

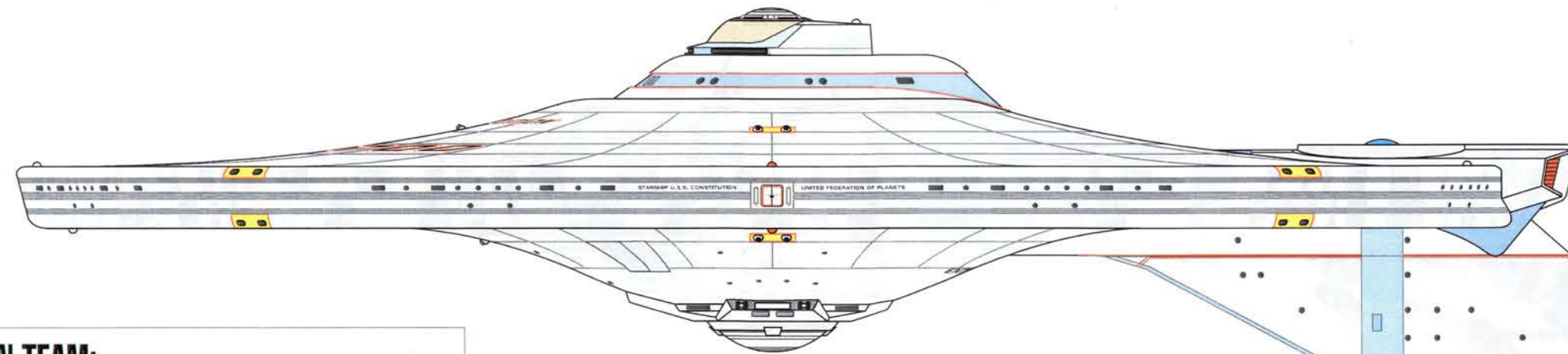
CONSTITUTION

PROTOTYPE NCC-1700 - REBUILD 1.0

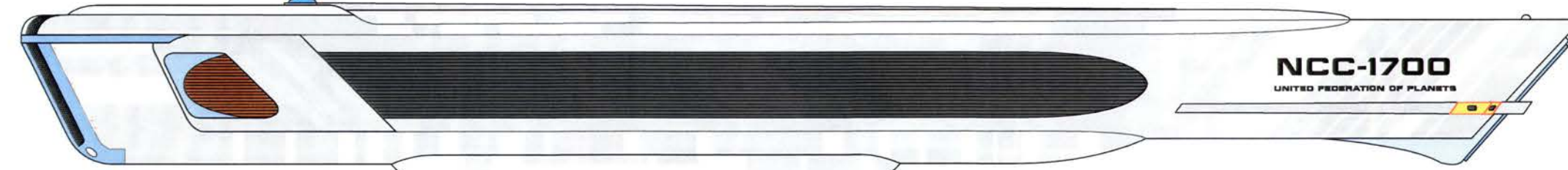
EXTERNAL VIEWS SHEET 1/15
 SPECIFICATIONS
 REBUILD HISTORY

DESIGN TEAM:

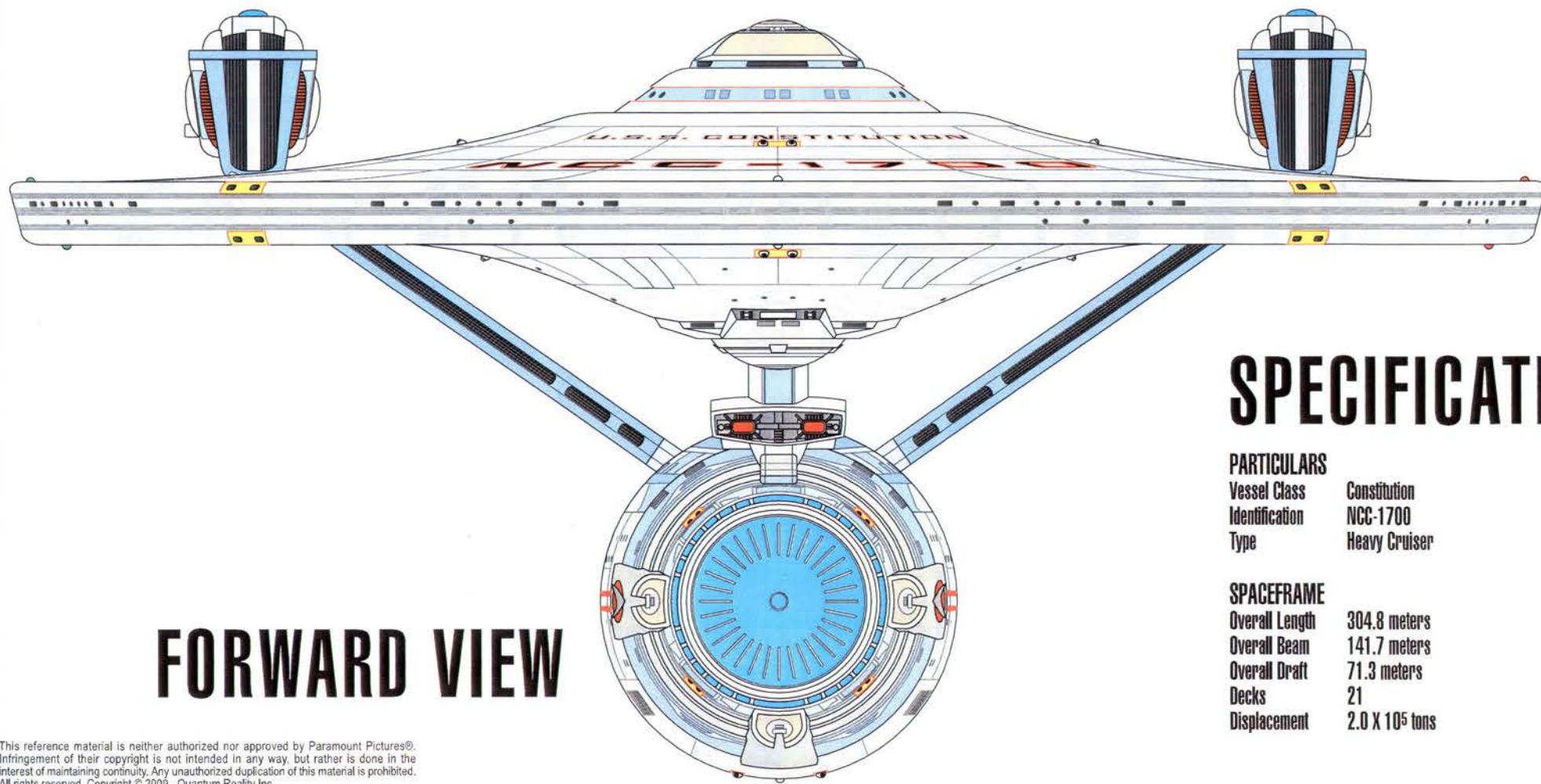
David Schmidt Designer / Layout Designer / Technical Editor
 Tim Palgut Researcher / Layout Designer / Technical Editor



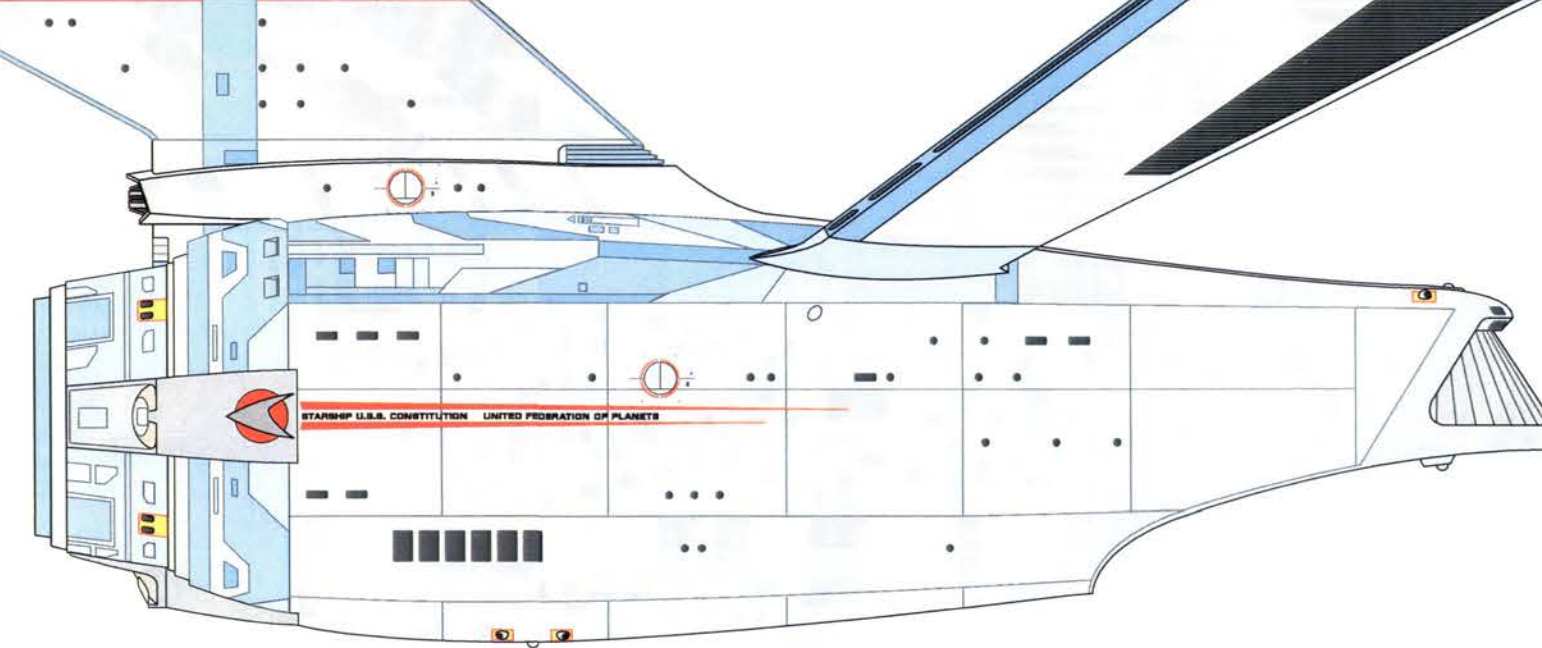
PORT VIEW



AFT VIEW



FORWARD VIEW



SPECIFICATIONS

PARTICULARS

Vessel Class Constitution
 Identification NCC-1700
 Type Heavy Cruiser

SPACEFRAME

Overall Length 304.8 meters
 Overall Beam 141.7 meters
 Overall Draft 71.3 meters
 Decks 21
 Displacement 2.0 X 10⁵ tons

CREW & AUXILIARY SYSTEMS

Complement 70 Officers
 336 Enlisted
 Transporters 4 6-personnel
 1 22-personnel Emergency
 1 26-personnel Emergency
 2 Cargo

INFORMATION SYSTEMS

Computer Core 1
 Duotronic
 Transtator FTL Microprocessors

Warp Systems

Power Matter / Antimatter Reactor (3.9 X 10⁸ terawatt)
 Cruising Speed wt 6.0 392.54c
 Flank Speed wt 7.0 658.14c (Sustainable for 12 hours)
 Burst Speed wt 7.9 981.95c (Sustainable for 1 hour)

Impulse Systems

Power Primary - feed from warp core (1.0 X 10¹¹ megawatt)
 Secondary - 4 deuterium fusion reactor (5.2 X 10¹⁰ megawatt)
 Vector Nozzle 2
 Cruising Speed 0.25 c
 Flank Speed 0.90 c

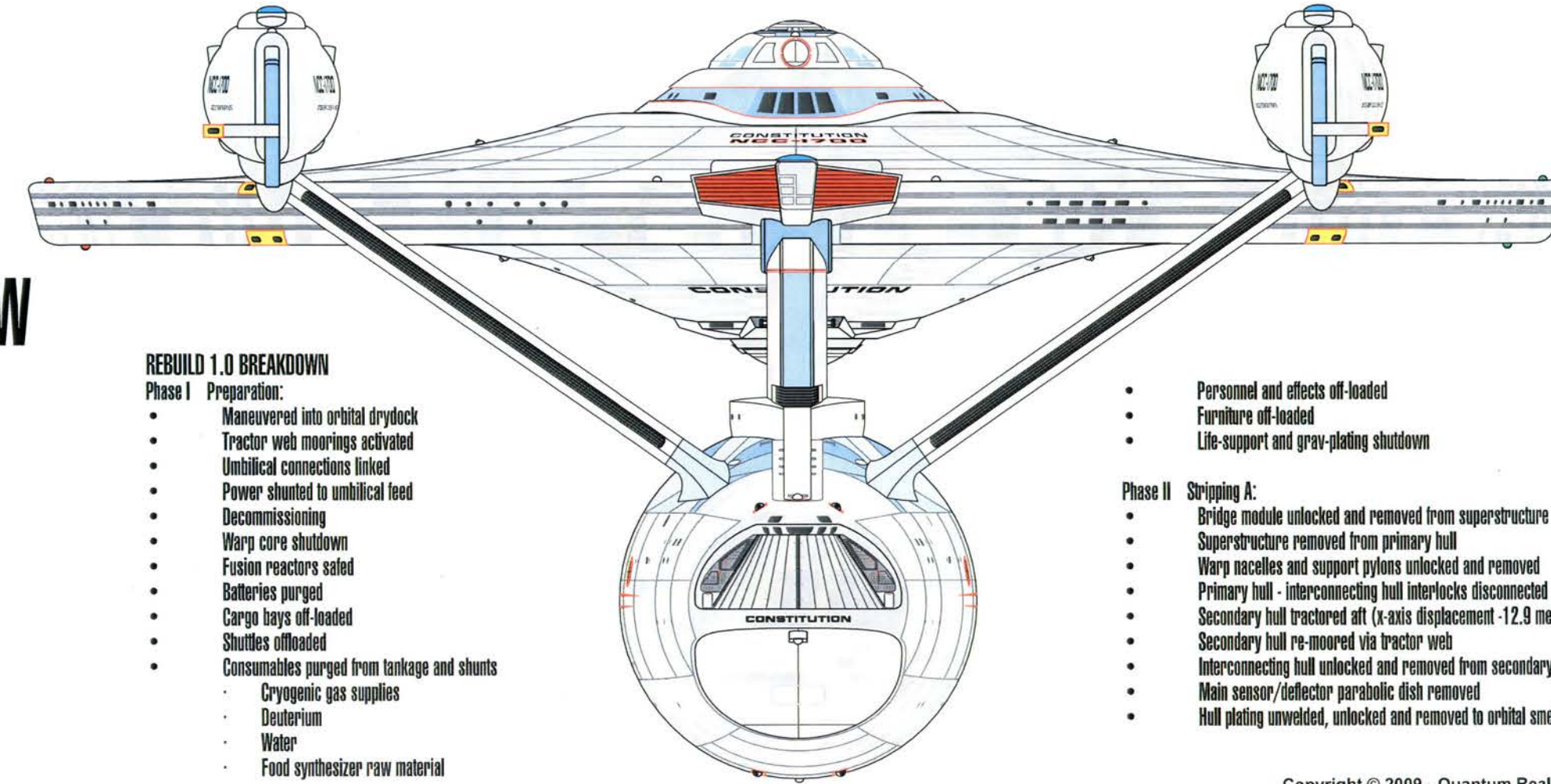
Tactical Systems

Phaser 18 - Type VIII turret
 Torpedo Tube 2 Fore - Type 2 / 1 Aft - Type 2
 Magazine 80 Mark V Photon Torpedoes
 10 Probes
 Grid 6 Deflector Shield Generator
 (rated 1.15 X 10³ mw - standby / 2.69 X 10³ mw - alert / 4.73 X 10⁶ mw - 0.0017 Sec.)
 5 Structural Integrity Field Generator (rated 1.15 X 10³ mw)
 Deflector 1 - Forward (1.51 X 10² megawatt - 187 millicochrane)
 Tractor Beam Main - 1 Aft (8 megawatt - 225 millicochrane)
 1 Shuttlebay (internal)

REBUILD 1.0

In 2268, with most members of the Constitution-class having completed 2 decades of service (4 5-year missions), it was decided that a refit of the class was in order. As the ships completed their current 5-year deployments they were assigned to the San Francisco Orbital Yards for Rebuilding. The first Constitution-class Heavy Cruiser to undergo this rebuilding (code-named 'Cathedral' was USS Enterprise - NCC-1701; being the first to return from her deep-space assignment) which became the testbed for the rebuild modifications. This first rebuilding took 18 months to complete - as design problems were detected and solved. By the time the class prototype, USS Constitution - NCC-1700 received her rebuild, processing time had been reduced to 6 months.

The concept was daunting. This was no standardized Refit, involving the repair, replacement or refurbishing of onboard systems. The most successful starship class to date, nonetheless these vessels were 20 years old - and bringing them up to state-of-the-art specifications involved a myriad of details. Not only was the spacelane itself being redesigned, almost all of the internal components were being replaced with newer systems.



REBUILD 1.0 BREAKDOWN

- Phase I Preparation:
- Maneuvered into orbital drydock
 - Tractor web moorings activated
 - Umbilical connections linked
 - Power shunted to umbilical feed
 - Decommissioning
 - Warp core shutdown
 - Fusion reactors sealed
 - Batteries purged
 - Cargo bays off-loaded
 - Shuttles offloaded
 - Consumables purged from tankage and shunts
- Phase II Stripping A:
- Cryogenic gas supplies
 - Deuterium
 - Water
 - Food synthesizer raw material

PROTOTYPE NCC-1700 - REBUILD 1.0
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REBUILD HISTORY

SUBSEQUENT SCHEDULED REFITTINGS

By 2293 most of the Constitution-class Heavy Cruisers had undergone 5 subsequent Refittings:

- Refit 1.1 Post-shakedown - Standard Outfitting
- Refit 1.2 Replacement of Bridge Module
- Refit 1.3 Installation of Landing Bay Doors/Turbolift
- Refit 1.4 Replacement of Bridge Module
- Refit 1.5 Upgrading of Sickbay
- Upgrading of Sensor Suite
- Replacement of Bridge Module
- Upgrading of Main Engineering
- Upgrading of Sensor Suite
- Upgrading of Computer Core
- Upgrading of Structural Integrity Field Generators
- Replacement of Bridge Module

- Personnel and effects off-loaded
- Furniture off-loaded
- Life-support and grav-plating shutdown

- Bridge module unlocked and removed from superstructure
- Superstructure removed from primary hull
- Warp nacelles and support pylons unlocked and removed
- Primary hull - interconnecting hull interlocks disconnected
- Secondary hull tractor aft (x-axis displacement -12.9 meters)
- Secondary hull re-moored via tractor web
- Interconnecting hull unlocked and removed from secondary hull
- Main sensor/deflector parabolic dish removed
- Hull plating unwelded, unlocked and removed to orbital smelters

CONSTITUTION

PROTOTYPE NCC-1700 - REBUILD 1.0

EXTERNAL VIEWS SHEET 3/15

REBUILD HISTORY
INTERNAL SYSTEMS

INTERNAL SYSTEMS

Section 1.0 **Spacecraft Spacelane & Hull**
The most obvious of the Rebuild 1.0 modifications is the larger spacelane. After hull plate removal (and subsequent frame inspection for buckling and shearing), all frame members of the Primary and Secondary Hulls were augmented with extensions - which when locked and gamma-welded to the original frame members increased the hull volume to 112%. Original hull plates were recycled via orbital smelter, and new hull plates matching the Rebuild 1.0 planform were produced.

Section 1.1 **Structural Integrity Field**
The SIF generators were replaced with the updated Type SIF2300A during the Refit 1.4.

Section 1.2 **Inertial Damping Field & Synthetic Gravity Generators**
Except for new installations under new deck areas, the original IDF/SG generator network was left untouched.

Section 1.3 **Security & Containment Force Field Generators**
Except for new installations (such as the new Engineering and Security complexes), the original S/CFF generator network was left untouched.

Section 1.4 **Main Deflector**
The MD generators were replaced with the updated Type MD5667C during the Rebuild. The external parabolic dish was replaced by the new Type MD5667D conformal array dish.

Section 1.51 **Ordnance: Phasers**
One of the most visible system modifications is the replacement of the Type VII Phaser Turret with the Type VIII. Following improvements to shield dynamics and power, Starfleet design engineers chose to discontinue the practice of retracting the phaser cannon emitter heads within the hull when offline. Besides being mechanically simpler, the new turrets improved power through-put to 145% by tapping the warp core directly via dedicated EPS conduits. Additional turret Phaser Turret locations were added in response to the increased Klingon threat.

Section 1.52 **Ordnance: Photon Torpedoes**
The P120TA was replaced with the P20TA Photon Torpedo Launch Bay System. The P20TA (Photon Suite - 2nd Version - Dorsal Mount - Tandem) design features a single Launch bay with a single centerline track running forward from the staging area to the loading hatch. After entering the loading subsystem, the torpedo was conveyed laterally port or starboard to the twin torpedo tubes - and then through the linear accelerator. Flexible in utility, the large Launch Bay can be used as a torpedo maintenance room as well, by placing removable gratings over the loading track. The two magazines were positioned on the two Interconnecting Dorsal Hull decks immediately above, and torpedoes are lowered to the staging area via telescoping crane.

Section 1.53 **Ordnance: Force-field / Deflector Screen Generators**
All FF/DS generators were removed and replaced with the Type FF/DS7764W, which features higher harmonic range, greater intensity, and much faster charging and response cycling time. Additionally, the force-field waveguide grid was augmented to reflect the larger spacelane.

Section 2.0 **Computer Systems**
The Type MCC8745MT Main Computer Core integral unit replaces the original, externally-indistinguishable unit. Within however, all 57,600 duotronic chips have been replaced with the new multitronic chips, doubling processing speed and quadrupling capacity.

Section 2.1 **Information Gathering Systems**
The DNSS8445 Dorsal Navigational Sensor Suite accompanies the new BM8994C Bridge Module. The VNSS3347Q Ventral Navigational/Science Sensor Suite on the underside of the Primary Hull has 4 lateral bays containing directional science sensors. Three LRSS2245 Long Range Sensor Suites have replaced the previous suites, to port, starboard and below the Main Deflector Dish on the Secondary Hull.

REBUILD HISTORY

REBUILD 1.0 BREAKDOWN

Phase III Stripping B:

- Various systems removed for later replacement
 - Warp core/antimatter processor/containment pods assembly
 - Ventral sensor suite assembly
 - Main & secondary computer cores
 - Structural integrity generators (SIF)
 - Force-field/deflector screen generators
 - Electro-plasma system conduits (EPS)
 - Phaser turrets
 - Control consoles
 - Furniture

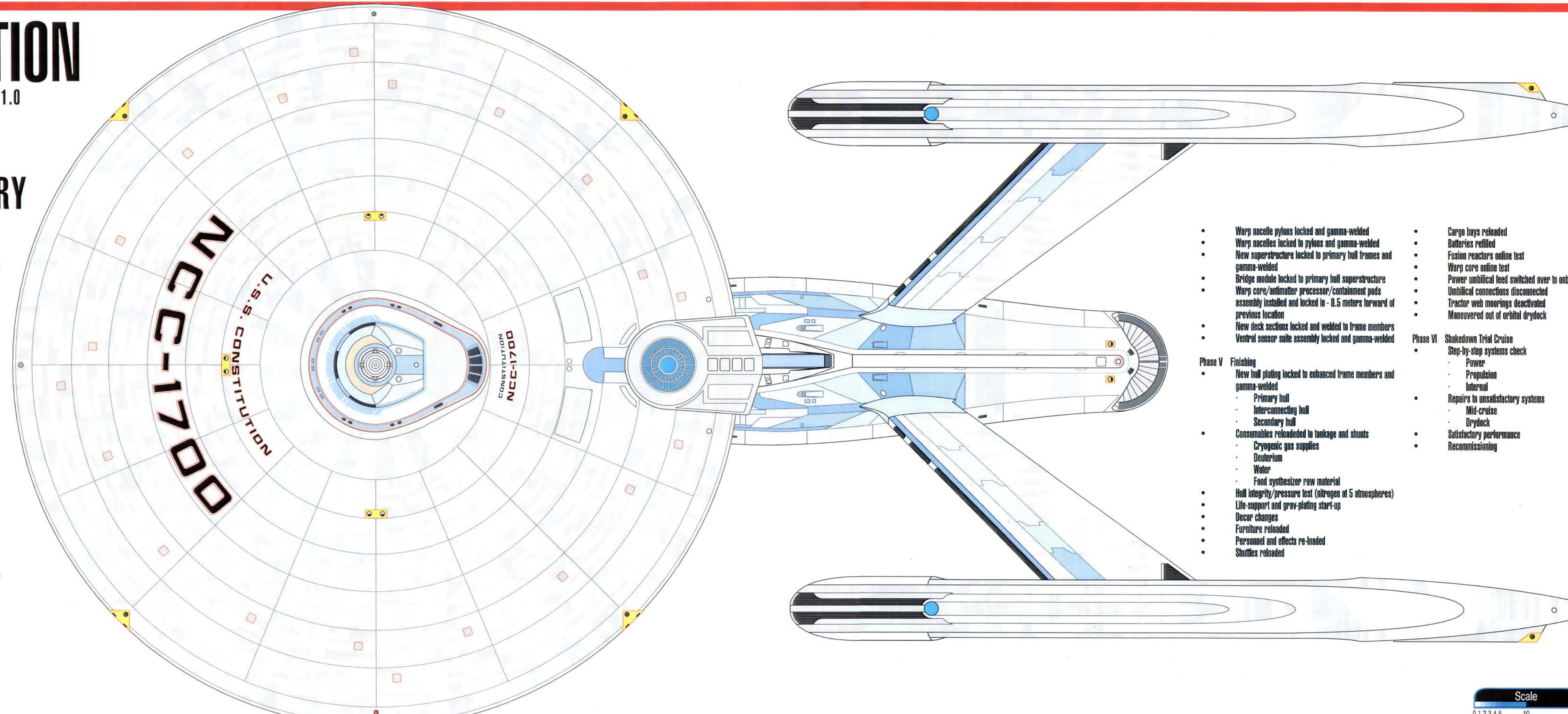
- Various systems rebuilt/repared/returished in place
 - Transporter Chambers/Emitters/Butlers
 - Food, organic and inorganic synthesizers
 - Life support facilities
 - Optical data network (ODN)

- Various compartments and structures modified
 - Bulkheads
 - Decking
 - Corridors
 - Jefferies Tubes
 - Main Engineering
 - Gymnasium
 - Recreation
 - Arboretum

Phase IV Replacement:

- Frame augments and extensions locked to frame members and gamma-welded
 - Primary hull
 - Secondary hull
- Interconnecting hull locked to secondary hull and gamma-welded
- Interconnecting hull locked to primary hull via explosive bolts

DORSAL VIEW



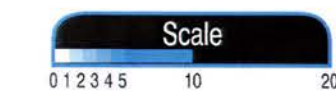
- Warp nacelle pylons locked and gamma-welded
- Warp nacelles locked to pylons and gamma-welded
- New superstructure locked to primary hull frames and gamma-welded
- Bridge module locked to primary hull superstructure
- Warp core/antimatter processor/containment pods assembly installed and locked in - 8.5 meters forward of previous location
- New deck sections locked and welded to frame members
- Ventral sensor suite assembly locked and gamma-welded

- Phase V** **Finishing**
- New hull plating locked to enhanced frame members and gamma-welded
 - Primary hull
 - Interconnecting hull
 - Secondary hull
 - Consumables reloaded to tankage and shunts
 - Cryogenic gas supplies
 - Deuterium
 - Water
 - Food synthesizer raw material
 - Hull integrity/pressure test (nitrogen at 5 atmospheres)
 - Life-support and grav-plating start-up
 - Decor changes
 - Furniture reloaded
 - Personnel and effects re-loaded
 - Shuttles reloaded

- Cargo bays reloaded
- Batteries refilled
- Fusion reactors online test
- Warp core online test
- Power umbilical feed switched over to onboard power
- Umbilical connections disconnected
- Tractor web moorings deactivated
- Maneuvered out of orbital drydock

Phase VI

- Shakedown Trial Cruise**
- Step-by-step systems check
 - Power
 - Propulsion
 - Internal
 - Repairs to unsatisfactory systems
 - Mid-cruise
 - Drydock
 - Satisfactory performance
 - Recommissioning



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INTERNAL SYSTEMS

PROTOTYPE NCC-1700 - REBUILD 1.0

SHEET 8/15

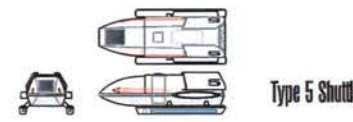
SYMBOL CHART

SYMBOL CHART

EMBARKED CRAFT



Work Bee

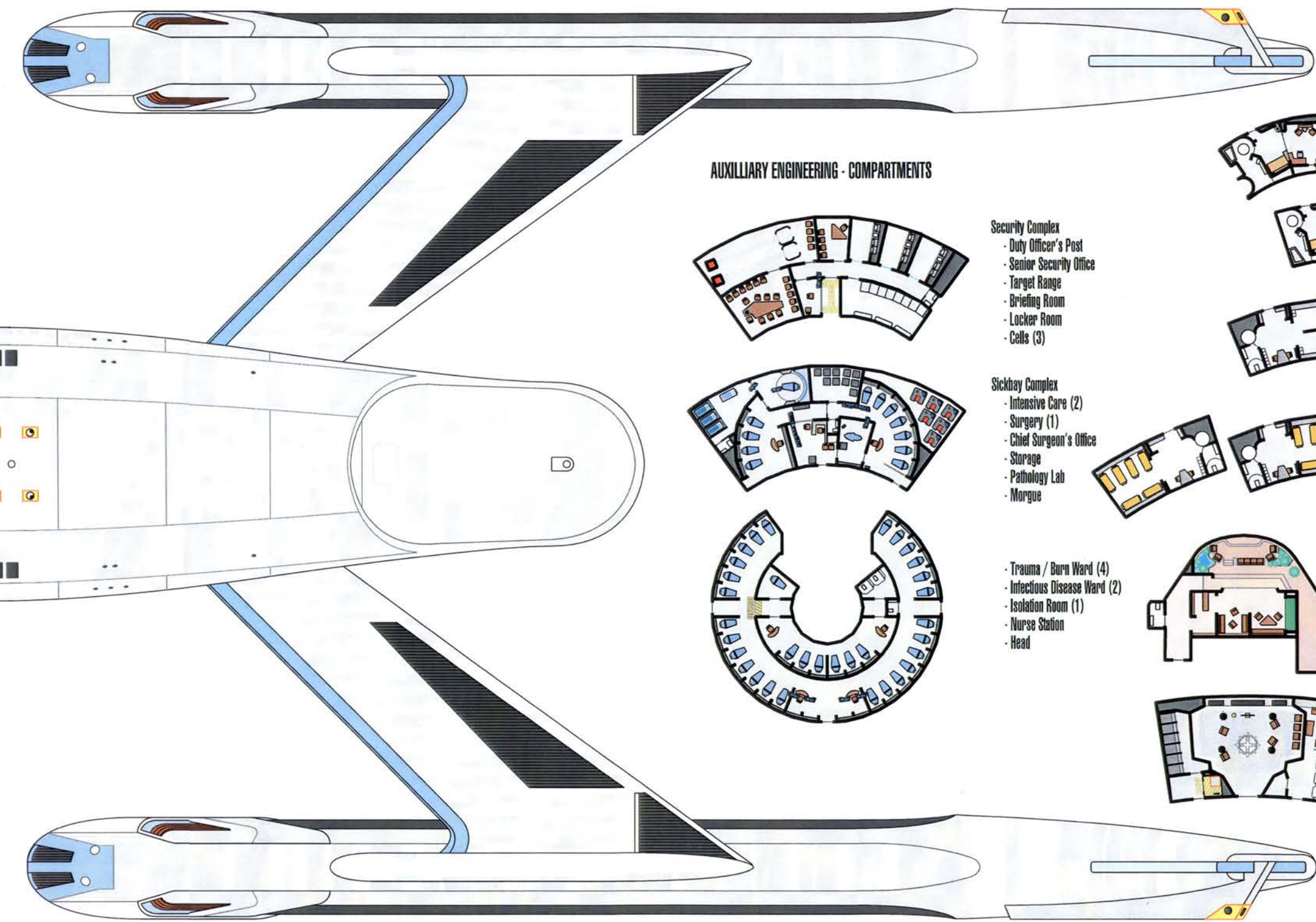
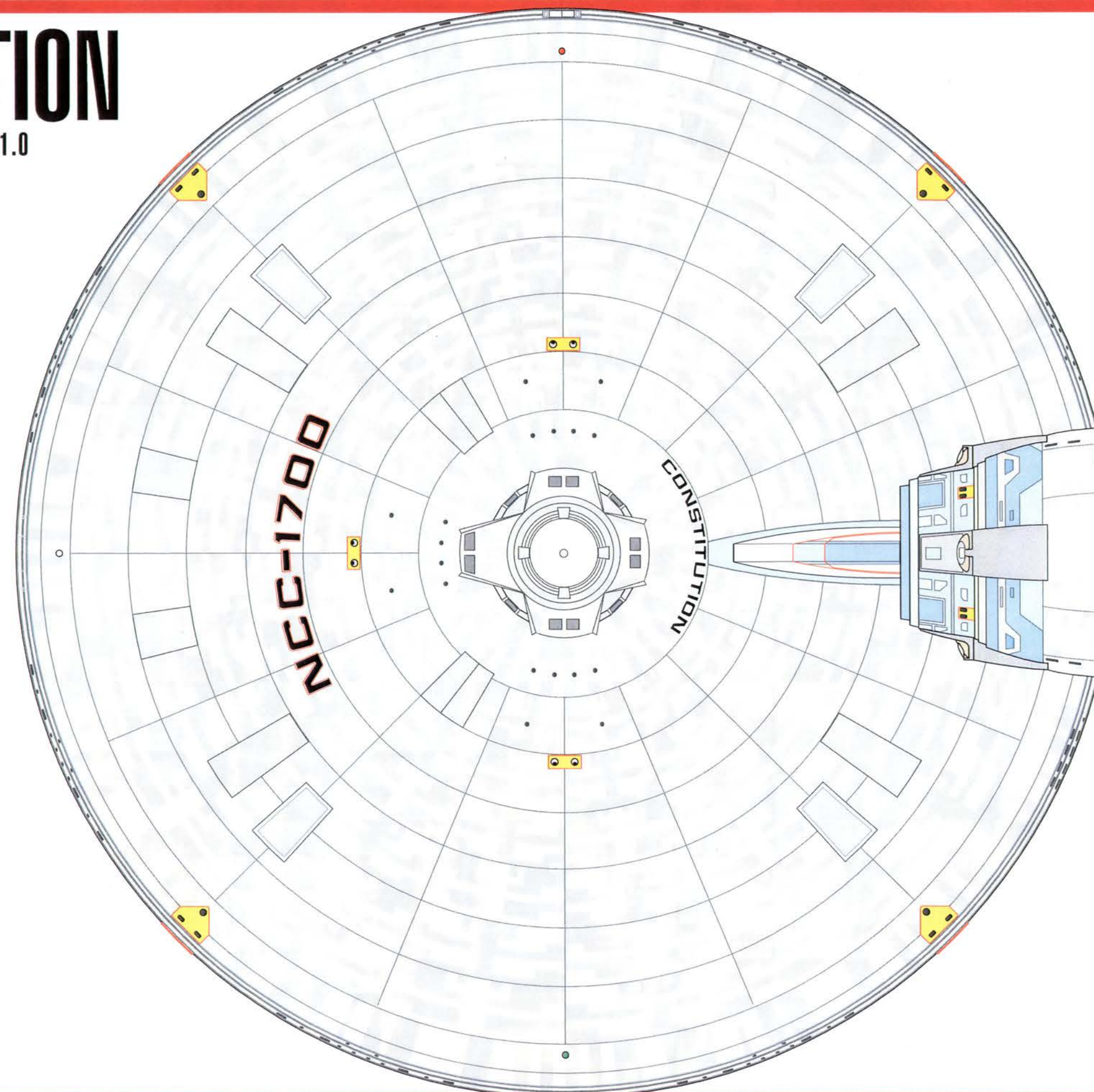


Type 5 Shuttle

ESCAPE SYSTEMS



Escape Pod



AUXILIARY ENGINEERING - COMPARTMENTS

- Security Complex**
- Duty Officer's Post
 - Senior Security Office
 - Target Range
 - Briefing Room
 - Locker Room
 - Cells (3)

- Sickbay Complex**
- Intensive Care (2)
 - Surgery (1)
 - Chief Surgeon's Office
 - Storage
 - Pathology Lab
 - Morgue

- Trauma / Burn Ward (4)
- Infectious Disease Ward (2)
- Isolation Room (1)
- Nurse Station
- Head

- Senior Officer's Quarters:**
- Sleeping Area
 - Lounge & Dining Area
 - Closet
 - Head & Sonic Shower

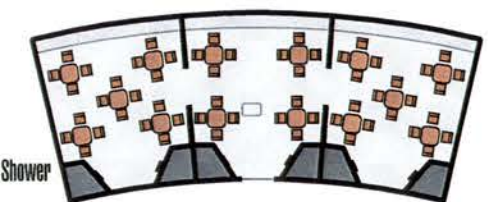
- Officer's Quarters:**
- Sleeping Area
 - Head & Sonic Shower
 - Closet

- Junior Officer's Quarters:**
- Sleeping Area
 - Dining Area
 - Lockers
 - Head & Sonic Shower

- Enlisted Quarters:**
- Sleeping Area (4 or 6 3-tiered bunks)
 - Dining Area
 - Lockers
 - Head & Sonic Shower

- Officer's Lounge**
- Conference Lounge
 - Observation Lounge
 - Heads (2)

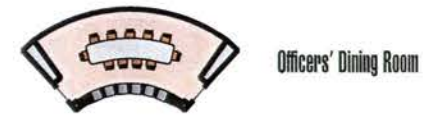
- Forward Observation Lounge**
- Main Lounge
 - Relaxation Lounge with Heads
 - Storage Room
 - Upper Hull Airlock/Elevator / EVA Suit Locker



- Enlisted Mess**
- 14 Tables (56 Personnel)
 - 4 Food Delivery Slots



Briefing Room



Officers' Dining Room



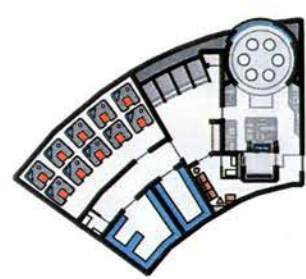
- Diagnostics & Repair Workshop / Lab:**
- Work Table
 - Research Area
 - Operators' Stations



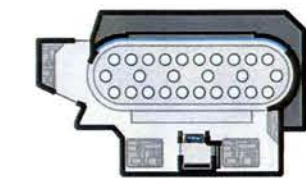
- Science Lab**
- Research Area
 - Operators' Stations



- Office Complex**
- 9 Offices
 - 3 Waiting Rooms / Yeoman's Desk Area



- 6-Personnel Transporter Room**
- Stage
 - Shielded Operator's Station
 - EVA Suit Lockers
 - Dedicated Battery Compartment
 - Storage
 - Armory
 - Head



- 22-Personnel Emergency Transporter Room**
- Stage
 - Shielded Operator's Station

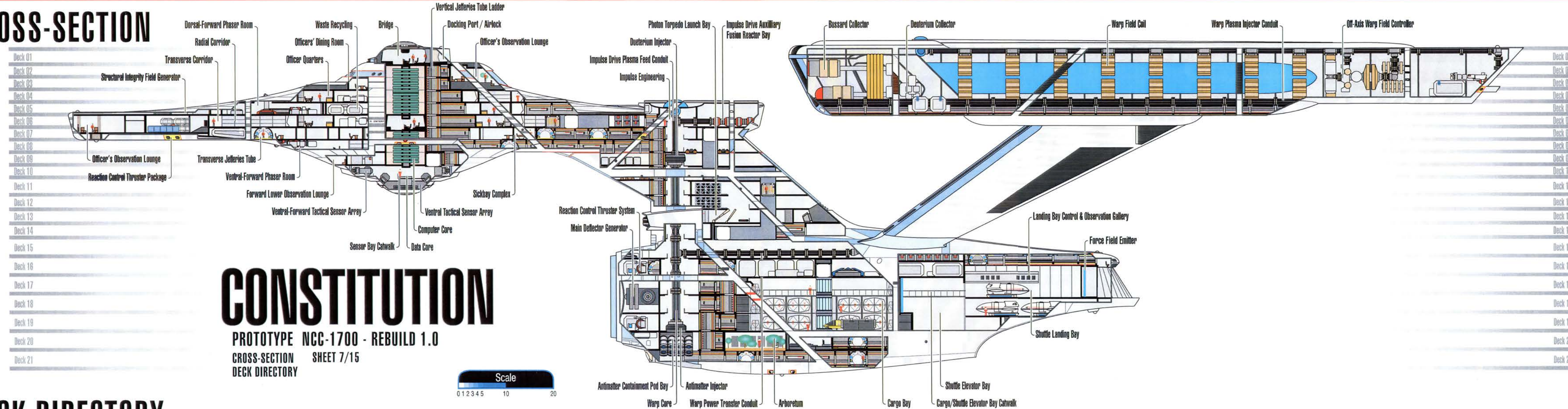


Scale

0 1 2 3 4 5 10 20

VENTRAL VIEW

CROSS-SECTION



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PROTOTYPE NCC-1700 - REBUILD 1.0
CROSS-SECTION SHEET 7/15
DECK DIRECTORY



Cross-Section Through Cargo Bay
Forward Aspect

- Deck 18
- 1 Main Engineering - Warp Core
- 1 Deflector Generator Bay - Main Level
- 2 Long Range Sensor Bay - Main Level
- 1 Main Damage Control
- 1 Shipment & Maintenance Workshop
- 2 Deuterium Tankage - Mid-Bay
- 12 Escape Pod
- 2 Lounge
- 1 Cargo Bay - Mid-Bay
- 1 Shuttle Elevator Bay - Main Level
- 1 Shuttle Parking Bay
- 1 Aft Photon Torpedo / Recorder Marker Buoy Launch Bay & Magazine

- Deck 16
- 1 Main Engineering - Warp Core
- 1 RCS Control Thruster Bay
- 3 Battery Compartment
- 1 Landing Bay Atmospheric Processing Compartment
- 1 Defense Field Generator Compartment
- 2 Landing Bay Observation Gallery
- 1 Landing Bay - High-Bay
- 1 Engineering Fabrication
- 1 Turbolift Repair

- Deck 19
- 1 Main Engineering - Antimatter Injector
- 1 RCS Control Thruster Bay
- 1 Cryogenic Cooling System Compartment
- 2 Deuterium Tankage - Main Level
- 4 Escape Pod
- 2 Cargo Transporter Bay
- 1 Cargo Bay - Main Level
- 1 Shuttle Elevator Bay - Lower Level

- Deck 17
- 1 Main Engineering - Warp Core
- 1 Deflector Generator Bay - High-Bay
- 2 Long Range Sensor Bay - High-Bay
- 1 Major Systems Diagnostics & Workshop
- 1 Battery Compartment
- 2 Deuterium Tankage - High-Bay
- 2 Escape Pod
- 1 Quartermaster's Office
- 1 Briefing Room
- 2 Docking Port / Airlock
- 4 Lounge

- Deck 20
- 1 Main Engineering - Antimatter Containment Bay
- 1 Transporter Buffer Bay
- 1 Insulating Force Field Generator Compartment
- 2 Head
- 1 Plasma Relay Compartment
- 1 Arboretum
- 1 Battery Compartment
- 1 Emergency Life Support Compartment
- 1 Arboretum Support Systems & Waste Recycling Compartment
- 1 Evacuation Transporter Room
- 1 Tractor Beam Emitter

- Deck 15
- 1 Main Engineering - Propulsion & Warp Core - Main Level
- 1 Insulating Force Field Generator Compartment
- 1 Dillithium Chamber
- 1 Engineering Isolation Suit Locker
- 1 Deuterium Processing Compartment
- 1 Warp Core Collant tankage Compartment
- 2 Structural Integrity Field Generator Compartment
- 2 Dorsal/Aft Phaser System Turret Compartment
- 1 Shuttle Traffic Control Room

- Nacelles & Pylons
- 1 Bussard Ionizing Beam Emitter Bay
 - 1 Bussard Magnetic Field Generator / Collector Bay
 - 1 Continuous Cycle Fractionator & Deuterium Chiller Bay
 - 1 Warp Coil & Plasma Injector Bay
 - 1 Off-Axis Field Coil Bay
 - 1 RCS Control Thruster Bay

- Deck 12 - Interconnecting Dorsal Hull
- 1 Main Engineering - Warp Core
- 1 Photon Torpedo Magazine 1
- 1 Photon Torpedo Launcher Exhaust System

- Deck 13
- 1 Main Engineering - Warp Core
- 1 Photon Torpedo Launch Bay
- 1 Photon Torpedo Launcher Exhaust System
- 2 Docking Port / Airlock
- 1 EVA Suit Locker

- Deck 14
- 1 Main Engineering - Propulsion & Warp Core - Upper Level
- 1 Battery Compartment
- 1 Flush Vent System

- Deck 09 - Interconnecting Dorsal Hull
- 2 Emergency Supply Locker
- 1 Deuterium Injector Compartment

- Deck 10
- 1 Tactical Scanner Bay
- 1 - Ventral Tactical Scanner / Sensor Suite
- 4 - Lateral Tactical Scanner / Sensor Suite
- Deck 10 - Interconnecting Dorsal Hull
- 1 Main Engineering - Warp Core
- 1 Interconnecting Hull Observation Lounge

- Deck 11 - Interconnecting Dorsal Hull
- 1 Main Engineering - Warp Core
- 1 Photon Torpedo Magazine 2

- Deck 08
- 3 Ventral Phaser System Turret Compartment
- 2 Airlock / Docking Port & EVA Suit Locker Bay
- 1 Emergency Transporter Room
- 2 Transporter Transceiver Bay
- 1 Transporter Buffer / Plasma Relay / Battery Compartment
- 1 Computer Core
- Deck 08 - Interconnecting Dorsal Hull
- 1 Vertical Main Turboshaft (Interconnecting Hull to Primary Hull)
- 1 Interconnecting Hull Horizontal Jefferies Tube

- Deck 09
- 1 Ventral Observation Deck
- 1 Ship's Laundry Compartment
- 1 Computer Core

- Deck 07
- 1 Forward Observation Lounge - Sub-Level / Battery Compartment
- 1 Security Complex
- 1 Sickbay Complex
- 86 Escape Pod
- 4 Cryogenic Fluid Tankage Bay
- 4 Water Tankage Bay
- 1 Bowling Alley - Main Level
- 1 Recreation Lounge - Main Level
- 1 Gymnasium - Main Level
- 1 Pool Machinery Compartment
- 1 Transporter Room
- 4 Landing Pad Bay
- 1 Impulse Drive Manifold Compartment
- 4 RCS Control Thruster Bay - Main Level
- 1 Computer Core

- Deck 06
- 16 Officer's Quarters
- 8 Enlisted Bunkrooms (18 bunks each)
- 16 Enlisted Bunkrooms (12 bunks each)
- 1 Science Lab
- 1 General Cargo Bay - High Bay
- 2 Crew Mess/Lounge
- 2 Office Complex
- 1 Unassigned Compartment
- 2 Briefing Room
- 1 Chapel / Theatre
- 1 Forward Observation Lounge
- 1 Main Gangway & Retractable Sleeve
- 1 Recreation Lounge - Upper Level
- 1 Gymnasium - Upper Level
- 1 Impulse Engineering Complex
- 4 RCS Control Thruster Bay - Upper Level
- 1 Computer Core
- 1 EPS Relay / Battery Compartment

- Deck 05
- 3 Senior Officer's Quarters
- 5 Officer's Quarters
- 14 Junior Officer's Quarters
- 3 Dorsal Phaser System Turret Compartment
- 6 Organic Synthesis Compartment
- 2 Inorganic Synthesis Compartment
- 4 Foodstuff Stasis Compartment
- 4 Defense Field Generator Compartment
- 3 Structural Integrity Field Generator Compartment
- 48 Escape Pod
- 1 Deuterium Tankage Toroid Bay
- 1 Computer Core
- 1 Waste Recycling Compartment

- Deck 03
- 1 Officers' Dining Room
- 1 Officers' Galley
- 1 Reefer
- 1 Battery Compartment
- 1 Officers' Observation Lounge
- 1 Officers' Lounge
- 1 Computer Core
- 1 Head
- 1 Damage Control Locker
- Deck 04
- 1 Officers' Quarters
- 3 Dorsal Phaser System Turret Tunnel
- 1 Life Support Compartment
- 1 Computer Core

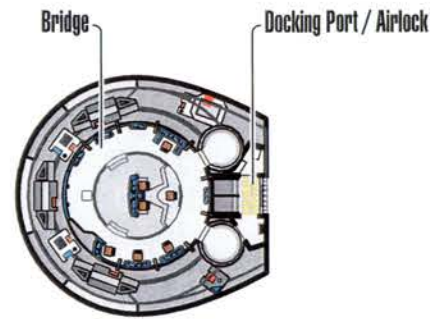
- Deck 01
- 1 Bridge
- 1 Aft Airlock/Docking Port / Head
- 1 Dorsal Tactical Scanner / Sensor Suite
- Deck 02
- 1 Combat Information Center
- 1 - Flag Bridge
- 1 - Communications Control & Cryptography
- 1 - Fleet Movement Status Display
- 1 - Data Management
- 1 - Internal Systems Control
- 1 - Ship's Systems Status Display
- 1 - Damage Control
- 4 Head
- 1 Computer Core
- 1 Officers' Observation Lounge - High Bay

CONSTITUTION

PROTOTYPE NCC-1700 - REBUILD 1.0

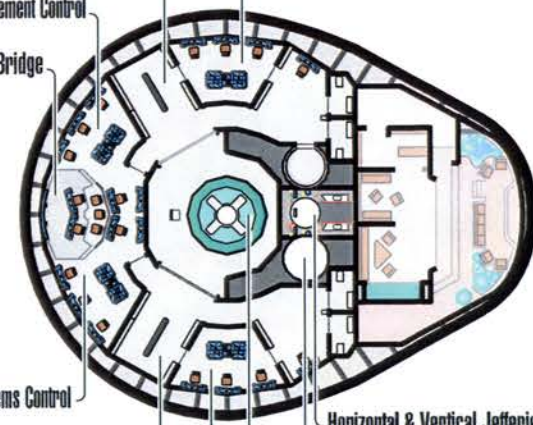
INTERNAL VIEWS SHEET 9/15
INTERNAL SYSTEMS

DECK 1



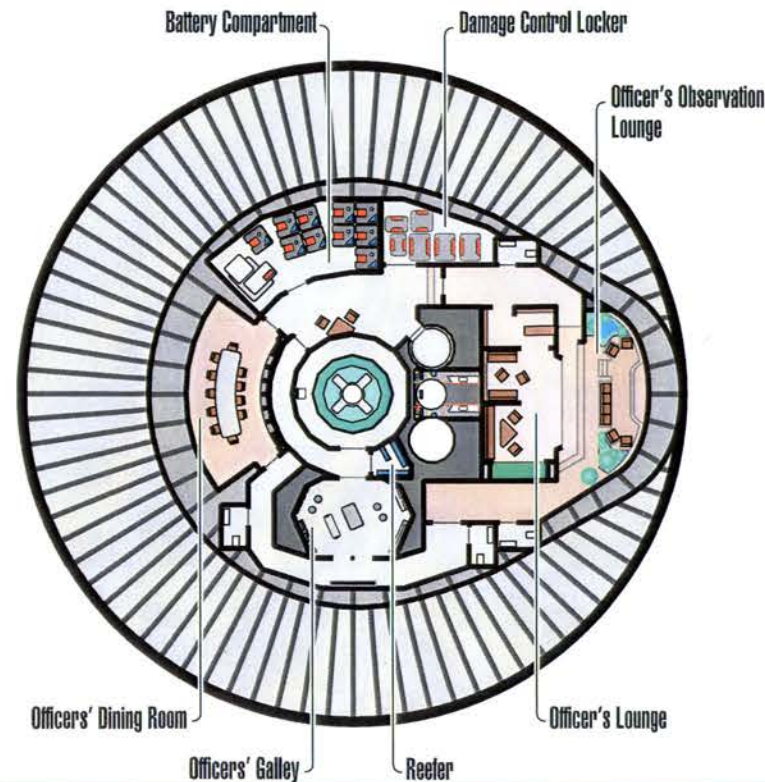
Combat Information Center - Fleet Movement Status Display
Combat Information Center - Data Management Control
Combat Information Center - Flag Bridge
Combat Information Center - Communications Control & Cryptography

DECK 2



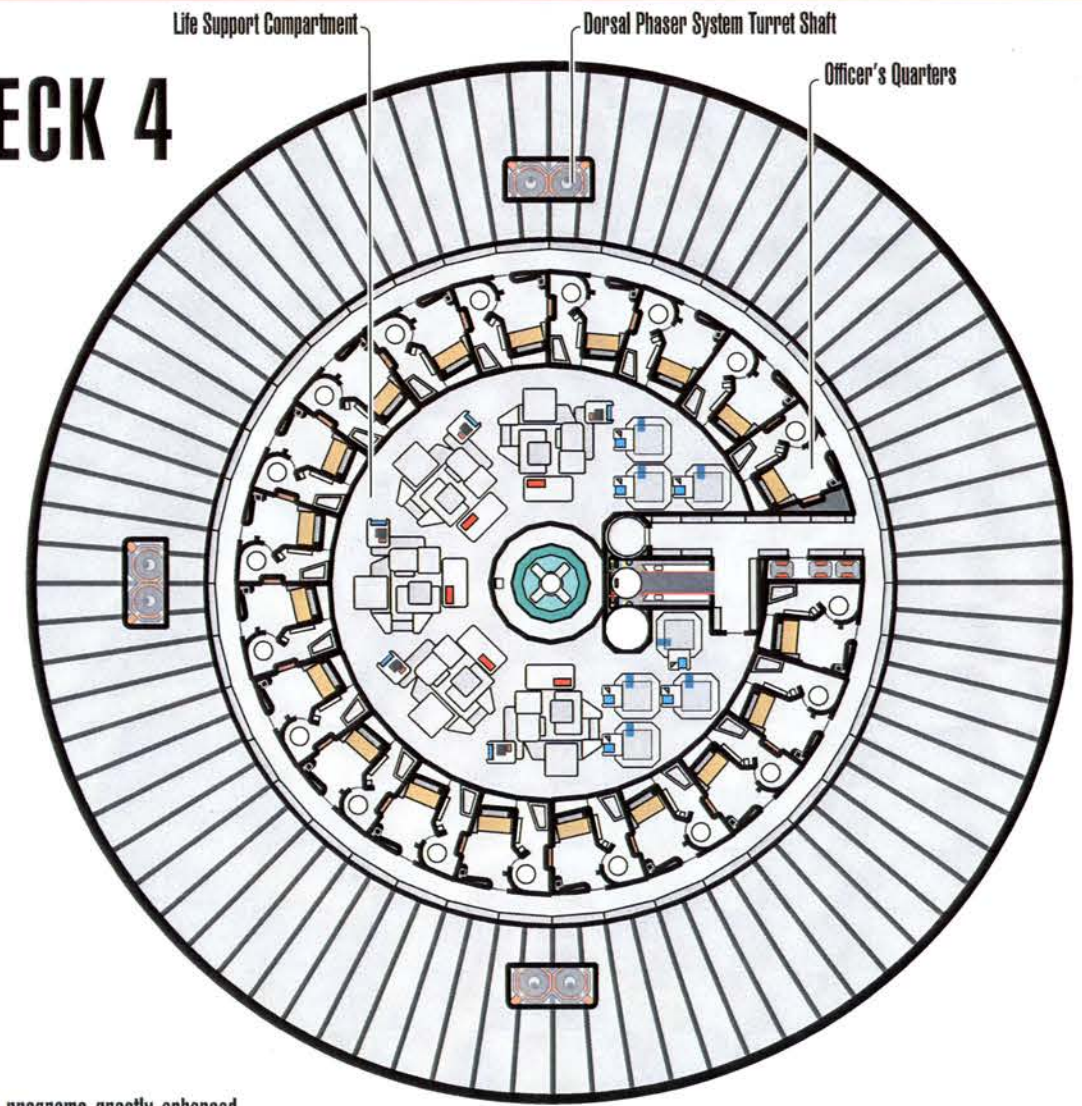
Combat Information Center - Internal Systems Control
Combat Information Center - Ship's Systems Status Display
Combat Information Center - Damage Control
Horizontal & Vertical Jefferies Tube Junction
Vertical Turboshaft
Computer Core

DECK 3



Battery Compartment
Damage Control Locker
Officer's Observation Lounge
Officers' Dining Room
Officers' Galley
Reefer
Officer's Lounge

DECK 4



INTERNAL SYSTEMS

Section 3.01 Crew Facilities - Quarters
Enlisted quarters remain virtually untouched from the TOS (Technology-Original-Standard) version. Officer quarters have been simplified, with the offices being removed from the quarters in favour of true offices located elsewhere.

Section 3.02 Crew Facilities - Recreation
Recreation, Gymnasium, and Lounges have been expanded with the enlarged radius of the Primary Hull. The VIP Observation Lounge was relocated forward with the addition of retractable hull panels concealing three large viewing windows for added effect to visiting dignitaries.

Section 3.03 Crew Facilities - Dining
Furniture has been upgraded, systems have overhauled, and menu programs greatly enhanced.

Section 3.04 Crew Facilities - Arboretum
The original enclosed biohabitats and display windows have been replaced with a park-like setting with winding paths, a waterfall and stream, and holographic sky.

Section 3.05 Crew Facilities - Laundry
Facilities have been largely left untouched, although systems have been overhauled.

Section 3.1 Science Facilities
All lab equipment and consoles have been replaced.

Section 3.2 Life Support
Life-Support systems were replaced with the updated Type LS9986 during the Refit 1.3. Trauma Wards have been added to the Sickbay Complex.

Section 4.0 Shuttle Facilities
The Landing and Parking Bays are virtually untouched. Work Bees have been relocated to the Flight Deck.

Section 5.0 Cargo Facilities
The Cargo Bay is similar to that of the TOS (Technology-Original-Standard) Constitution-class. It connects to the Shuttle Elevator Wells via two sideways-rolling shutter doors - backed-up by force-field pressure curtains. This allows work bee cargo trains to fly directly from the Hangar Bay to the Cargo Bay. The Cargo

Bay possesses two turb shafts running through it mid-bay, which access catwalks on the upper two levels as well as the main Cargo Deck. Cargo pods are moved from their storage quad niches to the deck and back via tractor/pressor beam 'crane' emitters, which run along tracks on the overhead. These are operated from the Quartermaster's Control Gallery on the upper forward bulkhead.

Section 6.1 Engineering - Warp Core
The revolutionary Type WC7445 Segmented Linear Warp Core replaced the original Tandem Warp Core. The new design places the Deuterium Injector midway up the Interconnecting Hull (which was redesigned to hold it), and is capable of 150% more output at nominal levels. The Antimatter processor/Containment Pods Assembly was replaced with a near-identical suite - utilizing better materials and systems.

Section 6.2 Engineering - Warp Drive Nacelles and Support Pylons
Both the Type WDN7675E Warp Drive Nacelles and WDS7633B Support Pylons are new installations. Visibly different on the exterior (reflecting changes in radiation shielding and component safeguarding), the interior does not represent a radical departure from previous designs - except insofar as better components (superior manufacturing specifications and materials) were created to make use of the higher speeds expected to be made available from the new Warp Core's output.

Section 6.3 Engineering - Impulse Drive
The Impulse Drive Assembly was removed to make room for the redesigned integral Type IDA2234J. The new design has increased thrust, more dependable standby fusion reactors, and improved reverse thrust. Instead of the previous mechanically-hinged baffles, force-field generated 'baffle plates' aft of the manifolds re-direct the impulse exhaust plasma forward (over and under the Primary Hull) thrust.



CONSTITUTION


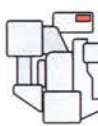


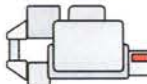
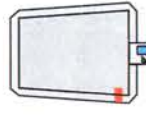

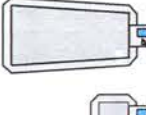








PROTOTYPE NCC-1700 - REBUILD 1.0

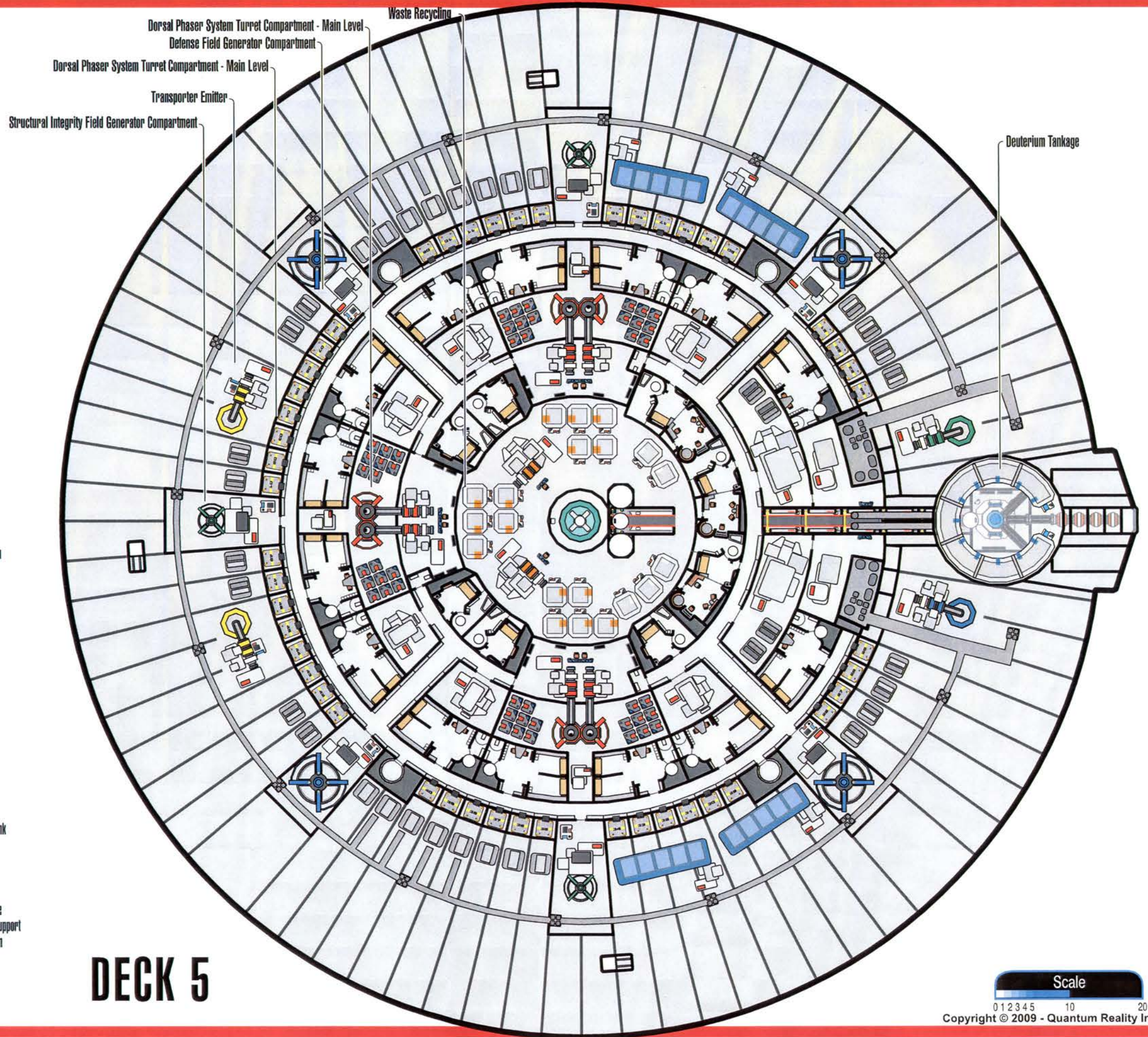
INTERNAL VIEWS SHEET 10/15

SYMBOL CHART

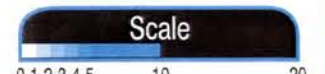
SYMBOL CHART

LIFE SUPPORT & FLUID/GAS TANKAGE

	Food Synthesizer		Cryogenic Cooling System
	Food Synthesizer Raw Material Storage Tank (Organic)		Cryogenic Tank (900 Cubic Meters)
	Inorganic Synthesizer		Cryogenic Tank (250 Cubic Meters)
	Synthesizer Raw Material Storage Tank (Inorganic)		Water Tank (100 Cubic Meters)
	Organic Stasis Containment		Cryogenic Tank (20 Cubic Meters)
	Organic Waste Recycler		Organic Waste Slurry Tank (20 Cubic Meters)
	Atmospheric Recycler		Umbilical Connections - Deuterium Intake - Cryogenic Liquids Intake - Atmospheric External Support - ODN External Connection - Fresh Water Intake
	Airlock / Docking Port & EVA Suit Lockers		Personnel Airlock & EVA Suit Lockers



DECK 5



CONSTITUTION


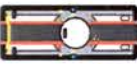







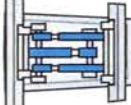

PROTOTYPE NCC-1700 - REBUILD 1.0

INTERNAL VIEWS SHEET 11/15


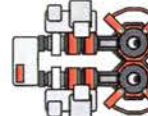

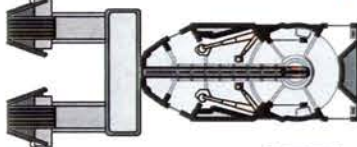

SYMBOL CHART

SYMBOL CHART

AUXILIARY ENGINEERING - MISC. SYSTEMS

-  Horizontal Jefferies Tube
-  Vertical/Horizontal Jefferies Tube Junction
-  Vertical Jefferies Tube
-  Diagonal Jefferies Tube
-  Vertical Turboshaft
-  Horizontal Turboshaft
-  Turbolift Station
-  Hull-to-Hull Explosive Bolt Connection
-  One Person Lift
-  Landing Pad & Armature (Retracted)
-  Shuttle Elevator

DEFENSE SYSTEMS

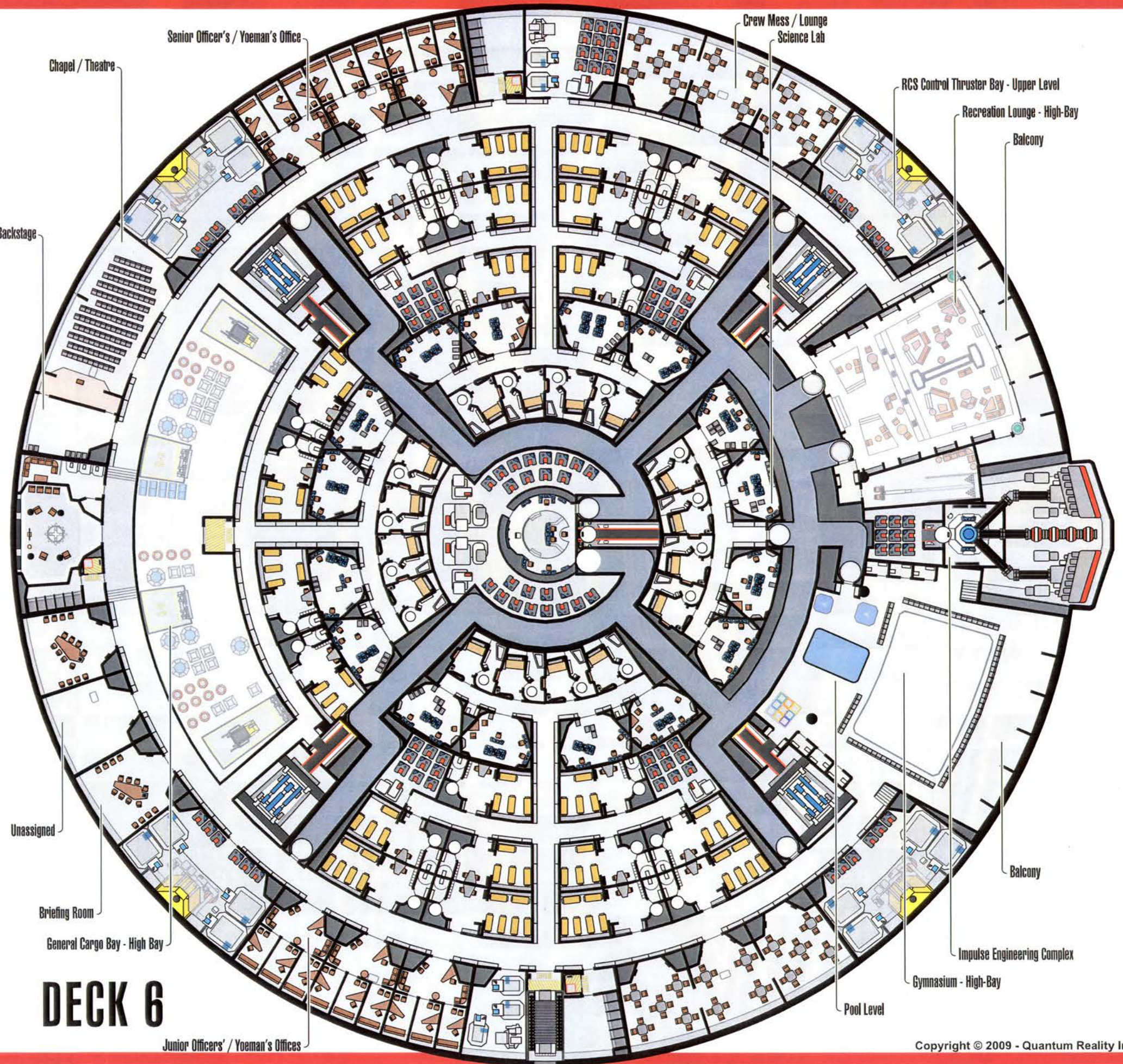
-  Phaser Emitter Turrets
-  Phaser Firing Chambers
-  Photon Torpedo Casing
-  Photon Torpedo Launch Bay & Tube
-  Photon Torpedo Magazine



Force-field / Deflector Screen Generator



Destruct Charge



DECK 6

CONSTITUTION

PROTOTYPE NCC-1700 - REBUILD 1.0

INTERNAL VIEWS SHEET 12/15

SYMBOL CHART

SYMBOL CHART

- Damage-Control Containers
- Emergency Supply Containers
- Misc. Shipwide ODN Distribution Areas



COMMUNICATIONS & TRANSPORTER SYSTEMS

- Subspace Radio Transceiver
- EM Radio Transceiver
- Transporter Transceiver
- Transporter Buffer
- Transporter Pad (6-personnel)
- Transporter Pad (Emergency 26-personnel)
- Transporter Pad (Cargo)

GRAVITONIC SYSTEMS

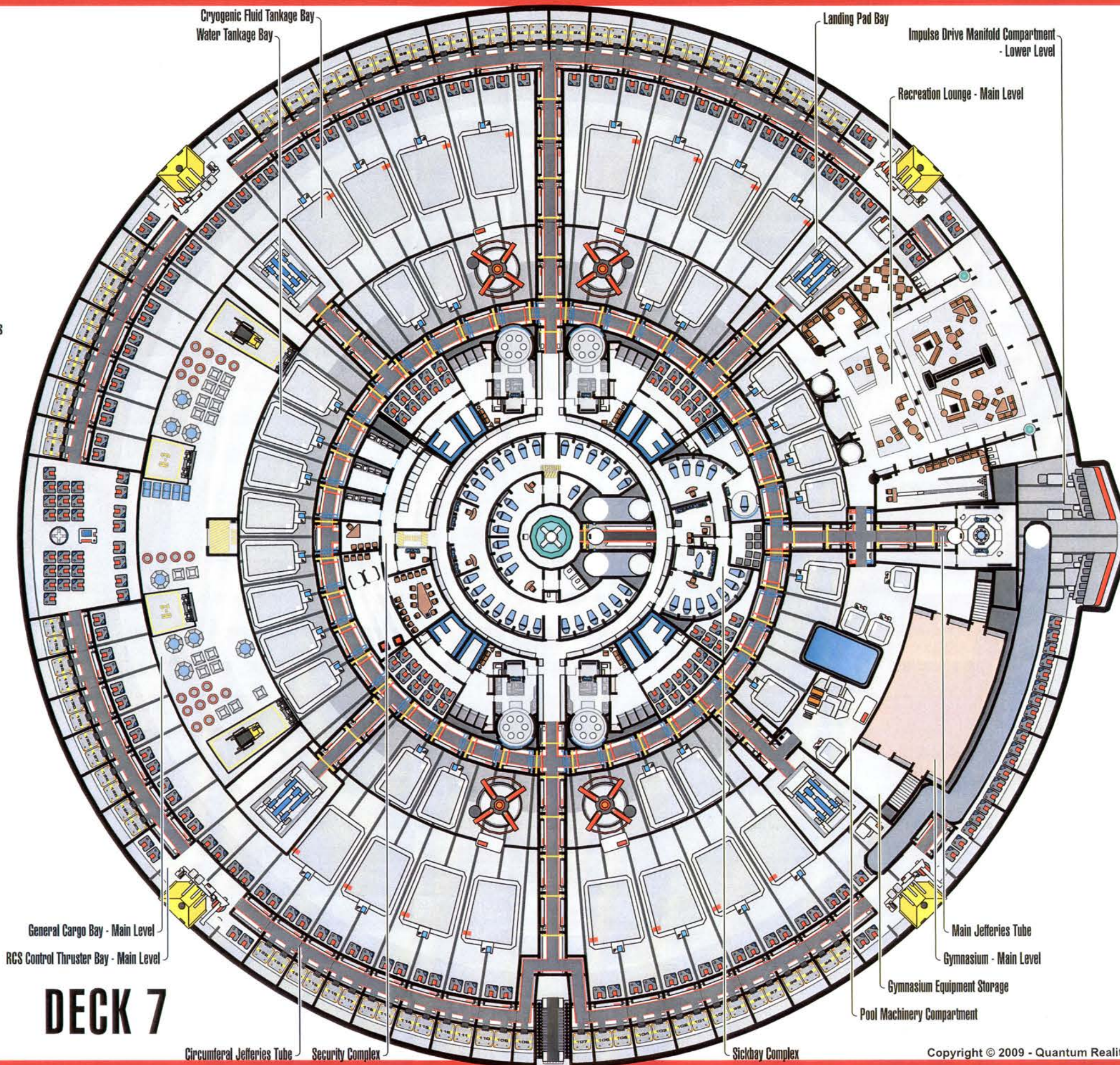
- Deflector Generator
- Engineering Insulating Force Field Generator
- Structural Integrity Field Generator
- Tractor Beam - Emitter
- Tractor Beam - Extension Track
- Tractor Beam - Aiming Gimbal
- Tractor Beam - Hatch

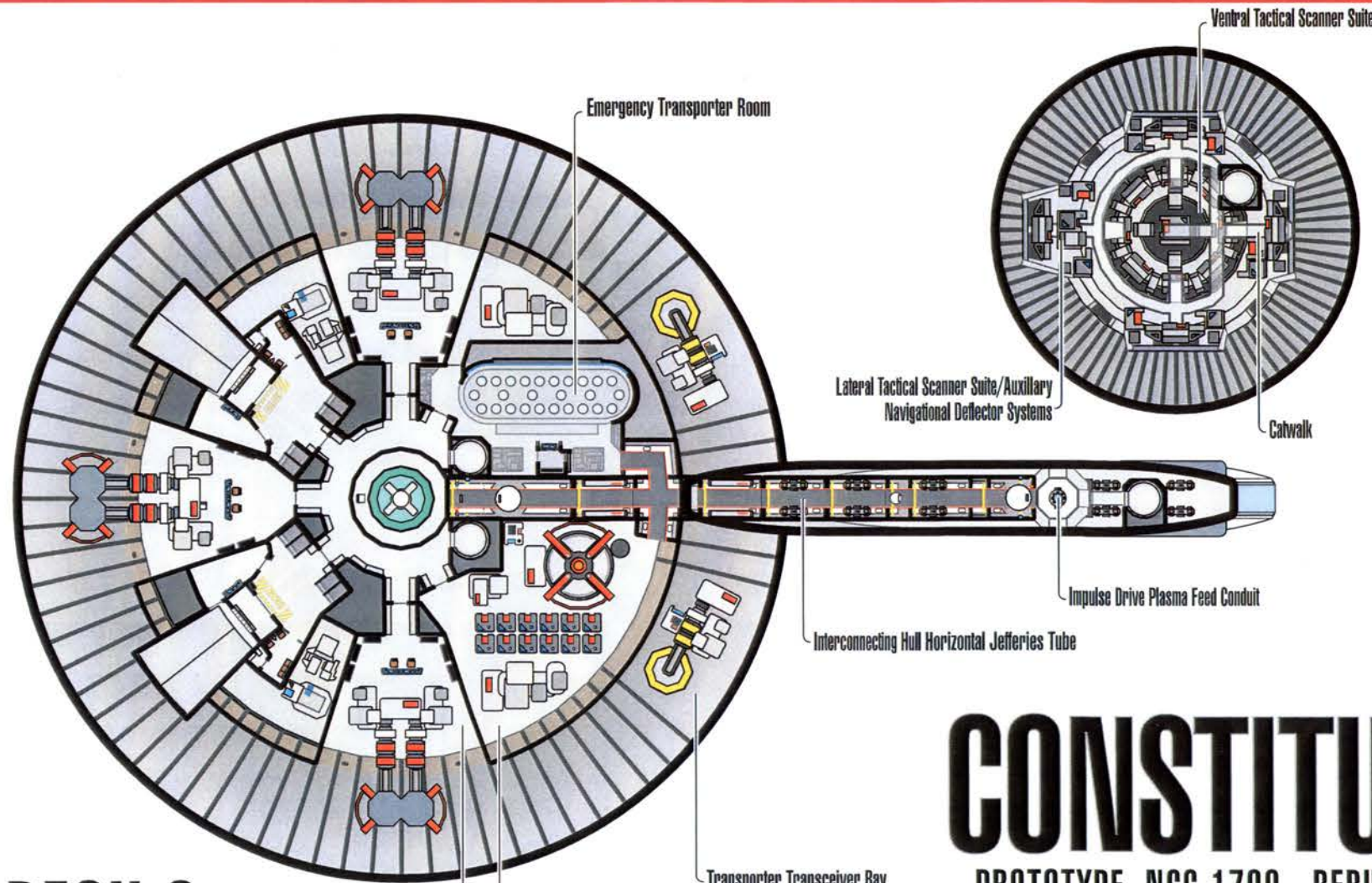
INFORMATION SYSTEMS

- Computer Core
- Navigation Sensor Array
- Lateral Tactical Sensor Array
- Ventral Tactical Sensor Array
- Long Range Sensor Array

MAIN ENGINEERING - ELECTRO-PLASMA SYSTEMS

- EPS Relay
- EPS Distribution Node
- Cold Fusion Battery Bank

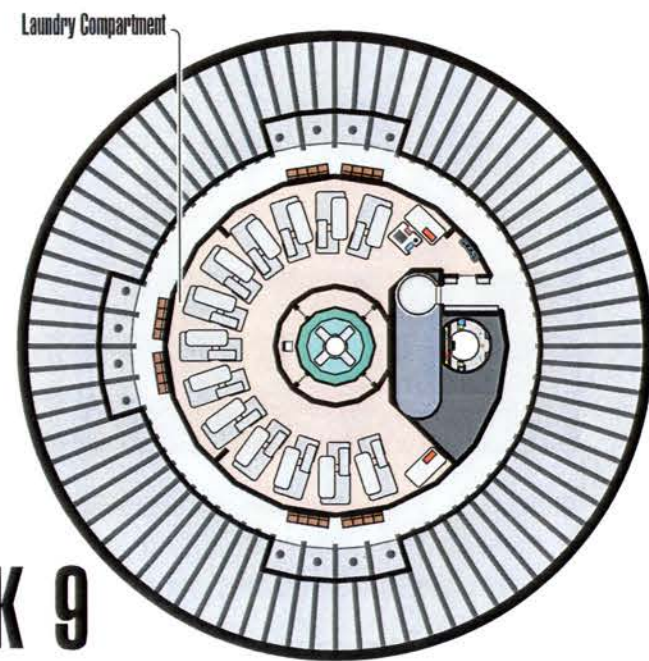




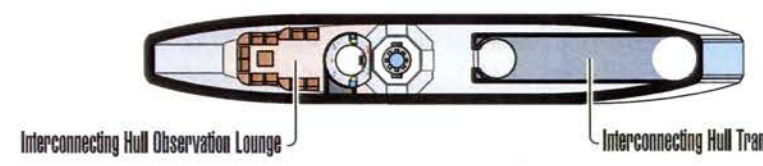
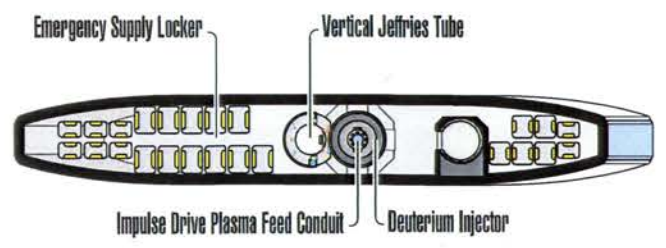
DECK 8

CONSTITUTION

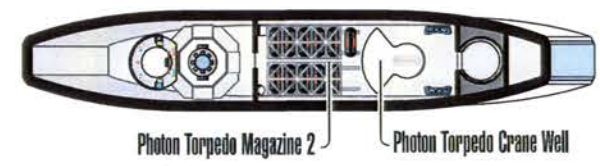
PROTOTYPE NCC-1700 - REBUILD 1.0
INTERNAL VIEWS SHEET 13/15



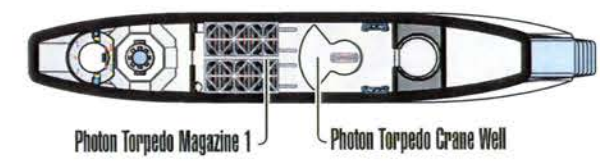
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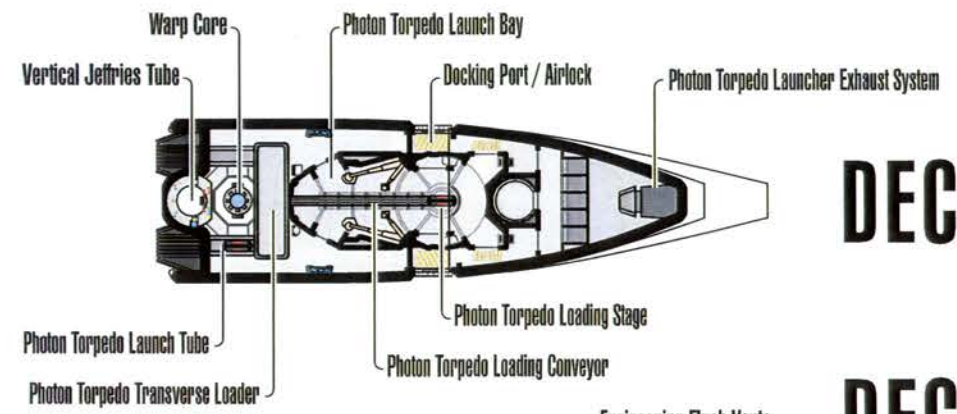
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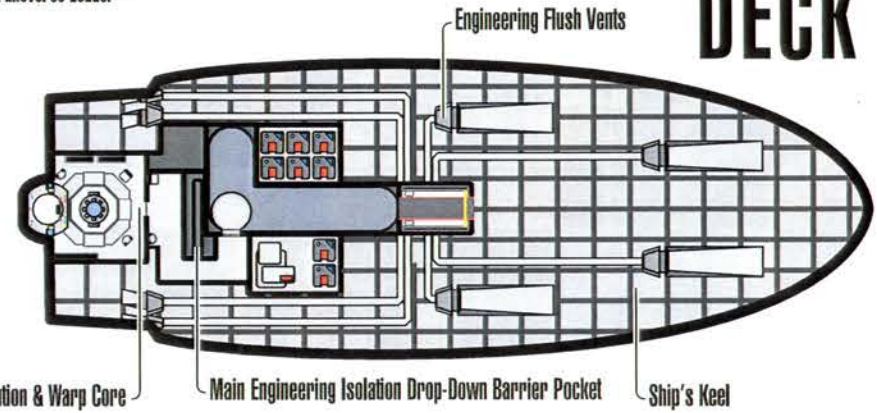
DECK 11



DECK 12



DECK 13



DECK 14

CONSTITUTION

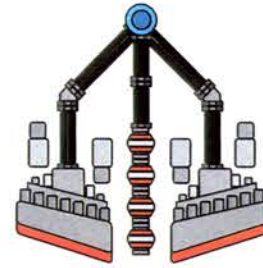
PROTOTYPE NCC-1700 - REBUILD 1.0

INTERNAL VIEWS SHEET 14/15

SYMBOL CHART

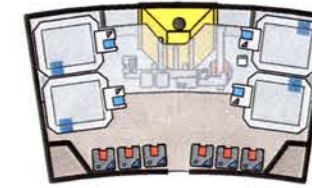
DECK 15

MAIN ENGINEERING - IMPULSE DRIVE SYSTEMS



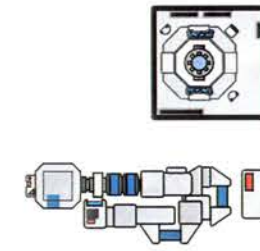
Warp Plasma Conduit
Auxiliary Fusion Generators
Impulse Exhaust Manifold

MAIN ENGINEERING - REACTION CONTROL THRUSTER SYSTEMS

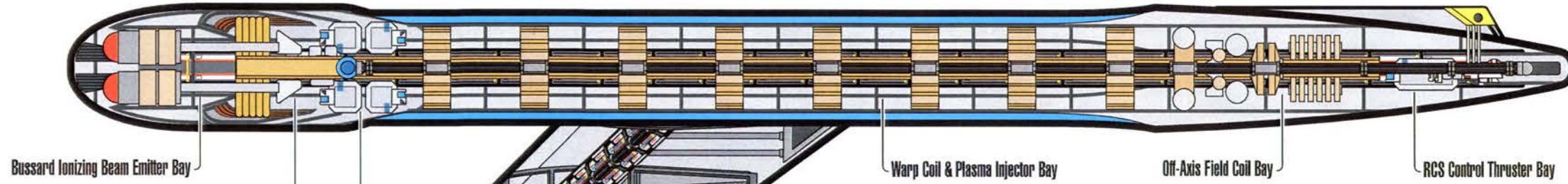


Fusion Generator (6.1 X 10¹⁰ Mw)
Vexed Exhaust Nozzle Plenum
Deuterium Tanks

MAIN ENGINEERING - WARP CORE SYSTEMS

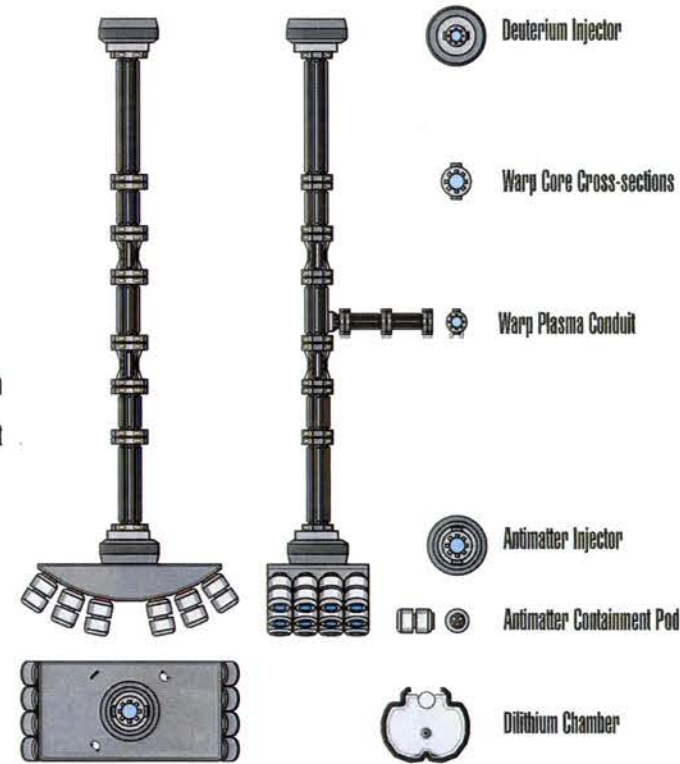


Warp Core Control Station
Deuterium Processor

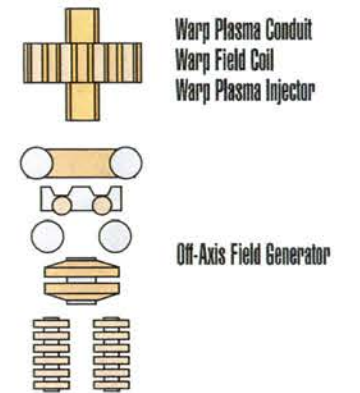


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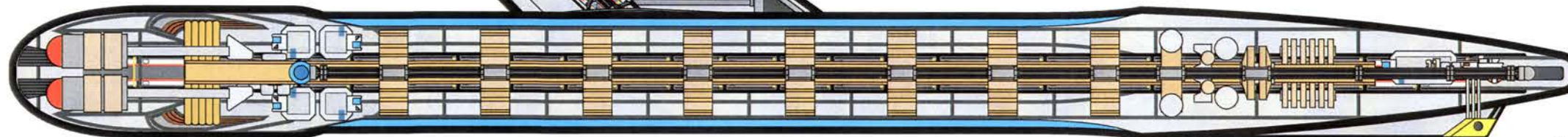
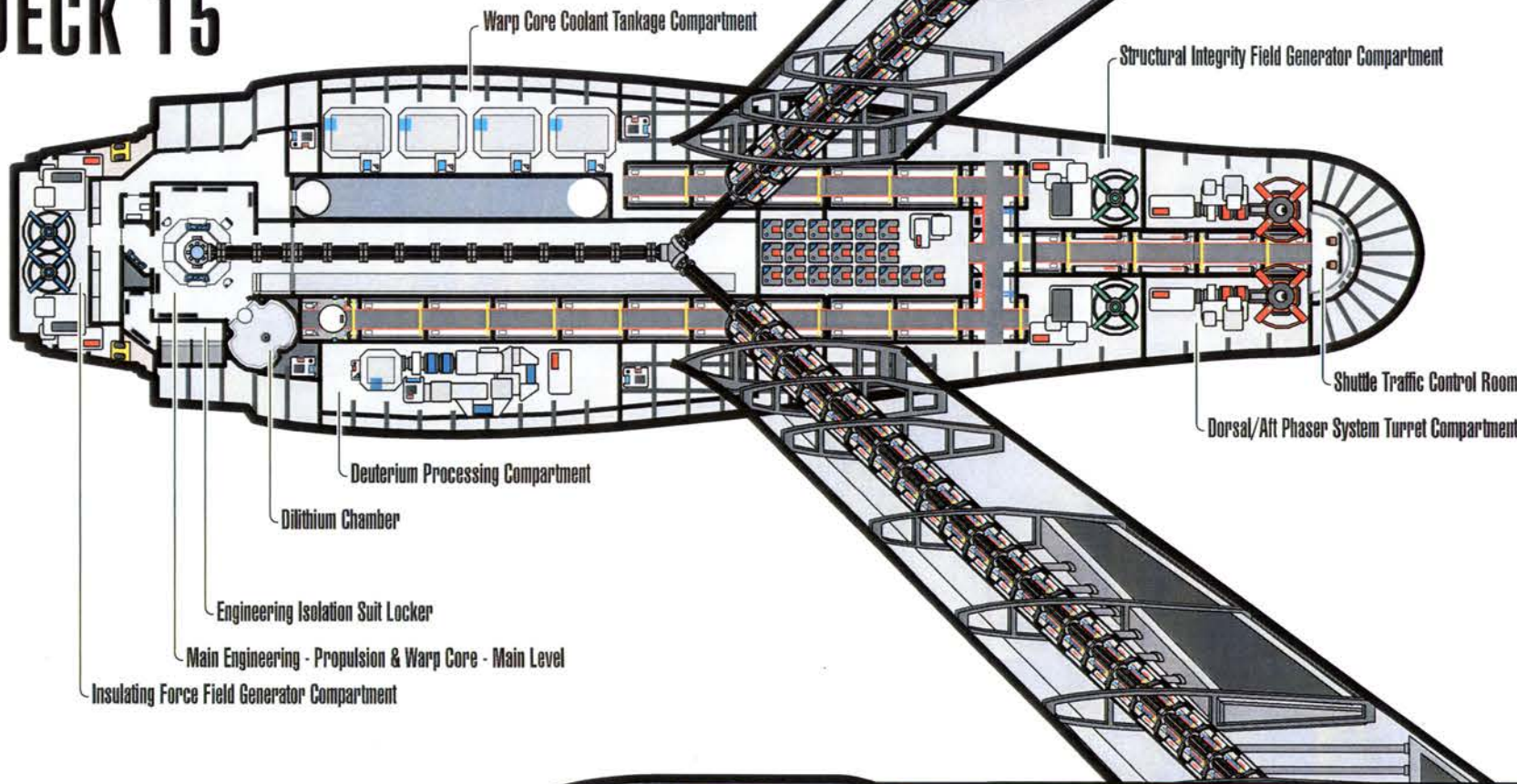
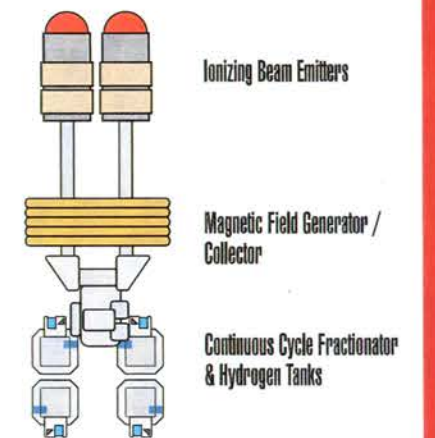
MAIN ENGINEERING - WARP CORE SYSTEMS

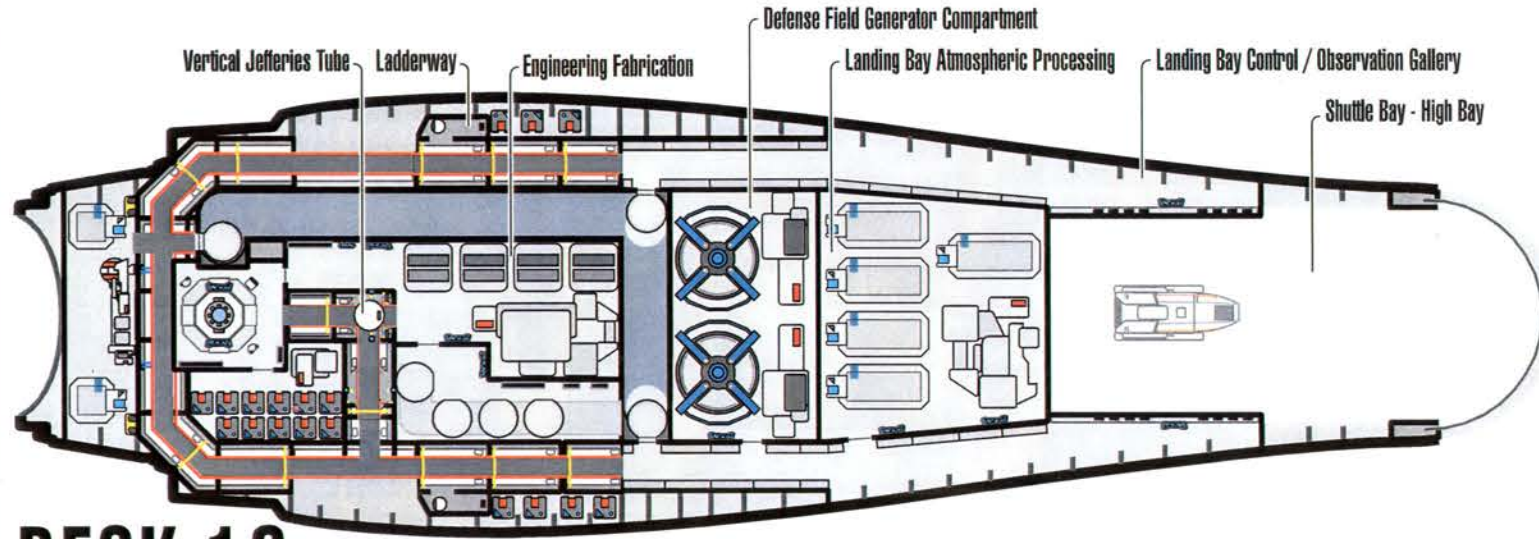


MAIN ENGINEERING - WARP DRIVE SYSTEMS

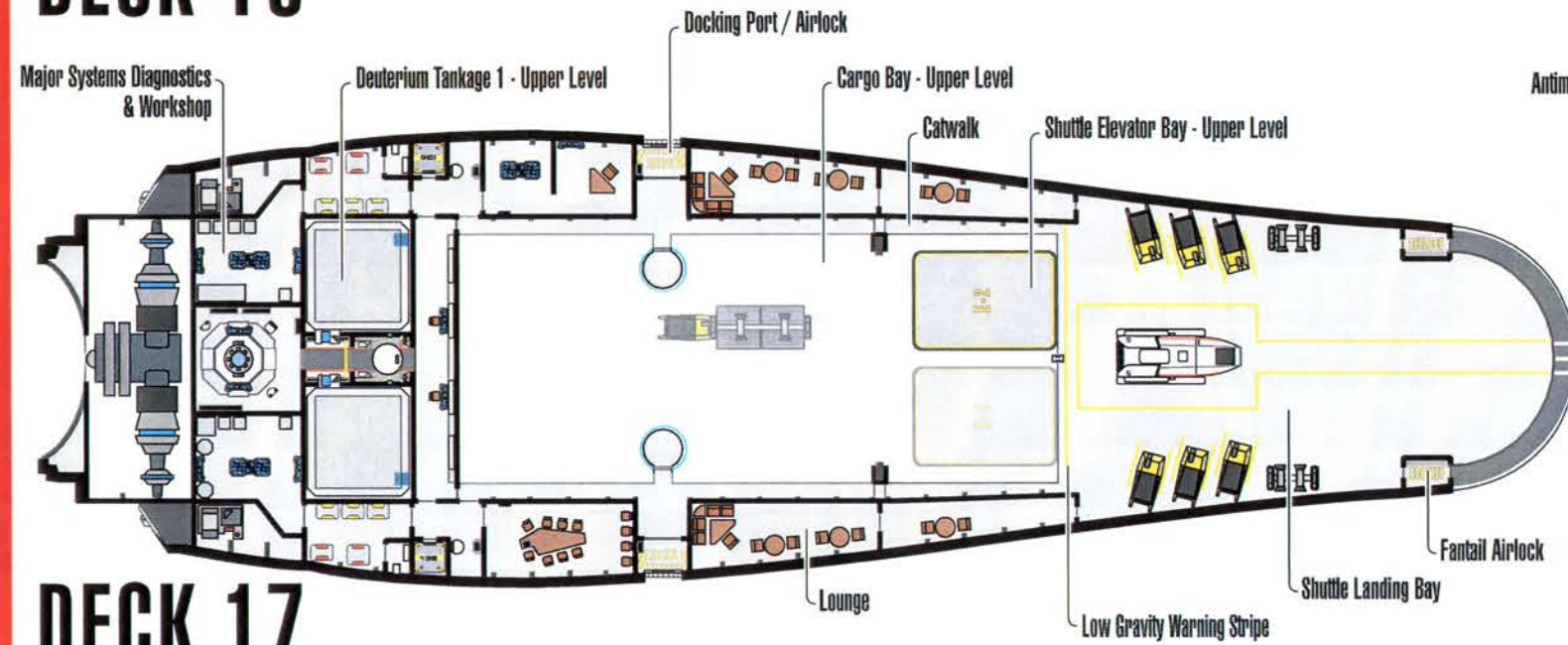


MAIN ENGINEERING - BUSSARD COLLECTION SYSTEMS

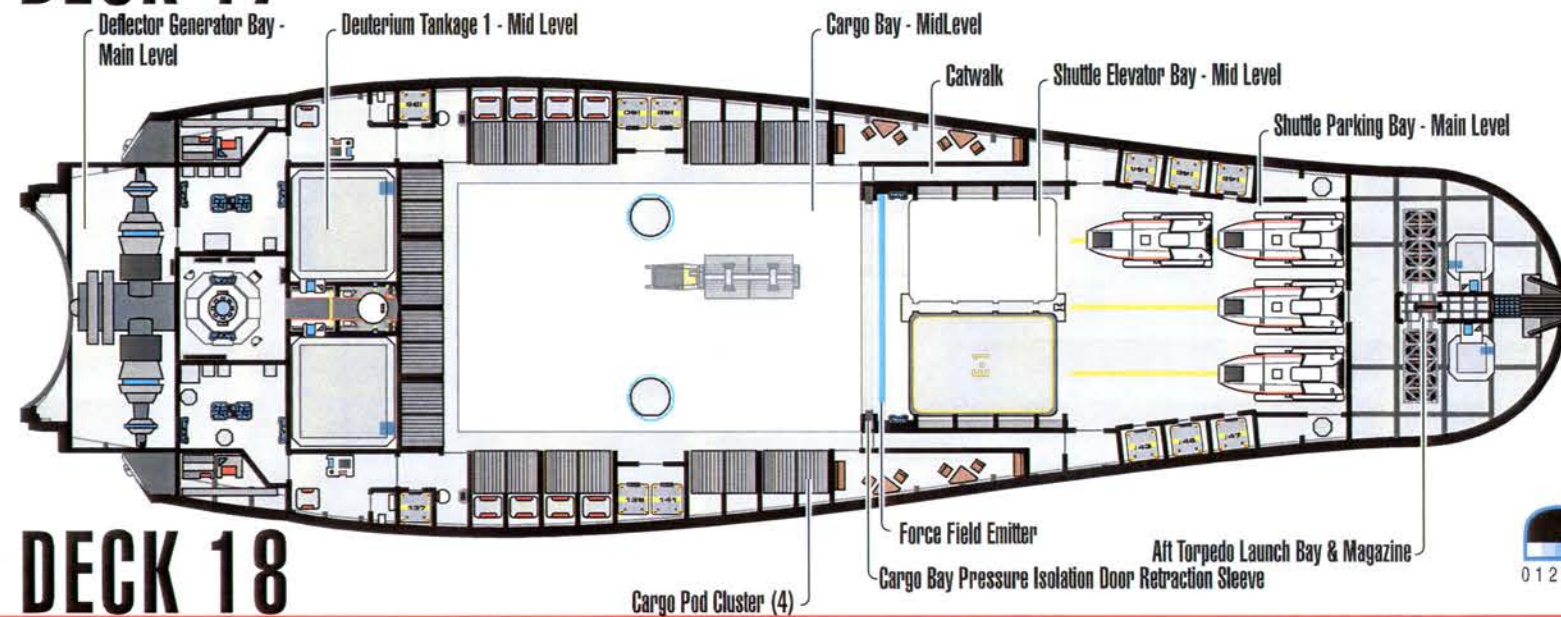




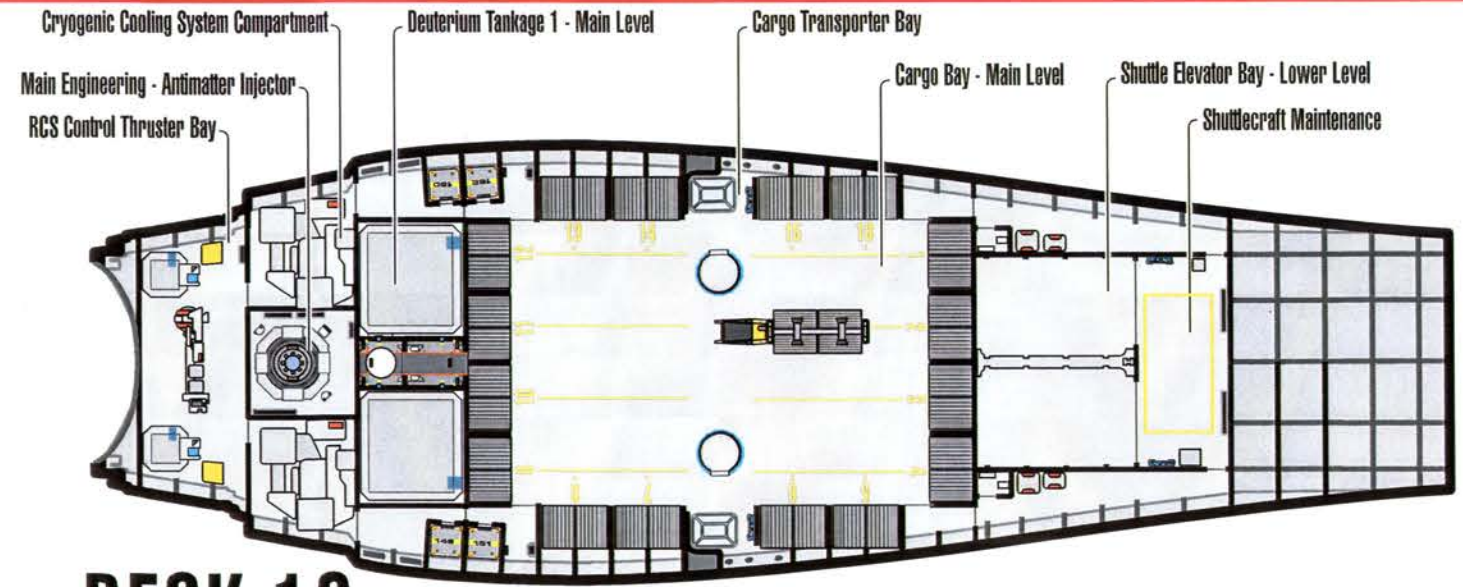
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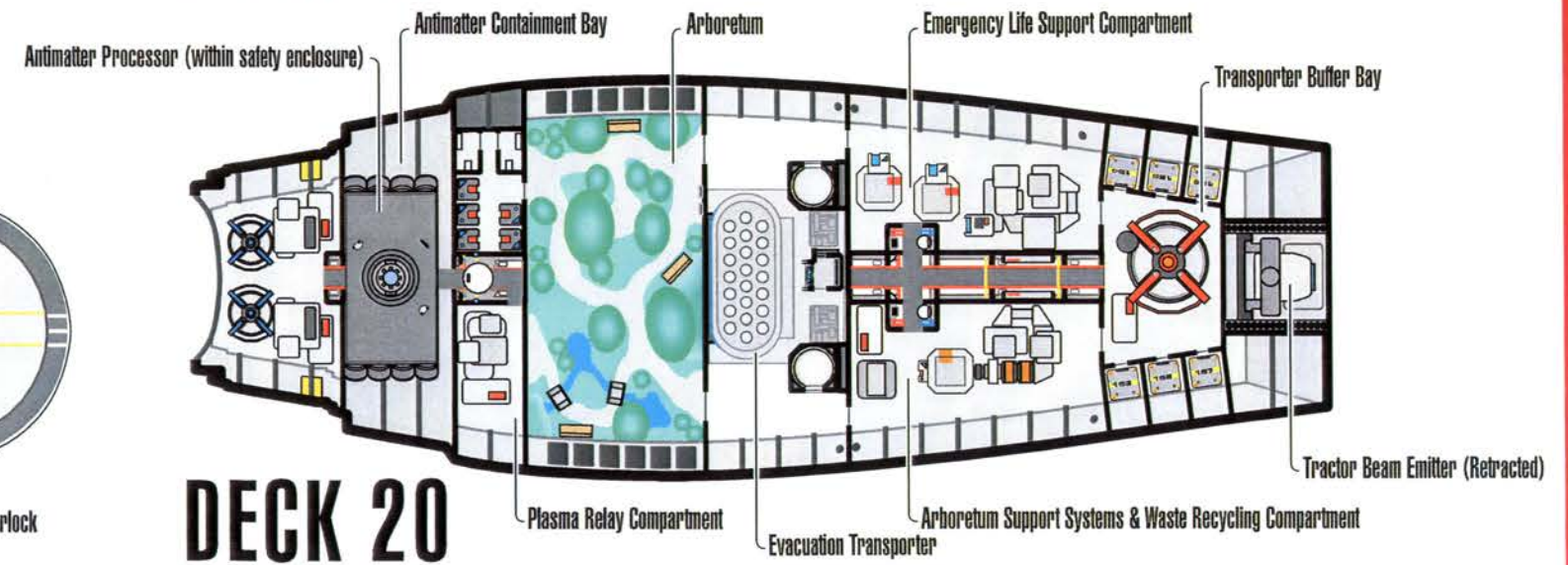
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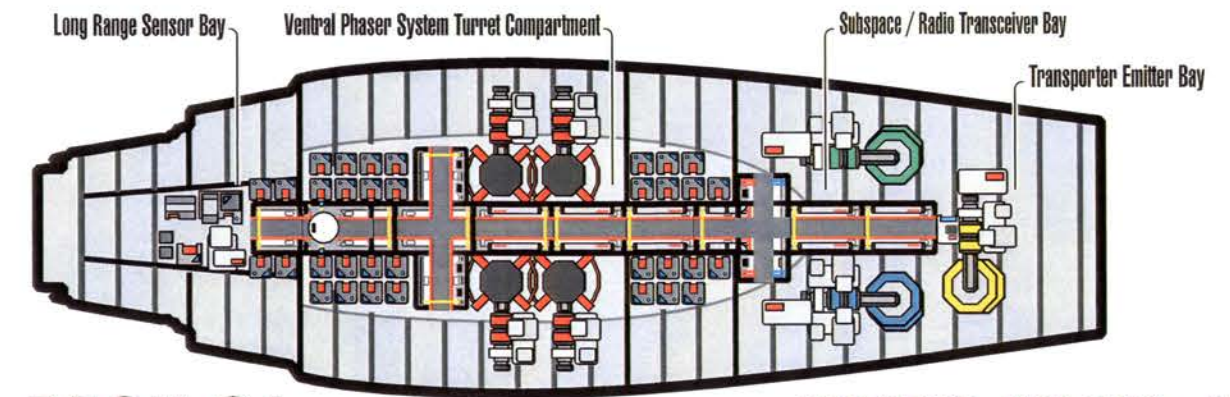
DECK 18



DECK 19



DECK 20



DECK 21

