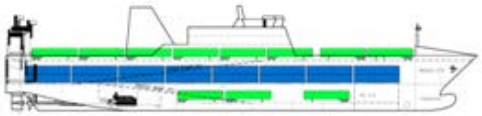
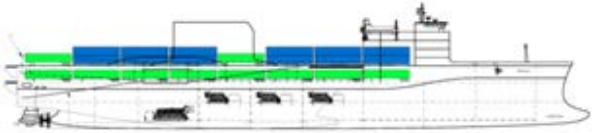
MARAD AMH VESSEL DESIGN PORTFOLIO

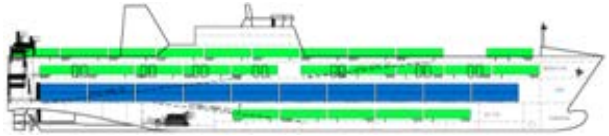
RO/ROs



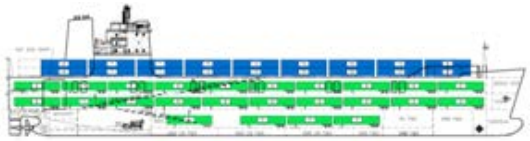
01-Small, 18kt



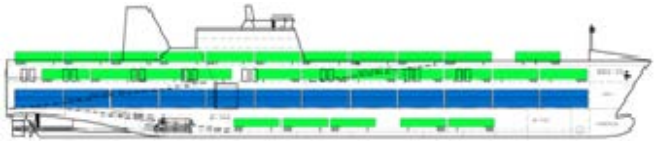
02-Trimaran, 29kt



03-Medium, 24kt



04-Medium, 20kt

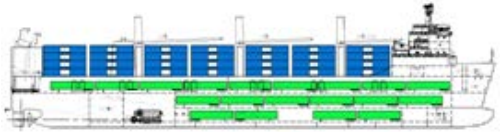


05-Large, 21kt

06-Fastship, 30kt

RO/CONs

11-ATB, 14kt



12-Large, 18kt

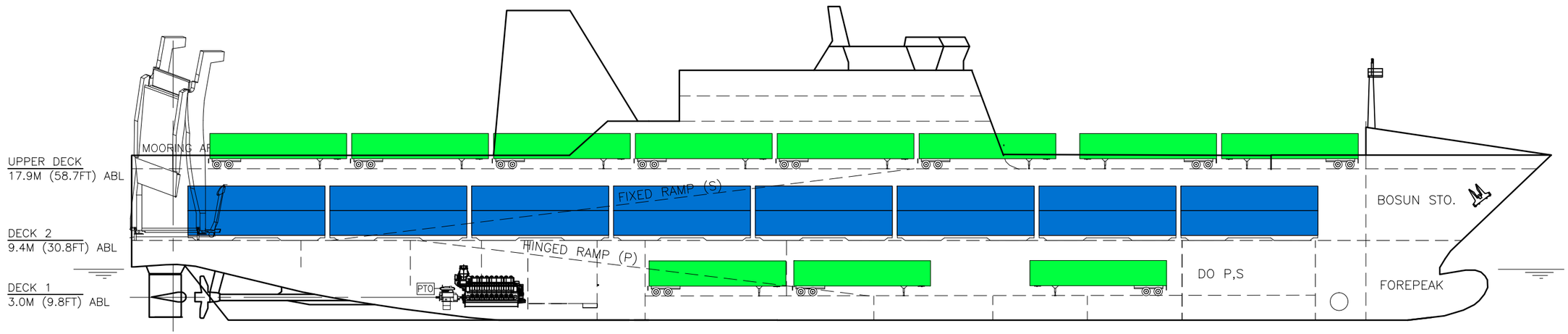
13-Large, 22kt

OTHER

21-Container, Medium, 18kt

22-RoPax, Medium, 22kt

01 - AMH RoRo Small 18kt



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	167.7 m	550.2 ft
Length, Between Perp.	150.2 m	492.8 ft
Beam	27 m	88.6 ft
Depth	17.9 m	58.7 ft
Design Draft	6.0 m	19.7 ft
Dwt. at Design Draft	5,442 MT	
Cb at Design Draft	0.57	

HULL PROPORTIONS	
L/B	5.6
B/T	4.5
B/D	1.5
L/D	8.4

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight
53' Containers	22	80	1,760
53' Trailers	20	71	1,420
Cassettes	3.56	40	142
Total ‡		423 TEU	3,322 MT
Reefer Outlets	40		

FULL LOAD CONDITION	
Cargo Weight	3,322 MT
Consumables (98%)	1,480 MT
Ballast	520 MT
Constant	120 MT
Lightship	8,710 MT
Displacement	14,152 MT
Estimated GM	2.3 m

PROPULSION	
Suggested Engine	2xMAN 9L32/44CR 2xWartsila 12V34DF
Speed at design draft	18 knots
Operating Power	8,400 kW *
MCR w/ PTO	10,080 kW
RPM	760

RANGE & CONSUMPTION	
M/E Fuel Consumption†	40.3 MT/Day
M/E & D/G Fuel (no reefers)	43.9 MT/Day
Range (MGO)	~10,000 nm
Range (LNG)	4,000 nm

TANK CAPACITIES	
Marine Gas Oil	1,350 m^3
LNG (if provided)	1,000 m^3
Fresh Water	380 m^3
Ballast Water	TBD m^3

Legend:

- 53' Trailer
- 53' Container

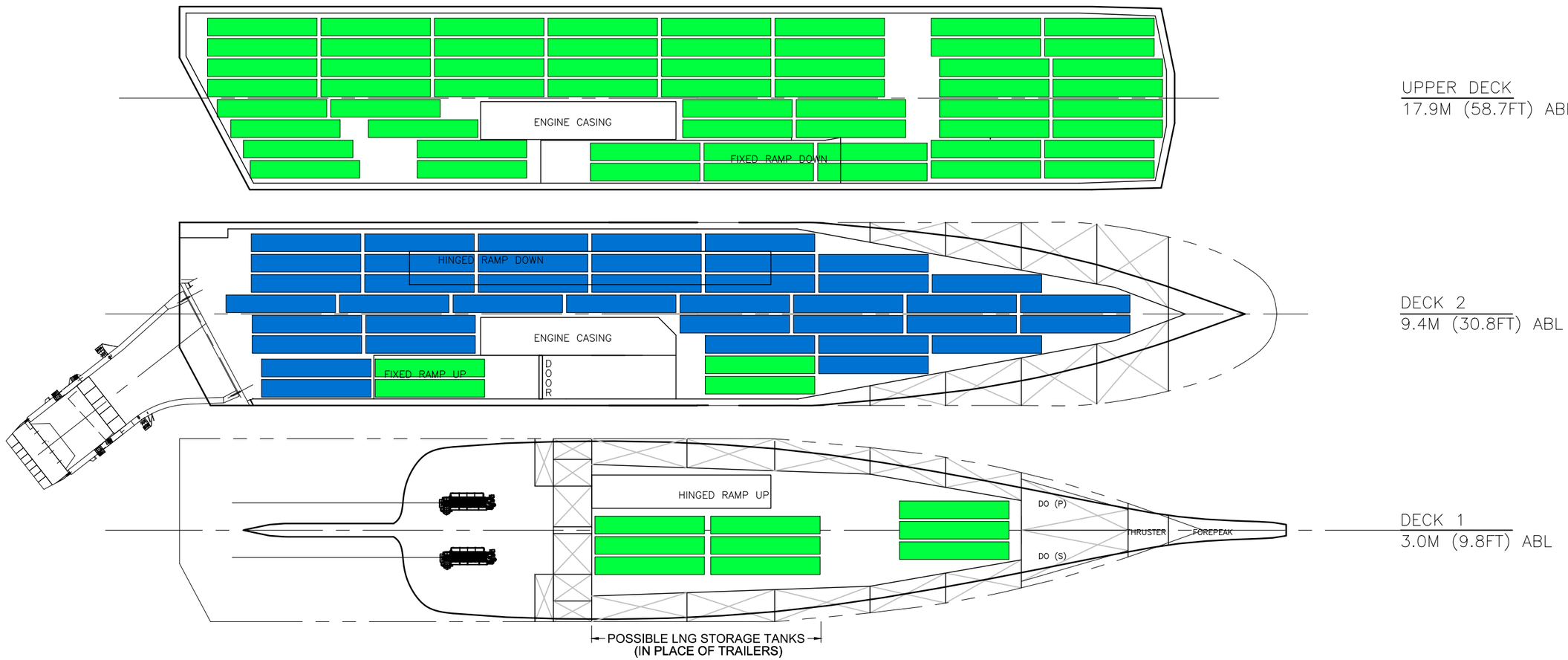
Notes:

† Fuel Consumption is based on MGO at the operating power.
LNG propulsion is an option and will require added storage tanks.
‡ Count assumes 2.8TEU/53' Trailer/Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CMB CHKD EVR	DATE 05-03-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Small 18kt CLASS RoRo	2010-083-050-01 Sheet 1 of 2 Rev. -

AMH01-DATASHEET-CNC3.DWG

01 - AMH RoRo Small 18kt



RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	17.9	open	-	-	-	3,358	36,145	1,120	3,673	58	-	1.5	300
Deck 2	9.4	8.5	1.2	7.3	23.9	2,717	29,245	814	2,669	4	80	2.0	400
Deck 1	3.0	6.4	1.2	5.2	17.1	859	9,246	223	732	9	-	1.5	300
Total						6,934	74,636	2,156	7,074	71	80		

Legend:

- 53' Trailer
- 53' Container

HEC Harbert Engineering Corp.

DRWN CMB
CHKD EVR
DATE 05-27-11
FILE 2010-083

U.S. Maritime Administration

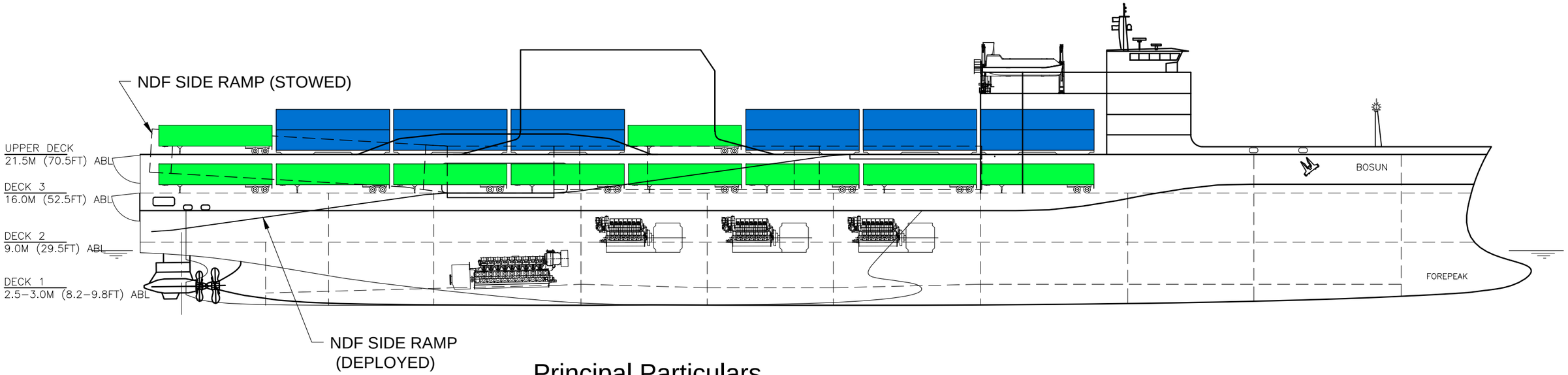
AMERICAN MARINE HIGHWAY
DESIGN CONCEPT

TYPE Small 18kt
CLASS RoRo

2010-083-050-01
Sheet 2 of 2
Rev. -

AMH01-DATASHEET-CNC3.DWG

02-Trimaran RoRo 29kt SR



Principal Particulars

MAIN DIMENSIONS

Length, Over All	205 m	672.6 ft
Length, Between Perp.	186 m	610.2 ft
Beam	40.6 m	133.2 ft
Depth	21.5 m	70.5 ft
Design Draft	8.2 m	26.9 ft
Dwt. at Design Draft	7,333 MT	
Cb at Design Draft	0.54 (average)	

HULL PROPORTIONS

L/B	4.6
B/T	5.0
B/D	1.9
L/D	8.7

CARGO

	Wt/Unit	Full Load Quantity	Full Load Weight
53' Containers	17	138	2,346
53' Trailers	20	115	2,300
Cassettes	3.56	69	246
Total ‡		708 TEU	4,892 MT
Reefer Outlets	50		

FULL LOAD CONDITION

Cargo Weight	4,892 MT
Consumables (2900 NM)	1,371 MT
Ballast	950 MT
Constant	120 MT
Lightship	11,294 MT
Displacement	18,627 MT
Estimated GM	1.0 m

PROPULSION

Suggested Engine	MAN 18V48/60CR
	+ 6 x 12V32/44CR D-G Sets
Speed at design draft	28.9 knots
Operating Power	54,000 kW *
MCR	60,600 kW
RPM	514

RANGE & CONSUMPTION

M/E Fuel Consumption†	241 MT/Day
M/E & D/G Fuel (no reefers)	250 MT/Day
Range (MGO)	~6,400 nm

TANK CAPACITIES

Marine Gas Oil	3,800 m^3
Fresh Water	190 m^3
Ballast Water	9,900 m^3

Legend:

- 53' Trailer
- 53' Container

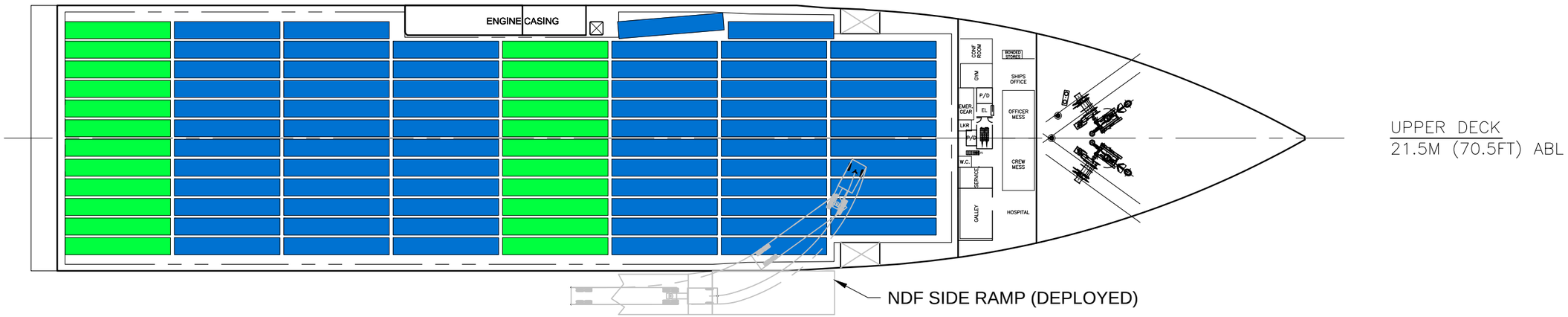
Notes:

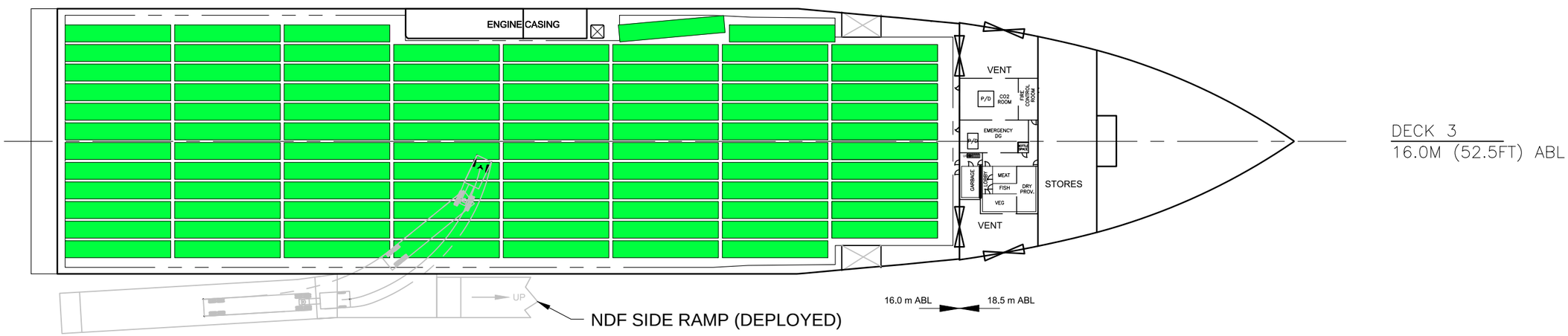
† Fuel Consumption is based on MGO at the operating power.
‡ Count assumes 2.8TEU/53' Trailer/Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN RVS CHKD EVR	DATE 05-27-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Trimaran 29 Kt CLASS RoRo	2010-083-050-02 Sheet 1 of 2 Rev. -

AMH02-DATASHEET-CNC8.DWG

02-Trimaran RoRo 29kt SR





RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	21.5	open	-	-	-	5,000	53,819	1,572	5,157	23	138	2.0	400
Deck 3	16	5.5	0.8	4.7	15.4	4,850	52,204	1,572	5,157	92	-	1.5	300
Total						9,850	106,023	3,144	10,315	115	138		

Legend:

- 53' Trailer
- 53' Container

HEC Herbert Engineering Corp.

DRWN RVS
CHKD EVR
DATE 05-27-11
FILE 2010-083

U.S. Maritime Administration

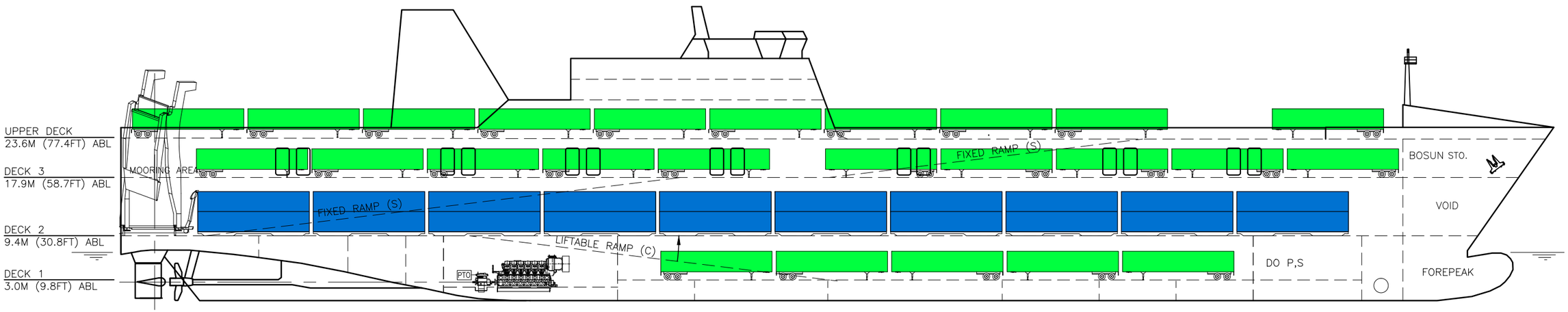
AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Trimaran 29 Kt
CLASS RoRo

2010-083-050-02
Sheet 2 of 2
Rev. -

AMH02-DATASHEET-CNC8.DWG

03 - AMH RoRo Medium 24kt



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	207.9 m	682.1 ft
Length, Between Perp.	190.4 m	624.7 ft
Beam	28.5 m	93.5 ft
Depth	23.6 m	77.4 ft
Design Draft	7.0 m	23.0 ft
Dwt. at Design Draft	10,178 MT	
Cb at Design Draft	0.63	

HULL PROPORTIONS	
L/B	6.7
B/T	4.1
B/D	1.2
L/D	8.1

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight
53' Containers	22	104	2,288
53' Trailers	20	151	3,020
Cassettes	3.56	52	185
Total ‡		714 TEU	5,493 MT
Reefer Outlets	50		

FULL LOAD CONDITION	
Cargo Weight	5,493 MT
Consumables (98%)	2,675 MT
Ballast	1,890 MT
Constant	120 MT
Lightship	14,447 MT
Displacement	24,625 MT
Estimated GM	1.0 m

PROPULSION	
Suggested Engine	2xMAN 12V51/60DF
	2xWartsila 12V50DF
Speed at design draft	23.7 knots
Operating Power	21,600 kW *
MCR	24,000 kW
RPM	514

RANGE & CONSUMPTION	
M/E Fuel Consumption†	102.4 MT/Day
M/E & D/G Fuel (no reefers)	106.4 MT/Day
Range (MGO)	~10,000 nm
Range (LNG)	4,000 nm

TANK CAPACITIES	
Marine Gas Oil	2,700 m^3
LNG (if provided)	2,100 m^3
Fresh Water	380 m^3
Ballast Water	TBD m^3

Legend:

- 53' Trailer
- 53' Container

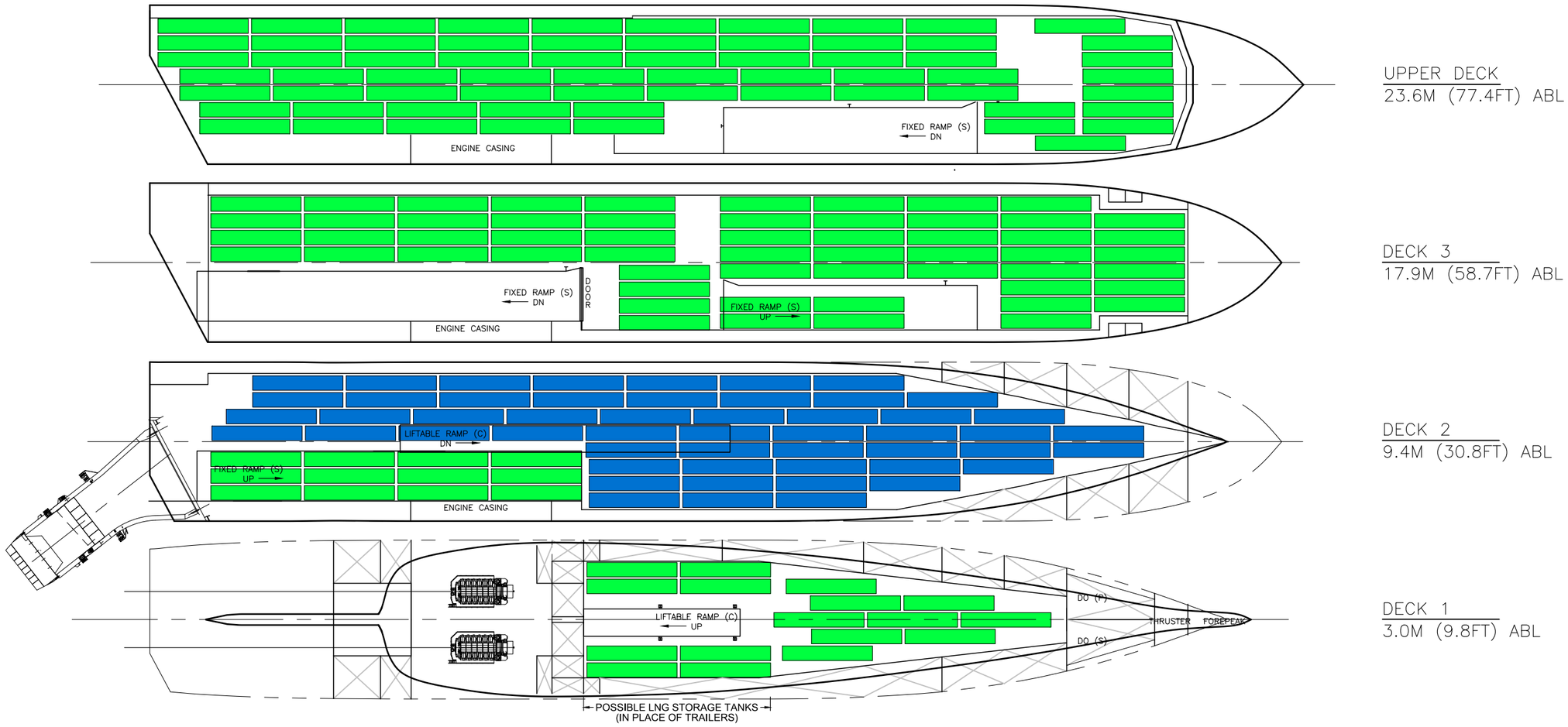
Notes:

† Fuel Consumption is based on MGO at the operating power.
LNG propulsion is an option and will require added storage tanks.
‡ Count assumes 2.8TEU/53' Trailer/Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CNC CHKD EVR	DATE 05-03-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Medium 24kt CLASS RoRo	2010-083-050-03 Sheet 1 of 2 Rev. -

AMH03-DATASHEET-CC7.DWG

03 - AMH RoRo Medium 24kt



RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	23.6	open	-	-	-	3,796	40,859	1,217	3,993	65	-	1.25	250
Deck 3	17.9	5.7	1	4.7	15.4	3,453	37,167	1,058	3,471	57	-	1.5	300
Deck 2	9.4	8.5	1.2	7.3	23.9	3,528	37,974	1,144	3,753	12	104	2.0	400
Deck 1	3	6.4	1.2	5.2	17.1	1,377	14,822	344	1,129	17	-	1.5	300
Total						12,154	130,822	3,763	12,346	151	104		

Legend:

- 53' Trailer
- 53' Container

HEC Herbert Engineering Corp.

DRWN CNC
CHKD EVR
DATE 05-03-11
FILE 2010-083

U.S. Maritime Administration

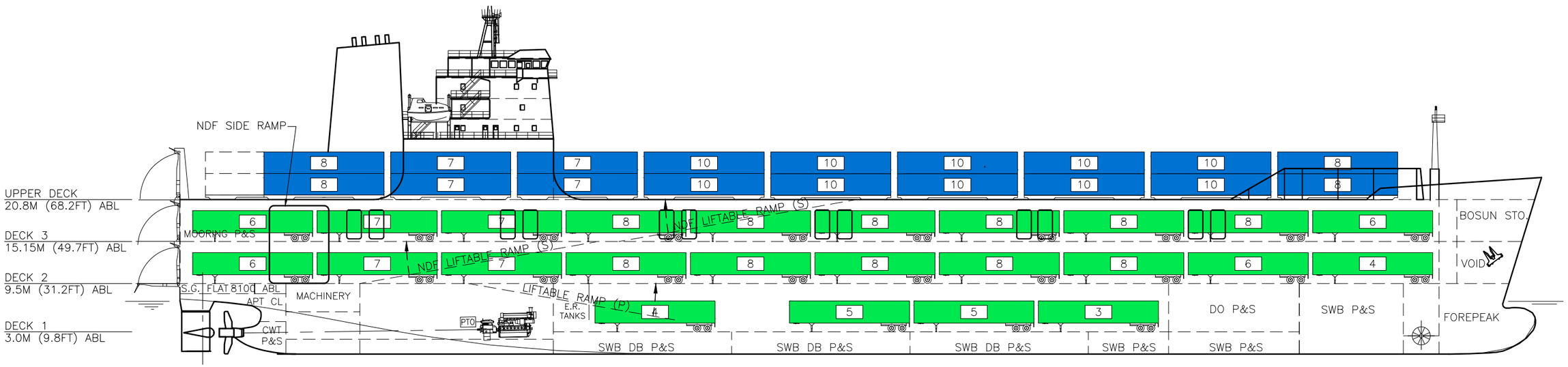
AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Medium 24kt
CLASS RoRo

2010-083-050-03
Sheet 2 of 2
Rev. -

AMH03-DATASHEET-CC7.DWG

04 - AMH RoRo Medium 20kt SR



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	183.5 m	602.0 ft
Length, Between Perp.	175.0 m	574.1 ft
Beam	29.0 m	95.1 ft
Depth	20.8 m	68.2 ft
Design Draft	7.1 m	23.3 ft
Dwt. at Design Draft	10,601 MT	
Cb at Design Draft	0.63	

HULL PROPORTIONS	
L/B	6.0
B/T	4.1
B/D	1.4
L/D	8.4

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight
53' Containers	22	160	3,520
53' Trailers	20	154	3,080
Cassettes	3.56	80	285
Total ‡		879 TEU	6,885 MT
Reefer Outlets	50		

FULL LOAD CONDITION	
Cargo Weight	6,885 MT
Consumables (98%)	1,750 MT
Ballast	1,866 MT
Constant	100 MT
Lightship	12,729 MT
Displacement	23,330 MT
Estimated GM	1.0 m

PROPULSION	
Suggested Engine	4xMAN 7L32/44CR
	4xWartsila 7L32
Speed at design draft	20 knots
Operating Power	13,300 kW *
MCR	15,680 kW
RPM	720

RANGE & CONSUMPTION	
M/E Fuel Consumption†	63.7 MT/Day
M/E & D/G Fuel (no reefers)	67.2 MT/Day
Range (MGO)	~10,000 nm
Range (LNG)	4,000 nm

TANK CAPACITIES	
Marine Gas Oil	1,875 m^3
LNG (if provided)	1,425 m^3
Fresh Water	380 m^3
Ballast Water	TBD m^3

Legend:

- 53' Trailer
- 53' Container

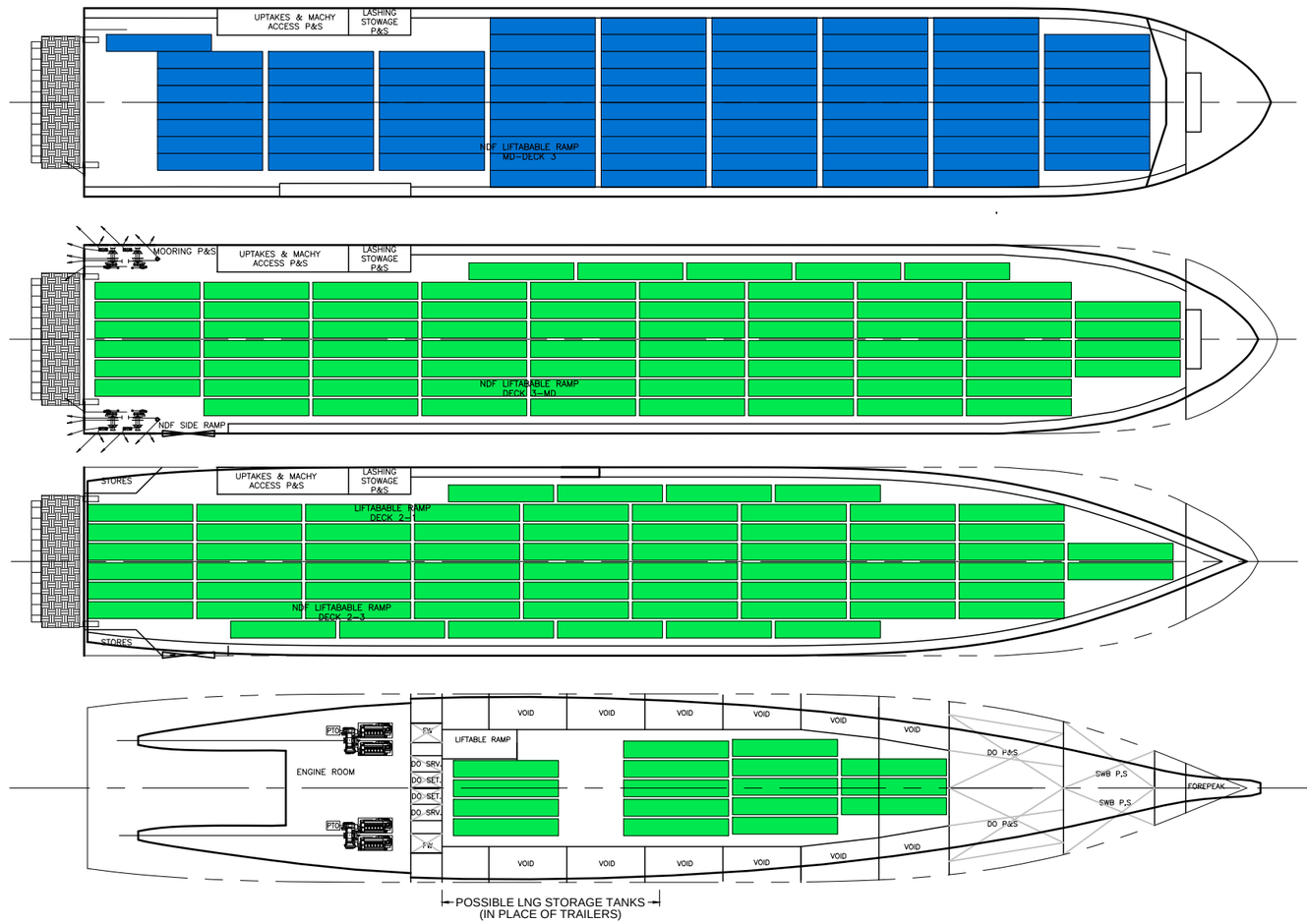
Notes:

† Fuel Consumption is based on MGO at the operating power.
LNG propulsion is an option and will require added storage tanks.
‡ Count assumes 2.8TEU/53' Trailer/Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CNC CHKD EVR	DATE 05-03-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Medium 20kt SR CLASS RoRo	2010-083-050-04 Sheet 1 of 2 Rev. -

AMH04-DATASHEET-CC2.DWG

04-AMH RoRo Medium 20kt SR



UPPER DECK
20.8M (68.2FT) ABL

DECK 3
15.15M (49.7FT) ABL

DECK 2
9.5M (31.2FT) ABL

DECK 1
3.0M (9.8FT) ABL

RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	20.8	open	-	-	-	4,145	44,616	1,213	3,980	-	160	1.25	250
Deck 3	15.15	5.65	1.2	4.45	14.6	4,100	44,131	1,218	3,996	71	-	1.5	300
Deck 2	9.5	5.65	1.2	4.45	14.6	3,905	42,032	1,124	3,688	66	-	2.0	400
Deck 1	2.0	7.5	1.2	6.3	20.7	1,275	13,724	357	1,171	17	-	1.5	300
Total						13,425	144,503	3,912	12,834	154	160		

Legend:

- 53' Trailer
- 53' Container

HEC Herbert Engineering Corp.

DRWN CNC
CHKD EVR
DATE 05-03-11
FILE 2010-083

U.S. Maritime Administration

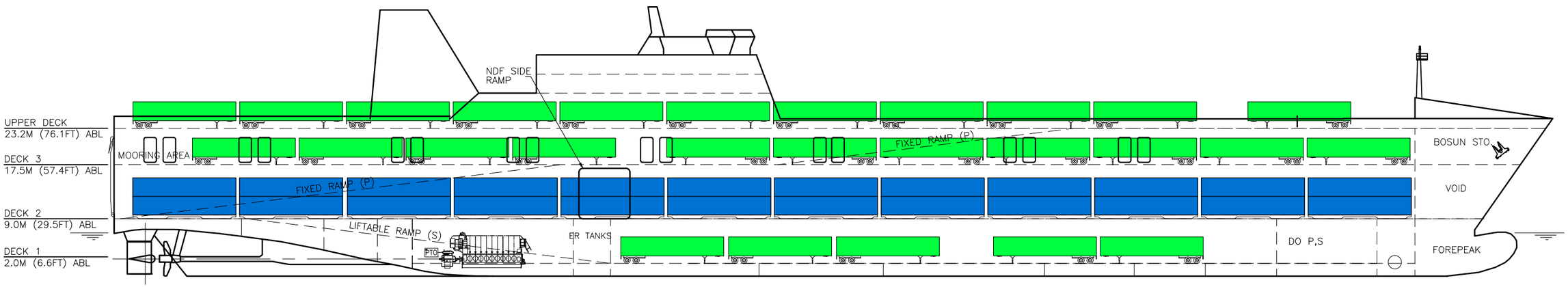
AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Medium 20kt SR
CLASS RoRo

2010-083-050-04
Sheet 2 of 2
Rev. -

AMH04-DATASHEET-CC2.DWG

05 - AMH RoRo Large 21kt



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	225.7 m	740.5 ft
Length, Between Perp.	208.6 m	684.4 ft
Beam	29.5 m	96.78 ft
Depth	23.2 m	76.11 ft
Design Draft	6.8 m	22.31 ft
Dwt. at Design Draft	10,380 MT	
Cb at Design Draft	0.61	

HULL PROPORTIONS	
L/B	7.1
B/T	4.3
B/D	1.3
L/D	9.0

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight
53' Containers	22	140	3,080
53' Trailers	20	203	4,060
Cassettes	3.56	70	249
Total ‡		960 TEU	7,389 MT
Reefer Outlets	50		

FULL LOAD CONDITION	
Cargo Weight	7,389 MT
Consumables (98%)	2,241 MT
Ballast	650 MT
Constant	100 MT
Lightship	15,654 MT
Displacement	26,034 MT
Estimated GM	1.2 m

PROPULSION	
Suggested Engine	2xMAN 9L51/60DF 2xWartsila 9L50DF
Speed at design draft	21 knots
Operating Power	16,200 kW *
MCR	18,000 kW
RPM	514

RANGE & CONSUMPTION	
M/E Fuel Consumption†	76.8 MT/Day
M/E & D/G Fuel (no reefers)	80.9 MT/Day
Range (MGO)	~10,000 nm
Range (LNG)	4,000 nm

TANK CAPACITIES	
Marine Gas Oil	2,300 m^3
LNG (if provided)	1,725 m^3
Fresh Water	380 m^3
Ballast Water	TBD m^3

Legend:

- 53' Trailer
- 53' Container

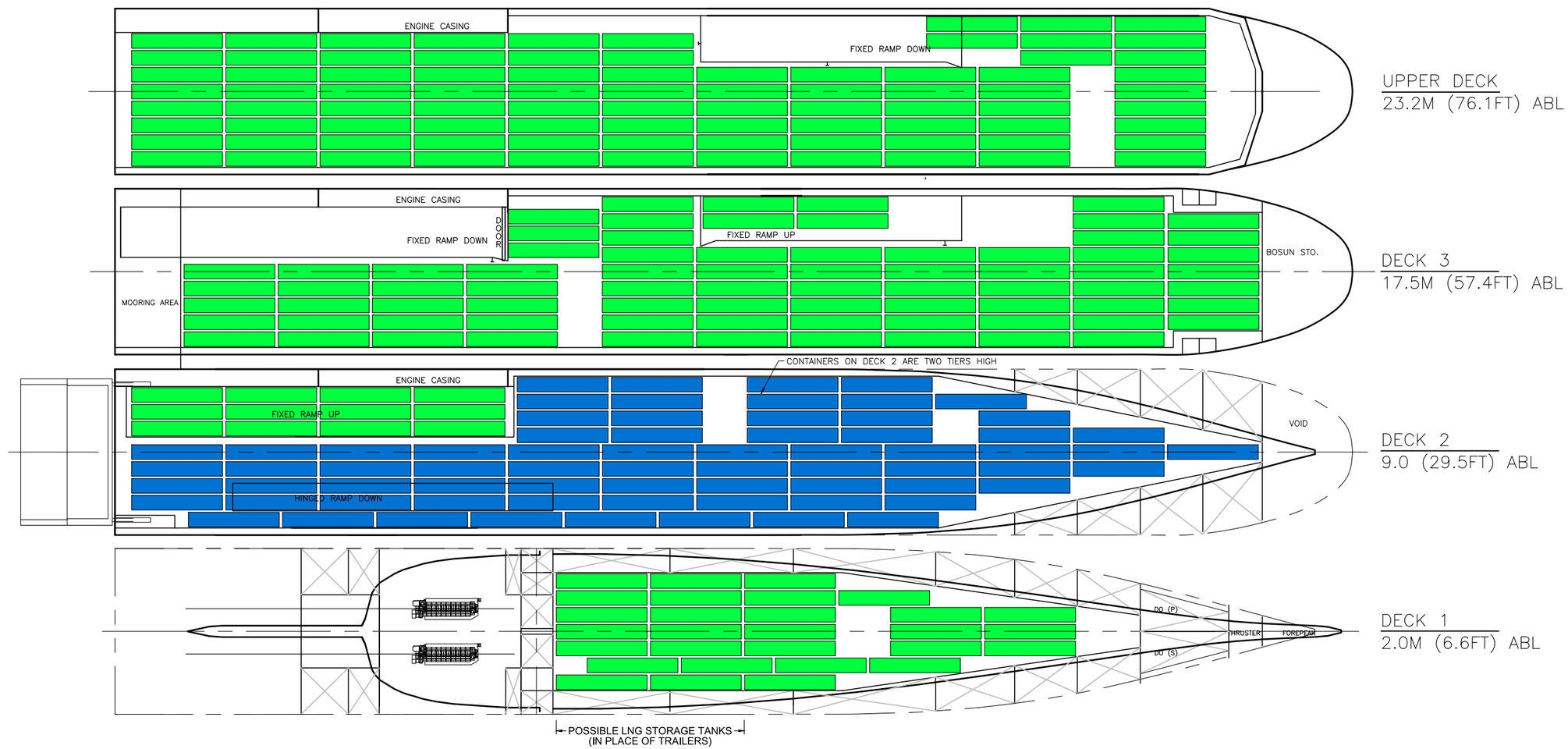
Notes:

† Fuel Consumption is based on MGO at the operating power.
LNG propulsion is an option and will require added storage tanks.
‡ Count assumes 2.8TEU/53' Trailer/Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CNC CHKD EVR	DATE 05-03-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Large 21kt CLASS RoRo	2010-083-050-05 Sheet 1 of 2 Rev. -

AMH05-DATASHEET-CC2 ENG VIEWS CURRENT.DWG

05 - AMH RoRo Large 21kt



RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	23.2	open	-	-	-	4,785	51,504	1,558	5,111	86	-	1.25	250
Deck 3	17.5	5.7	1.0	4.7	15.4	4,461	48,017	1,432	4,698	76	-	1.5	300
Deck 2	9.0	8.5	1.2	7.3	23.9	4,402	47,382	1,470	4,823	12	140	2.0	400
Deck 1	2.0	7	1.2	5.8	19.0	1,785	19,213	538	1,765	29	-	1.5	300
Total						15,433	166,116	4,998	16,397	203	140		

Legend:

- 53' Trailer
- 53' Container

HEC Herbert Engineering Corp.

DRWN CNC
CHKD EVR
DATE 05-03-11
FILE 2010-083

U.S. Maritime Administration

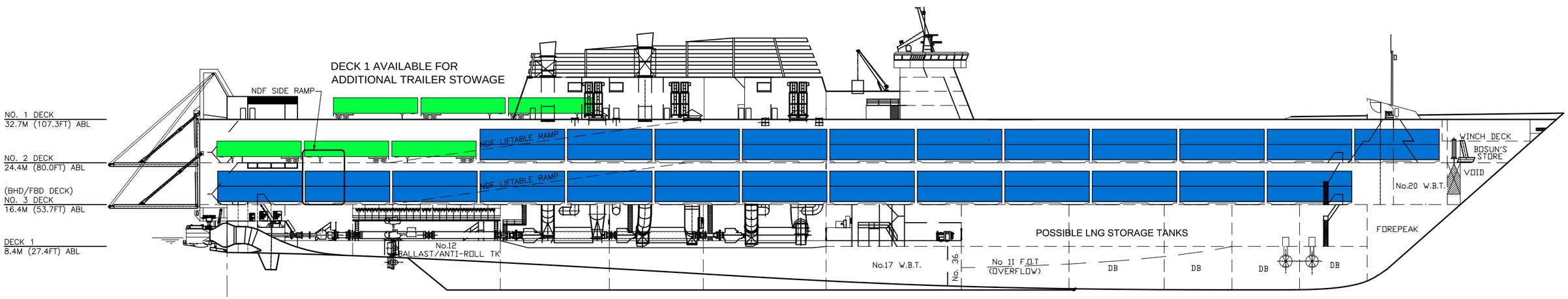
AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Large 21kt
CLASS RoRo

2010-083-050-05
Sheet 2 of 2
Rev. -

AMH05-DATASHEET-CC2 ENG VIEWS CURRENT.DWG

06-Fastship RoRo 30kt SR



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	265.0 m	869.4 ft
Length, Between Perp.	229.0 m	751.3 ft
Beam	40.0 m	131.2 ft
Depth	32.7 m	107.3 ft
Design Draft	10.0 m	32.8 ft
Dwt. at Design Draft	12,864 MT	
Cb at Design Draft	0.32	

HULL PROPORTIONS	
L/B	5.7
B/T	4.0
B/D	1.2
L/D	7.0

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight
53' Containers	19.45	424	8,248
40' Containers	19.45	16	311
53' Trailers	20.0	60	1,200
Cassettes	3.56	220	783
Total ‡		1,387 TEU	10,542 MT
Reefer Outlets	50		

FULL LOAD CONDITION	
Cargo Weight	10,542 MT
Consumables (2000 NM)	1,646 MT
Ballast	43 MT
Constant	633 MT
Lightship	17,098 MT
Displacement	29,962 MT
Estimated GM	7.0 m

PROPULSION	
Suggested Engine	3xLM6000 Gas Turbine
Speed at design draft	29.4 knots
Operating Power	118,000 kW *
MCR	118,000 kW
RPM	3300

RANGE & CONSUMPTION	
M/E Fuel Consumption†	613 MT/Day
M/E & D/G Fuel (no reefers)	623 MT/Day
Range (MGO)	4,300 nm
Range (LNG)	2,000 nm

TANK CAPACITIES	
Marine Gas Oil	7,048 m^3
LNG (if provided)	3,840 m^3
Fresh Water	190 m^3
Ballast Water	9,504 m^3

Legend:

- 40' Container
- 53' Container
- 53' Trailer

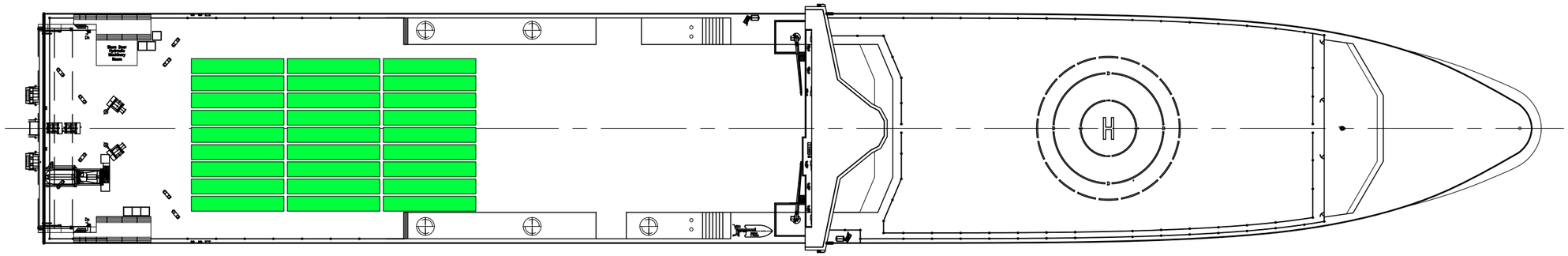
Notes:

† Fuel Consumption is based on MGO at the operating power.
LNG propulsion is an option and will require added storage tanks.
‡ Count assumes 2.8TEU/53' Trailer/Container, 2.0TEU/40' Trailer/Container.
* Operating power is at design speed and draft with 15% sea margin

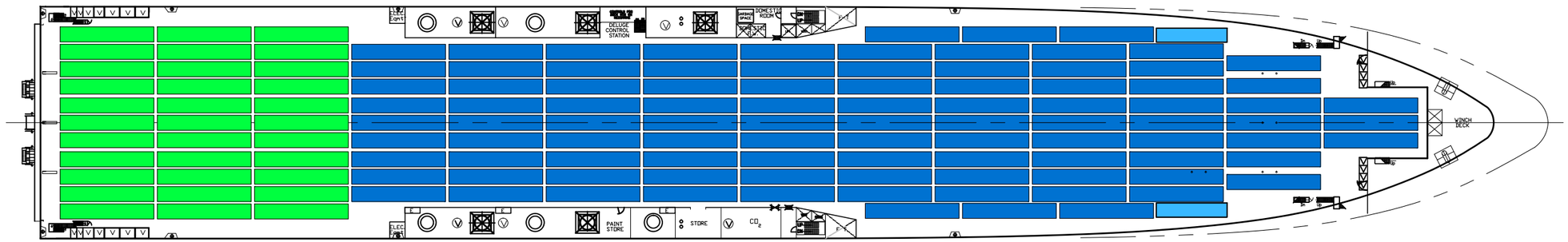
HEC Herbert Engineering Corp.	DRWN RVS CHKD EVR	DATE 06-03-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Large 30kt CLASS RoRo	2010-083-050-06 Sheet 1 of 2 Rev. -

AMH06-DATASHEET-CC6.DWG

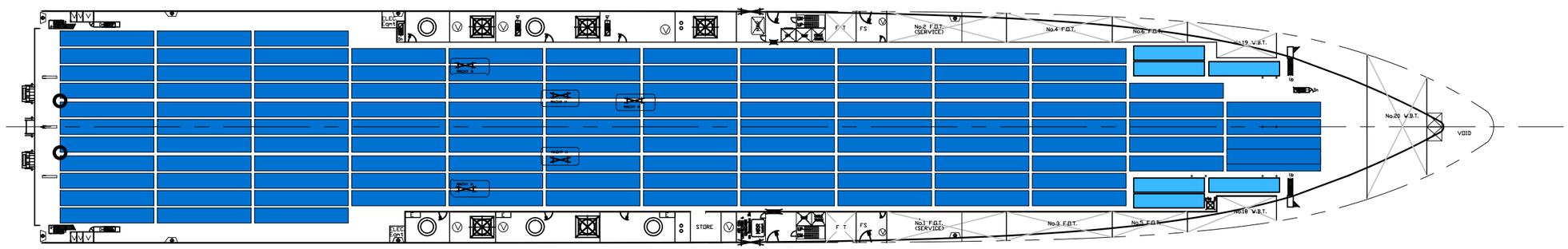
06-Fastship RoRo 30kt SR



NO. 1 DECK
32.7M (107.3FT) ABL



NO. 2 DECK
24.4M (80.0FT) ABL



NO. 3 DECK
16.4M (53.7FT) ABL

RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
No. 1 Deck	32.7	open	-	-	-	3,364	36,209	1,041	3,415	27	0	1.25	250
No. 2 Deck	24.4	8.3	0.8	7.5	24.6	7,664	82,493	2,249	7,377	33	198	2.0	400
No. 3 Deck	16.4	8.0	0.8	7.2	23.6	6,861	73,850	2,046	6,713	0	242	2.0	400
Total						17,889	192,552	5,336	10,793	60	440		

Legend:

- 40' Container
- 53' Container
- 53' Trailer

HEC Herbert Engineering Corp.

DRWN RVS
CHKD EVR
DATE 06-03-11
FILE 2010-083

U.S. Maritime Administration

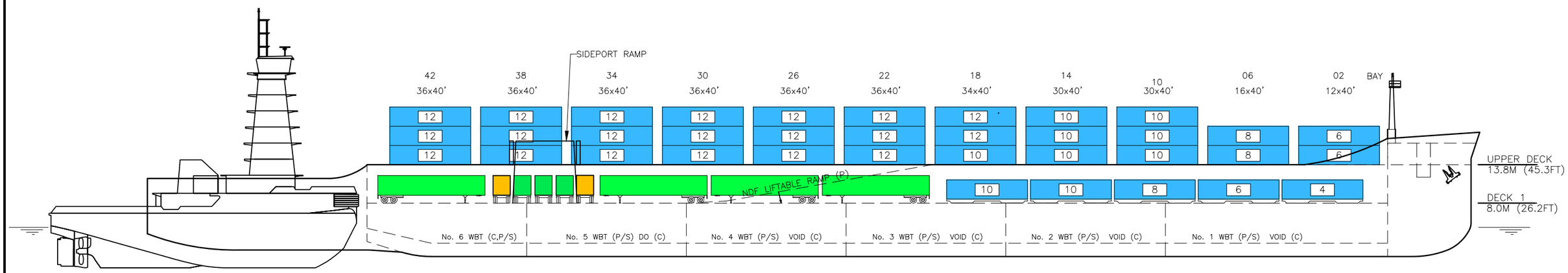
AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Large 30kt
CLASS RoRo

2010-083-050-06
Sheet 2 of 2
Rev. -

AMH06-DATASHEET-CC6.DWG

11 - ATB RoCon 14kt



Principal Particulars

MAIN DIMENSIONS

Combined Length, Over All	215.7 m	707.7 ft
Barge Length, Between Perp.	199.6 m	654.8 ft
Barge Length, Over All	200.9 m	659.1 ft
Beam	32.2 m	105.6 ft
Depth	13.8 m	45.3 ft
Design Draft	4.3 m	14.1 ft
Dwt. at Design Draft	9,411 MT	
Cb at Design Draft	0.65	

HULL PROPORTIONS

L/B	6.2
B/T	7.5
B/D	2.3
L/D	14.5

CARGO

	Wt/Unit	Full Load Quantity	Full Load Weight	Capacity Quantity
40' Containers	22	376	8,272	346
53' Trailers	20	43	860	74
40' Trailers	20	7	140	7
Cassettes	3.56	39	139	0
Total ‡		886 TEU	9,411 MT	913 TEU
Reefer Outlets	50			

FULL LOAD CONDITION (BARGE)

Cargo Weight	9,411 MT
Consumables (2900 NM)	0 MT
Ballast	0 MT
Constant	0 MT
Lightship	9,025 MT
Displacement	18,436 MT
Estimated GM	9.7 m

PROPULSION

Suggested Engine	2xMAN 8L32/44CR
	2xWartsila 9L32
Speed at design draft	14 knots
Operating Power	8,100 kW *
MCR	9,000 kW
RPM	720

RANGE & CONSUMPTION

M/E Fuel Consumption†	38.8 MT/Day
M/E & D/G Fuel (no reefers)	41.8 MT/Day
Range (MGO)	5,700 nm

(Extended range available by storing fuel on barge)

TANK CAPACITIES

Marine Gas Oil (tug)	970 m^3
Fresh Water	0 m^3
Ballast Water	0 m^3

Legend:

- 53' Trailer
- 40' Trailer
- 40' Container

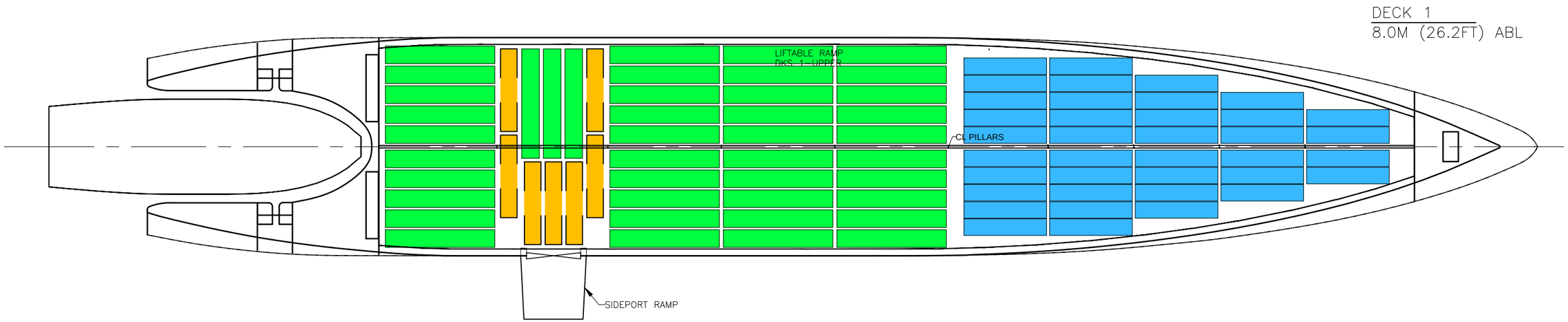
Notes:

† Fuel Consumption is based on MGO at the operating power.
‡ Count assumes 2.8TEU/53' Trailer/Container and 2.0TEU per 40'/45' Trailer/Container.
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CNC CHKD EVR	DATE 05-27-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE ATB 14 Kt CLASS RoCon	2010-083-050-11 Sheet 1 of 2 Rev. -

ATB ROCON_CC6.DWG

11 - ATB RoCon 14kt



RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	13.8	open	-	-	-	4,100	44,131	1,300	4,265	0	338	1.5	300
Deck 1	8	5.8	1.2	4.6	15.1	4,045	43,539	1,300	4,265	50	38	1.7	350
Total						8,145	87,670	2,600	8,530	50	376		

Legend:

- 53' Trailer
- 40' Trailer
- 40' Container

HEC Herbert Engineering Corp.

DRWN CNC
CHKD EVR
DATE 05-27-11
FILE 2010-083

U.S. Maritime Administration

AMERICAN MARINE HIGHWAY
DESIGN CONCEPT

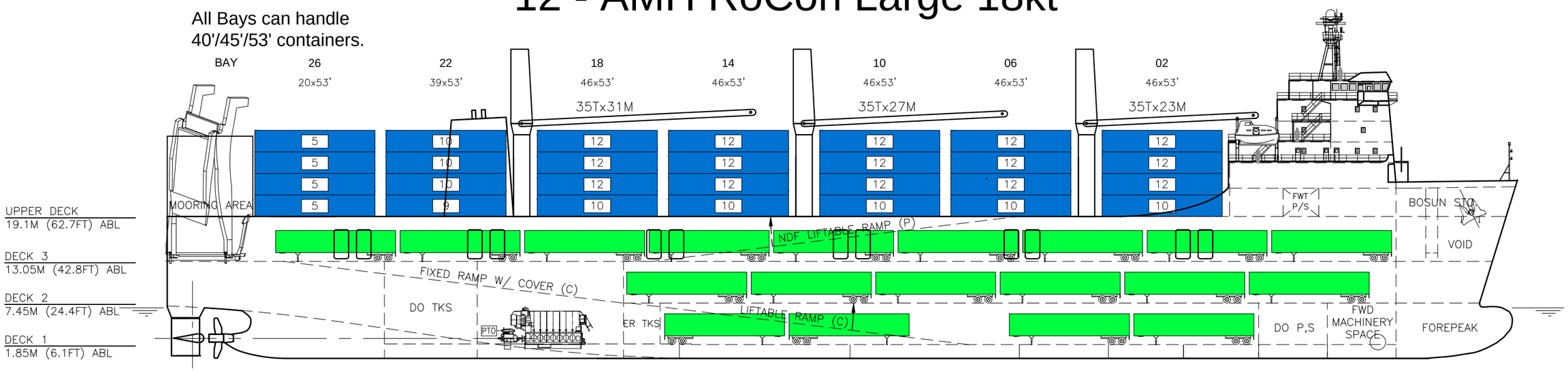
TYPE ATB 14 kt
CLASS RoCon

2010-083-050-11
Sheet 2 of 2
Rev. -

ATB ROCON_CC6.DWG

12 - AMH RoCon Large 18kt

All Bays can handle
40'/45'/53' containers.



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	181.7 m	596.1 ft
Length, Between Perp.	172.0 m	564.3 ft
Beam	32.2 m	105.6 ft
Depth	18.5 m	60.7 ft
Design Draft	6.8 m	22.4 ft
Dwt. at Design Draft	11,034 MT	
Cb at Design Draft	0.61	

HULL PROPORTIONS	
L/B	5.3
B/T	4.7
B/D	1.7
L/D	9.3

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight
53' Containers	22	289	6,358
53' Trailers	20	125	2,500
Total ‡		1,159 TEU	8,858 MT
Reefer Outlets	50		

FULL LOAD CONDITION	
Cargo Weight	8,858 MT
Consumables (98%)	2,076 MT
Ballast	0 MT
Constant	100 MT
Lightship	12,846 MT
Displacement	23,880 MT
Estimated GM	2.1 m

PROPULSION	
Suggested Engine	2xMAN 7L51/60DF 2xWartsila 7L50DF
Speed at design draft	18.3 knots
Operating Power	12,600 kW *
MCR	14,000 kW
RPM	514

RANGE & CONSUMPTION	
M/E Fuel Consumption†	59.7 MT/Day
M/E & D/G Fuel (no reefers)	63.4 MT/Day
Range (MGO)	~10,000 nm
Range (LNG)	4,000 nm

TANK CAPACITIES	
Marine Gas Oil	2,100 m^3
LNG (if provided)	1,300 m^3
Fresh Water	380 m^3
Ballast Water	TBD m^3

Legend:

- 53' Trailer
- 53' Container

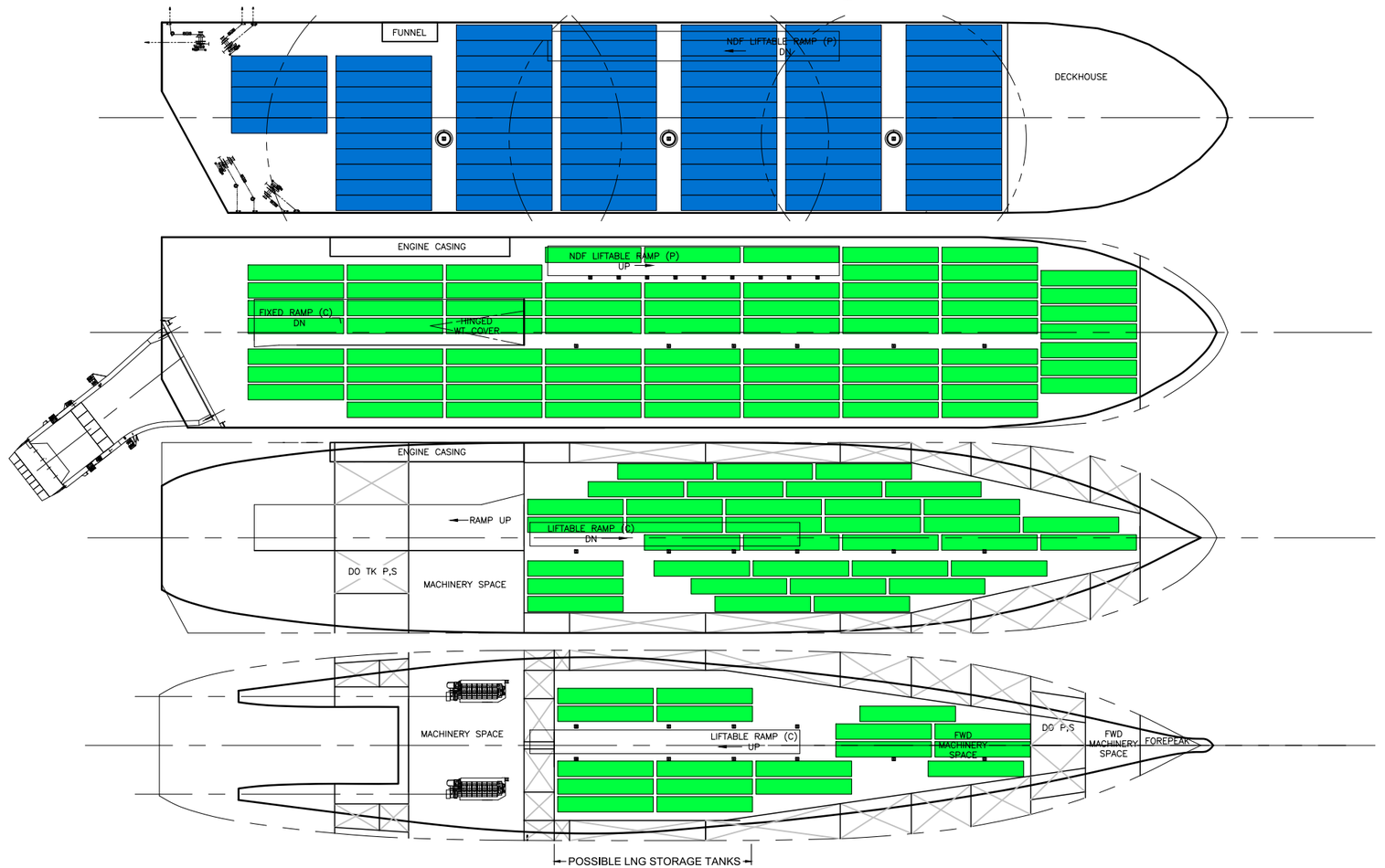
Notes:

† Fuel Consumption is based on MGO at the operating power.
LNG propulsion is an option and will require added storage tanks.
‡ Count assumes 2.8TEU/53' Trailer/Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CNC CHKD EVR	DATE 05-27-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Large 18kt CLASS RoCon	2010-083-050-12 Sheet 1 of 2 Rev. -

AMH12-DATASHEET-CC2.DWG

12 - AMH RoCon Large 18kt



RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	19.1	open	-	-	-	3,452	37,156	1,148	3,766	-	289	1.5	300
Deck 3	13.05	6.05	1.3	4.75	15.6	4,650	50,051	1,389	4,557	72	-	1.7	350
Deck 2	7.45	5.6	1.1	4.5	14.8	2,312	24,886	616	2,021	35	-	1.25	250
Deck 1	1.85	5.6	1.1	4.5	14.8	1,520	16,361	379	1,243	18	-	1.25	250
Total						11,934	128,454	3,532	11,588	125	289		

Legend:

- 53' Trailer
- 53' Container

HEC Herbert Engineering Corp.

DRWN CNC
CHKD EVR
DATE 05-27-11
FILE 2010-083

U.S. Maritime Administration

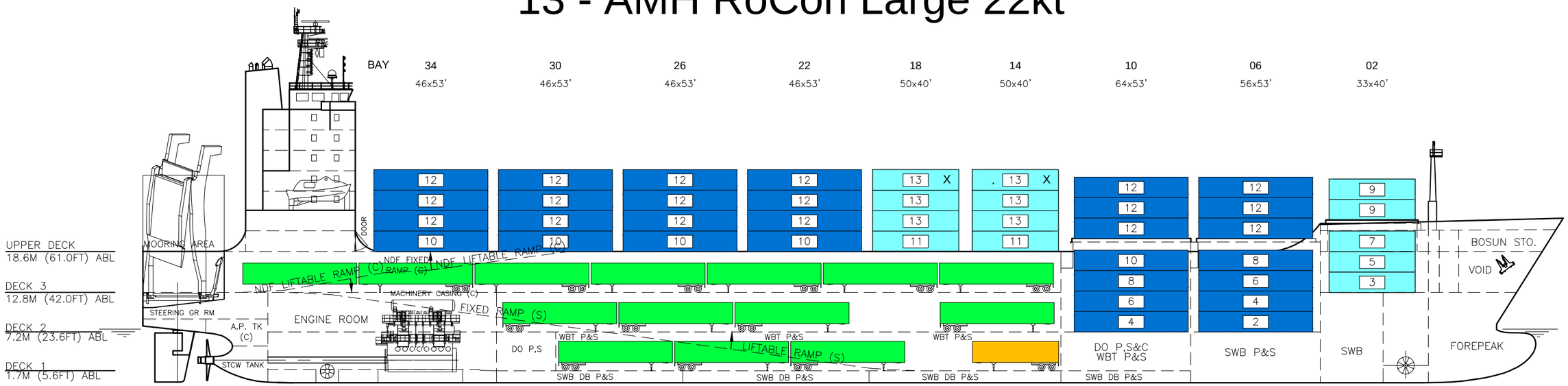
AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Large 18kt
CLASS RoCon

2010-083-050-12
Sheet 2 of 2
Rev. -

AMH12-DATASHEET-CC2.DWG

13 - AMH RoCon Large 22kt



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	201.3 m	660.4 ft
Length, Between Perp.	187.0 m	613.5 ft
Beam	32.2 m	105.6 ft
Depth	18.6 m	61.0 ft
Design Draft	7.6 m	24.9 ft
Dwt. at Design Draft	14,994 MT	
Cb at Design Draft	0.61	

HULL PROPORTIONS	
L/B	5.8
B/T	4.2
B/D	1.7
L/D	10.1

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight	Capacity Quantity
53' Containers	22	256	5,632	304
40' Containers	22	107	2,354	133
53' Trailers	20	94	1,880	94
40' Trailers	20	7	140	7
Total ‡		1,208 TEU	10,006 MT	1,394 TEU
Reefer Outlets	100			

FULL LOAD CONDITION	
Cargo Weight	10,006 MT
Consumables (98%)	2,619 MT
Ballast	2,269 MT
Constant	100 MT
Lightship	13,478 MT
Displacement	28,472 MT
Estimated GM	2.1 m

PROPULSION	
Suggested Engine	MAN 8L60ME-C8
	Wartsilla 8RT-flex60C
Speed at design draft	22 knots
Operating Power	16,848 kW *
MCR	18,720 kW
RPM	abt. 120

RANGE & CONSUMPTION	
M/E Fuel Consumption†	71.1 MT/Day
M/E & D/G Fuel (no reefers)	75.7 MT/Day
Range (MGO)	~12,000 nm

TANK CAPACITIES	
Diesel Oil	2,450 m^3
Fresh Water	380 m^3
Ballast Water	TBD m^3

Legend:

53' Trailer, 53' Container, 40' Trailer, 40' Container

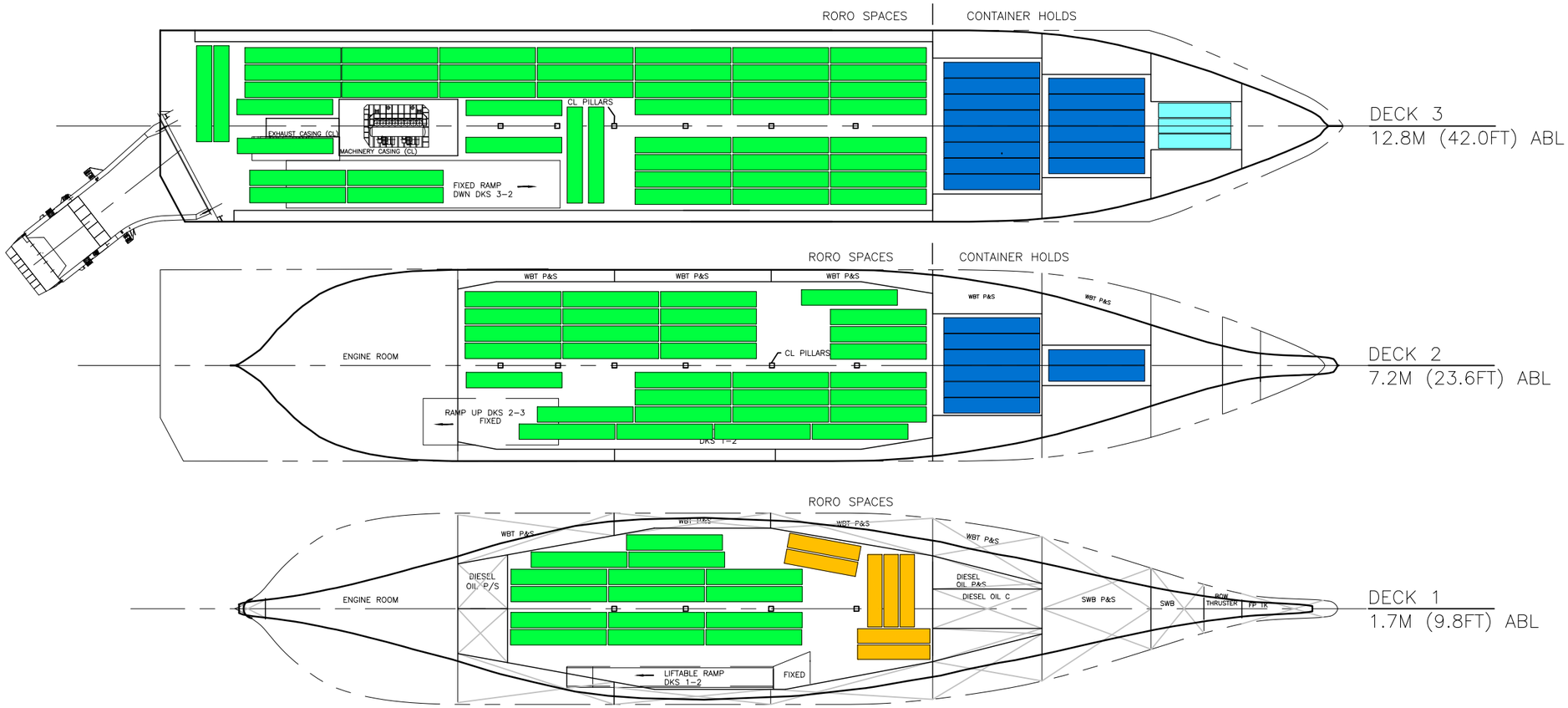
Notes:

† Fuel Consumption is based on MGO at the operating power.
‡ Count assumes 2.8TEU/53' Trailer/Container and 2.0TEU per 40' Trailer/Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CNC CHKD EVR	DATE 05-03-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Large 22kt CLASS RoCon	2010-083-050-13 Sheet 1 of 2 Rev. -

AMH13-DATASHEET-CC1.DWG

13 - AMH RoCon Large 22kt



RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# containers	t/m^2	PSF
Upper Deck	18.6	open	-	-	-	3,220	34,659	1,000	3,281	-	300	1.5	300
Deck 3	12.80	5.8	1.2	4.6	15.1	3,363	36,198	863	2,831	48	-	1.7	350
Deck 2	7.2	5.6	1.0	4.6	15.1	2,083	22,421	632	2,073	31	-	1.5	300
Deck 1	1.7	5.5	1.0	4.5	14.8	1,567	16,867	447	1,467	22	-	1.5	300
In Hold										-	63		
Total						10,233	110,145	2,942	9,652	101	363		

Legend:

- 53' Trailer
- 53' Container
- 40' Trailer
- 40' Container

HEC Herbert Engineering Corp.

DRWN CNC
CHKD EVR
DATE 05-03-11
FILE 2010-083

U.S. Maritime Administration

AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Large 22kt
CLASS RoCon

2010-083-050-13
Sheet 2 of 2
Rev. -

AMH13-DATASHEET-CC1.DWG

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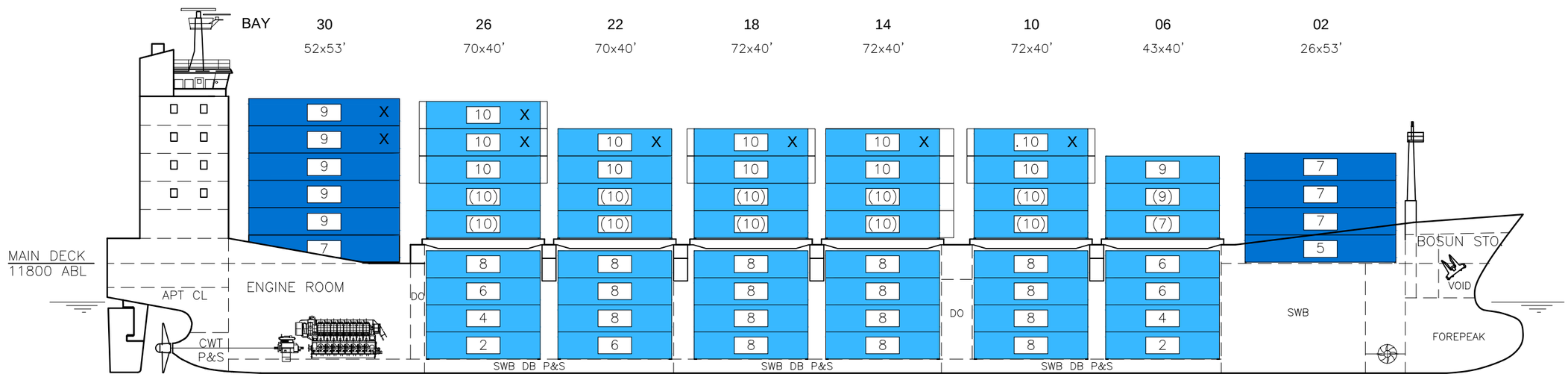
21 - AMH Container Medium 18kt LoLo



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	151.7 m	497.7 ft
Length, Between Perp.	142.4 m	467.2 ft
Beam	24.8 m	81.4 ft
Depth	11.8 m	38.7 ft
Design Draft	7.6 m	24.9 ft
Dwt. at Design Draft	11,866 MT	
Cb at Design Draft	0.63	

HULL PROPORTIONS	
L/B	5.7
B/T	3.3
B/D	2.1
L/D	12.1

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight	Capacity Quantity
53' Containers	22	53	1,166	78
40' Containers	22	339	7,458	399
Total ‡		826 TEU	8,624 MT	1,016 TEU
Reefer Outlets	100			

FULL LOAD CONDITION	
Cargo Weight	8,624 MT
Consumables (98%)	1,586 MT
Ballast	1,556 MT
Constant	100 MT
Lightship	5,530 MT
Displacement	17,396 MT
Estimated GM	0.8 m

PROPULSION	
Suggested Engine	MAN 8L48/60CR
	Wartsila 8L46F
Speed at design draft	18 knots
Operating Power	8,100 kW *
MCR	9,600 kW
RPM	514

RANGE & CONSUMPTION	
M/E Fuel Consumption†	36.7 MT/Day
M/E & D/G Fuel (no reefers)	38.8 MT/Day
Range (MGO)	11,500 nm

TANK CAPACITIES	
Marine Gas Oil	1,450 m^3
Fresh Water	380 m^3
Ballast Water	TBD m^3

Legend:

- 40' Container
- 53' Container

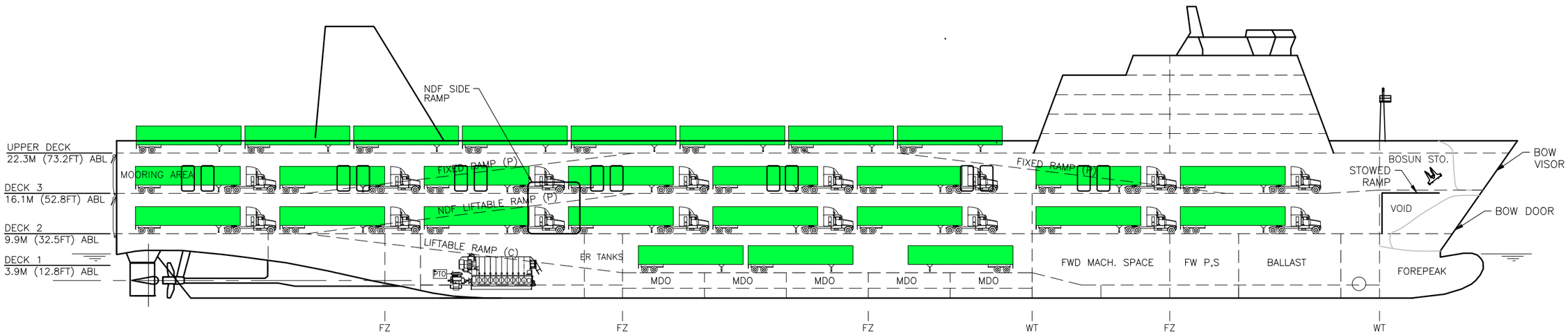
Notes:

† Fuel Consumption is based on MGO at the operating power.
‡ Count assumes 2.8TEU/53' Container and 2.0TEU per 40' Container
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CMB CHKD EVR	DATE 05-03-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Medium 18kt LoLo CLASS Container	2010-083-050-21 Sheet 1 of 1 Rev. -

AMH21-CONTAINERFEEDER18KT06-09-11REV.DWG

22 - AMH RoPax Medium 22kt



Principal Particulars

MAIN DIMENSIONS		
Length, Over All	215.5 m	707.0 ft
Length, Between Perp.	199.0 m	652.9 ft
Beam	29.5 m	96.78 ft
Depth	22.3 m	73.16 ft
Design Draft	6.7 m	21.98 ft
Dwt. at Design Draft	8,775 MT	
Cb at Design Draft	0.62	

HULL PROPORTIONS	
L/B	6.7
B/T	4.4
B/D	1.3
L/D	8.9

CARGO	Wt/Unit	Full Load Quantity	Full Load Weight
53' Tractor-Trailers	38	105	3,990
53' Trailers	20	77	1,540
Total ‡		510 TEU	5,530 MT
Reefer Outlets	50		
Passengers	100		

FULL LOAD CONDITION	
Cargo Weight	5,530 MT
Consumables (98%)	2,445 MT
Ballast	500 MT
Constant	300 MT
Lightship	16,041 MT
Displacement	24,816 MT
Estimated GM	1.5 m

PROPULSION	
Suggested Engine	2xMAN 9L51/60DF
	2xWartsila 9L50DF
Speed at design draft	22 knots
Operating Power	16,200 kW *
MCR	18,000 kW
RPM	514

RANGE & CONSUMPTION	
M/E Fuel Consumption†	76.8 MT/Day
M/E & D/G Fuel (no reefers)	84.0 MT/Day
Range (MGO)	~10,000 nm
Range (LNG)	4,000 nm

TANK CAPACITIES	
Marine Gas Oil	2,300 m^3
LNG (if provided)	1,725 m^3
Fresh Water	600 m^3
Ballast Water	TBD m^3

Legend:

53' Trailer

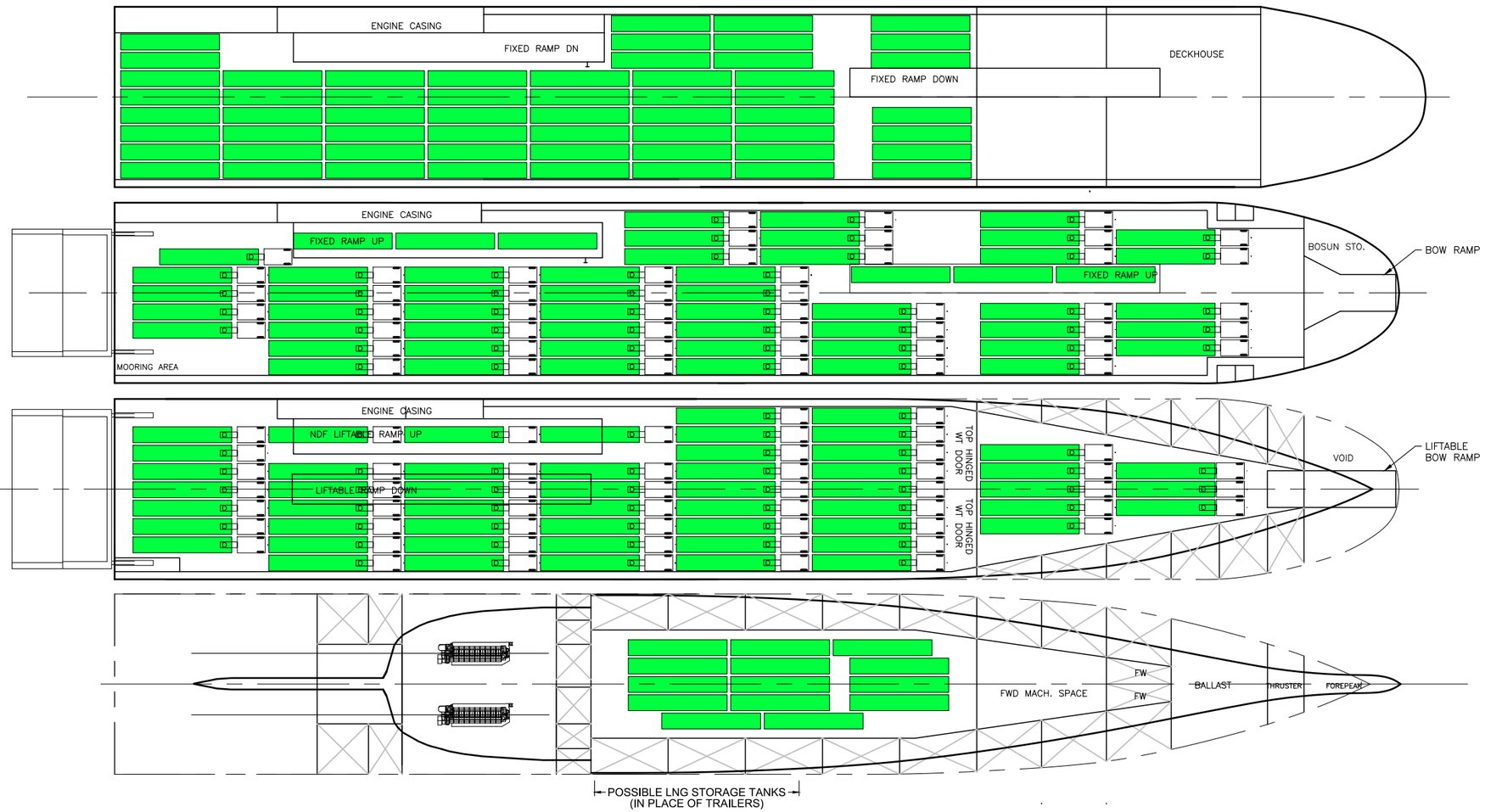
Notes:

† Fuel Consumption is based on MGO at the operating power.
LNG propulsion is an option and will require added storage tanks.
‡ Count assumes 2.8TEU/53' Trailer or Tractor-Trailer
* Operating power is at design speed and draft with 15% sea margin

HEC Herbert Engineering Corp.	DRWN CNC CHKD EVR	DATE 06-14-11 FILE 2010-083	U.S. Maritime Administration	AMERICAN MARINE HIGHWAY DESIGN CONCEPT	TYPE Medium 22kt CLASS RoPax	2010-083-050-22 Sheet 1 of 2 Rev. -

AMH22-ROPAX MEDIUM 22KT REVB.DWG

22 - AMH RoPax Medium 22kt



RORO DECKS	HEIGHT OF DECK	HEIGHT TO DECK ABOVE	DEPTH OF STRUCT OF DECK ABOVE	CLEAR HEIGHT FOR VEHICLES		NET AREA		LANE LENGTH		SAMPLE STOW		DECK STRENGTH	
	m	m	m	m	ft	m^2	ft^2	lane-m	lane-ft	# trailers	# trucks	t/m^2	PSF
Upper Deck	22.3	open	-	-	-	3,274	35,237	1,045	3,428	57	0	1.25	250
Deck 3	16.1	6.2	1.2	5	16.4	4,957	53,356	1,457	4,780	6	51	1.5	300
Deck 2	9.9	6.2	1.2	5	16.4	4,488	48,308	1,346	4,416	0	54	1.5	300
Deck 1	3.9	6	1.1	4.9	16.1	1,102	11,862	314	1,030	14	0	1.5	300
Total						13,821	148,762	4,162	13,655	77	105		

Legend:

53' Trailer

HEC Herbert Engineering Corp.

DRWN CNC
CHKD EVR
DATE 06-14-11
FILE 2010-083

U.S. Maritime Administration

AMERICAN MARINE HIGHWAY DESIGN CONCEPT

TYPE Medium 22kt
CLASS RoPax

2010-083-050-22
Sheet 2 of 2
Rev. -

AMH22-ROPAX MEDIUM 22KT REVB.DWG