Building Four: a Palace in Tula Grande, the Lodging of the Toltec King

Research Year: 2007
Culture: Toltec
Chronology: Early Postclassic
Location: Tula de Allende, Hidalgo State, Mexico
Site: Tula Archaeological Zone

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Abstract

During the field seasons of 2002, 2003, and 2004, we had the opportunity of excavating the northeast sector (known as “Building 4”) in the main precinct of Tula’s Archaeological Zone. A series of architectonic elements were uncovered, with a spatial distribution which represents the importance and meaning that a palace complex had for Toltec society. These excavations confirmed the existence of this palace as originally was proposed by the archaeologist Jorge R. Acosta during his first investigations.

Thanks to the support of the Foundation for the Advancement of Mesoamerican Studies, we were able to achieve a better and greater knowledge concerning the area which we explored. These contributions, which form part of my thesis investigations, will help us to understand the cultural and social dynamics that took place in this building complex, thus relating these processes to other sectors of the precinct during different times of its occupation. This study also presents for the first time detailed information concerning an Early Postclassic palace complex in the Basin of Mexico.

Resumen

Durante los años 2002, 2003 y 2004, tuvimos la oportunidad de realizar exploraciones arqueológicas en el sector noreste conocido como “Edificio 4”, del recinto principal de la Zona Arqueológica de Tula Grande, en donde salieron al descubierto una serie de elementos arquitectónicos, cuya distribución espacial denotan la importancia y relevancia que debió tener para la sociedad tolteca, un área que constituye un complejo palaciego, tal y como lo habría propuesto el arqueólogo Jorge R. Acosta en sus primeras investigaciones.

Gracias al apoyo de FAMSI, es como logramos un mejor y mayor conocimiento a través de la investigación del área explorada, dicho aporte (que forma parte del trabajo de tesis) nos permitirá comprender la dinámica cultural y social que se rigió en este espacio, y con el resto del recinto en sus diferentes momentos de ocupación, además de dar a conocer por vez primera, una unidad de este tipo para la Cuenca de México durante el periodo del Posclásico Temprano Mesoamericano.

Introduction

It is well-known that during the Early Postclassic, during the phase researchers have called Tollan (A.D. 900-1150), a society developed in the northern region of the Mexican Central Highlands which we know as the Toltecs. They established their ruling center in the midst of the Tula Valley, in its southwest sector, on the margins of the river we know

as Tula River (Davies 1977; Diehl 1983; Healan 1989; Mastache *et al.* 2002) (Figure 1, Figure 2, Figure 3). The Toltecs built many great structures in this geographic area, which are a true reflection of the complexity of their society and of the hegemony they had over other societies. Each structure erected had its own use and meaning, given by the Toltecs in order to perform in each building activities linked to political, religious, social, economic, and other social aspects, focused primarily on sustaining the status and control of a ruling class over the inhabitants of the region (Villalobos 1982).

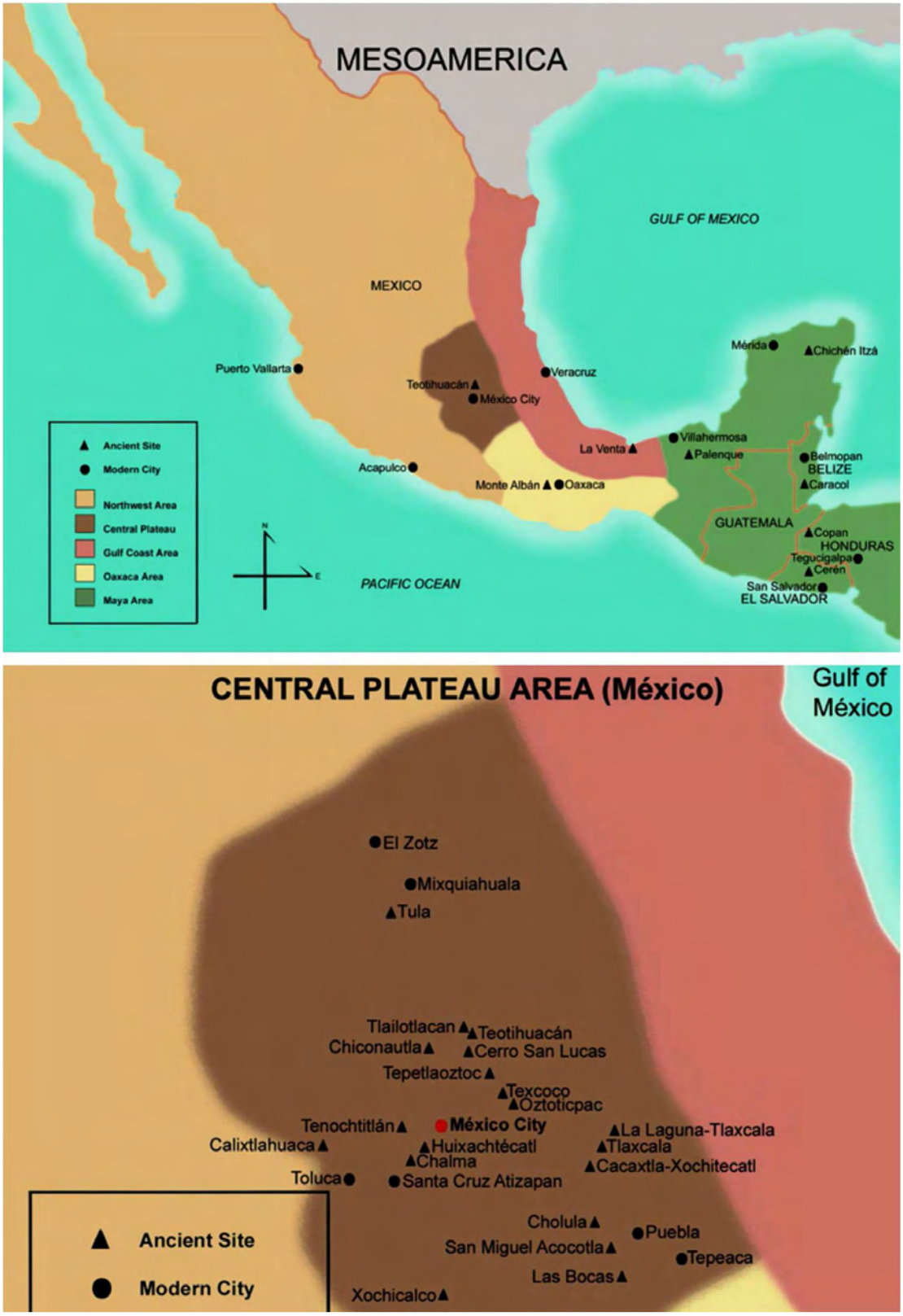

Figure 1. Location of Tula Archaeological Zone, in the northern region of the Central Highlands (adapted from http://www.famsi.org/maps/cp.htm).

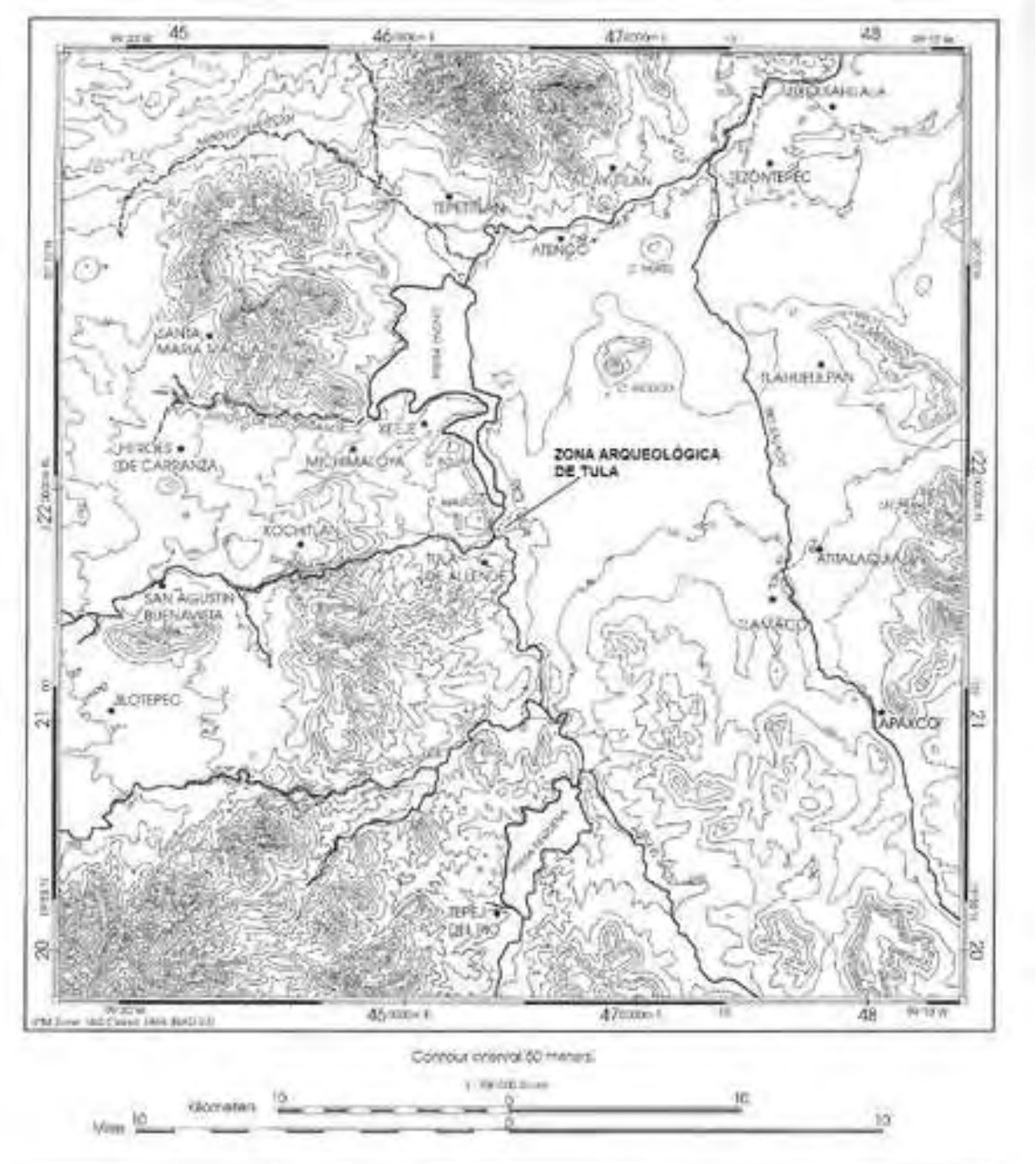

Figure 2. Geographical location of the modern city of Tula and the archaeological zone (adapted from Mastache et al. 2002: 18).

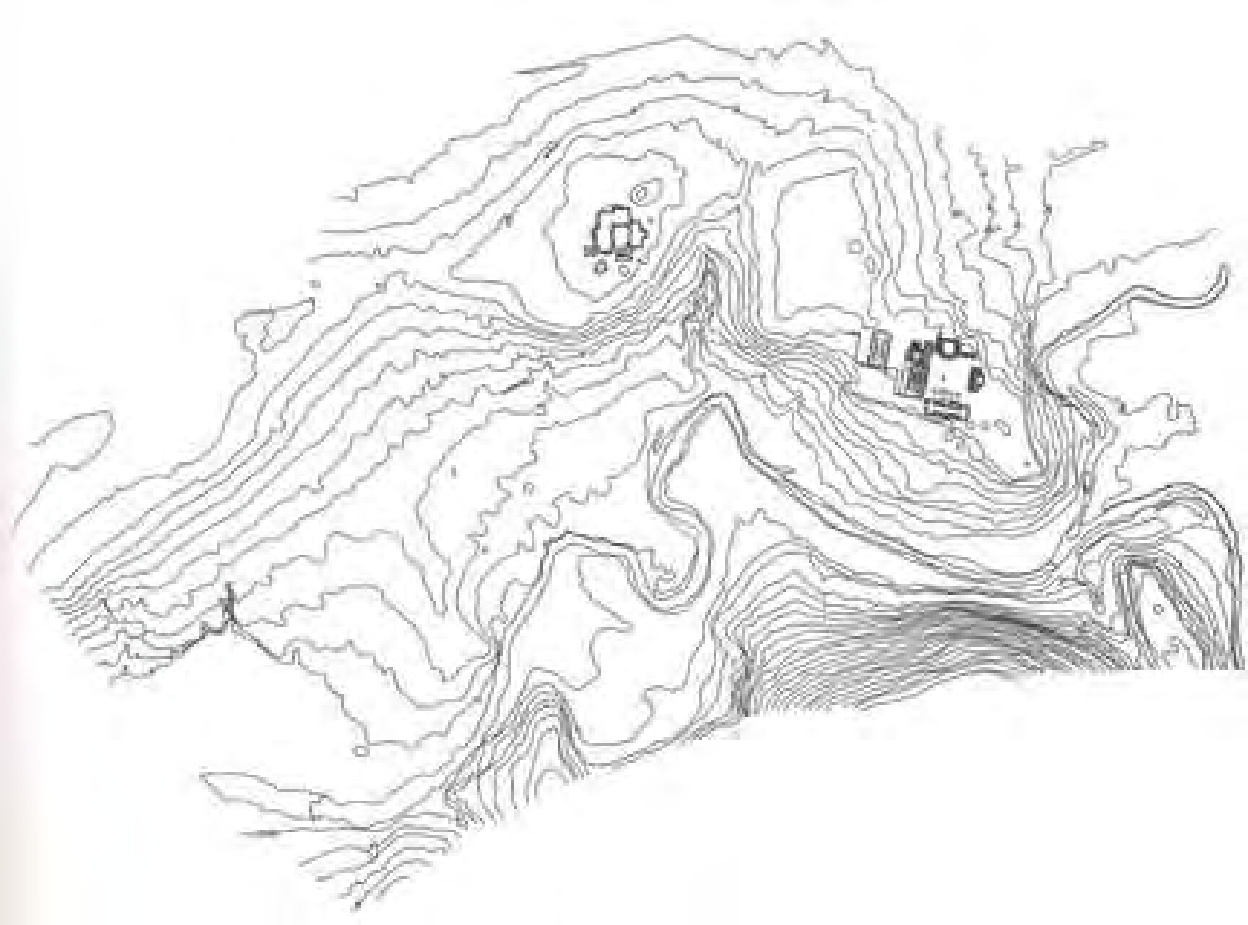

Figure 3. Detail, topographic location of Tula Grande's main precinct (to the right of the picture) (after Mastache *et al.* 2002: 83).

At present we know the functions of the buildings explored so far (Mastache *et al.* 2002), like Pyramid B, Pyramid C, the Burned Palace, Structure K (Getino 2000), Ball-game Courts 1 and 2, the Shrine (Adoratorio), the Coatepantli [snake wall], the Tzompantli [skull rack], and others. However, there are some still unexplored areas whose characteristics are still unknown, for example their architectural elements, or their function in comparison with the neighboring structures, or the role played by a precinct on a general level. In this regard, the lack of research on these areas hinders our knowledge about the way in which Toltec society functioned, as well as the ideological and social dynamics of the ruling class that inhabited these spaces.

In this respect, during 2002, 2003, and 2004 we were able to undertake an archaeological research under the direction of archaeologists Alba Guadalupe Mastache and Robert Cobean of the Instituto Nacional de Antropología e Historia (IANH) (Cobean *et al.* 2004, 2005). During this work systematic and extensive excavations were performed in a specific area within Tula Grande's Sacred Precinct, located in the Tula, Hidalgo, archaeological zone, following the methods and techniques proposed by Healan and Benfer (Healan 1989: 49-53). This area is known as Building

Four or East Palace (Acosta 1956, 1960). It pertains to a space which, given its location in the most important sector of the archaeological zone, must have had a vital importance and a unique meaning for Toltec society. For us nowadays this is a discovery that presents the opportunity of knowing Toltec culture and society in its moment of greatest achievement, as well as to understand the various processes of occupation and abandonment.

The study of this architectonic unit is very valuable because it allows us to understand fundamental aspects of the Toltec world, whose culture spread beyond their geographical limits to influence several aspects of the life of peoples from different regions in Mesoamerica. The Toltecs left their mark through time on peoples who occupied the Basin of Mexico, such as the Mexica groups during the Middle and Late Postclassic. These peoples adopted the magnificent Toltec tradition and made it their own, in order to exercise power and control over other peoples, and to appropriate the right to see themselves as the heirs of an ancient society who crafted the Mesoamerican vision during the Postclassic (Davies 1977; Diehl 1983; Healan 1989: 3-5; López Luján 2006). Proof of this are the architectonic, sculptural, and iconographic elements, as well as the information present in historical sources (Evans 2001, 2004), which attest to this tradition –be it inherited, appropriated or shared.

In addition to the above, I should add that up to now these palace structures had not been extensively studied in the Central Highlands during the Mesoamerican Early Postclassic period (Cobean, personal communication). Therefore, this research will give us credible empirical information, which when contrasted with ethnohistorical data (Evans 2001, 2004) will help us to better understand the social and cultural dynamics of two societies during distinct times: the Toltecs and the Mexica, who in a way were closely linked to each other.

In light of the above, in order to understand the diverse social and cultural processes within a given area from a diachronic perspective, we have to study Building Four's architectonic characteristics: its construction system, the distribution and context of the spaces within the building, as well as its position in respect to the Sacred Precinct. We should also study the diversity, density, distribution, and particular traits of the portable archaeological materials in association with their environment, in order to define the kinds of activities that were performed, as well as their time frames –whether as primary or secondary contexts– considering the stratigraphic relationships.

In these circumstances, the work carried out with FAMSI support in the present project was aimed at the study of portable items, carrying out their description, cataloguing, consolidation, photographic recording, as well as the architectonic analysis, making the plans of Building Four in order to visualize the structural characteristics (construction system), the spatial characteristics, and the state of preservation since the time of their last exploration. In addition to all this, plans were made in order to record the distribution of different contexts in certain spaces. This whole study and activities were based on the field record cards, where the information that had been produced was analyzed,

ordered, gathered and contrasted with other records such as field drawings and photographs.

We also conducted paleo-botanical studies (with the advise of archaeologist Nadia Velez) in order to complement the analysis of archaeological materials, identifying the organic materials. This allows us to know the plant resources that were used for several activities, or as part of the prevailing environment during different stages of the occupation of the building. This study had not been undertaken within the Tula archaeological zone, therefore its contribution will be a significant one.

In this phase of the paleo-botanical study we made a flotation of soil samples taken during the excavation of the building. We still have to finish with the interpretation of the different vegetal materials recovered, which are under analysis by specialists. Another one of the project's goals was to carry out dating by radio carbon, in order to define the absolute chronology of the building through several occupation stages. Therefore, we took carbon samples from specific and well-defined areas and contexts. We are waiting for the results of the analysis.

It was not possible to analyze all the portable materials, therefore we focused on those artifacts that pertain to primary contexts.

The results of this research are described in the following sections, where we will explore different aspects that make up this palace unit, such as its spatial distribution, construction system, processes of occupation and abandonment, on the basis of archaeological evidences and the paleo-botanical study. At the end we present a conclusion with a partial proposal about the building's function and the perspectives for the future.

Building Four and Tula Grande's Sacred Precinct

Building Four is located in the northeastern sector of Tula Grande's Sacred Precinct (Figure 4 and Figure 5). On the north it borders with the structure known as Quetzalcoatl's Palace; on the northwest corner is the so-called Pyramid B, where the Atlantes are located, and in the west part is the entrance to Building Four, which is accessed through the East Vestibule. This is where it communicates with Pyramid B on its front part. Because of this communication route there is a close link between Pyramid B and Building Four, and their activities were interrelated. It has been suggested (Mastache *et al.* 2002: 111-114) that in order to celebrate ceremonies of enthronement the procession departed from Building Four and went to Pyramid B –a shrine exclusive to rulers– through the East Vestibule.

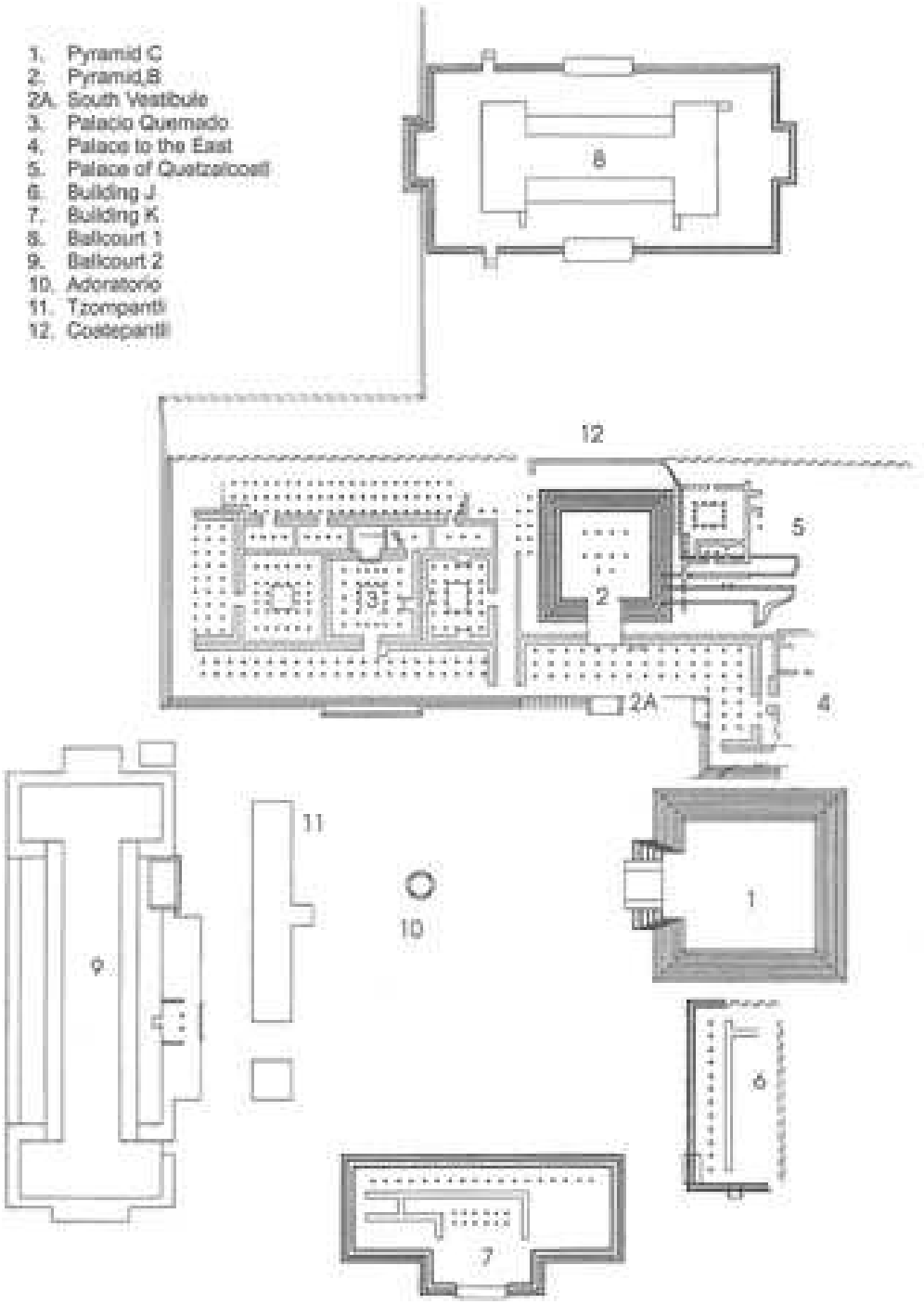

Figure 4. Spatial distribution of structures in Tula Grande's Sacred Precinct (after Mastache *et al.* 2002: 92).

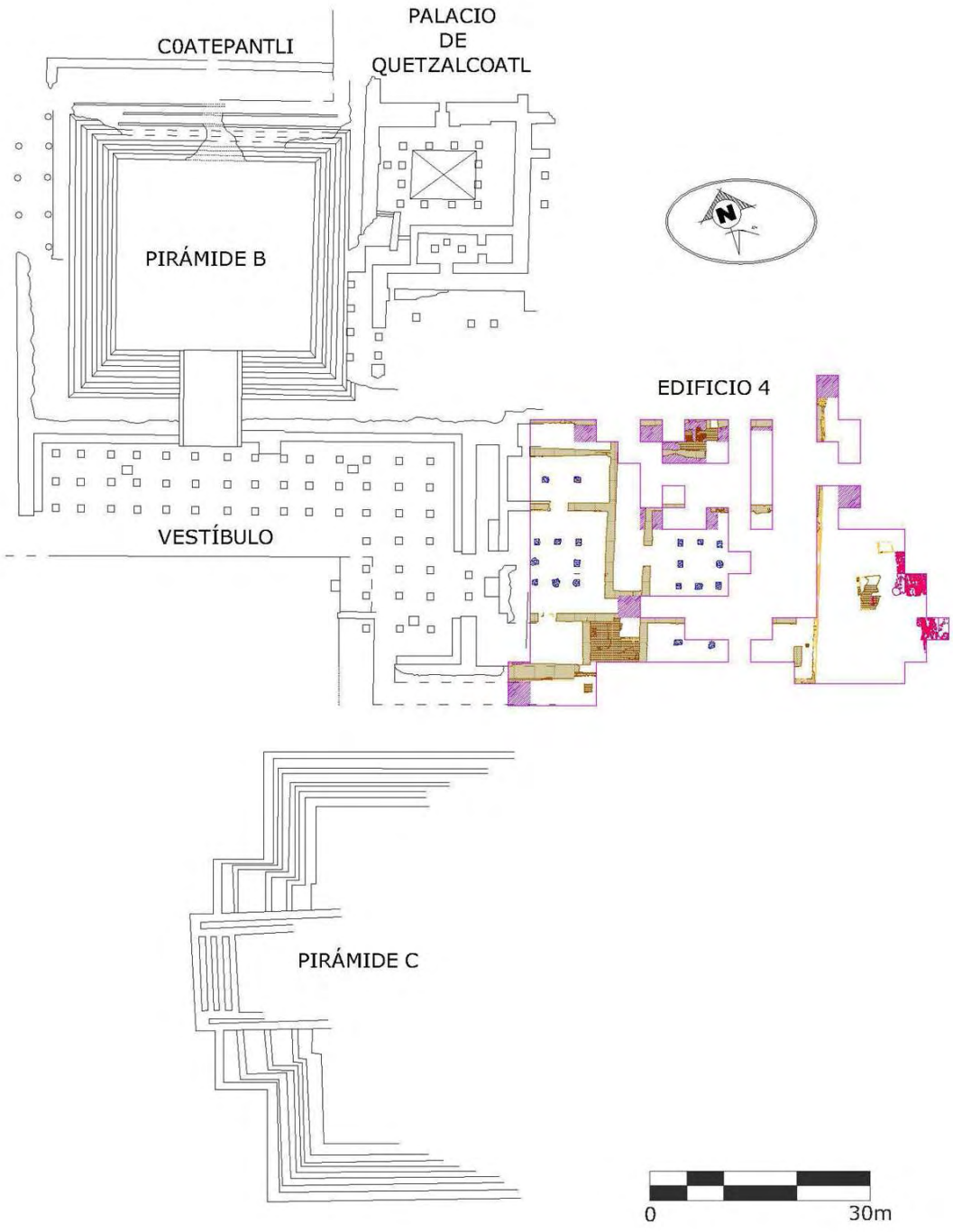

Figure 5. Building Four's location in the northeast sector of the Main Precinct.

On the south side Building Four borders directly with Pyramid C, the structure of greatest dimensions, whose function was linked with public events. On the east side, as a kind of terrace, the building borders with the limits of the great leveling platform from which the precinct's structures rise.

The Shape of Building Four

Taking into account the work performed by Acosta (1956, 1960), who uncovered the entrance, the altar-banquette, and three halls of Building Four, plus the area explored during the 2002 - 2004 excavations, we can say that this is a rectangular structure with a length of roughly 64 m in an east-west direction and a width of 42 m in a north-south direction. The building covers an area of almost 2,688 m^2 from the base of the structure to the wall dividing the building's access from the vestibule (Figure 6 and Figure 7). Building Four shows a general orientation of 17^o east of geographic north in respect with the rest of the structures of the precinct (Acosta 1944: 126).

Figure 6. Panoramic view of Building Four and the explored areas, seen from the northwest.

Figure 7. Building Four's east sector.

On the west side the building has the same floor level as the vestibule. On the north boundary there is evidence of an adobe wall with a height of roughly 4 m, which may have served as division from Quetzalcóatl's Palace. On the south side it is limited by an adobe wall, whose external face shows the typical Toltec building technique known as "small stone" (Diehl 1983: 72). Next is the level of the stucco floor, which may be part of the alley linking this palace unit with Pyramid C. On the east boundary there is no wall surrounding the building, but there is a terrace-like open patio on the sloping base of the structure; we have something similar to this in Structure K (Cobean *et al.* 1994; Getino 2000: 170), in which the north façade has a wide vestibule with a view toward the central plaza, without a wall that would hinder visibility to the outside. The same happens in Building Four, but looking toward the east, allowing for a clear view of the sunrise on the horizon. This is a unique feature which has not been present in any of the other buildings and pyramids so far explored, therefore it gives us a reason to point out an ideological and religious link between the sun and the palace to the east.

This palace is made up of at least 18 spaces with varying dimensions. Their distribution is discussed below (Figure 8).

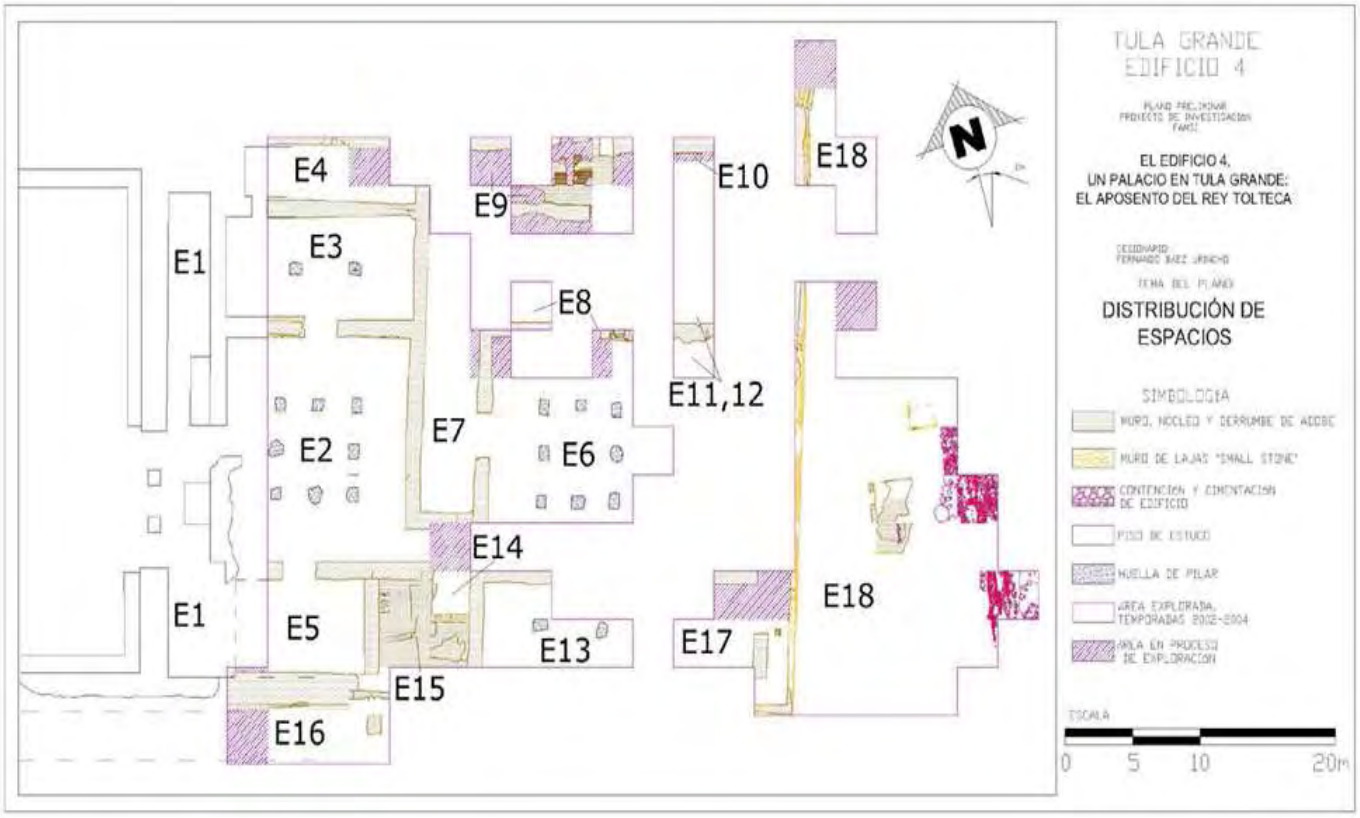

Figure 8. Plano General plan of Building Four and internal distribution of spaces.

Space 1:

This is an alley of rectangular shape discovered by Acosta (1956), it is 30 m long by 3 m wide, with an area of 90 m2. It is located in the entrance to Building Four, and extends over the whole west side of the structure. It is limited by adobe walls on the east and west facades (currently covered by tepetate slabs for protection and as a conservation measure), and an adobe wall on the north façade. This distribution can be seen in the north section of the alley, while in the south section the defined area is not clearly seen. However, because of the available evidence we can say tat the south section shows the same characteristics as the north part.

In the west façade of the alley the wall is interrupted, since it is the main access to Building Four with a clearance of approximately 8.49 m. There are two pillars in this entrance, oriented north-south. Just in front of the entrance to the architectonic unit, in the alley's east wall, there is an altar-banquette, which is "2.50 m long by 1.97 m wide and 0.57 m high" (Acosta 1956: 77); in this architectonic element we can see a series of slabs with engraved designs of personages in a procession (Figure 9), who seem to portray characters who, because of their clothing (Jiménez 1998: 228-235) may be dignitaries from foreign regions, who are in this place in order to celebrate the enthronement of the Toltec dignitary (Mastache *et al.* 2002: 111-112). In this respect,

there is a great similitude with the description by Sahagún (1956, Vol. II: 323-324) of Mexica rulers performing a ceremony of enthronement, in which high-ranking personages from other regions take part.

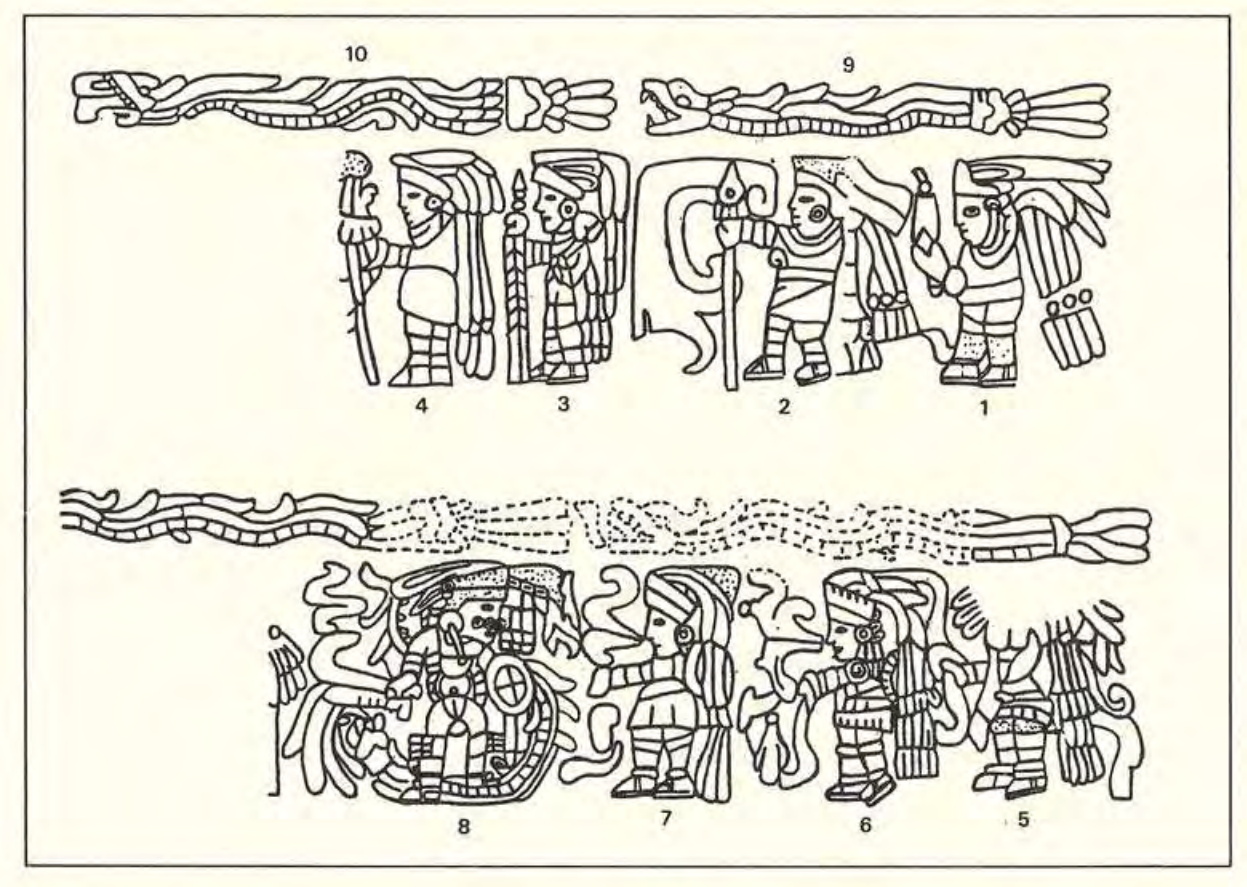

Figure 9. A representation of personages in a procession, from the banquette-altar explored by Acosta at the entrance to the East Palace (Acosta 1956; Jiménez 1998: 229).

At 3.60 m to the north of this altar-banquette, on the same side of the east wall, there is another, longer banquette (4.28 m long by 1.47 m wide), although it shows no iconographic elements like the ones on the nearby altar-banquette.

Space 2:

On the north side of the altar-banquette there is a 1.92 m-long entrance communicating with the first hall with portico, it is square with 14 m on its north-south axis, 13 m east-west, covering an area of 182 m^2. This hall is bounded by adobe walls on its four sides and a series of quadrangular pillars surrounding a central space, three pillars on each side, indicating that it was an open space of 4.90 m in length by 4.60 m wide (the hall), with a roof at the end of the hall (the portico) (Figure 10).

Figure 10. The explored area and the state of conservation of constructive elements in Building Four.

In the southwest corner of the open space in the hall with portico, the mouth of the drain that takes away rainwater is located on the stucco floor, measuring 40 cm in diameter. The rainwater entered through the central part of the hall and flowed to this point. This was complemented by a rowlock aligned with the pillars in the south part of the hall, directed toward the drain opening like an *impluvium*.

This first hall with portico is linked to other three spaces, since in the north and south parts there are two rooms, while in the southeast corner of the hall there is a 2 m wide access, which may have linked with the second hall with portico, or may also have been part of an alley going toward some stairs with a south and west direction.

Space 3:

To the north of the first hall with portico there is a 1.50 m long entrance, which links with a rectangular room measuring 13.86 m in length on its east-west axis, by 6.44 m wide in a north-south direction, with an area of 89.25 m^2.

This room is a roofed space, bounded on all four sides by adobe walls. In the room's center there are two pillars, aligned east-west, in order to support the roof. In the room's northwest sector there is an entrance of 1.12 m leading to Space 4, a storage area (Figure 10).

Space 4:

On the north side of Space 3 there is another room of quadrangular shape, which has been identified as a storage area because of the items found inside. We haven't defined its size with any certainty, but we can say that this is a narrow roofed space, measuring 3.45 m wide on a north-south direction, with a length of at least 12.63 m in an east-west direction, and an area of roughly 43.57 m^2. The north and south walls enclosing this space are also made of adobe (Figure 10).

Space 5:

On the south side of the first hall with portico there is an adjacent room, with an entrance of 1.75 m. It has a rectangular rowlock on the base (1.75 m long by 0.52 m wide and 0.25 m high), which was probably used to prevent water from passing to the southwest sector, coming from the central part of the first hall with portico. The room is a roofed space of rectangular shape, 9.57 m long (oriented from east to west) by 5.85 m wide (in a north-south direction), covering an area of 55.98 m^2. It is bounded by adobe walls (Figure 10).

Space 6:

In the center of Building Four there is a second hall with portico, which is probably linked with the first hall. As we have already mentioned, the first hall has an entrance or alley in the southeast corner, which seems to carry on toward the southwest corner of the second hall with portico. In spite of the fact that we don't know the size of this space, it has the same pattern of the first hall, with a series of eight pillars forming a 5.29 m by 4.54 m rectangular area in the central, uncovered part, while the surrounding part of this area was covered by a roof. This space is also bounded by adobe walls, and very likely it also encompassed an area of 196 m^2, with 14 m on the side and a north-south by east-west orientation.

Aligned with the traces of the pillars, like an *impluvium*, there is a rowlock in the stucco floor, like the one in the first hall, in order to take the rainwater toward the drain in the southwest corner of the hall's open area (Figure 10).

Space 7:

The west wall of the second hall with portico is interrupted in order to make an entrance of 1.80 m in length, which links the second hall with a long roofed alley separating the two halls with porticos, running in a north-south direction. We were unable to know the total extent of this space; all we have is a known area of 69.6 m^2 (17.40 m long by 4 m wide). This alley may continue in a northerly direction in order to link with the storage area, or even with the spaces located on the north side of the second hall (Figure 10).

Space 8:

At present we have evidence of a roofed room from the north side of the second hall with portico, namely the corner defined in the portion of the adobe wall in this sector. This means that this is an entrance to another space, like another adobe wall with an east-west direction, which very likely was the wall separating the second hall with portico from the space with unknown measurements (Figure 10).

Space 9:

On the north boundary of the East Palace we have evidence of an area which, although we have no certainty that it is part of the storage area (near the west side), the width of the walls have the same measurements as the storage area. On the other hand, it may be another space (Space 7) which links through an alley. This space was roofed, as shown by collapsed adobe walls on the north ad south sides (Figure 10).

Space 10:

With the same orientation of the walls of Space 9, in the northeast sector of the building, there is evidence of another adobe wall, which bounds an area with still undefined characteristics. It seems to pertain to another element different from Space 9 and the storage area (Figure 10).

Spaces 11 and 12:

In the northeast sector of the second hall with portico we have evidence of an adobe wall running on an east-west direction, therefore it indicates the division between two spaces, one on the north side that could be linked to Space 10 or Space 8, and a small area on the other side of the wall, to the south, which probably does not belong to the second hall with portico, since it is of different size than the homologous primary hall (Figure 10).

Space 13:

To the south of the second hall with portico there is a roofed room with two pillars aligned in an east-west direction, it is bounded by adobe walls. The entrance is probably on the north side, linking with the second hall. The known dimensions are 11.18 m long (from east to west) by 5.33 m wide (from north to south). However, because of the similitude with the first room with pillars to the north of the first hall, this space could have an extension of around 90 m^2 (Figure 10).

Space 14:

There is a small area contiguous to the west side of the second room with pillars, which we initially thought was a sunken patio, but on closer inspection we realized that the level of the stucco floor is the same as the other uncovered areas. This is a small

square area of 14 m^2, which must have been linked with the first hall with portico by the hall's southeast alley. It is bounded on the east by an adobe wall, while on the south and west there are stairways going up to the level of the floor toward another room. We have the remains of at least five steps on each side (Figure 10).

Space 15:

Next to the above, after going up the stairs there is another room, which on the basis of the few evidences we found, suggests a space located on a level of the upper floor. It may have linked with the exterior alley of the palace unit through the south sector. It also allowed direct communication with the northeast part of Pyramid C. We were not able to know the exact dimensions of this room, all we could tell is that it is an area of 6.48 m long by 5.45 m wide (Figure 10).

Space 16:

In the southwest sector of the building, on the outside, there are the remains of a stucco floor which must have pertained to an open area, probably an alley with an entrance from inside the building through the room or Space 15. It extends alongside the wall made of small stones outside the structure, a space communicating with Pyramid C (Figure 10).

Likewise, in this place two building elements were defined: the remains of a stucco floor and an adobe wall, recorded under the architectonic elements pertaining to the last stage of the East Palace.

Space 17:

The sector defined as Space 17 is still not well defined, since the exploration was not finished. However, this could be an element associated with the second room with pillars. It is located to the west of the open patio, in the southeast sector of the building. We could not define the exact area, all we know is a 8.51 m long by 6.60 m wide space (Figure 10).

The main characteristic is the shape of the corner of the wall separating open spaces, like the outside patio and the south alley, from the building's internal spaces. We also have the presence of an adobe wall oriented from east to west, in which we see a corner directed to the north, following the inside of the wall dividing this zone from the open patio. Three meters to the south we have another wall running on a north-south direction; on the north section of the wall one can see a layer of clay, which indicates there is a corner of the adobe wall, which is associated with a stucco floor. All this was found under a series of tamped and cobbled floors, indicating that this structure was remodeled, or that one structure was built on top of another.

Over these tamped and cobbled floors, 60 cm to the west of the north wall separating the open space from this area, there is a quadrangular element made of wattle-and-

daub, measuring 44 cm on a side. This may be a *tlecuil* (hearth), since inside it we found charcoal remains.

Space 18:

On the eastern boundary of the architectonic structure we defined Building Four's greatest area (Figure 10). This is an open space with an extension (so far as we know) of roughly 39 m long on a north-south direction, by 12 m wide on an east-west direction, covering an area of around 468 m^2. This open patio is bounded by a long wall made of slabs of *tepetate* (bedrock) covered with stucco, which runs along the whole of this face of the building. On the southwest corner the patio seems to carry on along the exterior alley. In the northwest section we found a series of five stairways going inside Building Four, therefore this indicates the means of access and communication between the open space and the rooms inside the building.

There is no evidence of pillars or wall junctures on the east boundary of the open patio that would suggest the outline of this space. The stucco floor ends and the sloped base of the structure carries on, therefore we can see an intention to create this space with a view toward the eastern horizon.

In the middle of the open patio, a little to the south, there is a rectangular altar (4.60 m long, north-south, by 3.10 m wide, east-west) with two stairways which basically occupy the west side, without evidence of struts. The stairways go toward the east on the top of the altar, an ideal location for observations and celebrations of the sun. There is evidence of altar walls on the north and south sides, with a finish of *tepetate* slabs covered with stucco.

Along the north wall, on its juncture with the floor, there is a small depression which may be a drain canal with an inclination toward the east.

At 3 m to the northeast of the altar are the remains of a small structure, which may pertain to another altar of smaller size (2 m long on the east-west axis by 1.58 m wide on the north-south axis).

Building Four's construction System

Building Four's construction system and the kinds of building materials used are similar to the other structures in the Sacred Precinct, such as the Burned Palace, Building A-C, and Structure K (Acosta 1958: 76-80; Cobean *et al.* 1994; Getino 2000). This reflects a homogeneity in construction, as well as chronological association, and the use of natural resources for building materials. What sets this architectonic unit apart from the rest, in addition to its location, is the architectonic design –the spatial layout– as well as the activities that must have been performed inside Building Four. For instance, there is

an absolute lack of banquettes for resting, such as the ones in the Burned Palace or Building K.

On the other hand, there is also a chronological affiliation between the construction system typical of Toltec culture (with its immediate antecedent, the Coyotlatelco culture) as seen in Tula Chico's architecture (Cobean *et al.* 2004) with its apex in the Corral phase (AD 750-850) (Mastache *et al.* 2002: 71-76).

Therefore, we think it is important to mention the main characteristics of the different materials used, as well as the building sequence, in order to understand the building process and the differentiation between spaces that were meant to perform activities in accordance with the building materials (Figure 10).

Basalt Foundations:

Only a small portion on the east limits of the building could be explored, where we excavated the slope of the structure's base. The material used for the base as core for the foundations and for containment is round basalt stone, which is placed in such a way that it allows the stones to link together by means of mortar made of earth with a compacted core. Also present –though in lesser amount– is another type of stone called *tepetate*, or limestone.

These mixtures of stone material are found inside what seem to be containment boxes in order to rise the level of the building. One can see several alignments of worked basalt stones (average width: 60 cm) in a north-south direction (Figure 11).

Figure 11. East limits of the structure, where part of the foundations and core can be seen (courtesy of Dan Healan).

Adobe Foundations:

Another element used as foundation for this structure was adobe, by means of containment boxes, in order to give greater volume and to raise the level of the floor of some particular area, such as the spaces with stairways in the south room (Space 15) and in the stairways to the north of the open patio, in the altars of the open patio, and in the rowlock at the entrance of the room identified as Space 5 (Figure 12).

Figure 12. Detail of the adobe core as part of the building's foundations.

Stucco Floor:

Once the core of the structure was raised in order to give it volume, the walls and floors that give form to the palace unit were erected. The floors were constructed using different materials: first a layer of adobe or compact clayey earth was put in place, mixed with a few *tepetate* pebbles in order to level off the surface, which is 20-26 cm thick over the core of basalt stone. After this the compacted adobe was covered with another layer of limestone (ground, gravel-sized *tepetate*) with a thickness of 2-10 cm, used as bed, and lastly a coat of stucco (measuring 0.3-0.5 cm thick; in some cases we see a 1 cm thick coat) covering the whole surface in order to have a firm and even floor (Figure 13).

Figure 13. State of conservation of the stucco floor and pillar mold, in which we see the constructive materials of the Toltec floor.

In the halls with portico the place where the rowlock (curved floor elevation) is located was built by placing lines of ground tepetate and a stucco coat in the required areas.

During the excavation process we were able to see in several points inside the building the placing of one stucco floor on top of another. The depth of one floor differs from that of another in the different sectors we explored, some are no thicker than 10 cm, with layers of adobe, ground tepetate and a coat of stucco over the lower stucco floor. Therefore, we suggest that this superposition of floors is due more to remodeling or maintenance of the structure in its last stage, rather than to two building episodes during different times.

The aforementioned evidences were seen in the eastern boundary of the open patio, where at least six levels of superimposed floors were recorded in a depth of less than 60 cm. Likewise, in the exterior alley to the southwest of the building, we found two floors in less than 15 cm (Figure 14).

Figure 14. This is the deposition of floors in the east end of the building.

In the exterior alley (Space 16) the two floor levels consist of a layer of ground *tepetate* as well as a 10 cm-thick layer of crushed *tezontle* (porous volcanic rock) similar to the outside areas in other buildings within the precinct. This suggests that *tezontle* was used for spaces that were left in the open and thus exposed to the elements.

Under the floor levels identified as part of the maintenance given to the residential unit, in the exterior side of the southwest wall of the same building (Space 16), there is another stucco floor associated with an adobe wall, at 70 cm under the structure's latest occupation level. Likewise, the southeast corner of Space 17 is covered by two layers of tamped earth and basalt cobbling over the same stucco floor, in the same lower level of Space 16. There is also the lower part of an adobe wall, so we regard these evidences as part of a substructure of Building Four (Figure 15).

Figure 15. Detail of several remodeling activities endured by Building Four on top of another floor seen at the end, probably that of a substructure.

It is possible that a floor is part of this substructure. It is laid inside with the traces of the pillars of the second room with portico (Space 13) (Figure 16).

Figure 16. Circular compound of re-used material over a pillar mold, after the abandonment of the East Palace. See the inside of the mold with the remains of the stucco floor of the possible substructure.

Adobe Walls:

One of the characteristic traits of Toltec society is the use of adobe architecture. This pertains to a tradition or style coming from northern regions of Mesoamerica during the Epiclassic period. It is seen in the architecture of Tula Chico (Cobean *et al.* 2004), as well as in other buildings in Tula Grande during the Early Postclassic (Acosta 1958: 76; Cobean *et al.* 1994; Getino 2000). Adobe is a very useful material in the sense that it allows for raising thick and tall walls, as is the case here. Acosta himself pointed out the existence of walls over 4 m high (Acosta 1956: 44). Adobe is highly efficient in terms of temperature control: interior spaces are cool during the hot season and warm in the cold season. However, this material has to be constantly protected and maintained, since it is subject to erosion by inclement weather (Schneider 2001). The ancient builders took this into consideration, which can be seen in the distribution of the walls and the collapsed roof remains associated with the walls. These show that this kind of building material was used to divide spaces inside the building, not for the areas that were exposed to the weather (Figure 17).

Figure 17. State of conservation of the adobe walls, in which we see the core made of blocks covered with a coat of clay. These rise directly from the floors, with no evidence of banquettes.

These adobe walls rose from the level of the floor before the stucco coat was applied, since in most of the excavated cases in this structure we see the stucco bevel joining the floor with the wall. We know of three cases that suggest remodeling, maintenance, affixing, or perhaps the reutilization of previous stages of Building Four. One of these is the wide south wall located in the room defined as Space 5, since this shows a wall with a greater thickness than the rest of the walls (it is 1.90-2.20 m thick), without considering the thickness of the covering of little *tepetate* slats, which is between 10 and 20 cm. Inside the room one can see the continuation of the stucco floor under the adobe wall, which may indicate an annexed or affixed wall on the previous adobe wall, because of its thickness (Figure 18).

Figure 18. Adobe wall from the building's southwest end, showing a greater width than the rest of the excavated walls. The stucco floor continues under the wall (courtesy of Dan Healan).

The second case is located outside Building Four, under the exterior alley in the southwest sector, where we have a 1 m-thick adobe wall with a north-south orientation associated with a stucco floor. As previously mentioned, this indicates the existence of a substructure which is earlier than the building. Another case is in the room known as Space 17, in the southeast corner inside the building. In this area we have evidence of two adobe walls which do not rise directly from the same floor as the rest of the walls, but go through to the lower floor of the substructure, besides they were part of the containment of the two layers of tamped earth and basalt cobbling that made up the last building stage. This would indicate a maintenance activity or a reuse of elements that are older than the stage currently exposed (Figure 19).

Figure 19. Detail of the stucco floor and adobe wall found beneath the rest of Building Four's constructive elements, pertaining to the last building stage.

The adobe walls rise from a base or bed of small long basalt stones (pebbles) placed horizontally. After this, adobe plaques were laid down (1.05 m long by 0.50 m wide and 6-7 cm thick) joined with mortar with a thickness of 3.2-5.5 cm, made of clayey earth mixed with organic matter as cementing agent. The plaques were united in rows and placed horizontally cross-wise, alternating the length of a block by the width of another in order to avoid cracks, up to a height of 4 m (in the case of the walls on the north limits of the building). Usually the thickness of the walls is 0.90-1.10 m, and they are united to each other forming straight angles in north-south or east-west direction.

Every adobe wall has a coat of clayey earth mixed with lime on the outside surface. This coat is 0.05-2 cm thick and it shows a whitish or light-brown color.

Door Jambs:

An element affixed to the adobe walls in very specific places are the so-called door jambs, which are located at the entrances to the various spaces we know so far, such as the main entrance to Building Four, the entrance to the north and south rooms of the first hall with portico (Space 3 and Space 5), and the entrance to the second hall with

portico from the alley (Space 6 and Space 7). In these spots we see, beside the adobe walls, a 46 cm-wide surface for the wall thickness lacking a stucco floor, likewise the lateral walls show no coating of clay with lime, and there is evidence that they were in contact with highly combustible material, such as wood (Figure 20). In addition to these evidences, we have a description written by Acosta (1956: 44) when he explored the entrance to this unit. Acosta refers to the existence of great carbonized beams, which were placed at the entrance of the unit. We can confirm that in these places there were wooden beams in every one of the entrances to the different rooms, which functioned as vertical supports on the floor, and had lintels on top, possibly made of wood, which supported the roof along with the adobe walls (Figure 21).

Figure 20. Entrance to the second hall with portico by the alley. See the state of preservation of the wall that was exposed to fire from the wood of the door jambs (wood traces can be seen at floor level.

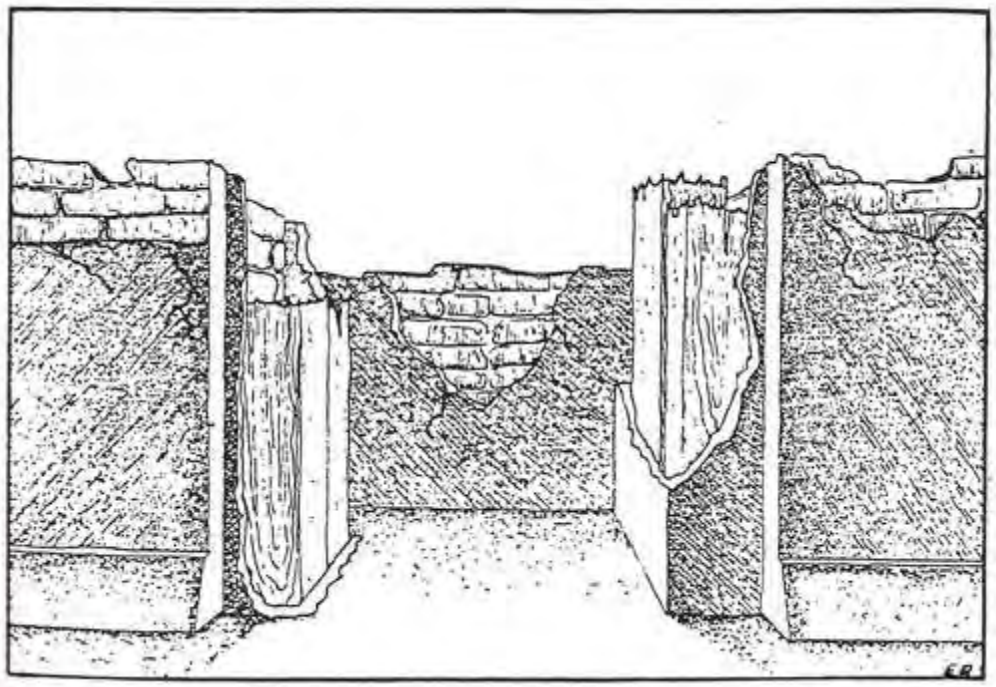

Figure 21. Acosta's hypothetical reconstruction of the main entrance to the East Palace, a proposal based on in situ remains, suggesting the use of wood as part of the door jambs at the entrances (Acosta 1956: 45).

Walls made of "small stone" Tepetate:

The walls made of *tepetate* slabs are known as a typical Toltec building technique called "small stone". They are another element affixed to the adobe walls, which functioned to protect the walls and allow us to identify open spaces that were exposed to weather. This technique consists of covering the adobe wall with a layer of pebbles of basalt and *tepetate*, with a thickness of roughly 10-39 cm, using as cement a mortar of clayey earth. After this a series of 10 cm-thick slabs of limestone (*tepetate*) was placed horizontally and crosswise, with a16 cm inclination forming a slope for wall containment. Over this layer of slabs is placed a stucco layer of 2 cm in thickness on average, which covers the spaces that were exposed to the weather, such as the external façades of the south and east walls of the East Palace (Figure 22).

Figure 22. State of conservation of the wall made of slats of "small stone" at the structure's southwest end. See the partial height bordered by quarry stone cornices.

The stairways of the south room (Space 14) and of the open patio (Space 18), as well as the altars of the open patio in their north and south sides, and the rowlock located in the south room of the first hall with portico (Space 5), also show this building technique (Figure 23).

Figure 23. Tepetate slats were also used to build the stairways of the building (courtesy of Dan Healan).

In the external wall of the building's south boundary we have evidence of the original height of the wall, since we located a cornice made of pink quarry-stone on the slope, as an upper limit with a height of 70-90 cm. Following the same building technique as the rest of the buildings, the small-stone wall must have followed after the slope some sort of projecting panel or vertical wall until the desired height was reached, and then it was finished with different decorative building elements.

Pillars:

An indispensable characteristic of Toltec architecture are the (round) columns and the (square) pillars used to support the roofs in closed spaces, or spaces with porticos. In this case we have as many as 20 pillar molds, which are evidence for the existence of pillars distributed in several spaces: eight in the first hall with portico (Space 2), eight in the second hall with portico (Space 6), two in the first room with pillars (Space 3), and

two in the second room with pillars (Space 13). All these pillar molds are rectangular, with average measurements of 90 x 75 cm, with a variable depth of 18-28 cm, where the pillars start (Figure 24).

Figure 24. State of conservation of the pillar molds of the first hall with portico, showing the base made of basalt stones.

In the case of the halls with portico, the molds are distributed in a symmetrical fashion every 2 m, forming a square, while the ones located in the rooms with pillars are distributed in pairs aligned on the east-west axis at an average distance of 3.60 m between each one.

We found no remains of the pillars in all the molds we explored. Some of them were reused, as we will see below. Others were probably dismantled in order to recoup as much reusable material as possible, such as wood. However, other cases such as Building Four, show enough evidence that we used as information to know the pillar's building system.

Most of the pillars were erected by means of wooden beams as a support axis covered with adobe. Only one case differs from this construction pattern; the pillar mold located on the right side of the first room with pillars (Space 3). This is different because the

support axis is not the wooden beam, but rather an adobe core which was raised and covered by wooden planks of roughly 20 cm in thickness (Figure 25).

Figure 25. Remains of one of the pillars that were used as support of the building's roof, showing the use of wooden boards to cover the adobe core.

Roof:

In light of the remains deposited on the stucco floor, associated with the different rooms near the adobe walls, we can assume this architectonic unit was roofed, covering an area of roughly 1,650 m^2. The materials which form part of the roof are wooden beams and poles, sometimes interwoven and tied up with ropes made of *ixtle* (maguey fiber), covered with mortar with level surfaces of clayey earth mixed with organic material and *tepetate* pebbles (Figure 26). Following the reconstructive model proposed by Alejandro Villalobos (1982: 179), we can use these elements to suggest that Building Four's roof was built as follows: first the rectangular beams (56 x 24 cm) were put in place (the length of the beams varied according to the area covered by the roof). On top of the beams the poles (of around 12 cm in diameter) were placed in a transversal direction. Over the poles is an *enramado* or layer of dry branches or a *tepetate* bed, in order to have a level and homogenous layer or superposition of *tepetate* gravel and pebbles extending over the vegetal matter. Over the superposed layers there is a coat of compact earth (*terrado*) which functions as bed. Lastly, we have no evidence for stucco over this last part of the roof, but it may have been applied over it, or else it was covered

with some other material in order to make the surface exposed to the weather waterproof.

Figure 26. Evidence for the use of poles and beams as part of the construction system used to make the roof of Building Four.

Crownings or Crests:

Among the last observed elements which are part of the architectonic design of the East Palace, there is evidence of a series of artifacts made of quarry stone, some with designs of conical architectonic tenons, with concentric circles on the largest surface, representing *chalchihuites*. We also found several merlon fragments with an inverted-T shape.

These materials were found as rubble from the collapsed roof toward the open spaces, such as the open patio (mainly on the west side), therefore they must have been used as decorative elements in the crowns of the roof, in order to improve the view (Figure 27).

Figure 27. Merlon fragment which was part of the crowning or crest of the roofs, part of the building's decoration.

Building Four and its Occupation Processes

All of the above information gives us a better understanding of the architectonic design in terms of space and volume. This will allow us to understand which of the needs of the people who occupied this building were satisfied in order to fulfill certain demands, be they political, religious, residential, or of another kind. After knowing the shape of this unit we will better understand its function. By analyzing the portable artifacts found *in situ*, we will complement the study of the building's function.

To this end we analyzed different contexts, as well as the materials and their stratigraphic association, therefore we could define the different occupation processes and their respective chronology. We identified several events around Building Four, such as activities during the Toltec occupation, followed by an abandonment process and fire, and then a re-occupation in order to sack and dismantle the building, recovering re-usable materials. This was followed by activities directed to filling up the structure in order to level off the surface and make it suitable for building housing units pertaining to the Mexica occupation period.

This unit shows the same basic pattern in relation to the occupational sequence as the other architectonic units, such as the Burned Palace and Building K (Cobean *et al.* 1994). The difference with Building Four, as we will see below, is the filling-up and

leveling of the space over the same structure, in depths reaching to almost 2 m in order to raise the Mexica constructions. In the case of the mentioned buildings, the Mexica constructions are found around 50 cm over the Toltec occupation (op cit.).

The Toltec Occupation

We have found some elements that let us define several types of activities performed in the palace unit, on the basis of the portable physical remains and their association with the building's architectonic space, the stratigraphic position of the materials, and the characteristics of each one of the artifacts.

For the time being we have established several activities that were carried out here, such as offerings before some architectonic element was erected, as well as activities centered on the room of the palace building, and other activities which have not been identified (Figure 28). The latter are still under analysis, in order to understand the association of the materials, the materials themselves, and the meaning they have in a certain place and time. This doesn't mean to say that we have established the kind of activities already mentioned (such as the erection offerings or activities in the rooms). Their meanings and functions are subject to change with our continued work, but in principle they show a trend for the objects under use.

Figure 28. Plan with distribution of spaces in Building Four and portable materials related to activities performed in the palace, before its abandonment and destruction.

In the case of activities like the offerings made before the construction of some architectonic element, we have nine examples inside the pillar molds. Two are located in the pillar molds of the first room with pillars (Space 3): offering 1-O1 in the west mold, and offering 2-O2 in the east mold. In the first hall with portico (Space 2) we have three offerings located in the three molds of the north side, offering 3-O3 in the west mold, offering 4-O4 in the central mold, and offering 5-O5 in the mold on the east side. Other three offerings were recorded in the second hall with portico (Space 6): offering 6-O6 was found in the northwest mold, offering 7-O7 in the central mold on the north side, and offering 8-O8 in the central mold on the south side. In the second room with pillars (Space 13) we have the evidence of offering 9-O9, inside the west mold (Figure 29).

Figure 29. Exploration process inside one of the pillar molds, in which were recorded offerings related to the building of the structure. See the blades and points.

The offering material in the different points we mentioned consists of a series of obsidian prismatic blades. There is no distribution inside of the pillar molds that would indicate a patterning or orientation of the materials, or their state of conservation or the kind of material, since we have fragments of several sizes and whole items of the obsidian prismatic blades, mainly green obsidian and fewer gray ones. We point out the case of Offering 2, with the presence of four small blade fragments of green and gray obsidian. These materials were recorded in association with shell and bone fragments, as well as in offerings 3, 6, 7, 8 and 9 (Figure 30).

Figure 30. These blades are part of the offerings inside the pillar molds, they are mostly of green obsidian and a few of gray obsidian.

En un caso tenemos siete navajillas prismáticas asociadas con dos puntas completas, In one case we have seven prismatic blades associated with two complete points, one made of flint and one of chalcedony (offering 5). Only one of the blades is complete, it is made of green-golden obsidian with a length of 8.1 cm. The other seven blades are fragments with a length between 2.3 cm and 7 cm. One is made of green-golden obsidian, three are made of green-transparent obsidian, one is dark green and the last one is made of gray obsidian. One point is dark-white or light gray, it is 5 cm long by 2.5 cm of maximum width and 0.5 cm thick, while the other point is clear white or lilac, and is 4 cm tall, 2.3 cm wide, and 0.4 cm thick.

Some of these points suffered a process of morphological alteration, due to the fact that they were in direct contact with the fire generated by the wood of the pillars from Building Four. The fire must have been quite intense on these points, to the extent that the obsidian material in some cases was deformed as if it was melted. However, the

intensity of the fire must not have been homogeneous, because not all items suffered the same transformation process.

In this case we have offering 1, which is a complete prismatic blade made of green-golden obsidian. It is 10.2 cm long by 2.5 cm of maximum width. In offerings 2 and 4 we have five blades, two melted ones of green obsidian: one is complete, measuring 9.6 cm long by 1.95 cm wide, and the other one is fragmented, it is 8.13 cm long by 1.77 cm wide. Another green obsidian fragment with no fire alteration is 8.76 cm long by 1,78 cm wide, apparently this was exposed to fire. A last blade has pigment remains (Figure 31).

Figure 31. When the building caught fire the heat was so intense that in some cases it caused morphological changes in some of the materials deposited as offerings.

These items were observed through a stereoscopic microscope; we could see that some of them have no wear marks, while others have wear marks in the form of micro-flaking. The distribution of wear marks usually is zonal, not continuous.

These materials were deposited over the layer of tamped clayey earth which covered the base of basalt stones; over this tamped layer we found the start of the beams of the pillars, and there are many remains of burned earth with carbonized wood. In other cases we even recovered the wooden core, that is to say, the wood that was not carbonized completely, like the east pillar in Space 3.

It is likely that this kind of offering was deposited in each one of the pillar molds, although we cannot know this with certainty because this kind of context was not found in all the molds, since in some cases the pillars were dismantled, while in other cases the points were reutilized for other tasks, without leaving evidence of the offerings.

Coming back to the activities focused on the room of the building, in this section we have so far identified three kinds of activities, such as storage of food products, as well those associated with illumination, heating, food warming, and/or ritual use of the building, and activities of a ritual kind. In the first case, we located a storage area in Space 4, called storage area AA (Figure 32), which was defined as such on the basis of the presence of at least two big storage jars, which were identified as pertaining to the *Soltura Rojo Alisado* type, which is characteristic of the Tollan complex (Cobean 1990: 430-437) of the Early Postclassic (AD 900-1150) (Mastache *et al.* 2002: 41-50). These jars have a globular shape with a rounded base, with a height of 80 cm-1 m, by 20-40 cm of rim diameter, a maximum width of 69 cm, and a paste thickness of 1-2 cm. The rim is curved-divergent with a rounded edge (Figure 33). The jars were found on the north side of Space 4, near the adobe wall on the stucco floor, aligned on an east-west axis in vertical position. They were fragmented and crushed on the upper part because the roof collapsed and fell over them. The jars showed signs of having been exposed to fire on several areas, because of direct contact with wood from the roof when this collapsed during the fire.

Figure 32. The storage area is located in the northwest sector of the building. It was defined by the presence of at least two great jars deposited on the stucco floor, which suffered the effects of fire when the roof came down.

Figure 33. Partial consolidation of one of the storage jars, of the type known as Soltura Rojo Alisado, which is characteristic of the Tollan phase, at the moment of greatest peak of Toltec culture.

Associated with the storage jars were found a textile fragment (26 cm-long by 17 cm-wide) and a rope fragment with knots, which may have been used to cover the mouth of the vessels. We also recovered corn cob remains, which had been carbonized by the fire. This evidence shows that this product was used in the area.

In addition to the above, we analyzed the ash and sediment samples; the results of the analysis are still being processed. This information will be important, because in addition to the maize remains it will allow us to know the kinds of products that were stored in these vessels, which will add to our understanding of the use and exploitation of resources by the Toltec elite.

The second case linked with the room of this building was context IC. It was used for illumination, heating, cooking of food and/or ritual use. This context was located under the portico of the second hall on the east side (Space 6); it includes the remains of a brazier of the *Abra Café Burdo* type, of the *Reloj de Arena Simple* variety (Cobean 1990: 411-416), which is characteristic of the Tollan complex from the Early Postclassic. This kind of vessel could have had several uses and functions. It could have been used as tool for illuminating a certain area, to heat the surrounding space, to heat food, and/or for other uses linked with ritual ceremonies (Cobean 1990: 404, 415). However,

because of the location and spatial association of the brazier inside the building, we can propose that the presence of the brazier is due to the need to illuminate and heat the east part of the second hall with portico.

These remains were found on the stucco floor, completely fragmented under the remains of the roof of the building (Figure 34). During this period of work within the project it was not possible to consolidate the vessel. We intend to do this in the future in order to salvage all of the vessel and to know its shape (Figure 35).

Figure 34. Evidences of a brazier that may have been used for internal illumination and heating inside the East Palace.

Figure 35. Brazier fragments pertaining to the Abra Café Burdo type, which is characteristic of Tula's Tollan phase.

In the third case of this section we refer to ritual activity –RA-, for this we point out three spaces which were identified basically by the presence of stains on the stucco floor: in the south sector of the alley (Space 7), to the west of the second room with pillars (Space 13), and in front of the stairway in the northwest sector of the open patio (Space 18). In these areas the stucco floor shows a series of reddish stains, distributed in a

random way, without well-defined sizes or shapes. Their size fluctuates between 4 cm and 15 cm in diameter, and they suggest some sort of liquid that was dispersed through dripping during a ritual of some kind.

Associated with the areas with pigment, in the second room with pillars we only have two bone awls in contact with the stucco floor, showing remains of red pigment on their surface in the distal section of the item (Figure 36).

Figure 36. One of the bone awls found on the stucco floor with red pigment stains, inside the second room with portico.

In the three areas we have the deposition directly on the floor of the remains of the collapsed roof and wall, therefore they show the activities during Building Four's peak occupation period.

Pertaining to undefined activities –AD- in the northeast corner of the room at the south of the first hall with portico (Space 5) we have two elements, a jar associated with a basalt sculpture (Figure 37), which shows the characteristics in miniature of the *Soltura Rojo Alisado* type of the Tollan complex (Cobean 1990: 430-437). The jar is of globular shape with a hemispherical base. It is 37.4 cm high by 30 cm of maximum width, with 19 cm in rim diameter and 15 cm of neck diameter, with a curved-divergent rim of round finish, and the paste is 0.7 cm thick. The manufacturing technique is by modeling, since on the whole it doesn't have a geometric shape. The interior surface finish is rough smoothing, and the exterior is roughly polished, showing irregular polishing traces.

Figure 37. Vessel and rabbit sculpture found in situ, in the northeast corner of the room defined as Space 5. They were found covered by the remains of the burned roof.

This vessel is peculiar in that it has three small bumps on the body's upper part, near the neck. These are small buttons added around the vessel. The vessel shows no handles for holding or transportation, nor any firing stains, but it has black and orange areas in the interior and exterior, which were caused by the fire from the roof of the building (Figure 38).

Figure 38. Vessel after restoration work.

We performed a micro-excavation of this vessel, but found no traces of the materials that would indicate its original contents. We analyzed the sediments inside the vessel, but found no remains of organic matter or any other material deposited inside it. This may be due to the fact that it many have been empty when it was placed in this spot, or else the contents were liquid and left no traces whatsoever.

The basalt sculpture represents a rabbit, it is 22 cm long on its base and 26 cm of maximum length, by 11 cm wide and 12 cm high. It shows well-defined features and has remains of red and yellow pigment (Figure 39). The sculpture together with the jar are the two pieces that were deposited on the stucco floor. The vessel was found in a horizontal position and the sculpture was placed standing up between the jar and the adobe wall. Both items show evidence of contact with fire, although not intense fire, on

part of the items. This was caused by the roof material which collapsed and was deposited on them.

Figure 39. Rabbit sculpture on which pigment remains can still be seen (courtesy of Elizabeth Jiménez).

We believe it would be risky to offer some sort of interpretation about the meaning and function of these items and their context, therefore in forthcoming writings derived from this study we will present a better argument about the activity performed here.

For the time being these are the main elements we have in order to understand Building Four's function. The activity areas, the internal and external spatial distribution, and the different architectonic elements found here, allow us to suggest that during the last moments of occupation of the building, this space was used as an area of totally restricted access, where everyday activities were carried out in the room, such as storage of products, food consumption, or some sort of ceremonial activity. This area also served to give light to the inside of the building and to keep it warm, as well as to perform ritual and ceremonial activities that may have been linked to initiation, enthronement, or the calendar. All this is linked with the presence of the altar in the open patio, on the west side of the building, because it allowed to keep a good record of the movement of the sun over the horizon. The sun's position at dawn would be a

marker of seasonal cycles, a very important characteristic for farming societies such as the Toltecs.

Another aspect to be considered regarding the privacy of spaces are some features of the construction system in the palace. As we have seen, internal spaces are built of and bounded by adobe walls which are erected directly on the stucco floor, without features such as banquettes or decoration on the clay plaster on the walls. This is contrary to what happens in public spaces such as the halls of the Burned Palace and the K Structure with a view of the plaza. In their banquettes and walls were mosaics made of slabs showing the monumentality of Toltec society exposed to the view of visitors. On the other hand, inside Building Four the use of banquettes and other elements showing visitors the importance of this society is not likely. The use given to these spaces is thought to have been more intimate.

The series of rooms inside the building suggest there was some privacy in this place. The rooms may have been used as living or rest areas, or for food consumption. On the other hand, we haven't found markers of basic activities, such as sanitary spaces, since there still are areas that have not been investigated. Therefore, we can suggest that this space was used exclusively by rulers for resting and for preparing their ceremonial activities.

Abandonment

After the highest development of Toltec culture, a series of events took place which meant the collapse of the state system achieved by this society. This led to the abandonment and the destruction by fire which we have clearly seen in each one of the structures explored within Tula Grande's Sacred Precinct (Acosta 1958: 75). Building Four is not isolated from these events. It also suffered because of the collapse of Toltec government, which is seen in several recorded contexts whose distribution and characteristics allow us to think that this palace unit suffered a process of abandonment, which was followed by destruction, looting, fire, and the collapse of the whole building.

Building Four's process of abandonment was such that the inhabitants of this unit, upon being forced to leave it, programmed their exit from it. We offer this interpretation on the basis of the archaeological remains recovered so far, which have been already mentioned. Although we explored a good part of the structure with its different spaces, we found nothing to indicate that it was used and had any activity performed in any area of the building. There are no traces of the portable items used in their daily life, we only found those materials which are left over from Toltec occupation. This means that the abandonment of this building was a gradual process.

Fire:

After the abandonment there was another event defined by the destruction and fire in the building. This was not a total fire; the archaeological evidences indicate that the fire originated in those spaces which had combustible materials such as wood and other plant materials, which means that the greatest concentration of fire was in closed spaces, which were covered by a roof with a design and structure based on highly flammable materials. To this we should add the entrances made of wooden lintels and jambs; likewise the pillars were also subject to destruction by fire (Figure 40).

Figure 40. Distribution plan and characteristics of the different events that happened after the abandonment of Building Four.

The spaces we refer to are the areas with porticos of the two halls (Spaces 2 and 6), the rooms with pillars (Spaces 3 and 13), the storage area (Space 4), the south room of the first hall (Space 5), the alley (Space 7), and space 10. This did not happen with open spaces such as patios, the exterior alley, and the central part of halls, since there is no evidence of burnt materials such as beams, or of any other kind of material that was exposed to fire (Figure 41).

Figure 41. Carbonized wood remains on the stucco floor, part of the burned roof that collapsed inside the different spaces of the building.

Most of the archaeological remains pertaining to the roof are located near the adobe walls, which in some cases allowed for the conservation of the artifacts we have recovered. Some areas of the stucco floor, as well as the adobe walls, were in touch with burning material, which made the plaster to change its color to orange or reddish hues. This indicates a different intensity of the fire; likewise the entrances were marked by burned adobes which were in touch with the wooden beams (Figure 42).

Figure 42. When the roof collapsed it was on fire, which caused fire damage on the adobe walls.

Linked to the fire was the collapse of the roof, as well as pillars and adobe walls. This can be seen in the north sector of the structure, in spaces 4, 9, and 10, where the walls are already collapsed, and in other cases they are slanted. In this sector we found the remains of walls showing the height the building must have had during its apogee (Figure 43). We can also see in some sectors inside the structure the state of preservation of the floor, because in some cases the stucco acquired a black color, while in other cases the fire caused the plaster to disintegrate.

Figure 43. Among the damages caused by the abandonment and fire was the collapse of the walls, as seen in the structure's north sector.

It is hard to tell whether the fire generated inside the building is due to natural or man-made causes. In the case of a man-made fire, we should determine whether it was related to an act of eliminating the sacred status in order to renovate the social status, or whether it was due to war confrontations caused by invading societies into the Toltec region (Davies 1977: 346-414), or caused by internal rebellions among the people (Diehl 1983: 158-169).

Recovery

Linked to these processes of abandonment and fire, as part of the destruction of the East Palace, there were man-made activities identified as recovery and looting. The first situation is interpreted as the occupation by groups who may have been foreign to Toltec society, who showed an interest to settle in this particular site, without the magnificence of the original construction. The goal of the new inhabitants was the dismantling and looting of the building. The evidence for the occupation of this area when it was not yet totally destroyed is a series of at least four circular elements, three of them located on the pillar molds on the east side of the second hall with portico, and the room located on another pillar mold to the east of the second room with pillars (Figure 40).

These circular elements were made with building material extracted from the remains of walls, merlons, and other items belonging to Building Four. This material can consist of basalt stones, *tepetate* stones, or fragments of merlons and faced quarry stones, which were placed on the stucco floor bordering the pillar molds. The circular elements average 1 m in diameter (Figure 44).

Figure 44. A typical feature of the reutilization of space and building materials after the abandonment of Building Four is the presence of a series of circular compounds located over the aligned pillar molds.

They are aligned in a north-south direction. We excavated inside them and found no evidence of carbon or ash which would indicate the use of hearths. We also analyzed soil samples by means of a paleobotanical study in order to identify macro remains, but there was no evidence of seeds or other plant materials deposited in these points. We would rather suggest that these elements consist of foundations to build small roofs or sheds, which were made by the new occupants in order to carry on with the dismantling and looting activities in the same building.

In Building K there is only one case in which one of the pillar molds also showed this kind of feature, although we recovered carbon remains from inside it, therefore we suggest this could have been a hearth (Cobean *et al.*, 1994:22).

The dismantling of his structure is seen in that several pillar molds have no traces of building material, either exposed to fire or collapsed, which indicates recycling of materials to be re-used for other purposes.

Looting:

Another event associated with the reoccupation and destruction of this building has to do with the lootings seen in the structure. We have defined three areas which were subjected to looting activities (Figure 40).

The first area deals with a huge looting found in the center of the room at the south of the first hall with portico (Space 5). In the stucco floor we see a broken surface of 4 m in diameter, with earth of very loose consistency. However, we were unable to explore the pit. In the center of the pit, on the floor level we recorded an offering with a whole vessel –OS1– which was subjected to a micro-excavation and was found to hold bird bones (Figure 45). This vessel pertains to Aztec orange monochrome ware, it is a pumpkin-shaped bowl with slightly spherical walls with straight rim, rounded edge, and convex base. The thickness of the paste is 0.4-0.6 cm, the vessel is 8.5 cm high and 18.1 cm in maximum width. The rim has a diameter of 17.5 cm and the base a diameter of 9.5 cm. The vessel shows wear marks inside and out (Figure 46).

Figure 45. Another feature indicating the later reoccupation of the building is the destruction and looting of the building.

Figure 46. Activities performed after the abandonment of the building were carried out by groups with Mexica affiliations from the Late Postclassic, as seen by this vessel in a looted offering.

The second looted area is located in the open patio, on the floor and west wall of Space 18. This too is a zone without floor, and a part of the wall was completely dismantled from the *tepetate* slabs with stucco plaster (small stone) to the core of the adobe wall. The dismantled material was placed on the floor and leaned against the same wall. The position of the materials (with a volume of roughly 70 cm) means that the walls did not collapse on their own accord, but were destroyed by human hands (Figure 47).

Figure 47. The dismantling of the building elements can be seen in the deposition of material coming from the slat walls concentrated in the north sector of the open patio.

On this cluster of *tepetate* slabs near the looted area we recorded a human skull –OS2–, which may be that of an adult female. This skull was the only element deposited here, and we found no other bone remains associated to it. The paleobotanical analysis identified seeds in the soil samples taken inside and around the skull. We don't have the results indicating the kind of seed yet, but in principle they indicate that the skull was used as an offering (Figure 48).

Figure 48. A human skull was deposited on the rubble material, indicating the presence of later groups, and the different activities they performed on the structure.

Other looted elements were the altars located in the open patio, which show a very poor state of conservation; their surface and core was found to be totally destroyed.

Filling and Leveling

Since Building Four suffered a process of abandonment and destruction, another stage of structural and visual transformation was generated over the original construction. The activities practiced by the new settlers in the region (namely groups linked with the Mexica during the Late Postclassic) were the filling-up of the structure and leveling of the new surface in order to build new structures. The filling was placed both inside and around the spaces defined by the walls; the filling consisted of materials obtained from the same building of the East Palace, and probably nearby structures as well, because, as we will see, a great amount of material was required in order to make the leveling.

The fill deposits consist of mixed-up materials deposited continuously, in a process of decomposition, made of adobes, burned adobes, earth mortar from the roofs, abundant carbon remains (fragments of beams and wooden poles, stucco fragments, abundant *tepetate* slabs, *tepetate* stones, and basalt from the walls). The fill's thickness varies

according to the zone of the building; in open spaces such as the patio, the layer of fill can be just a few centimeters deep (roughly 10-13 cm), while inside the spaces on the south sector the fill layer is around 1-1.50 m. This is the average height shown by adobe walls, although toward the north of the structure the walls and the deposited fills increase in level, so both height and thickness are greater, reaching up to 2 m or even 4 m in height and depth (Figure 49).

Figure 49. The filling-up of the surface of this area for leveling purposes was an extensive activity. A good part of the structure was covered with filling materials until a height of over two meters was reached on top of the Toltec floor.

Associated with the fill components are a great quantity and variety of portable archaeological materials, quite fragmented, which may come from the surrounding areas of the building, as well as elements of the architectonic design of the palace.

Among these are a series of fragmented slabs showing figures of richly attired personages. The latter were found as part of the leveling fill. One slab was located in the southeast sector of the alley (Space 7), and another one in the north sector, while in the southeast corner of the first hall with portico (Space 2) two slabs were found. In the northeast sector of the first room with pillars (Space 3) was found one slab, another slab fragment in Space 10, and other small fragments were scattered around may zones inside the building (Figure 50 and Figure 51).

Figure 50. Among the recovered fill materials are a series of engraved slabs, showing designs that suggest this was a very important space during its peak (courtesy of Elizabeth Jiménez).

We believe that these items probably come from exterior spaces, in particular the exterior walls of the open patio and the alley to the south of the building, since during the excavation process we recovered along the wall of the open patio smaller fragments located on the stucco floor. These were associated with the decorative elements of the crowning of the roofs on the outside, such as merlons, cut conch-shells, architectonic tenons showing *chalchihuites*, and miniature tenon blocks. Over these were found concentrations of *tepetate* slabs from the small stone wall. These small fragments pertain to slabs in which we can see elements belonging to the slabs discussed above. Unfortunately, since these items were not found in primary context, they received no priority for a detailed iconographic analysis. However, after studying the distribution of all materials and the different occupation and decay processes in the building, we became aware of the probable provenience of the materials, therefore they will be studied as part of this project.

Figure 51. We also have materials with representations pertaining to earlier occupations of the building (Robert Cobean, personal communication) (courtesy of Elizabeth Jiménez).

Likewise, as part of the fill materials near the level of the floor, we found a concentration of 20 broken disks in the north part of the alley (Space 7). These circular disks are 5.02 cm in diameter by 0.01-0.04 cm thick, they are made of an unidentified sedimentary lithic material, and are quite calcined by being exposed to fire. Most of these items show a design on one of their faces of a personage in front view with feathers over a mask, with earspools and a butterfly breastplate on the chest. The mask shows no outline, just the contours (Figure 52).

Figure 52. Among the fill materials there is a diversity of items which probably come from the area of the East Palace, like this disk which may have been part of the garments of the occupiers of the building.

As part of this cluster of 20 disk fragments is another disk or circular plaque of the same material, 8 cm in diameter by 1 cm thick. It has no design, just two conical perforations at the center, which pertains to a necklace pendant, as an accessory of the regalia of high-ranking personages (Jiménez 1998: 385, 451, 500) (Figure 53).

Figure 53. This object is part of the adornment of high-ranking personages. It was found in association with the disk on Figure 52.

Another group of materials that are part of the fill is found in the west sector of the second hall with portico (Space 6). This is a series of medial fragments of bifacial knives made of white flint, which were exposed to fire and thus suffered a change in the external coloration, so these items appear to be black.

In the south sector –near the entrance to the first room with pillars, between the pillar molds (Space 3)– we found 23 fragments of prismatic blades made of obsidian (13 are gray, nine green, and one black obsidian), distributed randomly within the layer of fill near the floor level. These items do not show macroscopic wear marks, and they may come from offerings inside the dismantled pillar molds.

Likewise, in the southeast sector of the first room with pillars we found a second concentration of 11 fragments of prismatic blades, mainly green and a few gray

obsidian, which formed part of the fill materials. However, because of the homogeneity in the presence of these materials and because of their presence in the base of the pillars, we believe they too are derived from Toltec offerings before the construction of the pillars of Building Four.

In the northwest sector of the second hall with portico, within the fill materials, we found another concentration of materials, such as abundant small bone and charcoal fragments, 17 small points (between 2.5 cm and 3.5 cm long by 2.1 cm wide) without any definite orientation or pattern of deposition. These points are made of obsidian, flint and basalt; five are made of green obsidian, five of gray obsidian, one of black obsidian, four of flint and two of rhyolite. All of them were extracted from flakes or blades (Figure 54).

Figure 54. This cluster of points was part of the fill materials; these items may pertain to groups later than the Toltec.

Mexica Occupation

On a regional level groups affiliated to the Mexica established their stable settlements, which were a reflection of the development and peak of this society. The Mexica to a great extent controlled the region of the northern Basin of Mexico during the Late Postclassic (Diehl 1983: 166; Healan 1989: 247; Obregón 1995: 286).

In the case of the area occupied by the Sacred Precinct, we have evidence for these occupations in different structures, such as the Burned Palace, Pyramid C (Acosta 1956), and Structure K (Cobean *et al.* 1994; Getino 2000), where we see a single Toltec-Mexica occupation pattern.

We will briefly mention that in the specific case of Building Four (Cobean *et al.* 2005), this pattern was seen with the filling and leveling of the area covered by the building, whose fundamental change was reflected in the erection of a cluster of buildings built mostly in the north zone of the area where we worked. In the northeast sector we found the best-preserved remains, while in the northeast sector and the central area the remains of Mexica structures were found in a very poor state of preservation. We could only record the remains of walls interrupted by cuts made on the terrain in modern times, when this area was the usual entrance to the central plaza of the archaeological zone.

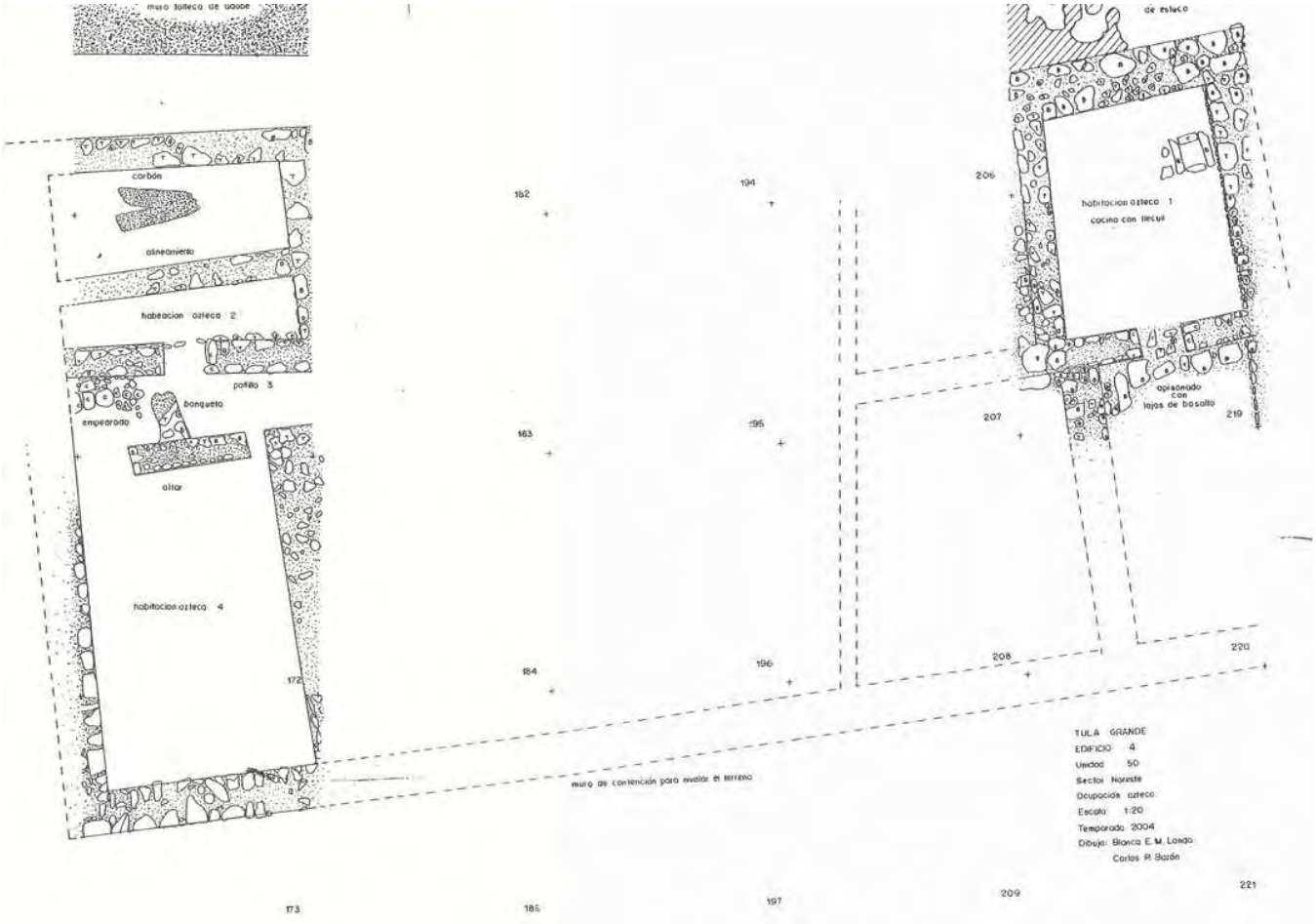

Figure 55. Plan indicating the spatial distribution of Mexica occupation in the northeast sector of Building Four (after Cobean *et al.* 2005).

However, with the data gathered so far –bearing in mind that we were not able to explore the Mexica occupation in its entirety– we can say that the settlement consists of a series of rooms, alleys and an altar, belonging to a domestic unit (Figure 55). Here we have an area for food preparation, in which we found clusters of ceramic material of domestic function (from the Palacio phase, AD 1350-1520) associated with the level of Mexica occupation (Mastache *et al.* 2002), pertaining mainly to the *Azteca III Negro sobre Anaranjado* (Figure 56) and *Azteca Anaranjado Monocromo* ceramic types (Cobean *et al.* 2005). We also found obsidian tools, such as a scraper made of green obsidian, blade fragments and flakes of obsidian, as well as fragments of eggshells and unworked bone. All this was found in a room associated with a *tlecuil* (hearth) which contained ash and the remains of carbonized organic materials.

Figure 56. Ceramic material indicating the presence of Mexica groups in Tula's region.

From the perspective of the construction system the main characteristic is the construction of walls with an average thickness of 42 cm, with basalt and *tepetate* stones and pebbles faced on the internal sides. Blocks of quarry stone were used as support on the entrances. These materials were joined with a mixture of clayey earth, without being covered by stucco, by clayey earth mortar, or any other material used to cover the walls (Figure 57). The floor level consisted of a compact layer of clayey earth in the interior spaces, while in the exterior spaces the floor level is defined by a cobbling made of stones and pebbles of quarry stone.

Figure 57. These construction features are typical of Mexica architecture in the region.

The described material was reutilized by the Mexica, and it no doubt came from Structure Four, since the types of material are the same, and even some fragments of carved quarry stones are part of the Mexica foundations.

Conclusions: Building Four and its Function

As we have seen, Building Four consists of a series of spatial units of different sizes, whose distribution, mutual association, and building constitution make it an architectonic compound designed to perform entirely private activities of a domestic kind, and/or exclusive ceremonial events. That is to say, activities in which only a small number of people of high social rank took part.

These activities and ceremonies must have been performed by Toltec rulers in an architectural environment vested with high relevance, since it is located between the two most important pyramidal constructions in Tula.

This is seen in the portable materials recorded in context during the excavation process, from which we infer the use of spaces for storing and perhaps consuming food, to illuminate and keep the interior spaces warm, and for the celebration of rituals. These

rituals were linked with –and were the basis of– the re-enactment of ceremonies in the adjacent buildings, such as Pyramid B and Pyramid C.

This kind of events and activities are evident in Mexica ceremonies; Fray Bernardino de Sahagún (1956) mentions several activities, as well as the spaces where they took place (Evans 2001, 2004). The archaeological data show architectural similarities that reinforce the data from the historical sources, which are present in Toltec buildings.

As we have stated in this report, Building Four functioned as a palace unit, a term proposed by Jorge Acosta (1956) to account for the building's function, and later adopted by Blanca Paredes (1999). If we add to this the idea of defining palaces as buildings that "integrate more than two chambers [and] show the application of construction systems with a high technical development" (Villalobos 1982: 165), and use it to define the contexts described here, we believe this concept is a feasible one. However, we are aware of the fact that more should be discerned about this before we take this concept literally. At the moment it is just an idea that comes close to our understanding about the definition of spaces in the Prehispanic world.

The process of analysis is currently underway, and the forthcoming results of the paleobotanical studies, as well as of radiocarbon dating and other studies integrated in this research, will contribute to strengthen our proposals, or else to offer new interpretations. This would allow us to approach an understanding of the social and historical development of a culture that went beyond time and space, whose memory has endured until our times.

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