The Giza Plateau Mapping Project carried out fieldwork at the Giza Pyramids in Egypt from September 2006 to June 2007. During this period we conducted two sessions of our field school for SCA inspectors: the Advanced Field School from October 7 to December 15 and a Beginners Field School from February 10 to April 4, 2007. We carried out our regular excavations from September 1 to December 15, resumed fieldwork on January 27, 2007, and continued until April 12, 2007, with laboratory work going on until June 7, 2007. Our excavations focused on two Pyramid Age settlements: the Khentkawes Town and the extensive Workers’ Settlement on the low desert, referred to as Area A and also Heit el-Ghurob (a name used by the local residents). This site has been the main focus of our work since 1988.

The Khentkawes Town (KKT)

Between late January and early April 2007, Lisa Yeomans, with Pieter Collet, supervised work in the KKT, the town, 300 m west of our Area A site, attached to the gigantic tomb of Khentkawes, an enigmatic queen who ruled at the end of the Fourth Dynasty (see Lehner 2006). Altogether Yeomans and Collet cleared, mapped, and assigned feature numbers over an area about $35 \times 55$ m. North of our 2005 work, the area spans the causeway leading to the Khentkawes tomb and includes the remains of three buildings in the eastern end of the “leg” of the town and a portion of two buildings in the “foot” (fig. 1).

Unfortunately, the mudbrick walls over most of this area were scoured down to the lowest traces or eroded away completely to expose underlying limestone bedrock or quarry debris. Much
of the thick northern enclosure wall (as well as the causeway walls) was completely gone. Some traces in the bedrock and cuts in the crushed stone and marl fill still showed the tracks of walls. Enough remained that we could tell which walls corresponded to those on Selim Hassan’s map.

Building Phases

Lisa Yeomans determined that Buildings I, J, K, and L were part of an early building phase, carried out prior to the construction of the causeway and the buildings to the west along the north side of the causeway. In short, the “foot” of the KKT existed before the “leg.” Yeomans also found that the eastern part of the town was occupied longer, with at least one phase of rebuilding.

When Yeomans cleared the entrance to the causeway (fig. 2) she found a large limestone pivot socket that projected into the causeway from the north wall and was much too large for the width of the causeway. The pivot and its jamb belonged to a doorway that preceded the causeway. This doorway must have been fitted with a swinging wooden door that would have been roughly 1.7 m wide (fig. 3).

Yeomans found evidence of another doorway, a limestone threshold, and large pivot socket in the northern enclosure wall. This opened to a street, about 2 m wide, which ran north–south between Buildings I and J and K and L.
After the inhabitants built the long east–west causeway, crossing and cutting off the north–south street, they quarried out a tunnel or underpass that allowed passage from the eastern end of the KKT “leg” to the “foot” of the town. The underpass, a meter or less wide, sinks 2.47 m at its deepest point (fig. 4). The quarrymen never finished the tunnel, leaving on the floor a series of humps rising up to half a meter, which would have made any passage difficult.

**Town Continues to the East**

When Yeomans cleared east of the KKT she found evidence that the settlement continued eastward. Beyond the end of the causeway she located the northwest corner of a mudbrick building with meter-thick walls. It was separated from the KKT by a corridor 2.44 m wide and lay at a lower elevation. The corridor was accessed by a door in the northern KKT enclosure wall, which extends east beyond the northeastern corner where the town makes its L-shaped turn (fig. 5).

Yeomans discovered that the bedrock surface drops vertically immediately under the eastern side of the eastern enclosure wall of the KKT. The enclosure wall respects and runs exactly along the drop of the ledge. The lower mudbrick building extends more than 28 m north–south along this ledge (fig. 6).
Neither this building nor the extension of the northern enclosure wall show in Hassan’s published maps or the Royal Air Force aerial photograph from the Reisner archives, taken not long after Hassan’s excavations. The area immediately east of the KKT “foot,” where the lower building is located, appears to have been covered with clean sand.

In addition to excavation, we employed two remote-sensing techniques in the Khentkawes area during this season. Glen Dash conducted a geophysical survey in the area of the Khentkawes Town in November 2006, and our Giza Laser Scanning Survey team surveyed the Khentkawes monument in December.

**Work in Area A — North of the Wall of the Crow (WCN)**

In late 2004, a contractor excavated a foundation trench just north of the Wall of the Crow for a cement corridor providing access from the Muslim and Coptic cemeteries on the west. The trench (known as DDT) ran parallel to the Wall of the Crow about 19 to 24 m north of it (fig. 7). Over 64 m of its 90.5 m length penetrated below the compact Old Kingdom surface that we had
exposed in 2004, giving us an opportunity to examine and map the underlying layers during our winter–spring 2005 season (see Lehner 2006).

The DDT cut revealed that the compact Old Kingdom surface was at the top of two layers of compact masons’ rubble, the Upper Rubble Layer and the Lower Rubble Layer, with a Sand Separation Layer in between. Judith Bunbury, Angus Graham, and Katy Lutley of the geomorphology team concluded that the lower portion of the sand in the separation layer was windblown, while the upper part was the result of anthropogenic activity. We believe that workers dumped this sand as a bed for the Upper Rubble Layer and for “Masons’ Mound,” the remains of an ancient ramp or embankment formed against the eastern end of the northern side of the wall during its construction.

In 2005 Derek Watson excavated Trench 2 (fig. 8) in order to trace the layering to the base of the Wall of the Crow (Watson 2005). In 2006 he extended Trench 2 to the west, opening a square, 6.0 m east–west × 5.6 m north–south, in which he found evidence of a series of limestone rubble walls built upon the Sand Separation Layer. Some ran parallel to the Wall of the Crow, others perpendicular, forming compartments. These were crude versions of the retaining and accretion walls that Egyptian builders used as temporary ramps and embankments for erecting large-stone structures. The evidence suggests, again, that Masons’ Mound is the remains of such a ramp or embankment.

Within his western extension, Watson excavated a deeper probe, 2.0 × 3.5 m, through the Sand Separation Layer down to the surface of the Lower Rubble Layer and to the foundation of the Wall of the Crow. In order to trace the stratification, he excavated a connection between his deep probe and the southern end of Trench 2. Watson found that the Sand Separation Layer pinches

Figure 8. WCN, Trench 2 extension and deep probe. The foundation stones of the Wall of the Crow, far right, can be seen protruding from under the wall. The section shows the composition of Masons’ Mound. Note crude limestone rubble wall running perpendicular to the Wall of the Crow. View to the east.
out toward the Wall of the Crow. Over the Lower Rubble Layer was a layer of gritty, rubbly sand, 28 to 35 cm thick. It is very possible that the builders dumped this sand to level out the Lower Rubble Layer so as to make an even bed for the ramp or embankment of Masons’ Mound.

As they did with mastaba tombs and the Great Pyramid of Khufu, the builders prepared a low masonry foundation for the larger superstructure of the Wall of the Crow. The foundation slabs range from 36 to 45 cm thick and protrude from the bottom of the lowest course of stones by 35 to 40 cm (fig. 8). The tops of the foundation slabs on the northern side were 15.91 m to 15.82 m above sea level (asl). The builders laid them onto the Lower Rubble Layer, and partially into a shallow trench or cut into this layer, at 15.41 to 15.29 m asl. This compares to the value, 15.41 m asl, for the base of the foundation slab at the northeast corner of the Wall of the Crow.

Watson’s 2006 trenches confirm that the builders laid down the Lower Rubble Layer as a hard bed on which they could bring in, maneuver, and set the stones for laying in the foundation and first course of the Wall of the Crow.

**Wall of the Crow Northeast (WCNE)**

Lisa Yeomans supervised our 2006 operations north of the eastern end of the Wall of the Crow (WCNE) (fig. 9). She excavated a connector trench between the DDT and our 2002 trench, which runs north from the northern mudbrick wall of Gallery Set I. She also excavated from the southern end of the 2002 trench to the northeast corner of the Wall of the Crow (see fig. 7).

In her extension, Yeomans excavated northward along the eastern base of Masons’ Mound, exposing a fieldstone retaining wall marking a formal, eastern boundary for the Mound. She found a second fieldstone wall about 70 cm to the east of the first. The second wall, 40 cm wide and preserved to a height of 54 cm, was built up against the face of the northern mudbrick wall of Gallery Set I and ran north while curving slightly to the east. Sandy soil with limestone chips filled the
space between this fieldstone wall and the first. It appears that the builders raised and expanded the Masons’ Mound ramp as they raised the end of the Wall of the Crow.

In this area north of the gallery, she also identified three floor levels, one of which contained a pit where people had dumped bread-pot fragments and other bakery waste. This waste must have come from Gallery Set I via a doorway, 80 cm wide, set in the gallery’s northern mudbrick wall. This doorway was apparently in use while the Wall of the Crow was under construction and was later blocked.

Yeomans extended her trench westward at the end of the Wall of the Crow to clarify the relationship between the Wall of the Crow and Gallery Set I. In 2002 we learned that the eastern end of the Wall of the Crow was built up against the western wall of Gallery Set I. The corners of Gallery Set I, the Wall of the Crow, and Masons’ Mound all meet here and would have touched. But when the builders placed the limestone blocks up against the western face of the gallery, they angled the end of the Wall of the Crow slightly west of north, leaving a thin, pie-slice gap, into which the fieldstone wall runs (figs. 10, 11).

How could the masons have built the fieldstone wall in that tight gap? Most likely they constructed the Wall of the Crow and the ramp in tandem, or in sequence, with the successive courses of the Wall of the Crow.

The actual corner stone of the Wall of the Crow was a very large block, 1.60 m east–west × 88 cm high. It sat on a thinner foundation slab, 43 to 44 cm thick, positioned in a foundation trench filled with smaller stones and sand. The large corner stone above it projected 20 or 30 cm farther out than the face of the foundation slab (fig. 11). This is the opposite of what Watson found in Trench 2, where the foundation slabs project about 35–40 cm from the face of the first course above. The difference lay in the fact that the masons dressed the lower courses of stone in Trench 2, but did not carry out this operation at the east end of the Wall of the Crow, leaving the wall unfinished. The bottom of the foundation slab was 69 cm lower than the base of the adjacent mudbrick walls of Gallery Set I. Here the bottom of the Wall of the Crow foundation is 15.41 m asl. This is within centimeters of the elevation at the bottom of the
foundation slabs that Watson excavated and that we found in the Wall of the Crow South operation’s deep trench in 1991 and 2001. The builders must have prepared a very level bed for laying out the foundation of the Wall of the Crow.

The Wall of the Crow was a truly gigantic mass parked up against the western wall of Gallery Set I — just 11 cm from the mudbrick wall. Why build this massive stone structure up against an already existing gallery block, thereby sealing off all access to the site on the northwest, except for through the gate in the center of the Wall of the Crow? The Wall of the Crow speaks of “permanence” (even though the builders never finished dressing down the sides). The builders must have intended the wall to fulfill its purpose for a very long time and the Gallery Complex as well.

Yet, all our evidence shows that the Gallery Complex and this whole urban district had a short life-span. The site was occupied only until the end of Menkaure’s reign. Menkaure’s successor, Shepseskaf, built his monument at South Saqqara, 20 km away. The reach for permanence was in vain. The builders left the Wall of the Crow unfinished with one of its construction ramps — Masons’ Mound — still in place.

The Backhoe Trenches (BHT, BBHT1, BBHT2)

Before, or shortly after, we began our excavations in 1988–1989, someone using a mechanized digger cut a series of large, deep trenches through the ancient settlement deposits, exposing section views of the site (fig. 12). This season we decided to work in BBHT1 and BBHT2 because...
the sides of the trenches had started collapsing as a result of the wetting and drying cycles caused by the high water table over the last few years. In addition we completed our long-term excavations in the first backhoe trench, BHT.

**BBHT1: The Biggest Backhoe Trench**

In November 2000 we uncovered the “biggest backhoe trench,” BBHT1, 25 m north–south × 9 m wide. This clearance showed large-scale architecture of great interest, but it was necessary to temporarily focus our attention elsewhere. Finally this season, Anies Hassan clarified and recorded the mudbrick walls that the digger had cut and then focused on excavations in grid square 4.N24 at the southeast corner of BBHT1, where we had long observed a large mudbrick wall as thick as the gallery walls.

The upper phase in square 4.N24 was badly disturbed, probably as a result of water, with the deposits “melting” into each other and making it very hard to define individual features. Below these disturbed deposits was a coherent older layout in phase with the mudbrick wall (fig. 13).

The wall, 1.25 m wide, runs east–west across the entire square, intersecting with another 1.25 m thick wall. The latter wall is slightly thinner south of the intersection, where it is built of limestone pieces (possibly the foundation for mudbrick). These two major walls formed four rectangular spaces, which may have been interior rooms. Features here include a bin and a doorway.

The results in square 4.N24 reveal that very substantial, complex architecture existed far east and north of Main Street dating from an older phase. This architecture may comprise structures similar to the Manor in the southeast corner of Gallery Set II. Given that the Manor had exceptionally thick walls, we have suggested that it was home to an overseer of the Gallery Complex.
The results of our work in square 4.N24 suggest that major structures were built east beyond the Gallery Complex. The major cross walls here are much thicker than the thickest walls of structures in the Western Town that we have hypothesized were elite houses.

**BBHT2: Second Largest Backhoe Trench**

BBHT2 measures 20 × 5 m and is at the northern end of EOG (East of the Galleries), an area with bakeries and other production facilities (see fig. 12). In carving out BBHT2, the mechanical digger cut all the way through two major phases of the ancient settlement, and it exposed a “shelf” of older phase walls and floors on the southern and western edges of the trench. In 2006 Dan Hounsell supervised the cleaning and recording of the sections in the BBHT2 and excavated the upper, later phase of occupation in the area adjacent to the southwest corner of the trench.

In an area between the Hypostyle Hall and BBHT2, Hounsell and Advanced Field School students Ahmed al-Laithy and Rabia Eissa excavated in four oblong enclosures defined by fieldstone walls. These structures, which were probably bakeries, date to a late occupation of the site (fig. 14).

Enclosure A, situated against the outer mudbrick wall of the Hypostyle Hall at the far eastern end of Gallery Set III, had two chambers connected by a doorway, 70 cm wide. In the floor of the northern chamber (Room 3), Hounsell excavated nine roughly circular depressions, with diameters from 48 to 60 cm.

In Enclosure B, the next one to the east, there were also depressions in the floor of the northern room, some of which roughly mirrored the installation in Enclosure A. These bowl-shaped pits ranged from 40 to 58 cm in diameter. In both rooms the inhabitants had spread debris to level the floor and then made new shallow pits in the higher floor. These depressions might have been for vats for ingredients — flour, water, malt, and ferment — similar to the three vats in the bakeries we discovered in 1991. Or could the shallow depressions have been emplacements for grinding stones used to mill flour or to crush malted barley grains?

Enclosure C, the next to the east, was truncated on the north by the BBHT2 which left a shallow cut that exposed a “shelf” of older-phase walls and deposits underneath it.

Room 5 is an oblong chamber oriented east–west just north of Enclosures A and B. The backhoe almost obliterated the eastern side of the room, but a cross wall lines up with the eastern wall of Enclosure B, possibly indicating the eastern limit of Room 5. Unlike Rooms 3 and 4, this chamber saw little remodeling. It appears to have been a common vestibule for Enclosures A and B, perhaps a control room where someone monitored materials and activities within these enclosures.

Ahmed el-Laithy and Rabia Eissa excavated in Enclosure D and confirmed that it was a bakery. With a trench 1.80 m wide (east–west) at the southern end, 1.33 m wide at the northern end, and 9.40 m long, they longitudinally sectioned half of the bakery, which is broadly of the same period as the other enclosures.

A large pottery vat, like those in the two bakeries we found in 1991 (Lehner 1992c), was in the southeast corner in a small room.
1.80 m long, defined by a stub of a wall that projected from the main western wall. In the longer chamber to the north, a weathered group of broken bread pots lay in front of what might have been an entrance at the east end of the northern wall. Baking pits extended for 5.10 m along the length of the western wall of the northern room. At the far northern end of the western side of the bakery, a piece of granite and orange-burnt earth may have been the remains of a platform hearth, like those in the southeast corners of the 1991 bakeries. At the north end the mechanical digger that carved out BBHT2 removed the hearth platform and probably the doorway.

The layout is similar to the 1991 bakeries (Lehner 1992c) but turned in the opposite direction. The doorway and hearth appear to be in the northeast instead of the southwest corner; the hearth platform, where we think the bakers stacked the pots and heated them, is in the northwest instead of the southeast corner. The baking pits are along the western instead of the eastern wall, and the vat partially showing at the southern end of the bakery suggests that the vats were in the southeast rather than the northwest corners.

A feature we have not found in other bakeries was built into the southwest corner of the bakery: a bin, 90 × 80 cm, enclosed by a thin, low wall of single marl bricks, built up against the southern and western walls of the bakery. Another unique feature turned up on an ashy surface against the west wall of the back room: two bivalve half-shells, each 8 cm wide × 13 cm long. Did the bakers use these half-shells as scoops? Or did they have some symbolic or magical significance?

Excavations in EOG and BHT: The First Backhoe Trench

The eastern (west-facing) section of the BHT cut through two major phases, both with intensive craft production involving fire. In the younger phase the inhabitants discarded large quantities of pottery fragments — mostly bread molds — in a thick layer that banked up around limestone pedestals arranged in rows. In the older phase they discarded quantities of curious “pink stuff” (PS) against the eastern side of a long, north–south mudbrick wall (see fig. 12).

The mechanized digger took out most of the deposits of the older phase on the opposite, western, side of the wall, but spared a bank of the lower layers. On this bar, which we dubbed the Faience Balk, we found evidence of faience production including faience tiles, the bottom of a small vessel, crushed quartz, and the peculiar slag-like “pink stuff.” We hypothesized that faience workers dumped waste from their production on the other, eastern, side of the long mudbrick wall.

During the 2006 season, Tim Stevens, working with Mike House and Delphine Driaux, supervised excavations in EOG/BHT (squares 4.F20–21, 4.E21; see fig. 12).

The Faience Balk

On the Faience Balk, Stevens excavated a series of deposits that appear to confirm the hypothesis that faience was made here. In one pit he found a fragile piece of thin faience and a possible fragment of copper. The lower layer of the pit contained a conical gaming piece, flat faience “tablet” fragments, green slag, copper, and a faience Horus eye (Stevens, Weekly Report 30ix–5x06). The fill of the second pit included another faience “tablet” fragment, while a third pit contained a piece of faience and a copper-stained quartz clast. In a 12 cm thick layer of crushed quartz, Stevens found seven more faience “tablet” fragments, faience slag/copper/stained quartz clasts, small shell fragments, and two larger shells, which might have been used as a source of calcite. Stevens suggested, “… quartz, limestone, shell, sand, and possibly ground ceramics, were all being used in this process” (Stevens, Weekly Report 12x06).
Excavating the Pink Stuff (PS)

One goal for the 2006 season was to rapidly remove the PS across the eastern half of EOG in order to expose the early-phase architecture and floors. The PS removal zone extended 11.10 m north–south. On the north it was 3.13 m wide and on the south 2.06 m wide, a width decrease to the south due to the slight angle west of north of the early-phase wall. If we include the wall and the early-phase layers to the west of the wall at the southern end of the BHT, the whole lower phase exposure was 3.46 m wide.

The team found that the PS was a massive dump of soft waste from some pyrotechnic activity (fig. 15). It contained small pieces of faience and slag. At the northern end of the PS zone, House came upon a large round pit and excavated through seven or eight distinct PS layers with a combined thickness of 50 to 80 cm. He did not reach the bottom of the pit due to the high water table.

Investigating the Lower Phase of the EOG

After the team removed much of the PS east of the early-phase mudbrick wall, we could see that this wall ran for 11 m, most of the length of the excavations along the eastern side of the BHT. At the far southern end the wall turned to the east.

The PS layer filled the pit and rose in a hummock at the northeast corner of the excavation area. House excavated a 1 m wide trench through the remaining PS material, an underlying deposit, and down to the floor along...
the eastern base of the main north–south wall. The excavations exposed a row of five bread pots turned upside down, resting on their rims. He excavated an east–west shallow trench, 1 m wide, through the lowest layers above the floor on which the bread pots rested.

To the north of the bread pots, we uncovered a deposit of concentrated bread mold fragments, which extended 2.70 m north–south and a little over 2 m east–west. On the west the pottery fragments bank up against the face of the main mudbrick wall. On the south they run up to the row of bread pots along the north of a rectangular space, 60 cm wide (north–south) × 2.07 m long (east–west). A line of upside-down bread pots formed the eastern side of this space. The eastern line of pots runs north–south under a wall lying directly over the bread pot ensemble (figs. 16–17). This later wall, feature number (25,120), extends west 1.36 m from the eastern limit of excavation. It is 60 cm wide, formed of headers on the north side and headers and stretchers on the south. This wall seems to have been cut about 92 cm from the western face of the main north–south wall (20,647). It was probably an internal wall forming a small room to the south, measuring 3.20 m north–south × 2.20 m east–west to the limit of excavation. The room on the other side of the wall, a large chamber, continues into the northern balk.

**Main Street East (MSE): Clues to the Pedestal Mystery**

In 2006 and 2007 we returned to excavations at the far eastern end of Main Street, area MSE, where Ashraf Abd al-Aziz and a team, including field-school students, excavated seven 5 × 5 m squares running north–south, 4.N28–H28 (see fig. 12). They were tracking a thick mudbrick wall that we had uncovered in square 4.L28 under layers of Nile flood deposits. It appeared to have been an important boundary between the production area east of the galleries and the Eastern Town.

**Boundary Wall Confirmed**

By the end of the 2007 field-school excavations the team had determined that the boundary wall continued south nearly 20 m. The wall probably once ran farther north and south, possibly all the way to the entrance of the Royal Administrative Building (RAB). It may have been an imposing barrier between the Eastern Town and the EOG production yard. At some point, the inhabitants removed the wall on the north and appear to have replaced it with a fieldstone wall on the south, continuing toward the RAB. The team found fieldstones preserved for a thickness of only a few centimeters in their southern excavation squares.

![Figure 18. Map of the MSE operation](oi.uchicago.edu)
Pedestal Series

Just as dramatic as confirmation of the eastern Boundary Wall was the discovery of twenty pedestals, similar to ones we have found elsewhere on the site, arrayed in a line along the western side of the wall and separated by a narrow corridor (fig. 18). We know from the pedestal assembly in the southern corridor of the Pedestal Building (see below) that the pedestals supported compartments above the slots between the pedestals. Ceramic jars sat in sockets at the base of the slots, possibly to catch liquid dripping from whatever was stored in the compartments. The field-school team found little sockets at the bases of eight of the slots between the pedestals. The sockets were formed of mudbrick and stone fragments, presumably for holding jars like those in the Pedestal Building (see below). Whatever the ancient inhabitants did with these curious structures, they were doing it incrementally, but on a large scale, over the entire site from the Western Town to Main Street East.

The Royal Administrative Building (RAB)

At the beginning of the 2006 season it was a sad sight to see water pooling in the deep part of the Royal Administrative Building (RAB), one of several ponds across the site created by a dramatic rise in the water table that began in 2005. Freya Sadarangani supervised excavations during the 2006 and 2007 seasons, working in 2006 with field-school students (fig. 19).

During 2004 and 2005 her team had examined the northwest corner of the RAB and chronicled the construction of the complex, its first occupation, all subsequent phases of structural remodeling and occupation, and its eventual collapse. These excavations revealed an earlier building
(Structural Complex 2), which ancient workers demolished and leveled in order to construct the later complex (Structural Complex 1), the greater RAB enclosure (Sadarangani 2005).

In 2006 Sadarangani’s team extended their excavations eastward with a transect running to the eastern wall of the RAB through the seven squares 4.T23–29. During the 2007 season they expanded their excavations through the open area on the north side of the RAB’s northern wall.

**Rooms of the Early Phase**

The team found more remains of Structural Complex 2 to the east, but preservation was poor. Ancient workers had badly damaged many of the walls when they built the later Complex 1. Enough remained to suggest eight spaces or rooms, but none of these had all original bounding walls. The walls were oriented just west of north, with plastered faces. Remains of silty surfaces overlay earlier plastered floors and limestone door sockets. Little remained of the overall spatial organization, but the team excavated parts of walls that had formed two rooms, P and O, with a mudbrick bench or (sleeping?) platform against the north face of the southern wall of Room O. Sheets of red-painted wall plaster from the fill of the eastern end of Room O suggest that this room or Room Q, adjacent on the east, may have been painted. Room Q also featured a reddish-pink floor. A limestone threshold and pivot socket marked the only surviving doorway, 50 cm wide, at the northeast corner of Room Q. Since the door would have swung inward, Room Q may have been a private, secure space.

**A Building Site**

The RAB builders dug many large pits in the open L-shaped court between the Sunken Court of Silos, the northern RAB wall, and along the rooms on the west side of the complex. The evidence suggests that the builders excavated some of these pits to obtain sand for making bricks and other building purposes.

The ancient builders also dug a hole at least 1.5 m deep, 20 m (east–west) × at least 10 m (north–south), to create the Sunken Court where they then built the mudbrick silos. At the same time they built up the areas to the north, east, and west, perhaps taking advantage of a natural ridge. In pits cut through the deposits we see tip lines where people dumped material downward from north to south. If the silos were for grain storage, the Sunken Court made it possible to easily fill them from the higher level they created above. Sadarangani believes that the sunken enclosure and the silos were planned from the inception of the later phase of building the RAB. “The area had been excavated to the lower level, the circular structures had been built, and the strip external to the structures backfilled, prior to the construction of the eastern limestone enclosure wall of the RAB” (Sadarangani 2007).

The Sunken Court was bounded on the west by a substantial east–west mudbrick wall. By the end of excavation we had not yet reached the base of this wall nor that of an east–west mudbrick wall to the north, which underlay later-phase architecture. We have so far found eight silos along the east, north, and west sides of the court. They stand one against another

Figure 20. The RAB silos and entry into the Silo Court. The dark sand in the background is backfill of the Sunken Court, saturated and moldy from ground water. View to the southeast
except for a gap of 1.40 m in the northwest corner, which corresponds to a gap in the northern mudbrick wall. Along with two small north–south walls on either side, these openings create an entrance into the central portion of the compound (fig. 20).

**Ever-Changing Courtyard**

The broad, L-shaped space, probably open to the sky, was approximately 7 m wide on the north × about 15 m wide west of the Sunken Court. From the northeast entrance of the RAB people could have accessed rooms at the west side of the complex and possibly the Sunken Court.

Between the north wall of the RAB and the large limestone Enclosure Wall ran a roadway, which we dubbed “RAB Street,” that would have channeled and possibly restricted access from the west through the northeastern entrance of the RAB (see fig. 19). People might have also approached from the north via a lane running along the Boundary Wall in area MSE. At present we do not know about a southern access to RAB.

Access and movement within the complex changed over time. On the west side of the L-shaped courtyard people built a limestone wall, creating a corridor, 1.20 m wide.

The corridor gave access to the western rooms through a door in a central chamber (Room 6). Later, they demolished the wall and built a narrow north–south mudbrick wall 5 m to the east. Both walls were attempts to separate the western rooms from the rest of the complex, perhaps for security. The walls may have prevented the workers/residents in the western rooms from having direct access to the Sunken Court of Silos.

**Circular Features**

The earliest occupation features of the northern courtyard included a roughly laid, sloping metalled surface of limestone gravel and a circular pit bordered with mudbrick. Two clusters of circular depressions flanked the pit, twenty-three on the west and eight on the east, along with a shallow, clay-lined pit (fig. 21). The diameters and depths of the western depressions could have accommodated the bases of small bread molds. The eastern depressions are more varied, with diameters and depths suitable as sockets for the bases of medium-sized bread molds. However, we found no evidence of burning, such as we might expect if these were baking pits.

The mudbrick-bordered, circular pit was in use longer than the pot emplacements and underwent several alterations. People filled the original pit with mudbrick and rebuilt the mudbrick border on top. During the final renovation they added a limestone border (three courses remain), enclosing a space 1.52 × 1.34 m. The smaller circular depressions went out of use, and people dug a rectangular pit, just to the north, and filled it with pottery fragments. Later they covered this rectangular pit with a surface and built a mudbrick bench, 1.54 × 1.04 m, between the circular limestone feature and the northern RAB enclosure wall. Could the bench have been a sleeping platform?

The next phase in the changing footprint of the courtyard saw the disbandment of the narrow north–south mudbrick wall and the construction of walls, 1.10 m wide, running north–south and east–west 5 m east of the RAB.
western rooms and continuing south beyond the limit of excavation. These walls redefined the enclosure along the west of the Sunken Court of Silos. Where the east–west wall reached the Sunken Enclosure its eastern end appeared to have been robbed. This wall may have continued east as a later build of the northern wall bounding the Sunken Court.

In the final phases of occupation the relatively short-lived mudbrick wall bordering the enclosure to the west of the Sunken Court was demolished or collapsed. People increasingly dumped waste throughout the courtyard. The opening up of this space appears to correspond with a reduction in activity in the western rooms, and possibly a partial abandonment of that area.

Area AA and the Pedestal Building (PB)

During our first excavation on the site in 1988–1989, we exposed part of a mudbrick structure and a building of fieldstone walls in Area AA. We called the latter the Pedestal Building (PB) because rectangular pedestals, 50–70 cm × 1.20 m long, ran down each side of the structure (fig. 22).

During our 2006 and 2007 seasons, James Taylor, Chaz Morse, and Banu Aydoğlugil excavated the southern end of the PB and areas flanking it on the north and east to explore its relationship to surrounding buildings and to the Western Town. Taylor also investigated the building sequence of the PB itself.

Southern Corridor Excavations

Fiona Baker excavated the southern end of the PB in 1991 (fig. 23) and found, attached to the back wall of the building, a series of five short mudbrick walls with brick tumble between them. Since we had found traces of such walls on the tops of pedestals in other places we suspected that the walls formed compartments resting over the spaces between the pedestals.

In 2006 we found that the walls did indeed form compartments on pedestals. They stood at least 20 to 30 cm high on four pedestals, which were 56 to 64 cm high × 55 cm wide × 74 cm deep. A half pedestal in the east marked a total of four slots. The series ended in a narrow box, 41 cm wide, formed by an L-shaped single-brick partition wall built against an extension of the east wall of the PB.

The partitions created four compartments, each about 60 cm wide, formed over one of the slots between the pedestals. The widths of the slots are irregular because the sides of the pedestals are mostly unfinished. One slot,
for example, varies from 9 to 14 cm wide; another is 17 cm wide. Marl plaster goes down only 15 to 20 cm into the sides of the slots and only 23 to 36 cm down the front faces of the pedestals. Similarly, the inner sides of the box at the eastern end are very irregular, with large angular limestone fragments undressed and unplastered.

At the base of the pedestals we found four complete red pottery jars still in place, leaning inward against the pedestals just in front of the slots (figs. 23–24). Commonly called “beer jars,” (our type AB4, see Wodzińska 2007: 296–97), these porous, crude, handmade jars are the second most common type of pottery across the site, after bread molds. The shoulders of jars, 14 to 18.5 cm wide, just fit between the sides of the slots. With mouths 8.5 to 9.0 cm in diameter, the jars stood about 25 to 28 cm off the ground. A larger jar (type AB1, 134 cm high, 21 cm at shoulder, mouth about 8 cm diameter), with white wash over a marl fabric, lay against the southern face of the westernmost pedestal (fig. 23).

On the floor, the jar bottoms stood in the fill of a crude channel, 12 to 20 cm wide, with a border of limestone pieces. In 1988–89 we found similar channels along the bases of
pedestals in the PB (Lehner 1992a: 23–24) and, more recently, in Area EOG (see fig. 12). Within the channels in the PB the builders had made little circles of sherds and limestone fragments, or in one case a mud-filled hole lined with marl, in front of the slots between the pedestals. In front of the MSE pedestals the workers formed little sockets of mudbrick and stone fragments (see above). These sockets and circles were for the pointed bottoms of jars. The channels in which we find the sockets are more puzzling, for they come to dead ends and do not drain anywhere. What’s more, in the PB the inhabitants sometimes covered the channels when they re-plastered the floor with marl.

Having seen the complete pedestal assembly in the southern corridor, we could imagine it replicated many times over in the main room of the Pedestal Building. Rows of six pedestals on the west and, originally, eight pedestals on the east, made six and eight slots respectively (fig. 25). Each slot of each row ran between two adjacent pedestals that supported two compartments, one facing east, another facing west. If, as in the southern corridor, jars leaned into each slot, the assembly included a total of twenty-eight jars. The whole ensemble also included the smaller set of two slots, two jars, and two compartments in the little box in the northeast corner (fig. 22).

We are considering several hypotheses about the purpose and function of this ensemble. The compartments appear to have been for storage, off the ground, with ventilation underneath provided by the spaces between the pedestals. The upright jars may have caught a substance dripping from storage containers. Or, if filled with water, the jars might have helped to keep the compartments cool and moist by the evaporation of the water. The function of the pedestals may have been related to the activities in the structures immediately north of the PB.

Figure 25. Reconstruction of the Pedestal Building with partition walls forming compartments over the slots and pottery jars at the base of each slot
The North Building: Area FS-AA

On the north side of the PB is an east–west corridor with an opening on the north leading into another structure (Lehner 1992c: 57, fig. 1). Along the west side of this northern building the field-school students excavated a corridor, 90 cm wide (figs. 26–27). Its west side was bounded by a north–south limestone wall, which was an extension of the west wall of the PB. The narrow corridor ran from a doorway, 68 cm wide, at the western end of the corridor between the PB and the Oven Room. The western face of the corridor’s eastern wall was painted black along the base. The students excavated down to a loamy mud floor, the same level as the floor of the PB, 40 cm higher than the floors in the northern building.

To the east of the corridor we excavated a series of rooms in the North Building, north and east of the PB (fig. 27). We ascertained the general shape and dimensions of the North Building by plotting the walls that show in the ruin surface (the “mud mass”) on the northeast, where we have not yet excavated, and by combining the plan of these walls with the ruins on the southwest, where we have excavated. This rectangular mudbrick complex is 16.5 m north–south × 12.4 m east–west. North–south walls divided the building into three strips. The eastern strip, 2.8 to 3.0 m wide, extends south to adjoin a set of baking chambers located east of the Pedestal Building (see below). The middle strip of the northern building, 4.0 to 4.2 m (8 cubits) wide, includes the Bin Room and the western strip consists of the Oven Room and Long Room.

In the first chamber immediately north of the PB, the Oven Room, Banu Aydınoğlugil excavated two ovens, about 70 × 85 (south oven) and 92 × 94 cm (north oven) in diameter (fig. 29). The oven walls were a single-brick (10–12 cm) thick. Irregular depressions in the floor at the eastern bases of the ovens seem to have been part of the assembly. Whitish wood ash filled the bottom interior of the ovens.

The square Oven Room, only 3.0 × 3.2 m, had no other features except doorways to the east and north. Enclosed in thick alluvial

Figure 26. The corridor along the western side of Area AA-FS following excavations by the students of the 2007 field school. View to the north

Figure 27. Schematic plan of the Pedestal Building and the mudbrick building to the north and east. The Long Room, Oven Room, Bin Room, and eastern bakeries were excavated in 2006–2007
mudbrick walls, it must have been very warm when both ovens were stoked. The inhabitants had at some point blocked the eastern doorway and plastered over it. The floor of the Oven Room is 40 cm lower than the general floor level of the Pedestal Building. One must step down through the entrance from the transverse corridor along the northern front of the Pedestal Building.

From the Oven Room one could access the Long Room, 3.20 m wide, on the north. We excavated most of the Long Room, although not the northern end as it was outside the limits of excavation. However, traces of a northern wall indicate a total length of about 11.50 m (22 cubits). The excavators found, on the clean mud-paved floor of the Long Room, a burnt spot against the wall right of the doorway into the Oven Room. Two low curbs formed of a single row of bricks run along the base of the western and eastern walls of the Long Room.

Figure 29. Oven Room and Bin Room. View to the west

Figure 30. Excavations north of the Pedestal Building in 2006. The Oven Room is to right, the Bin Room to the left. The Pedestal Building is on the right in the background. View to the southwest
To the east of the Oven Room, we excavated a chamber, 2.8 m × 1.98 m, which contained three rectangular bins of approximately equal size that divided the northern part of the chamber (figs. 29–30). A corridor ran along the bins on the south. Low round-topped walls, about 25 cm high, partitioned the bins from one another and from the corridor. Before the workers made the partition walls, they plastered the inner southern and eastern faces of the main walls of the room, facing into the room, with a pink gypsum plaster.

We do not know how the ancient inhabitants used the northern building. One suggestion is that the Long Room (and perhaps the similar room in the eastern strip) and the bins were for malting. In this process barley or other grains sprout by being first steeped in water and then kept moist; after some days growth is arrested by drying and “kilning.” The malting process in breweries and distilleries of more recent times involved bins, broad, open “malting floors,” and kilns or ovens for drying.

**The AA–Western Town Transect (B)**

We first worked in the area immediately east of the PB in 1988–89, when our first excavation square, A1, uncovered part of the eastern bakery complex (Lehner 1992b: 23). We continued in season 2005 in our “Transect B,” where Lauren Bruning supervised Field School Unit 1 (FS1) excavations (Lehner, Kamel, and Tavares 2006: 69). Their preliminary work in squares 5.K50, 5.J50, and 6.K1 located major walls and linked the PB with the Western Town to the east.

This season we excavated a series of rooms that is a southerly extension of the eastern strip of the northern building (fig. 27). On the south this room complex is bounded by an east–west limestone wall that is also the southern boundary of the PB. A north–south mudbrick wall on the east side separated the complex from House Unit 1 (see below). So far we have found no access or doorway through this major north–south wall, so the PB and northern complex appear to have been strictly separated from the Western Town. The eastern arrangement appears to have been entered through a broad corridor, slightly over 2.5 m wide, running along the east side of the complex.

A doorway, 74 cm wide, opened to a room 4.15 × 2.56 m, off the west side of the broad corridor. A large trapezoidal limestone slab, 2 × 56 cm and 5 cm thick, formed the threshold (fig. 31). Susan Sobhi excavated two floors in this chamber, which we dubbed the Limestone Threshold Room. She removed the upper floor, made of compact, dark gray ashy soil, 2 cm thick, over a make-up layer of pottery fragments, from the northwest and

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*Figure 31. Map of the East Bakery Complex in Area AA*
southeast quadrants. The underlying floor is 2 cm thick over sand, as we could see in a pit, which also removed part of the southern wall.

Just outside the doorway of the Limestone Threshold Room two large bread pots lay on the floor, obscuring evidence of a narrow doorway and corridor leading south into a series of small rooms (fig. 31). At the end of the season, after the excavations had ceased, we found a narrow, single-brick jamb extending east from the exterior wall of the Limestone Threshold Room. Several centimeters farther east, stones set into the floor may mark the threshold of an entrance into a narrow corridor. A portion of the eastern wall is preserved running north from the Basin Room and forming a corridor about 1 m wide. If this corridor had continued all the way to the jamb it would have restricted access to these rooms, which appear to have been a baking complex.

The Basin and Bakery Room

At the south end of the narrow corridor a doorway, 58 cm wide, opened into the Basin and Bakery Room, 2.40 × 4.45 m (fig. 31). In the northeast corner a low, round-topped rim, a single brick wide, enclosed a basin 2.20 × 1.90 m. The basin had a noticeable and probably intentional oval-shaped dip to the south, lined with silt. A silt-lined hole in the center of the basin, 50 cm diameter at the top and 30 cm in diameter at bottom, could have accommodated one of the small vats, about 42 cm diameter, such as we have found embedded in floors elsewhere on the site.

A fireplace platform, about 1 m × 77 cm, was built into the southwest corner of the Bakery Room. Extending east of the fireplace, we found a patch of compact, gray wood ash, 65 × 65 cm. When we removed the hearth we found a large semi-circular depression in the same corner. This and irregular depressions at the base of the eastern and southern walls must have been baking pits.

Four Rooms and a Fireplace

To the west of the Basin and Bakery Room we uncovered four small rooms we provisionally designated A through D (fig. 31). Room A is divided into a north and south chamber by short jambs or pilasters projecting from the western and eastern walls. The northwest corner of the room was blackened and reddened by fire from a hearth. The southern part of the room featured a circular feature, 50 cm in diameter, set into the floor and lined with dense gray clay and granite fragments.

Room B was also partitioned. Along the line of the jambs in A, a dip in the floor and two stone fragments embedded in the floor divide the room into northern and southern halves. Although erosion took down the eastern wall to just a few centimeters, traces remain of a door at the north end, 60 cm wide, and another at the south end, 77 cm wide. The southern doorway had a swinging wooden door, indicated by a pivot socket, 22 × 22 cm, with a pivot hole 2 cm deep. The door closed against a flat granite piece set into the western face of the wall on the north side of the doorway. An emplacement for a small flat-bottomed ceramic bowl graced the southwest corner.

A doorway, 58 cm wide, opened from Room A to Room C, which was a baking facility. Concentrated gray ash covered the floor in the southeast corner. Baking pits were sunk into the floor along all four walls.

Room D was also used for baking. In the northwest and southeast quadrants we excavated concentrated dark gray ash, 40 cm thick. The highest surface of the ash represents the latest “floor” in what must have been a gradual accumulation. We found linear depressions in this surface along the south, east, and west walls, which may have been for baking bread in molds, or for setting bread pots after baking. The thick deposit of ash over the floor partially covered a fireplace, 90 ×
93 cm, formed of crude brickwork against the walls of the northwest corner. The crude, round-fronted platform rose 20 cm off the floor.

The fragments of a large pottery vessel and nearly complete bread trays (provisionally type F1A; Wodzińska 2007: 306–07) rested upside down on the platform. A number of fragments of round, flat bread molds, or bread trays, were built into the fireplace and into the mudbrick walls of the chamber. Two or three nearly complete bread trays, type F1A or F1C (Wodzińska 2007: 306–07), were stacked within the fireplace.

The Basin and Bakery Room, along with Rooms A–D, appear to have comprised a baking complex with highly restricted, exclusive access through the narrow corridor.

**House Unit 1 in SFW (SFW.H1)**

House Unit 1 is one of three large houses in the Western Town that we provisionally distinguished on the basis of the thick, long outer walls. These units could be houses, although the boundaries are not clear except, perhaps, in the case of House Unit 3. In 2006 and 2007 we continued work that we had begun here in 2005. Yukinori Kawae supervised the excavations, assisted by Manami Yahata.

**The 2006 Excavations**

After seasons 2004 and 2005 we had not yet defined the western and northern boundaries of House Unit 1. In 2006 we determined what are most probably the outer walls (fig. 32). If these were indeed the bounding walls, House Unit 1 spanned approximately 25 m east–west × 16 m north–south, an area of 400 m². We also determined that House Unit 1 was built before the

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*Figure 32. Map of House Unit 1. After a field drawing by Yukinori Kawae*
Pedestal Building and adjacent bakery complex. Their common southern wall (east–west limestone wall) abuts the western wall of House Unit 1.

The 2007 Excavations: Niche and Bed Platform

During the 2007 season we excavated the large central room (10,780), 8.5 × 3.0 m, the least accessible interior space of House Unit 1. Assuming the entrance to the house was in the northeast corner, one had to go through at least nine doorways to reach the room. But access had been reconfigured two or three times, as indicated by blocked doorways. The last doorway into the room, still active at the time the site was abandoned, is on the south side. Just inside the door a sloping platform occupies the southwestern corner of the room (fig. 33). In other areas of the site we have seen bed platforms near or across doorways, where guards, who regulated access, slept at their posts (Lehner and Sadarangani 2007; Sadarangani 2005: 208–09).

However, features of this platform suggest it was the bed of a more important person. Oriented east–west, the platform occupies the southwest corner of the room and sits in a niche formed by pilasters built onto the east and west walls. The platform, 1.96 × 1.32 m wide, slopes down from west to east. The lower, eastern end, which stops just short of the doorway (10,786) that opens to the south, shows a distinctive “footboard.” The 70 cm of the north half of this raised bar is cylindrical or rounded, while the 62 cm of the southern half is rectangular. Could the difference have marked sides of the bed for a sleeping couple?

The room may have been the main hall of the house with a bedchamber for the proprietor or senior resident. Just in front of the platform to the north we found a pile of fragments of molded marl clay with red-painted surfaces. While these could derive from the walls and roof of the room, the fact that this concentration lay immediately north of the bed platform suggests the fragments could derive from decoration of the niche enclosing the bed.

In 2007 we also excavated a peculiar series of six bins in a room, 5.86 m about 2.5 m, in the southwest corner of House Unit 1 (fig. 34). A narrow corridor, 50 cm wide, passed along the east side of the bins. These had been re-plastered and painted at least once. The partitions are preserved only 6 to 31 cm high.

Pottery Mound Stratigraphy

Pottery Mound (PM) is a large, mounded dump within a confined, rectangular space south of House Unit 1, situated between it and House Unit 2. The two quadrants we excavated during 2005...
yielded an extraordinary collection of trash that suggested high status for the residents of the large house units. Among the 2,540 sealings thus far registered from PM, a large number bear motifs and designs that include titles such as “Royal Scribe” and appear to refer to institutions that we know from other textual sources belonged to the royal house, the palace, and the vizier’s office. However, PM layers covered what appeared to be the remains of the collapsed southern wall of House Unit 1. This seemed to indicate that the residents of House Unit 1 lived here before people dumped the trash of PM. This season we had to modify that conclusion. We found the earliest PM layers, laden with pot sherds and other trash, were dumped against the remains of the wall and under a tumbled layer of mudbrick, suggesting that some of the PM dumping began before the southern mudbrick wall was destroyed, so possibly before people abandoned the southern part of House Unit 1.

We also determined that this mudbrick layer, consisting of about 70 percent mudbrick, could have derived from the destruction of the walls during or after the time people abandoned this area. However, the volume of the mudbrick could not account for the structures adjacent to PM. This suggests that people took the mudbrick for reuse elsewhere. Across the site, but especially in the Western Town, we see evidence that people intentionally dismantled walls and took the brick away.

Conclusion

Across an area of half a kilometer, from the KKT on the north to House Unit 1 on the far south of the Area A settlement, our excavations are shedding new light on the history of the Fourth Dynasty pyramid builders and bringing into focus their houses, administrative buildings, and the structures of everyday life they marshaled for the mighty social undertaking at Giza.

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