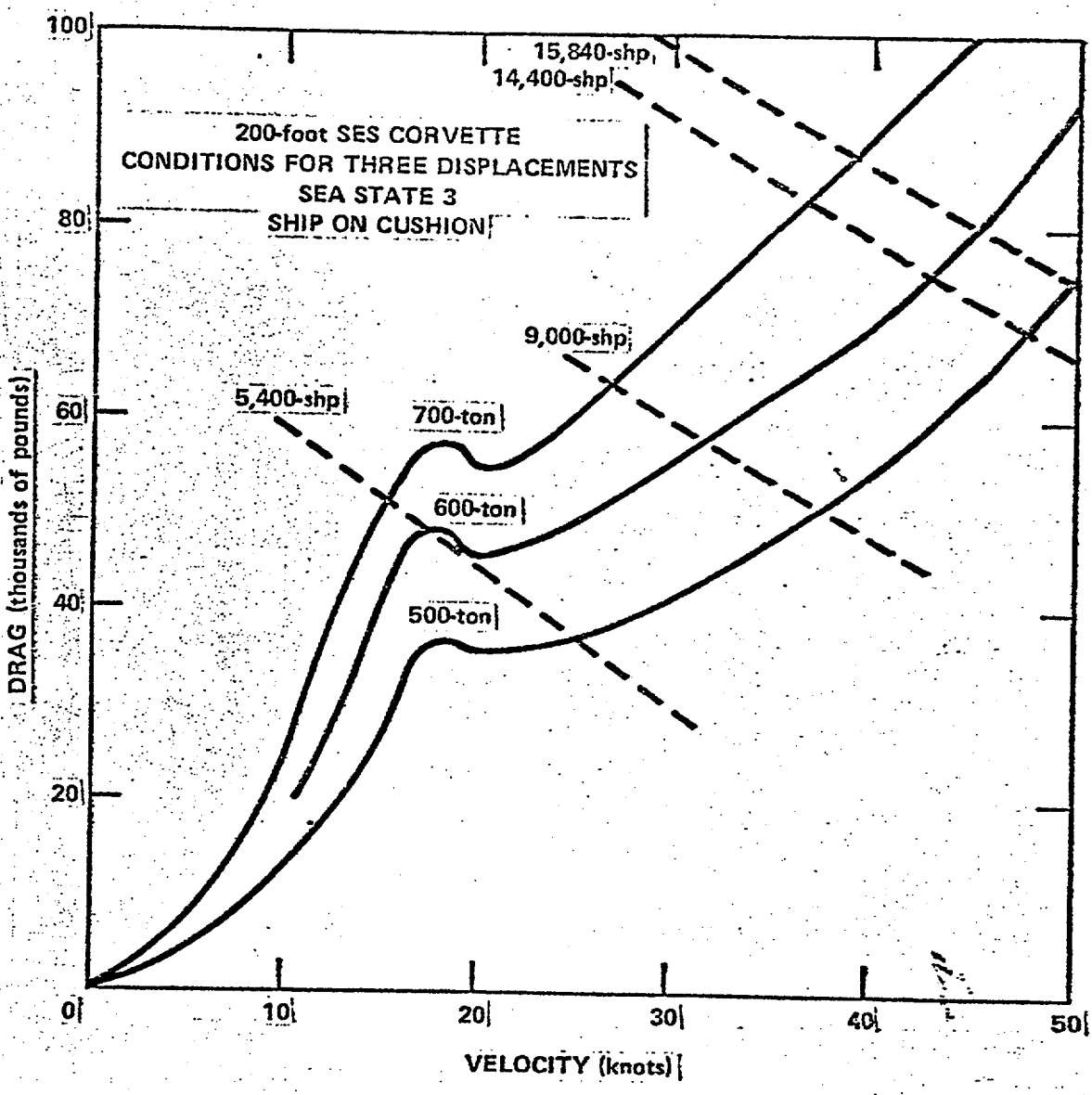
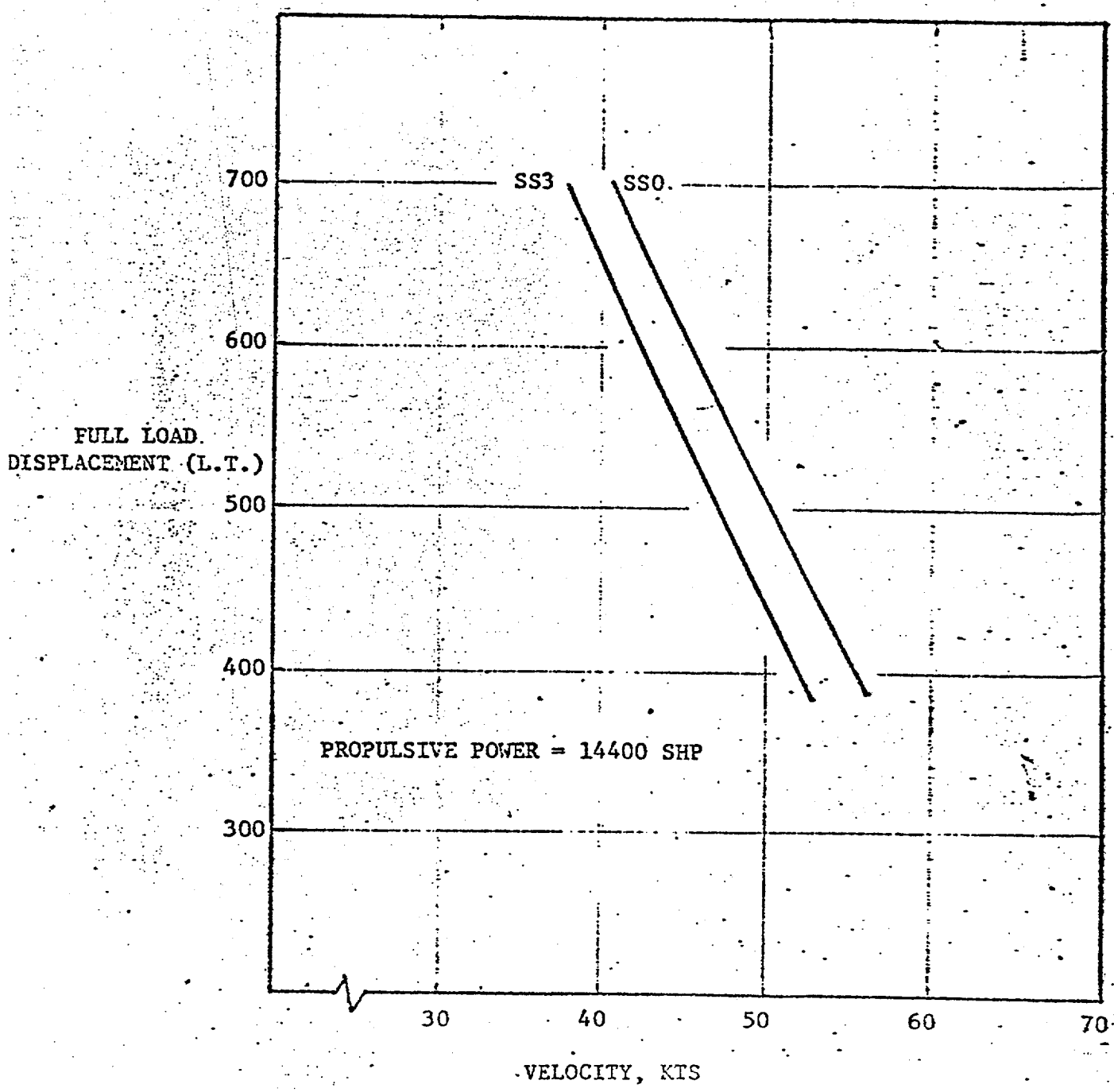


Figure 3 – Drag as a Function of All-up Weight and Velocity



220-FT SES CORVETTE - MAXIMUM VELOCITY VS. DISPLACEMENT

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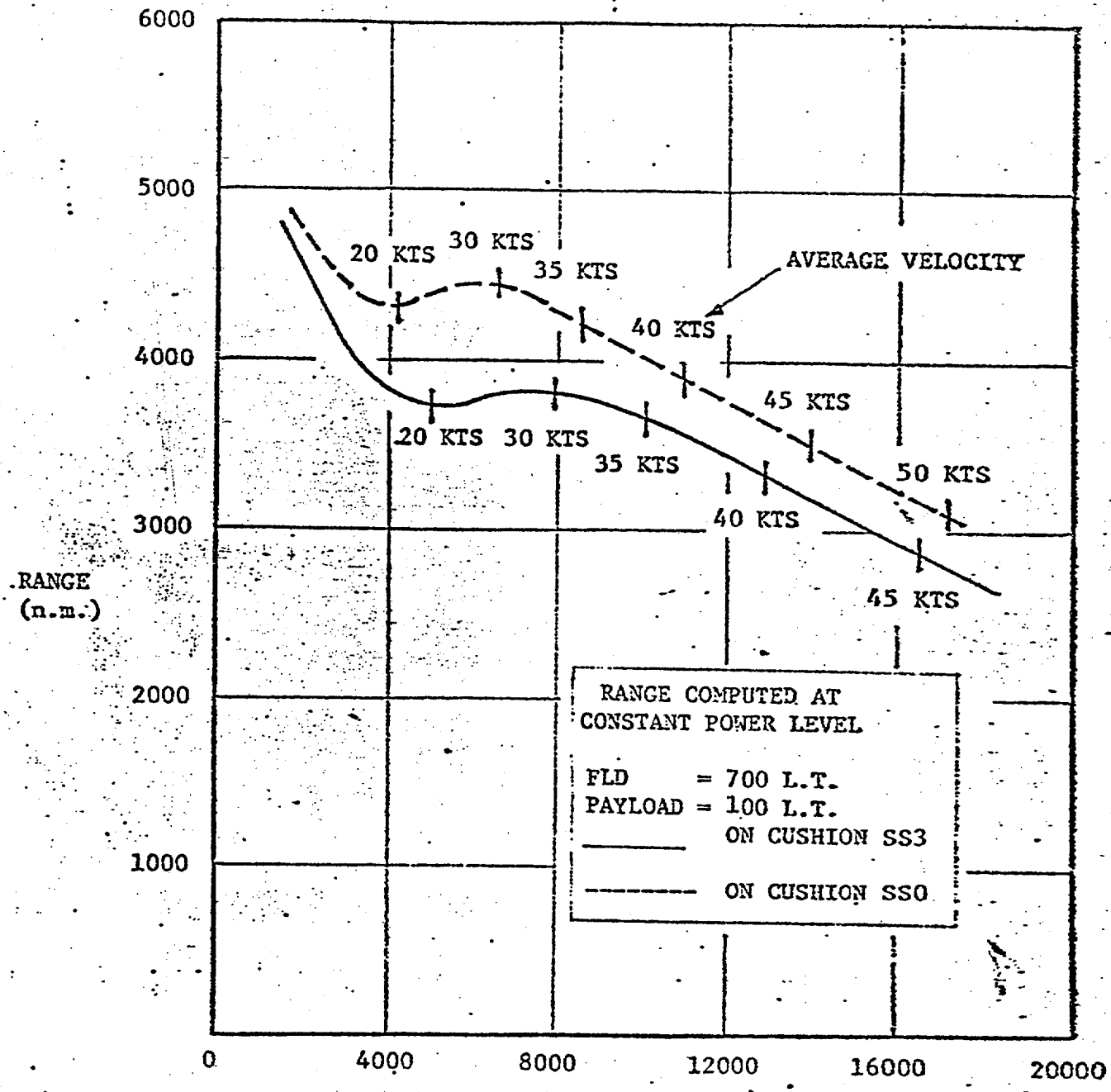


220-FT. SES CORVETTE - RANGE VS. PROPULSIVE POWER

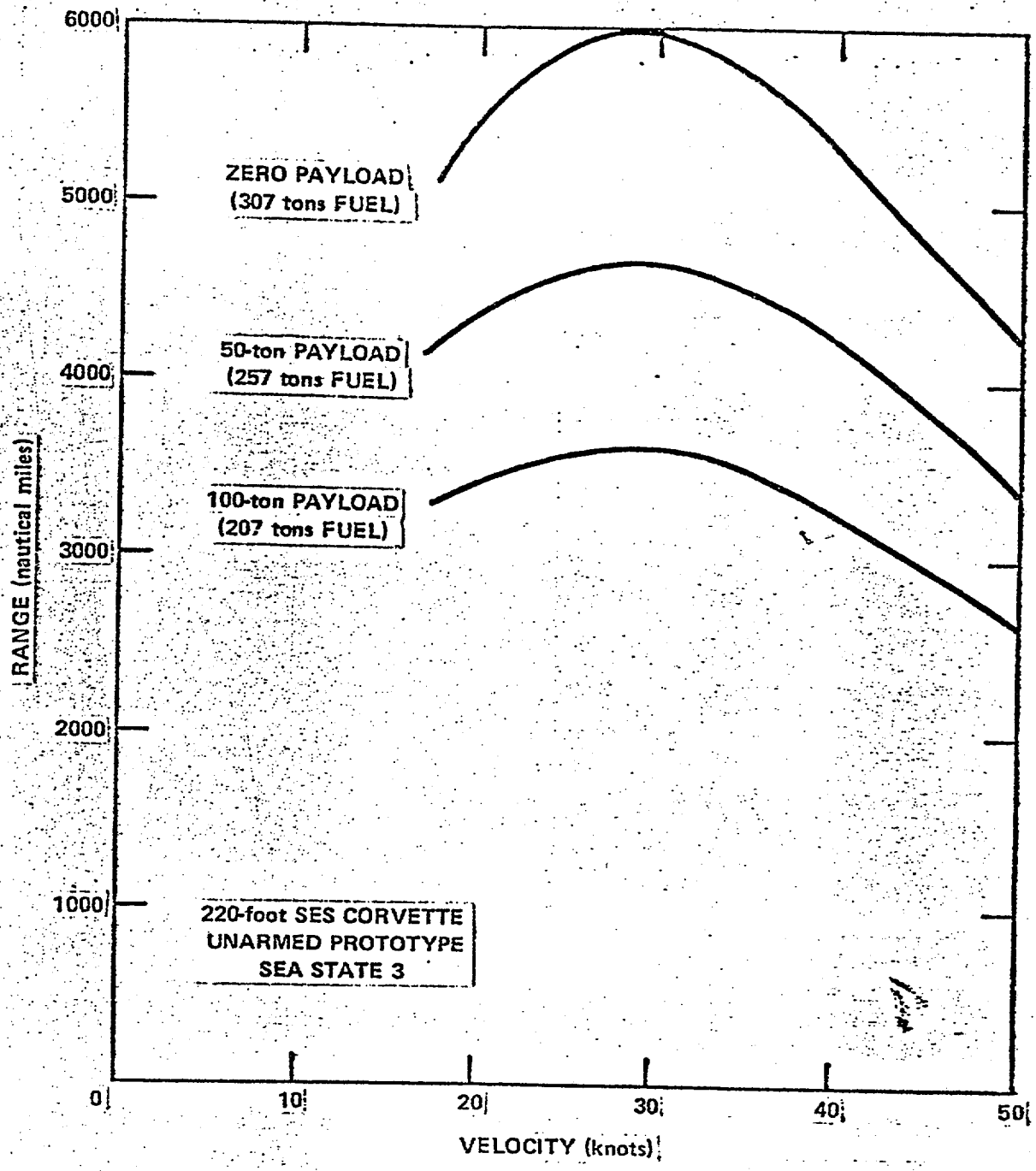
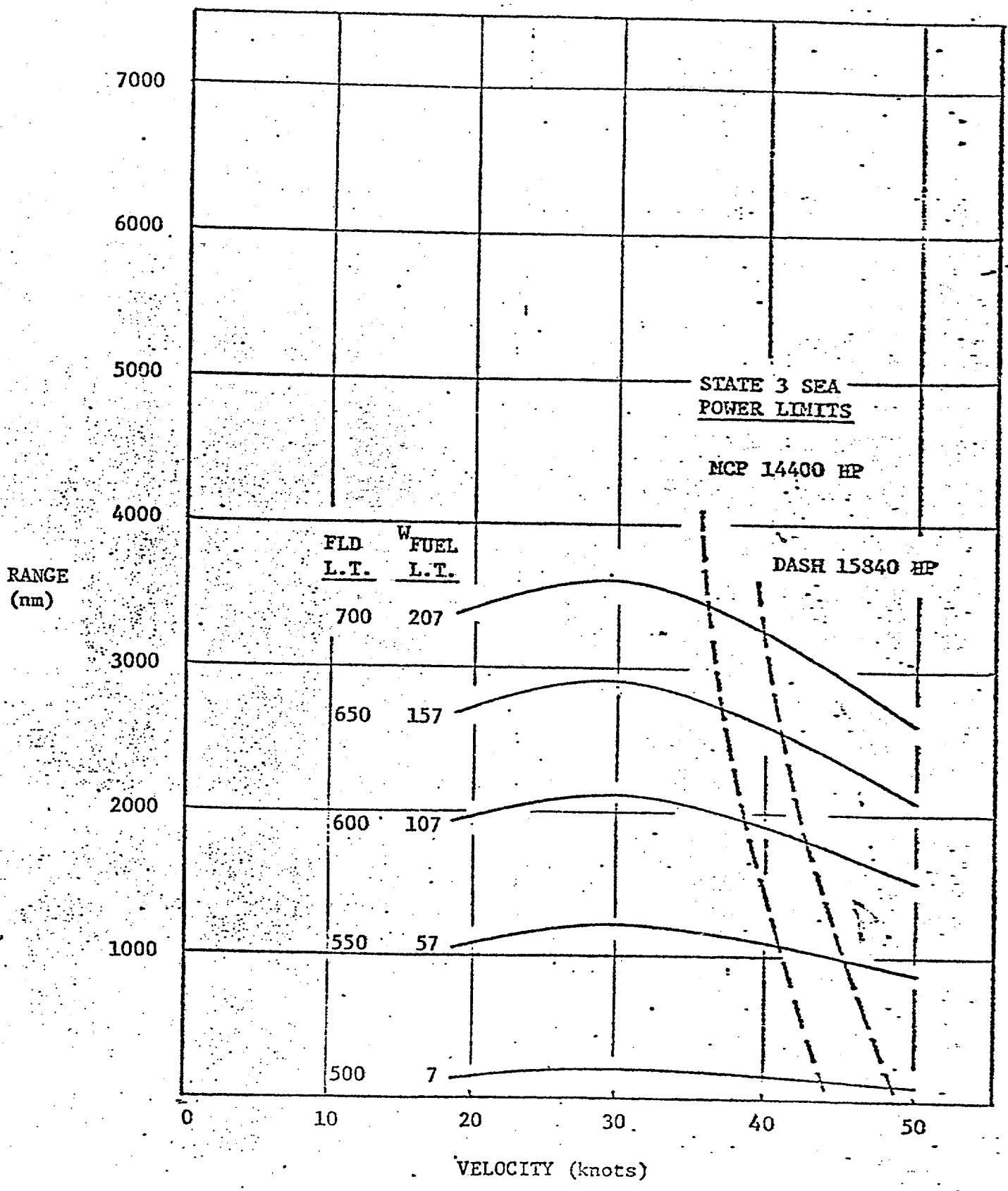


Figure 6 - Range Comparisons at Different Payloads



220-FT. SES CORVETTE - RANGE VS. VELOCITY FOR 100 L.T. PAYLOAD AT CONSTANT SPEED

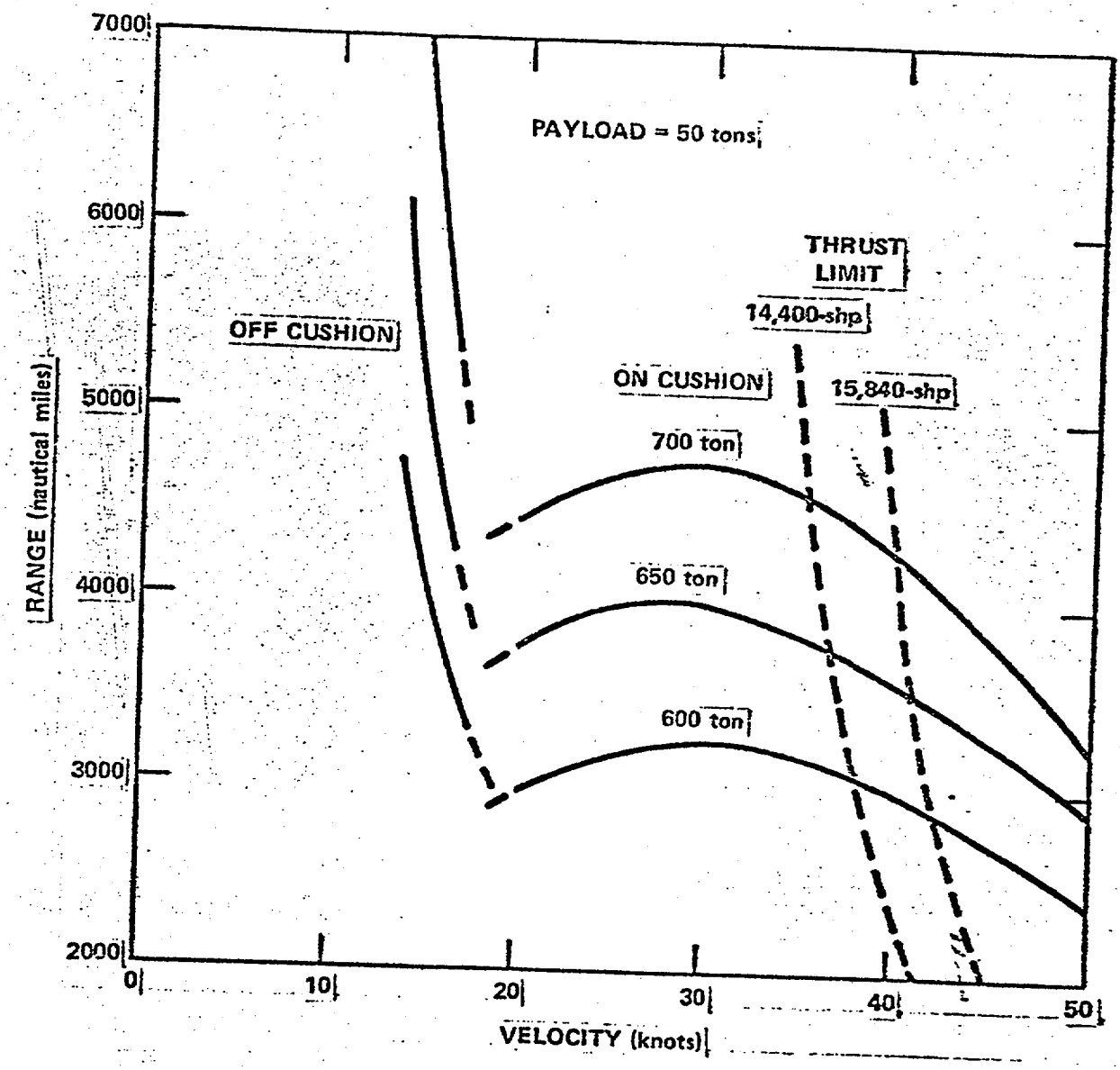
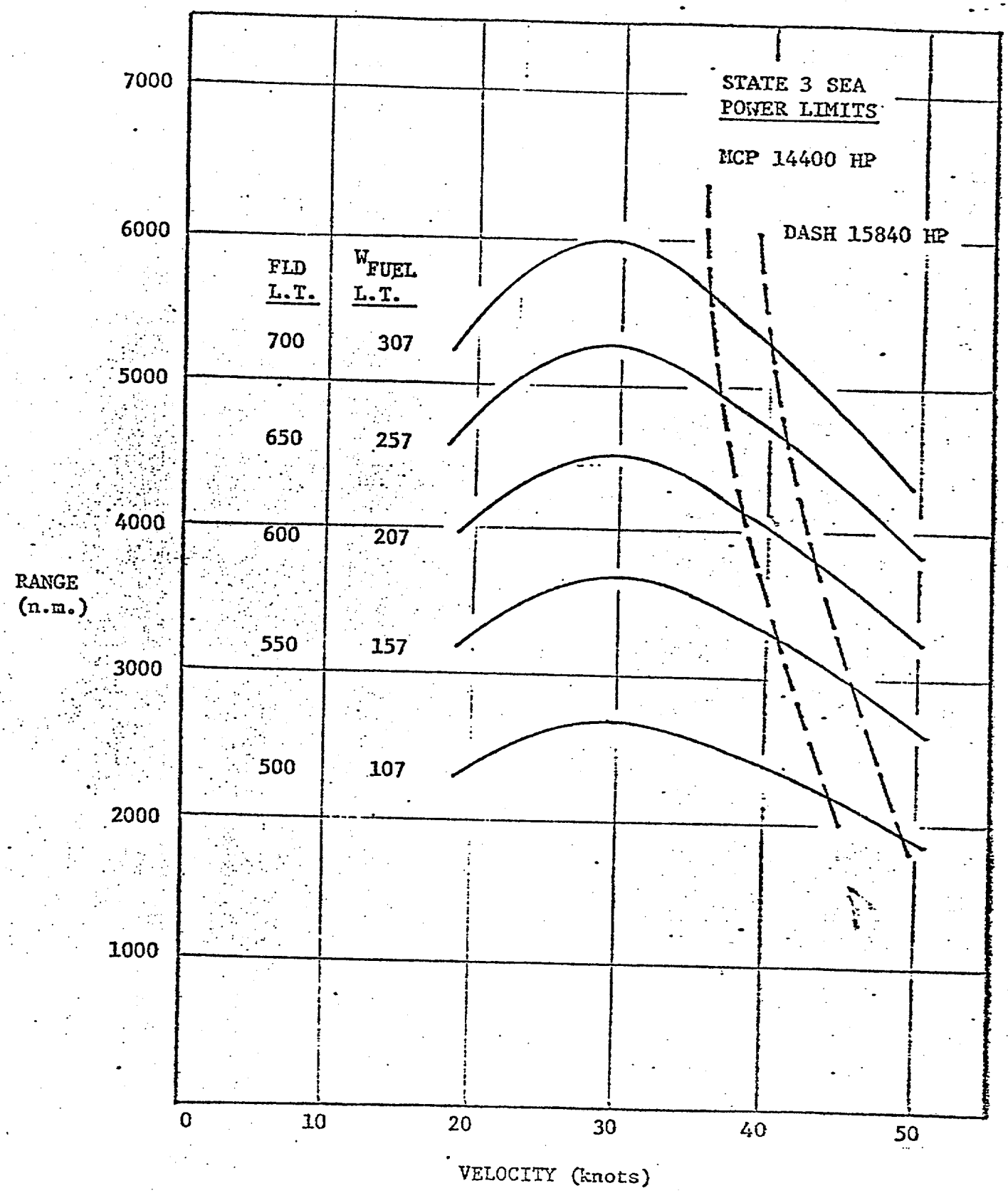
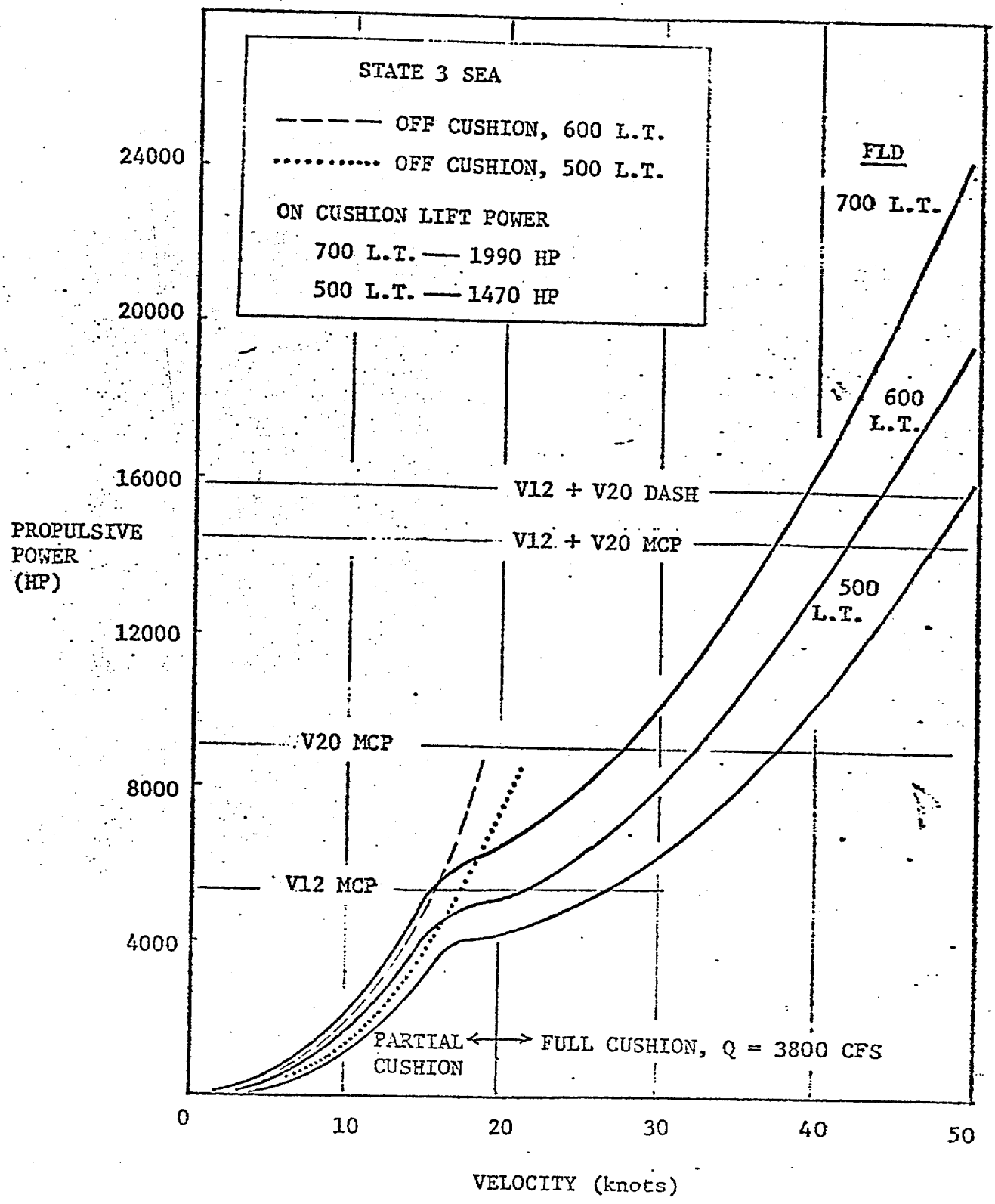


Figure 7 - Range Comparisons for Various All-up Weights



220-FT. SES CORVETTE - RANGE VS. VELOCITY FOR ZERO PAYLOAD AT CONSTANT SPEED

3 March 1980



220-FT. SES CORVETTE - PROPULSIVE POWER VS. VELOCITY

3 March 1980

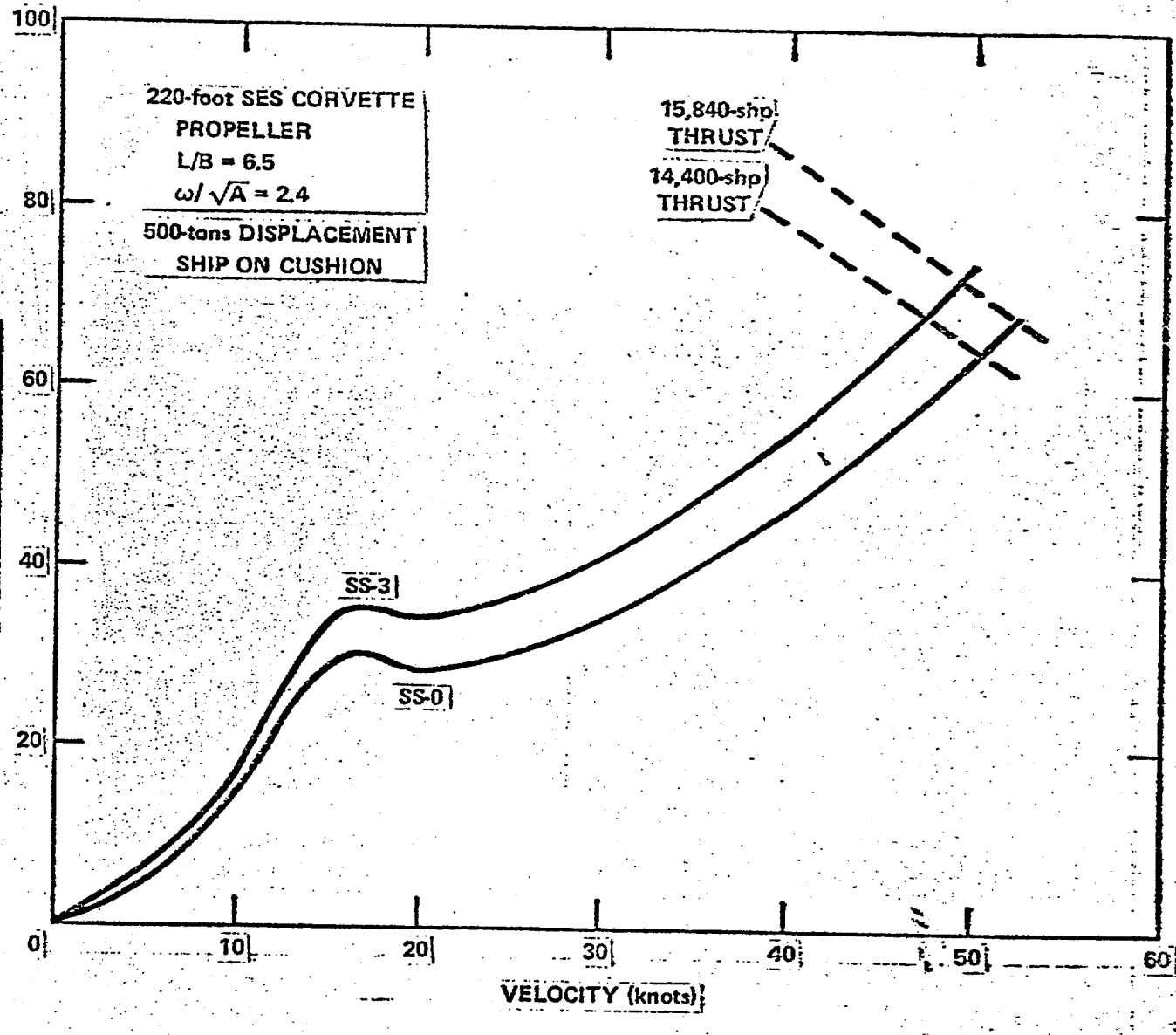


Figure 2 - Drag versus Velocity at 30-Knot Design Speed

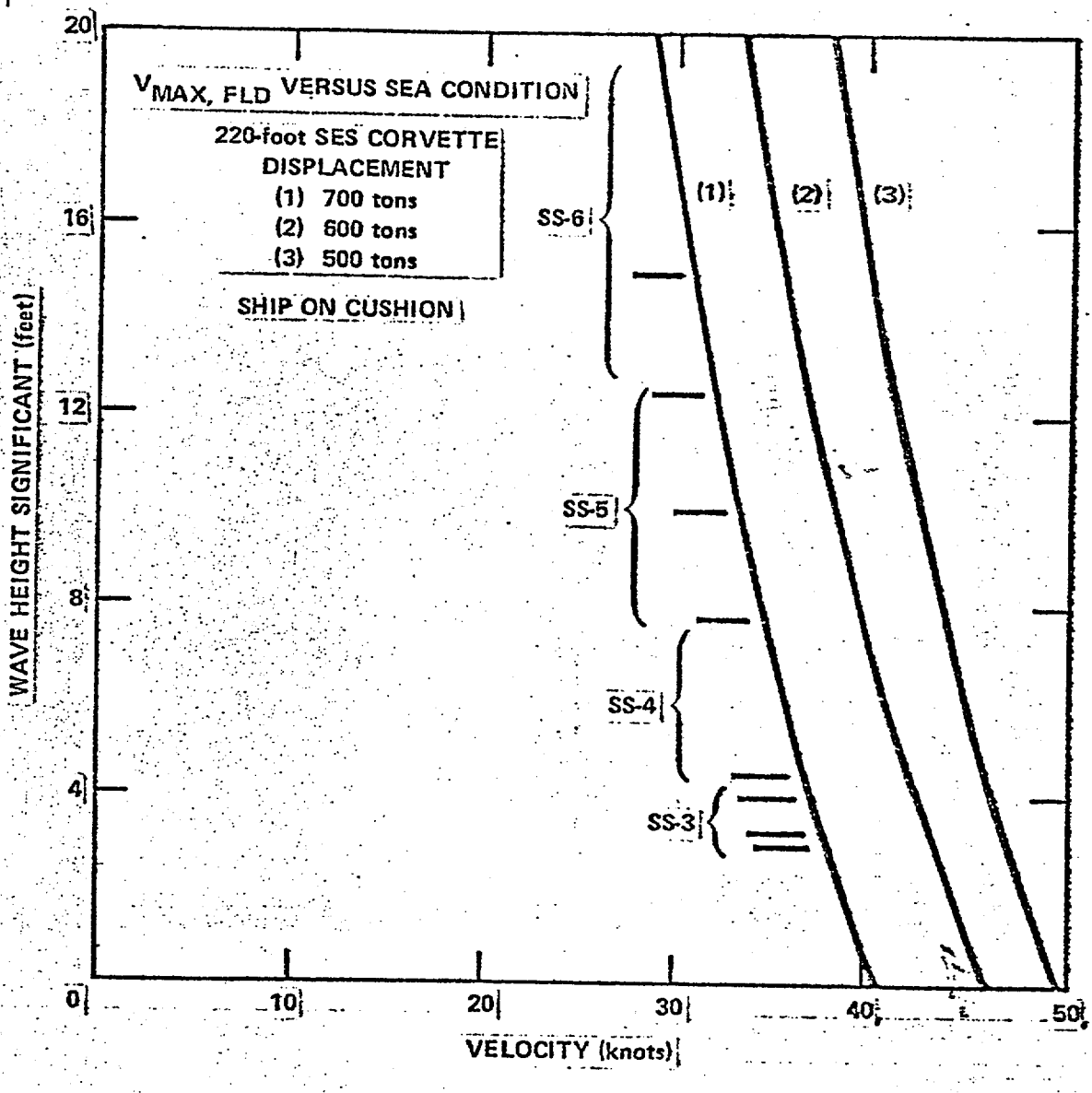
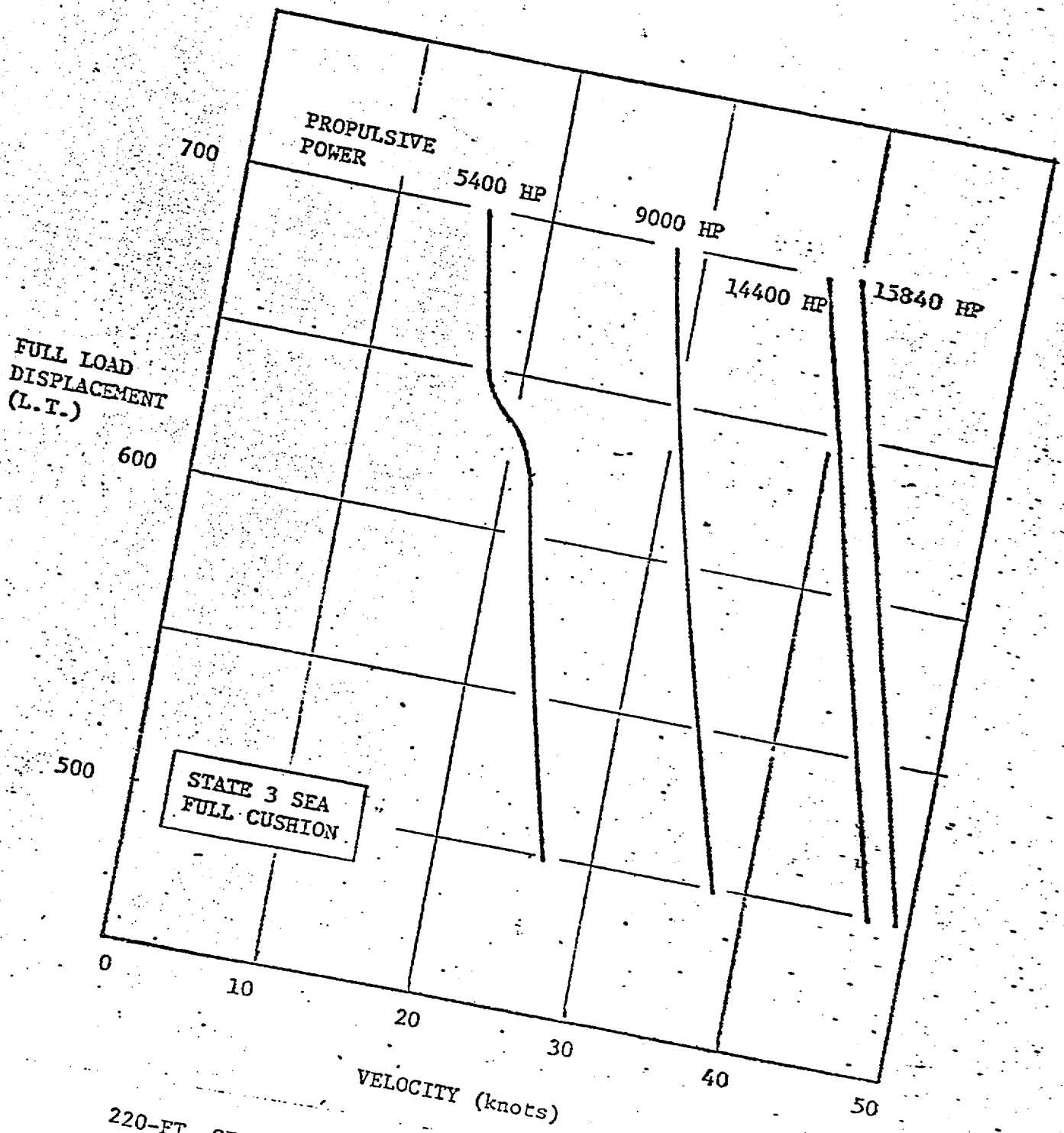


Figure 4 - Maximum Speed Variations with Sea State and Full Load Displacement



220-FT. SES CORVETTE - FULL LOAD DISPLACEMENT VS. VELOCITY FOR SEVERAL PROPULSIVE POWER LEVELS