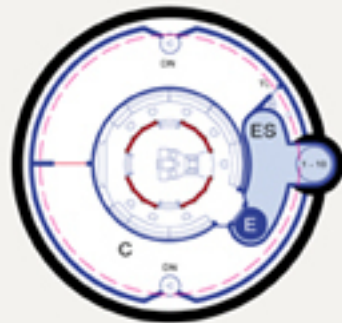
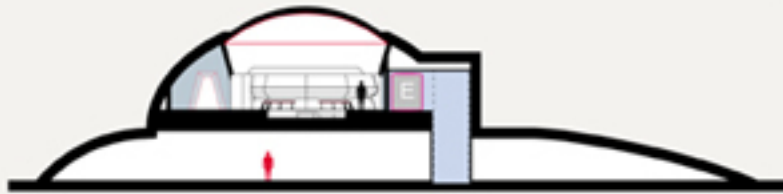


THE BRIDGE



LAYOUT AND VARIATIONS

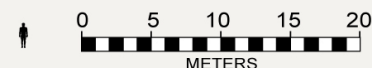
The Bridge of the U.S.S. ENTERPRISE (TOS)

LAYOUT: DECK 1 (ORIGINAL BRIDGE) PAGE 1 of 4

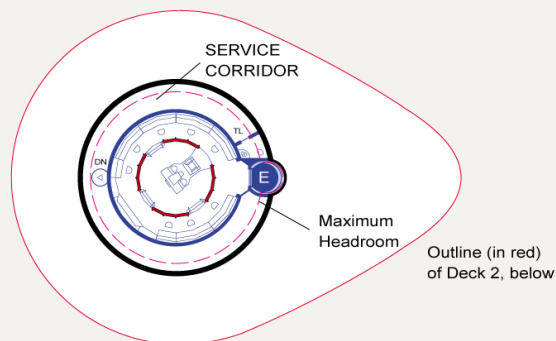
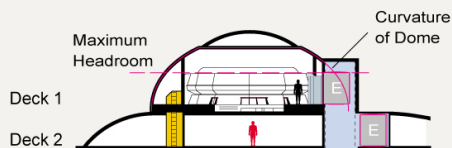
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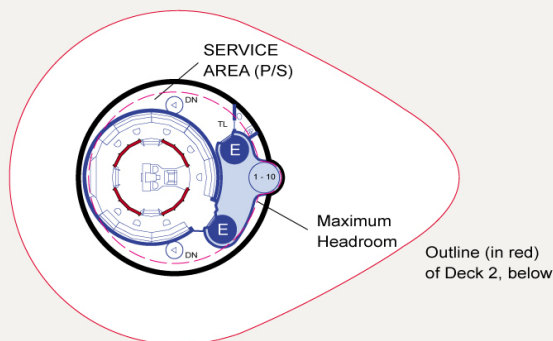
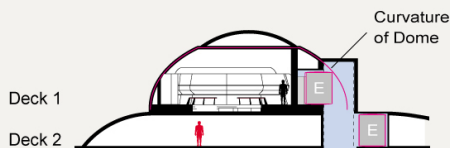
If printed 13 inches tall (from black-outlined edge to black-outlined edge) the scale of these drawings is 1/350.



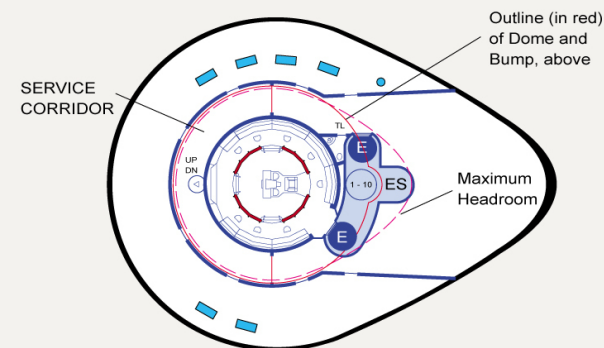
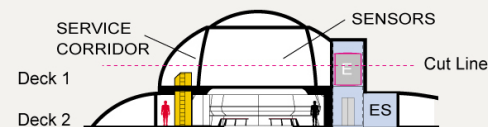
BRIDGE "A"



BRIDGE "B"



BRIDGE "C"



NOTES

BRIDGE A

The Bridge of the U.S.S. ENTERPRISE was intended to be under the dome on the studio model, as per the special effect in the first scene of THE CAGE. That original dome was taller. The bump aft of the dome was also taller. A turbo-elevator car easily fits inside the bump even if the recessed portion of the floor of the Bridge is completely above the ceiling of Deck 2. However, the curvature of the ceiling line of the dome does not allow a lateral turbo-elevator tube to fit behind the Bridge; the turbo-elevator car has to remain inside the bump. Therefore, the Bridge has to be rotated 36° counter-clockwise.

BRIDGE B

A forward-facing Bridge CAN fit but it has to be shifted toward the front. It is the only way a turbo-elevator car can fit under the curvature of the dome. This shift allows a lateral turbo-elevator tube - and even a spare turbo-elevator car - to fit behind the Bridge.

BRIDGE C

If the Bridge is lowered all the way to Deck 2 a lateral turbo-elevator tube and a spare turbo-elevator car both fit easily. But what of the dome? It could contain sensors and a service corridor . . . and now the Bridge is not as vulnerable, so all this might be a good thing.

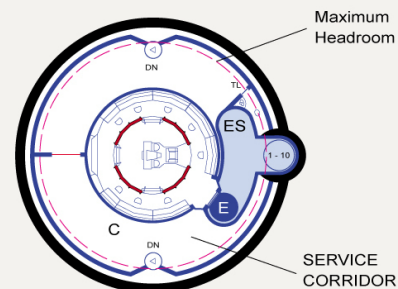
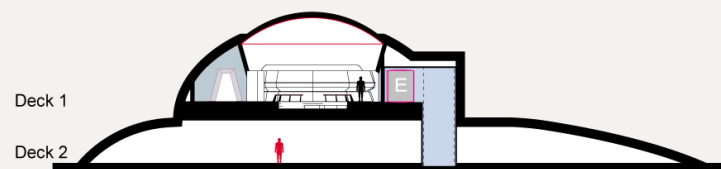
In at least one episode, a character left the Bridge and a moment later another turbo-elevator car was available for another character to leave. Spare turbo-elevator cars must be stored somewhere close. Solution "A" does not have a spot for a spare turbo-elevator car nearby.

BRIDGE D

If the length of the ship is enlarged from 947 feet (288.6 meters) to 1341 feet (408.7 meters) everything fits well. I chose that length so as to be able to fit ceilings 10 feet (3.05 meters) high, because that is what we saw in each episode.

After THE CAGE, the dome and the bump were reduced in height. Material was removed from the bottom of the dome and the bottom of the bump. See "Cut Line" on BRIDGE C, top right. That changed the fit and orientation of everything, as shown on the next page.

BRIDGE "D"



The Bridge of the U.S.S. ENTERPRISE (TOS)

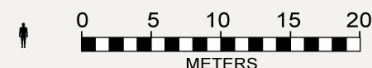
LAYOUT: DECK 1 (REVISED BRIDGE)

PAGE 2 of 4

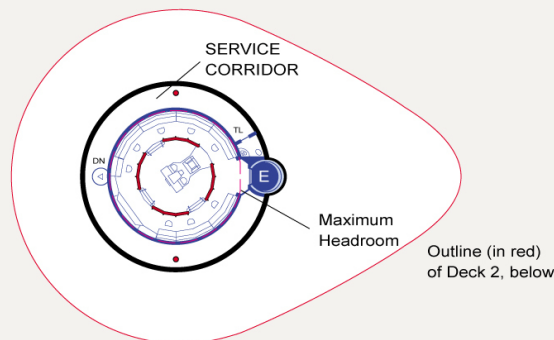
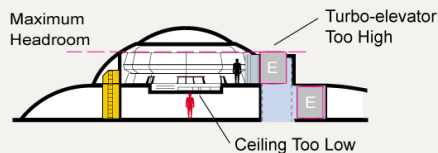
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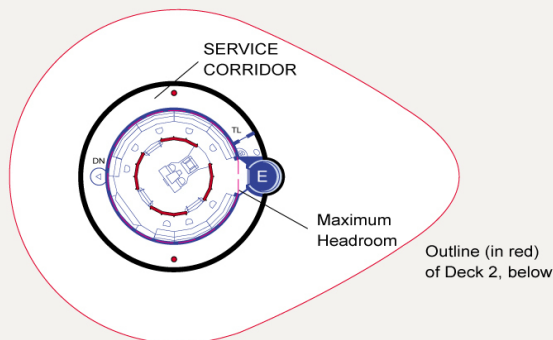
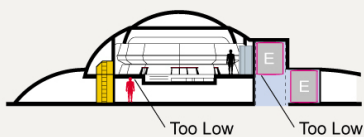
If printed 13 inches tall (from black-outlined edge to black-outlined edge) the scale of these drawings is 1/350.



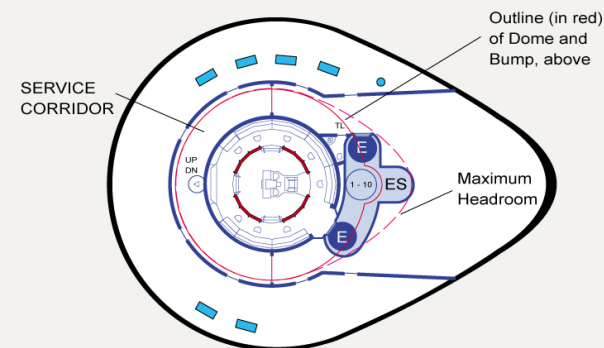
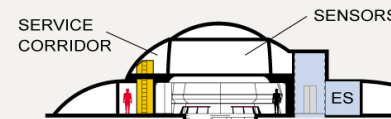
BRIDGE "E"



BRIDGE "F"



BRIDGE "G"



NOTES

BRIDGE E

When the shape of the Bridge on the model was modified, material was removed from the bottom of the dome and the bottom of the bump. The curvature of the ceiling line of the dome is now too low to allow the Bridge to be shifted forward as in Bridge B.

With the Bridge in the center of the dome, there is no space for a lateral turbo-elevator tube behind the Bridge, so the Bridge has to be rotated 36° to ensure the turbo-elevator car aligns with the bump. However, the material that was removed reduced the height of the bump too much. A turbo-elevator car no longer fits even if the entirety of the recessed floor of the Bridge is lower than the ceiling of Deck 2.

BRIDGE F

If the main floor of the Bridge is also dropped below the ceiling of Deck 2, the turbo-elevator car does finally fit inside the bump. But this makes the ceiling for most of Deck 2 too low. The Bridge is still rotated 36° but now the turbo-elevator car waiting inside the bump (to serve the Bridge) is too low, obstructing the shaft and preventing service to Deck 2.

BRIDGE G

If the Bridge is lowered all the way to Deck 2 a lateral turbo-elevator tube and a spare turbo-elevator car both fit easily. But what of the dome? It could contain sensors and a service corridor . . . and now the Bridge is not as vulnerable, so all this might be a good thing.

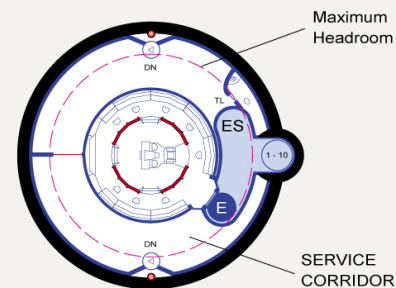
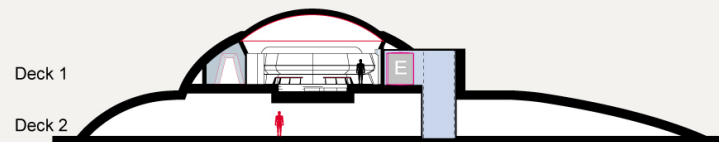
Only solution "G" has a spot for a spare turbo-elevator car nearby.

BRIDGE H

As mentioned on the previous page, the length of the ship can be enlarged from 947 feet (288.6 meters) to 1341 feet (408.7 meters) so as to be able to fit ceilings 10 feet (3.05 meters) high.

When the shape of the Bridge on the model was modified, material was removed from the bottom of the dome and the bottom of the bump. This reduced the height of the bump so much that a turbo-elevator does fit, but barely; the hull at the top of the turbo-elevator shaft is very thin. However, the Bridge faces forward! Also, a lateral turbo-elevator tube - and even a spare turbo-elevator car - fit behind the Bridge. Notice that the recessed floor of the Bridge does protrude below the ceiling level of Deck 2, but there is still a lot of headroom available.

BRIDGE "H"



The Bridge of the U.S.S. ENTERPRISE (TOS)

LAYOUT: DECK 1 (MODIFIED BUMP)

PAGE 3 of 4

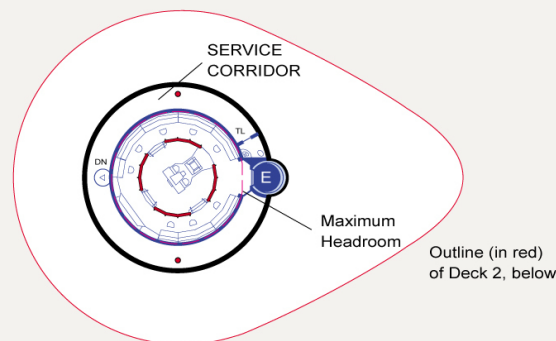
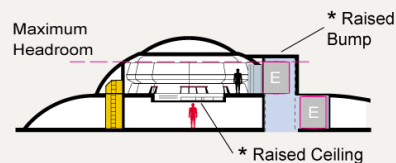
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If printed 13 inches tall (from black-outlined edge to black-outlined edge) the scale of these drawings is 1/350.



BRIDGE "E" - modified (*)



ALTERNATE BRIDGE CONFIGURATIONS

Starting with the shape of the dome and bump as they appeared after the second pilot episode BRIDGE E, a simpler, more practical solution is to raise the bump behind the dome slightly. Now a turbo-elevator car fits in the bump behind the Bridge. This is a good start. Internally, the thickness of the recessed floor of the Bridge can be reduced slightly to raise the ceiling of Deck 2.

Extending the bump to the port side, or to both sides, is even better. Now a lateral turbo-elevator tube fits behind the Bridge. The curvature of the ceiling line of the dome does not matter because the extended bump provides a new ceiling line.

The "Auxiliary Door" is optional, added here to satisfy what we see in STAR TREK - THE ANIMATED SERIES (TAS). Think of it as being hidden behind the display panel to port of the main viewing screen.

These small changes to the bump allow for smoother turbo-elevator operations, turbo-elevator storage spaces closer to the Bridge, and other (better, more logical) Bridge configurations. Below are three (3) such designs.

NOTES

VERSION 1

A storage space for a spare turbo-elevator exists to starboard. This makes the bump very wide but it is symmetrical.

VERSION 2

This second design minimizes the change to the bump. It is extended to the port side only, which adds another asymmetrical detail to the ship.

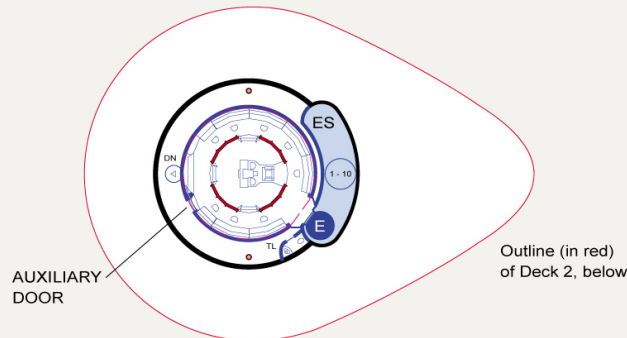
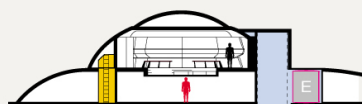
VERSION 3

The turbo-elevator storage space from VERSION 1 above has been replaced by a second access point for the Bridge. The work stations have been re-arranged around the Bridge, but overall, one station has to be deleted.

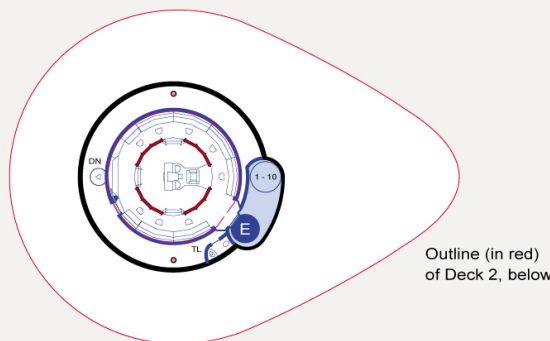
In all these Bridge designs, access to the Service Corridor can be via the auxiliary door (as seen in TAS), or the ladder behind the viewscreen, or the removable panels on either side of the elevator alcove.

Finally, the Bridge faces forward ... as it was always meant to be (in my humble opinion).

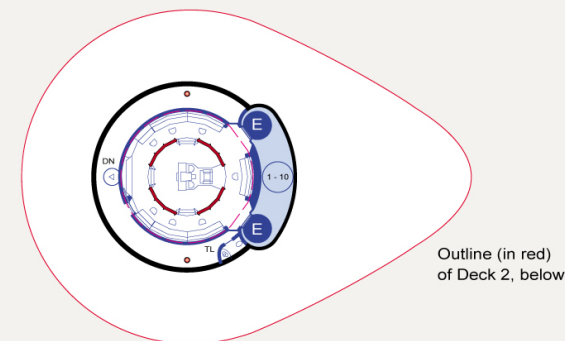
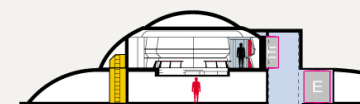
VERSION 1



VERSION 2



VERSION 3



The Bridge of the U.S.S. ENTERPRISE (TOS)

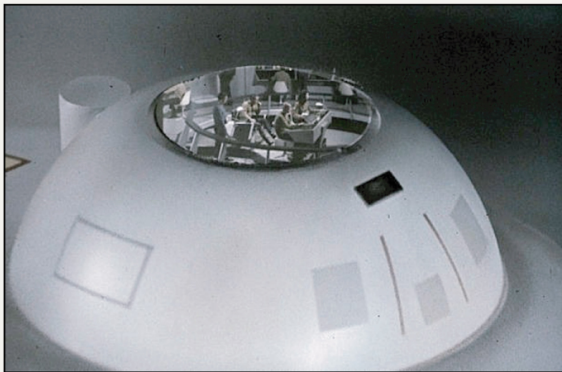
LAYOUT: DECK 1 (BRIDGE EVOLUTION) PAGE 4 of 4

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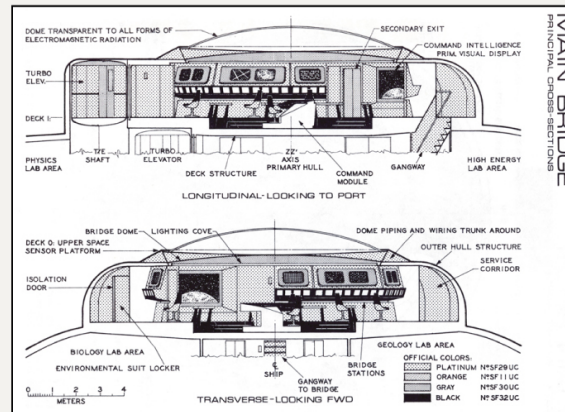
DRAWN BY: Jim Botaitis



1. THE CEILING OF THE BRIDGE



4. FROM THE FIRST PILOT EPISODE
"THE CAGE"



2. FRANZ JOSEPH'S TECHNICAL MANUAL



5. 6. FROM THE SECOND PILOT EPISODE
"WHERE NO MAN HAS GONE BEFORE"



3. AS DELIVERED IN 1964

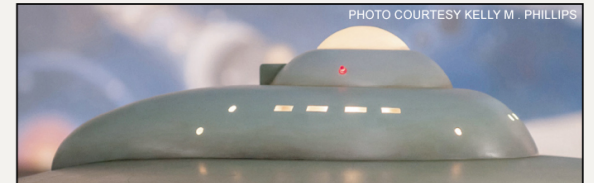


PHOTO COURTESY KELLY M. PHILLIPS

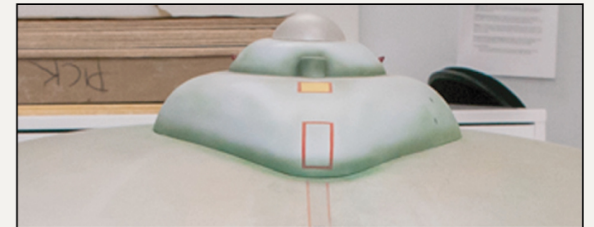


PHOTO COURTESY GARY KERR

7. 8. 9. THE BRIDGE AS IT APPEARED IN REGULAR PRODUCTION

NOTES

- The ceiling of the Bridge was rarely seen, but it does extend quite far above the horizontal red stripe.
- With all due respect to Franz Joseph, the shape, size, and curvature are all wrong. Compare to the following photos.
- The ship as it appeared when delivered for filming. The model had no internal lighting, and no markings on the Bridge.
- Grey and black rectangles were added at the front of the Bridge, as well as 2 vertical red stripes. A grey rectangular outline was also added on each side of the Bridge.
- When internal lighting was added a rectangular "window" was added at the front of the Bridge.
- When internal lighting was added a rectangular "window" was also added on each side of the Bridge.
- The Bridge was reduced in height (basically eliminating the lit rectangular windows) and a small red light was added on each side.
- The bump behind the Bridge was painted a darker colour.
- Compare the height of the bump to a figure of a human.