Attempt to rebuild the Temple of Hera II


Site: Poseidonia (Pæstum)
Type: Temple
Summary: Temple dedicated to Hera, adjacent to the older Temple of Hera I in the southern religious sanctuary of the site.
Date: 460 B.C.
Period: Classical
Material: The building material throughout is the local limestone, which was originally coated with white stucco to smooth over imperfections in the stone and to lend the appearance of marble to the temple.

Photography of the temple in Pæstum (Italia)

3D reconstitution modeled with trueSpace 2 by:

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Positioned, lighted and processed in LVS; textured and post-processed in Lightwave 5.5 by:

Arnold Gallardo
The cella building was elevated 1.40 m. above the surrounding peristyle; its lower two courses of orthostats, laid in isodomic fashion, are also preserved. The flooring of travertine slabs is preserved as well.

A staircase at the right of the entrance of the cella led to the roof; there is no evidence of an interior gallery. The roof was timbered, with terracotta tiles above. Cuttings for the roof beams are preserved, as are additional cuttings on the rear of the pediment walls for the main longitudinal beams. The interior colonnade of seven columns supported an architrave, which in turn rested on anta-like projections built into the cross-walls of the cella.

The architrave of the interior colonnade had no regulae or guttae, but a continuous crown molding. Above the lower colonnade in the cella was superimposed with an upper colonnade of smaller columns, which helped support the roof. The tapering of the lower columns was continued in the columns of this upper colonnade. The columns of the exterior peristyle had 24 flutes, instead of the canonical 20; the columns of the lower story of the interior colonnade had 20 flutes, while those of the upper story had 16. The capitals throughout have a rather flat, spreading echinus with three incised neck rings.

Plan:

The temple is peristyle, with 6 x 14 columns, a distyle in antis pronaos, and a distyle in antis opisthodomos. To the right of the cella door is a staircase that led to the roof; to the left was a small utility room. Inside the cella, a double colonnade of seven columns divides the cella into a nave and two side aisles. Above the lower colonnade, an upper colonnade of smaller columns exists to help support the roof.

Double angle contraction is employed in the temple: the corner intercolumniations at the flanks and fronts are reduced, in order for the triglyphs in the frieze above to be centered over the columns. This contraction is distributed over the first two intercolumniations at the corners. Certain optical refinements are also employed: the stylobate is curved upwards slightly towards the center, to avoid an impression of sagging; the horizontal cornices are also slightly curved; and the columns incline slightly inwards. These features suggest that the architect was influenced by developments in mainland Greek architecture.

3D reconstitution modeled with trueSpace 2, rendered with Cinema 4D XL 5.1
History:

The temple was constructed in ca. 460 B.C. There is no evidence of substantial later repairs or restorations, with the exception of the addition of a semicircular flight of steps at the east facade in the Roman period. Although the cella walls were removed to provide building material in the Byzantine period, the temple today is extremely well-preserved, with all columns of the peristyle in situ, and the superstructure preserved up to the horizontal and raking cornices.

Dimensions:

Overall dimensions of stylobate 24.26 m. x 59.98 m.
Dimensions of cella building 13.49 m. x ca. 45.30 m.
Width of ptera 4.83 m. (east); 4.38 m. (west).
Axial intercolumniation of exterior columns: 4.47 m. (fronts); 4.295 (contracted intercolumniation at front corners); 4.50 m. (flanks); ca. 4.36 m. (contracted intercolumniation at flank corners).
Lower column diameter of exterior columns 2.11 m. (fronts);
2.04 m. (flanks); lower column diameter of upper columns of interior colonnade 1.49 m.
Height of exterior columns 8.88 m.

If the proposed unit of measurement of 30 cm. = 1F is accepted, derived from an average intercolumniation of 4.50 m., De Waele 1980, 399, the proportions of the temple can be expressed as follows: overall dimensions 81 x 200 F; dimensions of cella 45 x 135 F; width of ptera 16 F (east), 14 F (west); axial intercolumniation 15F; lower column diameter 7.5 F; height of exterior columns 29.5 F; height of entablature 10 F.

Other Notes:

The temple contains some archaizing features, such as the low profile of the echinus of the column capitals, the use of 24 flutes on the columns instead of the canonical 20, the presence of fourteen columns along the flanks instead of thirteen, and the generally squat proportions of the columns and entablature. However, the optical refinements, and the knowledge of the theory of angle contraction, compensate for these archaizing features and lend a dynamic and harmonious aspect to the temple. The temple is devoid of sculptural decoration: neither the metopes nor the pediments were sculpted.

Due to its large size, the temple was believed by early travellers to have been dedicated to Poseidon, titular divinity of the site of Poseidonia. The presence of numerous terracotta votive reliefs, however, indicate that the temple was the second temple to be dedicated to Hera at Paestum, adjacent to the Temple of Hera I, the
so-called Basilica at the site. Unlike other temples at the site, which combine Ionic and Doric architectural features, the Temple of Hera II is purely Doric, perhaps the only concession to the Ionic order being the absence of regulae and guttae above the architrave, and in their place a continuous crowning molding.