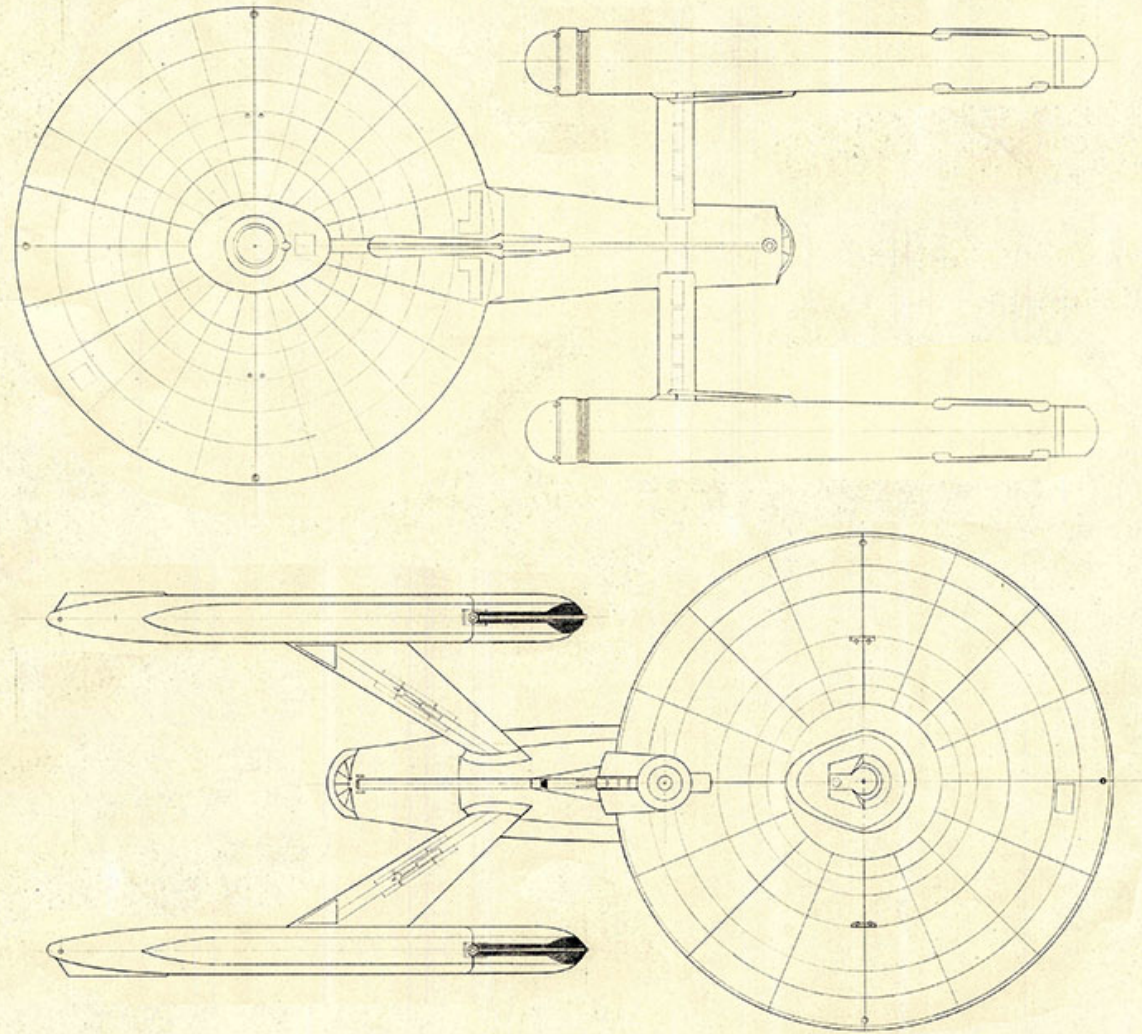
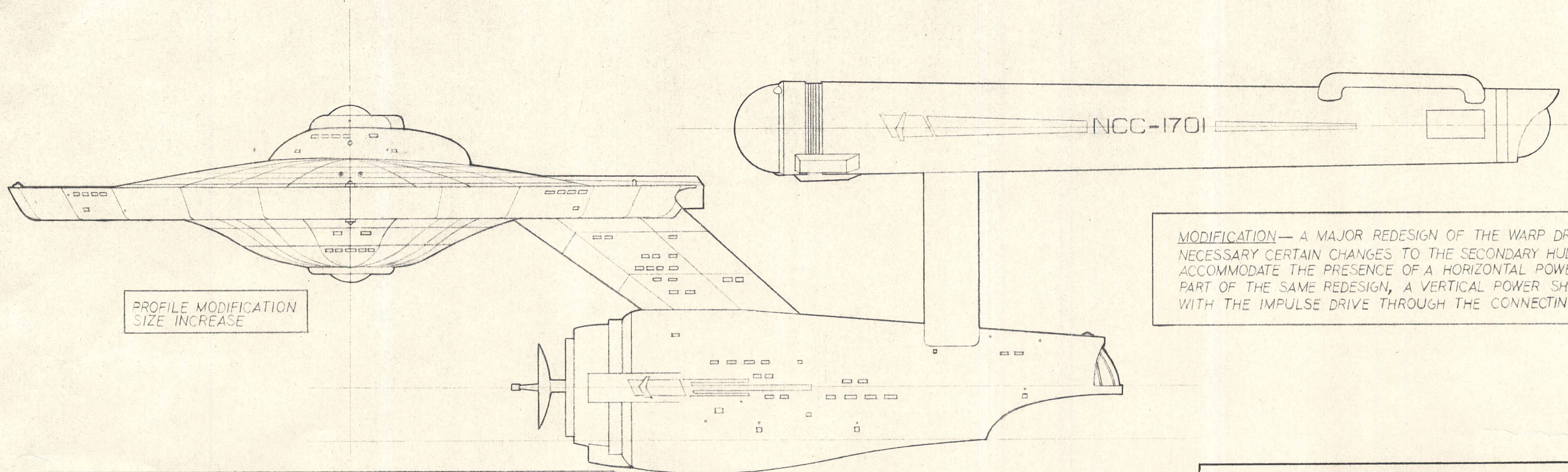


U.S.S. ENTERPRISE NCC-1701 UPRATING AND REVISION OF BASIC DESIGN



MODIFICATION—RECENT ADVANCES MAKE POSSIBLE A WARP ENGINE CAPABLE OF HIGHER LEVELS OF PERFORMANCE OVER THE ORIGINAL DESIGN:

ORIGINAL—	CRUISING—	WARP FACTOR	6
	EMERGENCY—	" "	8
UPDATED—	CRUISING—	WF	8
	EMERGENCY—	WF	10



MODIFICATION—A MAJOR REDESIGN OF THE WARP DRIVE MAKES NECESSARY CERTAIN CHANGES TO THE SECONDARY HULL TO ACCOMMODATE THE PRESENCE OF A HORIZONTAL POWER SHAFT. AS PART OF THE SAME REDESIGN, A VERTICAL POWER SHAFT WILL LINK WITH THE IMPULSE DRIVE THROUGH THE CONNECTING DORSAL.

THE FOLLOWING CLASS ONE HEAVY CRUISERS HAVE BEEN CONSTRUCTED FOR ACTIVE SERVICE WITH THE FEDERATION STAR FLEET:

CONSTITUTION CLASS—STARDATE 0965		
CONSTELLATION* NCC-1017	FARRAGUT NCC-1702	POTEMKIN NCC-1711
CONSTITUTION NCC-1700	HOOD NCC-1707	REPUBLIC NCC-1371
ENTERPRISE NCC-1701	INTREPID* NCC-1708	VALIANT* NCC-1709
EXCALIBUR NCC-1705	KONGO NCC-1710	YORKTOWN NCC-1704
EXETER NCC-1706	LEXINGTON NCC-1703	
BONHOMME RICHARD CLASS—STARDATE 3220		
ARI NCC-1723	EXCELSIOR NCC-1716	MONITOR NCC-1713
BONHOMME RICHARD NCC-1712	HORNET NCC-1714	SARATOGA NCC-1724
EAGLE NCC-1719	LAFAYETTE NCC-1720	TORI NCC-1725
EL DORADO NCC-1722	KRIEGER NCC-1726	WASP NCC-1721
ENDEAVOR NCC-1716	MERRIMAC NCC-1715	DEFIANT* NCC-1717
ESSEX NCC-1727		
ACHERNAR CLASS—STARDATE 5930		
ACHERNAR NCC-1732	JUPITER NCC-1734	QUINDAR NCC-1736
ANDROCUS** NCC-1738	MONDOLOY** NCC-1740	RIGIL KENTAURUS NCC-1735
ASTRAD** NCC-1739	PROXIMA** NCC-1737	SOL NCC-1733

* DESTROYED OR LOST
** UNDER CONSTRUCTION

Specifications:

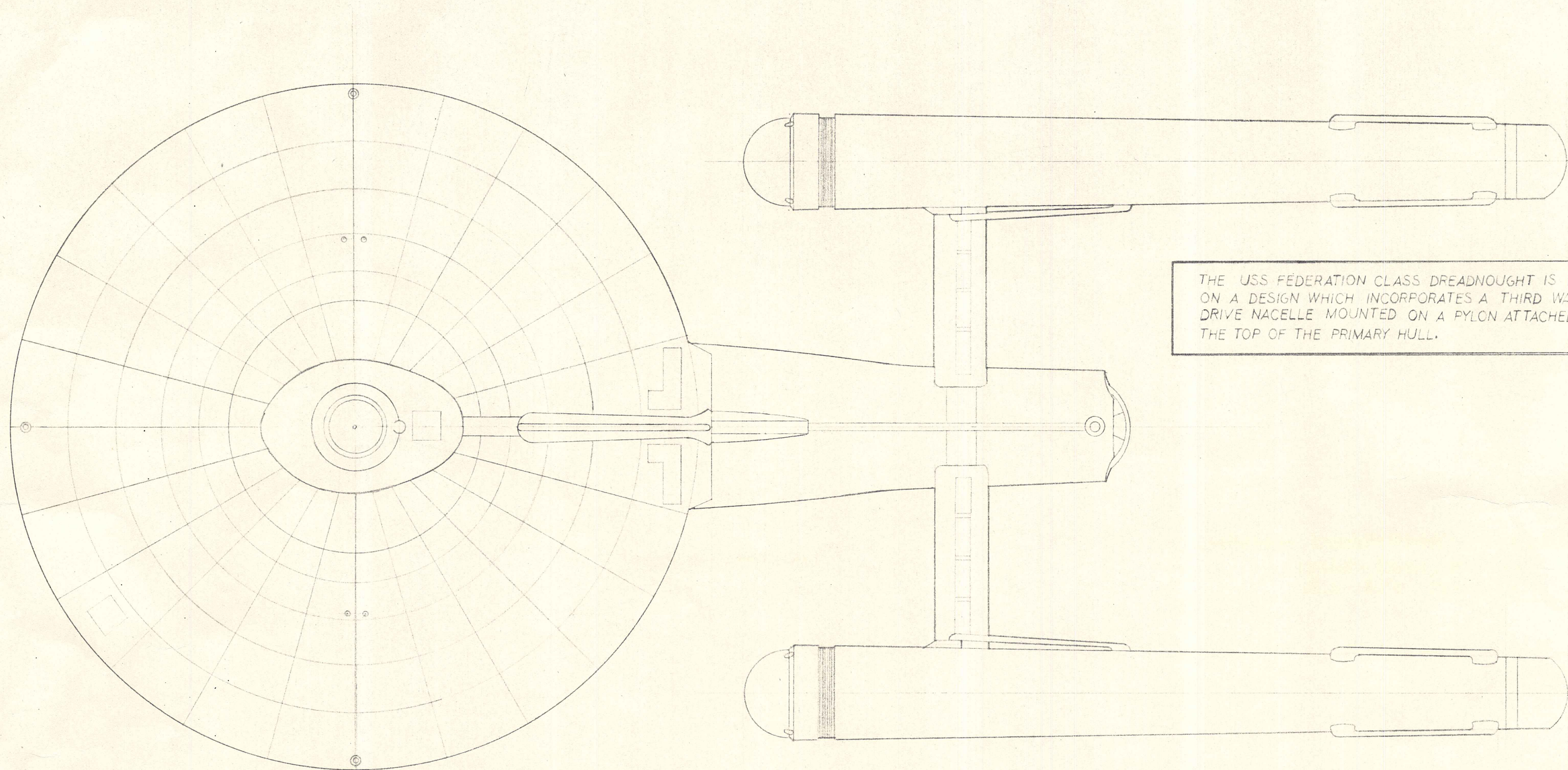
LENGTH OVERALL	289 M
BEAM (MAXIMUM)	127.1 M
HEIGHT OVERALL	72.6 M
MASS	190,000 METRIC TONS
ENGINEERING HULL—LENGTH	103.6 M
—MAX DIA	34.1 M
PRIMARY HULL—DIAMETER	127.1 M
—HEIGHT	32.3 M
WARP DRIVE NACELLE—LENGTH	153.6 M
—MAX DIA	17.3 M
PROPULSION: WARP & IMPULSE DRIVE	
MAXIMUM EMERGENCY WARP	WF8
WEAPONRY—PHASER BANKS	3 PAIRS
—PHOTON TORPEDOES	2 BANKS
DEFLECTOR SHIELDS—NAVIGATIONAL & TACTICAL	—STD, WARP POWERED
CREW	430 PERSONS
MAXIMUM (THEORETICAL) MISSION DURATION	16 YEARS

UNITED FEDERATION OF PLANETS		
Unified Space Services		
Star Fleet Command		
SHIP DESIGNATION USS ENTERPRISE (CONSTITUTION CLASS) NAVAL CONSTRUCTION CONTRACT 1701		TYPE MK IX HEAVY CRUISER
TITLE UPDATING AND REVISION OF BASIC DESIGN		
DRAWN BY <i>A. Kim</i> 22/02/80	SECURITY CLASS GENERAL	STARDATE 6775
DISTRIBUTION COPIES TO: ADMIRAL HEIHACHIRO NOGURA ADMIRAL JAMES KIRK CAPTAIN WILLARD DECKER COMMANDER MONTGOMERY SCOTT CHIEF DESIGN ENGINEER—SAN FRANCISCO NAVY YARDS CHIEF ASSEMBLY ENGINEER—ORBITAL DRYDOCK COMPLEX PROMETHEUS SCIENCE CENTER—VULCAN STAR FLEET ARCHIVES—EARTH, VULCAN, BABEL, MEMORY ALPHA		
CHARGE NUMBER BUDGET REFERENCE ENCCM3749FA6789XV1701HC		
PRIME CONTRACTORS SPACE INDUSTRIES INC. LUNAR ASTROTECHNOLOGIES CORPORATION WARPSYSTEMS (EARTH) LTD. COMMTECH COMPONENTS LTD. COMPUTRONICS INC.—DAYSTROM DUOTRONICS SYSTEMS HIGH ENERGY GROUP—LASER DYNAMICS CORPORATION ENVIRONMENTAL ENGINEERING COMPANY LTD.		
ASSEMBLED BY STAR FLEET DIVISION SAN FRANCISCO NAVY YARDS—ORBITAL DRYDOCK COMPLEX UNITED NATIONS OF EARTH SOLAR SYSTEM		
SHEET OUTBOARD PROFILE ORIGINAL CONFIGURATION		<i>A. Kim</i> 1980 PAGE 1 OF 4

THE DESIGN UPDATING OF THE CONSTITUTION CLASS HEAVY CRUISERS OF THE FEDERATION STAR FLEET WAS AUTHORIZED UNDER THE PROVISIONS OF THE UNIFIED SPACE SERVICES BUDGET AS APPROVED BY THE FEDERATION HIGH COUNCIL ON STARDATE 6510.

THE FIRST STARSHIP SCHEDULED FOR REFITTING IS USS ENTERPRISE. THIS SHIP HAS RECENTLY RETURNED FROM A FIVE YEAR EXPLORATION SURVEY OF THE TREATY EXPLORATION TERRITORY. SHIP MODIFICATIONS ARE BASED IN PART ON RECOMMENDATIONS CONTAINED IN THE ENTERPRISE LOGS.

UPDATING OF THE BONHOMME RICHARD CLASS AND THE COMPLETED UNITS OF THE ACHERNAR CLASS WILL BE SCHEDULED WHEN THE SPACE SERVICES BUDGET FOR STARDATE 7500 IS APPROVED. CONSTRUCTION ON THE REMAINING UNITS OF THE ACHERNAR CLASS AND THE PLANNED TIKOPAI CLASS HAS BEEN SUSPENDED UNTIL TESTING OF THE UPDATED DESIGN.



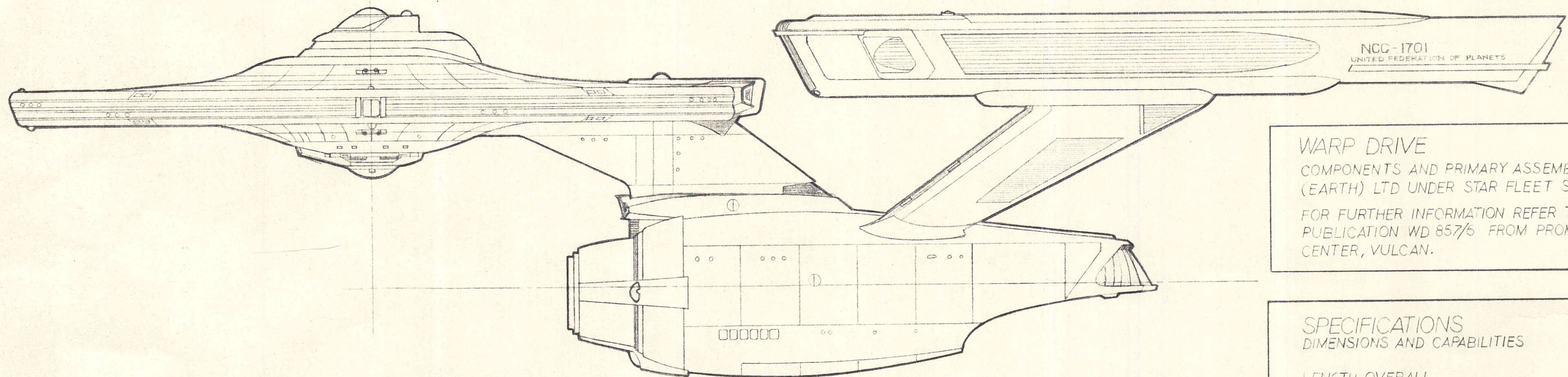
THE USS FEDERATION CLASS DREADNOUGHT IS BASED ON A DESIGN WHICH INCORPORATES A THIRD WARP DRIVE NACELLE MOUNTED ON A PYLON ATTACHED TO THE TOP OF THE PRIMARY HULL.

FOR DETAILED SCHEMATICS OF INTERNAL ARRANGEMENT REFER TO STAR FLEET DOCUMENT 102-MK9-1A

PRIMARY HULL

PRIMARY ASSEMBLY BY SPACE INDUSTRIES INC. FINAL COMPONENT INTEGRATION AND ASSEMBLY AT STAR FLEET DIVISION, SAN FRANCISCO YARDS AND STAR FLEET ORBITAL DRYDOCK COMPLEX.

LIFESYSTEM AND SUPPORT FACILITIES BY ENVIRONMENTAL ENGINEERING COMPANY LTD. COMPUTER SYSTEM SUPPLIED BY DAYSTROM DUOTRONICS SYSTEMS.



WARP DRIVE

COMPONENTS AND PRIMARY ASSEMBLY BY WARPSYSTEMS (EARTH) LTD UNDER STAR FLEET SUBCONTRACT.

FOR FURTHER INFORMATION REFER TO TECHNICAL PUBLICATION WD 857/6 FROM PROMETHEUS SCIENCE CENTER, VULCAN.

SPECIFICATIONS

DIMENSIONS AND CAPABILITIES

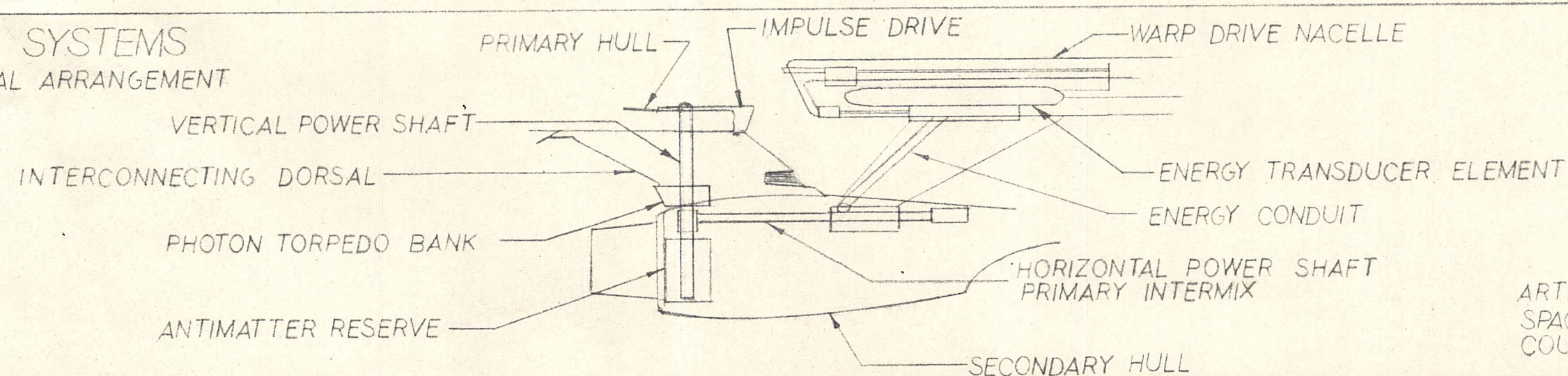
LENGTH OVERALL	281 M
BEAM (MAXIMUM)	131.5 M
HEIGHT OVERALL	67 M
MASS	190,000 METRIC TONS
ENGINEERING HULL - LENGTH	112 M
- DIAMETER	32 M
PRIMARY HULL - DIAMETER	131.5 M
- HEIGHT	32 M
WARP DRIVE NACELLE - LENGTH	143.3 M
- HEIGHT	15 M
PROPULSION: WARP AND IMPULSE DRIVE	WF10
MAXIMUM EMERGENCY WARP	
WEAPONRY - PHASER BANKS	9 PAIRS
- PHOTON TORPEDOES	1 BANK
(DIRECTLY COUPLED TO WARP DRIVE)	
FORCEFIELD DEFLECTORS	WARP POWERED
NAVIGATIONAL & TACTICAL	
CREW	450 PERSONS
MAXIMUM (THEORETICAL) MISSION DURATION	22 YEARS

THE UPRATED USS CONSTITUTION CLASS HEAVY CRUISERS ARE INTENDED AS REPLACEMENTS FOR THE USS FEDERATION CLASS DREADNOUGHTS AUTHORIZED BY THE STAR FLEET BUDGET OF STARDATE 6000.

INITIAL TESTS CONDUCTED WITH THE PROTOTYPE STARSHIP OF THE DREADNOUGHT CLASS HAVE DEMONSTRATED INSURMOUNTABLE PROBLEMS ASSOCIATED WITH THE DYNAMIC SPACEWARP STABILITY BALANCE IN A TRIPLE ENGINE NACELLE CONFIGURATION.

SUCH PROBLEMS SHOULD NOT ARISE WITH THE STANDARD TWIN NACELLE DESIGN OF THE UPRATED HEAVY CRUISER. THE POWER AND PERFORMANCE CHARACTERISTICS OF THE UPRATED HEAVY CRUISER ARE EQUIVALENT TO THE THEORETICAL CAPABILITIES OF THE DREADNOUGHT. THIS IS DUE TO THE FUNDAMENTAL MODIFICATIONS MADE TO THE WARP DRIVE OF THE UPRATED CRUISER.

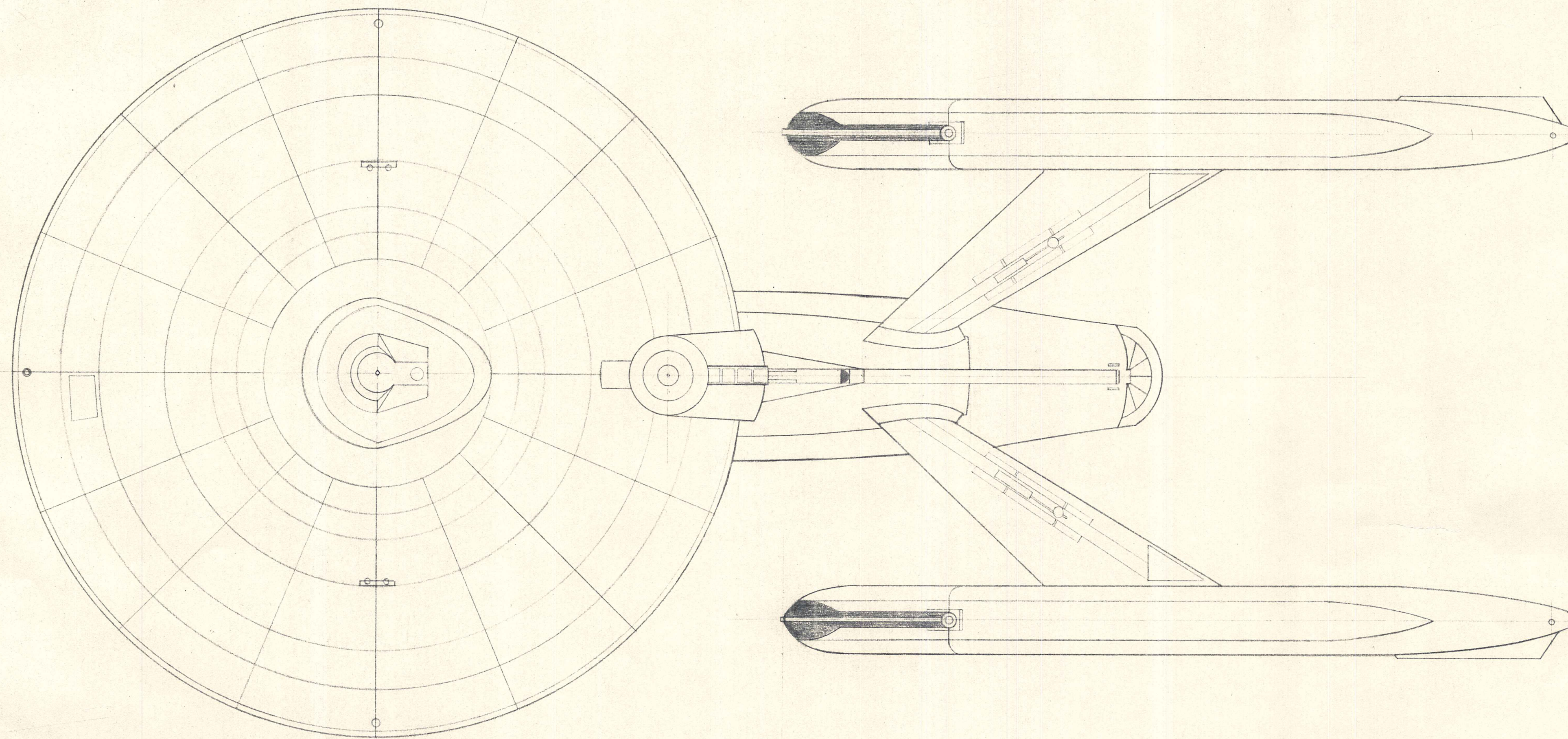
DRIVE SYSTEMS INTERNAL ARRANGEMENT



ARTIFICIAL GRAVITY MAINTAINED BY SPACE MATRIX RESTORATION COILS COUPLED TO WARP DRIVE

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1980



THE FOLLOWING HEAVY CRUISERS ARE SCHEDULED FOR UPRATING:

	NAME	STARDATE	FACILITY
1	ENTERPRISE	6875	SFOD(E)
2	HOOD	6950	TSY(A)
3	RIGIL KENTAURUS	7000	SFBA
4	ENDEAVOR	7050	SFOD(E)
5	YORKTOWN	7100	CCIC
6	CONSTITUTION	7150	SFOD(E)
7	FARRAGUT	7200	TSY(A)
8	KONGO	7250	SFBA
9	POTEMKIN	7300	CCIC
10	EXCALIBUR	7350	SFBA
11	LEXINGTON	7400	SB1
12	TORI	7450	SFOD(E)
13	EXETER	7500	SFBA
14	SARATOGA	7550	TSY(A)
15	REPUBLIC	7600	CCIC

ABBREVIATION KEY

CCIC	COCHRANE-CENTAURI INDUSTRIAL COMPLEX
SB1	STARBASE ONE
SFBA	STAR FLEET BETHLEHEM-ANTARES DRYDOCK
SFOD(E)	SAN FRANCISCO YARDS ORBITAL DRYDOCK (EARTH)
TSY(A)	TERGATH SHIPYARDS (ANDORIA)

Sh. M. L. 1980