

THE CHALKOTHEKE ON THE ATHENIAN AKROPOLIS

(PLATES 20–24)

THIS STUDY of the Chalkotheke on the Athenian Akropolis is based on a re-examination of the remains and of the original excavation photographs.¹ The result is an interpretation of the plan and architectural history of the building which differs substantially from that presented by Gorham Phillips Stevens, in the only major study of the Chalkotheke.² The topographical evidence reviewed here, together with the epigraphical documents, supports a 4th-century B.C. date for the construction, a conclusion which rules out any possible association of the building with work on the Parthenon some sixty years before.³ A review of the epigraphical evidence is followed by the architectural analysis and the presentation of newly observed features important for the reconstruction of the plan. In conclusion, I have attempted to place the Chalkotheke within the larger historical context of Athenian military developments of the 4th century B.C.⁴

¹ J. A. Bundgaard (*Acropolis*) has made available all the photographs and drawings produced during the excavation, supplementing the original excavation report by P. Kavvadias and G. Kawerau (*Die Ausgrabung der Akropolis*, Athens 1906). It is Building VII, the third structure to be identified as the Chalkotheke in the course of the excavations, that concerns us here. First recognized by Dörpfeld ("Chalkothek und Ergane-Tempel," *AthMitt* 14, 1889, pp. 304–313), it superseded the previous candidates, Buildings I (F. C. Penrose, "Excavations in Greece, 1886–1887," *JHS* 8, 1887 [pp. 269–277], pp. 269–270) and IV (J. E. Harrison, "Archaeology in Greece, 1887–1888," *JHS* 9, 1888 [pp. 118–133], p. 120), both marked on Plate 20. The identification is not in dispute; the other choices can be eliminated on the basis of plan or of date incompatible with the epigraphical evidence for the Chalkotheke. Building I is too small and too early (see J. Boersma, *Athenian Building Policy 561/0–405/4 B.C.*, Groningen 1970, no. 115, p. 229), while Building IV, partially unroofed, has been identified as the Heroön of Pandion (G. P. Stevens, "The Northeast Corner of the Parthenon," *Hesperia* 15, 1946 [pp. 1–26], pp. 21–25).

Works frequently cited are abbreviated as follows:

Bundgaard, *Acropolis* = J. A. Bundgaard, *The Excavation of the Athenian Acropolis, 1882–1890*, Copenhagen 1974

Stevens, *Parthenon* = G. P. Stevens, *Hesperia*, Suppl. III, *The Setting of the Periclean Parthenon*, Cambridge, Mass. 1940

² Stevens, *Parthenon*, pp. 7–19, 36–37. Stevens dated the construction of the Chalkotheke to ca. 450 with the addition of the portico ca. 400 B.C. His reconstruction is that shown in Figure 1.

³ As suggested by J. A. Bundgaard (*Parthenon and Mycenaean City on the Heights*, Copenhagen 1976, p. 78). Bundgaard's theory that Building VII had served as Pheidias' workshop for the chryselephantine statue of Athena Parthenos was based on the interior width of the building given by Stevens (*Parthenon*, p. 15, fig. 11), ca. 12 meters. The new measurements provided below give the Chalkotheke an interior width of some 15 meters and add to the objections to this theory.

⁴ This article presents the results of a measuring campaign of 1976 together with further research in Athens undertaken primarily between 1976 and 1978. Grateful thanks go to the Greek Archaeological Service and to Mr. G. Dontas, then Ephor of the Akropolis, for the permission to measure the remains of the Chalkotheke, and to his successor, Mrs. E. Touloupa, for permission to publish the results here; also to Professor James R. McCredie, then Director of the American School of Classical Studies at Athens, and to Professor T. Leslie Shear, Jr., Director of the Agora Excavations, for the equipment necessary for the survey. Special thanks are due W. B. Dinsmoor, Jr. for his help in measuring the remains, the execution of the drawings published here, and much fruitful discussion throughout the project, and to Dr. Judith Binder, who proposed the topic to me originally and offered many helpful suggestions as it developed. The final version has also

THE INVENTORY INSCRIPTIONS

The inventory inscriptions of the Chalkotheke are the primary source for evidence regarding the location, plan, function, and *floruit* of the building.⁵ They also document the changing accounting practices used for the inventory of the building's contents in the 4th century. Some twenty inscriptions have been associated with the Chalkotheke, but only the four in which the word "Chalkotheke" is preserved concern us here. The first (*IG* II², Add. 1424a, 371/0)⁶ demonstrates a reorganization of the system used to record the treasures of Athena on the Akropolis. Previous inventories listed items in non-columnar form, generally without any indication of their whereabouts on the Akropolis (*IG* II², 1407 + 1414, 1416, 1433, 1426; 385/4–375/4). In the inscription of 371/0, however, items are inscribed by location on a large opisthographic stele organized in three columns under the heading of the boards responsible for their custody.⁷ The transfer of objects to the Chalkotheke and the appropriation of the building for storage purposes seem to have been part of the general reorganization of the treasures of Athena in 374/3.⁸ For reasons set forth below, I believe that the construction of the Chalkotheke is most likely to have occurred at this time.

The second inscription (*IG* II², 120 + 1465; 353/2),⁹ some twenty years later, reflects the importance attached to the Chalkotheke and supplies details as to its location and plan.

benefited from the comments of Professors Emily Vermeule, Colin Edmondson, T. L. Shear, Jr., Homer A. Thompson, and two readers for *Hesperia*. For the shortcomings that remain, I am wholly responsible. The photographs on Plates 21–24 were taken by William Trowbridge, except for Plates 22:c and 23:b, by John Dobbins. The actual-state plan, elevation of the rock-cut steps west of the Parthenon, restored plan, and restored section of the Chalkotheke (Figs. 1–4) were drawn by W. B. Dinsmoor, Jr.

⁵ There are no literary testimonia for the Chalkotheke: Pausanias, I.24.3, which refers to his tour of this part of the Akropolis, is notoriously corrupt; see J. G. Frazer, *Pausanias's Description of Greece*, London 1898, II, *Commentary on Book I*, pp. 296–298. There is a Chalkotheke on Delos approximately contemporary with that in Athens and also known only from inscriptions; see, e.g., F. Dürbach, "Fouilles de Délos," *BCH* 35, 1911 (pp. 1–86), p. 12, line 5 and p. 13, and R. Vallois, *L'architecture hellénique et hellénistique à Délos*, Paris 1944, pp. 56–57. For general treatment of the Greek term and early discussion of the Chalkotheke on the Akropolis, *RE* III, 1899, cols. 2097–2098.

⁶ Lines 125–160, 255–289, and 374–399 (A. M. Woodward, "The Golden Nikai of Athena," *Ἀρχ'Εφ*, 1937 [pp. 159–170], p. 165, note 3).

⁷ For the procedure, W. S. Ferguson, *The Treasurers of Athena*, Cambridge, Mass. 1932, pp. 110–127; for the beginning of the columnar lists, W. B. Dinsmoor, "The Burning of the Opisthodomos at Athens, Part I," *AJA* 36, 1932 (pp. 143–172), p. 167, but see also D. M. Lewis, "Notes on Attic Inscriptions," *BSA* 49, 1954 (pp. 17–50), pp. 47–49. I am grateful to Mr. Lewis for helpful comments on dating the Chalkotheke inscriptions and for information about new joins.

⁸ For the date, see Dinsmoor, *loc. cit.* *IG* II², 1426, lines 9–24 were once thought to pertain to the Chalkotheke (*ibid.*), but line 9 contains the entry for a masculine place name. Although only the article in the dative is preserved, it cannot be construed to refer to the Chalkotheke, a feminine noun; nor is the restoration "in the opisthodomos of the Chalkotheke", adopted by Dinsmoor, possible (see pp. 78–79 below). Since the objects which follow this entry are found in the Chalkotheke a few years later (*IG* II², Add. 1424a and 1425 B, 371/0 and 369/8 respectively), *IG* II², 1426 (375/4) should list them in their previous location, before their transfer to the Chalkotheke. Thus the *terminus post quem* for the transfer is 375/4, while *IG* II², Add. 1424a provides the *terminus ante quem*, 371/0. The other non-columnar inscriptions dated before 371/0 and identified as inventories of the Chalkotheke on the basis of their contents alone are here considered to refer to those items before their transfer to the Chalkotheke, e.g. *IG* II², 1414 (lines 38–49), 1416, and 1433.

⁹ E. Schweigert, "Inscriptions from the North Slope of the Acropolis," *Hesperia* 7, 1938 (pp. 264–310), pp. 281–289.

It represents further refinement in accounting procedures and states that the Chalkotheke is situated on the Akropolis, where a new reckoning of the contents of the building is to be made (lines 12–13).¹⁰ The inscription cites a decree of the Boule calling for a more stringent tally of the objects in the Chalkotheke, which was to be compared with the inventories of the nine previous years in order to make good the missing items; both the full text of the decree and the resulting inventory are recorded.

The disposition of some of the shields stored in the Chalkotheke provides a clue to the plan of the structure (lines 35–36): . . . ἀσπίδες ἐπὶ χαλκοῖ ἐν τῇ χαλχ[οθή/κει] αὐτῇ(ι) πρὸς [τ]ῷ τοίχῳ, “. . . bronzed shields in the Chalkotheke itself against the wall.” The phrase “against the wall” occurs in similar form in several other inscriptions (largely restored in *IG* II², 1425 B, line 338 (369/8) and 1440 B, lines 47–48 (349/8); cf. 1469 B, lines 67–68 (321/0): “. . . ἀσπίδες [πρ]οσκεκρουμέν/[αι πρὸς τῷ] τοίχῳ”, “. . . shields nailed up against the wall”). In all four instances, the phrase occurs near the beginning of the inventory of the Chalkotheke, but it is only in *IG* II², 120 that the full context is preserved. Here an inventory of shields (lines 33–35) precedes the phrase “bronzed shields in the Chalkotheke itself against the wall” (lines 35–36); it is clearly distinguished from the following series, characterized as “in the Chalkotheke itself”. It is reasonable to assume that the first set of shields was located outside the building and thus hung either upon the façade, or, for better security, in a portico along the façade of the Chalkotheke. The architectural remains of the Chalkotheke do, in fact, include such a portico, and given the number of shields inventoried in this first series (over 980), it seems the more likely location.

The third, very fragmentary, inscription (*IG* II², 1438 + 1463 + 1440; 349/8)¹¹ has suggested to some scholars an even more specific interior arrangement of 13 walls and some sort of back room or *opisthodomos*.¹² The reference to 13 walls, which occurs only in this inscription, in fact provides little assistance for the restoration of the interior of the Chalkotheke. The inscription is unique in the Chalkotheke corpus in its arrangement of the inventory by weighing lots (ῥυμοί) and rows (στοίχοι), as well as by the disposition of objects on 13 walls. All three methods of arrangement are arbitrary, reflecting a system designed for the purposes of the treasurers responsible for the inventory. Unfortunately the details provided are insufficient for the reconstruction of this system with any degree of certainty. It appears that the number of votives on each wall was approximately the same, despite the fact that the north and south walls of the Chalkotheke are nearly three times as long as the east and west walls. It seems likely, therefore, that the long walls at least were subdivided

¹⁰ This type of inventory, the ἐξέτασμός or *recensus*, is discussed by J. Tréheux (“L’inventaire des clérouques d’Imbros,” *BCH* 80, 1956, pp. 462–479) and P. J. Rhodes, *The Athenian Boule*, Oxford 1972, pp. 91–93).

¹¹ *IG* II², 1438 B, lines 1–21 + 1463 B, lines 23–33 + 1440 B, lines 46–67 (P. J. Rhodes, *op. cit.* [footnote 10 above], p. 93, note 1).

¹² J. Tréheux (“L’aménagement intérieur de la Chalkothèque d’Athènes,” *Études d’archéologie classique* I, 1955–1956, pp. 133–146 [*Annales de l’Est*, Mémoires de la faculté de lettres de Nancy 19]) provides the most complete text and discussion including two possible reconstructions with 13 walls. The suggestion that this *opisthodomos* lay in the Chalkotheke was first proposed by Dinsmoor (*loc. cit.*, footnote 7 above), followed by Lewis (*op. cit.* [footnote 7 above], pp. 48–49). Both Tréheux (p. 146, note 2) and Lewis (p. 48, note 58) concede that the foundations of Building VII preclude any such back room.

into shorter segments. This interpretation is supported by the relatively small number of votives listed on each wall. One possible arrangement, postulated by Tréheux, offers two schemes of internal partitions, each of which provides 13 walls. This is not the only option, however. One could envision an equally plausible arrangement in which the existing wall space was arbitrarily subdivided into roughly equal wall segments, without the use of partition walls. The chief problem in any reconstruction is the lack of evidence for the number of doorways, which has major consequences for the number of segments into which the existing wall space can be subdivided. In the absence of specific evidence for the number of doors in the Chalkotheke, any number of reconstructions are possible, one just as speculative as the next. Moreover, the abandonment in subsequent inventories of this arrangement by row, weighing lot, and wall suggests that the scheme seen in this inscription may well have been temporary.

The evidence for an *opisthodomos* in the Chalkotheke is similarly suspect. The *opisthodomos* inventories occur both before and after those of the Chalkotheke (before: *IG II*², Add. 1424a, lines 115–122; after: *IG II*², 1438 B = *SEG* 19, 1963, no. 129, lines 22–27).¹³ The inventory of a back room listed before that of the main part of the building seems peculiar. In both cases, the items are few in number and of costly materials (ivory, gold, and silver) rarely found in the Chalkotheke.¹⁴ The nature of the objects as well as the position of the *opisthodomos* inventories relative to those of the Chalkotheke makes the identification of this *opisthodomos* with a back room in the Chalkotheke implausible. It is worth noting, moreover, that the word *opisthodomos*, a technical term for a specific chamber in a Greek temple, is only used in Classical references for that chamber in two temples on the Akropolis at Athens: the Parthenon and the Archaic temple south of the Erechtheion.¹⁵ The use of the term to describe a back room in a building other than a temple is not attested in the Classical period.

¹³ The first instance has generally been identified with the famous repository discussed below and not with an *opisthodomos* in the Chalkotheke, cf. *IG II*², Add., note to 1424a, pp. 804–805, also Ferguson, *op. cit.* (footnote 7 above), pp. 86–87, 95. The two inscriptions cited represent the crucial evidence for an *opisthodomos* in the Chalkotheke. The other much later inscriptions frequently mentioned in this connection either do not pertain to the Chalkotheke (e.g. *IG II*², 1469 A, lines 32–33: the Chalkotheke inventory is on the other side of this stone) or need not be construed as evidence for an *opisthodomos* there (e.g. *IG II*², 1469 B, line 85, where the word *opisthodomos* occurs in the nominative, probably a mistake; 1471 B, col. II, where line 60 reads “of the doors of the *opisthodomos*” and lines 63–64 where the reading “ISOOMOLO” is a hopeless corruption).

¹⁴ The items inventoried in the Chalkotheke, primarily military equipment and processional paraphernalia, are nearly all of bronze with a few silver and wooden pieces. The martial nature of much of the collection is clear from the earliest inventory, *IG II*², Add. 1424a, where Pasion’s *epidosis* of 1,000 shields, now some 754, is listed (line 129). Other military equipment includes catapult parts, listed in *IG II*², 120, lines 36–37; 1467 B, col. II, lines 48, 50, 53; 1469 B, col. I, lines 78; 1475 B, lines 30, 32–34; 1487a B, line 102; 1488, line 1; 1490, line 32. For discussion, see E. W. Marsden, *Greek and Roman Artillery: Historical Development*, Oxford 1969, pp. 56, 65, 68–71. The processional material consists of a quantity of braziers, often in poor condition, as well as processional shields, trays, and other vessels. Many of the items appear used, but whether use occurred before or after deposit in the Chalkotheke is unclear. The *epidosis* of Pasion and the catapult parts do seem to have been stored in the Chalkotheke for later use.

¹⁵ Cf. *RE*, s.v. *opisthodomos*, XVIII, 1939, cols. 685–689; and cf. J. J. Coulton, *Ancient Greek Architects at Work*, Ithaca, NY 1977, p. 191 and W. B. Dinsmoor, *The Architecture of Ancient Greece*, 3rd ed., London/New York/Toronto 1950, p. 393.

The cumulative evidence thus fails to indicate that there was an *opisthodomos* in the Chalkotheke. The word *opisthodomos* seems rather to refer to another structure, most probably the famous repository which Dinsmoor identified as the west end of the Archaic temple south of the Erechtheion.¹⁶

The fourth inscription (*IG II*², 1469 B; 321/0)¹⁷ provides important evidence as to the function of the Chalkotheke in the late 4th century. This inventory of the Chalkotheke can be associated with the stockpiling of artillery and naval equipment on the Akropolis under Lykourgos.¹⁸ As the increasing quantities of catapult parts and naval equipment inventoried in the Chalkotheke show, the building seems to have served chiefly as an arsenal in the late 4th century. Indeed, some scholars have suggested that the Chalkotheke took on this function substantially before the date of this inscription, pointing to the importance attached to its inventory in the middle years of the 4th century, when there is similar evidence for the tightening of administrative control over naval records in response to growing Athenian military needs.¹⁹ Unfortunately, it remains impossible to prove that the Chalkotheke was designed as an arsenal, although it is clear that the building was used for the storage of surplus military equipment as early as 371/0 (see footnote 14 above). The plan of this storehouse for bronzes is, however, highly suggestive; it is admirably suited for the military purpose the Chalkotheke had assumed by the 320's.

DESCRIPTION OF THE PHYSICAL REMAINS

What is left of the Chalkotheke (Pl. 21) lies in the shadow of the Parthenon, east of the sanctuary of Artemis Brauronia along the south wall of the Akropolis. Although only the foundations of the building are visible today (Pl. 22:a), the prominent position of the Chalkotheke and its size, some 43 by 20 meters, must have made it an impressive monument in antiquity. Certain peculiarities in the construction of such a large building attract attention. Seen from the air (Pl. 21), the Chalkotheke appears to rest entirely on fill. Closer inspection reveals that the northern façade of the building is, in fact, dug into bedrock: the northeast corner of the portico is embedded in the rock-cut steps west of the Parthenon, and a foundation trench for the portico extends along the southern edge of the terrace floor at the foot of these steps (Figs. 1, 2; Pl. 22:c, d).²⁰ In addition to this unusual placement on fill and

¹⁶ W. B. Dinsmoor, "The Burning of the Opisthodomos at Athens, Part II," *AJA* 36, 1932, pp. 307–326; also *idem*, *The Architecture of Ancient Greece*, pp. 91, note 1, and 198, following W. Dörpfeld, "Der alte Athenatempel auf der Akropolis. II," and "... III," *AthMitt* 12, 1887 (pp. 25–61, pp. 190–211), pp. 44–45, 203–224. The final abandonment of the Opisthodomos, placed by Dinsmoor in the mid-4th century, must come after 349/8, the date of the latest of its inventory inscriptions (*IG II*², 1438 B + 1463 B + 1440 B).

¹⁷ Col. I, lines 54–112; dated to 321/0, line 81.

¹⁸ Marsden, *loc. cit.* (footnote 14 above); cf. Pseudo-Plutarch, *Lives of the Ten Orators*, VII (Lykourgos), *Moralia*, 852 c.

¹⁹ On the financial difficulties of Athens in this period, see P. Brun, *Eisphora, Syntaxis, Stratotika: Recherches sur les finances militaires d'Athènes au IV^e siècle*, Paris 1983, esp. pp. 28–33 and 183–185; for the naval records, J. K. Davies, "The Date of *IG ii.2* 1609," *Historia* 18, 1969 (pp. 309–333), pp. 313–314; for the Chalkotheke as arsenal, R. L. Pounder, "A Hellenistic Arsenal in Athens," *Hesperia* 52, 1983 (pp. 233–256), p. 247; W. K. Pritchett, *The Greek State at War*, III, *Religion*, Berkeley/Los Angeles 1979, pp. 259–260, following A. Kirchhoff, "Griechische Inschriften," *Philologus* 15, 1860 (pp. 402–416), pp. 402–406.

²⁰ Figure 2 shows the relationship of the Chalkotheke to the rock-cut steps in elevation looking east. It illustrates Steven's comment that these steps served as a visual podium for the Parthenon, as they feature

bedrock, the Chalkotheke shows remarkable economy in the choice of its foundations. It shared a party wall with the sanctuary of Artemis Brauronia (the west wall of the Chalkotheke was the east wall of the Braurion; Pl. 23) and used the south wall of the Akropolis as footing for its south wall, thereby eliminating the need for new foundations on the west²¹ and south.²² As a further indication of economical construction, the north foundation wall of the building is composed to a large extent of re-used material: the inner or southern face of this wall (Bundgaard, *Acropolis*, fig. 86) shows a re-used column drum as well as telltale anathyrosis bands on header blocks, clearly originally cut as stretchers.²³

The strangest element, however, is the oblique east wall: far wider than the other foundations used for the building, it runs a diagonal course between the south wall of the Akropolis and the north foundation wall (Fig. 1). Furthermore, this wall proceeds to the north beyond the north foundation wall of the building (Pl. 22:a, b). The odd angle of this oblique wall led Stevens to reconstruct the plan of the Chalkotheke with an acute angle at the southeast and an oblique one at the northeast corner of the main part of the building. As the northeast corner of the portico, embedded in the rock-cut steps, does not correspond to the orientation of the oblique wall, he construed the portico to be a later addition to the building (Pl. 20).²⁴

A different interpretation of this oblique wall can be proposed on the basis of four pry holes which run northeast to southwest across its surface. These pry holes, worn by foot traffic and exposure to the elements, can be discerned in Plates 22:d and 24:a–c, where they are marked with arrows. The actual-state plan (Fig. 1) indicates the alignment of the pry holes with the northeast corner of the portico. I would reconstruct the east wall of the Chalkotheke along the line of these pry holes, running northeast–southwest across the oblique wall west of the dotted line indicated on Figure 1.

In this interpretation of the remains, the oblique wall serves as footing for the east wall of the Chalkotheke, just as the south wall of the Akropolis serves as a footing for the south

curvature similar to that found in the Parthenon podium; Stevens, *Parthenon*, p. 6. The rock-cut steps, terrace, and Kara limestone blocks which carried the line of the steps south to the Akropolis wall are all probably landscaping measures of the final phases of construction on the Parthenon; the Kara limestone blocks were brought most likely from the stylobate of the Archaic temple south of the Erechtheion in 435 or after 420 B.C., J. Paton *et al.*, *The Erechtheum*, Cambridge, Mass. 1927, pp. 455–456.

²¹ Plate 23:a shows that the party wall was made originally for the Braurion, as the rock-cut ledge which comprises its northern portion is dressed on the west side but left rough on the east. Further evidence for the priority of the Braurion is discussed in footnote 35 below.

²² Bundgaard (*Acropolis*, figs. 88–93) shows the inner face of this wall. These excavation photographs, not available to Stevens, indicate that his placement of the south wall of the Chalkotheke is incorrect; Stevens, *Parthenon*, pp. 14–15 with fig. 12, p. 16. The inner ledge of the Akropolis wall upon which Stevens placed the back wall of the Chalkotheke is far too irregular, as well as too low, to have served such a purpose. The back wall of the Chalkotheke must have rested on the upper part of the Akropolis wall, as shown in Figure 3. The irregularity of the inner ledge of the Akropolis wall shown in the Bundgaard photographs is also indicated by the elevations marked on the actual-state plan, Figure 1.

²³ Compare also the actual-state plan (Fig. 1) which shows that the western end of this wall was carried on an underpinning of polygonal blocks of Akropolis limestone. These may have been taken from the Mycenaean circuit wall which passed near here. See R. F. Rhodes and J. J. Dobbins, “The Sanctuary of Artemis Brauronia on the Athenian Akropolis,” *Hesperia* 48, 1979 (pp. 325–341), p. 331 and note 18.

²⁴ Stevens, *Parthenon*, pp. 11–13. Stevens argued that the greater breadth of the oblique wall was due to its construction on fill (pp. 9 and 15) although he never satisfactorily explained the reason for the odd angle; see his discussion, p. 36.

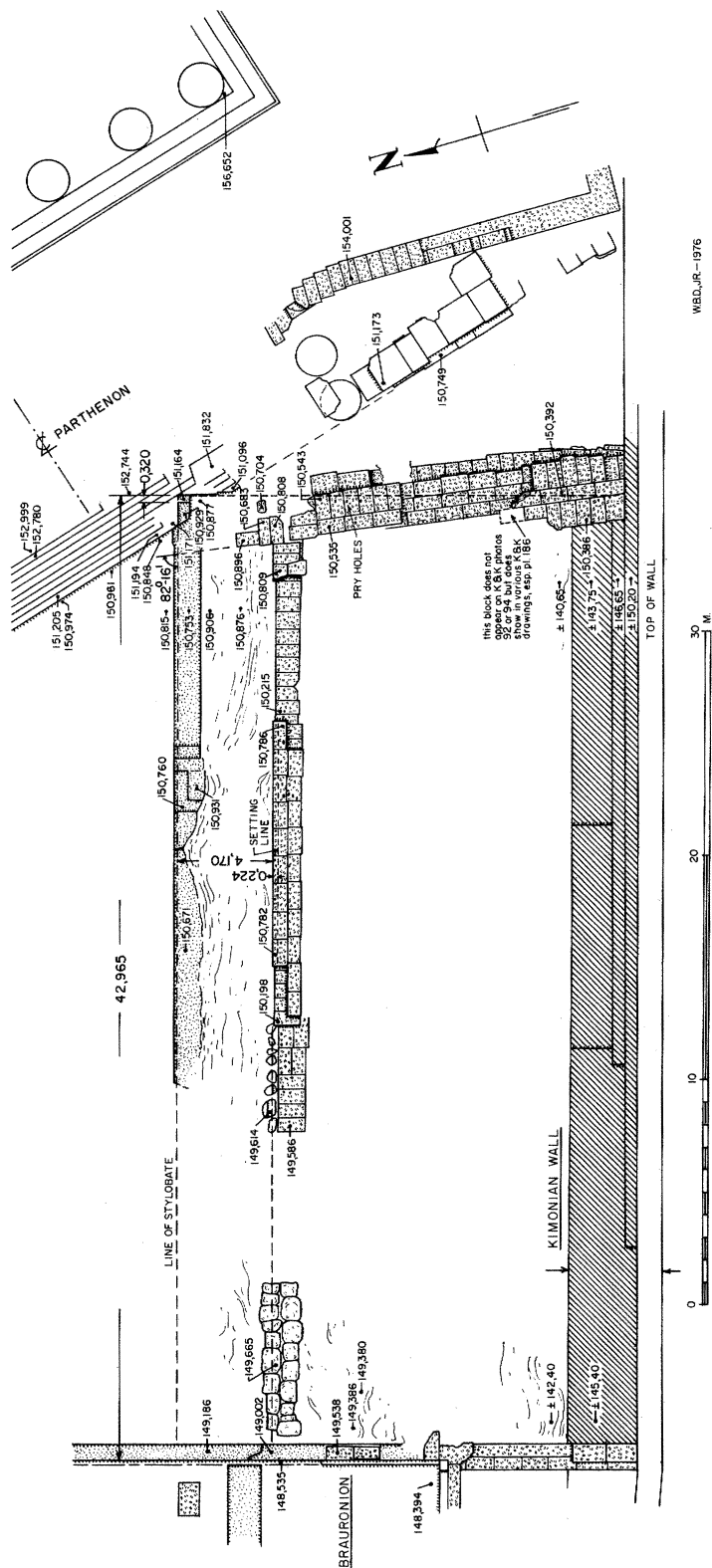


FIG. 1. Actual-state plan of the Chalkotheke

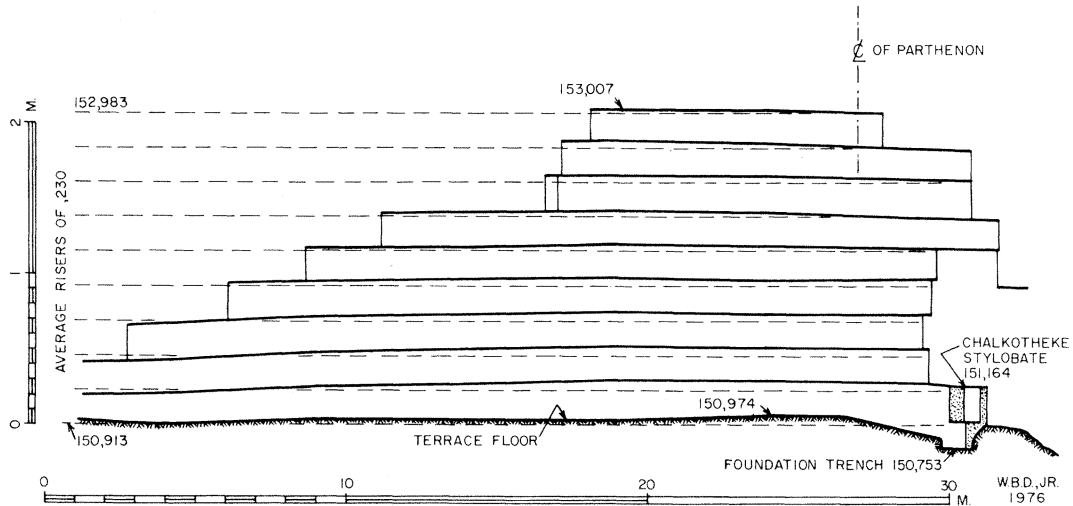


FIG. 2. Elevation of the rock-cut steps west of the Parthenon

wall of the building. Not only is this more consistent with the practice used for the other foundation walls of the structure, but it also reconciles several other peculiarities, for instance the odd juncture of the north and east walls noted above, which is explicable if the two walls are not simultaneous constructions. Furthermore, the new interpretation eliminates the divergent orientation of the east wall of the main part of the building and the east wall of the portico, it accounts for the unusual thickness of the oblique wall visible at the south (where five header and two stretcher blocks must have been added to the west face of the wall to widen the footing for the east wall of the Chalkotheke²⁵), and, finally, it allows the reconstruction of the plan with the more usual four right-angle corners.²⁶

²⁵ These blocks are visible on the actual-state plan (Fig. 2); compare Bundgaard, *Acropolis*, fig. 94, which shows the west face of these blocks. There are only two or three courses of these blocks (at the right of the photograph), while the rest of this wall continues deeper, a further indication that these seven blocks were added at a later date.

²⁶ Trapezoidal stoas are not unknown, but they are rare. Perhaps the best known, the Stoa of the Athenians at Delphi, is an open, shedlike structure quite unlike the Chalkotheke which had to be locked for security reasons (*IG II²*, 120, lines 13–14; cf. J. J. Coulton, *The Architectural Development of the Greek Stoa*, Oxford 1976, p. 234). The new interpretation of the plan as rectangular requires the rejection of the roof tile attributed to the southeast corner of the Chalkotheke on the basis of its acute angle (E. Buschor, *Die Tondächer der Akropolis*, Berlin/Leipzig, 1929–1933, I, pp. 73, 77). This sima and eaves tile (Akr. 9561) and the associated ridge antefix, now lost, may, however, belong to another building close by. I owe to W. B. Dinsmoor, Jr. the suggestion of the southeast corner of the South Stoa of the Braurion as a likely candidate and one perhaps chronologically more suitable. As is clear from Bundgaard (*Acropolis*, fig. 88) and Figure 1, the Akropolis wall makes a bend to the north at the southeast corner of the South Stoa. The roof tile, which Buschor dated to ca. 400 B.C., could therefore belong here; it would have had to be removed when the Chalkotheke was built and the easternmost row of tiles on the South Stoa was replaced with tiles slotted into the now heightened party wall. For a plausible reconstruction of the relationship of the roofs of the Braurion and the Chalkotheke, see F. Versakis, *Das Braurion und die Chalkothek im Zeitalter der Antoninen*, Athens 1910, the reconstruction drawing at the end of the text.

For an explanation of the original purpose of the oblique wall, one can compare two similar oblique walls, one on the north wall of the Akropolis west of the North Porch of the Erechtheion, the other, even longer, southeast of the Parthenon.²⁷ Both these walls are isolated and belong to no adjacent structure. Presumably they both served the same purpose as did our oblique wall before the construction of the Chalkotheke, as temporary retaining walls during the building of the Akropolis circuit wall, which had to be carried out in sections. These three oblique walls would have retained fill for one stretch of the wall, already completed, while the adjacent portion was under construction.²⁸

RECONSTRUCTION

The restored plan (Fig. 3) shows an east wall 1.20 m. in width along the line of the pry holes, employing the known width of the north foundation wall for this and the other walls of the building. The interior width of 15 meters necessitates the restoration of a system of interior supports; in the absence of any physical evidence for their disposition, their number, that of the columns of the portico, and the single doorway remain hypothetical.²⁹ The proper alignment, now made, of the east end of the portico with the east wall of the main part of the structure removes the chief reason for assigning the portico to a secondary building phase. The untidy juncture of the north foundation wall and the earlier oblique wall, probably never intended to be seen, also suggests that the portico was part of the original phase. The construction of the portico must have required extensive fill to raise the level from the bedrock on the west and to smooth out the unevenness of the foundation trench, but similar use of fill can be seen elsewhere in the building.³⁰ The *in antis* reconstruction of the

²⁷ Bundgaard, *Acropolis*, plate volume, key map Ah, figs. 4 and 4a; Hk-Gm. I am grateful to Judith Binder for pointing out the similar oblique wall near the Erechtheion and for her helpful discussion on the original function of the oblique east wall.

²⁸ Studies of the stratigraphy of the construction fill inside the south wall of the Akropolis complete with diagrams: W. Dörpfeld, "Die Zeit des älteren Parthenon," *AthMitt* 27, 1902 (pp. 379–416), pp. 391–393, fig. 2, and W. B. Dinsmoor, "The Date of the Older Parthenon," *AJA* 38, 1934 (pp. 408–448), p. 432.

²⁹ The four polygonal stones used by Stevens (*Parthenon*) and Tréheux (*op. cit.* [footnote 12 above]) to support their internal arrangements probably lie too far below the ancient floor level to pertain to any scheme of interior supports. These stones, uncovered during the excavation of 1882–1890, were never given an elevation nor pegged to any topographical feature in the excavation drawings. Stevens included them in his plan (fig. 6, opp. p. 9) where they are marked "b", but Bundgaard (*Acropolis*, fig. 79) illustrates only the post-Classical pillars from Stevens' plan. It is clear from the photograph that these pillars extended far below the ancient floor level of the Chalkotheke, which corresponded roughly to their top surface. It is highly likely therefore that the construction of these pillars destroyed all traces of the original interior supports for the building.

³⁰ For instance between the edge of the rock-cut terrace and the north foundation wall, where the bedrock drops sharply. Homer Thompson suggests that the building may have been planned originally without the portico, which might have been a last-minute adjustment forced on the architect by Akropolis authorities. In support of his hypothesis, one might note the rarity of porticoes on storage buildings and arsenals: neither the Siroi at Eleusis, the arsenals at Pergamum, nor Philo's arsenal in the Peiraieus had a portico (Coulton, *op. cit.* [footnote 26 above], p. 11, note 11, and p. 275). Such last-minute adjustments to the blueprints of architects are well-known phenomena on the Akropolis; cf., for instance, the Temple of Athena Nike and the Propylaea. The Chalkotheke variance would be a much humbler example, perhaps akin to the change in plan (blunder?) visible in the foundations of the New Bouleuterion (H. A. Thompson, "Buildings on the West Side of the Agora," *Hesperia* 6, 1937 [pp. 1–226], p. 142). For some reasons for the embellishment of the portico, see Stevens, *Parthenon*, p. 19.

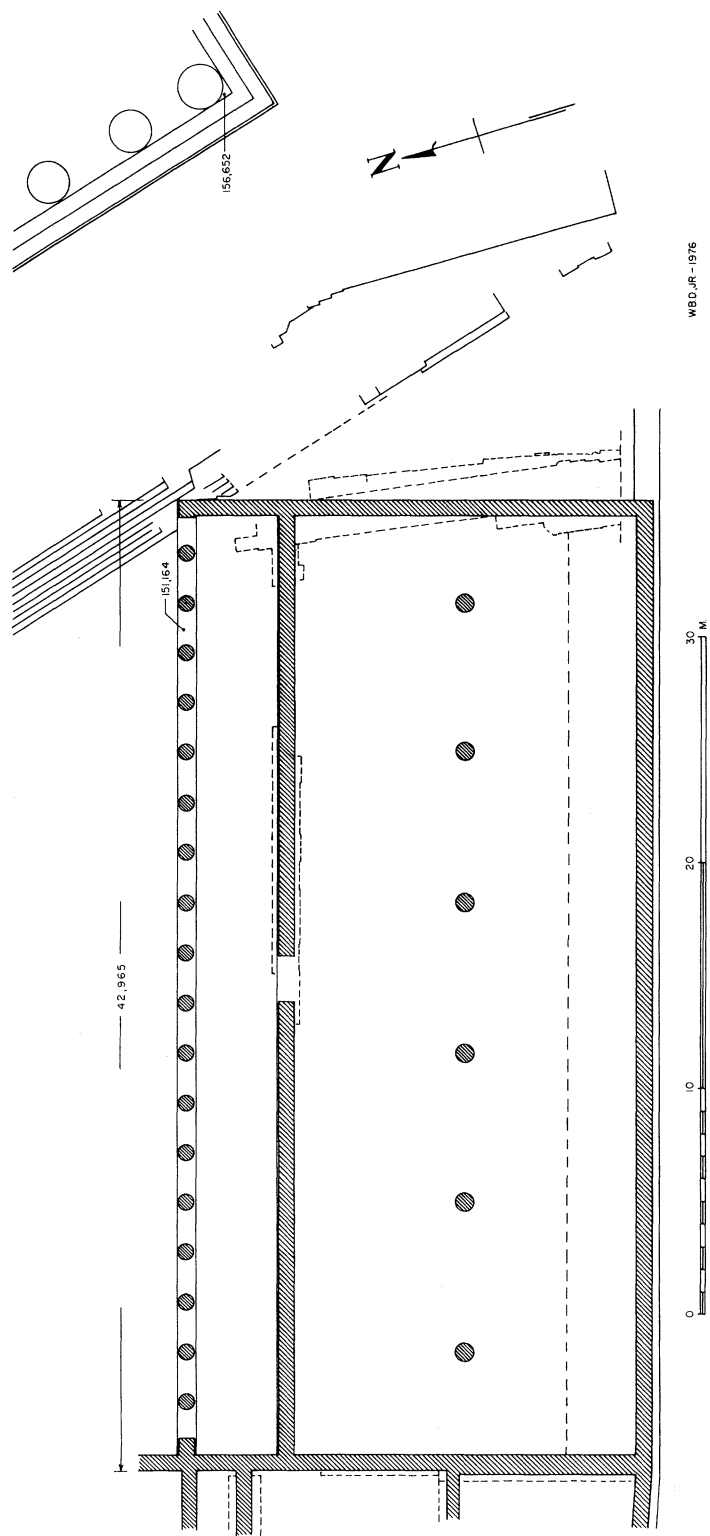


Fig. 3. Restored plan of the Chalkotheke

portico (Fig. 3) is preferable to Stevens' arrangement because of the difference in elevation between the terraces of the Chalkotheke and the Braurion on the west and between the Chalkotheke and the rock-cut steps on the east.³¹

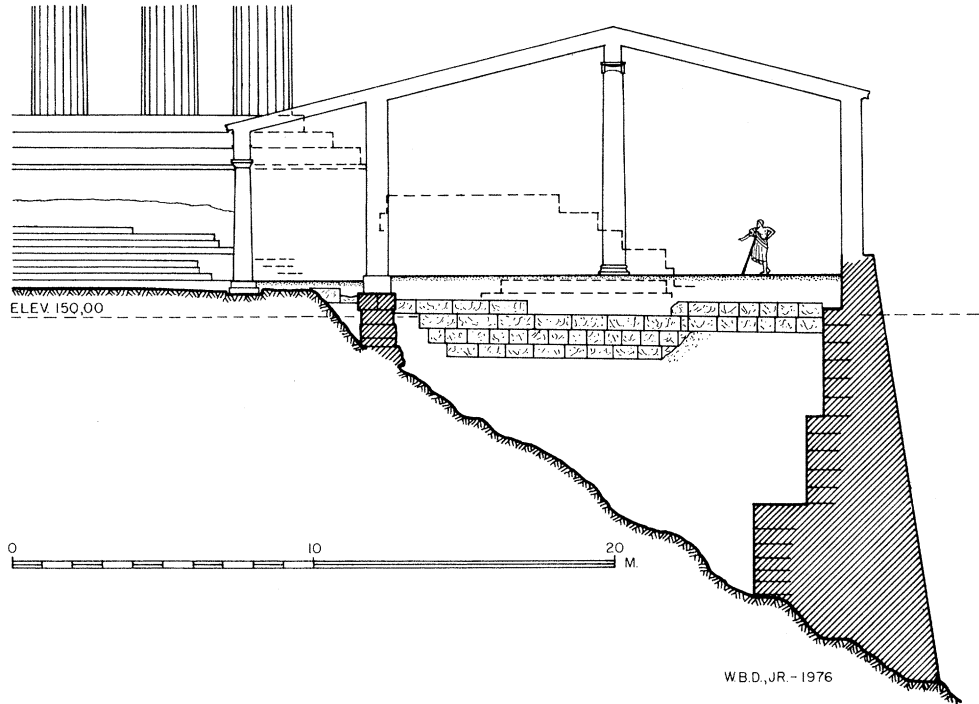


FIG. 4. Restored section of the Chalkotheke, looking east

In the restored section (Fig. 4), the height of the stylobate is taken as that of the lowest tread of the rock-cut steps (elev. + 151.164 m.; Fig. 2). This assumption allows the reconstruction of a two-stepped crepidoma with a riser height of 0.20 m. The highest surviving course of the north foundation wall, elev. + 150.78 m., must correspond to the euthynteria course, as the north face of several of its blocks feature a roughly drafted edge (average height 0.18 m.) and the upper surface of the outer northernmost blocks shows traces of a setting line (Fig. 1, Pl. 24:d).³²

The construction techniques used for the Chalkotheke hardly represent normal Classical building practice; they may be largely due to the peculiar topographical situation of the

³¹ This arrangement would protect the stylobate from water running on the rock-cut steps on the east and would be required on the west by the wall of the Braurion East Stoa, phase 3, as explained in footnote 35 below. It is possible that a few, or even many, of the intercolumniations of the portico were closed off with screen walls for the security of the votives stored in the portico (p. 77 above). Cf. the arrangement of the Northwest Stoa at Thasos in the early 3rd century B.C.; Coulton, *op. cit.* (footnote 26 above), p. 287 with fig. 114, p. 289.

³² The marble bases of bronze statues, placed on top of the wall in modern times, cover much of the top surface of this course and obscure the setting line on some of the blocks.

structure, perched between fill and bedrock.³³ Although the only absolute date for its construction comes from the epigraphical evidence (the *terminus ante quem* of IG II², Add. 1424a: 371/0), a relative date can be determined from the relationship of the Chalkotheke to the surrounding monuments. The building must postdate the construction of the south wall of the Akropolis and the rock-cut steps and terrace west of the Parthenon.³⁴ Recent work on the architectural phases of the sanctuary of Artemis Brauronia confirms that the third phase of its East Stoa must have preceded the Chalkotheke as well.³⁵

CONCLUSIONS

This article offers a new architectural reconstruction of the Chalkotheke on the basis of restudy of the remains. A series of pry holes which run northeast–southwest across the oblique east wall indicates that this earlier retaining wall was re-used as a footing for the east wall of the building. The Chalkotheke thus can be restored with a rectangular plan, eliminating the need to assign the portico to a second building phase and resulting in a greatly simplified architectural history.

The setting of the Chalkotheke precludes a construction date earlier than the late 5th century, because of the relationship of the building to the rock-cut steps west of the Parthenon. The Chalkotheke also postdates the latest phase of the East Stoa of the sanctuary of Artemis Brauronia, but this does not provide a *terminus post quem*, since the phases of the sanctuary have not been assigned absolute dates.³⁶ Both the extreme economy seen in the construction of the building and the increasingly restrictive measures shown by the inscriptions, however, suggest that its construction is more likely to fall in the period of decreased financial resources of the early 4th century than in immediately post-Periclean times. The evidence of the inscriptions places the *floruit* of the Chalkotheke in the middle years of the 4th century with the earliest attestation of the building in 371/0. I have proposed that the appropriation of the building for storage, and most probably its construction, were results of

³³ Stevens (*Parthenon*, p. 36) refers to the construction features of the walls of the Chalkotheke to support his mid-5th-century dating, citing block dimensions, dowels, and the use of anathyrosis. No dowels or dowel holes are visible today, and the only anathyrosis visible indicates that many of the wall blocks are in a different position than that for which they were cut.

³⁴ The south wall of the Akropolis, begun with the spoils of the Eurymedon under Kimon in the 460's (Pausanias, 1.28.3; Plutarch, *Kimon*, 13.6) was still under construction in Periclean times; see the stratigraphical studies cited in footnote 28 above. The rock-cut terrace and steps are dated either 435 B.C. or after 420 (footnote 20 above). These monuments thus afford a post-Periclean date for the Chalkotheke.

³⁵ Rhodes and Dobbins, *op. cit.* (footnote 23 above), pp. 325–341, fig. 1, p. 334. In their phase 3, the western surface of the party wall was cut back 0.22 m. (p. 326). Although the authors do not say so explicitly, this must have required the dismantling and rebuilding of this wall to new specifications of 0.80 m. for the thickness. It is clear that the wall blocks E-7 and E-8, still *in situ* (Pl. 23:b, c), are replacement blocks, specially cut for phase 3, as their western bands of anathyrosis are perfectly preserved (p. 333, note 24). If the wall was totally dismantled, it must have been before the construction of the Chalkotheke on its other side. For the placement of blocks E-7 and E-8 in relationship to the Chalkotheke, see the actual-state plan (Fig. 1); E-7 is the block at elev. + 149.538 m.

³⁶ The sanctuary of Artemis Brauronia on the Akropolis is thought to be a Peisistratid foundation (L. Kahil, "Le 'cratérisque' d'Artémis et le Brauronion de l'Acropole," *Hesperia* 50, 1981, pp. 253–263), but there is little evidence for the precise dating of the architectural phases of the sanctuary within the 5th and 4th centuries B.C. (but see footnote 26 above).

an administrative reform of the treasures of Athena in 374/3. A connection between this reform and the creation of the Second Athenian League a few years before, in 378/7 B.C., is not implausible.

The conception of an arsenal on the Akropolis such as the Chalkotheke³⁷ may have been a reaction to the vulnerability of the lower city after the demolition of the Long Walls in 404/3, but the presence of the Spartan harmost and garrison on the Akropolis until 394/3 seems to exclude that decade for its construction. The period of refortification of Athens and the Peiraieus in the later 390's or the years around the establishment of the Second Athenian League appear more likely. The latter date is preferable, since it coincides with known instances of tightening of administrative control, in the Athenian naval records as well as in those of the Treasurers of Athena on the Akropolis.³⁸

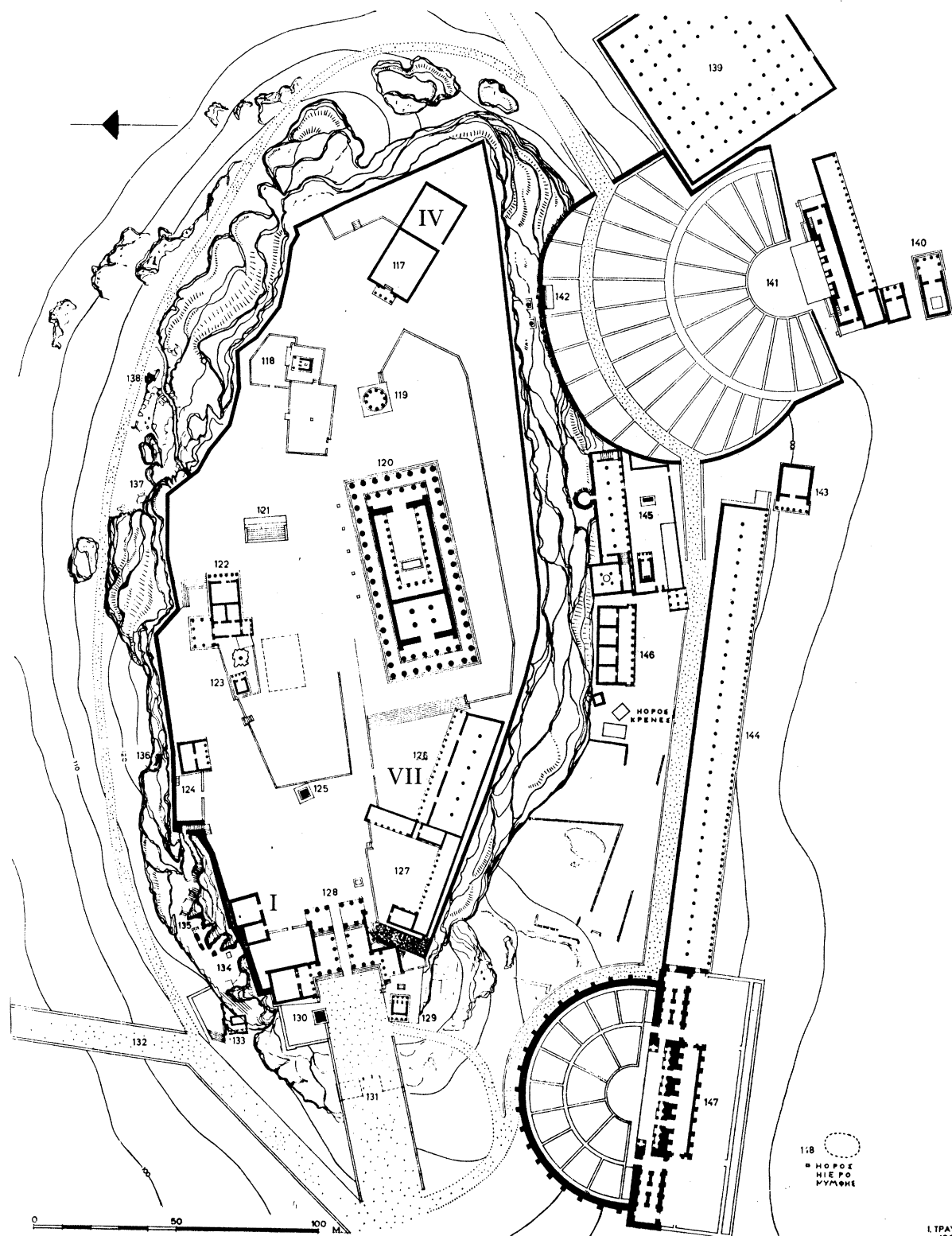
The consolidation of the bronze votives of Athena in the Chalkotheke makes sense in a period of revived imperial aspirations such as the later 370's in Athens. This hypothesis corresponds best to the epigraphical and architectural data presented here and illustrates the diverse roles still played by the Akropolis in the later Classical period. The existence of the Chalkotheke on the Akropolis between 371/0 and 321/0 belies the image of the latter as exclusively a cult center. Well into the 4th century, the Akropolis appears to have maintained some of the defensive aspects of the Mycenaean citadel, as befits the major sanctuary of the goddess renowned for both her martial prowess and her civic concern.

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³⁷ This appears to have been the intention, even if the Chalkotheke does not seem to have functioned always as an arsenal, as Pritchett has pointed out, *op. cit.* (footnote 19 above), pp. 259–260.

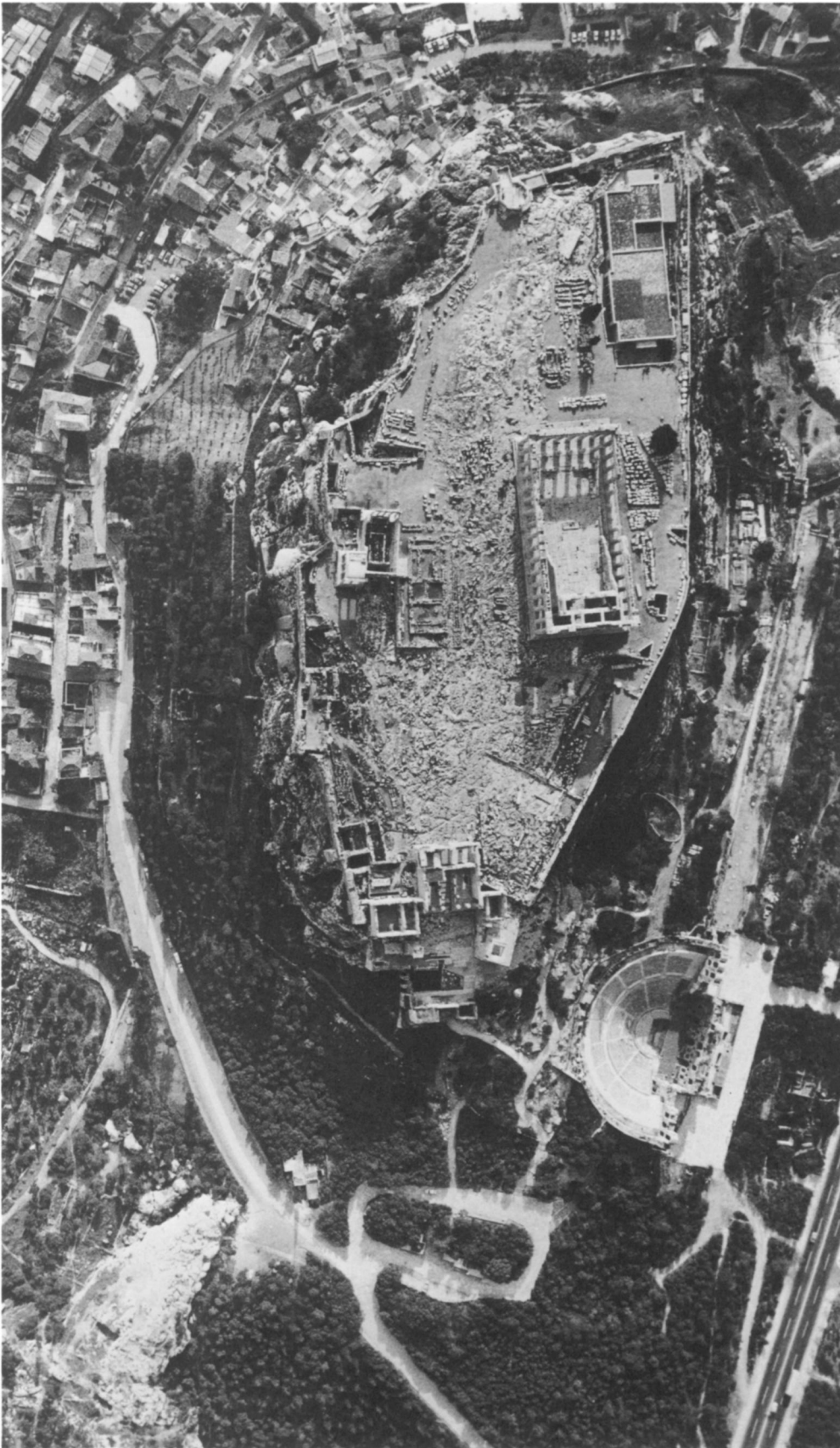
³⁸ For the naval records, see Davies, *op. cit.* (footnote 19 above), pp. 313–314; for those of the Treasurers of Athena, see discussion above, pp. 76–79 and footnotes 7 and 8.



The three structures variously identified as the Chalkotheke in the course of the excavations of 1882–1890 are marked: I, north-east of the Propylaea; IV, southeast of the Temple of Rome and Augustus; VII, west of the Parthenon against the south wall of the Akropolis, accepted as the Chalkotheke in this article. Note the relationship of VII to the rock-cut steps west of the Parthenon and the party wall between VII and the Brauronion (127). The restoration is that of G. P. Stevens (*Hesperia*, Suppl. III). Note especially the relationship of the portico to the rock-cut steps and the oblique east wall of the main part of the building. The placement of the south wall of VII and of the South Stoa of the Brauronion differs from that proposed in this article.

Plan of the Akropolis of Athens, 2nd century after Christ. J. Travlos, *Pictorial Dictionary of Ancient Athens*

LAETITIA LA FOLLETTE: THE CHALKOTHEKE ON THE ATHENIAN AKROPOLIS



Aerial view of the Akropolis (photograph, Julian Whittlesey, 1975)

LAETITIA LA FOLLETTE: THE CHALKOTHEKE ON THE ATHENIAN AKROPOLIS



a. View westward, showing the oblique east wall and the north foundation wall



b. Juncture of the oblique wall and the north foundation wall



c. View westward: rock-cut steps cut back for the northeast corner of the portico; foundation trench at the southern edge of the terrace



d. North end of the oblique wall, looking north: rock-cut steps and four pry holes (indicated by arrows)

Northeast corner of the Chalkotheke



a. Bedrock socle of the wall, looking south (DAI-Athen Akkr. 513)



b. Bedrock socle with blocks E-7 and E-8, looking north

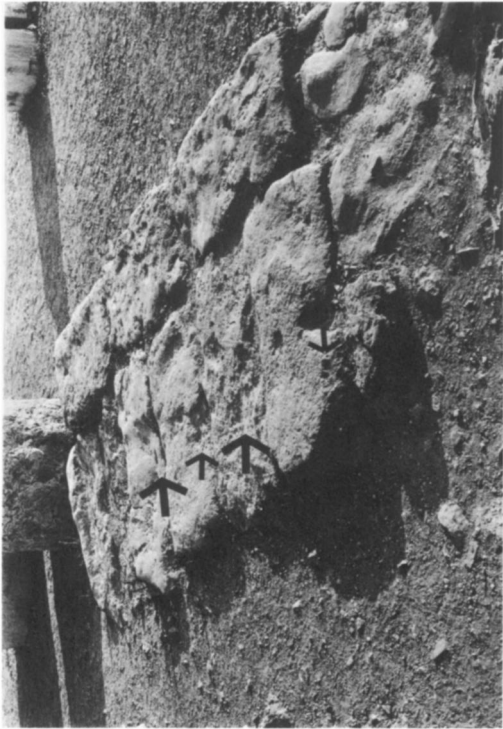


c. Matched anathyrosis bands on block E-8



d. Junction of the north wall of the Chalkotheke with the party wall, looking east

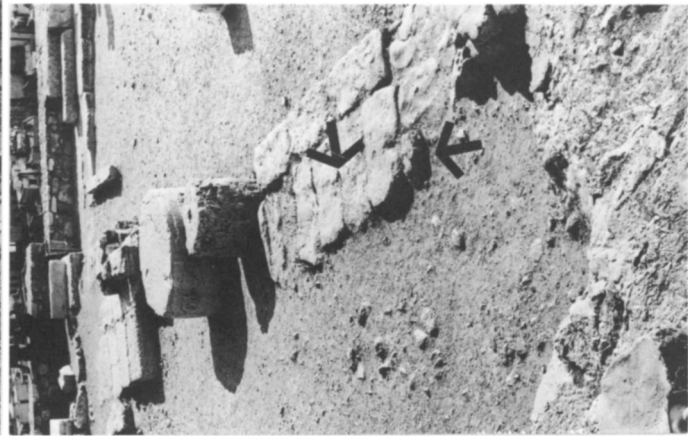
Party wall between the Chalkotheke and the Braurionian



a. Oblique east wall, northern section, looking south. Arrows indicate pry holes



b. Oblique east wall, southern section, looking north: five added header blocks at left



c. Oblique east wall, looking south. Arrows indicate pry holes



d. North foundation wall looking south. Arrow indicates a setting line

Oblique east wall and the north foundation wall