

# UNIVERSITY OF CHICAGO

## EXCAVATIONS AT ISTHMIA, 1989: I

(PLATES 1–19)

*In memoriam*, Oscar Broneer, 1894–1992

THE EFFORTS of the University of Chicago Excavations at Isthmia since 1976 have been directed towards the final publication and conservation of objects recovered in Oscar Broneer's excavations, 1952–1967.<sup>1</sup> Although considerable progress on the catalogues was made each season, important questions remained about the context of the objects and about the history of deposition in the areas to the east and north of the central plateau where Broneer had identified two major deposits of debris, one from the destruction of the Archaic Temple of Poseidon *ca.* 470 B.C. and the other from a fire in the Classical Temple in 390 B.C. Furthermore, questions had arisen about the form and date of the Archaic Temple as published in *Isthmia* II. In addition, more Protogeometric and Early Geometric pottery was found in the context containers than had been previously recognized, giving rise to the hypothesis that sacrifices on the plateau may have begun much earlier than had been suggested. Other questions included the date and route of the earliest phases of the Corinth–Isthmus road, the chronology of the Early Stadium, and the location of a Greek shrine to Melikertes-Palaimon. On the ridge south of the sanctuary Broneer had uncovered a small complex of houses and workshops known as the Rachi Settlement, but many structures remained unexcavated, and there, too, more information about the context of the buildings was needed before the architecture and objects could be fully understood. After preliminary topographical and stratigraphic investigations were carried out in 1985–1988,<sup>2</sup> a long season of excavation was undertaken on and around the central plateau of the sanctuary and on the Rachi, from August 16 to November 29, 1989.<sup>3</sup> The results form the body of this

<sup>1</sup> Works frequently cited are abbreviated as follows:

*Isthmia* I = O. Broneer, *Isthmia*, I, *The Temple of Poseidon*, Princeton 1971

*Isthmia* II = O. Broneer, *Isthmia*, II, *Topography and Architecture*, Princeton 1973

*Isthmia* III = O. Broneer, *Isthmia*, III, *Terracotta Lamps*, Princeton 1977

Abbreviations used in the catalogue of deposits at the end of each section are given in note 47 below.

For a summary account of the Isthmian Sanctuary at the end of Broneer's excavations, see O. Broneer, "The Isthmian Sanctuary of Poseidon," in *Neue Forschungen in griechischen Heiligtümern*, U. Jantzen, ed., Tübingen 1976, pp. 39–62. A list of Broneer's publications to that date appears in *Hesperia* 43, 1974, pp. 396–404. In 1976 Elizabeth Gebhard succeeded Broneer as director of the University of Chicago Excavations at Isthmia.

<sup>2</sup> Details of the geomorphological survey done in 1987 and 1988 using subsurface radar, a proton magnetometer, and electromagnetic conductivity meter will be published separately.

<sup>3</sup> We thank Dr. Ioannis Tzedakis, then Director of Prehistoric and Classical Antiquities of the Greek Archaeological Service, for permission to carry out excavations on behalf of the University of Chicago under the auspices of the American School of Classical Studies at Athens. The warm interest and support of Dr. Phani Pachygianni, Ephor of Prehistoric and Classical Antiquities, Nauplion Museum, and Mrs. Zoe Aslamatzidou are very much appreciated. We are indebted to Professor William D. E. Coulson, Director of the American School of Classical Studies at Athens, for his continuing interest and support and to his staff in Athens for their assistance. We are particularly grateful to Dr. Charles K. Williams, II, Director of the

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report.<sup>4</sup> Discoveries from the Rachi Settlement will be the subject of a separate report by Virginia Anderson-Stojanović. At this point the major outlines of the development of the sanctuary are clear, although many details will require further study.

In almost all cases the trenches opened in 1989 underlay earlier trenches dug by Broneer. Because of this and the fact that the new material is closely related to the discoveries of the earlier excavations, two trench plans are included, one for 1989 (Fig. 2) and one for the 1952–1980 excavations (Fig. 3).<sup>5</sup> Before the 1989 season, the surface elevation of deposits in most trenches surrounding the Temple of Poseidon was that of the temenos in the 2nd century after Christ (*ca.* –1.00 to –1.50 m.). East of the Early Roman temenos wall, Broneer exposed the surface of the Archaic temenos, –2.25 to –4.30 m. (East Terrace 4 in the series of terraces described below). In the southeast area he cleared the racecourse and starting line (elev. –2.09 m.) of the Early Stadium and the Roman Palaimonion precincts I–V (Pl. 7). At the north and northwest sides of the temenos, he excavated a large portion of the Archaic deposits to a depth of –2.68 to –7.73 m.

In 1989, elevations for the beginning and end of a basket were taken at the four corners and in the center of the trench.<sup>6</sup> Almost all soil was dry-sieved and the residue retained; samples from selected areas were taken for water sieving.<sup>7</sup> After excavation, the baskets were grouped in Lots according to the sequence of their deposition, and the Lots of a given area were then assembled under headings representing phases: Construction, Use, and Destruction. A summary of the remains pertaining to each phase is given here in the catalogue

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Corinth Excavations, and Dr. Nancy Bookidis, Assistant Director, for their valuable assistance and counsel during the preparatory period and the excavation season. None of our work would have been possible without a three-year grant from the National Endowment for the Humanities (#RO-21847-89) that was matched by generous contributions from Hunter Lewis, E. C. Whitehead, E. E. Cohen, W. D. Petersen, and T. K. Brooker. We also thank Professor Philip Gosset, Dean of the Humanities Division of the University of Chicago, and his staff for their support and encouragement throughout the project.

Trench masters were Alison Adams, Keith Dickey, Timothy Gregory, Bruce King, Elizabeth Langridge, Jeanne Marty, Linda Mol, Julia Shear, Carol Stein, Dragan Stojanović, Jennifer Tobin, and Grace Ziesing. Preliminary analysis of the pottery was carried out during the excavations by Karim Arafat, John Hayes, and Catherine Morgan with the help of Julie Bentz later in the season. The museum staff included Lauri Hlavaty (recorder), Helen Kingsley and Stella Bouzaki (conservators), Heather Goodhue, Julia Davey, Jane and Cynthia Thornet (pottery), and Jean Perras (secretary). Field photography was done by Catlin Rockman and object photography by Ino Ioannidou and Lenio Bartzioti. Frederick Hemans served as Assistant Director and Chief Architect and was, in the latter capacity, assisted by Ab Koelman and Donald Jones. The foreman was Aristomenes Arberores. Elizabeth Gebhard was Field Director and Principal Investigator.

Unless specified otherwise, drawings are by F. P. Hemans.

<sup>4</sup> In order to present the new material in a historical sequence, this preliminary report is organized chronologically by area. Because of the length, it is divided into two parts that will be published separately: Part I, the Mycenaean period to the destruction of the Archaic Temple, *ca.* 470 B.C.; Part II, the Classical period through the 3rd century after Christ. All dates in Part I are B.C. unless stated otherwise.

<sup>5</sup> In the following discussion, the 1989 trenches will be designated by the prefix 89-; in a list of 1989 trench numbers, the prefix to the first trench will apply to the entire series. In the catalogues of deposits, after the 1989 trench, the equivalent trench or trenches in Broneer's excavations is given in parentheses. The same datum point (53.37 m. above sea level) was used for both; it is located at the east end of the north cella wall in the Classical Temple (*Isthmia* I, p. 59, note 3).

<sup>6</sup> The x,y,z coordinates and elevations for all baskets are entered in the site data base.

<sup>7</sup> The Corinth Excavations kindly lent us equipment for water sieving and weighing. In 1990 the faunal material was studied by David Reese, and Julie Hanson briefly examined the flora; soil samples were exported for analysis in the United States.

of deposits at the end of each section.<sup>8</sup> Inventoried artifacts are listed by title followed by their inventory number in the Isthmia Museum.<sup>9</sup>

For the report on the Mycenaean and Early Iron Age pottery we have adopted a different approach, because no intact deposits prior to the 8th century have been recovered. In both the earlier and the 1989 excavations, Mycenaean and Early Iron Age sherds were found mixed with later material that was redeposited in the north and east terraces and in the second and third floor surfaces within the Archaic Temple. Their quantity, especially of Protogeometric cups, makes it likely that they were not casually left by passers-by but are remains of activities that took place on and around the central plateau of the sanctuary. Catherine Morgan presents here an overview of these wares, using examples from the old and new excavations at Isthmia. On the basis of vessel shapes, she makes suggestions about their function at the site.

### THE CENTRAL PLATEAU BEFORE THE ESTABLISHMENT OF THE SANCTUARY OF POSEIDON

At the beginning of our planning for excavation, when Broneer's trenches were examined in detail, it became clear that the central plateau on which the Temple of Poseidon stood had undergone a number of alterations during the history of the sanctuary. In order to understand how the earliest levels were related to the original landscape and what effect later alterations had on earlier remains, it was necessary to clarify the original configuration of the plateau.

Perhaps most important for an understanding of the early sanctuary is the fact that the central plateau was originally triangular. Its apex pointed northeast towards the Isthmus, and its base lay along the lower slopes of the ridge known locally as the Rachi (Fig. 1, Pls. 2–6). Broneer's excavation dump covers the point, north of the Roman temenos, but the natural conformation of the slope at the sides is visible in the aerial photographs, and it is indicated by the –2 to –5 m. contour lines in Figure 1.

The second feature of the plateau that is no longer visible is its sloping surface. Before construction of the Archaic Temple, the lower slope of the Rachi seems to have extended to the northeast as far as the 0.00 m. contour line in Figure 1. When the first temple was built, the bedrock was leveled, and there are tool marks from this operation beneath the Archaic Temple (p. 23 below). More of the surface was cut back to accommodate the northwest end

<sup>8</sup> Ceramics analyses for the Lots were prepared by Catherine Morgan (Mycenaean and Early Iron Age), Karim Arafat (Archaic), Julie Bentz (Classical and Early Hellenistic), and John Hayes (Late Hellenistic and Roman). The baskets comprising a Lot were not physically combined.

<sup>9</sup> We are indebted to David Mitten and Alastair Jackson for information on the terracotta figurines and on arms and armor, respectively. Anton Raubitschek, assisted by Helga Butzer-Felleisen, examined the other metal objects and included them in the late Isabelle Raubitschek's forthcoming volume on metal objects in the *Isthmia* series. The coins were identified by Liane Houghtalin, who is preparing their final publication.

In the case of inventoried ceramic vessels and sherds, only those contemporary with the deposit are listed. In Catherine Morgan's discussion of the Mycenaean and Early Iron Age pottery below, selected examples from the 1989 excavations are presented in the catalogue, together with unpublished material from Broneer's campaigns. A catalogue description of other important objects from 1989 will be included in Part II of this report. All objects are fragmentary unless specified otherwise. Pottery and roof tiles are Corinthian if no other source is mentioned.

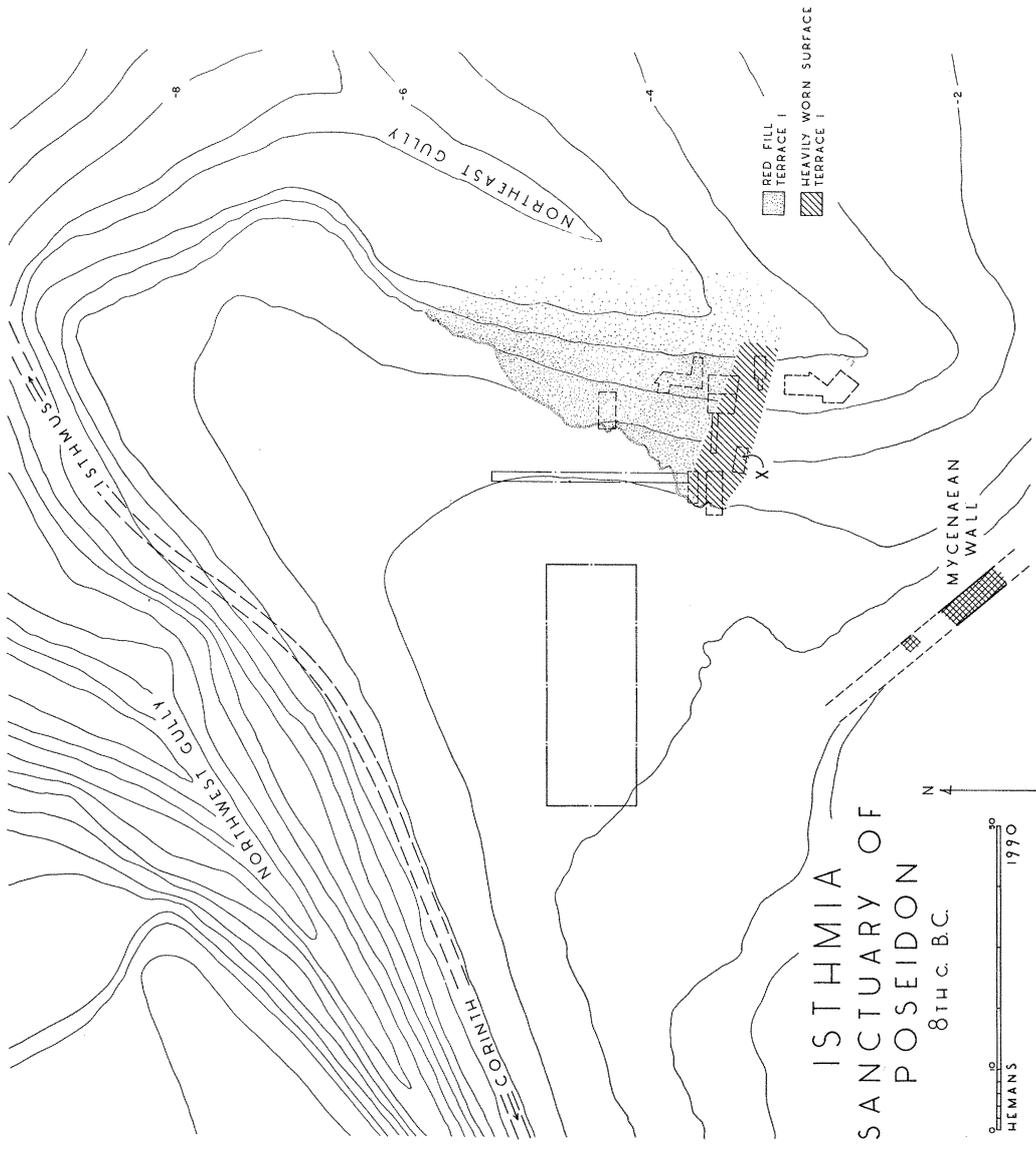


Fig. 1. East Terrace 1 in the 8th century B.C. Hatching shows area of heaviest use. Restored contour lines at 2 m. intervals with reference to the site datum point at 53.37 m. above sea level. Feature in Tr 66 marked X: detail in Fig. 4

of the Early Stadium (Fig. 14, Pl. 6). Finally, in the 2nd century after Christ, the entire south side of the plateau was leveled to form a large, rectangular temenos enclosed by colonnades. Outside the corner formed by the west and south stoas, the original surface of the rock slope is still visible.<sup>10</sup> Beneath the west stoa the sunken area that Broneer called the West Waterworks was almost certainly inside a cave at the time it was built in the 5th or 4th century B.C. (Pls. 6, 7).<sup>11</sup> The top layer of rock was removed with construction of the Roman temenos.

The geological formation of the plateau is one that is common in the Corinthia: layers of limestone and conglomerate interleaved with marl. The rock of the plateau as it is today consists of limestone at the southwest, and, at the north and east, of conglomerate with veins of sandstone. The change is evident on a north–south line running approximately through the center of the area.<sup>12</sup> At the northwest, the plateau is cut sharply by a gully (Pl. 6), and excavations have revealed the steeply sloping surface of its southeast side. The Archaic road found its way along a level section in this side of the gully (Fig. 5), but from the Classical period onwards the road ran farther north and was supported on a broad terrace. At various periods rock was quarried along the northwest sides of the plateau and the gully.

Along the eastern side of the plateau the irregular edge of bedrock running in a north–east–southwest direction is visible today (Figs. 1, 15, Pl. 6). Beneath its jagged lip, the underlying marl slopes down to the northeast gully.<sup>13</sup> During the early centuries in the history of the sanctuary much effort was directed towards constructing terraces along this edge of the plateau to modify the steepness of the eastern slope. After the 5th century B.C., the rocky edge was covered by terracing.

At the southeast corner of the triangular plateau the natural surface of the Rachi is preserved in the area between a heavy wall of Cyclopaean masonry and the edge of the stadium (Figs. 14, 15). It has a total decline of two meters. At this point the wall ran in a southeast–northwest line across the lower slopes of the Rachi, and if it continued to the northwest, it would have encountered the Archaic road and the northwest gully (Fig. 1).<sup>14</sup> Any remains of the wall on the plateau would have been removed with the leveling of the precinct in the 2nd century after Christ, but it seems to have been dismantled much earlier, perhaps in the 5th century B.C.<sup>15</sup>

<sup>10</sup> It lies within the modern schoolyard bordered by the wall visible in the aerial photo, Plate 2.

<sup>11</sup> *Isthmia* II, pp. 27–29. Broneer said that “it cannot now be determined whether the room . . . was roofed over. . . .” It appears to us that the slope of the ridge preserved outside the southwest corner of the temenos is so steep that it would have originally covered the area of the West Waterworks, and they would have been in a cave similar in formation to the Northeast Cave and the Theater Cave described in *Isthmia* II, pp. 33 and 37. The problems of this area will be discussed in more detail in Part II of this report.

<sup>12</sup> We are grateful to Paul Broneer for his observations on the geological formations of the sanctuary.

<sup>13</sup> Between the east façade of the Classical Temple and the edge of the plateau the rock surface slopes from ca.  $-0.80$  to  $-1.40$  m. At the edge of the rock, the marl lies  $0.50$ – $0.85$  m. lower, and it continues to slope down to the east and northeast into the northeast gully (Fig. 1). East of the east stoa, the marl also has a northward slope, from  $-4.80$  at the southeast propylon to  $-6.00$  m. at the entrance to the northeast cave, 60 meters farther north.

<sup>14</sup> For the relation between geological formations, the location of sites, and type of structures found there, see B. Wells, C. Runnels, and E. Zangger, “The Berbati-Limnes Archaeological Survey. The 1988 Season,” *OpAth* 18.15, 1990, pp. 207–238.

<sup>15</sup> *Isthmia* II, p. 13.

## THE LATE BRONZE AGE

## THE MYCENAEAN WALL

Several sections of the Cyclopaean wall were excavated by Oscar Broneer in 1957–1958 and the portion mentioned above (p. 5) in 1967.<sup>16</sup> Cleared segments of the wall extend from the Saronic Gulf to the southeast corner of the sanctuary. The construction lacks any sign of the culverts and bridges found in Mycenaean roads, nor have wheel ruts been seen where the bedrock rises to the level of the preserved masonry. A series of shallow projections on the side facing the Isthmus may represent towers or buttresses. Until there is clear evidence to the contrary, we retain Broneer's identification of the masonry as a wall. In light of the construction techniques, the size of the stones, and the majority of pottery found in connection with it, the wall seems likely to be Mycenaean. Broneer suggested that it had been intended as a fortification across the Isthmus, completed at the end of the Late Helladic IIIB or early in the Late Helladic IIIC period.<sup>17</sup> Although no further excavation was carried out on the wall, some study of it in relation to the topography of the Isthmus and the southeast valley formed part of the work of the 1989 season.<sup>18</sup>

The absence of clearly datable Late Helladic IIIC material from the wall (especially objects to compare with the distinctive fine and coarse wares from Late Bronze Age settlement deposits discovered in the area of the later sanctuary of Demeter and Kore at Corinth) must argue against a late date for the construction of the wall and for a date considerably earlier than the latest Bronze Age activity at Isthmia.<sup>19</sup>

## THE MYCENAEAN POTTERY

by Catherine Morgan

Excavation in most areas of the temenos from 1952 through 1989 has produced a scatter of sherds from all phases of the Late Helladic period (LH I–LH IIIC Late); in the absence of any other category of evidence (such as architecture), pottery offers the only means of characterizing Late Bronze Age activity at Isthmia. In the deposits recovered by Broneer, the Mycenaean sherd scatter is oriented towards the northern side of the temenos in the deposits of debris from the two destructions of the Temple, close to the ancient Corinth–Isthmus road, a second in the southeast temenos, and a third in the Later Stadium, but none of the material is in its original place of deposition. It is thus impossible to trace the original

<sup>16</sup> O. Broneer, "The Cyclopaean Wall on the Isthmus of Corinth and Its Bearing on Late Bronze Age Chronology," *Hesperia* 35, 1966, pp. 346–362; *idem*, "The Cyclopaean Wall of the Isthmus of Corinth, *Addendum*," *Hesperia* 37, 1968, pp. 25–35. J. Wiseman (*The Land of the Ancient Corinthians* [SIMA 50], Göteborg 1978, pp. 59–60) supports Broneer's conclusion that the Cyclopaean remains belong to a wall rather than to a road as suggested by C. Kardara ("The Isthmian Wall," *AAA* 4, 1971, pp. 85–89). Most recently the Berbati-Limnes survey team has examined retaining walls and bridges of a Mycenaean road in that area (Wells *et al.* [note 14 above], pp. 223–227; cf. G. E. Mylonas, *Mycenae and the Mycenaean Age*, Princeton 1966, pp. 86–87, with references).

<sup>17</sup> *Hesperia* 37, 1968 (note 16 above), pp. 29–31, fig. 3.

<sup>18</sup> James Redfield walked the area between the Isthmus, Kenchreai, and Corinth and studied the relationship between the modern country roads, ancient defensive works (Mycenaean, Classical, and Hellenistic walls), and the natural configuration of the terrain. This informal survey will be expanded in a future detailed study on the function of the walls in relation to the road system at different periods.

<sup>19</sup> J. B. Rutter, "The Last Mycenaeans at Corinth," *Hesperia* 48, 1979, pp. 348–392.

location(s) of activity. Since most sherds are found in soil redeposited, often on several occasions, they are generally small and abraded; this condition, in contrast with that of a portion of the Early Iron Age pottery, can be explained in terms of post-depositional circumstances alone, with no need to infer deliberate breakage. Joins exist between sherds from different parts of the temenos, and in particular, there are links between areas within the Archaic and Classical Temple cellas and the north temenos (which contained much debris from the Archaic and Classical Temple fires). The relatively frequent occurrence of light burning over already broken vases suggests that the soils and their contents were exposed to fire when the Archaic Temple burned in *ca.* 470 and the Classical Temple in 390. The pattern of joins offers evidence for the redistribution of material from the Temple to other parts of the temenos after each fire. There is an absence of similar joins and burning on Early Iron Age sherds. Thus, soils brought in and used within the last phase of the Archaic Temple and the first phase of its Classical successor seem to have been taken from an area where there was Mycenaean but not Early Iron Age activity.<sup>20</sup>

The LH I phase is represented by a small number of fine painted wares (e.g. 1; Pl. 8:a), plain wares (yellow and gray Minyan), and monochrome painted sherds (including goblet rims and stems); a very few Middle Helladic matt-painted sherds are probably also contemporary (on the parallel of evidence from levels XII–XVI of the East Alley at Korakou<sup>21</sup>). The relative paucity of LH I vessels (especially decorated fine wares) and the small range of shapes represented are not untypical in the Corinthia and the neighboring Nemea Valley (compare, for example, the ceramic repertoire at contemporary Tsoungiza [Archaia Nemea]).<sup>22</sup> Most of the Mycenaean pottery from Isthmia falls within the chronological range LH IIA–LH IIIA2/B, undoubtedly the period of greatest activity at the site. Pottery from these phases includes a wide range of open shapes, such as LH II Ephyraean goblets, and LH IIIA2/B kylikes and deep bowls (2 and 3; Pl. 8:a); such closed forms as occur are mainly large decorated jars and alabastra, with a low proportion of the types such as stirrup jars that are commonly found in graves in the Corinthia (as elsewhere in the Greek world).<sup>23</sup> Small fragments of large coarse, unpainted, closed vessels and bowls fill a functional gap in the ceramic assemblage but cannot be dated more precisely within the Late Helladic period.

There is limited evidence for activity throughout the LH IIIC phase (in the form of about 14 sherds, slightly fewer finds than in LH I), suggesting a basic continuity with

<sup>20</sup> Since the plateau was leveled for construction of the Archaic Temple, no deposit within the Temple could predate the building.

<sup>21</sup> J. L. Davis, "LH I Pottery from Korakou," *Hesperia* 48, 1979, pp. 234–259. The Isthmia MH pottery is much later than that from MH graves in the North Cemetery at Corinth: C. W. Blegen, H. Palmer, and R. S. Young, *Corinth, XIII, The North Cemetery*, Princeton 1964, pp. 1–12; J. B. Rutter, "Pottery Groups from Tsoungiza of the End of the Middle Bronze Age," *Hesperia* 59, 1990, pp. 375–458.

<sup>22</sup> J. B. Rutter, "MH Pottery from Tsoungiza (Archaic Nemea): A Brief Report," *Hydra* 1, 1985, pp. 34–37; *idem*, "A Ceramic Definition of LH I from Tsoungiza," *Hydra* 6, 1989, pp. 1–19. See now J. C. Wright, J. F. Cherry, J. L. Davis, E. Mantzourani, S. B. Sutton, and R. F. Sutton, Jr., "The Nemea Valley Archaeological Project: A Preliminary Report," *Hesperia* 59, 1990, pp. 631–642.

<sup>23</sup> See Wiseman (note 16 above), pp. 72–73 for grave groups from New Corinth of LH II and LH IIIA2/B date (*pace* Wiseman). Compare the cemetery of 19 chamber tombs at Kato Almyri: *AR* 35, 1988/89, p. 24; *Δελτ* 35, 1980, B' 1 [1988], pp. 102–105.

earlier phases, but on a much reduced scale; similar continuity is evident at the chamber-tomb cemeteries at Kato Almyri and also Skaloma (near Perachora).<sup>24</sup> There are notably few points of comparison, however, between the ceramic record at Isthmia and the one major LH IIIC settlement site in the Corinthia, in the area of the later sanctuary of Demeter and Kore at Corinth. The absence at Isthmia of distinctive local LH IIIC coarse wares and open-vessel forms is a particular point of contrast.<sup>25</sup>

As noted, pottery forms the only source of evidence for the nature of activity at Isthmia during the Bronze Age, in the absence of architecture or artifacts associated with cult (compare, for example, the House of the Idols at Mycenae, or the Mycenaean altar at the later sanctuary of Apollo Maleatas at Epidauros).<sup>26</sup> Small *psi* and *phi* figurines are the only other types of artifact so far discovered, and they are not diagnostic of any particular activity.<sup>27</sup> No convincing exclusive link has yet been established between any ceramic form and ritual activity. Since the bias of vessel forms towards open shapes suggests that the destruction of tombs is unlikely to have produced the Isthmia assemblage, small-scale settlement seems to be the most likely explanation for the Isthmian evidence. This identification is strengthened by comparison with sherd scatters found around the Isthmus and along the coast of the Saronic Gulf (those on near-by Euraionesos and at Chersonesos, for example).<sup>28</sup> Although it is important to emphasize the limitations of archaeological exploration in the Corinthia (especially in the absence of intensive surface survey), the Isthmia settlement appears relatively large by the standards of the eastern Corinthia, on a par with Corinth and second only to near-by Korakou or to Zygouries to the west. The presence of numerous small sherd scatters along the coast of the Saronic Gulf towards Kenchreai, around the Isthmus, and over the Perachora peninsula suggests that Isthmia formed one of a number of small local settlements during the Late Bronze Age.<sup>29</sup>

#### CATALOGUE OF MYCENAEAN POTTERY

1. IP 7340	Pl. 8:a	Th. 0.003 m. Deep band over rim exterior and interior. Fabric: buff; hard; a few small to large white inclusions; 10YR 8/3. Paint dark gray, 2.5Y 3/0; exterior surface polished.
Rim sherd of Vapheio cup FS 224, decorated with FM 46 running spiral. H. 0.035; est. rim diam. 0.11;	LH I	

<sup>24</sup> Kato Almyri (LH IIIA–LH IIIC): *loc. cit.* (note 23 above). Skaloma (LH IIIA2/B1 continuing at least into early LH IIIC): Δελατ 35, 1980, B' 1 [1988], pp. 109–110.

<sup>25</sup> Rutter, *loc. cit.* (note 19 above).

<sup>26</sup> Mycenae: W. D. Taylour, "New Light on Mycenaean Religion," *Antiquity* 44, 1970, pp. 270–280; E. French, "Cult Places at Mycenae," in *Sanctuaries and Cults in the Aegean Bronze Age*, R. Hägg and N. Marinatos, edd., Stockholm 1981, pp. 41–48. Cf. B. Rutkowski, *The Cult Places of the Aegean*, New Haven/London 1986, pp. 169–199. Epidauros: V. Lambrinudakis, "Remains of the Mycenaean Period in the Sanctuary of Apollon Maleatas," in Hägg and Marinatos, *op. cit.*, pp. 59–65, with references to excavation reports.

<sup>27</sup> A catalogue of the figurines from the old and new excavations will be published in Morgan's study of the Mycenaean remains in her volume for the *Isthmia* series. For the use of Mycenaean figurines, cf. E. French, "The Development of Mycenaean Terracotta Figurines," *BSA* 66, 1971, pp. 101–187; *eadem*, "Mycenaean Figures and Figurines, Their Typology and Function," in Hägg and Marinatos, *op. cit.*, pp. 173–177.

<sup>28</sup> R. Stroud, "Thucydides and the Battle of Solygeia," *CSCA* 4, 1971, pp. 242–243, pl. 5:3; K. Gebauer, *AA* (JdI 54) 1939, pp. 269–272.

<sup>29</sup> Wiseman (note 16 above), chaps. 2 and 3. Gebauer, *loc. cit.*

## 2. IP 3388

Pl. 8:a

Rim sherd of Ephyraean goblet FS 254, decorated with lily motif FM 9. H. 0.04; est. rim diam. 0.145; Th. 0.004 m. Fabric: yellow buff; hard; a scatter of small white inclusions; 10YR 8/3. Paint unevenly fired orange gray, 2.5YR 5/6; surface polished.

LH IIB

## 3. IP 7394 a and b

Pl. 8:a

Joining sherds of deep bowl FS 284, with panel decoration FM 75. H. 0.061; est. rim diam. 0.17; Th. 0.004 m. Interior unpainted, with single bands at rim and half way down body. Fabric: orange beige; soft; small-to-large white inclusions; 7.5YR 7/6. Paint washy gray brown, 7.5YR 4/4.

LH IIIB

THE EARLY IRON AGE, *ca.* mid-11th century to *ca.* 700 B.C.

## THE EAST TERRACES

*Introduction*

In the earlier excavations Broneer uncovered the area east of the long altar of Poseidon in a series of trenches reaching down to a layer of sea pebbles (elev.  $-2.25$  to  $-4.30$  m.) that he identified as the Archaic sacrificial area (Fig. 3, Pl. 7).<sup>30</sup> The sacrificial area can be easily seen on all plans, because it was later enclosed by the Early Roman Temenos Wall and its East Extension. In only one small test trench (Θ, 1958) was Broneer's excavation carried below that level to bedrock ( $-3.00$  m.). In 1989 a number of trenches were sunk into the pebble floor (described below under Terrace 4) to earlier surfaces (Terraces 1–3) and to bedrock: Trenches 2 G–H, 22 B–D, 30, 32, 38, 47 (Fig. 2).

South of the sacrificial area, Broneer excavated to the surface of the Roman Palaimonion I, II, and III, and further west under Palaimonion V, to the surface of the Archaic Early Stadium (Fig. 3, Pl. 7). In 1989 within the same area, Trenches 89-2A, 2B, 2C, 2F, 14, 17, 26, 43, 46, 61, 66 were carried through the later levels to the surface of Terrace 1.

The general overview of the terracing at the east and southeast edges of the central plateau is based on the results of the 1989 excavations that are described in the following sections. The presentation of this material is preliminary to a more detailed description of the terraces that includes material from the earlier excavations and will form part of the final publications of the sanctuary.

Although there were eight sequential episodes of terracing, they appear to have shared a single purpose, that of enlarging the usable space along the east side of the altar of Poseidon. The terraces overlap each other in a staggered fashion with the earliest (1) lying immediately adjacent to the plateau (Fig. 1) and the later ones (2 and 3) covering it and reaching farther east (Figs. 14, 15). Terrace 4 differs from the others in that it is composed of a layer of pebbles bedded on sacrificial ash over Terrace 3 (Fig. 18). Terrace 5A is likewise a surface added to Terrace 4, but it was made of compacted sacrificial ash mixed with clay and soil, almost all of which was cleared by Broneer. Terrace 5 is the smallest in extent, occurring in a limited area over the entrance to the stadium. The final three terraces (6–8) extend across the entire east side of the plateau, leveling the surface and enlarging it to a maximum width of

<sup>30</sup> *Isthmia* I, pp. 55–56; *Isthmia* II, p. 15. Above the Archaic level he distinguished two episodes of terracing: the first, reaching eastward to the Roman Altar, he dated to the period after the destruction of the Archaic Temple; the second, extending to the East Gateway, he placed after the fire of 390 B.C. Into these deposits we opened Tr 89-3 at the north end of his Tr NE-F (south section). A discussion of this material will appear in Part II of this report.

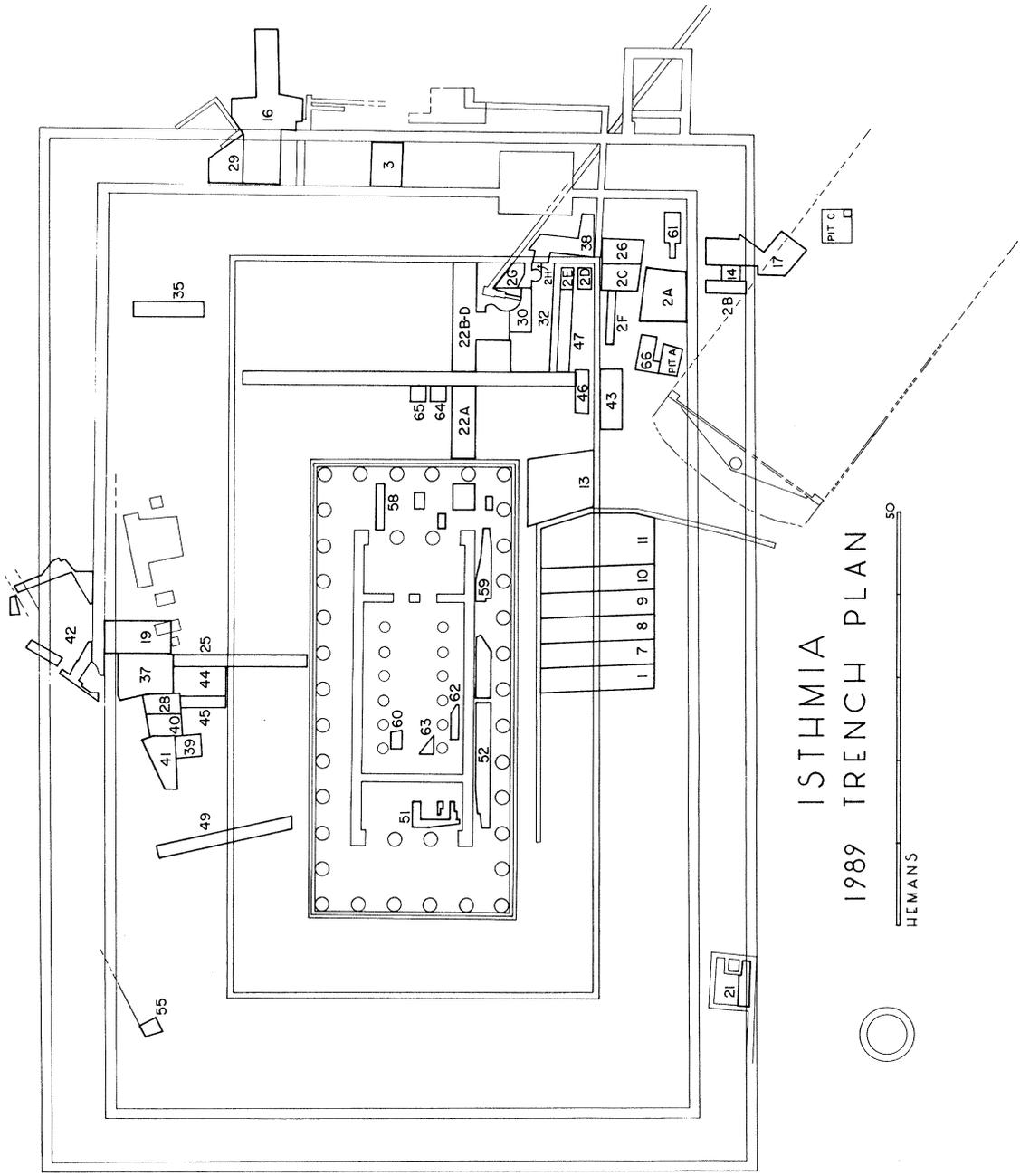


FIG. 2. Plan of excavation trenches, 1989. Pit A and Pit C refer to the Roman Palaimonion



35 meters east of the altar. They will be discussed in Part II of this report. The presence of surfaces between layers of fill and the chronological sequence of the fills from the 8th through the 3rd centuries show that the terracing developed over a long period of time. They were the product of large-scale construction projects, often a part of other construction efforts in the sanctuary, rather than of two or three single episodes of dumping.

Because the terrace fills were redeposited, most of the material they contained is earlier than the terraces themselves. The construction date of a terrace thus depends on the small amount of later pottery and roof tiles that were included in the fill. Although the source of the fill has not been precisely located, it is reasonable to suppose that the builders did not transport masses of soil, boulders, and field stones any farther than was necessary, and, therefore, most of the material in the terraces came from the immediate vicinity of the east temenos. Consequently, while we cannot identify the original place of use and disposal of objects found in the fills, they probably did not travel far. The ash mixed with a high concentration of burnt animal bones is surely refuse from sacrifices. After construction of the long altar in the 7th century (pp. 41–42 below), its source was almost certainly that altar.

#### EAST TERRACE 1

The surface of the central plateau breaks off sharply along a line running northeast–southwest, and there is a drop of 0.50 to 0.85 m. to the underlying layer of marl to the east (Figs. 1, 15). It is on this marl that the soil of East Terrace 1 was laid, packed against the edge of the conglomerate shelf (seen in Trenches 89-22B, 43, 46). The soil is generally red in color, and it is conspicuous in contrast to the beige and brown of later deposits. The surface can be traced for a distance of *ca.* 32 meters, north to south, and it extends at least 40 meters east of the plateau.<sup>31</sup> The area is indicated by dots in the restored plan in Figure 1. The surface is not level but slopes down from west to east and from south to north: from elevation –1.50 (Tr 89-43) to at least –3.01 m. (Tr 89-61); from –2.05 (Tr 89-22) to –4.60 m. (Tr R-1, 1956). The depth of fill varies from a bare centimeter to 0.35 m., shallow at the west and deeper to the east, following the general east and southeastward slope of the terrain.<sup>32</sup> Two kinds of fill were employed for the terracing: in the north, fine red soil with small pebbles but no larger stones and very little pottery (e.g. ET1 dep II.5; Pl. 1:a);<sup>33</sup> in the south and southeast, red-brown soil mixed with sand and numerous sherds (ET1 dep I.1).

It is in this latter area that the surface was firmly compacted in a strip measuring *ca.* 8 meters wide and 28 meters long, shown by hatching in Figure 1. Almost all the pottery recovered from the terrace was concentrated in the hard southern surface and in the fill beneath it, a sign that activity was localized in that area. The northern part of the terrace appears not to have been much used. Its surface is not so firm as that in the south, and it lacks the small pebbles that are a conspicuous feature of the compacted floor.

<sup>31</sup> The surface of Terrace 1 is seen in Broneer Trs NE-D, S; R-1; R-27; R-28; R-7; R-13; R-15 and in Trs 89-22B-D, 30, 32, 47, 38, 46, 43, 2F, 26, 66, 61, 17. It did not extend north of Tr 89-22B or south of Tr 89-17. As far as present excavation allows us to judge, Trs R-1 and R-25, just west of the rear wall of the east stoa, mark its easternmost extent.

<sup>32</sup> The greatest depth is at the south edge of the terrace next to the refuse deposit of Tr 89-17; the soil is shallower toward the north, 0.25 m. in Tr 89-61 and 0.14 m. in R-27.

<sup>33</sup> See note 47 below for the list of abbreviations used for the deposits.

To examine the hard floor and the fill beneath, a probe was opened through the surface exposed in Trench 89-61 and carried to bedrock (ET1 deps I.1, II.1; Pl. 1:b). Since there was no evidence of stratification within the deposit, the soil was removed in arbitrary layers of about 0.05 m. Some sherds of the 8th century occurred in all levels of the fill, and the latest vessels belong to the second half of the century (Pl. 10:d). Prehistoric and Proto-geometric wares predominated in the first two layers of the fill. A fragment of a leg from a terracotta bovoid figurine was found in the lowest level and fragments of two more legs, probably from the same bovoid figurine, in the second layer.<sup>34</sup> In the surface layer, the sherds were predominantly of the second half of the 8th century. There was no diagnostic Protogeometric pottery, and few examples were earlier than the middle of the 8th century (ET1 deps II.1, 2). The vessels represented are open shapes, largely cups, with some storage vessels. The latest examples extend to *ca.* 690 B.C. and were found in a small deposit of red soil at the east end of the trench where a depression may have been filled in during the use of the terrace (ET1 dep II.2). The presence of unburnt bones in addition to the numerous cups and bowls suggests that dining took place in the area. Catherine Morgan discusses dining ware more fully in the section below (pp. 18–22) concerning Early Iron Age pottery from the sanctuary as a whole.

In the western portion of the heavily used area, red-brown soil containing many small pebbles with some sand and clay was excavated in Trenches 89-43 and 66 (ET1 dep II.3). The fill was very shallow, and it was cleared together with the surface. At the edge of the plateau (Tr 89-43) worn patches of bedrock appeared through the red surface of the terrace before excavation. The pottery was consistent in date with that recovered from the surface and fill farther east, but it was much less plentiful.

In Trench 89-66 we uncovered a curved groove that had been cut through the hard red floor surface and the fill beneath (Fig. 4, Pl. 1:c). The groove is 0.12–0.16 m. deep, with a maximum length of 2.60 m. and a width of 0.08–0.40 m. Only a portion of it lies within this trench; the rest is to the north under East Terrace 2. The cutting was filled with a soft, light-beige soil, which, when removed, revealed three postholes cut into bedrock (ET1 dep III.1). Another larger posthole lies outside the groove, 0.50 m. to the south.<sup>35</sup> Three pieces of carbonized wood, too fragile to be removed whole, lay largely within and over the curved groove.<sup>36</sup> What arrangement is represented by the postholes, groove, and wood is not immediately apparent. The cutting does not appear to form a closed figure, although it has not been fully excavated. Its irregular shape and particularly its narrow width seem to preclude its use for a stone bedding to support a permanent building.<sup>37</sup> Wooden uprights set into the

<sup>34</sup> IM 5955, 5953 *bis*, 5954. Handmade bulls probably also of 8th-century date were found in Broneer's excavations; Trs. R-30, R-27, R-13, 2nd NT, 8 (2), 11, R-28 (2), EC-D, NE-F, NE-X (2), R-7, ET III (Fig. 3). They were concentrated in the terrace fills at the southeast side of the temenos. A full discussion of objects and their context will be included in Morgan's volume on the Early Iron Age sanctuary.

<sup>35</sup> From left to right, the diameters of the postholes are 0.15, 0.10, 0.12, and 0.22 m.

<sup>36</sup> The pieces measured (1) L. 0.07 m., diam. 0.025 m.; (2) L. 0.10 m., diam. 0.045 m.; (3) L. 0.33 m., diam. 0.035 m.

<sup>37</sup> Compare the foundations for the first temple of Hera at Perachora and the apsidal building at Solygeia; H. Drerup, *Griechische Baukunst in geometrischer Zeit (Archaeologia Homerica II, O)*, F. Matz and H.-G. Buchholz, edd., Göttingen 1969, pp. 28–29, 108–110. Also K. Fagerström, *Greek Iron Age Architecture (SIMA 81)*, Göteborg 1988, pp. 99–105, 119–121.

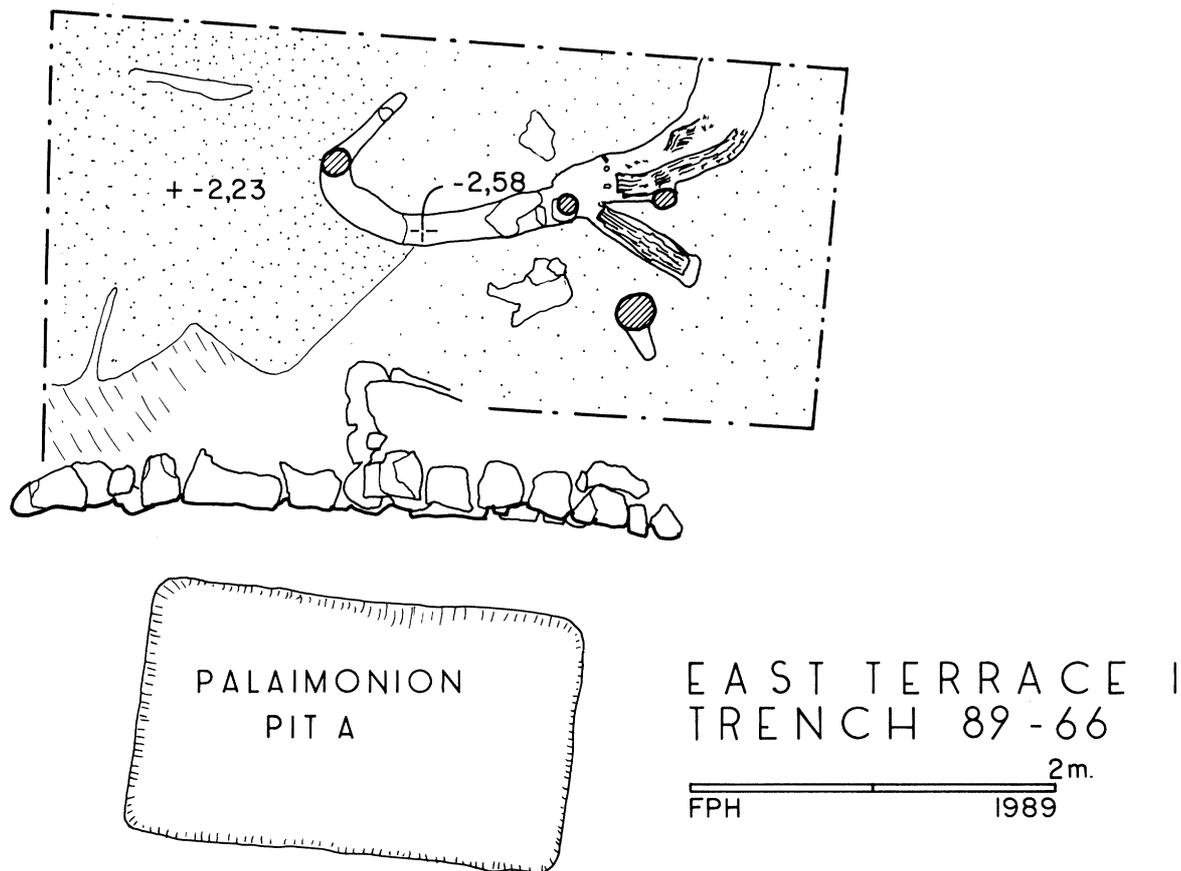


FIG. 4. Detail of feature on East Terrace 1, Trench 89-66

postholes could have been supports for a temporary structure, such as a hut or tent.<sup>38</sup> On the surrounding surface tiny sherds, largely of fine wares and mixed with small pebbles, were consistently early in date with only a few extending to the 8th century.

In Trench 89-17 (N) we reached the level of Terrace 1 but found no heavily compacted surface. The soil was a soft, homogeneous, dark brown humus with flecks of charcoal and a heavy concentration of pottery (ET1 dep II.4). The types and density of the pottery, together with the soft humus, suggest that this area was used as a refuse dump. Since few of the vessels can be dated before the middle of the 8th century and the latest piece is the rim of an Early Protocorinthian kotyle, its duration can be placed in the second half of the 8th century, continuing into the 7th century. There was a greater number of later sherds within the deposit in comparison with the rest of the terrace. When excavation was extended to the southern half of the trench, no trace of the refuse material was found. Beneath soil that seems to be associated with the first stadium (ESI dep I.1) there was only the worn surface of the native marl.

<sup>38</sup> U. Kron suggests that tents were used for dining at the Heraion on Samos, "Kultmahle im Heraion von Samos archaischer Zeit," in *Early Greek Cult Practice*, R. Hägg, N. Marinatos, and G. C. Nordquist, ed., Stockholm 1988, p. 144, notes 58, 59.

In summary, the first layers of soil spread over the sloping marl surface east and south-east of the central plateau were put down near the middle of the 8th century, but activity seems to have been concentrated at the south end of the area in a strip about 8 meters wide and at least 28 meters long. About 75 percent of the sherds came from open vessels that can be associated with dining, with the greatest concentration at the east end. Next to the plateau stood a small, probably temporary, structure (possibly a tent) using wooden posts. Refuse from dining was deposited at the southeast edge of the terrace.

#### THE PLACE OF SACRIFICE

The high percentage of open vessels, especially cups, in the Early Iron Age ceramic assemblage of the central sanctuary makes it likely that dining was a primary activity in the area.<sup>39</sup> An indication that the pottery was related to the sacrifices rather than to ordinary meals comes from its presence in great numbers in one of the thick layers of ash and burnt animal bones that formed part of the eastern terraces (ET3 dep II.1).<sup>40</sup> Only a small portion of the ash layer was cleared in Trenches 89-2C, 26, 32(S), covering an area of about 16 square meters. It formed a continuous stratum across the surface of Terrace 3 and continued down into the fill of the Early Stadium embankment. Ranging in thickness from 0.04 m. in the north to 0.14 m. in the south, the volume of ash amounted to perhaps 1.44 cu. m. (cf. ET section A-A [b], deposit B and ET section C-C, deposit C; Pl. 17:a-c). Although the ash was redeposited in a terrace constructed in the 6th century, it is distinct from the fill around it and was clearly taken from another context. From a total of 2,439 fine-ware sherds, 86 percent were Protogeometric and Geometric in date with the remaining 14 percent belonging to the early Archaic period. The coarse wares seem to follow the same pattern with a high proportion of well-finished vessels (often slipped and burnished), although there is an absence of diagnostic pieces. In the same deposit were 398 bones, of which 94 percent (200 grams) were burnt. Since animals cooked for eating do not usually produce heavily charred bones, it is reasonable to conclude that the ash and burnt bones were left from sacrifices.<sup>41</sup> The high percentage of Early Iron Age pottery mixed with the ash points to a similarly early date for the sacrifices, although it is not impossible that some of the pottery and ash were mixed together at a later date. Unusual, however, is the small size and the density of the sherds in relation to the volume of ash. These are two features that could characterize pottery deliberately broken after having been used in a sacrificial meal. The sherds are not burnt, and they were evidently mingled with the remains of the sacrificial fire after the flames had been extinguished. Their presence in the ash suggests that the meal was held

<sup>39</sup> See Catherine Morgan's discussion of the Early Iron Age pottery, pp. 18–22 below.

<sup>40</sup> Cf. ET3 dep II,3,5,6, ET4 dep I.1, II.1, and ET5 dep I.1, catalogue of deposits, pp. 67, 72, 75 below.

<sup>41</sup> Abundant examples of sacrificial ash mixed with small fragments of Early Iron Age and Archaic pottery occur on mountain-top altars sacred to Zeus, three of which are located on the borders of Corinthian territory: on Mt. Kokkygion (M. L. Zimmerman Munn, "The Zeus Sanctuary on Mt. Kokkygion above Herion, Argolis" [lecture, Washington, D.C.], abstract in *AJA* 90, 1986, pp. 192–193); on Mt. Arachnaion in the territory of Epidaurus (D. W. Rupp, "The Altars of Zeus and Hera on Mt. Arachnaion in the Argeia, Greece," *JFA* 3, 1976, pp. 261–268); and on Mt. Apesas (Phoukas) at the western boundary of the Corinthia (Wiseman [note 16 above], p. 106, fig. 143). A grid of the altar area on Mt. Apesas with sherd densities is included in the preliminary report of the Nemea Valley project (Wright *et al.* [note 22 above], fig. 7).

near the place of sacrifice. We are fully aware, however, that, since the ash is not in its original place of deposition, no incontrovertible conclusions can be based on it.

A likely place for the earliest sacrifices is the east side of the plateau where the later altar was constructed, because altars tend to remain in roughly the same place in Greek sanctuaries.<sup>42</sup> No traces of sacrificial activity exist on the rock, however, since the area was leveled for construction of the Archaic Temple (p. 23 below). Before the plateau was altered, much of the surface probably sloped down to the northeast, following the natural contours (Fig. 1). The Mycenaean Wall to the south and the Corinth–Isthmus road to the northwest may have exerted some influence on the choice of this location for the first sacrifices.<sup>43</sup>

An instance of redeposited layers of sacrificial ash with a similar thickness and consistency occurs in the Altis at Olympia, although the total volume of ash was much greater than at Isthmia. Also, more of it has been excavated, and the artifactual content included a rich collection of votive objects. The earliest materials are votive figurines of bronze and terracotta belonging to the 10th and early 9th centuries.<sup>44</sup> These layers, as at Isthmia, held a majority of material belonging to the Early Iron Age, although early Archaic pottery and votives were found. Mallwitz dates the creation of the layer at Olympia in the first half the 7th century, before the construction of the Heraion in *ca.* 600 and the Sikyonian Treasury. Both buildings cut into the ash layer.<sup>45</sup> He suggests that the upper ash stratum was formed during a rearrangement of the earlier altar area.<sup>46</sup>

#### EAST TERRACE 1 DEPOSITS<sup>47</sup>

##### I. Construction

##### 1. Fill beneath compact surface, east end

Tr 89-61 (R-33)

Elev.: from -3.03(W)/-3.21(E) to -3.18(W)/-3.47(E) m.

<sup>42</sup> D. W. Rupp, "Reflections on the Development of Altars in the Eighth Century B.C.," in *The Greek Renaissance of the Eighth Century B.C.: Tradition and Innovation*, R. Hägg, ed., Stockholm 1983, pp. 101–107.

<sup>43</sup> J. Shaw has suggested that the immense standing Minoan walls by the sea at Kommos, on which people of the Protogeometric period built their first temple, may have held attraction for the shrine not only as a source for building material but from a sense of wonder at the past; "Excavations at Kommos (Crete) During 1981," *Hesperia* 51, 1982, p. 186. A detailed consideration of the early cult of Poseidon will be included in a later study of the religion of the Isthmian sanctuary; cf. W. Burkert, *Greek Religion*, J. Raffan, trans., Oxford 1985, pp. 44–46.

<sup>44</sup> W. D. Heilmeyer, *Olympische Forschungen*, VII, *Frühe olympische Tonfiguren*, Berlin 1972 and XII, *Frühe olympische Bronzefiguren*, Berlin 1979. Cf. A. Mallwitz, "Cult and Competition Locations at Olympia," in *The Archaeology of the Olympics*, W. Rashke, ed., Madison, Wis. 1988, pp. 81–86, 102–103, fig. 6:2.

<sup>45</sup> J. Schilbauch, "Untersuchungen der Schatzhausterrasse südlich der Schatzhauses der Sikyonier in Olympia," *AA (JdI 99)* 1984, pp. 225–236; Mallwitz, *op. cit.*, p. 86.

<sup>46</sup> Mallwitz (note 44 above), p. 102.

<sup>47</sup> The following abbreviations for archaeological phases are used in the catalogue of deposits following each section:

A = Archaic	M = Middle
C = Classical	Myc = Mycenaean
E = Early	PC = Protocorinthian
G = Geometric	PG = Protogeometric
H = Hellenistic	R = Roman
L = Late	

Where the date of a deposit is given as Geometric or Archaic, the material could not be more precisely dated.

Lots 89-483 to 485<sup>48</sup>

Total sherds, 127: 9 Myc, 102 PG/G, 15 amphora/coarse ware, 1 cooking ware. Mycenaean and Protogeometric predominate in the two lowest Lots; Early and Middle Geometric in Lot 89-483 (Pl. 10:d).

Date: second half 8th century

Inventory: terracotta bovoid (leg),<sup>49</sup> IM 5953 *bis*; terracotta bovoid (leg), IM 5954; terracotta bovoid (leg), IM 5955

Fauna: 1 burnt bone, cattle-sized; 1 unburnt bone, sheep/goat-sized<sup>50</sup>

## II. Use

1. Compact surface, southeast end<sup>51</sup> (over ET1 dep I.1)

Tr 89-61 (R-33)

Elev.: from  $-2.97(\text{W})/-3.18(\text{E})$  to  $-3.05(\text{W})/-3.22(\text{E})$  m.

Lot 89-482

Total sherds, 44: 3 Myc, 28 PG/G, 13 amphora.

Date: second half 8th century

Fauna: 10 unburnt bones; 1 sheep/goat molar

2. Red soil east of ET1 dep II.1

Tr 89-61 (R-33)

Elev.: from  $-3.18(\text{W})/-3.24(\text{E})$  to  $3.28(\text{W})/-3.41(\text{E})$  m.

Lot 89-480

Total sherds, 21: 1 Myc, 17 PG/G, 3 EPC. The latest pieces are fragments of Early Protocorinthian skyphoi and kotylai feet, as well as the neck from a small conical oinochoe that need not be later than 690 B.C.

Date: ca. 690

Fauna: 1 burnt bone, cattle-sized; 1 unburnt bone

3. Compact surface, west end. The deposit comprises material from the fill and surface of the terrace.

Trs 89-43 (11, 12); 89-66 (R-33)

Elev.: Tr 89-43, from  $-1.56(\text{W})/-1.83(\text{E})$  to  $-1.83$  m. Tr 89-66, from  $-2.20(\text{W})/-2.26(\text{E})$  to  $2.23(\text{W})/-2.53(\text{E})$  m.

Lots 89-299, 545

Total sherds, 133: 1 Myc, 113 PG/G, 19 amphora/coarse ware. The 8th-century material is late and relatively slight in comparison with ET1 deps I.1 and II.1. The latest piece is a kotyle handle of the third quarter of the 8th century.

Date: third quarter 8th century

4. Refuse deposit southeast of compact surface (under ES II dep I.2)

Tr 89-17 (N) (ET III)

Elev.: from  $-2.89(\text{W})/-3.02(\text{E})$  to  $3.30(\text{W})/-3.28(\text{E})$  m.

Lot 89-100

Features of the sanctuary are abbreviated:

ET = East Temenos    NT = North Temenos

AT = Archaic Temple    ES = Early Stadium

LA = Long Altar    dep = deposit

See note 5 above for an explanation of references to trenches and elevations.

<sup>48</sup> Lot 89-483 is the highest deposit of fill.

<sup>49</sup> IM 5953 *bis* and 5954 are so similar that they are probably from the same handmade figurine. They are very small (0.025 and 0.022 m. long respectively).

<sup>50</sup> Owing to the small size of the bone fragments, it is often difficult to identify the animals. For this preliminary report, we have used the term "cattle-sized" for those that appear to be bovovids and "sheep/goat-sized" for the ovi-caprids. David Reese will discuss the material in more detail in the final publication.

<sup>51</sup> The deposit includes some of the fill below.

Total sherds, 175: 3 Myc, 89 PG/G, 68 EPC, 15 amphora, 107 coarse ware, 7 cooking ware. The assemblage is notable for coarse wares and reflects the full range of dining equipment with the addition of some votive vessels. The latest pieces are EPC kotylai.

Date: first quarter 7th century

Fauna: 1 unburnt bone, sheep/goat molar

5. Red soil, north of heavily used surface

Trs 89-30 (ET X, R-10, R-28); 89-32 (same as 89-30); 89-38 (S) (R-13)

Elev.: Trs 89-30, 32, from  $-2.20(\text{W})/-2.36(\text{E})$  to  $-2.84(\text{W})/-2.99(\text{E})$  m. Tr 89-38 (S), from  $-3.26(\text{W})/-3.31(\text{E})$  to  $-3.88(\text{W})/-3.87(\text{E})$  m.

Lots 89-183 (under ET2 dep I.1); 89-247 (under ET3 dep I.1)

Total sherds, 15: 1 Myc, 6 G, 1 A, 4 amphora, 1 coarse ware, 2 cooking ware

Date: Archaic

### III. Destruction

1. Compact surface, west end, within groove and postholes

Tr 89-66 (R-33)

Elev.: from  $-2.44(\text{W})/-2.51(\text{E})$  to  $-2.58(\text{W})/-2.68(\text{E})$  m.

Lot 89-546 (under ET2 dep I.1)

Total sherds 30: 7 Myc, 16 PG/G, 6 amphora, 1 cooking ware

Date: second half 8th century

## EARLY IRON AGE POTTERY

by Catherine Morgan

Following the LH IIIC phase, ceramic evidence indicates a gap in activity at Isthmia until the beginning of the Early Protogeometric period.<sup>52</sup> The relative (let alone the absolute) chronology of the Bronze-Iron transition in the Corinthia remains the subject of discussion, despite much valuable recent work.<sup>53</sup> Clearly, a site like Isthmia, where there is no relevant stratigraphy, can make no independent contribution to our understanding of this phase of Corinthian chronology. Furthermore, skyphoi (derived from deep bowls), the only forms common to both LH IIIC and Early Protogeometric at Isthmia (Pl. 8:b [4]), lack any clear, chronologically significant sequence of development.<sup>54</sup> The difficulty of placing the Isthmia pottery within the loose relative sequence available for the Corinthia should not be undervalued, and the present estimate of a hiatus of *ca.* 50 years before the resumption of activity at the start of the Early Protogeometric period remains open to revision. It is important to note, however, that even if one disputes the existence of a hiatus around the Bronze-Iron transition, further confirmation of a major change in activity at the site is found in the striking quantitative and qualitative differences between the ceramic assemblages in the

<sup>52</sup> In this section where an overview of the Early Iron Age is presented, examples from both the old and new excavations will be discussed.

<sup>53</sup> J. Rutter, "A Plea for the Abandonment of the Term 'Submycenaean,'" *Temple University Aegean Symposium* 3, 1973, pp. 58–65. Cf. *contra*, P. A. Mountjoy and V. Hankey, "LHIIIC Late *versus* Submycenaean. The Kerameikos Pompeion Cemetery Reviewed," *JDAI* 103, 1988, pp. 3–4, table 1.

<sup>54</sup> However tempting it may be to try to establish a stylistic sequence for the Corinthia, the fact that the closest parallels for the Isthmia Early Protogeometric skyphoi are found in the Weinberg House deposit at Corinth, where a variety of forms showing greater or lesser similarity with LH IIIC and later Protogeometric types are found together in clear association, forms a strong argument against the validity of any such sequence: S. Weinberg, *Corinth*, VII, i, *The Geometric and Orientalizing Pottery*, Cambridge, Mass. 1943, pp. 2–5. Mountjoy and Hankey, *op. cit.*, p. 15, figs. 13, 14.

periods surrounding the transition and those from preceding and subsequent phases, which include a wider variety of forms in greater numbers.

From the beginning of the Early Protogeometric period onwards, some 80 percent of the ceramic assemblage consists of open forms, and about 50 percent comprise a standard range of drinking cups. These begin with Early Protogeometric high-footed skyphoi, moving in the Middle to Late Protogeometric to high-footed cups, and then, from the beginning of the Early Geometric period onwards, to flat-bottomed, one-handled cups, which continue, unchanged in form, probably into the third quarter of the 8th century, from which time they are gradually replaced by the kotyle forms (Pl. 8:b, c).<sup>55</sup> This sequence reflects a continuing emphasis upon feasting and drinking as a central element of activity at Isthmia throughout the Early Iron Age. Indeed, the over-all composition of the ceramic assemblage remains remarkably uniform throughout and bears little resemblance to that of contemporary Corinthian burial, and later settlement, assemblages. Fragments of these common vessel types occur in all areas of the site (reflecting complex patterns of redeposition), but the discovery in both the old and new excavations of a large concentration mixed with ash and burnt bone redeposited in the southeast temenos not only confirms the ritual nature of early activity but also serves to identify the general area in which it took place. In the 1989 excavations significant percentages of Early Iron Age pottery mixed with sacrificial ash were recovered in the southeast part of Terrace 3 (ET3 dep II.1) and Terrace 4 (ET4 dep I.1). In Broneer's excavations, when a much larger amount of soil was cleared from the same area, the quantity of early pottery was quite large.<sup>56</sup> Indeed, the creation during the 8th century of the first terrace in this area surely marks a recognition of the need to demarcate and formalize space long used for ritual activity and also to cater to a growing number of participants at the shrine.

Comparable sanctuary assemblages may be found at a number of sites, including Olympia, but this pattern of activity begins at Isthmia at a strikingly early date.<sup>57</sup> Most sherds from the southeast temenos are very small but show relatively few signs of abrasion (especially when compared with those used to pack the main road on the north side). It seems likely that vessels were deliberately broken after use, perhaps as an act of sacralization. The majority of sherds show no signs of burning, and only one has probable traces of animal fat

<sup>55</sup> One-handled cups are documented at Corinth in datable contexts from Early Geometric times to MG II: C. Pfaff, "A Geometric Well at Corinth: Well 1981-6," *Hesperia* 57, 1988, p. 58. It seems likely that they lingered longer at Isthmia to overlap with kotylai and thus provide a continuous cup sequence. E. Brann (*The Athenian Agora*, VIII, *Late Geometric and Protoattic Pottery*, Princeton 1962, pp. 52-53, pl. 10) provides parallels for the similar Attic examples found at Isthmia, none of which date later than the mid-8th century, according to the Agora typological sequence.

<sup>56</sup> Details of sherd counts, weights, and the exact context of the Broneer material will appear in the final publication of the Early Iron Age sanctuary.

<sup>57</sup> W. Gauer, *Olympische Forschungen*, VIII, *Die Tongefäße aus dem Brunnen untern Stadion-Nordwall und im Südost-Gebiet*, Berlin 1975. Crete: *IC* I xvii, 2 (2nd century B.C.) records provision for the payment of the wages of potters making vessels for the sanctuary at Lebena (in Gortys) from the god's income: cf. *IC* II xi, 3, lines 4-5 (1st century B.C.) referring to the provision of pottery for the Dictynaean. See C. G. Simon, *The Archaic Votive Offerings and Cults of Ionia*, diss. University of California, Berkeley 1986, pp. 314-323 for a general discussion of the range of roles filled by pottery at sanctuaries.

adhering to it;<sup>58</sup> it is therefore clear that vessels were not dedicated by being broken into the sacrificial fire.

From Early Protogeometric times onwards, more elaborate drinking vessels are found alongside the standard types of monochrome cup and may reflect greater display by wealthier participants (Pl. 9:a–c). As a result, finds from Isthmia have significantly increased our knowledge of Corinthian decorative styles, especially during earlier periods (notably Middle Protogeometric; Pl. 9:c). The remaining components expected in a dining or drinking set, mixing bowls, jugs, and storage vessels (including 8th-century SOS and local Corinthian amphoras), are also represented at Isthmia; fine-ware jugs appear from Protogeometric times onwards, and although in early times mixing bowls were probably made in coarse fabrics, they too become more elaborate through time (e.g. Pl. 9:d). The conservatism of coarse-ware styles often makes them difficult to date, but the excavation in 1989 of deposits containing large amounts of early ceramics (East Terraces 1–4) has enabled the identification of the general range of Corinthian coarse and plain wares in use at Early Iron Age (EIA) Isthmia (Pl. 10:a). In short, it is possible to identify a trend towards ever greater investment in fine decorated pottery for use in ritual activity (especially during the 8th century), in addition to the standard range of monochrome vessels. Furthermore, the range of vessels with functions related, however loosely, to dining also increased during the 8th century, with the appearance of such forms as the plate (Pl. 10:b).

Although dining equipment dominates the ceramic assemblage at Isthmia throughout, vessels of unrelated function also appear in smaller numbers from Protogeometric times and increase in number during the 8th century; pyxides (Pl. 10:c) and Corinthian plain-ware vessels are such cases and almost certainly reflect the dedication of ceramics rather than their sacralization after use in sanctuary activity. All such vessels are paralleled in Corinthian and Attic graves and settlement deposits, however, and are not forms made specifically for sanctuary use. In this respect, Isthmia contrasts with the sanctuary of Hera at Perachora, newly established during the 8th century and soon outstandingly wealthy (with terracottas and a range of elaborate fine wares from a number of regions). Equally, there is scant evidence at Isthmia for dedications in other media before the 8th century (and even then, few items predate 700). With the exception of six bronze tripods, a pair of figure attachments from tripod handles, and two helmets, there is little that has so far been recovered which could be described as monumental or be said to reflect prestige display.<sup>59</sup> Small figurines and items of jewelry may be the personal dedications of local inhabitants.<sup>60</sup> Here

<sup>58</sup> We are indebted to Professor Lambrinudakis for allowing us to inspect the sherds from the altar in the Sanctuary of Apollo Maleatas, many of which bear unmistakable traces of fat. Our conservator, Helen Kingsley, confirmed the presence of fat on the Isthmian sherd.

<sup>59</sup> Tripods: IM 5080, 2308, 2826, 1656 + 5024 + 5068 + 5121 + 5122a + 5815, 234, 1795 a + b. Tripod attachments: IM 2224, 1335. Arms and armor: spear head, IM 2612; helmets, IM 2450, 325.

<sup>60</sup> Pins, IM 2221, 1338, 2174; fibulae, IM 5037, 2387, 2165; rings, IM 3140, 2263, 2314, 446; bronze figurines, IM 312, 2733. We are indebted to the late Professor Isabelle Raubitschek for details of the early metalwork from Isthmia from her forthcoming publication. See H. Payne, *Perachora I*, Oxford 1940 for catalogues of bronzes and terracottas together with earliest ceramics. Cf., for metalwork, I. Kilian Dirlmeier, "Fremde Weihungen in griechischen Heiligtümern vom 8. bis zum Beginn des 7. Jahrhunderts v. Chr.," *JRGZ Mainz* 32, 1985, pp. 225–230 and *Αφιέρωματα μη Κορινθιακής προλεύσεως στα Ηραία της Περαχώρας (τέλος 8<sup>ου</sup>–αρχή 7<sup>α</sup> αι.π.Χ., Πελοποννησιακά* 16, 1985/1986, pp. 369–375. Terracotta figurines of

also, Isthmia stands in sharp contrast to Perachora. At least until the construction of the Archaic Temple, it appears to have been principally a small shrine along the road, serving travelers and local inhabitants alike, and owing its popularity during the 8th century to increased traffic across the Isthmus.

## CATALOGUE OF EARLY IRON AGE POTTERY

4. IP 1082 Pl. 8:b  
High-footed skyphos (almost complete profile, excluding foot). H. 0.066; W. 0.068; Th. 0.002–0.007 m. Interior and exterior monochrome, with a single reserved band containing a wavy line between the two (lost) horizontal roll handles. Fabric: yellow beige with gray section; soft; numerous small red and white inclusions; 10YR 7/4. Glaze orange. Corinthian.  
EPG
5. IP 7469 Pl. 8:b  
High-footed skyphos (over half body diameter preserved to full height). H. 0.04; diam. base 0.044; Th. 0.004 m. Interior and exterior monochrome, with reserved area beneath horizontal roll handles (of which one is preserved). Fabric: green buff; hard; small-to-medium gray and white inclusions; 5Y 7/2. Glaze dark gray black. Corinthian.  
LPG
6. IP 1021 Pl. 8:b  
High-footed cup (full profile preserved). H. 0.09; est. rim diam. 0.095; H. foot 0.024 m. Interior and exterior monochrome, band around lip on exterior contains a single zigzag line flanked by two reserved bands below and at least one above. Fabric: yellow beige with underfired orange section; hard; small white, gray, and red inclusions; 10YR 7/4. Glaze gray black with metallic sheen. Attic.  
LPG
7. IP 1020 Pl. 8:b  
One-handled cup (restored). Rest. H. 0.051; rest. rim diam. 0.085–0.087; rest. diam. base 0.038 m. Interior and exterior monochrome, vertical strap handle decorated with horizontal bands, small reserved circle on interior center base. Fabric: green buff; hard; small-to-large white inclusions, 2.5Y 8/2. Glaze dull gray brown. Corinthian.  
LPG/EG–MGII (+ ?)
8. IP 7912 Pl. 8:c  
Protokotyle (restored). H. 0.076; rest. rim diam. 0.119; rest. base diam. 0.045; Th. 0.003 m. Hemispherical profile. Interior and exterior monochrome, with single reserved bands on either side of rim. One of two horizontal roll handles preserved. Fabric: beige; hard; a few small red and white inclusions; 10YR 8/3. Glaze gray brown. Corinthian.  
MG II
9. IP 6661 + 6670 Pl. 8:d  
Trefoil-mouthed oinochoe (restored to *ca.* three-quarters height and two-thirds diameter). Preserved H. as restored 0.021; max. diam. 0.191; Th. 0.005 m. Decorated with narrow horizontal bands, with narrow rows of chevrons and monochrome interior. Vertical framing bands for panel containing (lost) central motif preserved on shoulder between chevron band and neck joint. Fabric: orange brown; hard; numerous small gray inclusions; 7.5YR 6/6. Glaze lustrous dark brown. Attic.  
LG IIB/EPA, *ca.* 700
10. IP 7549 Pl. 9:a  
Rim of kyathos. H. 0.037; est. rim diam. 0.10; Th. 0.002 m. Decorated with a large foliate motif flanked by vertical bands; interior monochrome with three reserved bands at rim. Fabric: yellow buff; medium fired; a few small white inclusions; 10YR 8/4. Glaze red brown. Corinthian.  
EPC
11. IP 7923 a and b Pl. 9:a  
Krater (rim and upper body). H. 0.086; est. rim diam. 0.225; Th. 0.005 m. Right side of shoulder

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bulls (19 pieces), horses (2 or 3), chariots (2), and boots (3) were recovered in Broneer's excavations and are being studied by David Mitten.

panel preserved, with two facing, birdlike figures and panel of horizontal zigzags as secondary elements flanking (lost) main motif; remainder of preserved exterior banded, interior monochrome. Fabric: buff with underfired orange section; hard; small gray and white inclusions; 10YR 8/3. Glaze gray brown. Corinthian.

LG

12. IP 7938 Pl. 9:b

Protokotyle (restored). Rest. H. 0.099; est. rim diam. 0.16; Th. 0.002–0.004 m. Hemispherical profile. Shoulder panel contains chevrons and horizontal bands and is flanked by vertical bands on either side; lower body and interior monochrome. One of two horizontal roll handles preserved. Fabric: yellow buff with underfired orange section; hard; scatter of small gray and white inclusions; 10YR 8/4. Glaze unevenly fired orange black. Corinthian.

MG II

13. IP 3059 Pl. 9:c

Body sherd of skyphos. H. 0.041; Th. 0.004 m. Decorated with compass-drawn concentric circles; interior monochrome. Fabric: beige; hard; a few small-to-large brown inclusions; 7.5YR 6/4. Glaze black. Attic.

LPG

14. IP 3183 Pl. 9:c

Rim sherd of skyphos/kantharos, decorated with vertical dog-tooth and fringed line motifs; interior monochrome. H. 0.043; est. rim diam. 0.07; Th. 0.003–0.004 m. Fabric: beige with pink section; hard; small gray and white inclusions; 7.5YR 7/4. Glaze black. Corinthian.

MPG

15. IP 6677 Pl. 9:c

Rim sherd of small skyphos. H. 0.028; est. rim diam. 0.085; Th. 0.002–0.003 m. Decorated with cross-hatched triangle motif beneath glazed rim edge; interior monochrome, with one reserved band at rim. Fabric: gray beige; hard; scatter of small gray and white inclusions; 10YR 8/3. Glaze lustrous black. Corinthian.

MPG

16. IP3065, 3135, 6669, 6686, 6687, Pl. 9:d  
6688

Krater (section of *ca.* one-third diameter restored from sherds). Max. H. as restored 0.171; est. rim diam. 0.295; Th. 0.006–0.011 m. Decorated with panel of maeander and water birds, with subsidiary motifs of running spirals and vertical wavy lines. Fabric: yellow buff with gray section; hard; numerous small-to-medium gray and white inclusions; 10YR 8/4. Glaze dark gray brown. Corinthian.

(MG II/LG)

17. IP 7531 Pl. 10:a

Handmade aryballos. H. 0.06; est. rim diam. 0.028; max. diam. 0.084 m. Undecorated, surface smoothed. Fabric: orange beige with slight gray core; soft; numerous small gray and white inclusions; 10YR 7/6. Corinthian.

8th century (possibly late)

18. IP 7927 Pl. 10:a

Handmade coarse mug. H. 0.052; Th. 0.005–0.007 m. Undecorated, surface crudely smoothed. Fabric: buff (over-fired to pale green); hard; packed with medium-to-large gray, gritty inclusions; 2.5Y 8/2. Corinthian.

Early Iron Age

19. IP 7550 Pl. 10:b

Plate (joining sherds from the base and wall). H. 0.025; est. rim diam. 0.20; base diam. 0.15 m. Decorated on interior and exterior with concentric bands. Fabric: yellow buff with wide underfired orange section; hard; small-to-large white inclusions; 10YR 8/4. Glaze unevenly fired black crimson. Corinthian.

EPC

20. IP 7931 Pl. 10:c

Forequarters of a horse figure, probably attachment from the lid of a large pyxis. H. 0.054; max. W. (front) 0.035 m. Forepart of upper body decorated with a running spiral; remainder monochrome. From the Filla workshop. Glaze washy green gray unevenly fired to orange; cream slip over reserved areas. Fabric: pink beige; hard; small-to-large white inclusions; 5YR 6/4. Attic.

MG II/LG I

THE ARCHAIC SANCTUARY, *ca.* 700 to *ca.* 470 B.C.<sup>61</sup>

There are several major results from the new excavations that contribute to our understanding of the Archaic temenos as it developed during the 7th and 6th centuries. On the basis of this information, combined with material from earlier seasons, we have prepared three restored plans of the temenos during the period, Figures 5, 14, and 18. Further study may enable us to refine the chronology, but the major outlines of the sanctuary's development seem to be clear. In the following sections on the Archaic Temple and altar, north and east terraces, and the Early Stadium, the descriptions of remains and deposits uncovered in 1989 are intended to provide support for the reconstructed plans, but the full presentation of evidence for them must await the final publications.

Perhaps the most important event of the 1989 season was the discovery of several additional features of the Archaic Temple that permit the plan to be more accurately restored and of floor deposits that provide evidence for a construction date in the first half of the 7th century B.C. North and east of the temple, traces of the Archaic temenos wall were discovered, and on the south side of the temple a long stretch of wall was identified as part of the Archaic temenos. The long altar was found to be part of the same construction program.

Before turning to the individual features of the Archaic temenos it is necessary to mention that a leveling of the sanctuary plateau was carried out as a preliminary step in the construction of the Archaic Temple. As Broneer has described in *Isthmia I*, the bedrock at the west end of the temple was dressed down to a level surface across a broad area of the plateau that extended about 20 meters westward from the edge of the building.<sup>62</sup> To the east the surface was leveled for a similar distance, beyond the place where the altar was to be laid. To the north the new excavations have uncovered a smooth, gently sloping terrace extending from the temple to the upper edge of the northwest gully, North Terraces 1 and 2 (Figs. 11–13). As a result of the alterations, no undisturbed layers of the Early Iron Age have been found on the surface of the plateau, even though all the earliest deposits contain a high percentage of sherds from that period. Intact *stroses* earlier than the 7th century have survived only in East Terrace 1 at the east and southeast edges of the plateau (pp. 12–18 above).

These alterations to the landscape were to provide a setting for the temple as well as the necessary level foundation for its construction. The fact that the temple was to be oriented almost due east–west, however, required far greater changes than might otherwise have been necessary had it been sited in alignment with the natural contours of the plateau. In fact, with the exception of the Temple of Poseidon and the altar, all the Greek monuments of the sanctuary were oriented in relation to the plateau.

The following discussion of the Archaic Temple is divided into two parts: evidence for a restoration of the plan and an account of the deposits excavated in 1989.

<sup>61</sup> The sections on the Archaic Temple, North Terraces 1 and 2, and the northern segment of the Archaic temenos wall were written by Hemans; Gebhard prepared those covering the long altar, East Terraces 2–5A, the remainder of the temenos wall, East Gateway, and the Early Stadium.

<sup>62</sup> *Isthmia I*, p. 4.

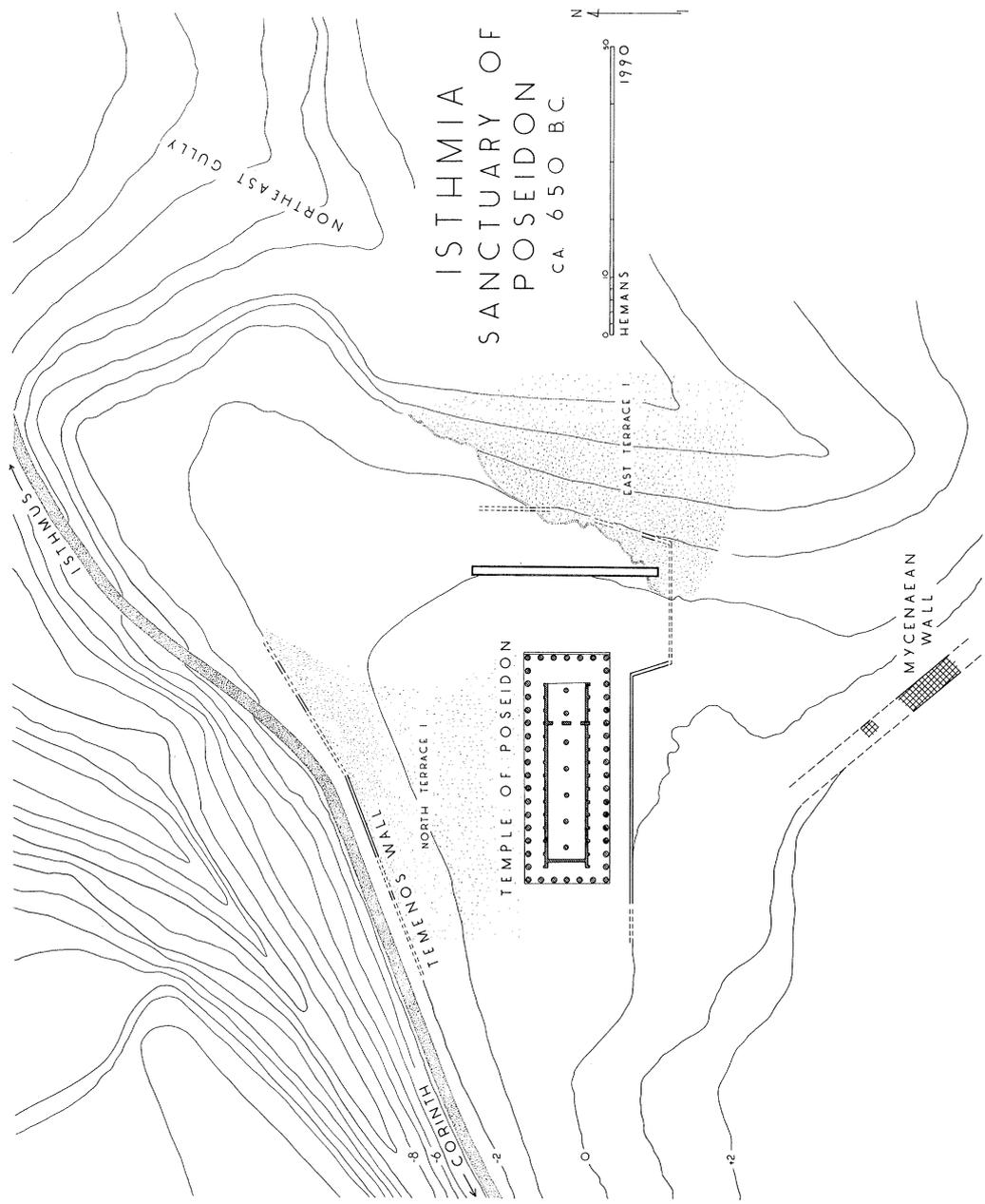


FIG. 5. Restored plan of the sanctuary, ca. 650 B.C.

## THE ARCHAIC TEMPLE: THE PLAN

Since the publication of Oscar Broneer's work on the Archaic Temple of Poseidon his reconstruction of the remains as a Doric temple has been controversial.<sup>63</sup> He restored a peripteral temple with a wooden colonnade, a Doric entablature, and a hipped roof, but very few remains were discovered *in situ*, and Broneer was always careful to acknowledge that much of the reconstructed plan was conjectural.<sup>64</sup> The proposed date for the temple not long after 700 B.C. has also been questioned, because the primary piece of evidence Broneer presented was the Daedalic style of the moveable marble perirrhanterion whose base was discovered at the eastern end of the building.<sup>65</sup> In brief, critics have maintained that a non-peripteral, non-Doric building is a more likely interpretation and that developed Doric architecture does not appear until much later in the 7th century or perhaps as late as the first quarter of the 6th century. For these reasons new excavations were conducted in the temple during 1989.<sup>66</sup>

The existence of an Archaic Temple of Poseidon was recognized during the first year of excavation at Isthmia in 1952 when building blocks and roof tiles of a very early type appeared among the debris of the Classical Temple. In succeeding years, Broneer uncovered over 16 tons of roof tiles and 800 fragments of blocks. With the exception of one block, however, none of these remains were found *in situ*. During the course of constructing the Classical Temple, the earlier walls were removed from their foundations and the trenches were then filled with soil and debris (Fig. 6). For the most part, the plan of the Archaic building must be reconstructed on the basis of the foundation trenches.

Prior to 1989 the exact position of only a few parts of the building had been recognized: the foundation trenches of the east and north stylobates, the cuttings in bedrock where the foundations for these two stylobates joined at the northeast corner of the building, and a single block remaining from the step that was built against the east stylobate (Fig. 6). Broneer restored the remainder of the plan from related features, especially five rows of holes in the bedrock that seemed to him to have been used to support scaffolding during the construction of the building. He presented a peripteral temple of 7 × 19 columns, 40.024 m. long and 14.018 m. wide, with a cella 7.418 × 32.084 m.<sup>67</sup>

During 1987 a preliminary review of the foundations and floors of the Archaic Temple was undertaken.<sup>68</sup> A complete examination, however, took place during the excavations of 1989. Not only were several floors and construction deposits found to be intact, but several

<sup>63</sup> *Isthmia* I, pp. 3–56. *Contra*: A. Mallwitz, "Kritisches zur Architektur Griechenlands im 8. und 7. Jahrhundert," *AA (JdI)* 96, 1981, pp. 635–637; R. F. Rhodes, "Early Corinthian Architecture and the Origins of the Doric Order" (lecture, New York 1986), abstract in *AJA* 91, 1987, pp. 477–480; R. C. S. Felsch, "Further Stamped Roof Tiles," *Hesperia* 59, 1990, p. 313, note 40.

<sup>64</sup> *Isthmia* I, pp. 53–55.

<sup>65</sup> *Isthmia* I, pp. 3, 55; for the perirrhanterion, see M. C. Sturgeon, *Isthmia, IV, The Sculpture, 1952–1967*, Princeton 1988, pp. 14–61. On the date of the temple, see J. C. Wright, "The Old Temple Terrace at the Argive Heraeum and the early Cult of Hera in the Argolid," *JHS* 102, 1982, pp. 189–191.

<sup>66</sup> This report forms part of a larger project that is directed to a re-examination of all material relating to the Archaic Temple. See F. P. Hemans, "The Archaic Roof Tiles at Isthmia: A Re-examination," *Hesperia* 58, 1989, pp. 251–266.

<sup>67</sup> *Isthmia* I, p. 54, pls. 3, 4.

<sup>68</sup> Robin Rhodes, Bruce King, Richard Rinaolo, and Frederick Hemans were staff members for the project.

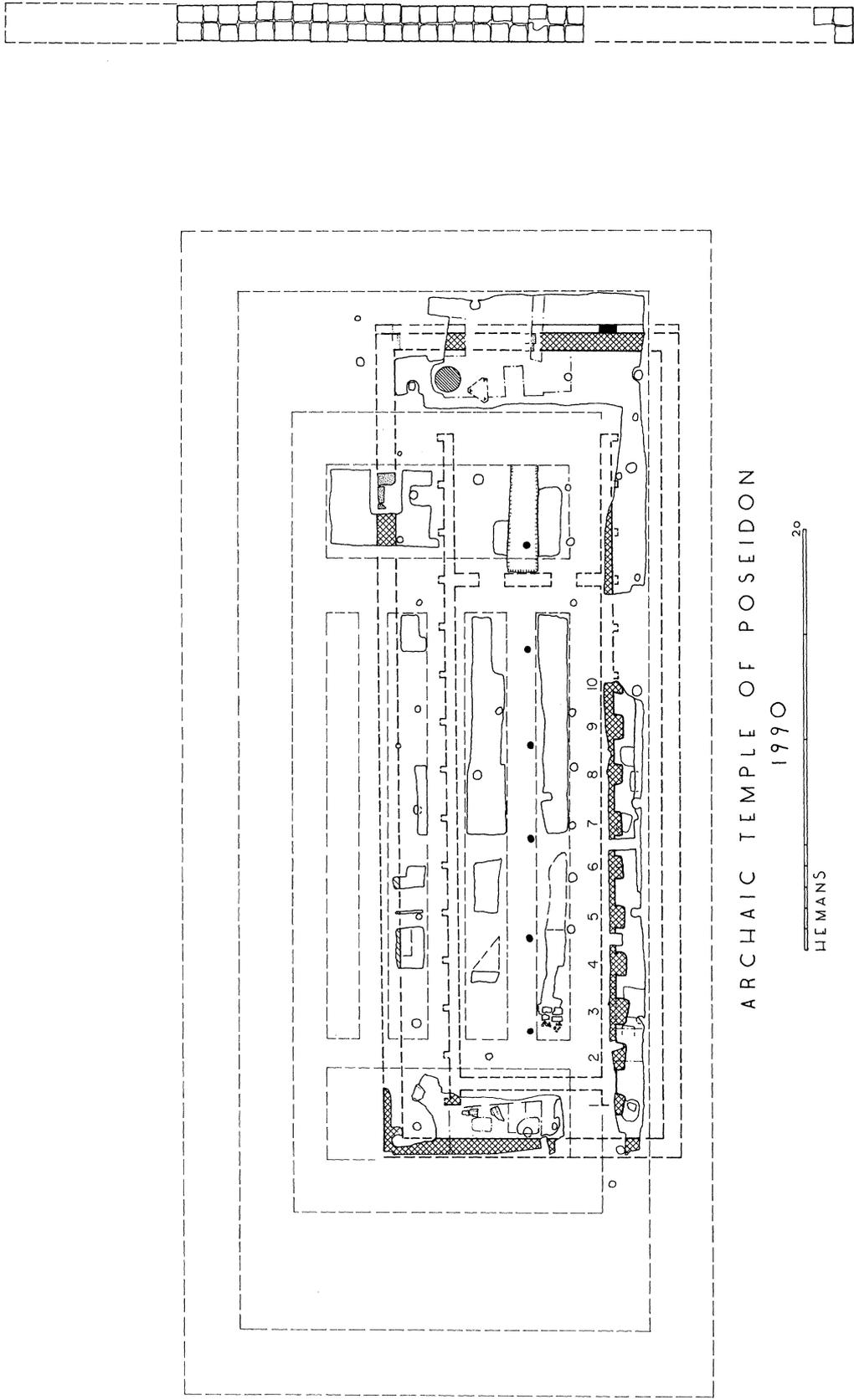


FIG. 6. Actual-state plan of the Archaic Temple and altar. The foundations of the Classical Temple and extension to the altar are shown in dashed lines. Crosshatched areas represent the robbed-out foundations of the Archaic Temple. The temple outline is restored in bold dashed lines.

new features of the temple were discovered that now allow an accurate reconstruction of its plan.<sup>69</sup>

### *West Stylobate*

Since the floor of the Classical Temple lay well above the floors of its Archaic predecessor, traces of the earlier building are found in many areas not disturbed by later construction.<sup>70</sup> One of the largest of these areas is at the west end of the temple, within the Classical opisthodomos. At the north side of the area, Broneer had traced the footing trench of the Archaic north stylobate, but he concluded that the west stylobate had been obliterated by the foundation for the entrance to the Classical opisthodomos.

In 1989, after removing only a thin crust of earth across the area, it became evident that the west stylobate trench had not been destroyed but is preserved for almost its full width along the west edge of the foundation cutting for the Classical building (Fig. 6). The trench extends for a distance of *ca.* 8.50 m., from the northwest corner of the colonnade to a point where it is cut by the foundation for the south wall of the Classical cella. Like other foundations of the Archaic Temple, the west stylobate was robbed of blocks and filled with debris and pieces of white marl after the temple was destroyed by fire.<sup>71</sup> The robbing fill within this trench was excavated over a length of four meters, and beneath it the level bedding for the stylobate blocks was exposed. The bedding was partly cut into bedrock and, where there was a fault in the rock, partly made with a hard-packed layer of poros stone chips (Pl. 11:a, b).<sup>72</sup> The preserved width of the foundation trench is *ca.* 0.96 m., approximately the same dimension as the footing trenches for the north and east stylobates.

South of the Classical cella, another small portion of the west stylobate foundation trench was traced. It ran between the south wall of the Classical cella and the south stylobate of the Classical colonnade (Tr 89-52a, west end; Fig. 7). The edges of the area have been badly disturbed by Classical construction, but a small portion of the trench fill is preserved, and next to it (immediately to the north) there is a north-south cut in bedrock that aligns with the east face of the trench farther north (Pl. 11:c). Thus, the total preserved

<sup>69</sup> In the following discussion, the burned remains of the temple after its destruction are mentioned, but the description of the deposits containing this material will be given in the Catalogue of Deposits in Part II of this report, because they contain evidence for the date of the fire and the events immediately following the destruction of the temple.

<sup>70</sup> The floor of the Classical Temple was bedded at an elevation of +0.34 m., that is, 0.26 to 0.46 m. above the final floor surface (Floor 3) of the Archaic Temple.

<sup>71</sup> Discussion of evidence for the date of the fire will be included in Part II of this report. Cf. J. Bentz and H. Butzer-Felleisen, "The Large Circular Pit at Isthmia and the History of Fifth-century Corinthian Painting" (lecture, New York 1986), abstract in *AJA* 91, 1987, p. 286.

<sup>72</sup> Areas excavated in the temple in 1989 are indicated in Figure 7. The west-stylobate robbing fill was cleared in Tr 89-51a. Deposits relating to the construction and subsequent repairs to the temple are described below in the section "The Archaic Temple: The Excavation and Deposits" (pp. 34-40). Materials found within the west-stylobate robbing fill and other deposits created after the destruction of the temple will be included in Part II.

The chips that make up part of the bedding come from dressing poros limestone during construction of the temple.

The irregular edge along the west side of the foundation trench (visible in Plate 11:a, b) is the result both of a trench excavated in 1952 that cut diagonally across the temple and of our trimming prior to excavation in 1989.

length of the west stylobate foundation trench, before it is cut off at the south end, is *ca.* 12.50 m.

With the discovery of the west foundation trench, three connecting sides of the temple were established, extending *ca.* 39.25 m. east to west and at least 12.50 m. north to south.<sup>73</sup> The over-all size alone would seem to dictate that the building must be restored as a peripteral temple, but the discovery of additional features has provided evidence for a detailed restoration of the plan.

#### *The South Wall of the Cella and Foundations for Piers*

Between the south wall of the Classical cella and the south stylobate of the Classical colonnade a long strip of earth is preserved, *ca.* 1.75 m. wide. Broneer observed that a separate red fill, *ca.* 0.25 m. wide and extending east–west, was located along its northern edge.<sup>74</sup> As in the case of the stylobate trenches described above, this fill marks the location of a foundation belonging to the Archaic Temple, and Broneer identified it as the south edge of the south wall of the cella. His excavation in the area, however, had been limited to two narrow north–south test trenches, and neither the length of the foundation nor the exact nature of the deposits adjacent to it had been determined.<sup>75</sup>

In excavation and cleaning we have now traced the full preserved length of this strip of robbing fill (Figs. 6, 7; Trs 89-52a, b, c, and 89-59).<sup>76</sup> It begins at a distance of *ca.* three meters from the Archaic west-stylobate trench and extends for *ca.* 26.50 m. to the east. After 18.80 m. it is interrupted for a space of 4.10 m. by the foundation for a house constructed in the 6th century after Christ. The location and length of this deposit marks the foundation trench for the south wall of the Archaic cella.

Immediately adjacent and partially overlapping the south side of the red fill, a series of ten evenly spaced pits was found in the course of excavation.<sup>77</sup> All are roughly the same size and rectangular in shape, measuring 1.00–1.15 m. east to west and 0.55–0.65 m. north to south.<sup>78</sup> Pits 1, 3–6, 8, 9 have been completely cleared; the others were excavated only to the point at which there was no doubt of their existence or shape.<sup>79</sup> Pit 1 appears in Plate 11:d. The pits were made after the cella-wall foundation trench had been robbed of stone and

<sup>73</sup> The distance of 12.50 m. does not include the width of the south stylobate; hence the minimum width indicated by the preserved length of the east and west stylobates is *ca.* 13.35 m.

<sup>74</sup> *Isthmia* I, p. 10. The section is described in somewhat more detail in the discussion of the floors of the Classical Temple, *Isthmia* I, p. 69. The pronounced red color of the fill comes from numerous pieces of mud brick in the soil.

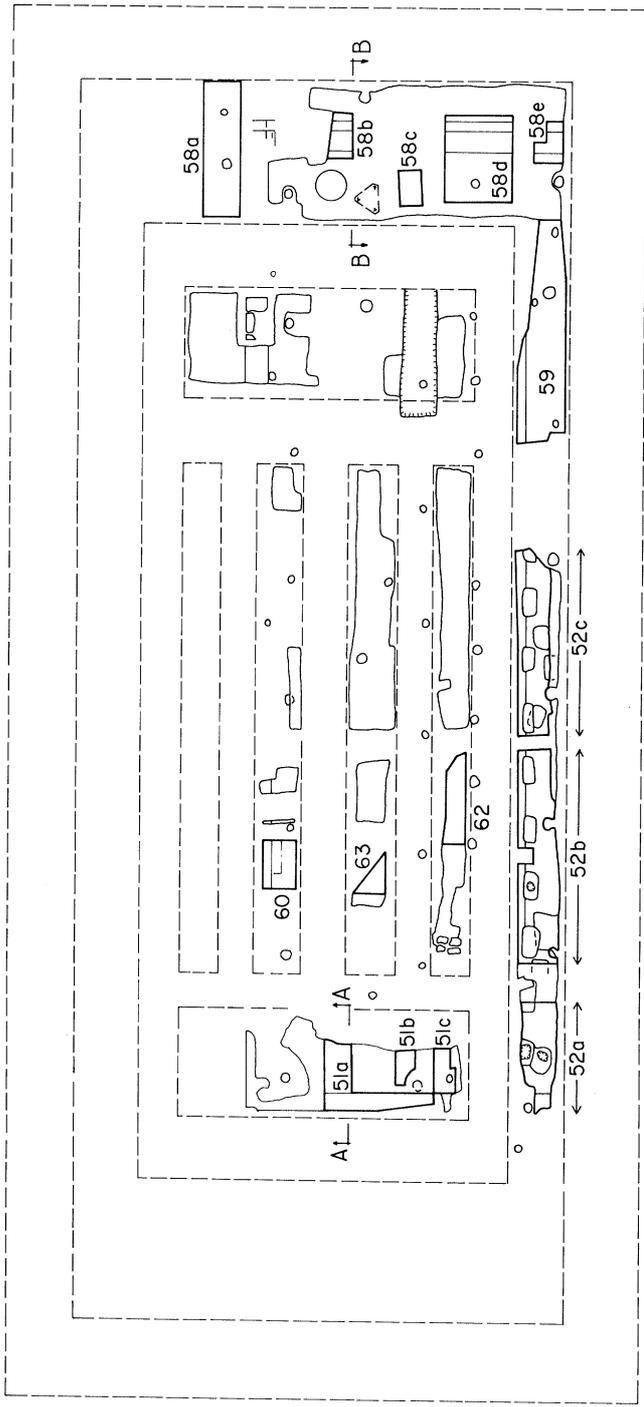
<sup>75</sup> The two test trenches are *ca.* 0.30 m. wide (*Isthmia* I, pl. 4). The eastern test is included in section A–A (*ibid.*, pl. 5), on which the deposits can be seen. The position of the red fill is not indicated on the plan on plate 4, where the deposits of the area are described as “Classical over Archaic fill.”

<sup>76</sup> East of the late house the upper layers of the strip were excavated in 1954. The robbing fill of the cella wall is visible in the unexcavated lowest layer, Tr 89-59.

<sup>77</sup> Trs 89-52a–c. Five additional robbing pits were excavated south of this series and are discussed below, p. 38.

<sup>78</sup> An exception is Pit 3, whose eastern side is 0.75 m. wide (Pl. 12:a).

<sup>79</sup> The second pit was not excavated at all, but it was recognized from the changes in soil that are visible in the scarp. The westernmost pit contains a rectangular cutting in bedrock at the bottom, the fourth pit has a circular cutting, the fifth an irregular cutting, and the ninth ends on broken bedrock that slopes down sharply from west to east. The pits vary in depth (Pl. 12:a).



ARCHAIC TEMPLE OF POSEIDON  
1989 EXCAVATIONS



FIG. 7. Plan of 1989 excavation trenches in the Archaic Temple

refilled with soil, since the northern edge of each pit cuts slightly into the robbing fill of the wall.<sup>80</sup> All the pits contain debris from the destruction of the Archaic Temple, mixed with loose, sandy, light-colored soil. Above the pits the sandy soil continues over the whole area, serving as fill beneath the floor of the Classical Temple.

The purpose of the pits can be determined from the manner in which they abut the cella wall, their regular spacing, and the relationship of this spacing to the over-all length of the Archaic Temple. Because we have uncovered ten pits in an unbroken sequence, the spacing can be measured rather precisely at 2.26 m. from center to center. If the series were extended hypothetically to the ends of the temple, the center of the final pit at each end would fall at the center of the east and west stylobates.<sup>81</sup> Thus, the pits are positioned in relation to the over-all length of the temple, and they were made during the removal of a repeating component that was located against the south cella wall and was surrounded by the floor of the peristyle.

It seems likely that the repeating architectural members were a series of piers that were built along the cella wall. Broneer in his study of the Archaic wall blocks observed that vertical bands, *ca.* 0.32 m. wide, were unaffected by the fire that destroyed the temple.<sup>82</sup> The vertical bands framed panels of stucco, and numerous blocks still retain small patches of stucco adjacent to these bands. The newly found evidence for a row of uprights standing against the walls thus explains how narrow portions of the wall surface came to be protected from fire when the temple was destroyed.

### *Interior Colonnade*

The foundations for piers against the south wall of the cella, spaced at intervals of 2.26 m., are related to a series of round holes cut in bedrock on the center axis of the building, shown in black in Figure 6. The diameter of the holes varies between 0.30 and 0.35 m. The five preserved holes are spaced on centers *ca.* 4.52 m. apart, i.e. twice the interaxial distance between the piers. Furthermore, the holes are positioned with respect to the midpoint between pairs of piers. Broneer believed that all five rows of holes found within the area were made to support scaffolding used in construction of the temple.<sup>83</sup> Each of the holes in the center row, however, has a different spacing, diameter, and depth from those in the other rows. At this stage of our study only that center row that also runs through the middle of the cella can be clearly associated with the structure of the Archaic Temple.

The interaxial distance between each hole of the center row is not precisely the same but varies a few centimeters between each placement. The distance between the third and fourth hole is a little longer than the others, *ca.* 4.60 m.

Because of their location on the center axis of the cella and their relationship to the spacing of the piers, it seems reasonable to assume that the holes were used to secure a row of wooden columns to support the ridge pole of the roof. A further indication that this was

<sup>80</sup> The relationship of the robbing and filling of trenches in the Archaic Temple to the construction of the Classical Temple and its rebuilding after a fire in 390 B.C. will be discussed in Part II.

<sup>81</sup> It should also be pointed out that the pits do not extend beyond the limits of the Archaic Temple, which is another indication that they have no relation to the much larger Classical Temple.

<sup>82</sup> *Isthmia* I, p. 35.

<sup>83</sup> *Isthmia* I, pp. 7–8.

the case is the location of the westernmost hole. It lies precisely under the place where we can restore the west end of the ridge, since the design of the roof is revealed to have been of the hipped type by the large number of surviving tiles.<sup>84</sup> The ridge pole supporting the top of a hipped roof extended only to the apex of the slope at either end, rather than to the front and rear ends of the building as in a gabled structure. Each end of the ridge pole would have been supported by a column, and other columns would have been located between them. The position of these holes shows that the central colonnade bore a symmetrical relationship to the piers, and both piers and columns were part of the same system (extending across the entire building) that supported the roof.<sup>85</sup>

### *The Plan of the Cella*

The five holes described above have a fairly even spacing of *ca.* 4.52 m., but a sixth hole is preserved at the east end of the row at a distance of *ca.* 5.05 m. from the fifth. The space between the fifth and sixth holes is *ca.* 0.53 m. more than the space between the other column supports. This extra amount of space is about equal to the width of the wall blocks and suggests that there was an intervening wall between the two supports, as restored in Figure 8. The central colonnade makes it quite likely there were two symmetrical doors leading from the pronaos into the cella, as shown in the plan.<sup>86</sup>

Through the center of the same area, surrounding the post hole and directly on the east-west axis of the temple, there is a shallow rectangular cutting in the bedrock (4.85 m. long [east to west] by 1.30–1.45 m. wide; Fig. 6). It has the character of a bedding and may well mark the location of a stylobate for stone columns that replaced the original wooden supports in a later renovation.<sup>87</sup> In the area Broneer found a concentration of votive objects from the destruction of the building, including 130 Archaic silver coins, faïence beads, bronze statuettes, horse-and-rider figurines, silver rings, gold foil, a stone seal, and fine ceramic vessels.<sup>88</sup> Considering the quantity and nature of the materials, it seems that the pronaos was used for storage of votive offerings and was probably enclosed.

The eastern end of the pronaos is not preserved, but its features can be located fairly precisely. First, it must have ended within the space later occupied by the bedding for the entrance to the Classical cella, because it did not extend into the Archaic deposits farther to the east. Secondly, the final interior column was probably placed in the same relationship to

<sup>84</sup> Cf. *Isthmia* I, p. 50. Broneer proposed that both ends of the temple were hipped because he found no remains of a raking cornice. In a statistical study of the roof tiles made before the recovery of the plan in 1989, I reached the conclusion that there was only an extremely small probability that the roof was not hipped at both ends. Now that the over-all size of the building has been established, that probability drops to a fraction of one percent; cf. Hemans (note 66 above), p. 258.

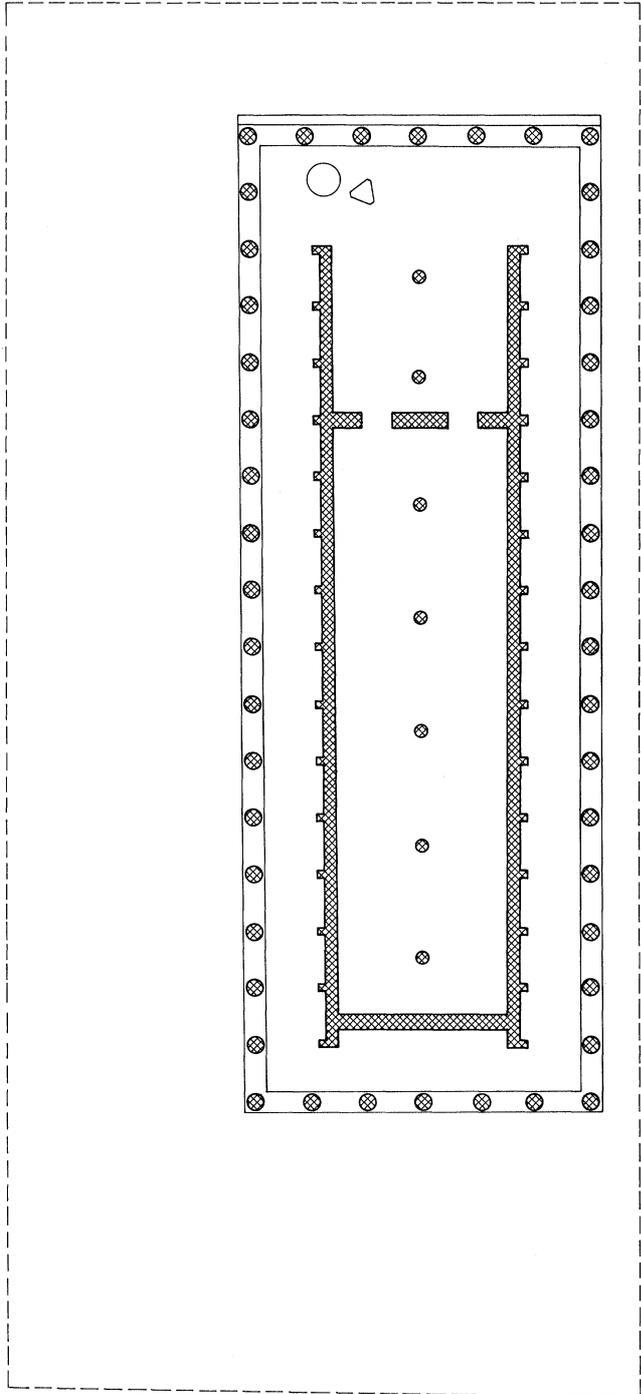
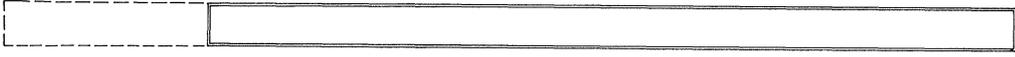
<sup>85</sup> Numerous blocks showing the cuttings to support beams have been found in both the old and new excavations. The blocks are designated type 6 in Broneer's catalogue, *Isthmia* I, pp. 26–27.

<sup>86</sup> A small area of bedrock immediately west of the pronaos area and just to the south of the axis of the building is very worn, apparently by foot traffic.

<sup>87</sup> The blocks contained in this foundation remained in place until Late Antiquity; see p. 38 below. The west end of the bedding very likely abutted the cella wall that stood between the fifth and sixth columns.

The bottom of the easternmost posthole is at approximately the same level as the other five, and the top would have been about the same level before the foundation cutting removed the upper surface of the rock.

<sup>88</sup> Broneer notebook 4 (1954), pp. 65–135. The dark earth in portions of Trs C3, C6, and C8 (Fig. 3) contained about 140 votives in all, exclusive of the silver coins.



ARCHAIC TEMPLE OF POSEIDON

1990



FIG. 8. Restored plan of the Archaic Temple and altar

the cella piers as the other interior columns, and only one pier would have fallen within the area removed by construction of the Classical pronaos. Thirdly, the final interior column must have stood under the apex of the east hip of the roof. Thus, the easternmost interior column has been restored approximately midway between the sixth interior hole and the center of the eastern stylobate. At that location, it would have been under the apex of the east hip of the roof, and it would have been midway between the last pair of piers that stood against the north and south cella walls.

At the western end of the temple several features reveal the position of the west cella wall and antae attached to the ends of the north and south cella walls. The cutting for the first of the piers against the south wall of the cella is located farther west than the east edge of the west pteron floor that is preserved. Thus, antae must have been attached to the north and south cella walls. On the north side, in line with the north cella wall, there is a partially preserved cutting in the floor of the west pteron that appears to mark the position of the north anta (Fig. 6). The position of the west cella wall may also be indicated by a north-south cutting in bedrock, *ca.* 2.93 m. from the east face of the west stylobate.

#### *East Stylobate and Step Course*

At the east end of the temple, Broneer discovered the foundation for a stylobate course and a step course against it (Fig. 6). At the northeast corner there are cuttings in bedrock where the east and north stylobates meet. The cuttings for both the step foundation and the east stylobate can be seen along the east façade to the point where they were cut off by the south stylobate of the Classical temple (Pl. 12:b). Near the south end of the foundations, just north of the Classical foundation cutting, one block of the step course (*ca.* 0.45 m. wide) is preserved in place. Immediately to the west of the Archaic stylobate is the base for the marble perirrhanterion and the feet of the iron tripod that Broneer associated with the Archaic Temple (Fig. 6).<sup>89</sup>

Although the results of the new excavations do not significantly alter Broneer's interpretation of the plan at the east end of the temple, the deposits and the levels of the floors and foundations can now be more fully explained. Since the central plateau sloped down from west to east, bedrock at the eastern end of the temple is 0.34–0.41 m. lower than at the west (east elev.  $-0.62$  to  $-0.72$  m.). Thus, at the eastern end it was necessary to provide a stone packing beneath the stylobate courses of the east and north colonnade (and presumably also at the south, although it is not preserved) to raise it to the appropriate level. Three stones of this packing remain in the north-stylobate foundation trench, *ca.* 6.50 m. from the northeast corner of the building.<sup>90</sup> A portion of two other packing stones for the east stylobate were exposed in 1989 just north of the one remaining block of the step (Fig. 6).<sup>91</sup> Archaic-temple section B–B illustrates how these levels correspond to the restored blocks of the temple (Fig. 10).

<sup>89</sup> *Isthmia* I, p. 6.

<sup>90</sup> On top, the stones have an elevation of  $-0.36$  to  $-0.39$  m.

<sup>91</sup> Top elev.  $-0.38$  to  $-0.40$  m. These blocks lie 0.09–0.13 m. lower than the foundation cutting at the west end of the building, but such a small amount of difference would not have presented great problems over such a long building, and there may have been some earth packing over the foundation stones at the east that is no longer preserved. It should also be noted that the cuttings in the bedrock at the northeast corner of the colonnade are at an elevation of  $-0.54$  m. and below, and thus these cuttings were made for stones supporting the stylobate, not for the stylobate itself.

Excavations in 1989 exposed additional segments of the east-stylobate foundation and the foundation for the step (Pl. 12:b, c). One stretch is 1.00 m. long at the north end, and the other reaches for 2.75 m. at the south (Trs 89-58b and 58d, respectively; Fig. 7).

### *Configuration of the Peristyle*

The fact that the piers on the cella walls were evenly placed in relation to the stylobate of the colonnade and with respect to the interior columns makes it clear that the spacing of the piers was also the spacing of the columns on the flanks of the building. Thus, we can restore 18 columns on the flank of the temple with an interaxial spacing of *ca.* 2.26 m. (Fig. 8).

The over-all width of the building at its western end would have been *ca.* 14.10 m. This space would have accommodated seven columns on the ends with an interaxial spacing of *ca.* 2.21 m., slightly less than the spacing on the flanks.<sup>92</sup> The eastern end of the building, however, was slightly wider, because the north stylobate was not perfectly perpendicular to the ends of the building. The over-all width of the building at the eastern end would have been 0.20–0.30 m. greater than at the west, a dimension that would have accommodated a column spacing equal to that on the flanks of the building.<sup>93</sup>

In summary, the Archaic Temple was a peripteral temple with a configuration of 7 × 18 columns on a stylobate *ca.* 39.25 m. long and 14.10–14.40 m. wide, as shown in the restored plan, Figure 8. The cella was *ca.* 7.90 m. wide with a central row of columns, and the over-all length of the cella was *ca.* 32.28 m.

## THE ARCHAIC TEMPLE: THE EXCAVATION AND DEPOSITS

### *Floors and Deposits at the West End*

Adjacent to the eastern side of the west stylobate, within the Classical opisthodomos, two areas were excavated to determine whether any floors of the Archaic Temple remained intact (Trs 89-51a and 51b). Three superimposed floors were discovered with a construction deposit below them (Fig. 9, AT sec A–A). The ceramics recovered from this area provide the best chronological evidence for construction of the temple and subsequent remodelings.

The lowest deposit is hard, almost sterile, and packed with poros chips from construction of the temple (AT dep I.A.1). Two Geometric sherds were recovered. The same layer is visible underlying the lowest floor deposits on all four sides of the temple and is also found within the cella (AT dep I.A.3). Poros construction chips were also used as packing beneath the west stylobate where there are gaps in the bedrock (AT dep I.A.2).

Over the construction layer is a floor of fine yellow earth (Floor 1, AT dep I.A.4). It is preserved on all four sides of the building, and portions were excavated at three locations in

<sup>92</sup> We arrived at a width of *ca.* 14.10 m. by extending the central axis of the cella, as shown by the circular cuttings, to the west stylobate and then by measuring from the central axis to the center of the north stylobate foundation cutting and doubling the results. To this dimension of 13.28 m. must be added 0.82 m., or half the width of each of the north and south stylobates. The approximate width of the stylobate blocks is 0.82 m. Thus the length of the west end, 14.10 m., minus 0.82 m. gives a space of 13.28 m. This figure divided by six intercolumniations yields a spacing of 2.213 m.

<sup>93</sup> The Archaic Temple was not constructed to millimeter or even centimeter accuracy in its over-all dimensions. Smaller elements are quite carefully made, for example, the wall blocks that are consistent within a few millimeters.

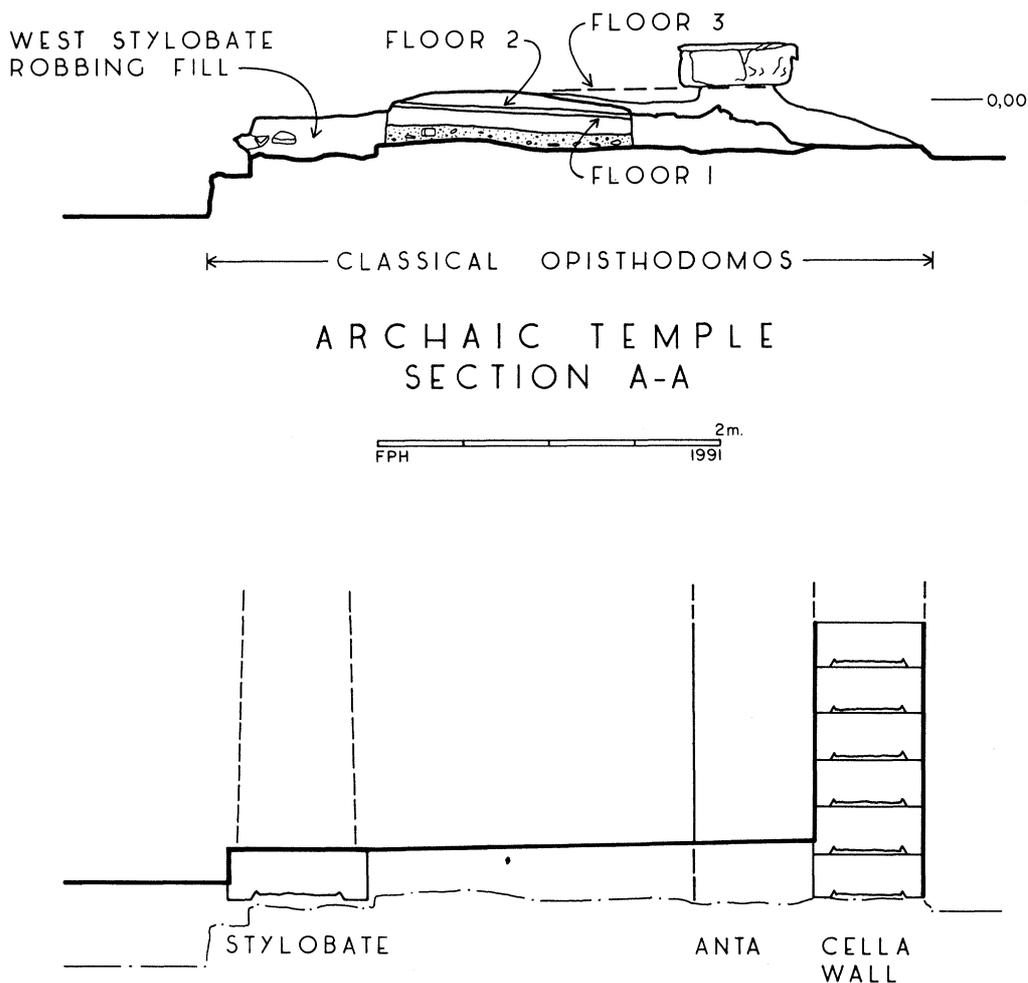


FIG. 9. Archaic Temple section A-A. Above: deposits at the west end, Trench 89-51a, facing north. Below: restored section through the stylobate and west cella wall

the western end of the building in Trenches 89-51a, 51b, and 60 (Pl. 13:a).<sup>94</sup> The latest ceramics are Middle Protocorinthian and provide a *terminus post quem* for the construction of the Archaic Temple in the first half of the 7th century B.C. (690–650 B.C.; Pl. 13:b).

The second floor in the sequence is also preserved on all sides of the building, but it varies considerably in thickness and was not found near the center of the western pteron. In Trenches 89-51a and 51b (by the west stylobate), it is very thin, reddish brown and sandy with a few patches of small pebbles. In Trench 89-60 (by the north stylobate), the floor is closer in appearance to the lower floor, although again slightly redder in color. At the western end of Trench 89-52b, the second floor is a thin layer, sandy and reddish brown as in Trench 89-51a but without any pebbles. Adjacent to the foundation for pier 6 the floor was

<sup>94</sup> The excavation of Floor 1 in Tr 89-60 was contaminated by excavating both the use surface and fill beneath in one basket. This entire basket is therefore recorded in Lot 89-428, with the material from the second floor (AT dep II.A.1).

not found. The varying thickness of the floor suggests that it was laid to renew the earlier floor. The latest pottery in the second floor belongs to the first half of the 6th century (AT dep II.A.1; Pl. 13:c).

The third floor surface is of distinctly red soil mixed with marl (AT dep III.A.1). At the west end it was excavated in the same three areas as Floor 2 (89-51a, 51b, 52b, and 60; Fig. 9). The top of this stratum is only preserved in a few places, most conspicuously in the northwest corner where it was protected by a stone block that still remains in place (AT section A-A, Fig. 9). Under the block the floor has an elevation of +0.08 m., and on it can be seen pieces of burnt bronze mixed with carbon flakes and ash. In another location, near the southwest corner of the building, there is a conspicuously scorched area of earth. The latest ceramics from this floor date to the second half of the 6th century. It was on this surface that the debris fell when the Archaic Temple was destroyed by fire about 470 B.C.

#### *North Pteron and Stylobate*

In Trench 89-60 the robbing fill within the trench for the north stylobate was excavated (Pl. 13:a). The fill is identical in composition to that found in the west stylobate: a loose, sandy, white soil with ash and fragments of worked poros and bronze from the destruction of the temple.<sup>95</sup>

Adjacent to the stylobate trench within the north pteron the same floor surfaces were found as in the west pteron.<sup>96</sup> The pottery from the floor deposits in the north pteron was lotted with that from the floors within the pteromata at the east and south ends of the building.

At the east end of the north pteron two of the floors are preserved.<sup>97</sup> On the north side of the stylobate, outside the building, the ground level at the time of the destruction of the temple was at an elevation of -0.12 m., as indicated by a thin layer of ash.

#### *Floors and Deposits at the East End*

Excavation at both the north and the south ends of the east stylobate (Tr 89-58b and 58d) revealed a sequence of deposits similar to that found at the west; the stylobate did not rest on bedrock, however, but on a deep bedding. As a result there are layers of robbing fills corresponding to the foundation for the stylobate, the stylobate, and the step course (Fig. 10, Pl. 12:b, c).

West of the east-stylobate foundations, within the east pteron, a series of floors is preserved having the same sequence as those found at the western end of the building (Pl. 14:a). The uppermost red-brown layer (Floor 3, AT dep III.B.1) has none of its surface preserved except beneath the circular base that probably held the marble perirrhanterion. Portions were excavated in the center and south sections of the pteron in Trenches 89-58c and 58d. The small section of preserved surface surrounding the perirrhanterion base at the north end of the area is white in color (elev. ca. -0.12 m.). The latest pottery in Floor 3 belongs to

<sup>95</sup> The robbing fill overlies an uneven packing, from elev. -0.14 to -0.18 m. to bedrock at -0.24 m.

<sup>96</sup> Beneath the uneven remains of the upper floor (3), Floor 2 had an elevation of ca. +0.03 m., Floor 1 of ca. -0.06 m.; a layer of construction debris occurred at ca. -0.14 m., but it was not excavated; cf. Pl. 13:a.

<sup>97</sup> Floor 2 has an elevation of ca. -0.05 m. and Floor 1 ca. -0.12 m. Beneath them is a layer of construction debris about 0.20 m. deep overlying bedrock (elev. -0.315 m.).

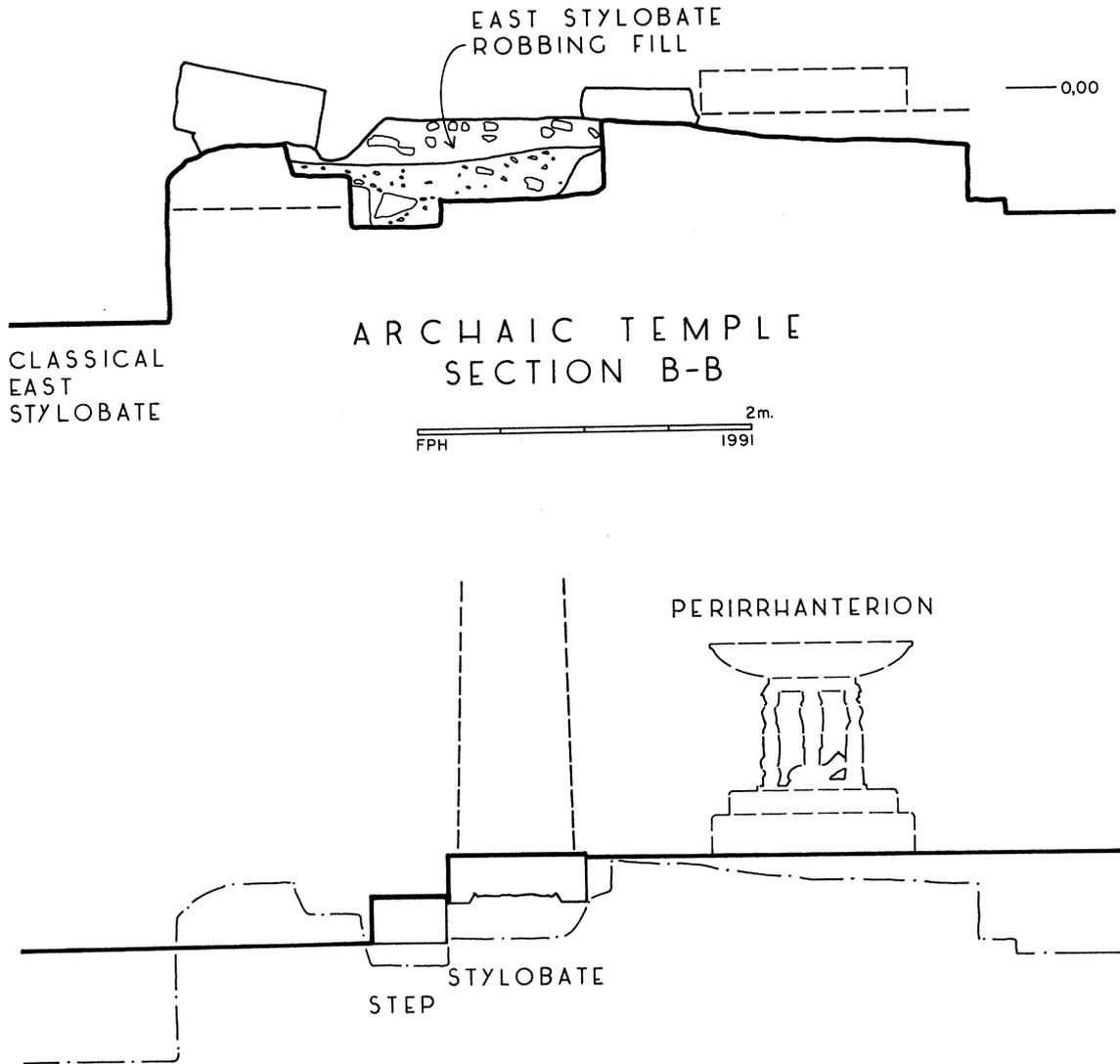


FIG. 10. Archaic Temple section B-B. Above: deposits at the east end, Trench 89-58b, facing south. Below: restored section through the step course and east stylobate

the early 6th century B.C., but the deposit must be dated later by position, because the floor beneath it has material of the mid-6th century.

Below the red-brown layer was the brown soil of Floor 2 (elev.  $-0.24$  m., AT dep II.B.1). The floor contained stones, pebbles, and chips of poros. Two joining fragments of a kotyle body from this deposit can be dated to approximately the middle of the 6th century B.C.

Floor 2 rested on the hard surface of Floor 1 (elev.  $-0.37$  m.). In places Floor 1 rests directly on soil that overlies bedrock. Elsewhere there are thin patches of construction chips beneath the floor (AT dep I.B.1).<sup>98</sup>

<sup>98</sup> A cut to bedrock was excavated at the center of Tr 89-58c.

*South Cella Wall and South Pteron*

The trench for the south wall of the Archaic cella was cut by the cella wall of the Classical building, leaving a strip of robbing fill 0.25 m. wide along its southern edge (see p. 28 above). The robbing fill contained fragments of mud brick and quantities of ash from the destruction of the temple. Below this layer there is a lighter-colored, sandy deposit with small clumps of marl and fragments of poros.

To the south of the ten pits left by removal of the pier foundations, five other robbing pits of irregular shape and orientation were found (Fig. 6). The stratigraphy shows that these pits were made before the foundations for the piers were removed, and so whatever they held was taken away earlier. The fill within the pits was the same sandy, light-colored soil that filled the foundation beddings for the piers. It may be that the southern pits are beddings for large objects, such as tripods and statues, that stood within the colonnade. Their bases could have been among the first objects removed from the area before the temple was dismantled.

*Deposits within the Cella and Pronaos*

No floor surfaces remain intact within the cella and pronaos. The deposits in these areas, while informative about the later history of the temple, revealed little about its original features. The first layer, 0.15–0.19 m. deep and consisting largely of poros chips, rested on bedrock. It appears to be a construction layer.<sup>99</sup> The second layer, with debris from the destruction of the Archaic Temple, covered Layer 1. Other fills over Layer 1 relate to the removal of the central colonnade of the Classical cella and to changes made to the interior floor levels in the Classical Temple.<sup>100</sup> All three deposits were heavily disturbed in some places by the robbing of the Classical Temple during Late Antiquity.

The most plausible explanation for the lack of a floor surface covering the first construction layer and for the fact that Layers 2 and 3, relating to later periods, lie directly on top of the early construction fill, is that there was a stone floor in the interior of the cella at the time it was destroyed. If the stone floor was not original with the temple, the installation of floor slabs would have destroyed any earlier surface. After the fire, if the stone slabs were removed, fill containing destruction debris (Layer 2) would have covered the construction deposits beneath.

In two areas (Trs 86-62 and 63) portions of the construction layer (1) were excavated. The soil in Trench 89-62 was a soft fill of sand and stones with some pockets of ash and poros working chips. At the west end of this strip a small amount of Layer 2 is still in place. Next to it lies a group of Archaic blocks resting on bedrock and surrounded by more destruction debris. Since some pottery of the 6th century was found in Layer 1, it seems that the later disturbances visible at the west end affected the entire area.

The other strip, Trench 89-63, is a cleaner sandy fill with more working chips and almost no ash (AT dep I.A.3). There was also a small amount of Layer 2 remaining. It appears that this area of the Archaic construction stratum may be undisturbed.

<sup>99</sup> Broneer thought that Layer 1 represented the floor of the Archaic Temple, but it has no hard or compact surface.

<sup>100</sup> Broneer discusses at length the deposits and possible changes in floor levels within the cella (*Isthmia I*, pp. 64–70).

*Summary of Deposits*

The materials recovered from deposits excavated in 1989 indicate that the Archaic Temple was constructed in the first half of the 7th century, probably in the second quarter. Two later floors found within the pteron indicate that repairs or remodelings were made to the temple around the middle of the 6th century, and again at the end of the 6th century. Neither of these repairs would indicate any major structural changes to the building, since there is no evidence of alterations in the wall foundations, the roof tiles, or the stone blocks. The floors might, however, be associated with alterations within the cella and pronaos. The long, narrow cutting in the pronaos shows that a foundation, perhaps a stylobate for stone columns, was installed. A stone floor may have been laid in the cella at the same time.

DEPOSITS IN THE ARCHAIC TEMPLE<sup>101</sup>

## I. Construction Deposits and Floor 1

*A. Western Areas of the Temple*

## 1. Poros-chip construction layer in the west pteron

Tr 89-51a (C-5); AT sec A-A, dep 2, Fig. 9

Elev.: from -0.14 to -0.27 m.

Lot 89-431 (under AT dep I.A.4)

Total sherds, 1: 1 G

Date: 690-650 by position, based on AT dep I.A.4

## 2. Poros-chip packing beneath the bedding for the west stylobate

Tr 89-51a (C-5); AT sec A-A, Fig. 9

Elev.: from -0.27 to -0.66 m.

Lot 89-432

No pottery

Date: 690-650 by position, based on AT dep I.A.4

## 3. Poros-chip construction layer in the cella

Tr 89-63 (I')

Elev.: from -0.12 to -0.26 m.

Lot 89-419

Total sherds, 4: 3 G, 1 A

Date: 690-650 by position, based on AT dep I.A.4

## 4. Floor 1 and fill below, fine yellow clay

Tr 89-51a and 51b (C-5); AT sec A-A, Fig. 9

Elev.: from 0.00 to -0.14 m.

Lot 89-429 (under AT dep II.A.1)

Total sherds, 261: 12 G, 191 A, 53 amphora, 5 plain fine ware. The latest pieces are a Middle PC I conical oinochoe (IP 8102) and a Middle PC aryballos, 690-650 (Pl. 13:b).

Date: 690-650

Inventory: Middle PC I conical oinochoe, IP 8102

*B. Eastern Areas of the Temple*

## 1. Floor 1 and soils below resting on bedrock

Tr 89-58c (C-8)

Elev.: from -0.35 to -0.50 m.

Lots 89-444 and 445 (under AT dep II.B.1)

<sup>101</sup> See note 47 above.

Total sherds, 21: 13 G, 4 A, 1 coarse ware, 3 amphora. The latest is a skyphos base of the early 7th century.

Date: 690–650

## II. Floor 2

### A. Western Areas of the Temple

#### 1. Surface and fill beneath Floor 2

Trs 89-51a and 51b (C-5), 52b (G), and 60 (I, I'); AT sec A–A, Fig. 9

Elev.: from +0.05 to –0.08 m.

Lot 89-428 (under AT dep III.A.1)

Total sherds, 444: 11 G, 375 A, 45 amphora, 4 cooking ware, 9 plain fine ware. The latest pieces are an aryballos dated 620–550, a square-rimmed bowl, and several other sherds that are probably of the first half of the 6th century (Pl. 13:c).

Date: mid-6th century

Inventory: terracotta horse (leg), IM 5961; terracotta horse (head), IM 5977; aryballos, IP 8091

### B. Eastern Areas of the Temple

#### 1. Soft brown fill beneath Floor 2

Tr 89-58c and 58d (C-8)

Elev.: from –0.23 to –0.37 m.

Lots 89-440, 441, and 448 (under AT dep III.B.1)

Total sherds, 23: 5 G, 13 A, 3 amphora, 1 cooking ware, 1 roof tile. The latest are kotyle fragments from the middle of the 6th century.

Date: mid-6th century

Inventory: alabastron, IP 8103

## III. Floor 3

### A. Western Areas of the Temple

#### 1. Red fill with marl associated with Floor 3 (surface is not preserved in areas excavated)

Trs 89-52a (B2), 52b (G), 60 (I, I'), 51a and 51b (C-5); AT sec A–A, Fig. 9

Elev.: from +0.08 to –0.08 m.

Lot 89-427

Total sherds, 132: 1 Myc, 9 G, 79 A, 35 amphora, 3 cooking ware, 4 plain fine ware, 1 coarse ware.

The latest piece is a skyphos fragment of Attic shape, from the second half of the 6th century (Pl. 13:d).

Date: second half 6th century

Inventory: terracotta figurine (unidentifiable), IM 5976; krater, IP 8029; kotyle, IP 8082; kotyle, IP 8094

### B. Eastern Areas of the Temple

#### 1. Red-brown fill below Floor 3 (surface not preserved)

Tr 89-58c and 58d (C-8)

Elev.: from –0.14 to –0.28 m.

Lot 89-439

Total sherds, 80: 6 G, 63 A, 7 amphora, 1 cooking ware, 3 plain fine ware. The latest is a kotyle base of the late 7th or early 6th century.

Date: second half 6th century by position, based on AT dep II.B.1

Inventory: cast bronze handle, IM 5957 (probably intrusive); conical oinochoe, IP 8092

## THE LONG ALTAR

As Broneer described it, the long altar stretching across the east end of the temple shows two phases of construction (Fig. 15).<sup>102</sup> The northern section, 8.35 m. long and 1.88 m. wide, is carefully built and contains blocks re-used from the Archaic Temple. The remaining portion, 31.65 m. long and 1.76 m. wide at the bottom, was built with two rows of newly cut blocks that are almost square but are finished in a less regular manner (Fig. 6, Pl. 14:d). On the basis of the re-used material and developed construction technique, Broneer conjectured that the northern part of the altar was built first, at the same time as the Classical Temple, but left unfinished; the long southern section he placed after the fire of 390. In his review of *Isthmia* I, J. J. Coulton drew attention to the fact that the axis of the southern part of the altar is aligned with the axis of the Archaic Temple, and thus it is probably contemporary with that temple; the northern end would have been added later in the 5th century.<sup>103</sup>

In 1989 we considered Coulton's suggestion and found that there was considerable evidence to support his view that the southern part of the long altar was indeed the original altar and that it was contemporary with the Archaic Temple. In a long exploratory trench (89-22), we found that the blocks of the first course, 0.305 m. high, had been set directly on the rock of the plateau with a thin layer of sterile red soil beneath them (Pl. 14:c). West of the altar where the rock rose gently towards the front of the temple, there was a stratum of very dark soil with a high concentration of carbon.<sup>104</sup> Fist-sized stones occurred toward the bottom of the layer and smaller rocks and burnt bones throughout (Pl. 14:b). This deposit of fill was laid down along the west face of the altar after the blocks were in place, evidently for the purpose of leveling the area between the altar and the temple. To gather further evidence for the date of the soil layer, we opened two small trenches to the north (Trs 89-64 and 89-65).

The pottery in Trenches 89-22 and 89-65 (LA dep I.1), although very fragmentary and poorly preserved, is contemporary with material related to the construction of the Archaic Temple (AT dep I.A.4).<sup>105</sup> Two-thirds of the sherds belong to the Early Iron Age, and one Protogeometric piece is heavily burnt. In Trench 89-64, although the material is predominantly early, the surface above the dark deposit next to the altar was disturbed in Roman times, and some later pieces also entered the soil beneath (LA dep I.2).

A date roughly contemporary with the temple is supported by the fact that the blocks of the altar were finished in a manner very similar to that employed for the temple. The end of each block was cut so that, when it was set in place, the outer edge of the joint fitted closely against the adjacent block but their inner surfaces did not touch (Pl. 14:d). The same method of joining blocks occurs in the south section of the Archaic temenos wall, described

<sup>102</sup> *Isthmia* I, pp. 98-100.

<sup>103</sup> *JHS* 95, 1975, pp. 271-272.

<sup>104</sup> In Tr 89-22 the elevation of bedrock just east of the Classical Temple is -0.93 m.; at the west edge of the altar it is -1.16 m.

<sup>105</sup> The diagnostic pieces are two rims of kotylai belonging to the end of the 8th century or the beginning of the 7th and the base of a deep bowl of the same period or a little later. None of the sherds are certainly later than the first half of the 7th century.

below. East of the altar the rock of the plateau was exposed, and the front face of the first course of the altar would have been visible. This surface is more carefully finished than that on the west side. It is interesting to note that the center of the altar was not aligned exactly on the east–west axis of the temple.

#### DEPOSITS RELATING TO THE LONG ALTAR<sup>106</sup>

##### I. Construction

###### 1. West side

Trs 89-22A and 65 (12)

Elev.: from –0.89 to –1.24 m.

Lots 89-454, 459, 547

Total sherds, 110: 65 PG/G, 24 A, 9 amphora, 12 coarse ware. The Archaic sherds are very fragmentary. Nothing needs to be later than the mid-7th century. See note 105 above.

Date: mid-7th century

Fauna: 592 bones, 100% burnt

###### 2. West side

Tr 89-64 (12)

Elev.: from –1.08 to –1.20 m.

Lots 89-458, 548

Total sherds, 30: 10 PG/G, 9 A, 1 C, 10 amphora; roof-tile fragments: 1 A, 2 yellow-glazed, 1 R.

Surface deposit (Lot 89-456) disturbed; later material entered deposit below.

Date: Roman

#### NORTH TERRACES 1 AND 2

The terrace constructed across the north half of the temenos (North Terrace 1) is the earliest well-preserved feature north of the temple, and it follows fairly closely the gently sloping bedrock as it approaches the more sharply inclining edges of the northwest gully (Fig. 5). Prior to this construction, the surface of the plateau was irregular, with exposed shallow outcrops of bedrock. No attempt was made, however, to create a horizontal terrace; the soil is shallow and follows the sloping contour of the bedrock. The terrace fill was excavated in four locations (NT1 deps I.A.1–4); it contained mostly Geometric sherds with a few pieces from the first half of the 7th century. NT section B–B (Fig. 12) illustrates the slope of the terrace at its northern edge in Trench 89-37.

The purpose of the terrace was to extend the amount of useable space northward to the edge of the gully, and its hard surface reflects the great amount of traffic in this area of the sanctuary during the second half of the 7th and first half of the 6th century (Fig. 13). During the 6th century additional fill was placed over the same area to renew the surface of the earlier terrace: the useable area remained the same, and the surface was raised only 0.10 to 0.25 m. (NT2 deps II.1 and II.2; Figs. 11, 12). This later terrace (North Terrace 2) continued to be used until the destruction of the Archaic Temple *ca.* 470 B.C. Soon thereafter when a large portion of the Archaic temenos wall (pp. 47–48 below) was dismantled, Classical Road 1 was constructed across the northern edge of the terrace.<sup>107</sup>

<sup>106</sup> See note 47 above.

<sup>107</sup> The roads and terraces of the Classical and later periods will be described in Part II of this report.

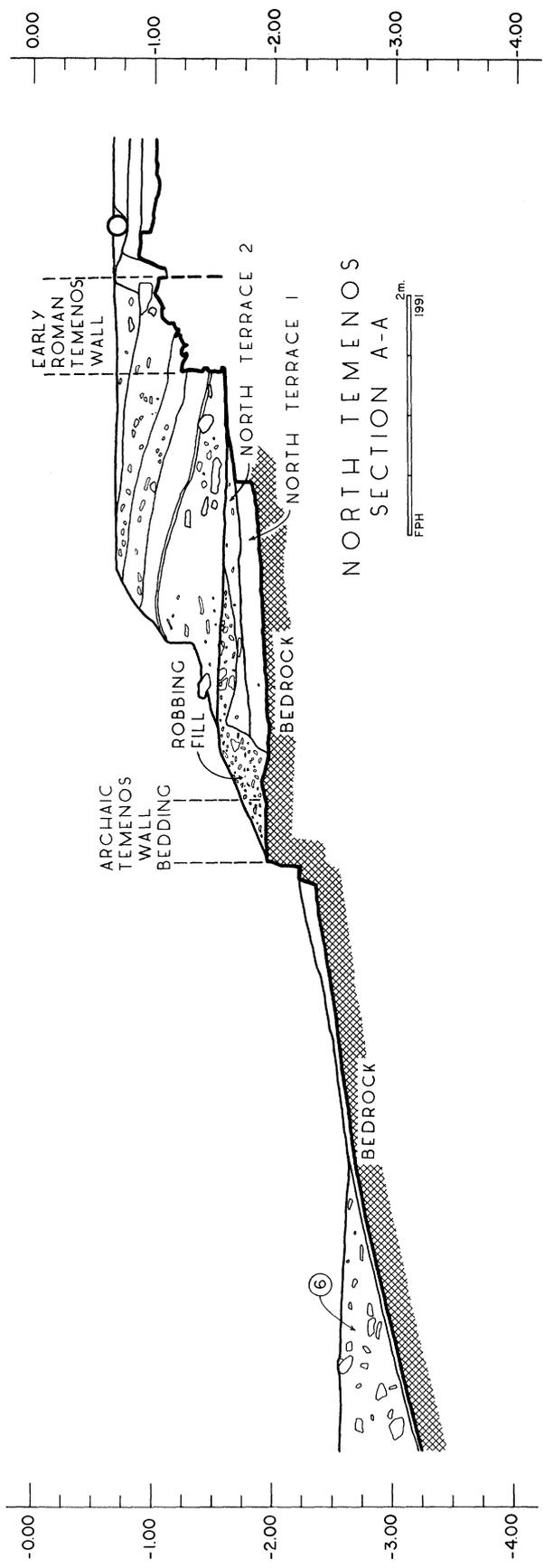


FIG. 11. North Temenos section A-A, Trench 89-49, facing east

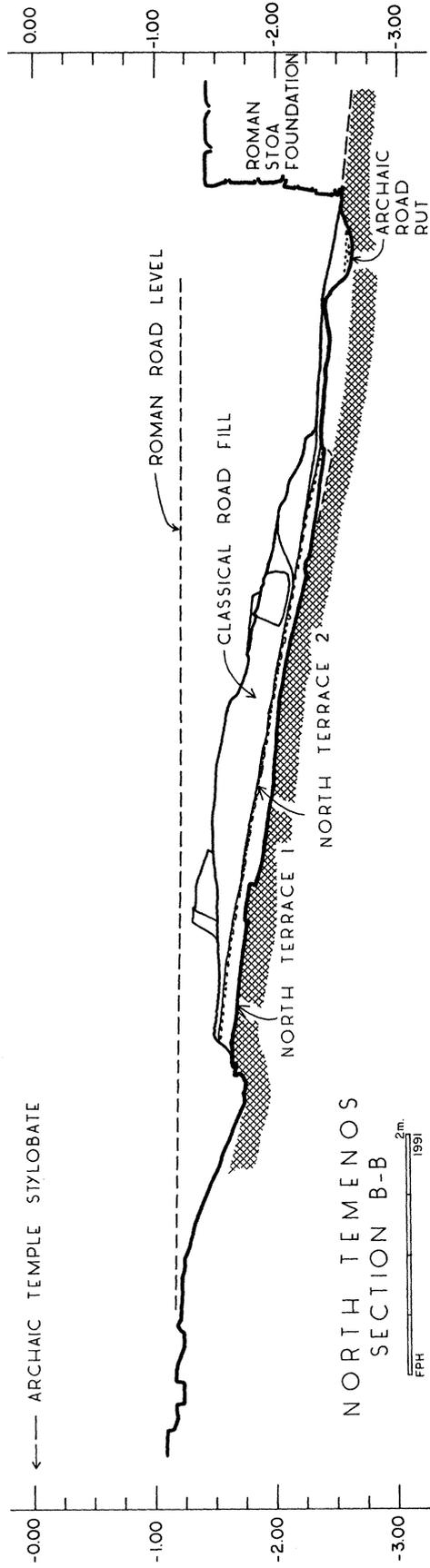


Fig. 12. North Temenos section B-B, Trench 89-37, facing west

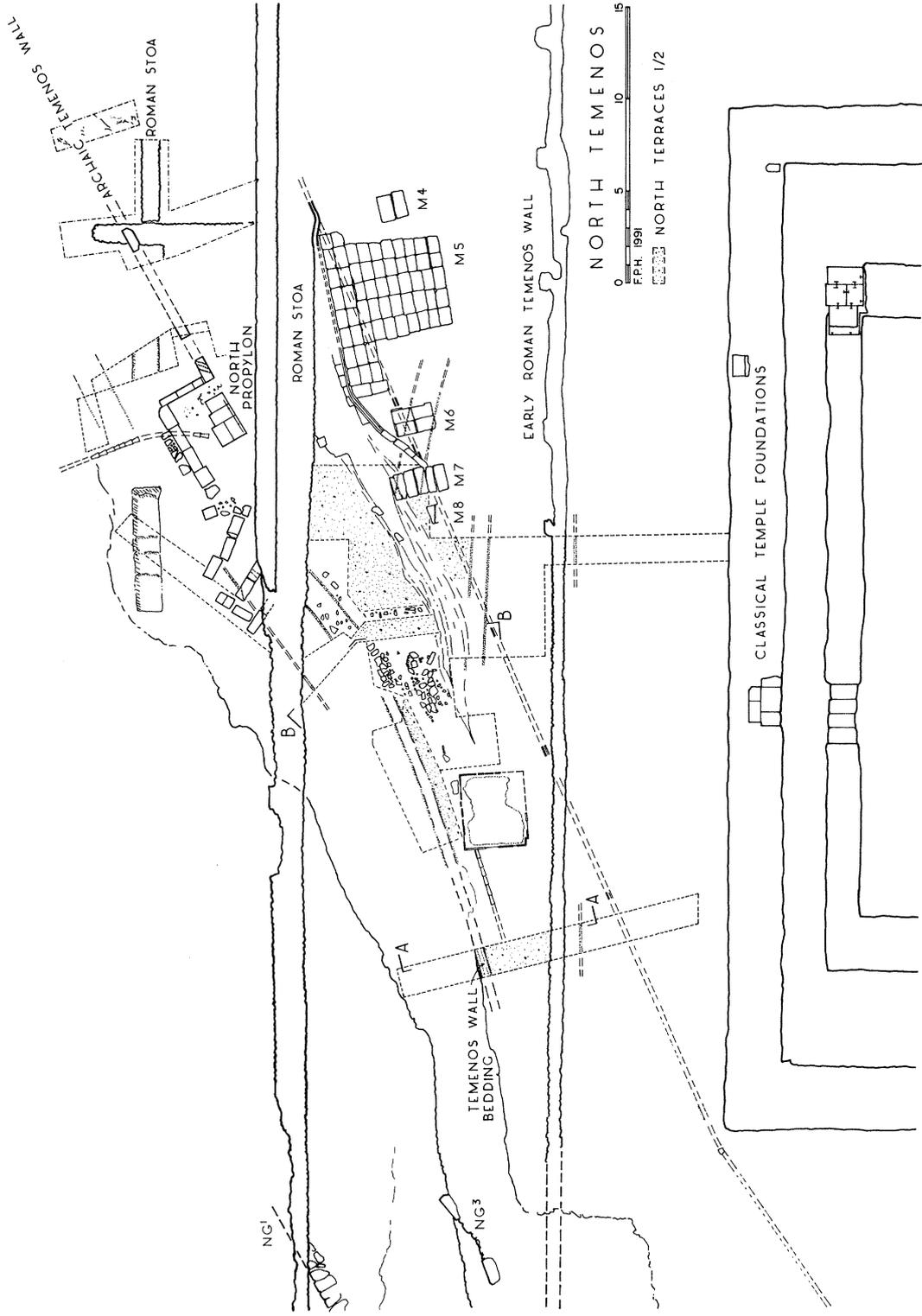


Fig. 13. Actual-state plan of the North Temenos. North Terraces 1, 2 shown by dots

DEPOSITS OF NORTH TERRACES 1 AND 2<sup>108</sup>

## I. North Terrace 1

*A. Fill of North Terrace 1*

1. Dark red soil overlying bedrock, with few stones. The deposit terminates abruptly at the north where the Archaic temenos wall was removed.  
Tr 89-49 (NW-E, III, IV); NT sec A-A, Fig. 11  
Elev.: from -1.63 to -1.94 m.  
Lot 89-380  
Total sherds, 54: 52 G, 2 A  
Date: 690-650, based on NT1 deps I.A.2 and I.A.4  
Fauna: 1 unburnt bone, sheep/goat
2. Sloping, hard, dark red soil overlying bedrock  
Tr 89-37 (IX, X, XI); NT sec B-B, Fig. 12  
Elev.: from -1.66 (S)/-2.25(N) to -1.74(S)/-2.30(N) m.  
Lot 89-386  
Total sherds, 31: 23 G, 1 A, 7 amphora  
Date: 690-650
3. Same as deposit I.A.2  
Tr 89-19 (N. Tem. W, XI), west of and adjacent to base M7 (Figs. 2, 13)  
Elev.: from -1.54(S)/-1.77(N) to -1.62(S)/-1.80(N) m.  
Lot 89-142 (under Lot 89-141)  
Total sherds, 10: 9 G, 1 coarse ware
4. Same as deposit I.A.2  
Tr 89-25 (T-1, NE-V, XI), on both sides of the Early Roman temenos wall  
Elev.: from -0.82 to -1.04 m. south of wall; to -1.38 m. north of wall  
Lots 89-153 and 161 (under Lots 89-145 and 89-158)  
Total sherds, 12: 1 Myc, 4 G, 1 A, 4 coarse ware, 1 amphora, 1 plain fine ware. The latest sherd is a Protocorinthian handle of the first quarter of the 7th century.  
Date: 690-650

*B. Use surface of North Terrace 1*

1. Hard, dark red soil  
Tr 89-49 (NW-E, III, IV); NT sec A-A, Fig. 11  
Elev.: from -1.60 to -1.66 m.  
Lots 89-377 and 89-379  
Total sherds, 20: 1 Myc, 8 G, 5 A, 2 coarse ware, 2 amphora, 2 cooking ware. The latest sherds are a rim of the 7th or early 6th century and the base of a conical oinochoe of the second half of the 7th or early 6th century.  
Date: second half 7th to early 6th century

## II. North Terrace 2

1. Reddish soil belonging to the fill, with small stones and poros working chips. The deposit terminates abruptly at its northern end where the Archaic temenos wall was removed, like NT deps I.A.1 and I.B.1.  
Tr 89-49 (NW-E, III, IV); NT sec A-A, Fig. 11  
Elev.: from -1.60 to -1.84 m.  
Lots 89-374, 375, 376  
Total sherds, 6: 4 G, 1 coarse ware, 1 amphora  
Date: first half 6th century, based on NT1 dep I.B.1

<sup>108</sup> See note 47 above.

2. Same as NT2 dep II.1

Tr 89-37 (IX, X, XI)

Elev.: from  $-1.59(S)/-2.16(N)$  to  $-1.74(S)/-2.25(N)$  m.

Lot 89-538

Total sherds, 42: 13 G, 18 A, 10 amphora; 1 roof tile. The latest pieces are two fragments of a conical oinochoe base of the late 7th or early 6th century.

Date: first half 6th century

### THE ARCHAIC TEMENOS WALL AND NORTH PROPYLON

Broneer identified the remains of a small building on the north side of the second Roman temenos wall as a propylon. It is labeled North Propylon in Figure 13 and shown restored in Figure 18 (cf. Pls. 6, 15:a).<sup>109</sup> He proposed a Classical date for the propylon on the basis of debris from the Archaic Temple that he believed pre-dated the propylon. Since the 1989 excavations have shown that the Archaic debris layer formed part of the Classical road system, which was higher and later than the propylon, we suggest an Archaic date for the gateway.<sup>110</sup>

At its southeast corner the building is bonded with a block 1.39 m. long by 0.64 wide that extends to the east, and Broneer excavated a similar block on the same alignment 6.65 m. farther to the east.<sup>111</sup> Based on their alignment and relation to the propylon, Broneer suggested that they formed part of a temenos wall (Fig. 13, Pl. 15:a).<sup>112</sup> New excavation has revealed part of one additional block between the two previously uncovered. It lies 1.32 m. from the east face of the block at the corner of the propylon (Fig. 13). It is 0.625 m. wide, but only 0.68 m. of its total length was exposed next to the trench face. The additional block confirms Broneer's conclusion that the other two blocks should be interpreted as part of a continuous wall.

Southwest of the propylon we exposed the bedding for another segment of the wall, about 20 meters long. At the west end (Trench 89-49), a short piece of bedding was cut into bedrock (Pl. 15:b). On the basis of the space between the deposits for North Terraces 1 and 2 and the north edge of the bedrock ledge, the wall could have been as wide as 0.90 m., but the area where the surface of the bedrock has been smoothed is narrower, *ca.* 0.60 m.

The date of this temenos wall can be established on the basis of the deposits that were laid against it. North Terraces 1 and 2 immediately south of the bed cutting have an abrupt vertical face where they abutted the wall before it was removed (NT1 deps I.A.1, I.B.1, and NT2 dep II.1; Fig. 11). Clearly, both North Terraces 1 and 2, since they abutted the temenos wall, were laid after the wall was in place. The wall thus predated the terraces which were constructed in the first half of the 7th century and the first half of the 6th century, respectively. The temenos wall was very likely built at the same time or shortly after the Archaic Temple. A *terminus ante quem* for the removal of the wall is provided by a deposit

<sup>109</sup> *Isthmia* II, pp. 10–11, pl. 52:a. The foundations of the building are preserved on three sides and are oriented 30 degrees north of east.

<sup>110</sup> A description of the Classical roads will appear in Part II.

<sup>111</sup> The latter block is now covered with backfill from the Broneer excavations.

<sup>112</sup> *Isthmia* I, p. 10.

of the second half of the 5th century containing poros chips; it overlies the terraces and fills the position of the robbed-out wall.<sup>113</sup>

At the north edge of Trenches 89-37, 28, 40, and 41, over a distance of about 12 meters, the position of the wall is also visible (Pl. 15:c). The line is indicated by the hard edge between North Terrace 1 and ash deposits from the destruction of the temple, placed here in the third quarter of the 5th century. In Trench 89-37 small additional portions of the ash layer are visible over North Terrace 2. On top of this ash layer a roadway (Classical Road 1) was in use to perhaps the third quarter of the 5th century. At that time large amounts of blocks from the Archaic Temple were dumped over the whole area as the bedding for a new roadway. The date for the removal of the wall is thus firmly fixed between the destruction of the temple, *ca.* 470 B.C., and the dumping of temple debris in the third quarter of the 5th century for Classical Road 2. Only some portions of the temenos wall, however, were removed in the 5th century. In Trench 89-42 (east of the propylon) blocks of the wall are covered by debris placed there in the 3rd century B.C. The propylon may have continued in use throughout the Classical period.

No firm stratigraphic sequence was found to date the construction of the North Propylon, but its relationship to North Terrace 1 and the Archaic temenos wall show that it must have been constructed before the 5th century. The workmanship on the blocks, employing well-developed banded anathyrosis, also suggests a date not earlier than the 6th century. The building may well be contemporary with North Terrace 2.

On the east side of the center plateau, evidence for the course of the Archaic temenos wall is not so clear as on the north. No parts of the wall itself are preserved, but towards the center a block from the bedding remains in place, and there is a robbing trench for the southern section.

North of Trench 89-22 and next to the edge of the plateau, the wall was bedded on a well-cut poros block (elev. -1.59 m.; Fig. 15, east of the altar and west of the Early Roman temenos wall, between the third and fourth buttresses from the north end). The block is finished in a manner comparable to the blocks of the Archaic Temple and altar, and a setting line inscribed on its top surface shows that it supported a second course.<sup>114</sup> Its position and size are appropriate for bedding an ashlar wall about 0.32 m. thick, and its orientation shows that the wall ran almost due north-south at that point, as restored in Figure 5.

The robbing trench lies in Trench 89-47, toward the south end of the altar, and it can be traced for 2.50 m. as shown by hatching in Figure 15. The wall trench is filled with crushed stone and sand, gray in color, which is clearly distinguishable from the white gravel fill of East Terrace 2 that was built against it to the east.<sup>115</sup> North of Trench 89-32, traces of

<sup>113</sup> This deposit will be included with the Classical roads in Part II of this report.

<sup>114</sup> The block is irregular with a maximum length of 0.75 m., width of 0.44 m., and height of 0.235 m. It is bedded on a thin layer of soil over marl with its west side overlapping the rock ledge of the plateau. The north and east faces were finished with a broad chisel; the south face is cut with rough anathyrosis on the east side where the joint with the next block to the south would have been exposed. The setting line runs at a slight angle to the east face, and the west edge is gently beveled. The surface is smoothed to receive a block 0.75 m. long by 0.32 m. thick.

<sup>115</sup> The trench was opened from the surface of East Terrace 1 (elev. -2.23 m.). It is 0.50 m. wide at the bottom and broadens to 0.90 at the top; it is 0.65 m. deep. A portion of it was cleared in Lot 89-211. The latest

the wall disappear. It was probably removed during construction of Terrace 2, as restored in Figure 14.

The original course of the temenos wall north of the altar is a matter of conjecture. Immediately south of the altar the area has not been excavated below Classical levels. The wall apparently did not continue south of the Early Roman temenos wall, because there was no sign of its presence in Trenches 89-2F, 66, and 43 that were excavated to bedrock. Its course in Figure 5 is restored along the line of the Early Roman temenos wall.

The southern section of the temenos wall was uncovered by Broneer, and it is the best preserved (Fig. 19, Pl. 6).<sup>116</sup> It ran parallel to the Archaic Temple, along the lower edge of the Rachi where the rock sloped down to the flank of the temple. Not until the stoas were constructed in the 2nd century after Christ was the plateau leveled to its present state.<sup>117</sup> The main portion of the wall is about 30 meters long and lies *ca.* 3.50 m. from the south flank of the Archaic Temple.<sup>118</sup> The blocks are comparable in material, finish, and joining technique to those used in the Archaic Temple and the altar. Rope grooves, similar to those found on blocks of the temple, are visible on one block that also has rough anathyrosis. Only the outside face of the wall is smoothly finished. The vertical joints are cut diagonally back from the front face so that they are closed at the face but are open toward the inside, a technique seen also on the altar (Pl. 14:d). The blocks are about 0.38 m. wide and about 0.29 m. high.

At the east end of the long southern section, the temenos wall turned to the south (Fig. 19). In that section it is built in three segments. The northern part, which is surely contemporary with the long, east–west segment, is 7 meters long and runs in a southeasterly direction. The second section turns due south for *ca.* 5.50 m., and the third makes an oblique angle to the southwest for a stretch of 17 meters. The second and third segments are evidently later than the main part of the wall, because the blocks, with shifting notches and setting lines, are cut and finished in the same manner as the Classical masonry in the sanctuary.<sup>119</sup> The southernmost block of the first section was cut to run east–west, as though the wall had originally made a turn to the east and continued along the south end of the altar. A cutting in bedrock just east of the turn supports this reconstruction. Its original course

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sherds belong to the second half of the 6th century B.C., but this portion of the temenos wall probably was not removed until construction of East Terrace 6 in the 5th century.

<sup>116</sup> *Isthmia* II, p. 14.

<sup>117</sup> Trs 89-1, 7, 9, and 12 revealed no deposits earlier than the Roman period (Fig. 2).

<sup>118</sup> Although the south stylobate is not preserved, its location can be restored as discussed above (p. 34) in the section on the Archaic Temple.

<sup>119</sup> Broneer suggested that the wall, which he called “polygonal” because of its irregular plan, had two steps along its north and east face (*Isthmia* II, p. 14). While recognizing the two types of masonry, he considered the earlier blocks re-used and placed the entire wall in the 5th century B.C., because it terminated at the stadium reservoir. Reasons for believing that the majority of the wall belongs in fact to the Archaic period are given below (p. 51).

Gebhard once thought that the wall might have enclosed the precinct of Melikertes-Palaimon in Classical times, but the absence of a return at the southeast end and the discovery in 1989 that the east–west portion continued westward make that identification untenable (cf. “The Early Sanctuary of Poseidon at Isthmia” [lecture, San Antonio, Texas 1986], abstract in *AJA* 91, 1987, pp. 475–476).

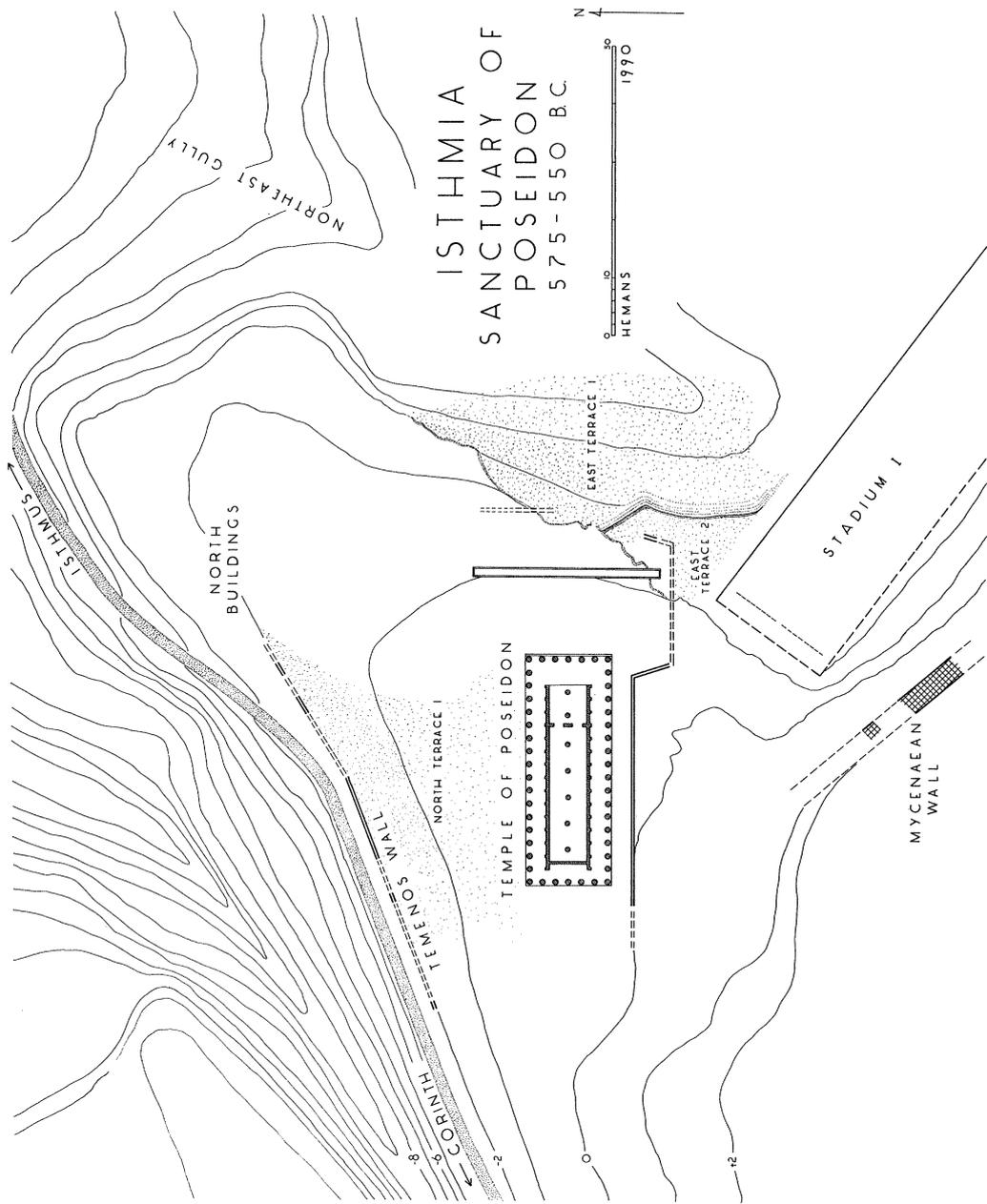


Fig. 14. Restored plan of the sanctuary, 575-550 B.C.

would then have been about the same as that of the Early Roman temenos wall, until it passed the altar and turned northward.

The blocks of the short return at the east end rest on bedrock without a foundation trench, a feature also found in the altar and in other segments of the temenos wall. They are *ca.* 0.62 m. wide with a setting line along the east side that indicates that the second course had a width of about 0.32 m. The same width for the temenos wall east of the altar is indicated by the foundation block described above.

At the west end of the main, east–west section of the wall the blocks are missing, but a shallow foundation cutting in marl shows that the wall continued for more than 8 meters (Fig. 19, Pl. 6). Another short stretch of the bedding at the west end was cleared in 1989. West of the Archaic Temple, no further trace of the wall was found. The surface is the flat rock of the plateau, and it was much used in later times.

In summary, the Archaic temenos wall can be traced in a continuous line along the north side of the plateau for a distance of about 45 meters (Fig. 5). The foundation for the wall was laid on bedrock using an earth packing to level the surface; the foundation course was 0.60–0.63 m. wide. At the eastern end the blocks that are in place lie at an elevation of  $-2.13$  to  $-2.39$  m.; at the west the bedding is at an elevation of *ca.*  $-2.00$  m. North Terrace 1 was laid against the temenos wall in the second half of the 7th century and provides a *terminus ante quem* for its construction. At the east side of the temenos the course of the wall is marked by a foundation block (elev.  $-1.59$  m.) for a wall about 0.32 m. thick. A robbed foundation trench 2.50 m. long at the south end of the altar very likely belonged to the same wall. The wall enclosed the south end of the altar and then ran along the south flank of the temple where the first course is preserved for about 30 meters.<sup>120</sup> A date close to that of the Archaic Temple is suggested by the similarity in stone work and building technique between the temple, the temenos wall, and the long altar.

### THE ARCHAIC ROAD

Immediately north of the temenos wall and North Propylon are the remains of the earliest preserved road. It traveled in the same orientation as the gully and temenos wall described above, and it is quite likely that the road is earlier than the wall, following a path of much greater age.<sup>121</sup> As Broneer noted, however, the only evidence for the date of the road is the fact that it was buried under debris from the Archaic Temple.<sup>122</sup> A short stretch of the road survives to either side of the second Roman temenos wall, where wheel ruts are deeply worn into the bedrock (Fig. 13). Northwest of these ruts, adjacent to the propylon, the bedrock was heavily altered during construction of the Roman temenos, and no additional ruts are visible. To the southwest, Broneer believed he had traced the road for nearly 45 meters, but a cut through this area failed to reveal any surface of the road. It showed, on the other hand, that the deposit he believed was the early road surface contained debris from the Archaic Temple (NT section A–A, no. 6; Fig. 11). This lower deposit of temple debris

<sup>120</sup> The surface of the first course lies at elev.  $-0.17$  m. at the east end and at  $-0.09$  m. towards the west.

<sup>121</sup> A similar relationship between temenos wall and road occurred on Temple Hill in Corinth; H. S. Robinson, "Corinth, Temple Hill," in *Neue Forschungen in griechischen Heiligtümern* (note 1 above), p. 240, figs. 1, 2.

<sup>122</sup> *Isthmia* I, p. 9.

was supported by terrace walls NG 2 and 3 (Fig. 13), that were made in part from temple blocks.<sup>123</sup> Beneath the terrace walls and temple debris lies the steeply sloping surface of the native marl. The same layer of marl underlies the entire temenos beneath the limestone cap at the surface. It seems reasonable to assume that the road once ran along the edge of the limestone at the rim of the gully and that erosion or quarrying of the stone at this location has removed further traces of it. Erosion and its damage to the road are likely reasons for the removal of the temenos wall in the 5th century and the construction of the extensive system of terrace walls and fills to support a new road.

#### EAST TERRACE 2

The terracing at the southeast end of the altar was enlarged in the first half of the 6th century in the form of an irregularly shaped platform over 1.20 m. high and about 25 meters long (north–south), restored in Figure 14. The northeast and eastern faces are visible in Figure 15. The maximum width is 16 meters. In contrast to Terrace 1 and the later terraces that gradually slope down to the east and north, the surface of East Terrace 2 is nearly horizontal.<sup>124</sup> Its profile can be seen in ET section A–A through Trenches 89-2F and 2C (Fig. 16:a). It covered the southwestern side of East Terrace 1 and raised the surface of the area 1.20 m. at its eastern edge. At its southeast corner the clay surface is not preserved (Tr 89-2B), but a curved deposit of large field stones shows that the terrace continued to the edge of the first racecourse (Fig. 15, Pl. 16:a). At this point the stone core has a maximum elevation of  $-2.06$  m., not much higher than the track (elev.  $-2.09$  to  $-2.40$  m.). There was evidently a close relationship between the terrace and the stadium. At the south end of the altar, fill for the terrace was laid against the outside face of the Archaic temenos wall already in place.<sup>125</sup> A portion of the wall seems to have been removed at the north end of the terrace to allow free access between the altar and the stadium.

The most unusual feature of the terrace, and one that distinguishes it from all the other terraces, is that it is a horizontal platform with built faces at its northeast and eastern sides. These faces rise 1.00–1.20 m. above the surface of Terrace 1, and they are constructed of a heavy layer of clay with a consistent slope of 26 degrees (ET section A–A; Fig. 17:a, b). In all areas where the top is preserved (Trs 89-2A, 2C, 2D, 2E, 2G, 2H; Fig. 15, Pl. 16:c), it forms a sharp and clearly defined edge with sloping faces. While the northeastern side runs in a straight line to the southeast, the eastern face is gently curved, more deeply at the north and flattening out at the south as it approaches the stadium. The surface of the terrace is also covered by a layer of clay.

Considerable effort was expended on its construction. It was made in several stages, and the fill varies from one section to another. This can be seen clearly (Fig. 16:a) in Trench 89-2F, ET section A–A. On the west a layer of head-sized and smaller field stones with some worked blocks of poros was covered by a sloping deposit of soil with a heavy concentration of

<sup>123</sup> *Isthmia* I, p. 9.

<sup>124</sup> The surface elevation is  $-1.91$  to  $-1.97$  m. at the north and south ends with a rise amounting to *ca.* 0.30 m. in the center (Trs 89-2C, 2D).

<sup>125</sup> As described above (pp. 48–49). The deposits in Tr 89-46, between the south end of the altar and the temenos wall, were disturbed in Roman times, but they are probably contemporary with the wall and altar (Lot 89-293).

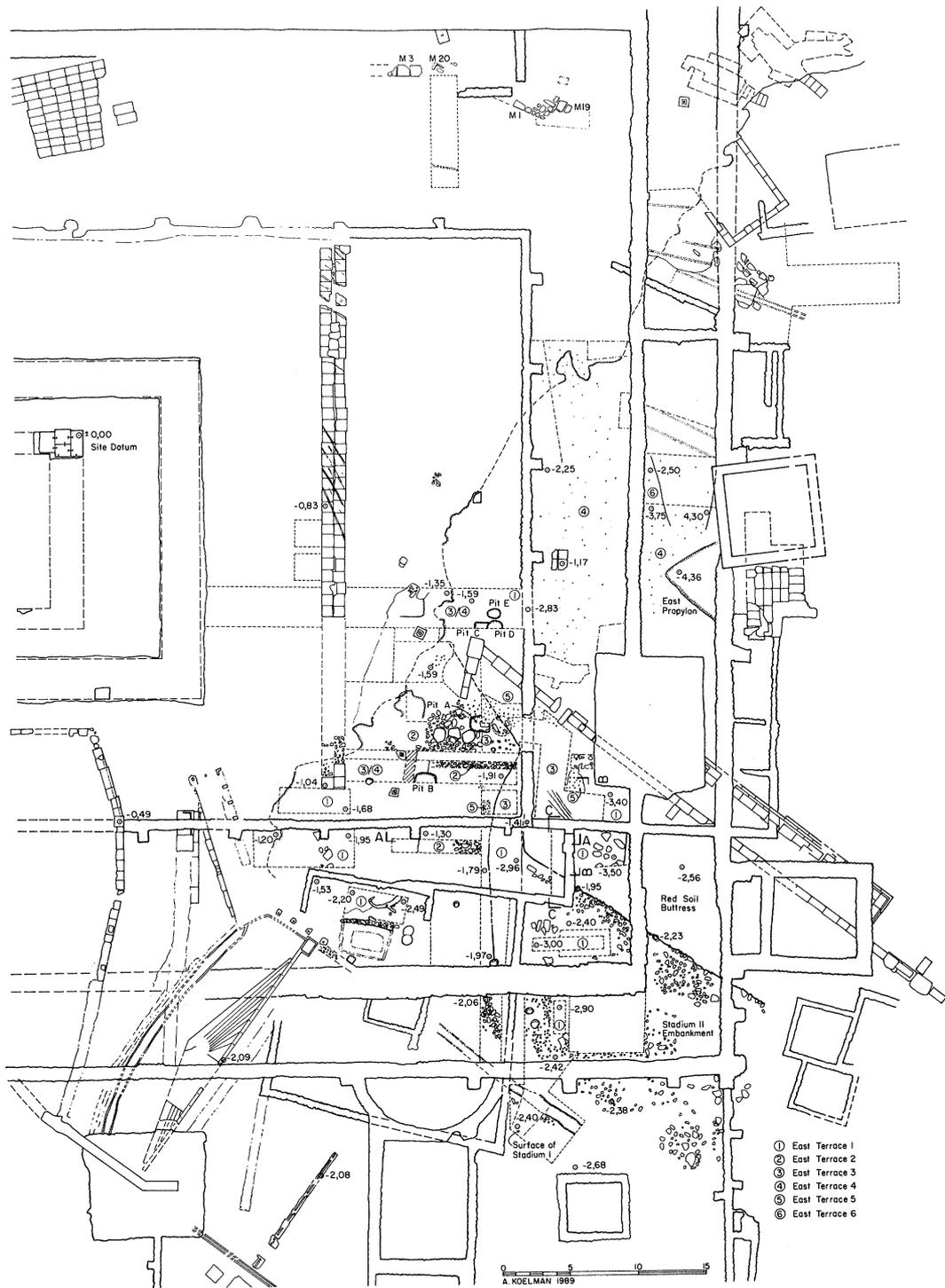


FIG. 15. Actual-state plan of the East Temenos with elevations, 1989. Numbers in circles refer to the terrace surface visible at that point. Remains of later structures are shown in outline. (A. Koelman)

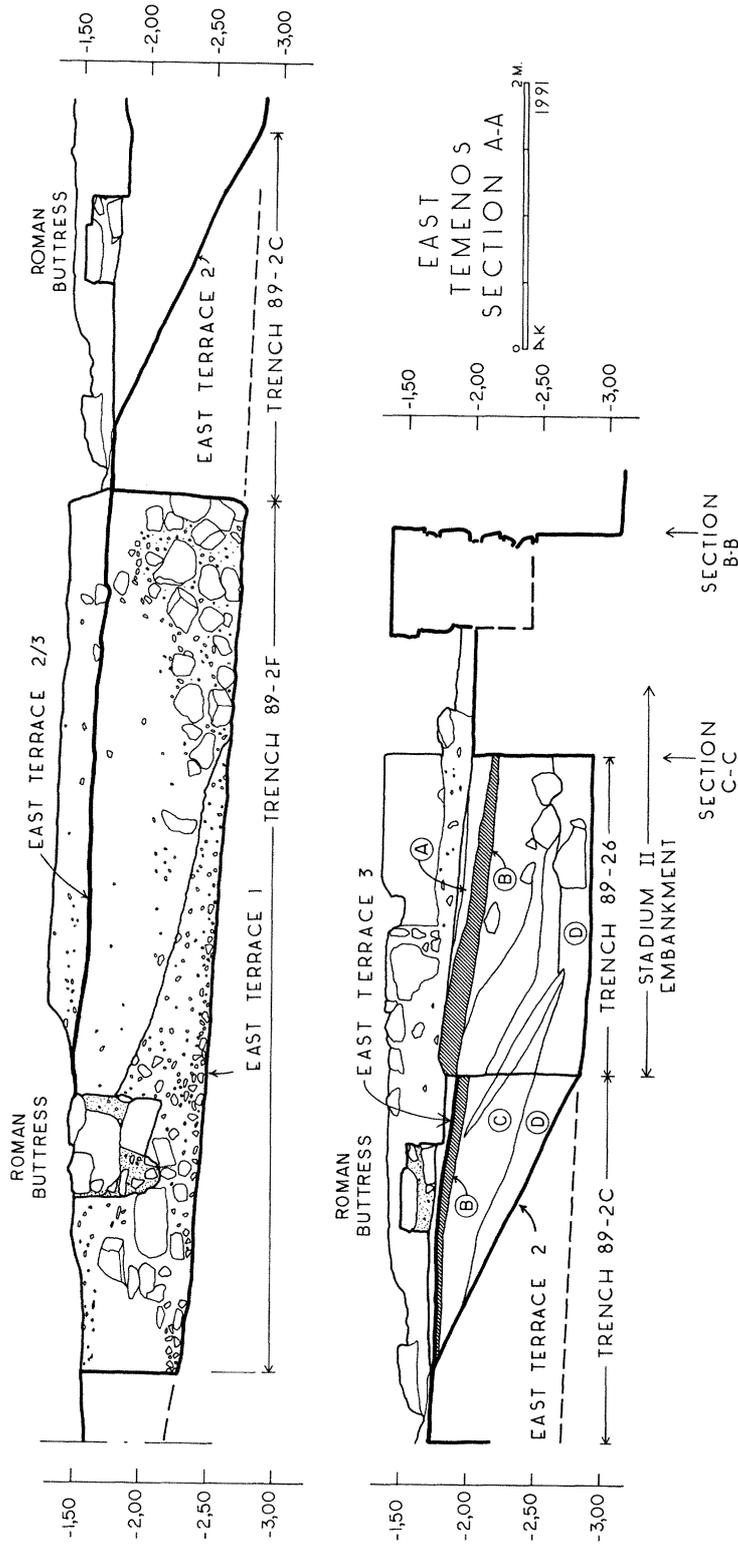


Fig. 16. East Temenos section A-A (a), (b), Trenches 89-2F, 2C, 26, facing north. A: red-soil buttress; B: sacrificial ash; C, D, East Terrace 3 fill (left), Early Stadium II embankment (right)

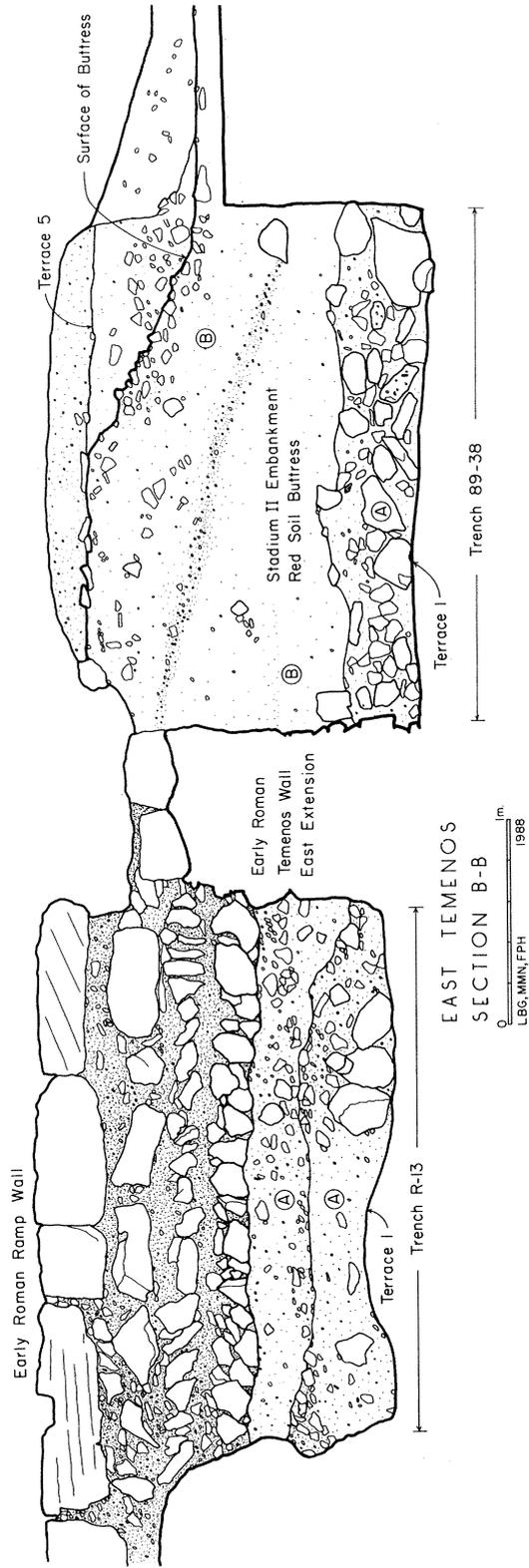


FIG. 17. East Temenos section B-B, Trenches R-13, 89-38, facing west. A: ET3, Early Stadium II fill; B: red-soil buttress against stadium embankment

broken-up marl and small stones. The profile of the deposits shows that the fill was put in from the west. The east portion was built next with a mass of larger field stones and some worked blocks placed along the edge. Finally, the center, top, and faces of the terrace were covered with light-red soil, high in clay content but with few stones and almost no pottery (ET2 dep I.2). An exception to this pattern of fill is found at the northeast corner, where the east face makes a sharp turn to the northwest (Tr 89-32). Here a mass of large boulders was assembled, four of which look as if they had been taken from the Mycenaean wall. Among the boulders were smaller stones and crushed limestone that together formed a solid mass of stone (Pl. 16:b, upper right). The surface layer in this area did not entirely cover the boulders, and the tops show signs of heavy wear.

Most of the pottery in deposits associated with the construction of East Terrace 2 is Geometric and Early Archaic in date (ET2 deps I.1 and 2; Pl. 16:d). The latest sherds are a few pieces of Attic black-glazed vessels that first appear at Isthmia and Corinth in graves of the second quarter and early third quarter of the 6th century. Of about the same period are roof tiles of a hard, yellow fabric, self-slipped and with a carefully smoothed surface, called simply "yellow-glazed" in the catalogue of deposits; they were made in Corinth from the early decades of the 6th century, although the earliest building with which they are associated is the Archaic Temple of Apollo.<sup>126</sup> The sherds were few considering the amount of earth excavated and sieved. The reddish soil, with bits of marl that filled the center of the terrace and formed the surface of the platform, was particularly devoid of pottery (ET2 dep I.2), and there was little sign of use.<sup>127</sup> On the basis of the evidence available (Pl. 16:d), the terrace seems to have been constructed in the second quarter of the 6th century.<sup>128</sup> Shortly afterwards it was incorporated into and covered by the much larger expanse of Terrace 3.

<sup>126</sup> For the earliest Attic black-glazed pottery found near the sanctuary see P. A. Clement and M. M. Thorne, "From the West Cemetery at Isthmia," *Hesperia* 43, 1974, pp. 401–411, esp. four Attic kylikes, nos. 13–16, pp. 408–409, pl. 86. These compare with vases found in the North Cemetery from the second quarter and beginning of the third quarter of the 6th century, *Corinth XIII* (note 21 above), pp. 156–158. See also E. Pemberton, *Corinth, XVIII, i, The Sanctuary of Demeter and Kore: The Greek Pottery*, Princeton 1989, nos. 318–321, p. 141, pl. 35. For cups of comparable date from the Athenian Agora, see B. A. Sparkes and L. Talcott, *The Athenian Agora, XII, Black and Plain Pottery of the 6th, 5th and 4th Centuries B.C.*, Princeton 1970, nos. 378–383, class of Athens 1104, pp. 88–89, pl. 18.

An early example of yellow-glazed roof tiles from Isthmia (IA 663) can be assigned to the second quarter of the 6th century on the basis of its painted decoration: F. Hemans, "The Doric Treasuries and Propylaea at Isthmia," International Conference on Greek Architectural Terracottas of the Classical and Hellenistic Periods, December 12–13, 1991, Athens. For early yellow-glazed roof tiles at Corinth, see Charles K. Williams, II, "Demaratus and Early Corinthian Roofs," in ΣΤΗΛΗ, Τόμος εις μνήμην Ν. Κοντολέοντος, Athens 1980, pp. 345–350. For the Archaic Temple at Corinth a low construction date of ca. 540 is given by W. B. Dinsmoor (*The Architecture of Ancient Greece*, London 1950, p. 89) on the basis of pottery found among the construction chips. A higher date is supported by Henry Robinson who uncovered a retaining wall and associated deposits of 580–570 B.C. that he connects with plans for construction of the Archaic Temple (note 121 above), p. 244.

<sup>127</sup> In most trenches, e.g. 89-47, 32, 30, and 43, no surface was preserved, or it was impossible to separate the surface of Terrace 2 from that of Terrace 3. Lots 89-185 and 89-188 that may belong to Terrace 2 are thus listed with the later terrace, ET3 dep II.1. The layer of surface fill in Tr 89-2F (Lot 89-261) had little to distinguish it from the deposits below except its elevation, which corresponded with that of the east edge. The pottery consisted of eight Archaic and five Geometric sherds, not more precisely datable.

<sup>128</sup> Construction deposits in Tr 89-2F (Lots 89-262, 263, 265, 266, 276) are omitted because of contamination from a Roman buttress not recognized during excavation.

The way in which the terrace was designed as a platform with a wide base at the south end next to the race track and narrowing towards the north suggests that the terrace functioned as a passage between the altar and the stadium. The southern section between the track and the temenos wall could have served as a place for judges, officials, and privileged spectators, since it lay adjacent to the starting area. At the north end the passage was only 6 to 7.50 m. wide between the east edge of the terrace and the temenos wall. Such a raised and level walkway could have been used for processions of priests, officials, and athletes from the altar to the stadium, serving the same function as the Classical ramp a century later. That the terrace existed in its original form for only a short time is not surprising when we consider that it was built in the early years of the Isthmian Games. It was not long before the festival drew increasingly large crowds to the sanctuary, and a much larger terrace was built to accommodate them.<sup>129</sup>

#### EAST TERRACE 2, DEPOSITS<sup>130</sup>

##### I. Construction

###### 1. Stones and loose fill

Trs 89-30 and 32 (ET X, R-10, R-28); 66 (ET III [N], ET VI [N])

Elev.: from -1.71(W)/-1.68(E) to -2.30(W)/-2.49(E) m.

Lots 89-186, 187, 543

Total sherds, 102: 49 PG/G, 28 A, 17 amphora, 7 coarse ware, 1 cooking ware. The latest pieces are 6 Attic black-glazed scraps (Pl. 16:d).

Date: second quarter 6th century

Other material: 5 poros blocks with quarry finish

###### 2. Clay and red soil (generally over ET2 dep I.1)

Trs 89-30 and 47 (ET X [S], R-32, R-30); 2E (R-30 [W]); 43 (11, 13); 2B (ET XI [N])

Elev.: from -1.28(W)/-1.40(E) to -1.71(W)/-2.40(E) m.

Lots 89-184, 297, 298

Total sherds, 59: 27 PG/G, 18 A, 9 amphora, 5 coarse ware

Date: 6th century

Inventory: terracotta figurine (unidentifiable), IM 5906

Fauna: 1 unburnt bone

##### II. Use

1. Deposits for the surface of East Terrace 2 could not be isolated from those of Terrace 3. See p. 66 below, ET3 dep II.1.

#### EARLY STADIUM I<sup>131</sup>

##### *Track*

Before construction of the racecourse, the southeast end of the central plateau curved further toward the southeast, and the marl surface sloped down gradually from the Mycenaean wall (elev. +0.43 m.) to East Terrace 1 (elev. -2.24 m.; Fig. 1). When the stadium

<sup>129</sup> The sharp increase in votive offerings, such as arms and armor and terracotta figurines, in the second half of the 6th century is evidence of the new popularity of the festival. See A. Jackson, "Arms and Armour in the Panhellenic Sanctuary of Poseidon at Isthmia," in *Symposium on the Olympic Games* (1988), H. Kyrieleis and W. D. E. Coulson, edd., Athens, forthcoming.

<sup>130</sup> See note 47 above.

<sup>131</sup> Broneer distinguished two periods in the first stadium: the Archaic Stadium and the Earlier Stadium (*Isthmia* II, pp. 46-47). We believe there were in fact four phases, which we will call Early Stadium I-IV.

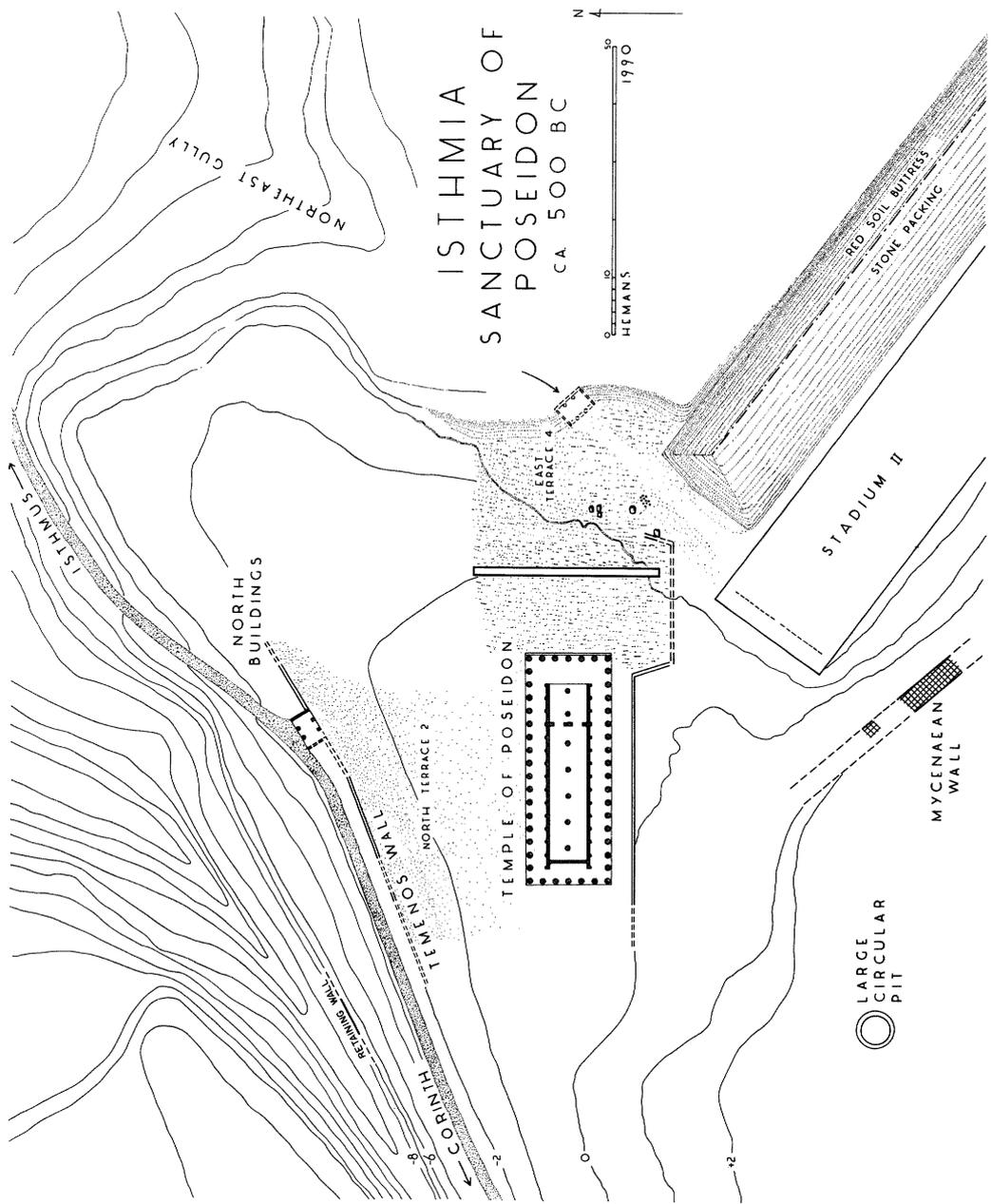


Fig. 18. Restored plan of the sanctuary, ca. 500 B.C.

was begun, the conglomerate surface of the plateau was cut back to accommodate the west end of the track. Further rock was removed in the Classical period when the triangular starting device was built farther to the west (Fig. 19).<sup>132</sup>

The northwest end of the original stadium was removed in the construction of the later phases, and there is no evidence for its shape or for the location of the first starting line. The line may well have lain in the same place as its successor, as restored in Figure 14. Or, if the track was made long enough in the early period, it might have been farther east where the starting line was placed in Phase IV.<sup>133</sup> The end of the stadium is restored as a straight line on the basis of the early stadium at Epidauros.<sup>134</sup> The elevation of the original dromos at the west end would have been about the same as that of the later one, since the surface of the Classical track (elev. -2.09 m.) rests on marl and the surface of East Terrace 2 at its southwest side is only a few centimeters above it. In Trench 89-17, 20 meters to the east, the surface was 0.31 m. lower. The full track of the stadium is shown restored in Plate 5.

As described earlier (pp. 3-5), the natural slope of the terrain in this area is toward the east and north, but it was not a continuous descent. Investigations in 1988 with a electromagnetic conductivity meter revealed that the rock at the far east end of the track was *ca.* 6.00 m. lower than that at the west end. For the final 65-70 meters at the east end of the dromos, the amount of earth that would have been needed to raise the surface to the same elevation as the west end is perhaps 5,000 cubic meters, or less, depending on the conformation of the ground.<sup>135</sup> It may well have been the case that the racecourse was not level but continued to slope gradually to the east. Construction of the track would have marked an important step in the creation of a panhellenic athletic center. The broken terrain surrounding the Temple of Poseidon left no room for an improvised racecourse in the vicinity of the temple, and considerable effort was expended to build the Early Stadium and East Terrace 2, which seems to have made with it.<sup>136</sup>

The date of the first race track is difficult to define because there is very little context pottery. A small deposit of soil was recovered below the track in Trench 89-17, 20 meters from the starting line (ESI dep I.1, Lot 89-397). Its red color and high clay content are characteristic of the natural surfaces east of the temple plateau. Of the few sherds recovered, the latest belongs in the 6th century, and there was one fragment of Corinthian yellow-glazed roof tile. The packing of stones and mixed soil over this surface (ESI dep I.2) contained slightly later

<sup>132</sup> In the absence of deposits relating to its construction, Broneer concluded, as we do, that the triangular pavement probably belonged to the same period of expansion that included the ashlar retaining walls for the spectator embankment (*Isthmia* II, p. 65). This is Phase III in our sequence, and it can be placed in the second half of the 5th century on the basis of 1989 deposits that will be discussed in Part II of this report.

<sup>133</sup> *Isthmia* II, pp. 51-52.

<sup>134</sup> R. Patrucco, *Lo stadio di Epidauro*, Florence 1976, pp. 79-113.

<sup>135</sup> In a recent study of the lowest deposits in the Roman Forum, Albert Ammerman has suggested that they were laid down in order to build up the ground level and make a better public space; "On the Origins of the Forum Romanum," *AJA* 94, 1990, pp. 641-645. In that case the ground level had to be raised about two meters in the center of a basin that was 120 meters across and sloped up at the sides. An estimate between 10,000 and 20,000 cubic feet of fill is given, depending on the exact conformation of the basin (p. 642 and note 100). The Isthmia racecourse would have been 1 stade (= 600 feet) in length, or 192.24 m. with a foot of 0.3204 m. (*Isthmia* II, p. 64).

<sup>136</sup> See E. R. Gebhard, "The Early Stadium at Isthmia and the Founding of the Isthmian Games," in Kyrieleis and Coulson (note 129 above).

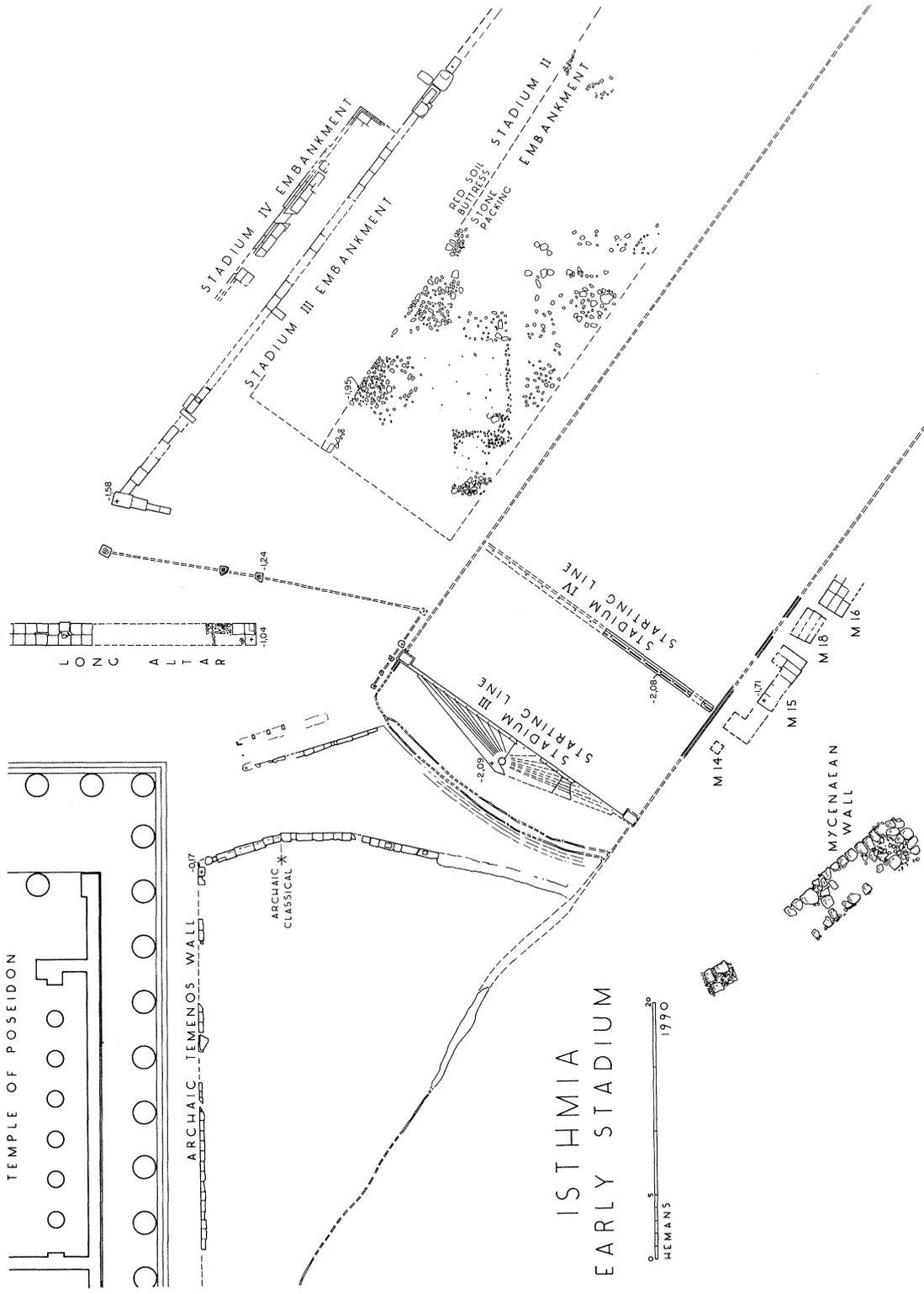


FIG. 19. Plan of the Early Stadium, Phases I-IV

pottery. It may represent a later leveling of the track. No higher surface was preserved. If the first stadium is contemporary with East Terrace 2, as seems likely, its construction falls in the second quarter of the 6th century, but maintenance and improvement of the surface were very likely ongoing. The traditional date for the founding of the Isthmian Games is 582–580.<sup>137</sup>

#### EARLY STADIUM I DEPOSITS<sup>138</sup>

##### I. Construction

###### 1. Track, red soil and clay

Tr 89-17 (ET XI [N])

Elev.: from  $-2.89(\text{S})/-3.03(\text{N})$  to  $-3.02(\text{S})/-3.22(\text{N})$  m.

Lot 89-397

Total sherds, 16: 2 G, 7 A, 1 amphora, 5 coarse ware, 1 cooking ware; 2 yellow-glazed roof tile

Date: second quarter 6th century (on the basis of the tile)

###### 2. Track, reddish brown soil and clay with many stones

Tr 89-17

Elev.: from  $-2.46(\text{S})/-2.49(\text{N})$  to  $-2.87(\text{S})/-3.02(\text{N})$  m.

Lot 89-292

Total sherds, 82: 3 Myc, 18 G, 9 A, 44 amphora, 6 coarse ware, 1 cooking ware; 1 yellow-glazed roof tile

Date: second half 6th century

Inventory: coarse jar handle, IP 8007

Other material: iron point

#### EAST TERRACE 3

The next stage in the terracing along the east side of the central plateau is designated East Terrace 3 (shown restored with its later pebble surface [East Terrace 4], Fig. 18). An embankment for spectators was constructed at the same time along the northeast side of the race track (Early Stadium II; Figs. 18, 19). Terrace 3 represented a major effort to enlarge the sacrificial space by raising the sloping surface along the east edge of the plateau. It extended to the north end of the altar and reached about 30 meters east of it. Its surface, not as horizontal as East Terrace 2, had a slope of 1 in 7 or a 14 percent grade.<sup>139</sup> Along the edge of the plateau the conglomerate surface remained visible as a step down of about 0.20 m. from the plateau to the terrace (Fig. 15). At the southwest side (Trs 89-30, 32, 47, 2F, 66) Terrace 3 did not raise the elevation of Terrace 2, and their surfaces cannot be separated. To the east and north (Trs 89-2G, 2H, 2E, 2D, 2C, 26, 38), Terrace 3 represents an extension of Terrace 2 (Fig. 14).

The layers of rock and soil that constituted the fill for Terrace 3 were about 0.60 m. deep as far east as the stylobate of the east stoa (ET3 deps I.1, 2; Pl. 7). Beyond that the fill became shallower, reaching eastward for another 6.50 m. (within the area of the east stoa). The soil and rock evidently came from areas where there had been activity since the Early

<sup>137</sup> Cf. A. Mosshammer, "The Date of the First Pythiad—Again," *GRBS* 23, 1982, pp. 22, note 14, 24–25.

<sup>138</sup> See note 47 above.

<sup>139</sup> The surface of Terrace 3, at the center along a west–east line, sloped from  $-1.80$  to about  $-4.35$  m. At the south end (Tr 89-2C) it had an elevation of *ca.*  $-1.70$  m., just above Terrace 2. The northeast section of Terrace 3, east of the Early Roman temenos wall, was exposed in the earlier excavations.

Iron Age, because there was a sizeable amount of early pottery mixed with it. There were also working chips of poros and fragments of worked poros blocks that may have been left from construction of the Archaic Temple and possibly other Archaic buildings that have not been found. The same layers of rocky fill were extended eastward to form the west side of the spectator embankment for the stadium (Trs 89-26, 38, 61; ET sec A-A [b] east end, ET sec B-B, and ET sec C-C; Figs. 16:a, 17, Pl. 17:c). It is very clear that Early Stadium II and East Terrace 3 were part of the same building program.<sup>140</sup> In ET section A-A (b) the vertical line in the center that shows the division between Trenches 89-2C and 89-26 also marks the western end of the stadium embankment, as seen on the restored plans in Figures 18 and 19.

The fill of Terrace 3 was similar to that employed for Terrace 2 except that it was more extensive and included a more varied selection of redeposited material. Most of the deposits excavated in 1989 were in the south where the terrace joined the stadium embankment. They included layers of loose, sandy soil mixed with fist- to head-sized pieces of conglomerate and poros with lenses of ash and red soil (ET3 dep I.1; Fig. 16, Pl. 17:b, c). The lowest stratum (ET sec A-A [b], deposit D, east end; ET sec B-B, deposit A; ET sec C-C, deposit E) contained some boulders similar to those employed for Terrace 2. Over the sloping east face of Terrace 2 lay a consistent layer of homogeneous soft brown soil with small stones, broken pieces of marl, and poros working chips in a sandy matrix (ET sec A-A [b], deposit D, west end). It was the presence of this layer, which separated so easily from the hard clay surface of Terrace 2, that helped us trace the outline of the earlier embankment. Above this lay a harder sandy layer with small stones, brown, yellow, and white in color (ET sec A-A [b], deposit C; ET sec C-C, deposit D). In Trenches 89-38 (N) and 89-61 we found an upper layer of fill that was light yellow red in color and contained a considerable amount of clay with some stones. The same fill appears to have been used in the northern half of the terrace, north of Terrace 2, where Terrace 3 extends east of the Early Roman temenos wall and reaches the rear wall of the east stoa (Fig. 15). Most of this section was excavated only to the pebble surface of Terrace 4. Following the natural eastward slope of the ground, the fill grows progressively thinner until it virtually disappears at the edge of the massive foundation for the rear wall of the east stoa.

Most of the surface of Terrace 3 was composed of hard-packed, light-red soil and clay that was homogeneous in color and contained few artifacts. In contrast are remains of a well-defined passage with more compact, variegated earth, clay, and ash that ran along the west end of the stadium embankment (Trs 89-2D, 2E, 38, 2C). It is shown as a reserved strip in Figure 18.<sup>141</sup> Part of the surface was formed by a consistent layer of sacrificial ash mixed with soil (ET3 dep II.1; ET sec A-A [b], deposit B, west side), while the rest was

<sup>140</sup> The redeposited material of Terrace 3 constituted a large part of the material excavated in the east and southeast areas in Trs 89-22 B-D, 2G, 2C, 2A, 17, 61, 38; Broneer Trs R-27, R-28, R-30, R-33, R-13, R-15, R-7.

<sup>141</sup> The path was excavated in Trs 89-38, 38A, 38B, 32B, 2E, 2D, 2C, and it is included in ET3 deps II.1 and 2. The surface elevation was  $-1.86$  to  $-1.79$  m. at the northwest (Tr 89-32B) and south (Tr 89-2C), and  $-2.44$  m. at the east (Tr 89-38). The path undoubtedly continued to the edge of the race track in the area explored in Trs 89-2A and 2B, but its surface seems to have been disturbed by renovations to the stadium in the 5th and 4th centuries.

dark red in color and contained ash mixed with carbon (ET3 dep II.2). The layer of ash, as the other layers of fill in Terrace 3, continued into the stadium embankment (ET sec A–A [b], east side; cf. Pl. 17:a–c). The ash was not pure but was mixed with a considerable amount of soil containing a high percentage of clay. It was much compacted and would have made a satisfactory surface.

In the surface of Terrace 3 the latest pieces extend through the second half of the 6th century and possibly into the 5th (ET3 deps II.1, 2; Pl. 17:d). Animal bones, burnt and unburnt, appeared in all floor deposits. Excluding the areas where sacrificial ash was used as a surfacing material, almost half the bones were unburnt (ET3 dep II.2). If these were left from the sacrificial meal, we may think that dining took place on the terrace.<sup>142</sup> The amount of amphora, coarse-ware, and cooking-ware fragments that occurred in the surface deposits lends support to this idea (ET3 dep II.2).

The date of construction for Terrace 3 rests largely on small sherds of Archaic pottery (ET3 deps I.1, 2; Pl. 18:a). Of the inventoried material, a miniature jug (IP 7610) is late Archaic but not more precisely datable, and the same is true of a bronze scale, probably from a corslet (IM 5696).<sup>143</sup> A date in the third quarter of the 6th century seems most likely for Terrace 3. During that time there was a sharp increase in the number of objects used and dedicated in the sanctuary (see note 129 above), and the panhellenic Isthmian Games attracted large crowds to the festival. Expansion of the sacred area in front of the altar as well as the provision of an embankment for spectators to watch the games in the stadium bear witness to Corinth's investment in the major extramural sanctuary of the city.

#### *Features Associated with East Terrace 3*

Several pits were dug into East Terrace 3. In most cases they seem to have been opened from the original surface of the terrace, rather than from the later pebble surface of East Terrace 4, but it is difficult to be certain of this because the pebbles do not cover them.

#### Pit A

The most regular of the pits is a rectangular opening that will be called Pit A. It is located 9.25 m. east of the altar and 4.50 m. north of its south end, next to the heavy boulders at the northeastern corner of East Terrace 2 (Figs. 15, 18). The pit measures 1.50 by 1.25 m. and is 0.76 m. deep (Pl. 18:b).<sup>144</sup> When it was made, boulders in the fill of Terrace 2 that impinged on the south side of the opening were trimmed off. That the builders went to the work of cutting back the rocks is some indication of the importance of the pit. Before excavation of the soil within the pit, we noticed that there was a posthole in the center, about 0.20 m. in diameter and reaching to a depth of at least 0.44 m. The hole was filled with a very soft black material that was probably the remains of a wooden post set up in the center of the pit after the cavity had been filled in. The pit itself contained moderately soft, dark, sandy soil with some ash and 88 burnt animal bones, almost all of which were sheep/goat-sized (ET3 dep II.3). No difference in the soil or its contents was observed between the top

<sup>142</sup> See the recent discussions on dining in sanctuaries: Kron (note 38 above), pp. 135–147; and U. Sinn, "Der Kult der Aphaia auf Aegina," in Hägg *et al.* (note 38 above), pp. 149–159.

<sup>143</sup> The scale will be published in the catalogue of objects in Part II of this report.

<sup>144</sup> The top has an elevation of *ca.* –1.80 m.; the bottom ends at the level of East Terrace 1, elev. –2.58 m.

and bottom of the pit. The pottery, all fragmentary, was largely Corinthian fine wares belonging to the second half of the 6th century and the early 5th. Six miniature vases, two of them kraters, were surely dedications.

On the basis of the remains we conclude that Pit A was filled in shortly after fire destroyed the Archaic Temple. Its location was then marked by a wooden post. What purpose it served is difficult to say. Its importance is attested by the care with which it was made, its prominent location in the sacrificial area in front of the altar and next to the entrance to the stadium, and its later marking by a wooden upright. Perhaps a hero was honored there, but the absence of burning on the sides precludes holocaustic sacrifices made within the pit.<sup>145</sup> Also, there was no peribolos wall enclosing it, although some kind of planting appears to have been located next to it (see below). If Pit A received offerings, they could have consisted of perishable materials, such as garlands and libations.<sup>146</sup> The bones and ash in Pit A, although not so concentrated as those found in the other small pits in Terrace 3, probably belonged, like the miniature vessels, to the sacrifices and offerings made at the altar of Poseidon. They would have been deposited in the pit when it ceased to be used for its original purpose. The length of time that the pit remained open, perhaps 50 years during the use of Terraces 3 and 4, makes it appear that it was connected with some cult practice and that it was filled in with sacrificial debris only after cult practices had changed. The terracotta figurines that were found near by in the surface of Terrace 4 lend support to the presence of cult activity near the pit (ET4 dep II.1). Its location continued to be marked by a post. Pit A is different in this respect from Pits B, C, D, and E that appear to have had a more limited use simply as receptacles for sacrificial remains.

#### Planting(?) Holes

A series of 12 small holes occurs in the surface of East Terrace 3 immediately south and a little east of Pit A and clustered in an area about two meters square (Fig. 18, Pls. 16:c, 18:c). They were covered by the pebble surface of Terrace 4.<sup>147</sup> The holes range in diameter from 0.10 to 0.30 m., and they are 0.21 to 0.44 m. deep. While roughly circular in section, the shafts are not vertical but have a diagonal slant. They contained soft, sandy soil with little pottery, 12 unburnt sheep/goat bones, and one horn core and one molar, both from sheep/goats (ET3 dep II.7). If any one of the cavities had been encountered singly, it would not have been difficult to identify it as an animal burrow, several of which were excavated in Trenches 89-2C and 26. In the present case, their number and the fact that they are grouped so closely together, between 0.20 and 0.60 m. apart on centers, suggest that they were intentionally placed. One possibility is that they are cavities left from the roots of bushes or small trees, some kind of "sacred" garden near the altar, stadium, and Pit A.<sup>148</sup>

<sup>145</sup> The sacrificial pits of the Roman Palaimonion where holocaustic offerings were made present a very different picture; *Isthmia* II, pp. 101–104.

<sup>146</sup> Cf. Burkert (note 43 above), pp. 203–208; for *bothroi*, see P. Stengel, *Die griechischen Kultusaltertümer*, 3rd ed., Munich 1920, pp. 16–17.

<sup>147</sup> Although Figure 18 shows the sanctuary in the time of East Terrace 4, the holes are included for reference.

<sup>148</sup> The tree pits in the sacred cypress grove at Nemea are much larger (14 of them are 1.50–2.00 m. in diameter and 0.50–0.80 m. deep) and farther apart (3.70 to 4.70 m.). We are grateful to Darice Birge for information on planting in sanctuaries; see "Sacred Square II, Sacred Grove," in *Nemea, A Guide to the Site and*

Whatever their purpose, they were covered by Terrace 4 at the end of the 6th or in the early 5th century B.C.

### Pit B

Pit B is located farther south, next to the temenos wall (Tr 89-47; Figs. 15, 18). Like Pit A, it lies adjacent to the entrance path to the stadium. It is about the same size as Pit A but oval in contour and shallower (0.33 m. deep; Pl. 16:b). Only half the pit was cleared, as the remainder lay outside the area of excavation. It was dug into the surface of Terrace 3, but, since the soil above the pit was removed in the earlier excavations, it is not clear if Terrace 4 covered it or it remained open during that period. The pit was filled with dark, sandy soil, unstratified (ET3 dep II.4). It contained, in addition to pottery, two burnt, cattle-sized bones and one unburnt, sheep/goat-sized molar. On the basis of the latest sherds it was filled a little earlier than Pit A.

### Pits C, D, and E

The three pits lie clustered together, opposite the center of the altar and 9 meters to the east of it (Tr 89-22B; Figs. 15, 18). The south half of Pit C may have been excavated in 1956 at the same time as the upper layers of Pit D, which was dug into its north end (Pl. 18:d).<sup>149</sup> The surface of Pit D is mentioned as originally covering Pit C before it was removed in 1958.<sup>150</sup>

In the northwest corner of Pit C, in one-sixth cubic meter of fill, there was an unusual concentration of 250 burnt animal bones, 59 percent of which were cattle-sized (ET3 dep II.5). In approximately the same amount of soil cleared from the sides and bottom of Pit D, most of which had been previously excavated, 156 burnt bones were collected (ET3 dep II.6). The latest sherds in Pit C show that it was filled by the end of the 6th or early 5th century; material in Pit D belongs to the 5th century or later.

Pit E was smaller and circular (*ca.* 0.70 m. in diameter); it lay immediately north of Pit D (Pl. 18:d). Although not mentioned in the earlier excavation records, a marked tile at the bottom revealed that Broneer cleared it in or before 1959. Its contents are unknown, but they were probably similar to what was found in Pits C and D.

The three pits (C, D, and E) in the center of the sacrificial area served, as far as we can see, as receptacles for refuse from sacrifices on the main altar to Poseidon. Their use spans the period of Terraces 3 and 4, and Pit D was filled in a little later. It is difficult to say whether or not they received other offerings, such as those suggested for Pit A, before being filled with sacrificial debris.

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*Museum*, Stephen G. Miller, ed., Berkeley 1990, pp. 157–159; *eadem*, *Sacred Groves in the Ancient Greek World* (diss. University of California, Berkeley 1982). See also W. F. Jashemski, *The Gardens of Pompeii*, New Rochelle, N.Y. 1979, esp. pp. 243–265. For planting around the Hephaisteion in Athens, see D. B. Thompson, “The Garden of Hephaistos,” *Hesperia* 6, 1937, pp. 396–425.

<sup>149</sup> Only the northwest corner of Pit C was preserved at the time of our excavations. The portion cleared measured about 0.90 by 0.50 m. and 0.36 m. in depth, ET3 dep II.5. Pit D, 1.20 m. in diameter, is referred to as a *bothros* in Broneer notebook 12 (1956), p. 77. It lay on the north edge of his Tr R-24, with half of it extending into his Tr East Central-B where Tr 89-22B was located. In 1989 an additional 0.38 m. of soil was removed from the bottom of Pit D, which was cut slightly into bedrock (ET3 dep II.6). In antiquity Pit D would have been about 0.87 m. deep.

<sup>150</sup> Broneer notebook 18 (1958), p. 139; plan p. 114.

EAST TERRACE 3 AND PITS A, B, C, AND D: DEPOSITS<sup>151</sup>

## I. Construction

1. Large stones and loose fill (Lot 89-319 = ET sec A-A [b], dep C = ET sec C-C, dep D; Lot 89-320 = ET sec A-A [b], dep D = ET sec C-C, dep E; Lot 89-246 = ET sec B-B, dep A; Figs. 16, 17, Pl. 17:a-c)

Trs 89-2D and 2E (R-30); 2G (R-24); 2H (R-28); 38 (R-28, R-30); 2C and 26 (C); 61 (R-33)

Elev.: from  $-1.73(\text{W})/-1.79(\text{E})$  to  $-3.31(\text{W})/-3.38(\text{E})$  m.

Lots 89-190, 246, 319, 320, 479.

Total sherds, 1,433: 13 Myc, 843 PG/G, 163 A, 345 amphora, 38 coarse ware, 31 cooking ware.

Much of the Archaic pottery consists of undiagnostic scraps, but the latest pieces are a body fragment of a ray kotyle that should not be dated before 575 and one fragment of Attic black-glazed ware (Pl. 18:a).

Date: third quarter 6th century

Inventory: bronze armor scale, IM 5696; terracotta horse (leg), IM 5694; miniature jug, IP 7618; worked poros, IA 4054; perirrhanterion, IA 4055

Other material: 4 baskets of worked poros chips and fragments of worked stone

Fauna: 24 bones, of which 42 percent were burnt, 8 cattle-sized, the remainder sheep/goat-sized.

The 13 unburnt bones were cattle-sized.

2. Clay and stones

Trs 89-38 (N) (R-30); 61 (R-33)

Elev.: Tr 89-38, from  $-2.32(\text{W})/-2.79(\text{E})$  to  $-2.68(\text{W})/-2.88(\text{E})$  m. Tr 89-61, from  $-2.86(\text{W})/-3.17(\text{E})$  to  $-3.02(\text{W})/-3.33(\text{E})$  m.

Lots 89-250, 478 (Tr 89-61, over Lot 89-479 in ET3 dep I.1)

Total sherds, 245: 11 Myc, 120 PG/G, 44 A, 53 amphora, 11 coarse ware, 6 cooking ware. Most of the Archaic sherds are undiagnostic. They are concentrated generally in the early 7th century and extend through the first half of the 6th.

Date: mid to third quarter 6th century

## II. Use

1. Sacrificial ash (Lot 89-318 = ET sec A-A, dep B = ET sec C-C, dep C; Fig. 16, Pl. 17:a-c). The same layer of ash that was used in the surface of Terrace 3 extended southward into the fill of the Early Stadium II embankment. Since it was excavated as a single deposit, it is listed with its latest phase.

Trs 89-2C and 26 (C); 32 (R-28)

Elev.: from  $-1.79(\text{W})/-2.24(\text{E})$  to  $-1.90(\text{W})/-2.64(\text{E})$  m.

Lots 89-318, 474

Total sherds, 2,751: 1 Myc, 2,097 PG/G, 341 A, 223 amphora, 43 coarse ware, 46 cooking ware; 4 yellow-glazed roof tile. The two latest sherds are from small, semiglazed kotylai belonging to the second half of the 6th century and beginning of the 5th. Much of the Archaic material belongs to the first half of the 7th century.

Date: second half 6th century and into 5th century

Inventory: bronze clasp, IM 5777 a, b; iron blade, IM 5794; pyxis lid, IP 7645 a

Fauna: 398 bones, 94 percent burnt. Of the burnt bones, 27.5 percent are cattle-sized, the remainder sheep/goat-sized.

2. Clay surface, including the path at the end of the stadium embankment

Trs 89-32 (15, ET X, R-10, R-28); 47 (15, ET X, R-32, R-30); 22B (16, E-C "A"); 2D (R-30); 2E (R-30); 2G (R-24); 2H (R-24); 30 (ET X, R-10); 43 (11, 13); 38 (R-28, R-30)

Elev.: from  $-1.12(\text{W})/-1.40(\text{E})$  to  $-2.48(\text{W})/-2.78(\text{E})$  m.

<sup>151</sup> See note 47 above.

Lots 89-185, 188, 189, 198, 249, 257, 296, 316, 472, 473

Total sherds, 4,219: 20 Myc, 1,664 PG/G, 1,429 A, 3 C(?), 662 amphora, 327 coarse ware, 114 cooking ware; 13 yellow-glazed roof tile. The Archaic sherds fall mainly into the first half of the 7th century. The latest pieces are a part of a kotyle foot ring that should not be dated before the late 6th century and possibly into the 5th, 5 small sherds of Attic black-glazed vases including one handle that is probably from the second half of the 6th century, and 13 small fragments of yellow-glazed roof tiles (Pl. 17:d).

Date: late 6th and into early 5th century

Inventory: bronze ring, IM 5692; iron point, IM 5693; bronze tool, IM 5695; bronze sheet, IM 5840; iron knife, IM 5852; obsidian blade, IM 5905; terracotta horse (leg), IM 5859; terracotta tool (scoop), IM 5937

Fauna: 304 bones, 55.9 percent burnt. Of the burnt portion, 39.4 percent are cattle-sized, remainder sheep/goat-sized.

### 3. Pit A, contents

Trs 89-30 and 32 (R-28)

Elev.: from -1.82 to -2.58 m.

Lot 89-193

Total sherds, 232: 25 PG/G, 158 A, 2 C, 34 amphora, 7 coarse ware, 6 cooking ware; roof-tile fragments: 1 A, 3 yellow glazed. The latest pieces include the rim of an Attic, black-glazed bowl, gray cooking ware, the rim of an Attic lekythos, IP 8047, and a body sherd from an Attic krater, IP 8048.

Date: shortly after *ca.* 470

Inventory: Attic lekythos, IP 8047; Attic krater, IP 8048, miniature krater, IP 8049; miniature column-krater, IP 8050

Other material: fragments of 4 uninventoried miniature vessels

Fauna: 88 bones, 98 percent burnt. Of the burnt portion, 97.7 percent are sheep/goat, remainder cattle-sized.

### 4. Pit B, contents

Tr 89-47 (ET X)

Elev.: from -1.45 to -1.79 m.

Lot 89-210

Total sherds, 204: 4 PG/G, 173 A, 26 amphora, 1 coarse ware. The range of Archaic decorated fine wares evenly covers the 7th and 6th centuries. The latest pieces are from a kotyle base of the late 6th or early 5th century and an Attic vase with good black glaze.

Date: late 6th or early 5th century

Fauna: 2 burnt, cattle-sized bones; 1 unburnt, sheep/goat molar

### 5. Pit C, contents from NW corner

Tr 89-22B (R-24, E-C "B")

Elev.: from *ca.* -1.92 to -2.29 m.

Lot 89-194

Total sherds, 9: 1 PG/G, 4 A, 4 amphora. The latest piece is from a Corinthian black-glazed vase of the second half of the 6th century and perhaps the early 5th.

Date: late 6th century, possibly into early 5th century

Fauna: 250 bones, all burnt. 59 percent are cattle-sized, the remainder sheep/goat-sized.

Other material: 3 pieces carbonized matter

### 6. Pit D, contents. Cleaning the sides and bottom of pit originally excavated in 1956.

Tr 89-22B (R-24, E-C "B")

Elev.: from -2.31 to -2.70 m. (bottom of pit)

Lot 89-192

Total sherds, 32: 19A, 2C, 1H,<sup>152</sup> 4 plain fine ware, 1 amphora, 2 cooking ware, 3 coarse ware

Date: 5th century

Fauna: 157 bones, 99 percent burnt

7. Planting(?) holes, contents

Tr 89-32 (R-30)

Elev.: from -1.88 to -2.33 m.

Lots 89-191, 471

Total sherds, 57: 3 PG/G, 43 A, 11 amphora; roof-tile fragments: 1 yellow glazed, 1 C. The latest piece is the Classical tile.

Date: 5th century

Inventory: 2 iron strips with bronze attachment, IM 5963 a, b

Fauna: 12 unburnt bones, sheep/goat-sized; 1 molar, 1 horn core, sheep/goat-sized

## THE EARLY STADIUM II

### *Spectator Embankment*

Broneer uncovered a layer of large stones and boulders along the northeast edge of the racecourse and recognized them as belonging to a spectators' embankment, which extended for at least 67 meters along the northeast side of the track.<sup>153</sup> Further excavation of the boulder layer in 1989 (Trs 89-26, 61, 17) revealed that the embankment was contemporary with East Terrace 3 because the same layers of fill were used for both, as discussed above (cf. ET3 dep I.1). Further, the layer of ash that formed the surface of Terrace 3 along the northwest face of the embankment (Trs 89-2C, 38) was found to continue as part of the lower fill of the embankment (ET sec A-A [b], dep B [Pl. 17:b]; ET sec C-C, dep B [Pl. 17:a, b]; ET3 dep II.1, Lot 89-318).

The present surface of the embankment is shown in section in ET sec C-C, deposit C (Pls. 1:b, 17:a, right side, c, and plans, Figs. 15, 19). The boulders, head-sized field stones, and pieces of conglomerate bedrock were laid in a soft, dark, sandy soil that contained many air pockets. The rocky layer is so irregular that it could not have been used as a surface for standing or sitting without the addition of another stratum of soil. In 1989, however, no deposit above the rocks was found to be earlier than the Roman period. It appears that, during and after construction of the Later Stadium, the upper layer of the early embankment was removed, together with the much larger embankment of Phases III and IV (Fig. 19).<sup>154</sup> The surface as it is today, although very uneven, exhibits the same eastern slope as Terrace 3.<sup>155</sup> The layer of rocks is 0.50–0.70 m. thick, and, nearest the track, it rests on the surface of Terrace 1 (Trs 89-61, 17; Pl. 1:b). At the northwest corner it lies over fill

<sup>152</sup> One 3rd-century sherd is probably an intrusion that entered when the pit lay partially excavated. The pit was presumably covered in the 5th century by East Terrace 6.

<sup>153</sup> *Isthmia* II, pp. 46–47, plan II, pl. 20:a, b. Broneer notes that nothing was found in the packing that could provide evidence for the date of construction. Since the packing preceded the 5th-century retaining walls for an enlarged embankment, he concluded that the stone layer belonged to the 6th-century stadium, built sometime after the Isthmian Games were established in 582–580 (*ibid.*, p. 65).

<sup>154</sup> *Isthmia* II, p. 52. Removal of the Early Stadium would have greatly altered the appearance of the south-east area of the sanctuary in the Hellenistic period. Further landscaping evidently took place in Early Roman times, because there are no deposits before the 1st century after Christ covering the rocky layer. Further discussion of the later stratigraphy in the area of the Early Stadium will be included in Part II of this report.

<sup>155</sup> From elev. -1.84 m. in Tr 89-26 at the northwest corner to -2.40 m. in Trs 89-61 and 17, 8 meters farther east.

continued from Terrace 3, as shown in ET sec C–C, deposit C (Pl. 17:a, c). Along the outer (northeast) side, smaller, more regular stones were carefully laid side by side to form a finished edge (Figs. 15, 19). On its inside face the embankment extended up to the edge of the track. Large field stones belonging to that layer are still visible across the northeast corner of Palaimonion III (Fig. 19, Pls. 6, 7). The total width would have been about 13 meters.<sup>156</sup> The embankment may have continued to the southeast end of the track where it would have helped to buttress the track itself.

A final feature of the embankment helps us to restore its original conformation. Along the well-defined outer (northeast) edge lies a deep layer of fine red soil, high in clay content and very compact. It is labeled “red soil buttress” on the plans in Figures 15 and 19, and it is seen in section in ET sec B–B, deposit B (Fig. 17) and ET sec C–C, deposit A (Pl. 17:a, c). Its width is about 7 meters. The soil closely resembles the red fabric of East Terrace 1, but it occurs at a higher level and lies over the rocky fill that extends eastward from Terrace 3. Much of the deposit was uncovered and probably cleared by Broneer in Trenches “C”, R-23, R-26, and R-34. It can be traced southeastward as far as the stone packing of the embankment has been uncovered.<sup>157</sup> At the west side of Trench R-13 the red soil could be seen in elevation at the beginning of the 1989 season (ET sec B–B, deposit B; Fig. 17). Its surface at an elevation of  $-1.75$  m. was about 1.20 m. above Terrace 3 to the north. The red soil sloped northeast at an angle of 26 degrees to the surface of Terrace 3.<sup>158</sup> The mass of compact red soil appears to have been put in as a buttress to support the spectator viewing area against the sloping ground to the east. The restoration in Figure 18 is intended to indicate that slope. It should be borne in mind that the ground level continues to decline towards the east for the entire length of the stadium (Pl. 5).

The red soil of the buttress and the rock packing belonged to the lower levels of the stadium. The upper portion can be restored only in general outline. An embankment of soil over the rock packing, perhaps with a gentle slope, would have provided the spectators with a place to stand or sit while watching the games (Figs. 18, 19).<sup>159</sup> Later Terrace 5, laid over the edge of the buttress, raised the path between the altar and the entrance to the stadium.

A portion of the red-soil buttress was cleared in 1989 (ESII dep I.1). It contained no sherds later than the third quarter of the 7th century, with the majority belonging to the Early Iron Age. A high proportion of early sherds was also found in the stony layer (ESII dep I.2), where the latest material is a fragment of yellow-glazed Corinthian roof tile. Joining fragments of an early 7th-century pyxis lid (IP 7645) were found in the stony layer in

<sup>156</sup> Since the original surfaces of both the track and the embankment are missing, it is difficult to locate the precise edge of the track. Tr 89-17 (S) revealed a strosis of compact white clay beginning at elev.  $-2.44$  m. (ESII dep II.1) over a layer of stones (ESI dep I.1; Lot 89-292) lying on the natural ground surface. Where tested, the stones were clearly a packing put into hollows in the ground. The clay was applied over the packing as a bedding for the track.

<sup>157</sup> *Isthmia* II, plan IV.

<sup>158</sup> The same angle was employed for the east face of Terrace 2. The builders evidently considered this an appropriate slope to retard erosion. The red soil does not extend as far as the retaining wall for Early Stadium III. Its west end was covered by Terrace 5.

<sup>159</sup> A maximum height of two meters above the present rock packing would equal the level of the temple plateau next to the altar. Compare Stadium II at Olympia as restored by A. Mallwitz (*Olympia und seine Bauten*, Darmstadt 1972, pp. 185–186, fig. 149; *idem* [note 44 above], pp. 94–102, fig. 6:11).

Trench 89-26 (Lot 89-315), in the red-soil buttress (Lot 89-314), and in the ash under the stony layer (Lot 89-318). Although the soils are different, the three deposits apparently came from the same area, probably not far from the west end of the stadium. The construction date of the stadium embankment is thus provided by the fill beneath the red-soil buttress and rock packing. As seen above (p. 63) in connection with Terrace 3, it falls in the third quarter of the 6th century.<sup>160</sup>

#### EARLY STADIUM II DEPOSITS<sup>161</sup>

##### I. Construction

1. Red-soil buttress for embankment (ET sec B-B, dep B = Lot 89-244; ET sec C-C, dep A = Lot 89-314; Fig. 17, Pl. 17:a, c)
 

Trs 89-26 (C); 38 (R-80, R-13, R-15)  
 Elev.: Tr 89-26, from  $-1.71(W)/-1.92(E)$  to  $-1.95(W)/-2.40(E)$  m. Tr 89-38, from  $-2.17(W)/-1.88(E)$  to  $-2.43(W)/-2.49(E)$  m.  
 Lots 89-314, 244  
 Total sherds, 1,663: 29 Myc, 783 G, 489 A, 301 amphora, 14 coarse ware, 47 cooking ware. The concentration of the Archaic sherds is in the first half of the 7th century with nothing necessarily later than the third quarter of the 7th century.  
 Date: after the middle of the 6th century, by position  
 Inventory: obsidian blade, IM 5761; iron nail, IM 5820; pyxis lid, IP 7645 b  
 Other material: 10 fragments of iron  
 Fauna: 175 bones, 96 percent burnt. Of the burnt portion, 13 percent are cattle-sized, and the remainder sheep/goat-sized. The 17 unburnt bones are mainly sheep/goat-sized.
2. Stony layer for spectator embankment (ET sec C-C, dep B = Lot 89-315; Pl. 17:a, c)
 

Trs 89-26 (C); 61 (R-33 [E])  
 Elev.: Tr 89-26, from  $-1.84$  to  $-2.51$  m. Tr 89-61, from  $-2.43$  to  $-3.31(E)/-2.94(W)$  m.  
 Lots 89-315 (over ET3 dep II.1), 476  
 Total sherds, 1,111: 10 Myc, 676 G, 93 A, 294 amphora-coarse ware, 7 cooking ware, 31 plain fine ware; 7 yellow-glazed roof tile. The Archaic sherds are almost entirely of the first half of the 7th century. The latest piece is a ray kotyle of 6th-century date. The roof tiles may be of the mid-6th century and later, and the metal is probably of the same date.  
 Date: second half 6th century  
 Inventory: Mycenaean female figurine, *phi* type, IM 7531; pyxis lid, IP 7645 c  
 Other material: 16 bronze fragments, 1 lead drip, 1 iron blade, 1 worked poros block  
 Fauna: 41 burnt bones, of which 9 are cattle-sized, the remainder sheep/goat-sized. 1 unburnt bone

##### II. Use

1. Dromos
 

Tr 89-17 (S) (ET XII, XIII, C-1)  
 Elev.: from  $-2.44$  to  $-2.68$  m.  
 Lot 89-291 (over ESI dep. I.1)  
 Total sherds, 27: 3 Myc, 1G, 11A, 5 amphora, 2 coarse ware, 5 cooking ware; 1 yellow-glazed roof tile  
 Date: 6th century

<sup>160</sup> The deposits for East Terrace 3 and the Early Stadium embankment were not closed. Their proximity to the surface and the soft consistency of the soils permitted penetration of later material. These strays consist of 8 sherds of Classical through Roman date from a total of 4,983 sherds (ET3 deps I.1 and 2; ESII deps I.1 and 2).

<sup>161</sup> See note 47 above.

## EAST TERRACE 4: THE PEBBLE SURFACE

East Terrace 3 was given a new surface in the form of a layer of sea pebbles that will be called East Terrace 4.<sup>162</sup> Although the pebbles are more concentrated in some areas than others, they are found over most of Terrace 3, including the surface of the plateau as far as the foundation for the Classical Temple. The restored plan, Figure 18, shows their distribution. Their extent and the precise manner in which they were laid, largely in a single strosis and carefully bedded in a layer of ash and clay, shows that they were intended to form a continuous surface (Pl. 19:a). The pebbles gave a specific definition to the sacrificial area in front of the temple, separating it from areas to the north and east. From a practical point of view, they provided a more durable surface for the most important space in the sanctuary. The pebbles did not continue south of the long altar, where there was a clay surface at the same elevation.

The pebbles are gray, smooth, and flat, from 0.05 to 0.08 m. long. Identical examples abound today on the shores of the Corinthian and Saronic Gulfs, surely the source of the Archaic pebbles. Their bedding varied. Between the edge of the plateau and the Early Roman temenos wall the pebbles were laid in a layer of sacrificial ash, 0.05–0.12 m. thick (Pl. 19:a).<sup>163</sup> On the rock surface of the plateau near the altar the ash bedding is thinner. Farther east they were set into a thin layer of clay, most of which has not been excavated.

The ash is similar to that described for East Terrace 3 (ET3 dep II.1), and it undoubtedly came from sacrifices on the long altar. Ash and bones also filled the interstices between the pebbles in all areas that were excavated (ET4 dep II.1). The surface ash was probably left from sacrifices contemporary with Terrace 4.<sup>164</sup> Where portions of the ash bedding were excavated in the south half of the terrace (Trs 89-32, 2D, 2E, 47), Archaic fine wares outnumbered those of the Early Iron Age by 2 to 1 (ET4 dep I.1; Lot 89-196). A different mix appeared in a small deposit in the area of the planting(?) holes (between the east end of Tr 89-47 and Tr 89-32), where there were three Early Iron Age sherds for every Archaic one (ET4 dep I.1; Lot 89-468). The proportion of cattle-sized bones was a little higher in the latter deposit (Lot 89-468), 44 percent in comparison with 38 percent in the rest of the terrace. The surface ash layer contained, as would be expected, a much higher proportion of Archaic sherds in comparison with those of the Early Iron Age, 30:1, and a greater number of unburnt animal bones. It would appear that at least some of the ritual meal continued to be consumed on the terrace. Among the burnt bones in the surface ash layer the proportion of cattle-sized to sheep/goat-sized bones remains about the same (40 percent cattle-sized as compared with 44 percent and 38 percent in the two Lots of the bedding).

On the basis of the associated pottery, the construction date for Terrace 4 can be placed a little after 500 B.C. (ET4 dep I.1). The layer associated with the use of the terrace produced fewer sherds than the construction layer, the latest piece being a large ray kotyle of

<sup>162</sup> A large part of the pebble layer was exposed by Broneer (*Isthmia* I, pp. 55–56, pl. 14:b). Broneer did not see the pebbles as forming a surface but as belonging to rituals performed at the altar.

<sup>163</sup> The lower layer was collected in ET4 dep I.1. The upper portion in which the pebbles were bedded is combined with material from the surface, ET4 dep II.1. Broneer reports an ash layer in Tr E-C "B", 1958, that may have been the remains of bedding for the pebble surface (*Isthmia* I, p. 56).

<sup>164</sup> Some of it is surely later than the terrace, because, after the temple fire of ca. 470, another layer of ash was spread over the pebble floor to form East Terrace 5A, described below.

the first half of the 5th century (ET4 dep II.1; Pl. 19:b). Several small pieces of Classical roof tile also suggest that the pebble surface continued in use during the first half of the 5th century.

Fragments of 9 terracotta horse-and-rider and bovoid figurines, the leg of one small terracotta kouros, and a fragment of another male figurine were recovered in the surface layer near Pits A and B at the entrance to the stadium (Trs 89-32, 47; ET4 dep II.1). While several of the figurines are earlier than the terrace and thus not in their original disposition, the later examples including the kouros could be related to cult activity contemporary with the terrace.

#### EAST TERRACE 4 DEPOSITS<sup>165</sup>

##### I. Construction

###### 1. Bedding for pebbles made with sacrificial ash

Trs 89-32 (15, ET X, R-10, R-28, R-30); 2D (R-30); 2E (R-30); 47 (15, ET X, R-32, R-30)

Elev.: from -1.27(W)/-1.60(E) to -1.81(W)/-1.88(E) m.

Lots 89-196, 468

Total sherds, 2,215: 2 Myc, 811 PG/G, 1055 A, 289 amphora, 13 coarse ware, 45 cooking ware; roof-tile fragments: 1 yellow glazed, 3 C(?). The majority of the Archaic material ranges from the mid-7th century to the end of the 6th, although 2 or 3 fragments of ray kotylai may go into the 5th century. The unusually high number of Attic black-glazed pieces and 11 miniature vessels suggest a date at the end of the range.

Date: late 6th to early 5th century

Inventory: terracotta horse and rider, IM 5823; tondo of Attic cup, IP 8011; obsidian blade, IM 5978

Other material: 3 terracotta horse legs, iron nail, small pieces of iron and bronze

Fauna: 745 bones, 98 percent burnt. Of the burnt portion 39 percent are cattle-sized, the remainder sheep/goat-sized. The 14 unburnt bones were both cattle-sized and sheep/goat-sized.

##### II. Use

###### 1. Pebble surface and upper layer of bedding

Trs 89-22B (16, E-C "A", E-C "B"); 30 (ET X, R-10); 32 (15, ET X, R-10, R-28, R-30); 47 (15, ET X, R-32, R-30); 2H (R-28); 38N (R-28)

Elev.: from -1.51(W)/-1.60(E) to -2.37(W)/-2.44(E) m.

Lots 89-195, 199, 248, 470

Total sherds, 2,118: 54 PG/G, 1,630 A, 2 C, 347 amphora, 19 coarse ware, 66 cooking ware; 7 C roof tile. The Archaic material extends evenly through the 7th and 6th centuries. The latest certain date is provided by several sherds of a ray kotyle of the first half of the 5th century, IP 7637. Fragments of Classical roof tiles also confirm a date in the first half of the 5th century. Pl. 18:b.

Date: first half 5th century

Inventory: iron chariot clamp, IM 5804; terracotta bovoid(?), IM 5805; terracotta bovoid, IM 5807; terracotta bovoid, IM 5858; terracotta rider, IM 5773; terracotta horse (neck), IM 5774 *bis*; terracotta horse (neck), IM 5778; terracotta horse (leg), IM 5795; terracotta horse and rider, IM 5857; terracotta horse, IM 5879; terracotta horse (leg), IM 5965; terracotta horse (foot), IM 5966; terracotta male figurine, IM 5776; terracotta kouros, IM 5985; Attic black-glazed foot, IP 7581; miniature krater, IP 7582; miniature krater, IP 8024

Other material: 5 terracotta horses, small pieces of iron, bronze, lead

Fauna: 645 burnt bones, 68.4 percent burnt. Of the burnt portion, 40 percent are cattle-sized. The 211 unburnt bones are largely cattle-sized.

<sup>165</sup> See note 47 above.

## 2. Clay surface south of pebble surface

Trs 89-2F (C, ET X); 2C (C)

Elev.: from -1.52 to -1.66(W)/-1.74(E) m.

Lots 89-259, 311

Total sherds, 196: 2 Myc, 32 PG/G, 102 A, 1(?)C, 54 amphora, 3 coarse ware, 2 cooking ware; 11 C roof tile. Classical roof-tile fragments place the date in the 5th century.

Date: early to mid-5th century

Inventory: terracotta beehive, IP 8051

Fauna: 3 burnt bones, sheep/goat-sized

## THE EAST GATEWAY

The Archaic temenos wall in front of the altar seems to have been completely removed with the construction of East Terrace 3, and a new boundary for the temenos was probably established at the east side of the terrace.<sup>166</sup> The rear wall of the east stoa obliterated any trace of a wall or other boundary marker along the east side of Terrace 3. At the south end of the altar the temenos wall remained in place until the second half of the 5th century when Terrace 6 was constructed.

Just west of the rear wall of the east stoa, north of the Roman altar, there is a bedding cut deeply into the marl (Fig. 15). It escaped being entirely covered by the stoa because it is turned at a 45 degree angle to the building. When the bedding was cleared in the earlier excavations (Tr NE-F, south section; Fig. 3), it contained debris from the destruction of the Classical Temple after the fire of 390 B.C. Thus, whatever construction had stood in the cutting was removed during the remodeling of the temenos after the fire and before construction of East Terrace 7.<sup>167</sup> Its location in relation to Terrace 3 suggests a construction date contemporary with that terrace in the second half of the 6th century. If, as seems probable, the cutting was originally rectangular, the southwest and northwest faces are visible. They measure 5.25 m. and 3.50 m. respectively, and the cutting is about 0.50 m. deep. The stoa wall covers the remainder.

Clues to the identity of the structure come from its location at the outer edge of the sacrificial terrace and from its width, which is comparable with that of the north propylon. Both placement and size are suitable for a monumental entrance to the sacred area, and we have restored such a gateway in Figure 18.<sup>168</sup> Although the entrance was turned toward the stadium, it was placed opposite the center of the Archaic Temple and altar and would have been the main entrance to the sanctuary from the east. The identification of an Archaic propylon in this place is further supported by the fact that a monumental gateway was built immediately to the east of it in the Hellenistic period.<sup>169</sup> Since the Archaic Temple had been

<sup>166</sup> All deposits immediately east of the long altar were cleared in the earlier excavations, and there is no mention in the excavation account of a robbing trench for the wall. In any case, it seems likely that Terrace 3 was wholly within the temenos.

<sup>167</sup> The cutting is visible in *Isthmia* II, pl. 7:a. The fill for East Terrace 7 consisted largely of debris from the fire of 390 B.C., but the terracing was not completed until at least the third quarter of the 4th century. Terrace 7 will be included in Part II of our report.

<sup>168</sup> Cf. *Isthmia* II, pp. 10-11, plan III, pl. 52:a.

<sup>169</sup> *Isthmia* II, pp. 15-16, pl. 7:b, c. A *terminus post quem* for construction of the gate is given by the debris from the temple fire of 390 B.C., through which the foundation for the gate was laid.

destroyed two centuries earlier and the altar lengthened to correspond with the Classical Temple, the reference point for building the Hellenistic Gate in that location was very likely an earlier entrance that had been constructed while the Archaic Temple was still standing. Since the bedding for the earlier structure was not filled in until after 390, it seems likely that the gate continued in use until it was replaced by the new entrance.

The sequence of events appears to have been the following: In the second half of the 6th century a propylon was built at the outer edge of Terrace 3. Its orientation may have been influenced by a road approaching the plateau along the northeast gully (Fig. 18).<sup>170</sup> The gate continued in use through the 5th century after expansion of the stadium (Phases III and IV) and construction of East Terrace 6. Following the temple fire of 390, the old propylon was replaced by a large new gateway to the east, contemporary with the final episode of terracing along the east side of the plateau (East Terrace 8).<sup>171</sup>

#### EAST TERRACE 5

East Terrace 5 is confined to the south end of Terrace 3, near Pit A and the entrance to the stadium (cleared in Trs 89-30, 2G, 38; unexcavated portions marked on Figure 15). It overlies and is similar to Terrace 4 in that it has a surface of sea pebbles laid in a layer of sacrificial ash. The bedding is *ca.* 0.20 m. thick in some places.

The construction of Terrace 5 seems to belong to the period shortly after the destruction of the Archaic Temple in *ca.* 470 (ET5 dep I.1; Pl. 19:d).<sup>172</sup> Later in the 5th century it was covered by the embankment for Early Stadium III, and the retaining walls for the embankment cut through the pebble surface.

Where Terraces 4 and 5 remain intact (Trs 89-2G, 2H, 38), two layers of sea pebbles are visible (Pl. 18:b), north of Pit A. The two terraces are particularly clear in the area around a circular hole about 1.50 m. in diameter that lies immediately east of Pit A and was excavated in 1956 (Tr R-28; Fig. 15). From the information available, it is difficult to know if this was an ancient pit or simply a softer area that was excavated separately.<sup>173</sup> The considerable amount of ash, burnt bone, and small objects that were retrieved from this area in 1956 could have come from the beddings for Terraces 4 and 5.<sup>174</sup>

Terrace 5 modified the rather steep slope of Terraces 3/4 to the east where spectators were approaching the stadium (Trs 89-38 and R-7). It should probably be understood as a temporary measure to raise and improve the entrance into the stadium. Its surface in the

<sup>170</sup> A similar instance of two entrances and probable replacements connected with expansion of the temenos occurs at the Heraion on Samos. Their oblique orientation with respect to the 6th-century temples and altars seems to be related to the topography of the site; cf. B. Bergquist, *The Archaic Greek Temenos*, Lund 1967, pp. 43-47, 94, pls. 25-27.

<sup>171</sup> Discussion of Early Stadium III and IV and East Terraces 6-8 will be included in Part II of this report.

<sup>172</sup> Since the bedding for Terrace 5 was exposed since Broneer's excavations, it was not a clean deposit and is included with the later, surface deposit.

<sup>173</sup> It appears on Broneer's plan of the temple and altar, just south of the stadium retaining wall (*Isthmia* I, pl. 2), but it is not mentioned in the text; cf. Broneer notebook 12 (1956), p. 90.

<sup>174</sup> Two lots of bones were recorded, Bone Lot 68 with 214 burnt bones, 66 percent of which are cattle-sized, and Bone Lot 69 with 164 burnt bones, 71 percent cattle-sized. Pottery Lot 443, containing Early Iron Age and Archaic sherds, was associated with them.

center was nearly horizontal (elev.  $-1.65$  to  $-1.85$  m., Trs 89-30 to 38). Along the south-east face it sloped down and overlay a sloping layer of red soil that seems to have washed down from the red-soil buttress for the stadium embankment (ESII dep I.1). The overlap of Terrace 5 and the stadium buttress can be seen in ET section B-B (Fig. 17).

The concentration of burnt bones and terracotta figurines in the surface and bedding of Terrace 5 is greater than in Terrace 4 (ET5 dep I.1). Carbonized wood was evident, and two *Horticum* and two grape seeds have been recognized.<sup>175</sup> In the northern part of the terrace (Lot 89-201), 49 percent of the burnt bones were cattle-sized, while farther east (Lot 89-243) 20 percent were cattle-sized. As a whole the pottery is concentrated in the 6th century, and the associated material should probably be understood as belonging to contemporary cult activity.

#### EAST TERRACE 5 DEPOSITS<sup>176</sup>

##### I. Use

###### 1. Bedding and interstices of pebble surface

Trs 89-30 (ET X, R-10); 2G (R-24); 38 (R-28, R-30, R-13, R-15)

Elev.:  $-1.67$ (W)/ $-1.59$ (E) to  $-1.76$ (W)/ $-1.81$ (E) m.

Lots 89-201, 243

Total sherds, 498: 55 PG/G, 341 A, 3 C, 96 amphora, 3 cooking ware; roof-tile fragments: 2 A, 4 yellow glazed. The concentration of Archaic material falls in the 6th century. The latest piece comes from the foot of a burnt Attic skyphos, probably of early 5th-century date, IP 8106, and from 5 miniature vessels that may be of the 6th or 5th century. A large fragment of Archaic roof tile of the type used in the Archaic Temple suggests a date after *ca.* 470. Pl. 19:d.

Date: second quarter 5th century

Inventory: bronze comb or scraper, IM 5802; iron roasting spit, IM 5810; terracotta horse and rider, IM 5798; terracotta horse and rider, IM 5799 + 5800; terracotta female figurine, IM 5801; terracotta horse and rider, IM 5811; terracotta horse figurine (leg), IM 5832; terracotta plaque with painted warrior, IP 7632 a, b; perirrhanterion foot, IP 8035 a, b; miniature jug, IP 7629; Attic skyphos, IP 8106; miniature kantharos, IP 8009

Other material: miniature krater, phiale, and kotyle; 5+ horse-and-rider figurines; small pieces of iron and bronze

Fauna: 368 burnt bones, 99 percent burnt. Of the burnt portion, 30.5 percent are cattle-sized, the remainder sheep/goat-sized. Of the unburnt bones, 3 are cattle-sized.

Flora: 2 *Horticum* seeds, 2 grape seeds, carbonized wood

###### 2. Yellow clay surface

Trs 89-32 (R-28); 2E (R-30)

Elev.:  $-1.73$  to  $-1.84$  m.

Lots 89-197, 469

Total sherds, 70: 2 PG/G, 56 A, 9 amphora, 1 coarse ware, 2 cooking ware; 1 A roof tile

Date: second quarter 5th century

Other material: terracotta horse (leg)

Fauna: 4 burnt and 1 unburnt bones, sheep/goat-sized

<sup>175</sup> We are indebted to Julie Hanson for this information, based on a preliminary survey at the Isthmia Museum.

<sup>176</sup> See note 47 above.

## EAST TERRACE 5A

After the Archaic Temple burned in *ca.* 470, a thick layer of sacrificial ash mixed with soil was laid over the pebble surface of East Terrace 4 in the area north of the stadium; it will be called East Terrace 5A. This layer was cleared by Broneer with the exception of small portions that lie beneath the Early Roman temenos wall and the retaining walls for Early Stadium III.<sup>177</sup> If the deposits that remain represent the original depth and extent of the terrace, it would have been 0.10–0.30 m. deep and would have covered most of Terrace 4. Of the pottery recovered from the ash layer, the latest pieces extend to the first half of the 5th century.<sup>178</sup> The largest amount of the burnt bones, 8,890 grams, occurred west of the Early Roman temenos wall near the altar, as compared to 5,710 grams in the area farther east. In the east there were also 132 unburnt fragments. The majority of bones in the terrace were cattle-sized, ranging from 71 to 92 percent of the total amount of burnt bone; the remainder were sheep/goat-sized.<sup>179</sup> This shows a marked increase in the proportion of cattle-sized bones, possibly reflecting a higher percentage of cattle sacrificed in the last period of the Archaic sanctuary.

## SUMMARY

A new study of the Mycenaean pottery from the Isthmian sanctuary suggests that a small settlement had existed somewhere in the vicinity during the Late Bronze Age. Ceramic remains of cups and bowls from the Early Iron Age, with concentrations in layers of redeposited sacrificial ash, place the beginning of continuous ritual activity probably as early as the 11th century. In 1989, excavations revealed a terrace (ET1) that was constructed along the east side of the central plateau in the second half of the 8th century. Deposits to the southeast of it contain refuse from dining. Construction of the Archaic Temple and altar of Poseidon can now be placed in the first half of the 7th century, marking the beginning of enhancement and enlargement of the sanctuary. At the same time a temenos wall was built around the temple and altar, and a terrace (NT1) was laid down at the north side, between the wall and the road. More than half a century later the Corinthians concentrated further attention on the shrine by establishing a biennial athletic festival that, like the Olympic Games, was open to all the Greeks.<sup>180</sup> The games soon became so important that a race-course (ESI) was built as close as possible to the altar and temple, and a walkway (ET2) linked the stadium and altar. These were followed shortly by a much larger terrace (ET3) and embankment for spectators (ESII). A pebble surface (ET4) over the sacrificial area gave it increased definition and importance. Enlargement of the temenos included the addition of two monumental entrances, one at the north side, next to the Corinth–Isthmus road, and the other at the east end of the sacrificial terrace, opposite the temple and altar.

<sup>177</sup> Broneer mentions the ash as being under the debris from the Archaic Temple and mixed with sea pebbles (*Isthmia* II, p. 15).

<sup>178</sup> Pottery Lots 443, 889, 892, 1246, 1306, 1307, 1314, 1506, 1539, 1611.

<sup>179</sup> A full account of the bones from Broneer's excavations will be included in David Reese's study of faunal material from the sanctuary.

<sup>180</sup> Their beginning is traditionally placed in the 49th Olympiad (584–580); Gebhard (note 136 above).

The destruction of the Archaic Temple by fire about 470 B.C. marked the end of an era. In the years immediately following the disaster the sacrificial area was repaired with the addition of a new surface composed of sacrificial ash mixed with clay and soil (ET5A), and a new pathway (ET5) improved the entrance to the stadium.

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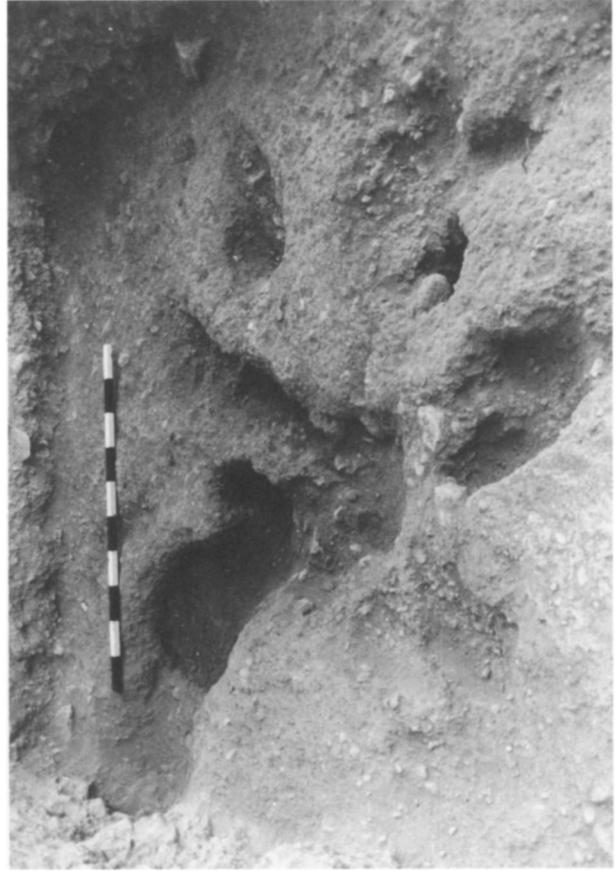
POTSDAM COLLEGE, SUNY  
Department of Anthropology  
Potsdam, NY 13676



a. East Temenos, Trench 89-38. Surface of Terrace 1 with probe to bedrock (ET dep II.5), looking south. Fill for red-soil buttress above Terrace 1



b. Compact surface of East Terrace 1 in Trenches 89-61, R-33, with probe to bedrock (ET1 dep I.1), looking west. Under embankment of Early Stadium II (ESII dep II.2)

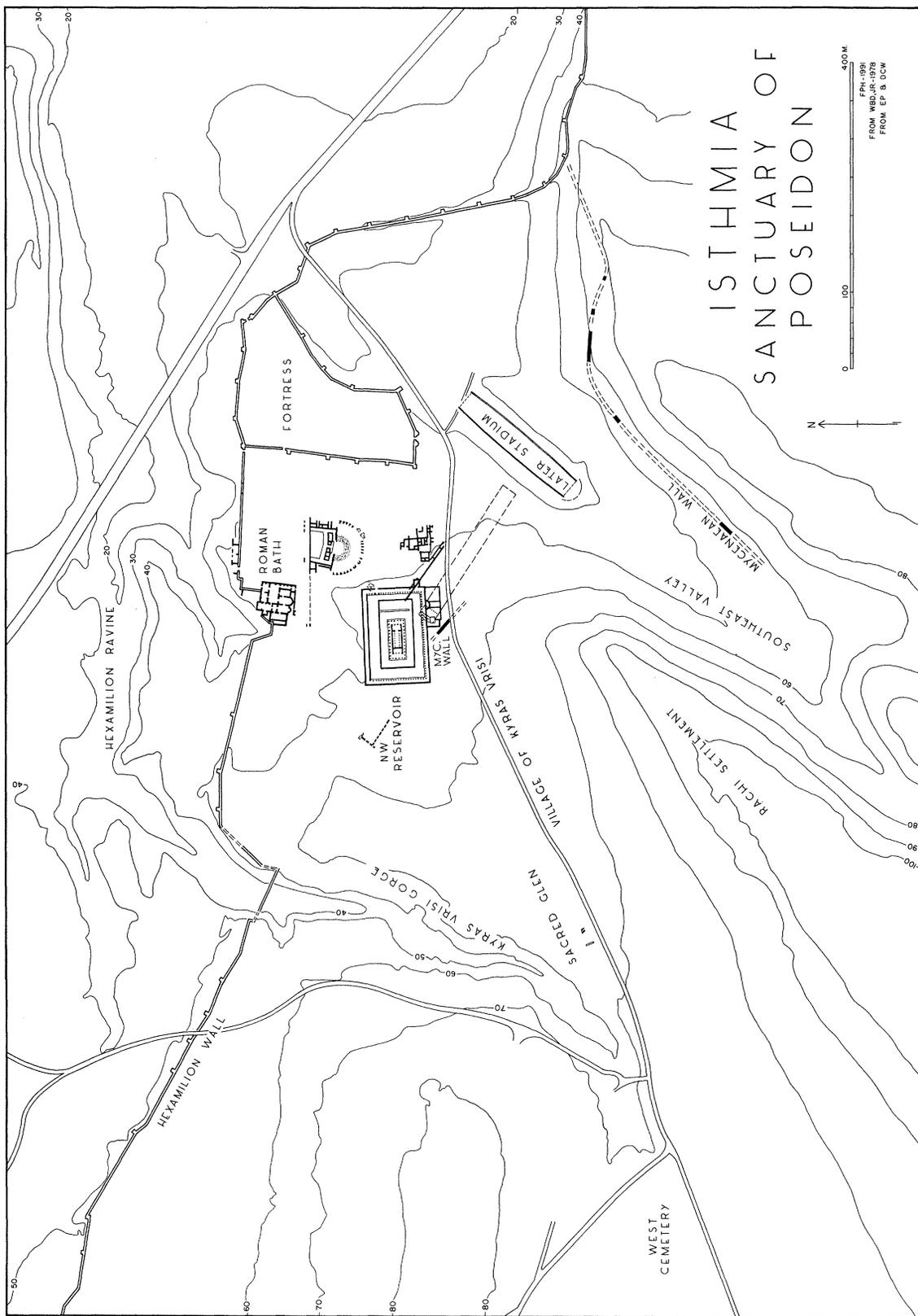


c. Cutting and postholes in East Terrace 1, Trench 89-66, before removal of carbonized wood, looking east



Aerial view of Sanctuary of Poseidon and Rachi (W. and E. Myers)

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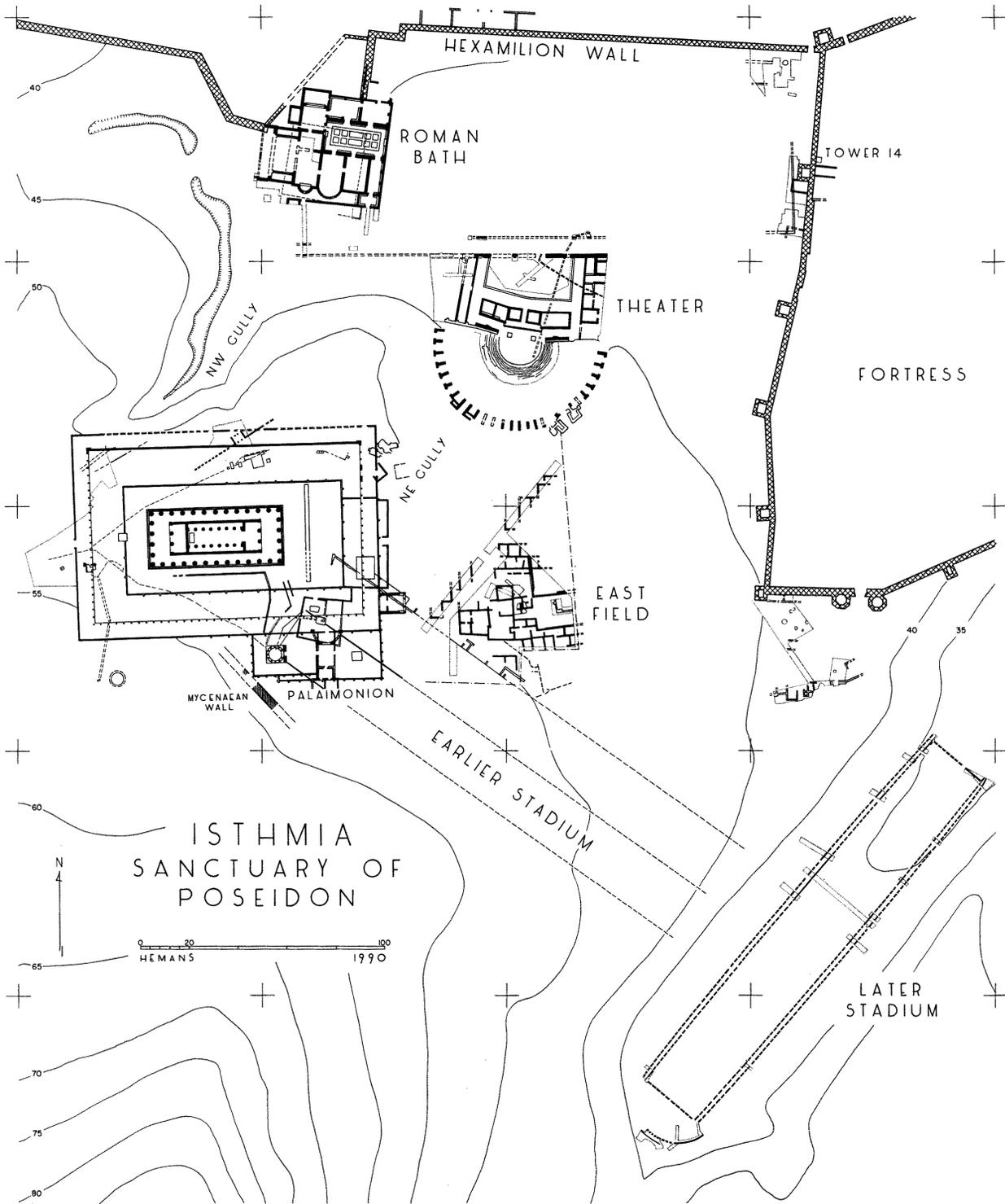


Sanctuary of Poseidon at Isthmia and its environs (after earlier drawing by W. B. Dinsmoor, Jr.). Ten-meter contour intervals marked from sea level

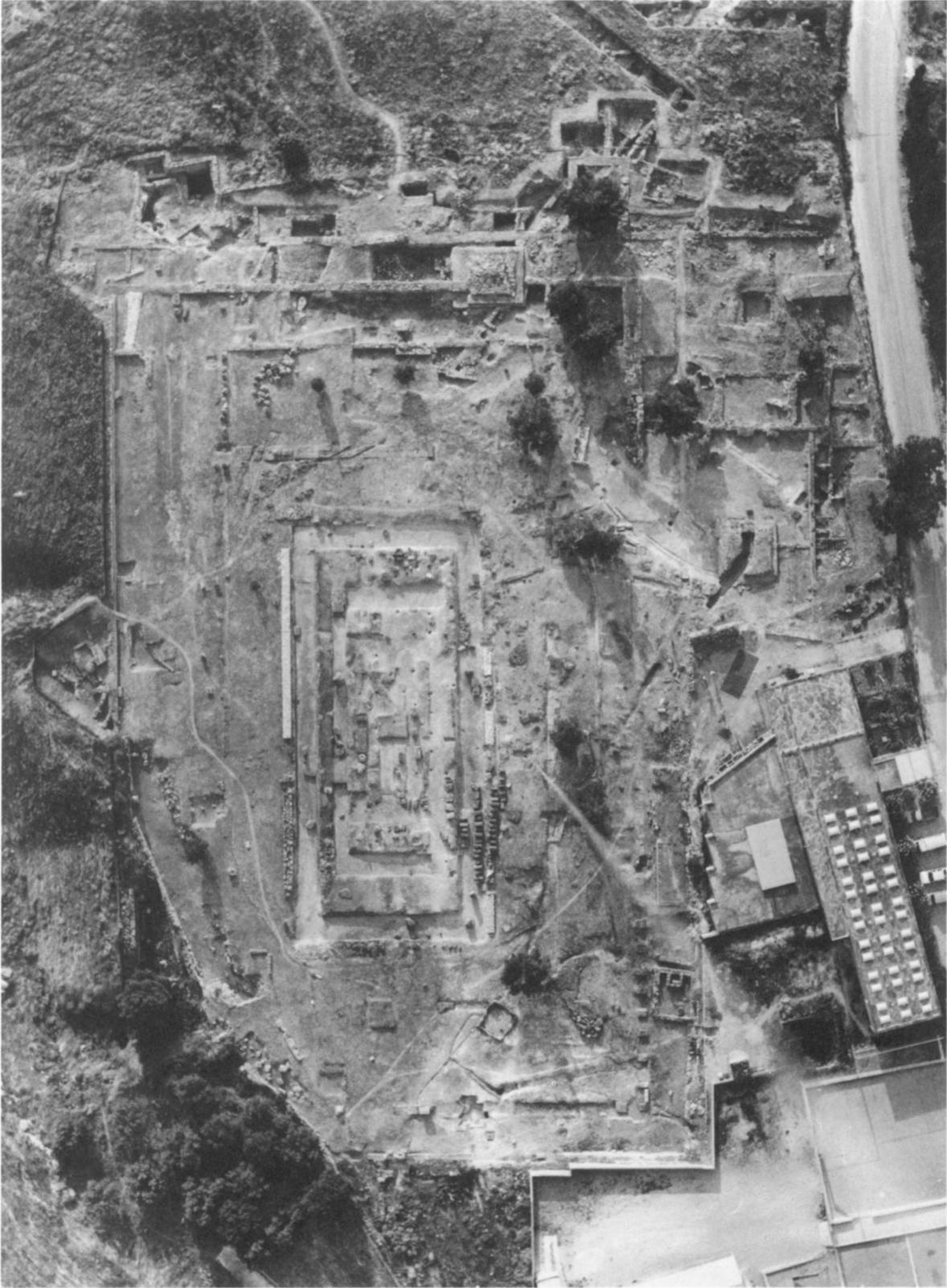
E. R. GEBHARD and F. P. HEMANS: CHICAGO EXCAVATIONS AT ISTHμία, 1989: I



Aerial view of central plateau (W. and E. Myers)

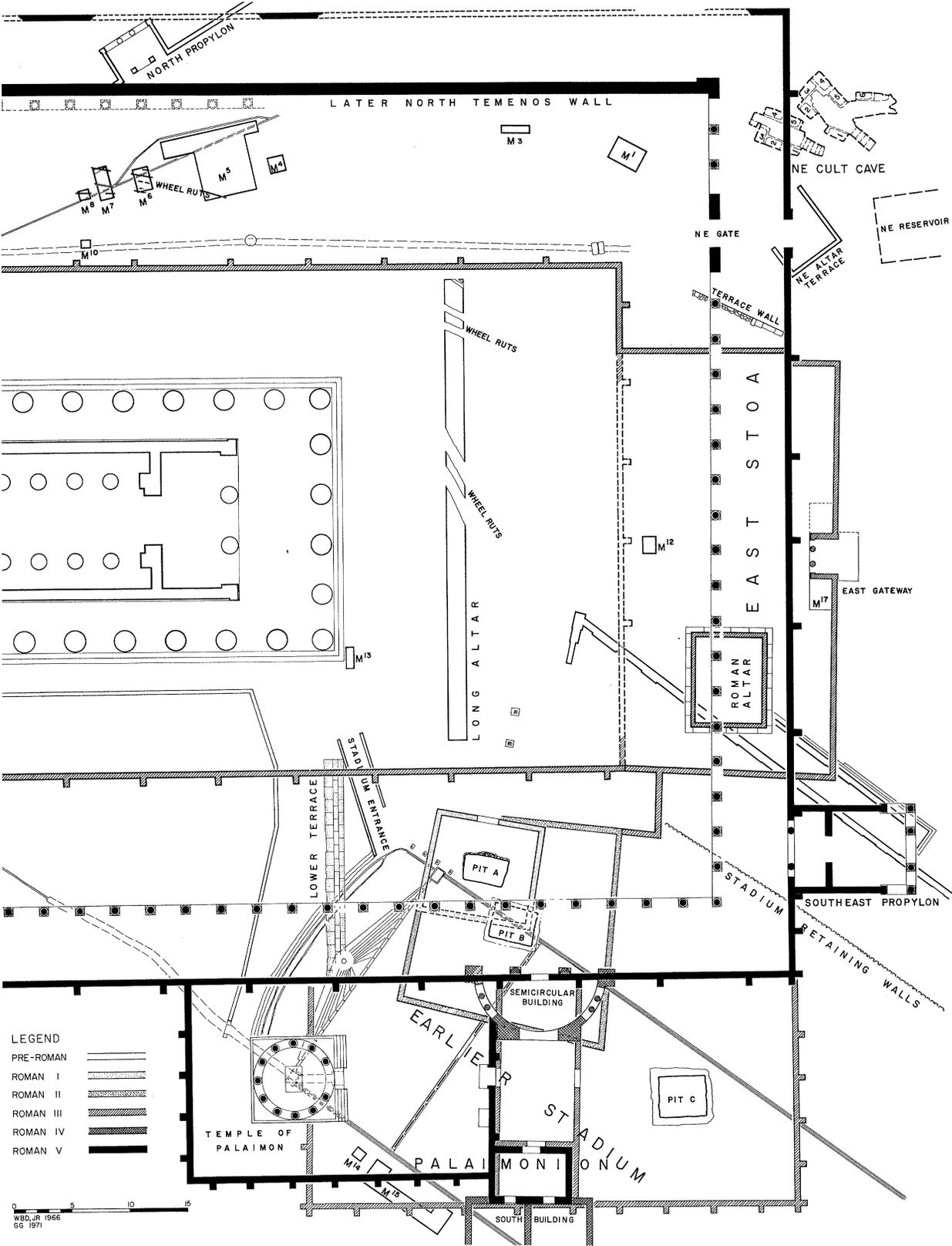


Major monuments of Sanctuary of Poseidon at Isthmia. Five-meter contour intervals marked from sea level



Aerial view of Temenos and Temple of Poseidon, 1986. The prominent foundation trenches were made for the Classical Temple (W. and E. Myers).

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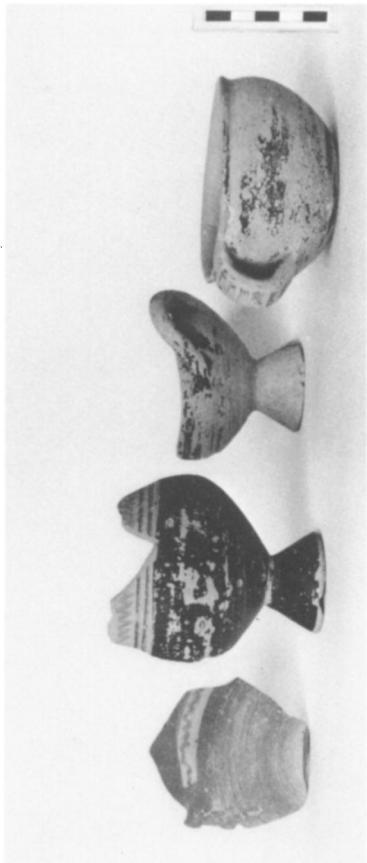


Restored plan of the eastern part of the temenos (after Broneer, *Isthmia* III, pl. III; W. B. Dinsmoor, Jr. with additions by G. Grulich)

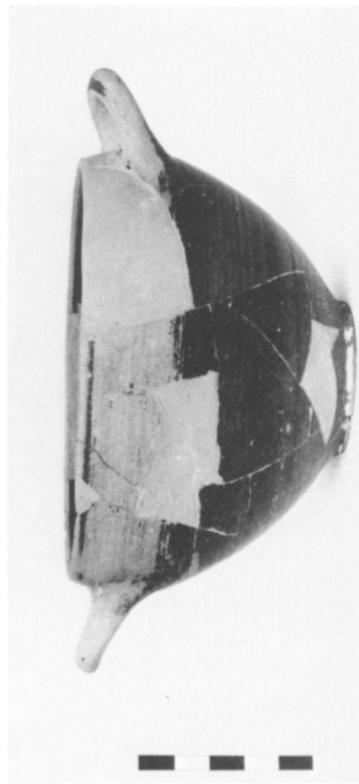
PLATE 8



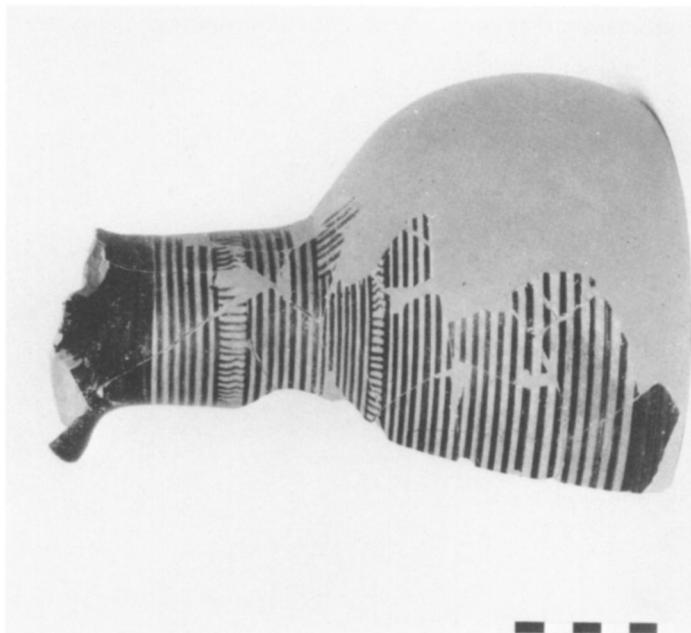
a. Bronze Age open vessels: 1, 2, 3 (left, right, center)



b. Early Iron Age cups: 4, 5, 6, 7 (left to right)



c. MG II protokotyle: 8



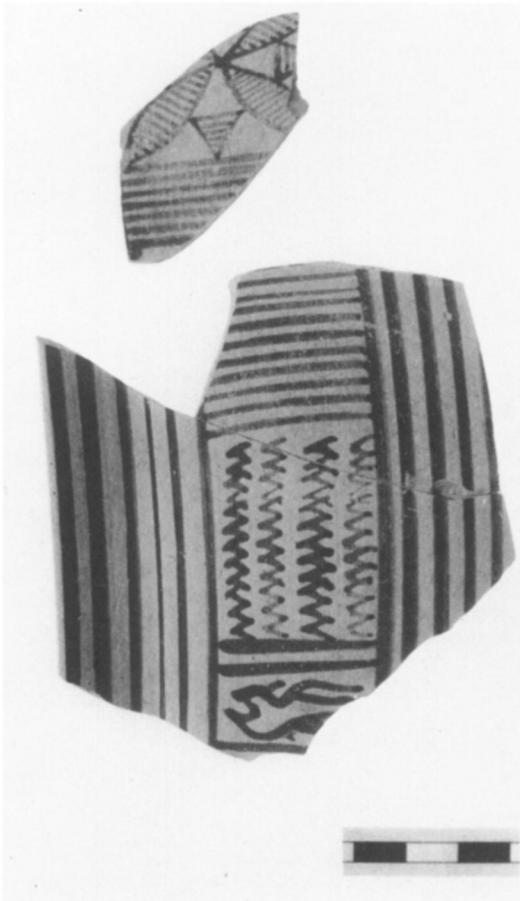
d. Attic trefoil-mouthed oinochoe, ca. 700 B.C.: 9



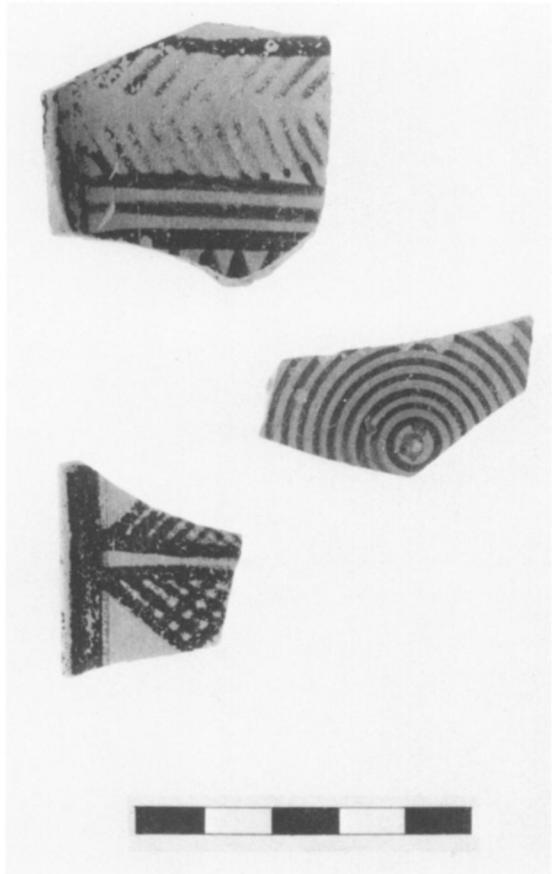
b. MG II protokotyle: 12



d. (MG II) LG krater: 16

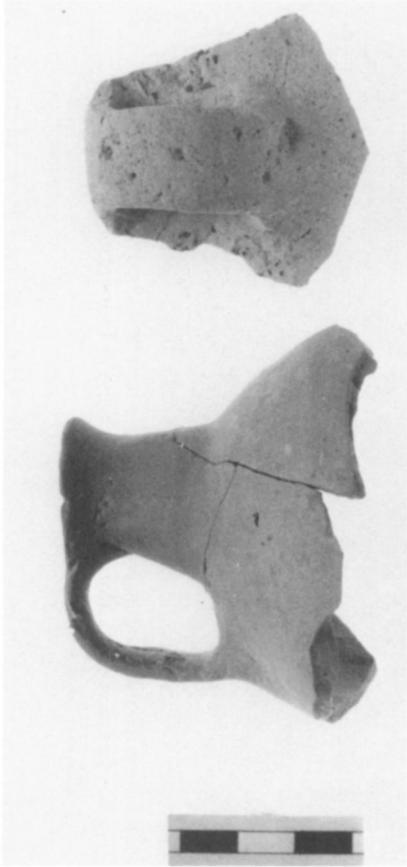


a. EPC kyathos: 10 (right); LG krater: 11 (left)

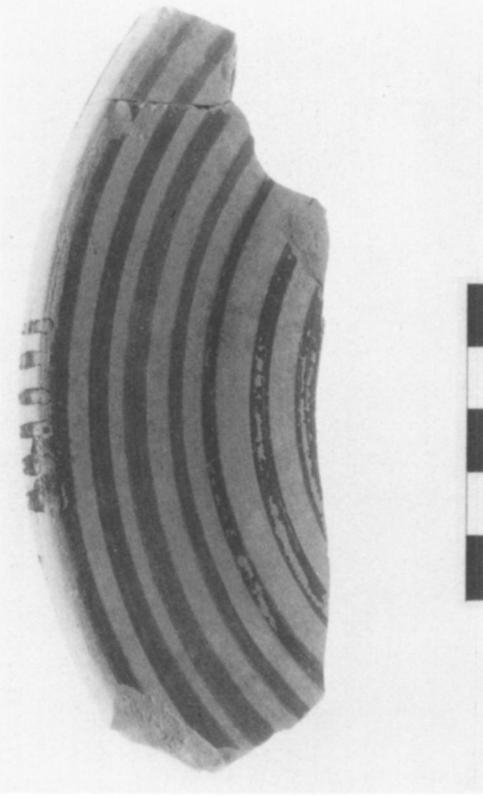


c. Late PG Attic Protogeometric skyphos: 13 (center); MPG skyphoi: 15 (left), 14 (right)

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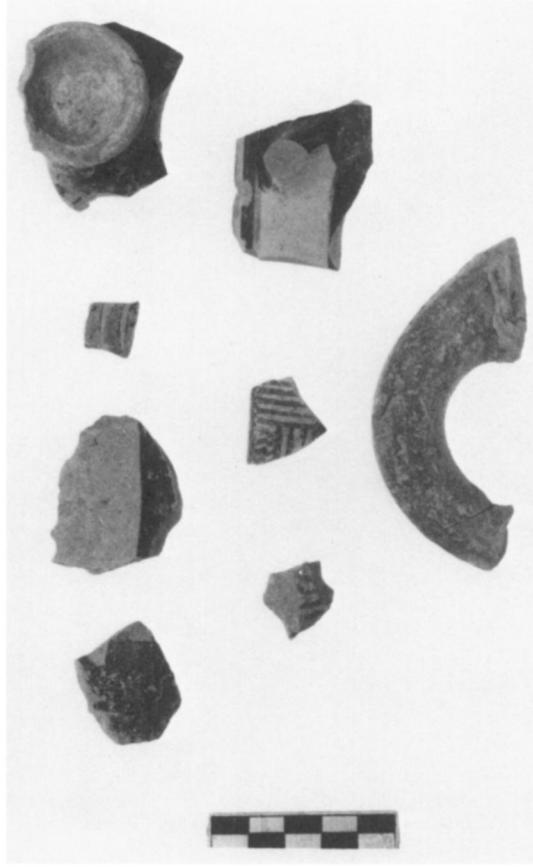
a. Plain-ware aryballos: 17 (left); EIA coarse-ware mug: 18 (right)



b. EPC plate: 19



c. Horse figure from Attic pyxis lid, MG II (LG): 20



d. Top row: East Terrace 1 construction (dep I.1). Body, Attic PG cup; shoulder, PG closed vessel; handle, LPG/EG to MG II (+?) one-handled cup; base, (L)PG skyphos. Middle row: East Terrace 1 use (deps II.1,3,4). Body, SM/earliest PG large skyphos/krater, IP 7545; rim, LG kotyle, IP 7517; rim, MG II protokotyle. Bottom row: horizontal roll handle, EIA large (open?) vessel, IP 7540



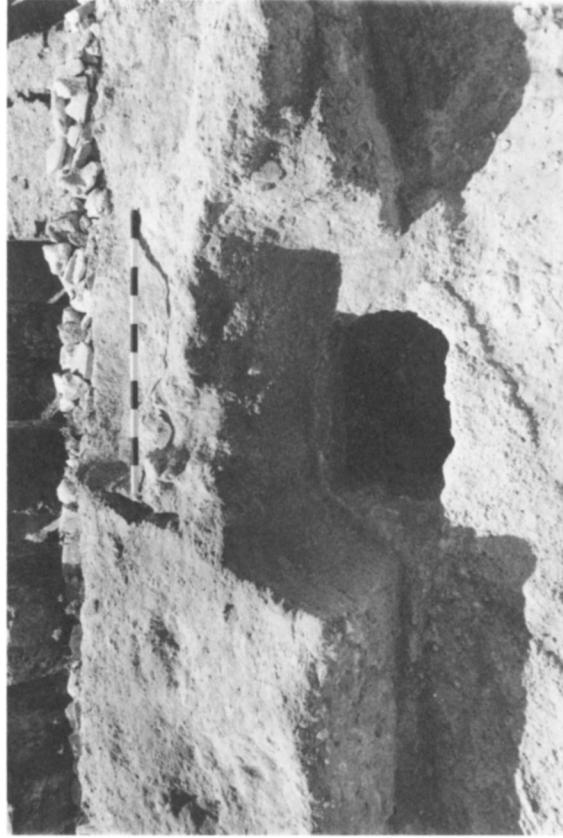
a. West stylobate foundation trench after removal of robbing fill, looking east. Trench 89-51a



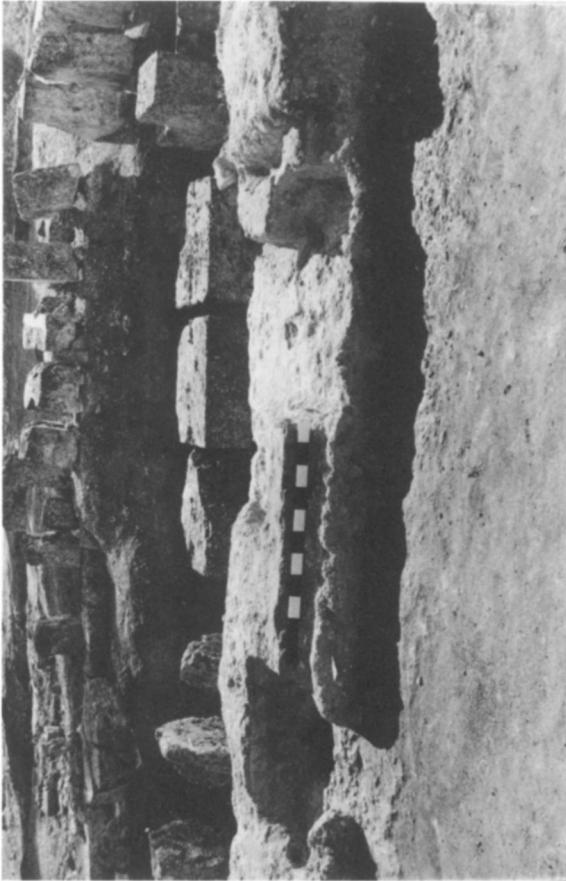
b. West stylobate foundation trench after removal of robbing fill, looking northeast. Trench 89-51a



c. West stylobate foundation trench near southwest corner of temple and cut in bedrock (left) along line of east edge of foundation, looking east. Trench 89-52a, west end



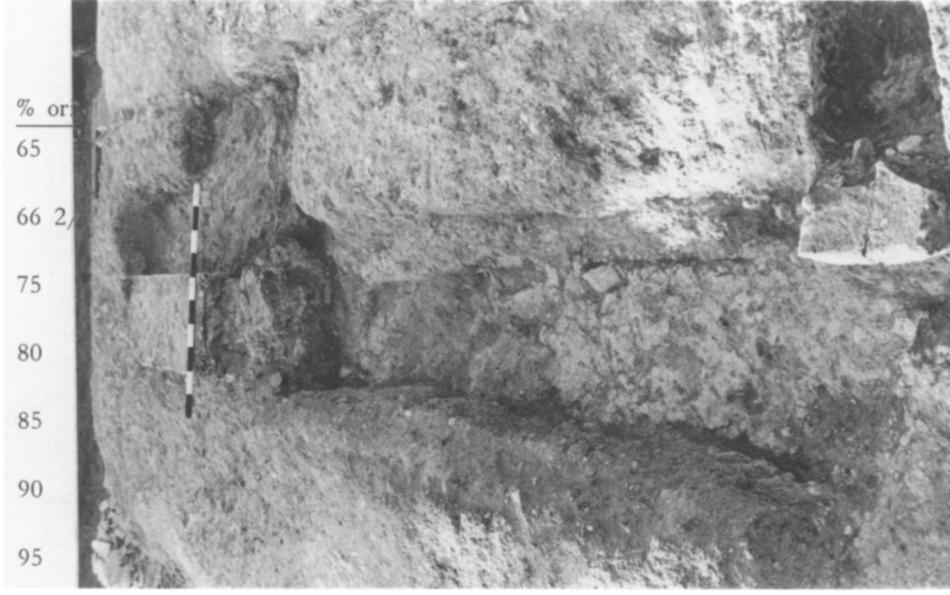
d. Robbing pit at pier 1 in Trench 89-52a, looking south



a. Robbing pits at piers 3 and 4, west end of Trench 89-52b, looking south. The scale rests on the construction fill of the south cella wall, between the piers



b. East stylobate robbing fill (right) and east step-course foundations (center) in Trench 89-58d, looking south. Background: step block *in situ*



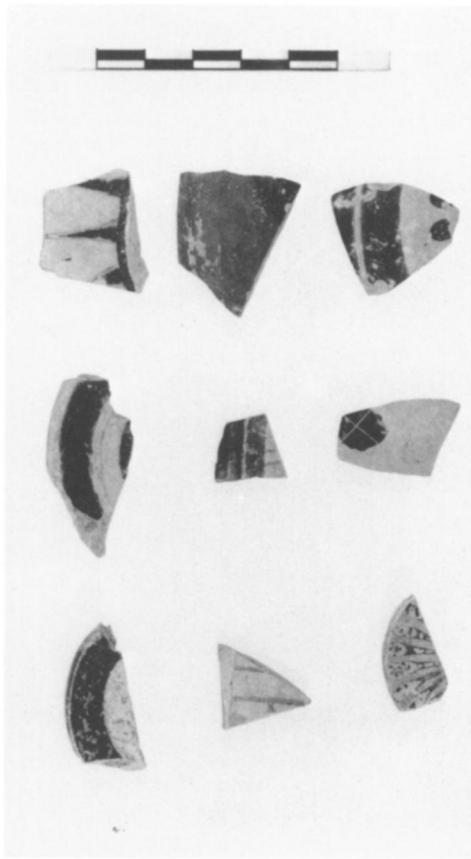
c. East stylobate and step-course foundations and robbing fills in Trench 89-58b, looking south



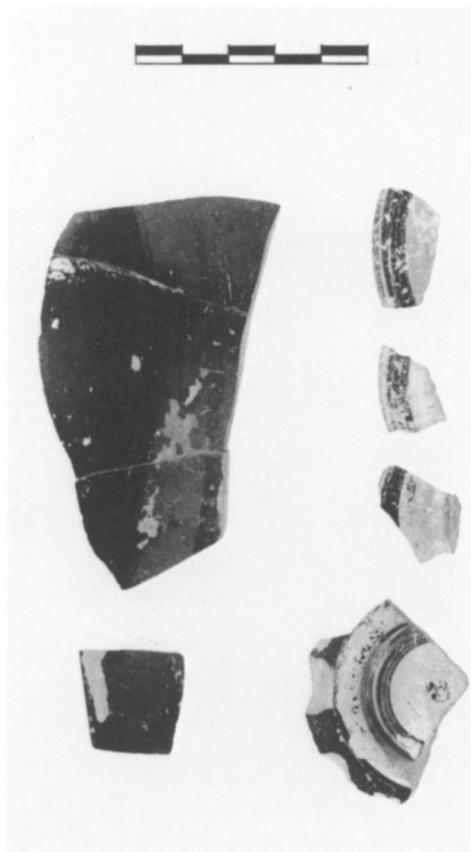
a. Sequence of floors in north pteron, Trench 89-60, looking east: center, Floors 1 (foreground) and 2 (background); left and right, construction fill deposits. North stylobate trench at left



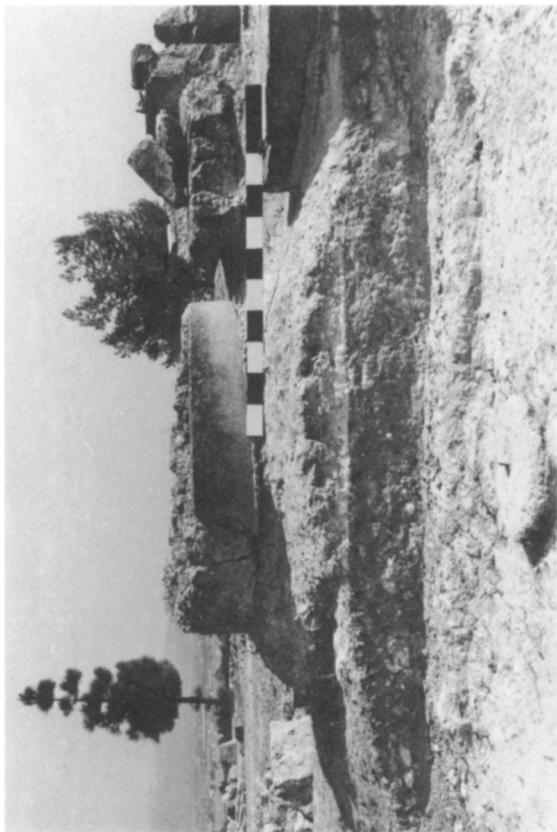
b. Sherds from Floor 1, AT dep I.A.4. Top row: body, MPC aryballos; base, PC conical oinochoe. Middle row: PC kotylai body sherds. Bottom row: bases, PC kotylai



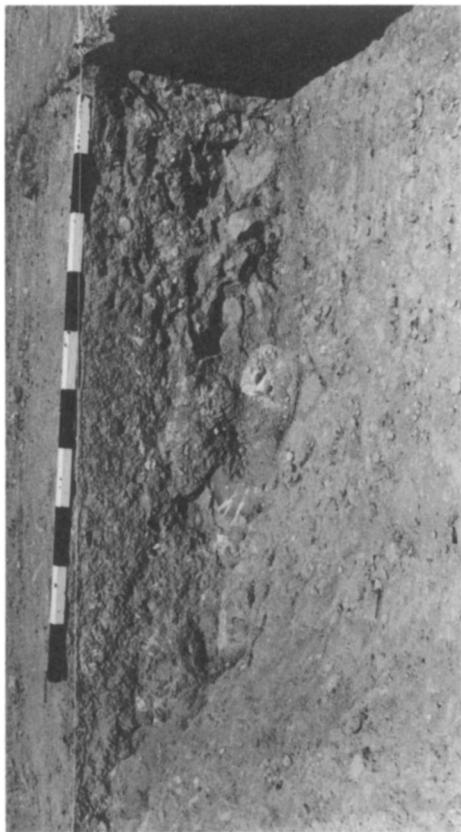
c. Sherds from Floor 2, AT dep II.A.1. Top row: bases, 7th-century kotylai. Middle row: 6th-century kotylai body sherds; square-rimmed bowl, 6th century. Bottom row: rim, late 7th-century alabastron; lower body, late 7th- or beginning 6th-century aryballos



d. Sherds from Floor 3, AT dep III.A.1. Top row: body sherds, skyphos of Attic shape (6th-century, second half). Bottom row: base, 6th-century kotyle; 3 sherds of a miniature bowl



a. Floors in east pteron beneath perirrhanterion base, looking east



b. Detail of altar and leveling fill in Trench 89-22A (LA dep I.1), looking north



c. Long altar with leveling fill along west face, Trenches 89-64 and 89-22A, looking northeast. Bedrock rising to west



d. Blocks of altar, looking north



a. North Propylon (center) and Archaic temenos wall, 1954, looking southwest



b. Bedrock bedding for Archaic temenos wall (center) in Trench 89-49; beyond it, cut through North Terrace 1, looking north



c. Robbed-out bedding of Archaic temenos wall (center left), North Terrace 1 (center), and 5th-century road-fill deposits with Archaic Temple debris (right), looking northeast



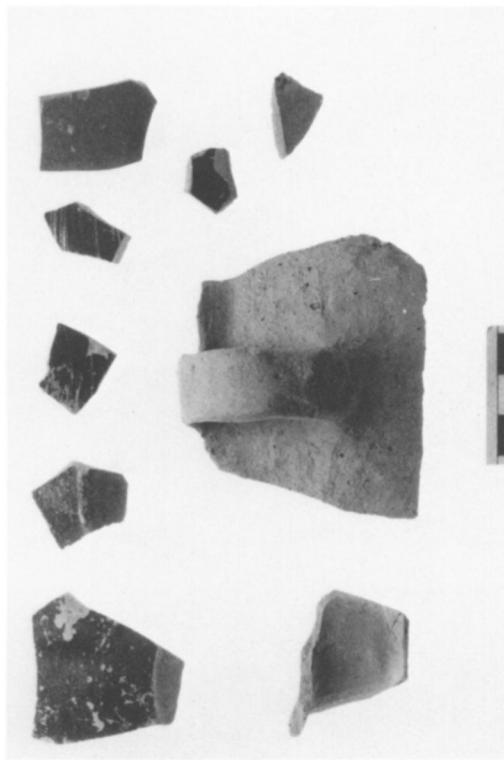
a. Southeast end of East Terrace 2 in Trench 89-2B, looking north



b. Left: surface of East Terraces 2, 3 after excavation in Trenches 89-47 and 89-32; Pit B in background, looking west. Right: boulders belonging to fill of Terrace 2; foreground, planting(?) holes in Terrace 3



c. East face of East Terrace 2 in Trenches 89-2E, D, C, looking south. Foreground, planting(?) holes of East Terrace 3



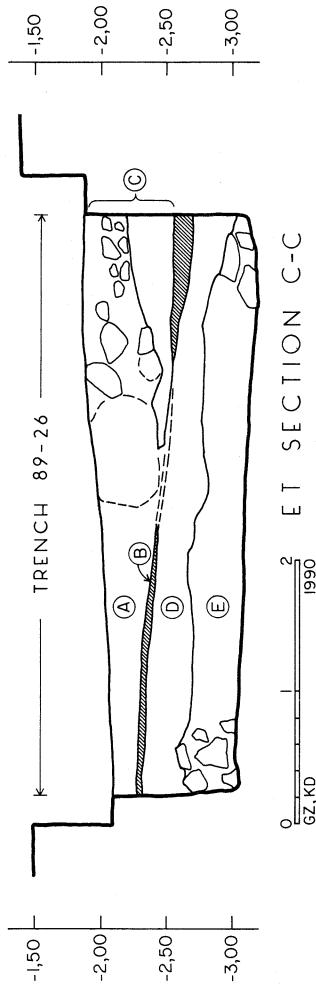
d. Sherds from East Terrace 2 construction (dep. I.1). Top row: base and lower body, MG skyphos; base, EPC kotyle; 3 body sherds, Attic black glaze. Bottom row: neck, 8th-century small closed vessel; body and handle, handmade coarse mug, probably pre-8th century (IP 7939); 2 body sherds, Attic black glaze



a. East Terraces 1, 2, and 3 in Trenches 89-2C and 89-26, looking east. Fill of Terrace 3 has been removed from sloping face of Terrace 2 at lower left foreground. Red-soil buttness, left rear; embankment of Early Stadium II, right rear (ET sec C-C)



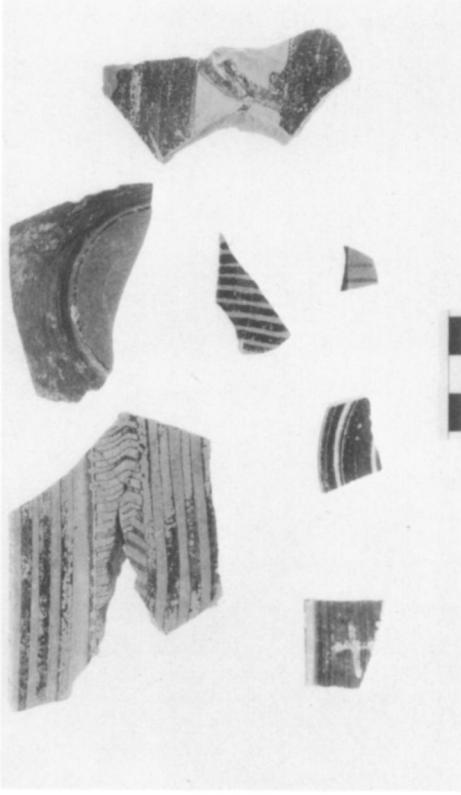
b. Fill and surface of East Terrace 3 and stadium embankment in Trenches 89-2C and 89-26, looking north (ET sec A-A)



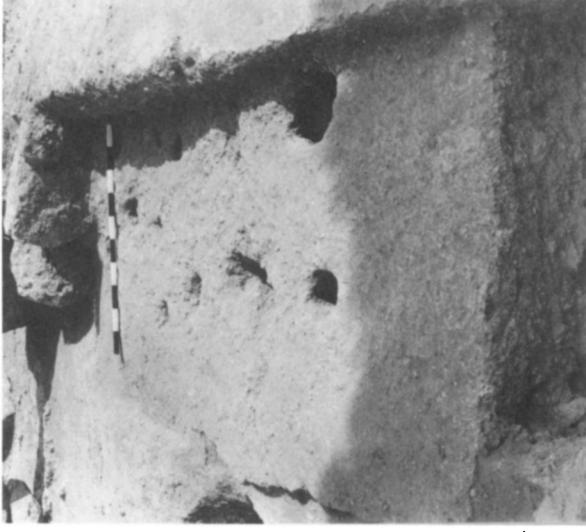
c. East Temenos section C-C, Trench 89-26, facing east. A: red-soil buttness of stadium. B: rocky embankment for stadium. C: sacrificial ash. D, E: East Terrace 3 fill (G. Ziesing, K. Dickey, F. Hemans)



d. Sherds from surface of East Terrace 3 (dep II.2). Left: body (restored), PC conical oinochoe, IP 7606. Right, top row: body, LG kalythos, IP 7522; neck of closed vessel, IP 7488. Right, bottom row: rim, LG II Attic, Corinthianizing kotyle



a. Sherds from East Terrace 3 construction (dep I.1). Top row: rim and upper body MG II/LG krater; base, EPC skyphos. Middle row: rim, LG II Attic kantharos, IP 7477; rim and body, EPC(+) high-footed skyphos. Bottom row: rim, (MG II/LG kotyle, IP 7510; pyxis lid, 7th century, IP 8065; body, ray kotyle



b. Planting(?) holes in East Terrace 3, looking east



d. Pits C, D, and E in East Terrace 3, Trench 89-22B, looking north



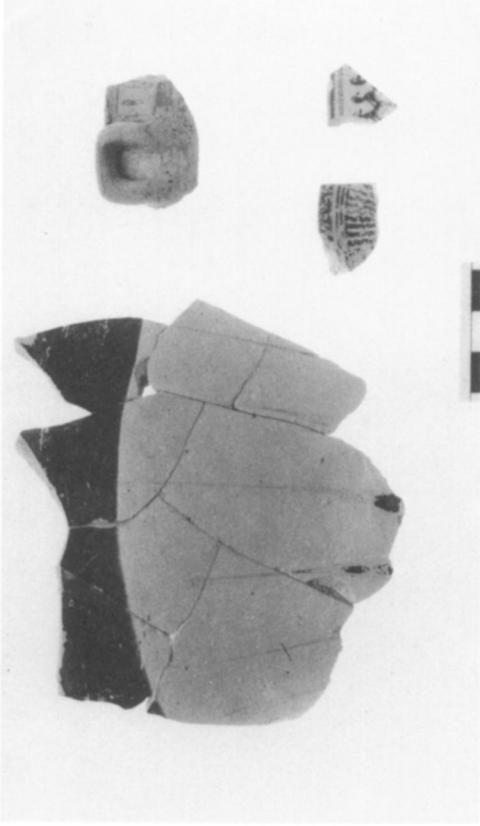
c. East Terrace 3 after removal of Terrace 4; foreground, Pit A, looking north. Surface of Terrace 5 at right



a. Ash bedding of East Terrace 4 after removal of pebble surface in Trench 89-2H, looking west. Pebble surface of Terrace 5, right; Pit A, background



c. East Terrace 5 over red-soil buttress of stadium embankment in Trench 89-38, looking north



b. Sherds from surface of East Terrace 4 (dep II.1). Left: kotyle body, first half 5th century, IP 7637A. Right top: handle, miniature krater, IP 7582. Right bottom: pyxis lid, 7th century, IP 7613; rim, EPC kotyle, IP 8060



d. Sherds from surface of East Terrace 5 (dep. I.1). Top row: miniature handmade jug, IP 7629; handle, Attic black-glazed cup; base, Attic black-glazed skyphos with applied red, IP 8106; miniature phiale. Middle row: handle, miniature krater; body, miniature kotyle. Bottom row: miniature kantharos, IP 8009; kotyle base, second half 6th century; body, kotyle (possibly same vessel)