Architectural Analysis in Western Palenque

James Eckhardt and Heather Hurst

During the 1999 season of the Palenque Mapping Project the team mapped the western portion of the site of Palenque. This paper gives information about the architecture of specific buildings in some of the groups that were mapped. These architectural insights are based totally on surface assessment, measurement of the interior and the exterior of the exposed buildings and crawling into collapsed interiors to extract more information. The architectural forms of the Moises' Retreat Group, the Picota aqueduct system and surrounding structures in the Picota Group are discussed here.

The first area that this paper will look at is the Moises' Retreat Group that is located between the Motiepa and Piedras Bolas rivers. The majority of the group sits upon the escarpment ridge proper, with the rest sloping down on terraces or natural hillside. Structure MR4 is where we would like to start; it is an "L"-shaped structure (24.45 x 16.61 m) on a raised platform (4.89 m high). The condition of the mound is much like the rest of the site; overgrown with trees and thick vines. The structure faces to the north and fortunately that area has the most visible architecture (Figures 1 and 2). The eastern portion of the north face is mostly collapsed but the rear interior is visible up to the spring-line. The estimated width of the interior is 2.20m, which is an average interior width in most of the rest of the group. The southwest corner of this chamber gives an estimated height. Even though the floor is buried, one is able to conclude that the maximum height to the spring-line would have been 1.30m. The spring-line is off-set 13cm and the vault height itself is 1.0m.

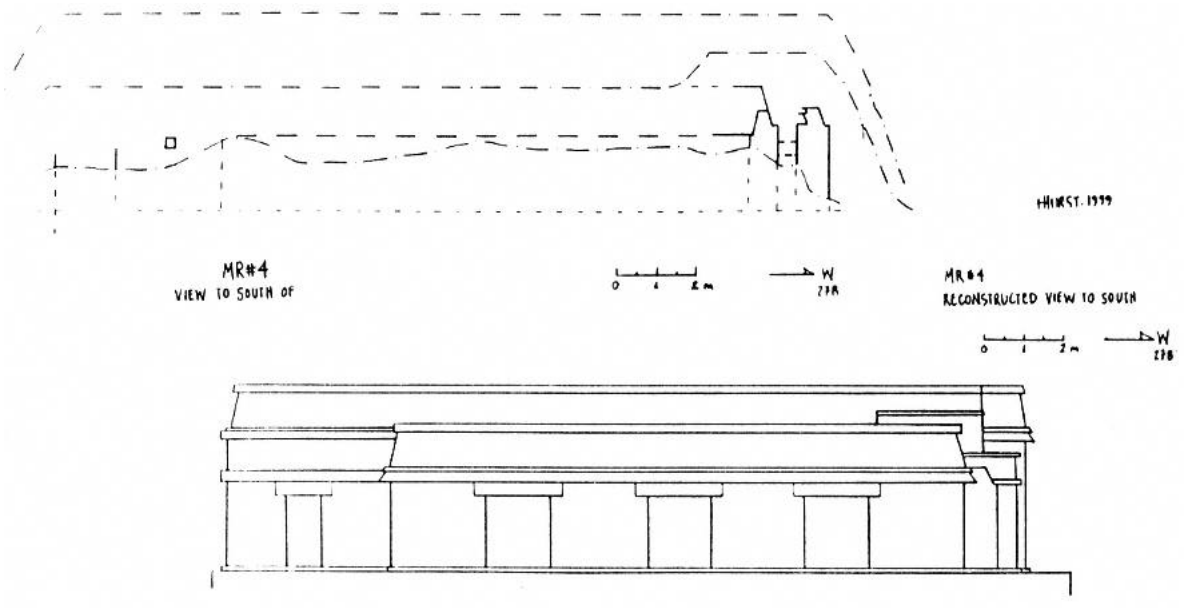

Fig. 1 & 2

The western-most chamber is a later addition. It is small and connected to the initial chamber by a window. Width of the chamber is 0.87m, length is 1.64m and the height to the spring-line is 1.86m. The vault of this chamber is interesting because it uses the exterior medial molding as the eastern half of the vault. Its height is 46cm. From these measurements and Hurst's reconstruction drawings one can see that this building had many additions during the periods that it was in use and reuse (Abrams, 1998). Based on the structure's position in the group and its architecture, it was more than likely a middle to upper class residence (Johnston and Gonlin, 1998).

The core of what we believe makes up Moises' Retreat are the collection of buildings near the Piedras Bolas river, buildings MR19-21, 24&25,29,32&33, and 68. Once again the structures here are covered with thick vines and large trees. Many structures in the group have collapse and old looters trenches. These breaks in the structures were able to yield much architectural information and allowed a complex reconstruction drawing of the group (Figure 3).

The preservation of these structures over the course of hundreds of years is a testament to the achievements of the ancient people of Palenque. On the eastern face of MR32 there is a collapse of a large chamber, which is easily entered from above. Inside we were able to take measurements of the connecting corridors, the doorways exiting to the west and the stairs that coincided with those doorways. The chamber itself is north-south oriented with two doorways opening to the west; one of the doorways is completely destroyed due to the collapse that allows entry. The other doorway has stairs leading down to the east and out of the structure. It is assumed the other was constructed similarly. The chamber itself is again 2.20m wide, over 7m in length, and from reconstruction estimates the height to the spring-line is 2.70m. The vault adds

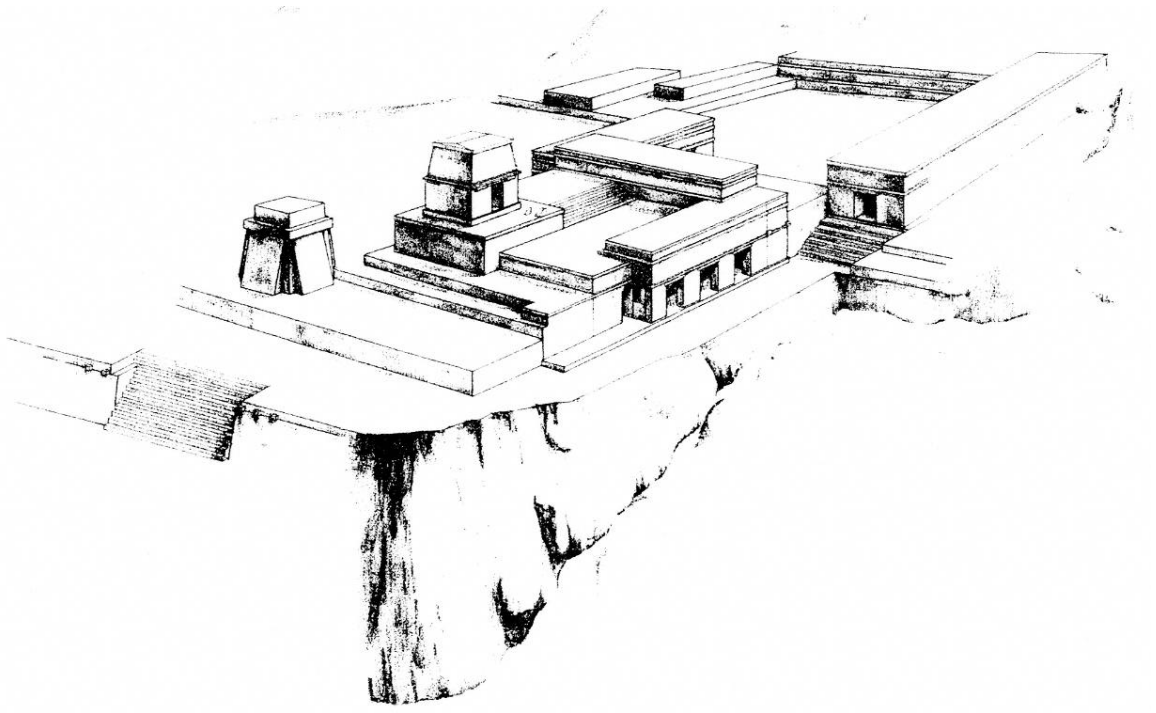

Fig. 3

another meter (Figure 4). This chamber is quite large and is connected to another chamber by a small northwest corridor that mirrors its dimensions (Figure 5). This chamber is almost identical in dimensions and north of the previous one, directly underneath the eastern side of the temple structure MR24.

This chamber's north wall has been sealed up and has created either an antechamber on the other side or was filled up and then sealed to create better support for the temple addition above it. There is evidence that there was another chamber, running north-south, on top of the chamber. This would explain the thick, wide capstones in the initial lower chamber as supports. We believe this shows the extensive masonry specialization that is characteristic of most architecture in Palenque (Fash, 1998).

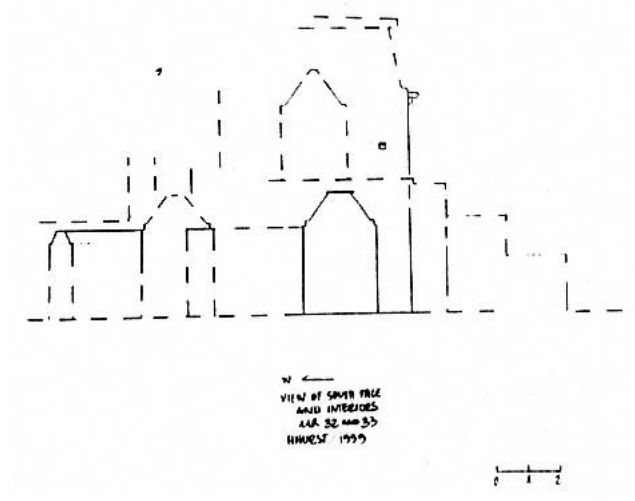

Fig. 4

Moving to the south face of MR33, there is a thin corridor that is collapsed on both ends. We were able to traverse it with some difficulty. The interior height is a little over 2.0m with only a 30cm vault. Near the center of the corridor on the south side, are two "Ik'" windows looking out to the

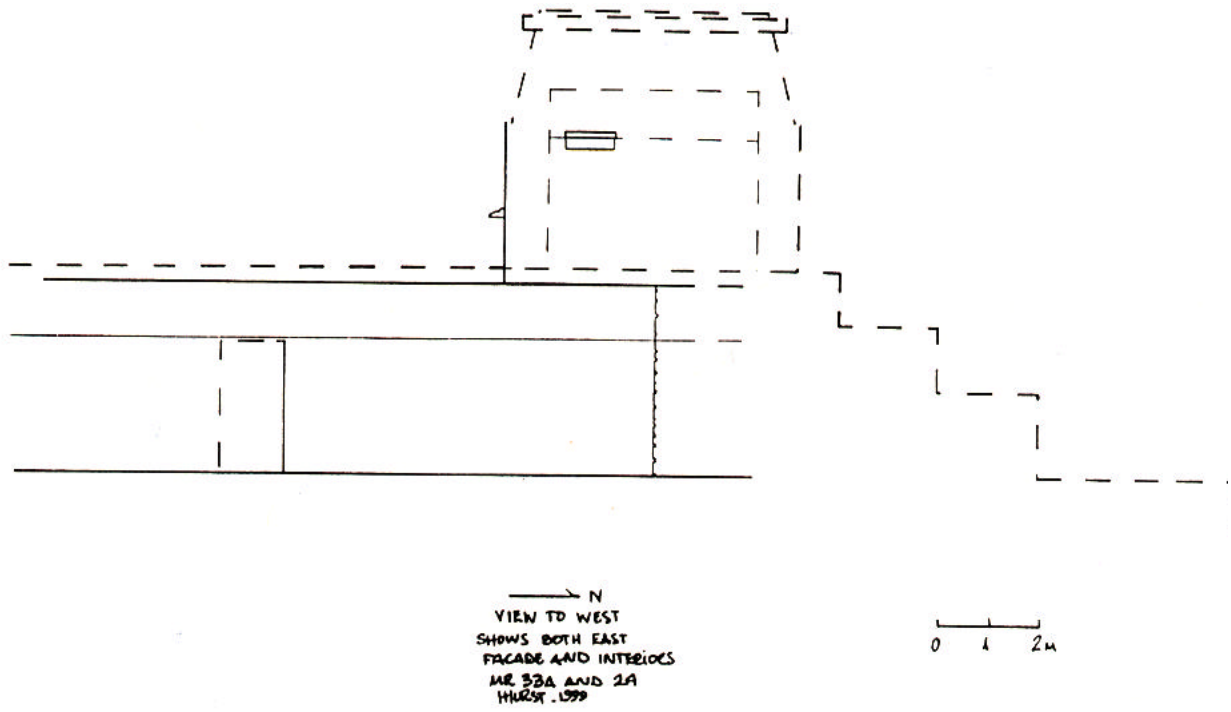

Fig. 5

plazuela to the south (Figure 6). Initially, it was thought that this corridor ran the entire length of the southern face of MR33. Upon more thought it is believed that the corridor's east doorway would have had stairs and connected to the upper chamber in MR32, which is now destroyed. The western doorway either turned north into the bulk of the platform or possibly turned south, exiting into the plazuela.

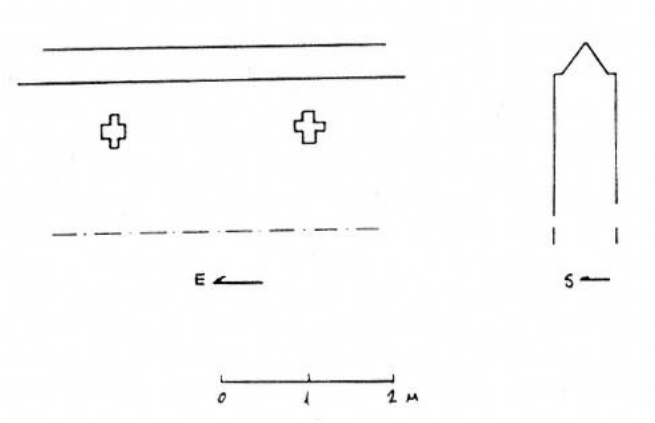

Fig. 6

The western face of MR32 and MR33 has completely collapsed except a small part of it towards the northwest corner. It is believed that this corridor ran the length of both 32 and 33 with three doorways opening out to the west. On its preserved northwest corner, we see a window looking out to the north but it has evidence that it was changed into a window from an earlier doorway opening to the north. There were also some curtain holders in the small east-west running corridor directly north of the western corridor.

Most of the north face of Moises' Retreat has been destroyed by tree fall and seasonal water drainage. The platform MR68 is probably the remnants of a large stairway and the support platform of MR21 (Webster, 1998). Just north of it is a steep cliff that drops down to terrace structures; initially we believed that this was just natural rock but with further investigation we noticed cut blocks into the face of the cliff with limestone calcification over it. We found this to be a very interesting discovery because it is possible that what we have seen in Palenque before to be just calcification could very well be water drainage depositing a layer of calcite over architecture, not just in Moises' Retreat but also in many other areas of the site. When we looked for this possibility in other areas of the site we were rewarded with evidence that it is indeed architecture rather than natural stone.

The other area of interest is the La Picota area and especially the aqueduct area. The La Picota aqueduct is part of the river system closer to the southern ridge of the mapped site. The Picota River flows down from the south and is then constricted by the construction of a large C-shaped group of mounds that opens to the north. The river is forced under these mounds, then the plaza, and then it's used to feed the three constructed pools before emerging at the northern exit of the aqueduct (Figures 7 & 8, next page).

The aqueduct begins under the plaza passing under the northwest corner of a large stairway with faced blocks that are very large; average is around 2 by 0.50 by 0.80 meters. At this point, the ceiling of the aqueduct is only 20 cm beneath the plaza. Near the stela it makes a turn of nearly 90° to the west, then gradually curves north before the water exits and continues down the Picota River. There are enormous faced

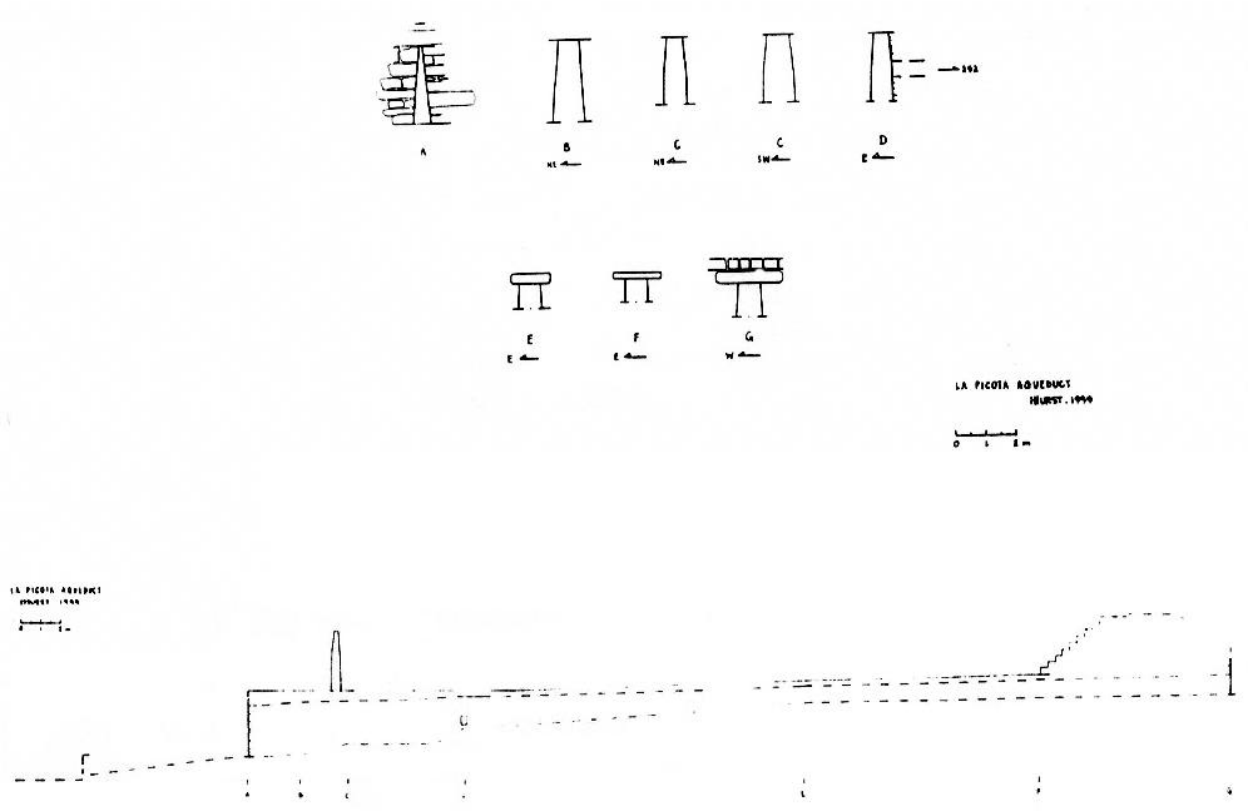

Fig. 7 & 8

blocks in the interior walls that have no calcification; as an interesting note the water in the aqueduct must move fast enough at the base of it never to accumulate calcite. Also, the slabs used as capstones must have been exacting enough not to let water from the surface seep through, very good evidence for elaborate specialization (Hansen, 1998). The slabs cap the entire course of the aqueduct and it is likely that these slabs could have been removed for maintenance.

The walls are vertical and have no offset before the capstones, meaning that there is no vault in the aqueduct. As the aqueduct travels north, the heights of the walls increase. This maintains the level of the plaza while providing slope to move water. The walls taper slightly as height increases. There is no stucco present inside the aqueduct. The entrance, where the water is funneled into the aqueduct, is a rectangular doorway with a huge capstone. It is possible that this entrance was blocked with another large stone to control the reservoir level. The exit is a tall tapering vault, much like the shape of the Picota Stela itself (2.65 m high, .53 m at base, .11 m at top) and is narrower than the channel just inside the door, which would force the water out dramatically.

The aqueduct fills three pools. The first pool is L-shaped and is in the south corner of the western flanking terrace. The water is channeled into its northeast corner, and channeled out of the southeast corner. The second pool is on the north side of the terrace and the drain that feeds this pool (24 x 50 cm.) is 1.21 m below the plaza level. A stepped wall is visible on the eastern side of the second pool. The third pool is channeled from the Picota River just after exiting the aqueduct with the walls overgrown

and fallen. The only true wall lies on the western side and only one course is visible above the water line.

This paper has explained some of the architecture of Palenque that could not be rendered in the greater map. These renderings of Moises' Retreat and the Picota aqueduct were produced by what was seen from the exterior and interior without excavation. We hope that these findings will encourage others to move into the western portion of Palenque and to do more analysis.

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