

# Survey and Excavation at Petra, 1973 - 1974

by  
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The American Expedition to Petra, in cooperation with the Department of Antiquities of Jordan, has conducted two seasons of survey (1973) and excavations (1974) at that major site<sup>1</sup>.

In 1973 the most extensive electronically instrumented survey yet to be conducted on a Middle Eastern site was successfully completed at Petra during the period June 4 to June 25.

Four proton differential magnetometers built by the Archaeometric Laboratory of the University of Utah, a Martin-Clark Resistivity instrument, and a resistivity instrument designed and built by the Woodbury Research Laboratory of Salt Lake City, Utah, were employed in the survey.

(1) The 1973 season was under the direction of Dr. Philip C. Hammond, Professor of Anthropology of the University of Utah, with Dr. M. A. Bennett (Eastern New Mexico University) and Dr. W. H. C. Poe (California State College at Sonoma) as Co-directors, with the assistance of Mr. Yacoub Oweis, Director General of Antiquities of Jordan. Department of Antiquities Representatives were Mr. Yusuf Alamy and Mr. Raffiq Sarraf. Survey student personnel were: B. Bowman, J. Brydson, S. Brydson, J. H. Burk, P. Gibson, F. Momena, R. Read, K. Russell, P. Samiy, and N. Woodbury of the University of Utah, V. Indes of New Mexico University and A. Spencer of Brigham Young University. The survey was assisted by a grant from the Research Grants Committee of the University of Utah, by assistance from the Department of Antiquities of Jordan and by Dr. P. C. Hammond.

(2) The 1974 season was under the co-direction of Drs. Hammond, Bennett, and Poe. Francesca L. Xaiz served as Recorder, Fr. John Langfeldt was Camp Manager. Participating

Seventy-one 30 m. x 30 m. grids were laid out by transit survey on the basis of the UTMG World Grid, with the base line marked by a permanent base point at (358 UTMG 735,160 m. E. and 3,385,000 m. N. --see JORDAN, 1:50,000, Edition 1, Sheet PETRA, 3050, Series K 737, 36RYU) to estimated error of .03% (see Site map).

Some 15,975 stations were read by one or both instrument types at 2 m. intervals, with a total of 63,900 square meters (ca. 80% of the surveyable area) completed. Field data were processed by computerized programs especially written for the instruments used (N. Woodbury) at the Computer Center of the University of Utah.

students who served as Site Supervisors and Laboratory Assistants included J. L. Brydson, S. Brydson, S. Cuddy, P. Samiy, K. Russell and Kühn of the University of Utah, and S. Falconer of Portland State University. Representatives of the Department of Antiquities were Mr. A. Saidi, Mr. A. Jalil Amer, and Mr. B. Rihani. Assistance to the project was given by the Honorable Mr. G. Barakat, Minister of Tourism and Antiquities, and Mr. Yacoub Oweis, Director-General of Antiquities. Sponsorship of the project was in part made by the Institutional Funds Committee, the office of the Vice President for Academic Affairs (Dr. P. Gardner), the Research Grants Committee of the University of Utah and Dr. P. C. Hammond.

Especial thanks must be given to the Recorder, Francesca Xaiz, for invaluable assistance in the analysis of data for this report.

Appreciation must also be extended to Brook Bowman for preparation of the final drawings, plans and site maps.

Thirty-eight grid areas were identified as high anomaly areas, whose sub-surface features strongly suggest priority in excavation.

Scaled drawings of observable surface features, along with photographs and reference sounding operations completed the survey.

In 1974<sup>2</sup> two sites were chosen, on the basis of surface features, ceramic materials and the survey data (see Site Map).

During the course of the 1974 season the survey baseline established in 1973 was resurveyed to an appreciable error of .00%.

## SITE II

This site area is located on the northern edge of the *Wadi* bed, to the west of Site I. The site area is generally flat, falling off sharply to the south, with considerable fall debris to its front. The tops of column drums were visible on the surface prior to excavation in II. 6 (Plate X. 4). An area of 30 m. x 30 m. was laid out for excavation, with 10 m. x 10 m. subdivisions numbered from West to East and South to North (see Site Map). Site II. 3, 5 and 6 were opened in the 1974 season, with Site II. 6 carried to the greatest depth. Sites II. 3 and 5 were halted at opportune stratigraphic surface definitions, to be completed in succeeding seasons. When Site II. 6 began to provide the outlines of a large structure, II. 5 was opened to test its westward extension and II. 3 to test its southern extension limits. Hence, it was possible to secure a preliminary plan of the structure, as well as the complete

vertical stratigraphy of the area down to the original floor level of the building.

The three excavated areas produced 101 Stratigraphic Units (S. U.), which were then analyzed into 15 phases tracing the events of the use-history of the site (see Stratigraphic Phasing and Section Drawings). The probability of dividing the building phase (Phase XV) into two sub-phases reflecting the periods of its use remains to be clarified by further excavation.

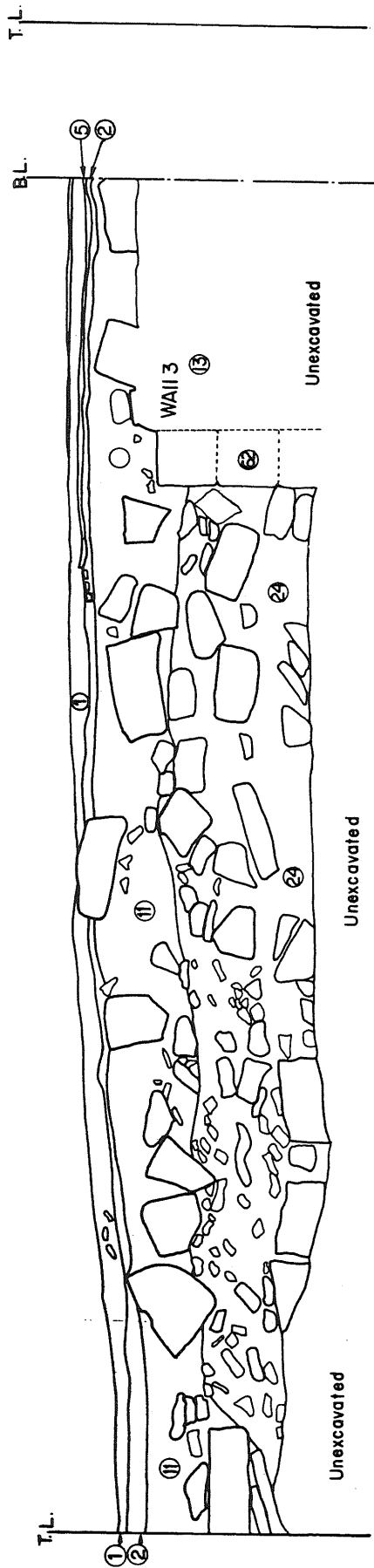
**Phase I:** Modern Surface (II. 6(1) = II. 3 (S + 1) = II. 5(1)).

This phase attests to the use of this area for local agricultural activity as well as to probability of considerable wind and water erosion. The S. U. involved contained architectural materials which could only have come from the building debris of Phase XV. Plaster. *tesserae*, carved stone fragments (capitals), ashlar, iron nails (for bedding plaster and cement), among similar materials were recovered.

Pottery fragments were also found in large quantities, ranging from the first century B. C. onward, though generally not beyond the Byzantine period. Such a spread indicates shifting of soils (agriculture) as well as the washing down of surface debris from the slopes to the North.

This ceramic material is, of course, non-diagnostic, chronologically, but does display, as it were, the "history" of the area as at most other Middle Eastern sites, where the occupational history is reflected by surface and near-surface ceramic remains. At the same time, the presence of virtually no sherds later than the





# PETRA: AEP ' 74

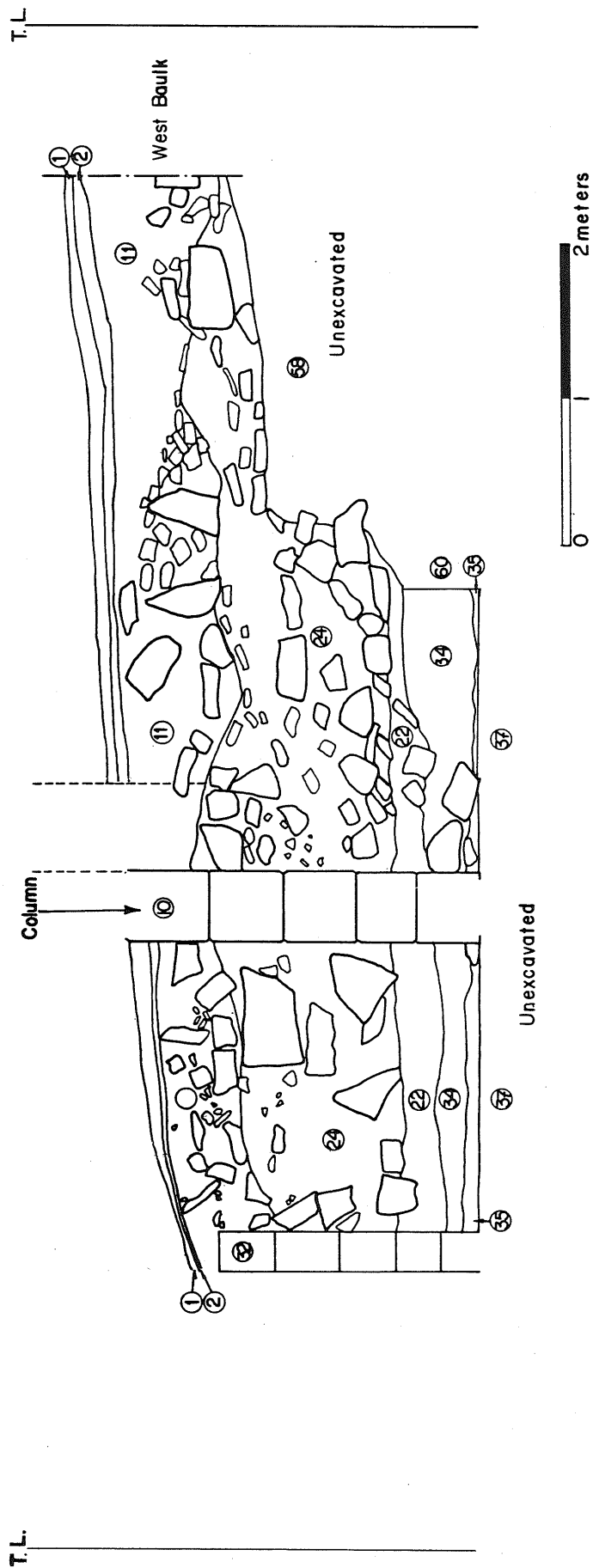
AREA: II

SITE: 6

WEST BAULK: EAST FACE

FIELD DRAWN: JB/SB.

FINAL DRAWING: PCH/BAB



PETRA: AEP ' 74

AREA: II

SITE: 6

SOUTH BAULK: NORTH FACE

FIELD DRAWN: JB/SB

FINAL DRAWING: PCH/BAB

Byzantine period is suggestive in regard to the terminal occupational use made of the site, even if the "Byzantine" ceramics were actually produced in the Early Islamic period, prior to discernible influences upon form or decoration.

Apparent also in the Byzantine materials was the obvious presence of common wares --including cooking pots and store-jars--indicating that the use made of the site area was largely *domestic*, as against the *public* use of the area in Nabataean times, evidenced by the building of Phase XV (see comments on *tesserae* below).

**Phase II:** Disuse Phase (II. 6(5) = II. 3(2) = II. 5(2)).

The silty, compacted surface of this phase exhibits no signs of even casual use of the site area. Once again, architectural debris was found in the phase, especially toward the West (II. 5) where the cover of lower fall debris was slighter.

Ceramic materials from this phase were very scant and again showed the common Byzantine wares to be predominant. Common ribbed and plain wares, red, dark tan, orange-tan, and light red fabrics were found, with decoration limited to red, tan, cream (Nabataean?), and black slips. The presence of a higher incidence of Byzantine to Nabataean fragments in this phase may suggest that the number of the latter encountered in Phase I can be attributed to wash action from the northern slopes above the site area.

**Phase III:** Occupational Phase (II. 6(2) + (5A) firepit = II. 3(3) = II. 5(2)).

The extent of the "occupational" use of the site area in this phase is limited

to the one firepit found in II. 6. Since no ceramic material can be directly associated with this firepit the date of this "occupational" use cannot be fixed. The ceramic materials recovered, again scant in quantity, only repeat those from the higher phases--especially ribbed and plain store-jar and cooking-pot wares of "Byzantine" vintage.

The easternmost part of the site area (II. 6) now began to produce larger quantities of architectural debris, as the phases began to near the cover levels of the structural fall beneath and as the deposition variation from West to East (wind and erosion) was less deep. This is significant for the probable kind of transient employment use of this area in this phase, along with Phase V below.

**Phase IV:** Localized Dumping Phase (II. 3(10) over II. 3(6)).

This phase is a relative "orphan", since it is clearly defined in II. 3 only and is probably a result of the "occupational" use of the area in Phase III. In any event, it does show the moving of a part of the then-surface rubble (6) down the southern slope and its filling with soil (10) to level the surface slightly. No pottery or other remains were found in the soil-rubble debris. The probability is that this "phase" simply represents the removal of non-usable ashlar (sandstone) from the surface of II. 6 and II. 3 in order to reach destruction fall rubble (i. e. capitals) for re-use (see also Phase V below).

**Phase V:** Occupational Use (Transient) Phase/Cover of Destruction Phase (II. 6(11) + (2A) fireplace = II. 3(8) = II. 5(9)).

The Stratigraphic Units which constitute this phase reflect the re-use of

the site area following the final destruction of the already once destroyed building of Phase XV and its covering by wind and water laid soil. This "re-use" is again hardly more than casual and transient, since its evidence is limited solely to the single firepit (2A) found in II. 6, and parallels Phase III and Phase IV in terms of employment use of the area.

Moreover, the relatively scant quantity of ceramic materials found in the units of this phase represent *both* the disuse gap (Phase VI below) *and* any materials left by surface occupation, because of the silty nature of those units and their irregular depths occasioned by filling architectural fall debris below. Hence these materials can only suggest a rough *terminal* point, rather than any firm date.

Most apparent in the recovered sherds were the plain and ribbed "Byzantine" common wares already seen higher, further suggesting the nature of the use of the site area. Plain and ribbed common thin wares, plain thick and thin store-jar fragments, cooking-pot sherds, and a few probable open bowl fragments predominated. Ware fabrics tended to be red or tan, with much rarer orange-reds. Decorative finishes were mainly the usual red-tan, tan and black slips, with cream slips slightly more noticeable. With the exception of the omnipresent ribbing of cooking-pots, other decorative techniques appear to be generally lacking, although one fine orange-red bowl fragment was recovered with a black slip and paint around the rim and a few sherds showing wide combing patterns were also recovered.

The presence of "green" hued fabrics is, however, to be noted as possibly establishing a chronological peg for this phase.

It must also be realized that some or most of the ceramic materials "recovered" in this phase actually belong to the disuse (silting) phase below (Phase VI) as noted above, either deposited by users or, most probably, by wash action on the northern slopes. This latter probability is most evident in the case of the scant, but obvious, early Nabataean sherds, plain and painted, along with late (black painted) examples in the same context.

In terms of the specific occupation represented by this phase and by Phase IV and Phase III, the presence of *tesserae* is significant and a definite "industrial" use of the area is suggested. This argument is discussed in the commentary on the phase distribution of architectural elements below.

**Phase VI:** Disuse/Silting Phase (= S. U. make-up of Phase V above).

The soil makeup of Phase V is clearly the result of wind and water silting over the architectural debris of the destruction phase below, as is also shown by certain of the ceramic materials contained in it, as noted above. No estimation of the duration of this silting phase can be made, except to bracket it between the probable date of the destruction phase below and the possible terminus of the ceramic materials recovered in it already discussed above.

**Phase VII:** Destruction Phase.

There can be no question that the architectural debris covered by the silting

of the previous phase and resting on the surface of the next phase below represents anything but the final destruction of the building of Phase XV. The direction of this fall ran from the Northwest to the Southeast consistently throughout the excavated areas (Plate I. 1, 2 and X. 4).

The destruction material isolated here is significant both for the reconstruction of the original structure and for estimating the force of the obvious earthquake which caused its fall.

The former aspect will be considered in detail when Phase XV is discussed below. However, it may be noted here, since it has relevance to the latter question, that much of the building was intact at the point of this destruction --with columns still standing, some capitals and cornices still in place, considerable plaster decoration still *in situ*, intercolumnar or gate (?) arches (?) still standing, and possibly even sections of the roof (?) still in place. With this earthquake *all* of the superstructure was tumbled that had survived the earlier earth tremor which had already partially -- but *only* partially --demolished the structure. Hence a relative degree of severity between the two earthquakes may be postulated -- *precisely* as was the case with the Main Theater excavated in 1961 - 1962 (Hammond, *The Excavation of the Main Theater...*, 1965:55-65).

As a consequence, it is suggested that the same chronology be postulated for this structure, in terms of destruction, as was established for the Theater: namely that this phase be dated to A. D. 746/748, the second and most severe of the two earthquakes involved.

The overlying recovered materials of the higher phases do not conflict at all with this dating and it can plausibly fit the peculiarities of ceramic materials recovered -- i. e. early in the Early Islamic period wherein local potters ("Byzantine") continued to produce familiar wares and types without yet evidencing "Islamic" influences.

This fall phase was the richest in recovered architectural materials *per se*, and the specifics of content greatly assist in suggesting possible reconstructions. This quantity of material also attests to the force of the earth tremors which finally brought down the super-structure of the building, as was also the case at the Main Theater.

**Phase VIII:** Occupational Use Phase  
(Transient) (II. 6(24) + (47)  
+ (11 A-B-C) firepits = II. 3  
(11) = II. 5(12) + (15)/(14)/  
(13) Burial  $\S$  1).

On the basis of the firepits marking this surface and the burial in II. 5 it is obvious that the building ruins invited some sort of transient visitation, as well as serving as a handy necropolis. Whether the firepits represent a one-time use or a series of visits could not be determined, nor could any relationship between them and the burial be established.

The burial was poorly preserved, since it had lacked very much in protective preparation at interment. A rough stone-line grave had been cut into the soil over the rubble fill, but no covering slabs had been used, resulting in deterioration of the skeletal remains. The burial was, in any case, a primary child interment in



the extended supine position, oriented with the head to the West, facing Southeast. The skeleton was fragmentary -- as a consequence of the impact of later destruction fall -- with facial and other bones badly damaged (Plate I. 3). Ordinarily sexing of the burial would have been impossible in this situation, but the presence of an iron neck torque (RI#50) suggests a female, as do the presence of seashells in the debris, although the latter were too disarranged to determine precise decorative use (Plate I. 4). The torque was badly oxidized and fragmentary, but still had a longitudinally grooved stone ball (the "lotus" bead type) decoration at one end (the second presumably lost). No other remains were recovered in the grave.

The torque type would place this burial firmly in the Byzantine period, although a more precise date is impossible, other than one bracketed between Phase X and VII.

The rather deep silt make-up of this phase contained a considerable quantity of early Nabataean fine and common thin wares, along with some fragments of *terra sigillata* which are intrusive to the predominantly Byzantine materials and must again reflect wash material trapped in the debris from the northern slopes. However, the presence of these earlier materials conforms to the chronology of the two destruction falls between which this phase rests and may suggest an actual date close to that of Phase X.

The Byzantine materials from this phase include both occupation deposits and probable wash debris, and hence serve

only as terminally diagnostic. II. 6 produced a fair quantity of both thick and thin coarse common wares, plain and ribbed. Fabrics were generally red (especially), light red, tan or black, with cream, tan, dark red, red-tan and, of note, an apparent increase in black slips, complete or reserved. Store jar fragments were in relative abundance, but cooking-pot sherds extremely rare. This latter fact may give credence to the possibility that the "occupation" indicated by the numerous firepits reflects a larger group on the site for a shorter period rather than any durative period. II. 3 produced only a scant quantity of ceramic materials, probably because of its slope. Here, also, however, thick and thin coarse common wares, plain and ribbed, with red, tan, and black slips were most obvious.

A complete Byzantine lamp (RI#25) was recovered from II. 6(24) in this phase (Plate I. 5, 6). It was the closed discus type, with a knob handle, in a red-tan ware. The top was decorated with a raised ring around the wick hole, a double ring around the filler hole, radiate raised slashes and a transverse bar on the nozzle, with curved raised slashes around the sides. This likewise would tend to depress the probable date of this phase closer to that of Phase X.

The architectural materials found "in" and under this phase belong to the lower destruction phase (X) and will be considered properly there. Miscellaneous fragments were silted all around and so give the impression of having belonged to the silt (Phase IX) making up this phase, but obviously must be assigned to their actual lower provenance stratigra-

phically. Plaster decomposition and copper plastering nail oxidation caused a varicolored effect in the soil of this phase because of the quantity of materials covered.

#### Phase IX: Disuse and Silting Phase.

The silt units, whose surface constituted the phase preceding, belong to this period of disuse and long-term silting of the site area following the first major destruction of the structure below (Phase X). The contents of these units have already been noted above (Phase VIII).

No internal divisions indicating any intervening use of the site area could be detected in the course of excavation. Hence it must be presumed that this area went out of general use, following the destruction of the building and even though ruins were visible above ground they could serve no real occupational function and were not even used for temporary shelter.

#### Phase X: Destruction Phase

The material remains of this phase are constituted by the architectural fall debris covered by the preceding phase and resting on II. 6(22). Here again, the *specific* content of this debris assists in reconstruction, on a *vertical* plane, when considered with the debris from the later fall above.

Although it has been noted that the later fall (Phase VII) was occasioned by a much more severe earthquake (or series of quakes), the earth tremors which struck in this phase were of sufficient strength to preclude further real use of the structure, as noted above.

The specific content of this phase will be discussed with Phase XV below, but the extent of damage, as reflected by the fall content, may be noted in passing here to illustrate the destruction involved. Not only were some capitals dislodged, along with cornice-carrying blocks, wall members, and other structural members, but a *great* deal of internal plastered decoration, including undercoatings, was also dislodged, including the curious inset floral decorations (plaster) set into some of the capital carvings. It would be expected that plaster decoration would be so dislodged when the structural members to which it was attached fell, but it would appear, from the quantities involved, that the plaster was not simply knocked off as a result of impact, but dislodged separately by the earth tremors. When the size of the iron plastering nails used to key such decorations to masonry is considered, the jarring movements must have been of considerable severity!

At the same time, the fact that a considerable number of free-standing columns survived the quake, even if with the loss and fragmentation of some capitals provides a contrast to the *total* loss of the superstructure and the final loss of *all* capitals in the later (more severe therefore) destruction (Plate II. 1).

It must be noted that the fall debris from this phase showed considerable weathering -- so much so that tool marks were weathered off in some cases. This would indicate that some durative, even if undefinable, period followed the destruction, prior to the beginning of the silting actions of Phase IX above.

Altogether, however, the situation reflected between the two destruction strengths, along with the specifics of both, seems to be precisely that seen in the Main Theater sequences. Hence the date of this phase should be the same as the first destruction seen there, namely A.D. 365.

**Phase XI: Disuse and Silting Phase (II. 6(22)).**

This phase was the fall "floor" of the destruction phase above and represents, itself, a period of building disuse *prior* to that destruction.

The scant quantity of ceramics materials recovered from this phase include heavier and thinner common wares from cooking-pots and plain store-jars. Ware fabrics include tan, brown, red, orange-red, and black examples, with tan, brown, red-tan, and black slips. Some combing is present, but no other decorative finishes are present. Some Nabataean fine ware is present, again probably the result of wash intrusion with the silting.

Some architectural materials were recovered from *within* the soil of this phase as well as the far greater quantity resting on or penetrating into its surface as a result of the destruction of the building by earthquake. This would ordinarily raise a serious question of sequence of deposition -- i. e. would require that this silt phase be deposited *after* the destruction phase above. However, as will be noted below, other factors preclude that interpretation -- i. e. the impossibility of this phase being deposited by wash action from *above* the destruction phase, since the main fall rests *upon* its surface;

the nature of the included debris -- i. e. more highly weathered materials, *crustae*, small architectural fragments, a particular abundance of architectural plaster, flooring slabs, and column base "necks". Hence, another explanation must be sought: namely, that less extensive disaster struck the building, *prior* to its first destruction by earthquake (Phase X), which put it out of use and partially open to the elements (hence the silting), dislodging only small or easily damaged (e. g. the decorative plaster) elements, which were subsequently covered by this silting phase and the one preceding it (Phase XIII), with a relatively durative period intervening (Phase XII), during which the extensive weathering of fallen elements took place. Some architectural fragments recovered from this phase also show evidence of fire marks, which are of significance in regard to the partial destruction suggested below (Phase XIV).

**Phase XII: Disuse Phase - Building Open**

As a consequence of the situation described in Phase XI above, this phase must be interposed to account for the weathering of the materials on the surface of Phase XIII, subsequently covered by the silting action of Phase XI and is, therefore, a "fall" phase of architectural debris on the surface below.

No estimate of duration can be made, but it must have been relatively durative to have permitted the relatively greater effects of weathering noted on architectural fragments in excavation.

**Phase XIII: Disuse and Silting Phase (II. 6(34)/(35)).**

This phase, along with Phases XII and XI above, was another disuse period,

during which certain architectural materials, similar to those of Phase XII, having been exposed to the elements began to fall, piling up on the surface of Phase XIV below and then covered by the silting of this phase.

Another phase, similar to the disuse Phase XII above, might be demanded, stratigraphically, before the silting of this phase could take place. However, the lack of weathering and the distribution of materials in the silt of this phase probably indicate that the "open" period was less durative than that of Phase XII and both the "fall" and silting constituting this phase and its contents were relatively contemporaneous actions -- hence both events are subsumed under this phase alone.

This phase contained a single coin (RI#83) of Rabbel II with Gamilat, datable to the period A. D. 71-75 (Plate II. 2). Although a single coin is hardly final evidence of date, it at least *precludes* a date for this phase *earlier* than Rabbel, although it may be *later* than his reign. However, a date *in* the reign of Rabbel II would accommodate the phases above this, up to the first firm date of A. D. 365 (the first earthquake destruction of the site) and not contradict the possibility, to be suggested below, of roughly the same date for the opening of the building and the beginning of its architectural falls. Late in Rabbel's reign Petra was in a state of decline and no particular upsurge probably took place immediately after A. D. 106 when the site was occupied by Rome. The presence of *only* Nabataean wares, especially fine thin wares, in this phase would also fit

this period, since black painted fine thin wares are present, along with the red-painted varieties, and thus indicate the Late Nabataean period even though both are wash debris, which they must be.

#### Phase XIV: Partial Destruction (?) Phase

If the stratigraphic interpretations of Phases XI-XIII above are correct, this phase -- a 1 mm. deposit of ash -- would be the key to the apparent disuses and sporadic fall of fragile architectural elements of a building whose walls and columns were still intact!

A finely decorated public building would hardly be left to have its floors silt in and its decorative elements fall down if it were still in use and closed to the effects of weather. At the same time, the relatively thin layer of ash hardly suggests any major "destruction" took place. Yet the loss of some floor tiles and almost every scrap of *crustae* and copper fixtures, along with probably some of the column base "necks", is stratigraphically indicated at about the time of the ash deposition, although no removal of other parts seems probable.

Hence, some *slight* damage of the building by fire, followed almost at once by removal of the more portable (and valuable) decorative marble and by subsequent abandonment to the weather seems to be the only interpretation of the stratigraphic evidence.

Basically, the questions involved here are the meaning of the ash deposit, the removal of only portable materials, and the apparent abandonment.

Of architectural elements susceptible to fire, only roof elements seem probable

and since no other applicable materials were recovered, but small roof tiles were, the use of traditional wooden structural beams and tile supports ( *cantherii* and *templa* ) along with main structural beams (the *columen* and others) can be postulated.

Since this building is relatively small, the total ash deposit, when compacted and washed over, left by probably fast burning woods (if local) would likewise be scant, and may well be almost totally represented in residue by the existing deposit --from which any useable timber or firewood was removed, as were most of the roofing tiles. This would account for the opening of the structure to the weather and subsequent silting actions.

If this event took place when local economy precluded re-roofing, the removal of the valuable, easily detached reusable decorative elements would then be reasonable, but not any total disassembly of the structural elements involved because of the cost involved.

Once such denuding took place, the structure could be abandoned gracefully without becoming a public eye-sore, since its walls and columns were still standing and its upper level decorative elements, here generally in plaster, were still attached.

When the history of Petra is examined, the period which fits *both* a time of economic stricture *and* one in which all the appearance of past glory had not yet been given up is that of Rabbel II, especially the latter part of his reign when his own interests shifted to Bosra and Roman pressure was building up for the reduction of the Nabataean kingdom

and its capital city. The evidence suggested for the possible date placement of Phase XIII therefore applies equally well here and, again, appears to fit known historical, economic, and political requirements.

Alternately, and equally fitting the data, is the possibility that this structure was a casualty of the incoming of the Romans in A. D. 106. Local ability to restore was at a low ebb at that time as well -- continuing the pattern of Rabbel's reign -- and Roman restoration would hardly have been expected either, resulting in the same sequences of disuse and silting phases until the initial major destruction of structural elements in the earthquake of A. D. 365.

Because of the unique appropriateness of both periods, their chronological proximity, and the lack of any more definitive dating markers in such a restricted time range, no choice between the two alternatives can be suggested as definitive, but the latter part of the reign of Rabble II covers both and seems plausible for the date of this phase.

#### **Phase XV A/B: Main Building Phase.**

This phase represents the construction and use period(s) of the building occupying most of the area of Site II. 3, 5 and 6, excavated in the 1974 season. The structure was first exposed in II. 6, although surface indications (the upper surface of scattered columns) and the electronic survey results of 1973 had already predicted its existence.

Fortuitously, the lay-out of the excavation grids coincided with the lines (and limits) of the structure, so that East

and West walls, with their exterior, followed the N-S excavation limits of II. 3, II. 6 and II. 5, while those of II. 5 and II. 6 similarly coincided with North wall of the structure and II. 3 covered the southern wall line and exterior. Since the structure is symmetrical and square this exposure permits a reconstruction of almost all of the building plan, with the exception of the forward part of the central interior build which is still obscured by a baulk (see Plan). Moreover, by staggering the depth of excavation possible during the 1974 season a complete vertical view of the stratigraphy of the area was able to be secured. At the same time, certain questions remain to be stated and specific emphasis be made upon them during the excavation of the remaining parts of the structure in order to resolve them.

However, "reconstruction" of most of the structure, either via the recovered materials, *per se*, or the structural requirements demanded by such recovered materials, is possible descriptively at this point and will be even more complete following further excavation, although some uncertainties will doubtless exist because of the force by which destruction took place. Especially difficult, in the latter instance, is the matter of entablature parts, since these appear to have been almost exclusively molded plaster which disintegrated to a great part upon fall impact or the impact of the fall of other structural members upon them, as well as because of the effects of weathering. However, enough of these, as well as other architectural members were preserved to furnish considerable detail.

## Plan

Basically the structure is a square, measuring 17.42 m. x 17.42 m. on its exterior sides, oriented N-S, with its entry situated to the South, facing the city center along the banks of Wadi Musa.

## Walls

Existing walls stood to a height of 2.13 m. above the interior floor, measured to the top surface of preserved capping slabs. The eastern side of the wall, in II. 6 and II. 3 was best preserved and permits the best estimation of build and architectural techniques employed.

The wall build was double faced with ashlar, well coursed on the exterior into an inset-outset pattern, with the interior face less well coursed and of quite irregular stone with smaller chinking stones put in to fill gaps. Coursing is roughly header-stretcher, alternating vertically to strengthen joints, on the interior (Plate II. 3). The exterior face is much more carefully coursed, and may therefore have been left unadorned, at least on the East, North and West sides. Large blocks were notched to form the "header" type outsets from the face of "stretcher" type straight wall line (Plate II. 4). At the corners these notched blocks, literally headers on the East, became the equivalent of stretchers on the North side, neatly solving the exterior pattern. Joints on the exterior were extremely close and present a finished appearance in contrast to the rather poor interior face (which was of course completely covered by plastering and *crustae*). The space between the two faces was rubble filled and cemented. The exterior coursing is thus

what Vitruvius ( *De Architectura*, II. viii, 6) called "Isodomic". The build proper is that seen elsewhere at Petra (e. g. the Main Theater) and is the "speedy" variation of the Greek *enplecton* noted by the same author ((II. viii, 7) Plate II.5). The front (South) face of the structure is considerably wider than the side and rear wall but follows the same double face build. The coursing on the exterior face is a mixed header-stretcher, varying header-header and stretcher laid in a straight pattern, but far less carefully laid than the visible section of the East side wall. Rather large joint gaps exist and the ashlar is irregular. However, the presence of large fixture holes in the ashlar explains the apparent difference -- namely that the South face of the building exterior must have been faced with the same veneer-type local marble as the *crustae* of the interior faces, hence care in coursing and laying was irrelevant to the final effect. The distance between fixture holes suggests a width of ca. 40 cm. for long facing horizontal slabs, with alternating smaller slabs (vertical?) ca. 20 cm. in width (Plate II. 6). This arrangement would have produced a patterned face which may have been further enhanced by different colors or grain types. Here, as in the case of the interior walls, the width measurements suggest *crustae* similar to those used at the Main Theater.

The significance of the capping slabs preserved on part of the East wall cannot be explained at this point, nor can the relatively low level at which they are set (Plate III. 1). Presumably the walls rose higher than 2.13 m. from its interior floor (2.38 m. from the plinth on the

exterior side), but the superstructure above those capping courses has been lost. The recovered remains do not permit the assumption of very great wall height to this structure (see below also in regard to *columns* ) but the preserved height seems much too low to begin roofing (Plate II. 3).

### Internal Plan

The internal plan of the building combines a series of engaged semi-columns and niche arrangement, set by engaged semi-columns. This plan therefore affects wall thicknesses: side walls --ca. 72-75 cm. thick (another deterrent to postulating great wall height), excluding decorations (plaster and *crustae* ); North wall -- 1.02 m. (because of double semi-columns and an outset niche) to ca. 66 -68 cm. within the niche faces (Plate III. 3 and Plan); South wall -- 1.76 m. at the East corner (outset niche and double semi-columns) and ca. 1.60 m. elsewhere.

The niches have a ledge level above the building floor but no comment can yet be made concerning how their upper part was constructed because of the destruction damage (Plate III. 2). The corner niches are outset, as well, and they vary in internal width (ca. 1.42 m. wide except for the center one). These were later filled in and this may be a part of the "simplified" interior of a later stage of the building's use.

Engaged (to ledge-capping level) half semi-columns flank the niches of all walls, with double sets at the corners (i. e. two quarter semi-columns) to achieve symmetry with

the North-South face lines. This necessitated out-setting the corner niches to maintain the line (see Plan). On the North end at least some of the semi-columns are compositely formed, whereas those of the side walls are "true" half columns in terms of drum build. However, all of these semi-columns are actually only pseudo-drums, since their rear ends are built squarely into the wall build with rectangular ashlar blocks finishing the required depth. This results in an actual out-set header, rounded off to form a semi-column face (Plate III. 5). All of the semi-columns rise above the ledge capping and then become true drums and free-standing columns.

It must also be noted that the semi-engaged "drums" must have presented a rather flat appearance, since they measure some 62 cm. wide along the North-South wall face, but extend outward only about 27 cm. in frontal radius. Those of the "platform" (see below), however, were outset about 36 cm. and would, therefore, have been more truly columnar in appearance.

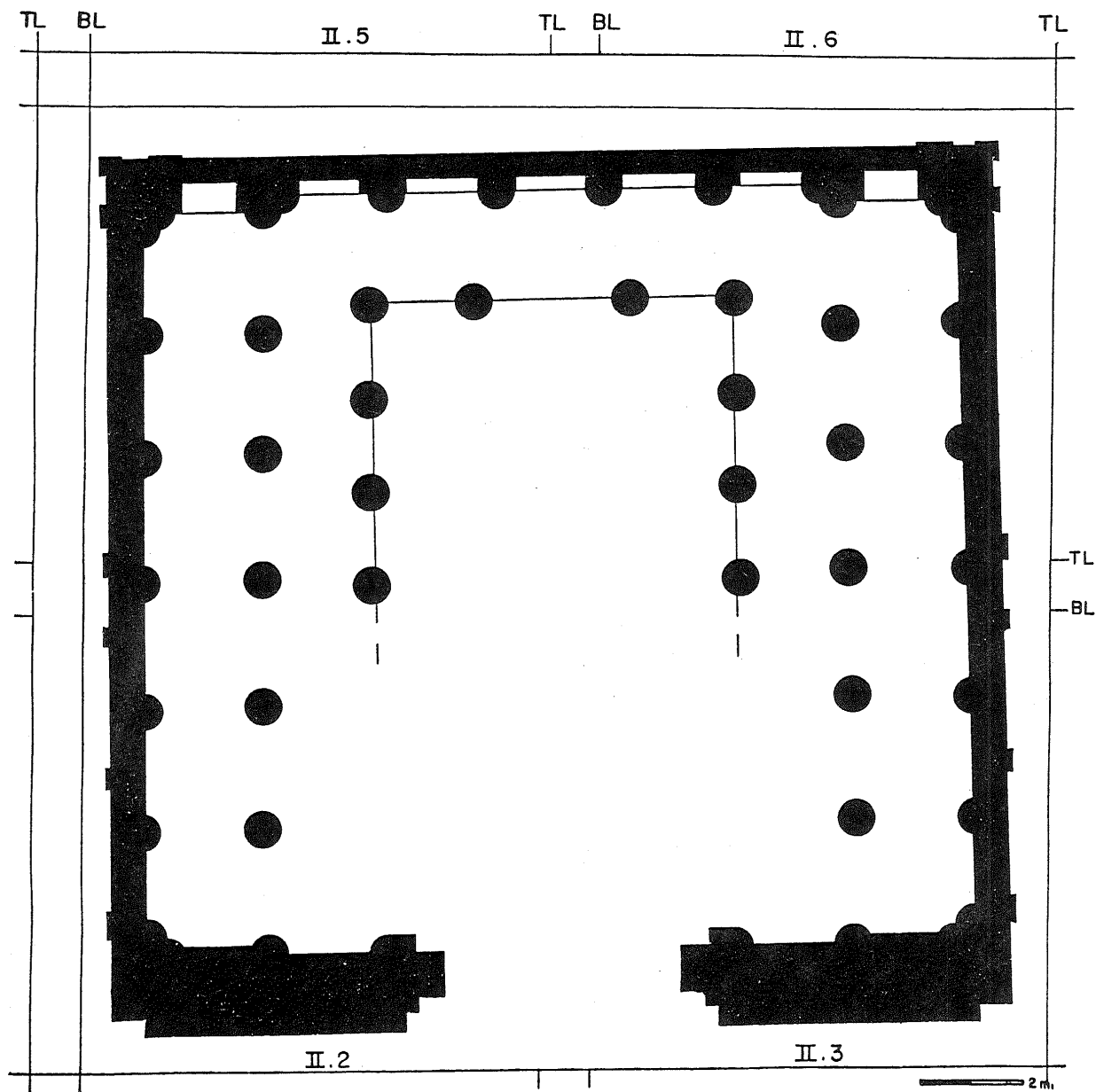
The East wall line (and hence the West wall line) has five engaged semi-engaged columns set along its face (Plate II. 3 and III. 1). The South wall has only a single one between the corner and doorway, excluding the niche treatment and the squared-off oblong doorway example (Plate II. 5 and IV. 1). This arrangement is dictated by the rest of the interior plan, since a row of free-standing columns, running North-South, divides the interior into bays on each side, with a "platform" structure in the center. The engaged semi-columns of the North,

South, (West) and East walls are lined up with the free-standing column rows producing the bays and cause the irregular spacing (Plate III. 6 and see Plan).

### "Platform"

Within the structure another feature was partially disclosed -- a columnated "platform" of yet unclear meaning. The floor of this feature rises, by well-coursed header-stretcher ashlar, to a height of 1.31 m. above the general floor level of the building. Its floor was paved in brown, white, and yellow floor tiles set in a greenish cement. Four engaged semi-columns were set along its rear (E-W) end, and four were recovered along its eastern N-S side, with the possibility of one (or more) additional not yet recovered in Site II. 3. These columns were bonded to the edges of the "platform" to its floor level and then were free-standing above that level. Bonding was achieved by cuts in the drums, but the cuts were less than 50%, hence the bonded portions of the columns are less engaged than are the true half-drum ones elsewhere (Plate IV. 3, 4 and Plate II. 1). These columns are set more or less between the other columns forming the bays, with a slight intercolumnation distance variation: East side, N-S: 1.21 m., 1.12 m., 1.16 m.; North side, E-W, of the two recovered - 1.38 m.. The ashlar face of the "platform" is diagonally dressed and was probably plastered and veneered like other interior wall faces. The staggering of excavation depth in II. 3, along with the baulk between that site and II. 6 precluded securing a complete view of the eastern and southern faces of this feature, hence its function





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remains to be determined by subsequent excavation. The strong possibility exists, however, that this internal structure may be another example of the "altar pedestal" discovered in the temple at Et-Tannur ( cf. N. Glueck, *Deities and Dolphins*, 1965: Pl. 101 a/b, p. 225; Pl. 110 b, p. 235). The unusual architecture involved at least would seem to fit such a purpose. It is also possible that certain of the architectural blocks recovered in II. 3 may have been from a corbelled-type front arched entry to the "platform". This issue will also have to await further excavation, however.

### Crustae

The interior decoration of the walls completely covered the rather shoddy build noted above. A thick layer of plaster was laid on and then the thin veneer-like *crustae* of marble affixed. Although scant evidence was available, these *crustae* were held in place here by the same means as at the Main Theater -- i. e. by copper fixtures. Contrary to the collection of such fixtures recovered at the Theater, all that was found here were the notches in the sides of *crustae* and traces of copper oxide to indicate the similarity. This, of course, was the result of the stripping off of the *crustae* noted above (Phase XIV). *crustae* in translucent white, yellow, and amber local marble were found, averaging about 1.7 cm. thick, a bit thicker than those at the Theater (ca. 1 cm. thick).

### Vertical Moldings

At the point of engaged column and wall-join, gaps in the plaster were obvious along the East and South wall lines in

Site II. 3 indicating the probability of vertical moldings present at those points (Plate IV. 1). These appear to have varied in thickness, based on the variations in the plastering, but this may be an accident of plastering and the same size moldings simply set differently. In any case, the gaps vary between 6 - 13 cm. (6, 10, 13 cm.). These moldings, presumably also local marble, suffered the same fate as the *crustae* and none were recovered *in situ*. The spaces between gaps give some evidence in regard to the *crustae* noted above also. These spaces were generally some 1.20 m. to 1.80 m., allowing for slab widths similar to those used at the Main Theater.

### Free-Standing Columns

The free-standing columns creating the double bays on each side of the structure -- (9), (17), (10), (7) and (4) -- were drum-built, of a reddish sandstone (Plate II. 1; Plate III. 6). Drum height varied in the individual columns, from 35 cm. to 72 cm., with a maximum of six drums (as far as recovered data suggest). In the only case of drum fall closely associated with a partially standing column (column (10) in II. 6) the column height, less capital, appears to be 2.87 m., with the double Corinthianized capital bringing the full height to between 3.62 and 3.65 m. Drums were uniformly 66 cm. in diameter -- with a centimeter of plaster bringing them up to the 68 cm. of the capitals. A few drums at the South end (II. 3) had diameters of 59 and 60 cm., but these were not of the main columniation.

The columns were straight shafted, without *entasis* and were, as were the

engaged semi-columns of the walls and of the "platform" (except column (44), diagonally dressed and plastered. The original plastering was worked into a flat-fluted surface, with 2 cm. flutes separated by 7 cm. panels (Plate V. 1). It should be noted that this results in 24 "flutes", precisely the number Vitruvius sets ((III. V. 14) for the Ionic order in conventional form. A second plastering (subphase A) produced smooth faced columns by completely covering the panels and flat fluted treatment.

The five free-standing columns on each side of the structure are in line with the engaged semi-columns on each end (North and South) of the building as well as along each wall (East and West). The intercolumnar spacing on the East side, where columns were still *in situ*, was as follows:

engaged wall semi-column (64)	
to column (9)	- 1.78 m.
column (9) to column (17)	- 1.78 m.
column (17) to column (10)	- 1.82 m.
column (10) to column (7)	- 1.78 m.
column (7) to column (4)	- 1.82 m.
column (4) to engaged semi-	
column of South Wall	- 1.78 m.

None of these distances respond to any multiple of the column diameters (68 cm. with plaster), nor to distances reduced by 36 cm. (the width of two base rings) to achieve a base-to-base interval. However, the regularity of the two distances (1.79 m. and 1.82 m.) suggests some intentional spacing unit involved.

Column drums were found (e. g. columns (9), (10) and (17) with roughly

rectangular cuts made in their tops, indicating the probable use of the pulley for raising them into position, as at the Main Theater, where davit holes for guy lines in the floor were also in evidence for such machine hoisting. Here the height involved probably was not much of a problem, however. Some columns (e. g. columns (4), (17)) also had small square or rectangular holes in their faces. These possibly also served for handling and would have been plastered over in the finishing stage (Plate III. 6).

### "Bases"

The "bases" of the free-standing columns, and presumably of the engaged semi-columns, were produced by affixing two half-rings (necks/collars) 18 cm. wide about the base of each column (Plate IV. 6 and VI 2). These pseudo-bases were vaguely Ionic: a large lower torus with a narrow inclined fillet, a scotia with an inclined fillet, a smaller topping torus with a narrow inclined fillet and a narrow scotia necking. These base ring were of dark local marble, setting off the white plastered columns.

### Capitals

The capitals of this structure were quite similar to those of the first story of the Khazneh Far'un, combining the acanthus and volutes of the (Nabataenized) Corinthian order. They were apparently carved on at least two separate blocks, with the acanthus motifs on the lower one and the voluted motifs on the upper one. Although it remains to be verified by further examples, it would appear that the total height of the capitals were relatively close to the Vitruvian model --

height of capital = diameter of column (Vitruvius, IV. i, 11 ff.).

The lower segment of the capitals held two bands of acanthus leaves, relatively close packed, with the upper row well curved-out from the capital face. Drilled holes appeared in the faces of the upper leaves in particular (Plate V. 3).

The upper segment of the capital was by far the most ornate and complex. Two protruding angled volutes were at the ends (presumably a full capital would show four such scrolls), inclined toward the center (Plate V. 5, 6). These volutes were veined, perhaps suggesting grapevine tendrils, and were curled one and one half turns toward the center. The upper portion of each volute was partially "wrapped" by a spiked leaf motif. Beneath each volute was an acanthus leaf, curling downward. It is probably upon these that the winged lion-griffon (RI # 94, # 95, # 96, # 99, Plate X. 6; Plate VI. 1, 2, 3, 4) figures were perched ( cf. Glueck 1965: 226, 369, 365, and 75 ff.), although these may have replaced the volute elements, also. Between the volutes was a complex symmetrical guilloche pattern of entwined vines and tendrils with flowers and leaves, upon which were pinecones and bulbous fruits or nuts (acorns? poppies?, pomegranates? or local flora?). In addition, molded plaster rosettes were set into the face of the stone as well (four petalled, five veined, with protruding centers) (Plate X. 1, 2). It is also probable that these upper segments also had carved masks/heads or flowers between the volutes in the center of the face, since some recovered examples show breaks at that point (Plate VI. 5, 6).

Above the whole ensemble was a series of band moldings resembling those of an architrave proper: a thin fillet directly on top (replacing the scroll cushion of the Ionic volutes), followed by an outset, wider *fascia* band, followed by a narrow fillet, an angular to oval bead and a fillet. These moldings varied in treatment, even on the same piece. This was a bit more complex than Roman, but parallels that of the Khazneh. Similar capitals are known from Petra, though only in fragments ( cf. M. Lindner, ed., *Petra ...*, 1974: 150).

### Floor

The main floor of the structure was paved in square and rectangular local marble tiles, white and brown banded, set in cement in a straight-line pattern. No border pattern could be detected (Plate IV. 5, 6).

### Doorway

The doorway area was only partially exposed but must measure about 4.36 m. wide, necessitating double (or folding) doors (Plate II. 5 and Plate IV. 2). Hopefully more details of this feature will be recovered when the adjacent square (II.2) is excavated, or the area of rubble fall South of II. 3.

### Entablature

The internal architrave and frieze elements of the order above the capitals were apparently all of plaster affixed to lintel beams of stone. The architrave elements (i. e. *fasciae* ) cannot, at this point, be isolated from the frieze bands of the upper entablature of this structure, although it appears indisputable that the

Ionic order was basically employed here. This is made clear by the lack of *mutuli* and *guttae* and, conversely, the presence of dentils and egg-and-dart astragals.

### Corona

One fragment, with dentils and astragal was recovered from I. 6(22) with the remains of what may be the upper cornice ( *corona* ), painted in red, brown and black. Another less developed fragment was found in II. 6(24).

### Dentils.

Dentils (Plate VII. 2, 3) with a wide flat (frieze) band below, with red and blue painting of the bands, were recovered from II. 6(24) along with other fragments of large dentils. Larger dentils with a curved molding also appear from the same S. U. In II. 3(11), belonging to the same phase, large dentils with narrow fillets above were recovered. In II. 6(22), from Phase XI, a molded egg-and dart astragal, painted brick red, below molded dentils, was present, along with a painted version of the egg-and-dart motif. The same S. U. also produced a fragment with dentils and an astragal band with a series of molded fillets, a curved band, and thin fillets below. Fragments of small dentils were also present in that S. U. . In II. 6(34) a fragment with small dentils with an egg-and-dart motif carved above them was also found. II. 6(35) produced fragments of a molded and painted egg-and-dart astragal which was also gilded.

### Frieze/Fasciae

Isolation of the frieze/ *fasciae* bands may ultimately be possible on the basis

of colors of paint used. The over-all distribution of these elements, however, is thus far only possible by paint colors involved, which may represent height and areas involved. Ordering of these elements will have to await examples *in situ*. In Phase III, II. 6(5) produced fragments of ocher and brown painted and molded plaster, white (unpainted) and molded plaster and black painted and molded plaster.

Phase V produced ocher painted and molded fragments, along with black painted and molded, brick-red painted and orange-red painted examples (II. 6(11), with blue (?) painted and molded fragments in II. 5(9). In Phase VIII ocher, dark blue, brick-red, orange-red, and light tan painted band fragments were found in II. 6(24), along with fragments of an ocher background with black designs and white (plain) fragments with dark blue horizontal lines (in imitation of moldings?). In the same phase, II. 3(11) produced fragments painted in light blue, dark blue and ocher, brick-red and blue, and plain tan as well as red with black, and black with wide red bands.

In Phase XI (II. 6(22)) a fragment with bright yellow painted bands outlined with black with a wide orange-red band beneath was recovered, along with fragments showing parallel lines in black or blue, dark blue painted and other line painted fragments.

Phase XIII produced fragments of ocher painted with black decorations, along with others in brick-red, dark blue, and dark tan. All of these fragments were more muted in color than elsewhere

and may reflect the effects of durative exposure to the elements as suggested in the stratigraphic consideration of this phase.

### Affixes

Also to be considered in regard to the entablature were the fragments of plaster-molded heads found in II. 3(11). The only partially recognizable specimen has the appearance of a female(?) head, seen frontally, with flat hair treatment on each side, a gaping mouth and rather odd modelling of cheek bones, nose and eyes. These were attached to small masses of plaster showing the outlines of flat wooden/metal fixtures which had apparently been set into the heads at the time of molding. The fixtures were then forced into holes filled with plaster. When the building fell the heads and their affixing plugs were dislodged in one piece. Unfortunately, the quality of plaster used for these heads was rather susceptible to weathering, hence fall impact and the elements preclude complete description and possible identification.

### Roofing

As was noted, in the discussion of Phase XIV, it would be reasonable to postulate a conventional roofing of this structure on the basis of evidence available. Ash, charred stone, charcoal and *tegulae* fragments all substantiate this assumption and no negative evidence appears to contradict it.

### Drain Pipe

As a result of the distribution loci of this element, it would appear certain that the recovered fragments of this element are all from roof drains, and

not from floor drains. The pipes are similar to those found elsewhere at Petra i. e. in the Siq and in the water systems found at the Main Theater.

### Other Architectural Elements

Ashlar, specialized building blocks, and plastering fixtures are treated under the comments regarding architectural element distribution which follows.

### Comments on Phase Distribution of Architectural Elements

**Tegulae:** The absence of *tegulae*, except in the cover debris after the latest destruction can be explained on the basis of the postulated fall with the loss of the roof (Phase XIV) and subsequent "reclamation" of valuable elements; those in the Phase V-VII debris would be the (scant) remainder not dislodged until the final fall of retaining elements (see *Ashlar* below). Fragments recovered were between 3.1 and 3.5 cm. thick, with the usual right-angle upturned edge (Plate VII. 1 and cf. Hammond 1965, Plate XXXIX. 5, 6).

**Capitals:** The heavy concentrations of these elements and their fragments in the fall of Phase VII and later phases would tend to indicate that a considerable number of columns were actually undisturbed after the first earthquake destruction (Phase X). The find areas of the "lion-griffon" decoration would suggest a definite relation to the "platform" columns, rather than the bay columns or side engaged semi-columns. This is borne out by the standing columns of the bays in II. 6 and II. 3, as well as by the distribution of drums in the later phases (see also *Drums* and *Tesserae* below).

# PHASE DISTRIBUTION: ARCHITECTURAL ELEMENTS

(Order: II. 6/.3/.5; + = present, + + = concentration)

Phase:	I	II	III-IV	V-VII	VIII-X	XI-XV
<b>Tegulae</b>	- - -	- - -	- - -	++ - -	- -	-
Corona cornice	- - -	- - -	- - -	+ ? + ? -	- -	-
Dentils	- - -	- - -	+ - -	+ + -	- +	+
<b>Frieze/Fasciae</b>	+++ ++	++ -	++ ++ ++	++ ++ ++	++ ++	++
Capitals	+ + ++	- - +	- - +	++ ++ +	++ ++	++
Capital frags.	++ ++ ++	- -	++ ++ +	++ ++ ++	++ ++	++
Column Drums	+ - ++	- - -	- - -	+ ++ +	+ ++	-
Base necks	- - -	- - -	- - -	- - -	- -	++
<b>Crustae</b>	- - -	- - +	+ - +	++ + -	+ -	++
Floor tiles	- - -	- - +	- - -	++ + -	+ -	++
Drain pipe	- - -	- - -	- - -	++ ++ ++	+ +	+
Ashlar	- - ++	- - -	- - ++	++ ++ -	++ ++	+
Concave-sided blocks	- - +	- - +	- - -	- ++ -	- -	-
Bevelled-ended slabs	- - -	- - -	- - -	- ++ -	- +	-
"L" blocks	- - -	- - -	- - -	- + -	- +	-
Nails: Fe	- - +	- - ++	+ - ++	++ - ++	++ +	-
Nails: Cu	- - -	- - -	- - -	++ ++ -	++ ++	++
<b>Tesserae</b>	+ + ++	+ - ++	+ - ++	++ + ++	- -	-

**Drums:** The presence of fallen drums in phases following the initial destruction of Phase X also supports the fact that not all columns were tumbled in that destruction. The absence of drums -- vis-à-vis capitals and capital fragment -- in the phases following the second earthquake destruction (Phase VII) can be explained by factors of height and by the probable "re-use" made of capitals and fragments later (see *Tesserae* below).

**Base necks:** The distribution is massed in the proper location only.

**Crustae:** As noted elsewhere, it is postulated that re-usable marble was

removed, in the main, following the roof destruction of Phase XIV. Pieces too high for removal then, or engaged with other elements, probably account for the presence of *crustae* in later phases, especially uppermost ones not dislodged until the heavier earthquake of Phase VII.

**Floor tiles:** Distribution is massed in the proper location, with that of later phases explicable on the same bases (i. e. difficulty of removal) as the *crustae* or because of identification error.

**Drain pipe:** The severity of the second fall (Phase VII) explains why this element appears in the phases related to that fall

as well as to those related to the earlier fall of Phase X (Plate VII, 4).

**Ashlar:** Although ashlar was encountered in later phases, the bulk of it is properly distributed in the two fall-related sequences. Both wall and trabeation ashlar is probably here involved and is relatively difficult to distinguish apart, since the latter (bearing plastered decoration) would be indistinguishable in this structure from (especially) interior wall build materials (see also the "specialty" blocks below).

**Concave-sided blocks:** The find spots of this type of material suggests a possible arch which survived until the second fall and was dislodged as a unit, as the distribution, in place and phase, would indicate. The find spots of these blocks also suggests a possible relation to the frontal treatment of the "platform", as was noted earlier (Plate VII. 5, 6).

**Bevelled-ended slabs:** Whatever the purpose of these specialty slabs, they are distributed in the same manner as the Concave-sided blocks above and may be related(?), although some are present in the fall of the first destruction (Phase X) also (Plate VIII. 1,2).

**"L" blocks:** The same comment may be made regarding these blocks as those above (Plate VIII. 3, 4).

**Nails: Fe and Cu:** Both types of nails recovered in the excavations were used for keying plaster elements to ashler (Fe) or to base-coat plaster (Cu). A distribution difference is to be noted between the two types, with the Fe type following the distribution pattern of the

*heavier* frieze/ *fasciae* plaster elements, dislodged primarily by earthquake fall, whereas the lighter and more fragile elements keyed plaster-to-plaster were also susceptible to the effects of the elements and begin to fall in the Phase XI-XII period. The higher susceptibility to oxidation on the part of the Cu specimens caused their disintegration in most cases, as the Site Supervisor of II. 6 notes in reporting specks of green (i. e. oxidized copper) characteristic in the soil of S. U. (24), the cover of the second destruction, in particular (Plate VIII, 5, 6; Plate IX, 1, 2, 3, 4, 5).

**Tesserae:** The presence of these elements is *totally* anomalous to the structure of Phase XV, but the *distribution* provides the explanation for their presence --namely *post* the second destruction (Phase IX and higher and *only* in the more elevated portions of the area (II. 6, II. 5). When the distribution is then related to postulated *use* of the area in the phases where they are noted (i. e. transient "occupation") and then to the concentration of capitals and capital fragments in those same phases the anomaly is completely cleared up: namely the proximity of a supply of fine stone (i. e. capitals and capital fragments) to surface (the higher sections of Site II) provided the raw materials for the production of *tesserae* to be utilized elsewhere (since no further building is evident on Site II)! Erosion and modern tilling of the area brought discards up into Phases I and II, while the actual production may be assigned to the "occupation" Phases V and III. This also explains the major ceramic types recovered from these phases: i. e. store-jars (for stocking the *tesserae* manufac-



tured) and cooking-pots for daily eating "on-site", as well as the evidence of only transient use (i. e. cooking-fire remains, with little else to show for any "domestic" life. Such factory-use may also explain the high incidence of capital *fragments*, hardly to be explained by fall in Phases I through III and possibly also clarifies the peculiar nature of Phase IV -- i. e. the moving away of ashlar and other debris in the search for the raw materials. The probability of a Byzantine Church East of Site I -- where *tesetae* would be employed in large quantities -- adds further weight to this suggestion of a factory-site use of the area.

#### **Sub-Phasing, Phase XV**

On the basis of replastering of the plaster flutings found on certain of the free-standing columns and the probable filling of the niches of the interior of the North wall, it is probable that this structure underwent some form of (probably minor) redecorating in the course of its primary use phase. As a consequence, it is tentatively suggested, pending further excavation, that Phase XV should be subdivided into a primary stage (XV B) and a later one (XV A) to accommodate existing indications.

No chronological conclusions are possible in regard to the date of Phase XV A at this time. Coincidence in event with the re-doing of the Main Theater is suggestive (Hammond, 1965. 64), however, since the same conditions apply.

#### **Chronology: Phase XV A/B**

Although, as noted above, no firm evidence exists for the dating of Phase XV A -- and likewise for Phase XV B --

the similarity of events found in regard to the building of Site II and those of the Main Theater is striking.

To erect a public building of this type, with the degree of ornateness and the stage of the Nabataeanized Corinthian order involved reflects precisely the period seen at the Theater, i. e. that of Obodas II or Aretas IV, with attention again focusing upon the conditions applying in the reign of the latter. Likewise, refurbishing of the structure matches the similar activity at the Theater and the reign of Malichus II, with subsequent decline late in the reign of Robbel II (Phase XIV).

As a working hypothesis, therefore, it is suggested, pending more conclusive evidence, that Phase XV B, building of the structure in Site II, may be tentatively set in the reign of Aretas IV and the refurbishing of the structure set in the reign of Malichus II. This tentative chronology in no way conflicts with the stratigraphic or architectural data thus far recovered and does, as in the case of the Theater, fit the socio-economic, political and architectural stage situations of those reigns.

#### **Architectural Nature of the Structure**

Likewise tentative is the conclusion that this building represents a temple to a yet undetermined deity at Petra. The plan, in particular, permits that conclusion, while denying other possible use attributions. The internal "platform" strongly suggests the "altar pedestal" of the temple at Et-Tannur, although completion of excavation may render another explanation more probable. Further,

the lavishness of the internal decorations suggests a building of more than common use and the failure to demolish it, following the partial destruction in Phase XIV, may point to a special (sacral?) character of the building.

### **Stratigraphic Phasing**

#### **Phase I: Modern.**

II. 6(1) = II. 3(S)/(1) = II. 5(S)/(1).

#### **Phase II: Disuse.**

II. 6(5) = II. 3(2) = II. 5(2) upper.

#### **Phase III: Occupational Use (Transient).**

II. 6(2) + (5A) fireplace = II. 3(3) =

II. 5(2) lower.

#### **Phase IV: Localized Dumping.**

II. 3(10)/(6).

#### **Phase V: Occupational Use (Transient).**

II. 6(11) + (2A) fireplace = II. 3(8) =  
II. 5(9).

#### **Phase VI: Disuse.**

#### **Phase VII: Destruction - A.D. 746/748.**

#### **Phase VIII: Occupational Use (Transient)**

II. 6(24) + (47) + (11 A, B, C) fireplaces = II. 3(11) = II. 5(12) + (15) slabs, (14) fill, (13) Burial #1.

#### **Phase IX: Disuse/Silting.**

#### **Phase X: Destruction - A.D. 365.**

#### **Phase XI: Disuse/Silting.**

II. 6(22).

#### **Phase XII: Disuse.**

#### **Phase XIII: Disuse/Silting.**

II. 6(34)/(35).

#### **Phase XIV: Partial Destruction/Disuse Phase - c. A. D. 106(?).**

II. 6(36) ash.

#### **Phase XV: Building Phase - Tentatively.**

Malichus II (XV A)/Aretas IV (XV B).

The 1975 excavation season considerably clarified and modified certain of the aspects discussed above and will be subsequently reported.

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