

IMTO – Italian Mission to Oman

University of Pisa

SUMHURAM

Preliminary Report

January – March 2014 (SUM14A)



PRELIMINARY REPORT (SUM14A)

January-March 2014

The first IMTO's campaign of 2014 (SUM14A), under the direction of prof. A. Avanzini, started on 9th January and finished on 20th March 2014.

Excavation was performed in different areas with different goals.

In Area A, Eastern part, excavation was completed in three buildings and it was extended to the South in order to understand the relation between the buildings of Area A and the storage quarter in Area B.

In Area A, western part, excavation interested the area West of building BA13 (excavated in SUM12C).

In Area B excavation continued in room A178 and excavation of building BB2 was completed.

In Area F four different operations took place. Excavation to the North of the building named Monumental Building 2/BF5 unearthed important structures related to the earliest phase of the city. The removal of the massive collapse of limestone blocks was completed in the Monumental Building 2 and excavation inside the building began. Outside the south-eastern and the north-western walls of MB2 surface layer has been removed to expose the outer face of the walls of MB2. During this operation a room East of MB2, belonging to a late phase, was excavated.

Excavation outside the western wall of the building, in street A43, continued and in order to expose the layers along the city wall, walls belonging to the very late building BF4 were removed. Excavations were conducted on the field by Prof. Alexander Sedov, dr. Vittoria Buffa, dr. Alexia Pavan, Mr. Said al Mashani and Mr. Said al Hamri, with senior students Silvia Lisci, Giulia Buono, Cleto Carbonara, Carlotta Rizzo, Anna Chiara Muscogiuri, Marina Sartori.

Arch. Simona Rossi was responsible of the architectural survey, the CAD digitalization and the updating of the plans of the city.

Gianluca Buonomini was responsible of restoration of pottery vessels and bronze objects.

The restoration activities have been carried out at the city walls (partially dismantling and rebuilding of the walls M19, M16 and M25 at the north side), rising up of the south-west corner M545-M118, rising up of the following walls: M21-M22 inside the Monumental Building. Consolidation and Rising up of the walls M15-M15bis, and some other restoration works as indicated in the technical report section.

The restoration of the walls M19, M16 and M25 can be considered a huge intervention that involved the partial dismantling, the reconstruction and/or the rising up of the walls.

The restoration and consolidation of ancient masonry structures has been done under the coordination of arch. Valter Filatondi.

The work of IMTO has been possible thanks to the collaboration of the Office of the Adviser of His Majesty the Sultan for Cultural Affairs in Salalah and in Muscat, in particular Ghanem al Shanfari, Said al Mashani, Ali al Kathiri, Said al Hamri, Said al Salmi, Hassan al Jabri. We thank them all, together with all the Museum's team, for their kind helpfulness.

Sumhuram Preliminary Report SUM14A

January- March 2014

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Archaeological Report

Area A, eastern part, building BA12 (trench supervisor: Cleto Carbonara)

In the SUM14A campaign of IMTO (Italian Mission to Oman) resume work in the building BA12 in Area A, south of BA6 and east of the street A75. This building was previously excavated by AFSM (American Foundation for the Study of Man) and was the object of a general cleaning in the SUM11C campaign.

Room A190

A190 is the south-western room of the BA12, delimited by the walls M540 to north, M541 to east, M542 to south and M185 to west. None of these walls has an opening. The room has already been partially excavated in the SUM11C campaign. In this campaign the excavation stopped to the elevation of 29.82 (US539).

The US539 shows a loam composition with a light brown color and a medium compact consistence. The consistence of the layer is more compact in the southern part of the room. On its upper surface there were several limestone and sandstone blocks small and medium in size. In particular in the southern part of the room has been noted an alignment of small limestone slabs oriented east-west, that could seems a wall. But going down with excavation this alignment was recognized as a very superficial row of stones and the presence of stones becomes very rare, except a rectangular limestone block big in size placed in vertical sense near the eastern wall

Always at a very shallow level, along the western wall M185, there were two zone, circular in shape, of compact loam mixed with some small limestone blocks surrounded by several traces of ash and some charcoals.

To the elevation of 29.11 has been reached a compact level with the presence of several mudbricks placed along the western wall M185 and in the south-eastern corner interpreted as a floor (US 539 floor). The floor has a slight slope from south to north.

The US 539 returns a good amount of pottery, particularly storage vessels. Also several stone, metal and shell objects have been found. Three whetstone (S2507, S2508, S2530), an handmill (S2528) and a mortar (S2529). A bronze head of nail (MB833) and an iron nail (MI223). A shell bead (Sh580) and a Tutufa Bardeyi (Sh582).

A190 (south-west view)



Before excavation.



After excavation.

Room A191

A191 is the north-western room of the building BA12 in Area A. It is delimited by the wall M185 on the west side, M127 to north, and M540 to south. Initially on the eastern side the room was delimited by the staircase in the northern part of the building and by its supporting wall.

In the room A191 was recognized the US672 consisting of loam brown in colour and very loose in consistence. The US672 covered the inner face of the walls M185 and M127. Proceeding with the excavation was unearthed a wall lined with M54, probably linked to the use of the staircase, to which was given the number M663. In this wall are visible two openings. The excavation in the space between M663 and the staircase stops to a very straight level, interpreting this space as a floor for the using of the staircase.

In the US672 was found many limestone blocks big and medium in size in the whole surface of the room.. The presence of sandstone blocks very different in size was also noted in the eastern part of the room. The presence of these stones was interpreted as the collapse of the walls delimiting the room. At a lower level the collapse appears to be concentrated along the southern wall M540. Stones belonging to the collapse continue to be present until the elevation of 30.20. Here was reached an earth paced soil (US672 floor) with the presence of mudbricks along the southern wall and several whale vertebrae on it. One vertebra is in the north-western corner. Another one is in the central part of the room near the eastern wall M663. The last two vertebrae are both in the south western corner. One disposed in vertical sense and above it the other one in horizontal sense.

The US672 returned a good amount of objects: two bronze coins (Co858 and Co859), two glass vessels (G208 and G209), two bronze objects (MB840 and MB841) and several stone objects (S2506; 2512; 2513; 2514; 2515; 2516; 2517; 2524; 2525; 2526; 2527).

A191 (east view)



Before excavation.



During excavation: collapse in southern part of the room.



A191 (east view): US672 floor with whale vertebrae.

Area A, BA15, excavations in rooms: A211, A218, A219 and A222 (trench supervisors: Giulia Buono, Vittoria Buffa)

During the SUM13C campaign four rooms of building BA15 were excavated. During this campaign the other two rooms (A218 and A219) have been investigated. Furthermore excavation in the corridor A212 and in room A211 were completed.

Preliminary remarks

The building has an irregular plan, consisting of a central corridor, two rooms on the western side and three on the eastern side. The perimetral walls of the building are: M518 to the North, M620 to the West, M635 and M621 to the South and M484 to the East. The entrance to the building was located in the southern walls M635 and M621 with a door 0.90 m wide leading into the central corridor A212. Here a staircase was leading to the first floor of the building, in a western direction, as shown by the wall M643 supporting the landing. The staircase was also leading to the East through room A219. Excavation in room A219 clarified the reason of the irregular plan of the building in the eastern part. The walls defining room A219 are the northern perimetral wall M518, the western narrow wall M609, the southern wall M210 (separating A219 from A210), and the eastern wall M484. It is not clear if M518 reached M484. It is more probable that it stopped about 1 m before, leaving a space that has been numbered A222, separated by A219 by the wall M640, made of mud-bricks and sandstone slabs. A219 and A222 have never been living spaces (no finds have been recovered), but they were filled up intentionally with loam and mud-bricks to support the long landing that permitted the eastern passage that connected building BA15 with building BA6 at the level of the first floors of the two buildings. This passage (with external walls M484 and M483) was constructed when building BA15 was first built, together with all the building. It is probable that wall M641 in A222 was also built to support the landing turning North to BA6. Wall M483 was closing this installation to the North. It is not yet clear if room A179, North of M483, was part of it, since the room has not been excavated yet.

Two constructional phases have been detected in the building with the raising up of the floors, but without changes in the general plan. The first phase has been reached in corridor A212 and in rooms A218 and A211. The well plastered floors of the second phase were not removed in rooms A209 (where the bronze inscription was found) and A210.

It seems that the building was constructed during the first general construction phase in Area A, when other houses were built against the city wall. The second phase of BA15 is probably to be put in relation with the renovation of the area A, when US22floor was constructed in street A75 and A45.



BA15: before excavation.

The cultural deposits excavated in SUM14A

The work started with the enlargement of the trench to the south of the building with the purpose of unearthing its southern wall M635, removing the surface layer US619 .

The section left during SUM13C campaign close to M518 was completely removed and the inner face of M518 was exposed.



Entrance to the building in A212.

Room A218

The room A218, that covers a surface of about 4.50 m², is delimited by the plastered walls M607 to the North, M639 to the East, M635 to the South and M620 to the West. The entrance to the room is on wall M639 with a door 0.70 m wide. Two steps and threshold mark the entrance.

US619. It is the layer that covered all the building.

US664. Below US619, at an elevation of 30.40 US664 was identified. The layer consisted of a dark brown loam, from medium compact to loose in consistence. The dark color was due to a presence of a fireplace and a lot of bones and shells were collected. In the layer some pottery shards were found (4 glazed, 1 black and gray). The following small finds have been unearthed: the worked bone stick B88, the oil lamps Sh573 and Sh577 and the bronze object MB832.

At an elevation of 29.07 and close to M635 a rectangular installation made of dressed limestone slabs with a *Tutufa Bardeyi* shell (Sh581) and some stone tools as a mortar (S2497), two handstones (S2498, S2499) and a whetstone (S2500) were discovered. We can presume that it served as a working area. At the same elevation a wheel vertebra was brought to light near the threshold of the

room. The plastered floor was reached at an elevation of 28.77. The floor belongs to the first phase of occupation of the building. No upper floor has been identified.



A218 west view: installation with stone tools, Tutufa Bardeyi shell and the wheel vertebra.



A218 south view: plastered floor.

Room A211

Room A211 was already excavated in SUM13C but work stopped at US642 floor, consisting in a hard packed soil that we decided to excavate during this campaign. US642 floor belongs to the second phase of occupation of the building.

US665. Under US642 floor, US665 was identified. It was an accumulation layer with a loam composition, brownish gray in color and very compact in consistence. Four pottery shards were found in the layer. The plastered US665 floor of the first phase of the building was reached at an elevation of 29.19 m. The floor is divided into two part by a row of stone and mud-bricks with a east-west orientation.



A211 east view: plastered floor.

Room A219

The room is delimited by perimetral northern wall of the building M518, the narrow western wall M609, made of sandstones, the eastern wall M640, also made of sandstones, and the southern wall M610 of limestone blocks. Its dimensions are 2.80 x 0.80 m.

US619. The superficial layer US619, covering all the building, was removed.

Underneath a succession of layers were intentionally deposited to fill up the space.

US666. It consisted of light brown color, medium compact in consistence. Its lower elevation was 30.50 m. Few bones and shells and pottery shards were found.

US668. The US was removed only in a stretch along M610 and M609. It consisted in horizontal layers of mud-bricks. No finds were recovered. The narrow wall M640 was placed on US668. It was widened inside A219 with a series of mud-bricks, almost another wall leaning to M640 for a width of around 0.70 m.

US669. It consisted in medium compact, brownish layer of loam. No finds were recovered. At an elevation of 29.92 m few small sandstone slabs were found.

US670. It consisted of soft brownish-gray loam mixed with burnt stones and charcoals, remains of a fireplace. The layer presented also white inclusions.

The sounding stopped at the elevation of 29.66 m.

Room A222

The space is divided from A219 by wall M640. It is delimited by the southern wall M610, and the eastern wall M484. To the North the space is delimited by wall M641 (see above, General Remarks).

US472. The superficial deposit US472 (partially excavated in the SUM13C campaign) was excavated.

US671. It consisted of loam, medium compact in consistence and brownish in colour. The layer was removed only in a stretch along M640. No finds were recovered. US671 is equal to US669 in A219. The foundation of the wall was reached at an elevation of 30.00 m. Here the sounding stopped.

Deep sounding in room A212

A deep sounding, 1 x 06 m, was carried out in the central corridor along M639. The foundation of wall M639 was detected at the elevation of 28.48 m. Underneath some mud-bricks were covering the bedrock that was reached at the elevation of 28.37 m.



A212: bedrock.

Area South of building BA15 (trench supervisors: Giulia Buono, Cleto Carbonara)

An area immediately South of building BA15 has been left a trench 11.70 (south) x 7.90 (west) x 9.70 (north) was opened South of building BA15, leaving an area unexcavated to allow the passage of tourists and of the wheel barrels between the building and the new trench..

The area has been partially excavated during the SUM13A campaign when room A204 was partially unearthed. During this campaign a row of three rooms were excavated North of A204. They lie West of the massive wall M516. Room A225 is defined by the eastern wall M664, the southern one M581, the western wall M653. It is not clear if the northern wall M646 reaches wall M644 or if there is a door. A door, 87 cm wide, in wall M653 connects the room with room A230. This is defined by northern wall M646, eastern wall M653, western wall M645 and southern wall M581. Two doors connect A230 with A204 in wall M581 (88 cm wide) and with A231 in M645 (80 cm wide). The mostly western room unearthed so far is A231. This room is defined by the northern wall M646, the eastern one M645, and the southern wall M581. On the west side, the bound of the trench did not enable to understand if the amount of limestone and sandstone blocks in this part is the western wall of the room or belongs to the collapse of US663.

The following cultural deposits have been excavated.

Room A225 and room A230

Since the wall M653 was unearthed only at a low elevation above the floors, in the two rooms the deposit has been given the same number.

US663. The superficial deposit US663 equals US571 in n-9/10 (see Preliminary SUM13C) and US507 in l-10, see Preliminary SUM12C). It consists of medium compact light brown loam mixed with a quantity of limestone blocks from the collapse of the walls. The removal of the layer brought to light 3 new walls that delimit the room: M645, M646 and M653.

In A225 in the most superficial part of US663a basin was unearthed. At the elevation of 29.56 a fireplace was found in the eastern corner between M653 and M646. At the same elevation, close to the south-eastern end of M581 the layer presented a more compact consistence and contained white inclusions and charcoals. The remains of the plastered floor were reached at an elevation of 29.24 close to the wall M581 and 29.15 close to the walls M646 and M653. Pottery shards (like glazed pottery and straw temper vessels) and some bones and shells were found.

Small finds: 3 coins (Co857, Co860, Co863), 3 beads (Sh584, Sh586, S2532), *Tutufa Bardeyi* shell (Sh590, Sh595), oil lamps (Sh591, Sh594), a fragment of worked bone (B90), a fragment of alabaster vessel (S2533), a stone weight (S2521) an handmill (S2546) and an iron object (MI224).



A225: basin.



A225 and A230 east view: plastered floor.

Room A231

US663. Also in room A231 the superficial deposit has been named US663. It consisted of a massive collapse of limestone blocks mixed with reddish brown loam.

US690. At the elevation of 29.40 m the new layer showed a different consistence and color, being loose and reddish. The layer is also characterized by the presence of charcoals on the whole surface of the room and by the presence of many fragments of limestone very small in size in particular along the eastern wall M645.

At a lower level was noted the presence of a large amount of sandstone slabs squared in shape interpreted as the collapse of the roof of the room.



Sandstone slab in A231.

Mixed with the loam and with the sandstone slabs, along the eastern and the southern wall (M645 and M581) there also were several mudbricks. Mudbricks were used also in the construction of the

walls. The last inner row of M581 is made completely of mudbricks. Also in M646 to north there are some mudbricks disposed among the limestone blocks probably as wedges. At the elevation of 28.87 was found a plastered floor.



Mudbricks in M646.

The US690 returns several objects. Two whetstones (S2573 and S2581), three handmills (S2575, S2576 and S2578), two handstones (S2577 and S2582), a mortar (S2573), a fragment of stone vessel (S2579), a loom-weight (S2583), an oil lamp (Sh615), and a Tutufa Bardeyi (Sh614).



A231, US690 (north view): before excavation.



A231, US690 floor: plastered floor.

Room A204

Room A204 was already object of excavation in the SUM13A campaign. During this campaign was reached the floor of US573 at the elevation of 30.17.

Below this level there is another US consists of loam medium compact in consistence and reddish brown in color (US684). Initially it has been decided to excavate only the eastern and a section has been left to 2.40 m from M235 westward.

From the beginning of the excavation the layer shows several traces of burnt and of ashes, probably linked to the fireplaces unearthed on the US573 floor during SUM13A. In the layer was also found a lot of charcoals and a large amount of fragmentary bones. On the western part of the trench there also were a lot of limestone blocks probably belonging to the structures surrounding the room.

From the elevation of 30.02 begins to be evident the presence of a stairway in the southern part of the room with the discovering of the third step and the two walls supporting it. The stairway going eastward, is composed by ten limestone steps with measures between:

- l. 92 and 51 cm
- w. 32 and 17 cm
- h. 26 and 14 cm

The stairway is supported by two walls. The first one oriented east-west and composed by two rows of limestone blocks big and medium in size. The second one is oriented north-south and composed by only one row of limestone blocks.

To the elevation of 28,91 was found a plastered floor better preserved at the bottom of the stairway.



A204(west view): before excavation.



A204 (west view): discovering stairway.



A204 (west view): stairway with plastered floor.

After the discovery of the floor in the eastern part of A204, it decide to enlarge the trench westward to follow the northern and southern walls M581 and M582, and to find the western perimetral wall of the room.

In its western part the US684 shows the same features of the eastern portion. After the removing of the stones present on the whole surface to south of BA15, continue the traces of burnt and of ashes along the western bound of the trench and in the north-eastern and south-eastern corner.

Both walls M581 and M582 continue westward. In the M582 there is a door 88 cm wide lined with the door linking A230 and A204 in M581.

At the same elevation of the plastered floor (28,91) there is a very hard earth packed soil and the plaster doesn't continue westward.

The US684 returns some squared limestone slab with a flattened surface, an arrowhead (MI225), and several stone tools including an handmill and a fragmentary incense burner (S2559 and S2561). Below the US684 has been recognized another layer compact in consistence and reddish in color with the presence of stones small in size



A204: limestone slabs.



A204 (west view): after excavation.

Area A, western part, West of building BA13 (trench supervisor: Carlotta Rizzo)

During the SUM14A campaign it was decided to investigate the western part of BA13, to obtain a complete overview of the building and of the street A156, that runs along the northern part.

A trench was excavated along the length of the western perimetral wall of BA13 (M494)

The operations started whit the removal of the modern accumulations and after with the removal of surfaces firstly in the northern part(US680) and secondly in the southern part (US682) of the trench. After the removal of the northern surfaces, US680, a new roomwas discovered: A226.

After the removal of US 682 it was discovered a new wall western of BA13 and it was clear the trend of the wall was visible from the southern section of the trench.

First trench



Before excavation.

US680

It is in the western part of BA13. It was the deposit under the modern accumulation, which covered the northern area of the trench (3.35x6.35). The superior elevations was 30.24 m. It was made of light brownish loam with some charcoals, remains of ashes, fragments of crumbled plaster and some collapsed stones. Pottery, animal bones and shells and iron slags were recovered.

A fragment of stone vessel (S2539) and a bronze object (MB845). A little structure made of very compact loam, grey in colour, with plaster was discovered and left in situ.



Particular of plaster

During the removal of this layer it was clear that the western perimetral wall of BA13 was covered by plaster.

During the removal of this US, room A226 was found.

Room A226

Room A226 is the western Room of A170. It was delimited northward by M656, eastward by M494, southward by M652, westward by M651. An opening, 0.83 m wide, was found along M656. After the removal of US680 and the cleaning of the walls, US 679 was excavated.



Before excavation.



After excavation.

US679

From a level of 29.47, it was made by dark brownish in colour soft loam with several charcoals, iron slags, some filling and small collapsed stones. Storage pottery, animal bones and shells, a bead (Cl60), oil lamps (Sh587, Sh604), a spindle whorl (Sh593) a strainer (S2535), two whetstones (S2538, S2540), two Tutufa Bardeyi (Sh 588, Sh592) and a Tonna Luteostoma (Sh589) were recovered. No floor was found and we stopped at an elevation of 28.61 m.

In the western part of A226, after the removal of the surface (US680) we found the layer of A156: US316 at an elevation of 29.29.

A156-A80, US316

This street was previously excavated in SUM10A and SUM10C. Now we just arrive at US316. It was recognized under the external part west of M651. It was covered by a surface (US680) and we stopped at an elevation of 29.11. In this layer it was found a large lens (0.35x0.20) made of very soft loam greyish and white in colour with green traces. The layer has a lot of charcoals, ashes and burned bones. In the northern part the layer is more compact and gray in colour. The limits of this layer in US316 were brought to light and the US was not removed. Fragments of pottery, burned bones and shells, iron and bronze slags an oil lamp (Sh602), a stone vessel (S2560), two nails (MI226, MB855).



Particular of US316.



After excavation.

Second Trench

We decided to enlarge the trench (now 9.54x2.45 m) to the south along M494. The works started with the removal of surface, US682.



Before excavation.



After excavation.

US682

This layer was an accumulation under the modern deposit. It was soft loam light brown in colour with several collapsed well-dressed stones of big and medium sizes and several sandstones. Several traces of burnt (29.82 m), charcoals and iron slags, a vetrified lump, some fragments of pottery, a Tutufa Bardeyi (Sh599) and two fragments of stone vessels (S2551, S2552) were found. Under the two surfaces US680 e US682 a new layer was found, US689 (29.19 m).

US689

This layer was an accumulation under US682. It was made by soft loam reddish brown in colour with charcoals, bronze slags, several shells and fragments of animal bones. Few fragments of pottery, a coin (Co869), a bronze object (MB850), a clamp (MB851) and a fragment of stone vessel (S2569) were found. During the removal of this layer a new wall was found (M657) with an east-west orientation that leans on M494. After the cleaning of the southern section it was clear the continuation of the wall visible in the section during the excavation in SUM12C, now M655. US 689 is not completely removed and we stopped at 29.00 m, at the same layer of US316 floor, with a loam light brown in colour which was more compact.

Removal of the section in BA13, A200

During SUM14 it was decided to remove the eastern section in room A200 left in situ during the excavation in SUM12C.

In the lower layer of these room, US559, at an elevation of 29.16 m was found an half complete jar in the south-eastern corner of the room on the floor made of very compact loam with filling stones and several traces of burnt. The jar was removed and restored.



BA13, A200, US559: floor with jar in situ.

Area F, sq. h-6, Room A232 (trench supervisor: Carlotta Rizzo)

The works during SUM14A in this area started with the purpose to elucidating the trend of the walls came to light after the removal of a part of the platform for tourists.

The room is delimited by the northern wall M658, the eastern wall M659, the southern wall M660 and the western all M661.



Before excavation.



After excavation.

US691: from an elevation of 30.07, this layer was a superficial deposit made of soft light brown loam. At an elevation of 29.95 was found a plastered floor which was very badly preserved.



A232: US691 floor.

US692: under *US691*, The layer was made by very soft dark brown loam with several charcoals, traces of burnt and animal bones. At an elevation of 29.41 m some well-preserved mud-bricks were found under the southern wall. A more compact loam light brown in colour was individuated under the northern wall (29.37m). No objects other than a few fragments of pottery were found. In the lower part of the layer, some sandstones slabs and fragments of plaster were identified and the loam was piecewise sandy.

US695: under *US692* at an elevation of 28.69 *US695* has been reached. The layer was made by dark brownish soft loam, with few animal bones and fragments of pottery. The works has been stopped an elevation of 28.18 m, because the northern wall was in dangerous of collapse.



A232: mud-bricks.

Excavation in Area B, room A106-A178 (trench supervisor: Giulia Buono)

The furnace US688 in A106-A178 was already unearthed during SUM13A but the works stopped at the elevation of US564 floor. During this campaign we decided to empty the furnace to try to understand its real function.



Furnace (US688) before excavation.

US688 is a semicircular structure with a diameter of 50 cm delimited by two courses of cooked clay (the first one pale yellow in colour and the more eastern one, brown in colour and soft in consistency). interpreted as a furnace probably used for the cooking of the moulds for bronze inscribed plaquettes.

US674 is the filling of the furnace US688 and it consists of light brownish gray loam mixed with several fired clay shards and charcoals. Only few bones and shells were collected from the layer. Small finds: the crucible G211 with remains of bronze on the internal surface and the clay object C159.



Furnace (US688) after excavation.

Area B, A180 (trench supervisor: A. Sedov)

The wide square, *circa* 5.50x9.90 m in size, is located SW of the building BB2, between its external wall M529 and the wall M245. The 'passage', *circa* 2.0 m wide and 2.6 m long, connected squares A180 and A184. In SUM13A season a trench, *circa* 3.0 m wide, was placed in the square A180 against the wall M516 and between the walls M529 and M245 in order to understand the purpose and function of A180 square. Ruins of mud-brick structure were discovered in the trench: walls M580 and M579 were partially unearthed.

According to the report SUM13A, the stratum US567 (sup. elevation 30.20 m) was excavated in the trench under the US523floor. It was a rather compact loamy accumulation, brown-reddish in colour, with a quite regular surface, running from SE to NW. While excavating US567 the top of the mud-brick walls M579 and M580 was accidentally removed. The accumulation inside these walls (US577) was not distinguished from US567. US567 covered US572 (sup. elevation 29.75 m), a loamy accumulation, brownish in colour and rather compact in consistence, which ends with a rather compact floor (US572floor, sup. elevations 29.61 m on the north, and 29.66 m on the south). Along the north-western baulk of the trench the top of a new mud-brick wall was uncovered in SUM13A but not numbered (1.20x0.40m, sup. elevation 29.72 m). Excavations in SUM13A season were stopped on the US572floor.

In the season SUM14A, the trench was extended in SE direction, along the wall M245, following the same level (US572 floor, the present elevation in the southern part of the trench 29.70 m). It seems that the mud-brick wall M580 was continued in SE direction (although, it was not clear). The excavations showed that the wall M245 was not a single unit, but consisted of at least two parts. Its NW section (3.6 m in length), leaned on the wall M516, was running down, below US572floor, while the foundation of its SE part (3.6 m in length) was traced in 0.35-0.37 m high than the above-mentioned floor (sup. elevation 30.17 m, which is comparable with elevation of the US523floor). The total length of excavated trench (along wall M245) is 7.7 m, its width is 3.8 m.

Area B, Building BB1, room A107 and room A229 (trench supervisor: Anna Chiara Muscogiuri with Marina Sartori)

A107

During this campaign the room A107 was re-investigated, focusing on the section left during SUM08A. The excavation started with the removal of US261 at an elevation of 29,70. It was an accumulation layer of very soft light brown loam with collapsed stones. Some pottery fragments, some shells and bones were collected. On reaching the US261 floor, very badly preserved at an elevation of 29,28 a sandstone handmill was found, measuring 0,48 m of diameter (0,12 the diameter of the hole), 0,7 of thickness. It was left in situ.



A107 detail: handmill.

Below the US261 floor, the US263 was found. It probably represents a preparation layer for the US261 floor and is composed of light brown medium compact loam mixed with rubble and crushed mud-bricks.

At an elevation of 29,17 the US265 started, consisting in soft loam, light brown in colour, with many bones. It was not investigated completely but until the elevation of 29,06.

During the excavation the wall M239 was exposed for seven rows. With the loam of US261, US263 and US265 the room A73 was refilled until an elevation of 28,45.



A107 (west view): before excavation.



A107 (west view): after excavation.

A229

During this campaign the new room A229 was excavated. It is delimited by M239 on the North, M166 in the south, M234 in the west, and M244 and M257 in the east.

The US685 was investigated starting from an elevation of 29,85. It is an accumulation layer, light brown in colour with stones small and medium in size. It's medium compact in consistence and crushed mud-bricks were also found in it. A great quantity of iron slags was collected (2,800 kg). Among the findings bone rests medium in size are notable, together with some charcoals. Beside this, pottery shards and some objects were found: coins (Co864, Co865, Co866, Co867, Co870); stone vessel fragments (S2567, S2568); a whetstone (S2570); beads (Sh596, S2547, MB849, Sh608, MB854); a clamp (MB846); a bracelet (MB847); a pendant (Sh609); a loom weight (S2556); a pestle (S2555). In the center of the room also a sandstone slab with groove (th. 0,06 m ; w. 0,43 m ; l. 0,43 m ; w.groove 0,08 m) was found but left in situ.



A229 detail: sandstone slab.

An entrance was exposed in the N-W corner of wall M239. The loam filling it was removed and a threshold made of beaten earth was found at an elevation of 29,45. It doesn't continue inside the room. On the threshold a broken limestone mortar (h. 0,41, w. 0,46, th.0,10) emerged and was left in situ.



A229 (south view): entrance.



A229 detail: mortar.

At the elevation of 29 the loam consistence seems different. In the south side the loam is very hard packed, while on the north side is extremely soft and loose, with traces of burnt and crushed mud-bricks. The excavation stopped at this elevation.

The wall M234, which is not well preserved in the higher rows was exposed and cleaned.



A229 (east view): before excavation.



A229 (east view): after excavation.

Area B, building BB2, room A186 (trench supervisor: Anna Chiara Muscogiuri with Marina Sartori)

The excavations started with the removal of US532, from an elevation of 30,46. It is an accumulation layer filled with collapse stones, grayish in colour, inside the north-eastern room of BB2, A186, delimited by M532 to west, M528 to north, M530 to east, M662 to south. The US shows a not very compact consistence and a loam composition with limestone blocks, small and medium in size, probably due to the collapse of the walls surrounding the room. Traces of plaster have been found mixed with the loam, probably original of the walls.

In the layer these findings were collected: an oil lamp (Sh585), two whetstones (S2518, S2519), a weight (S2520), a worked bone (B89) and a stone vessel fragment (S2531).

Below the US532 the US673 (starting at an elevation of 29,91) was investigated. It is an accumulation layer made up of loam, soft in consistence and dark reddish to brown in colour. A great quantity of small charcoal was mixed with the loam together with pottery shards, many shells and bone rests.

During the excavations the walls M528, M530, M532 and M662 were exposed. M528 and M530 which delimit respectively the north and the east part of room A186, are composed of limestone blocks and are not well preserved, since only three rows remain. On the contrary, M532 and M662 which delimit the west and the south part of room A186, are quite well preserved, (seven rows remain).

After the excavation the room was refilled.



A186 (north view): before excavation.



A186 (north view): after excavation.

Area B, room A105 (trench supervisor: Anna Chiara Muscogiuri with Marina Sartori)

The excavation started with the removal of the US232 floor (reached during SUM07B) from an elevation of 28,93. The accumulation layer, called US677, was composed by loam mixed with rubble, very compact in consistence and light brown in colour. Only a few pottery shards and bones were collected.

The US677 floor, reached at an elevation of 28,78, only 15 cm. below the US532 floor, was conserved quite well and was made up of plaster, which covered the whole room.

During the excavation a row of stones delimiting the north part of the room was exposed : it was composed by circular limestone stones, gradually overlapping creating a semi-circular arch. Many of them were handmills of 30 cm ca. of diameter and 15 cm thick. The room presents also a row of stones in the west part with an elevation of 28,94.



A105 (west view): before excavation.



A105 (north view) : after excavation.



A105 detail: handmills.

Area F, street A43 (trench supervisors: Alexia Pavan, Said al Mashani)

Works in area F begun on 9th January 2014 and finished on 21st under the supervision of Alexia Pavan; from the 21st of January to the 21st of March After they have been conducted by Said Al Mashani (Area F) and Carlotta Rizzo (Monumental Building 2).

During the first two weeks excavations have been carried on inside the so-called Monumental Building 2 and in A43, the street located western from the MB2 and already partially excavated in SUM13C.

Street A43

Works restarted from the level where excavations of SUM13C stopped. This level did not correspond to a floor or to a new US, but just to the elevation reached in the available time. Thus, the excavation of US623 has been completed confirming, at the first sight, the discovery of ceramic materials diagnostic of the first occupational phase of the city (i.e. wavy rim bowls, cooking bowls in stoneware). US623floor has been quickly reached at an elevation of 26.02 (measure taken below wall M602), roughly corresponding to the elevation of the oven placed in square A20 (elevation of 25.88, see Report 2) and to US142floor in room A42 of BF3 (elevation of 26.14).

The digging, in extension, of A43 let to the identification of the new US647, previously not recognized. The layer, discovered under US623floor, has not a uniform thickness. It's about 20 cm below wall M602 to become larger towards south. Layer is reddish in colour and rather compact, with few materials (this works well with the interpretation as a street's accumulation) and an amount of crumbled mud-bricks. A scarce amount of animal bones and marine shells has been discovered. Pottery is not abundant but more frequent in the interface with US623 (from here, the shard of paddle impressed ware). Many shards are apparently burnt (secondary burning ?) and could have been used as a sort of « preparation » for the floor. US647floor has been reached at an elevation of 25.80. The following items have been discovered in the layer: Co839-848-849-851; the stopper Cl61; the clamp of a stone vessel – MB844-; the nail MB827; the hammerstone S2433 and the fragments of stone vessels S2464, S2468, S2469 and S2496.

Below US647floor, the accumulation US635 already exposed also if very partially has been found. As during the previous campaign very few small finds have been recovered, the fragments of stone vessels S2479 and S2481 and the shell bead Sh567. To be highlighted the presence of a deep bowl in straw temper with inscription. Some animal bones and some marine shells have been recovered as well.

The situation changes with the layer discovered below US635, named US652 with the related floor. The accumulation is brown in colour, rather compact, with a clay matrix. The floor is made by compact earth with some plaster/gypsum lumps. The accumulation US652 has been excavated just in a very small part. In fact it's limited in the northern part by the section with M602 and the top and in south by the new wall M630. US652 present a consistent number of amphora shards (to be checked, they are probably matching), some marine shells and some stone tool (the whetstone S2436 and the hammerstone S2439).

With the aim to check the foundations of wall M92, US652floor has been removed. A layer very similar to US628 (excavated by C. Condoluci in SUM13C) has been recovered. US628 is a very soft loam mixed with a low percentage of mud, yellowish on colour with presence of rare small/medium size stones and rare charcoals.



To sum up the following layers have been exposed in the small space in between the section on which wall M602 is actually standing and wall M630: US623 accumulation, US623 floor, US647 accumulation, US647 floor, US635, US652 accumulation, US652 floor, US628, bedrock.

Different is the stratigraphy brought to light in A43 southern from wall M630. Here is not possible to follow US647 with the related floor but we have US635 and below, the new US657.

US657 is very greasy with a lot of ash, animal bones and shell. It's, moreover, very soft. The following items have been discovered in the layer: the coins 840,841,842,843,844, the fragments of stone vessels S2501, S2502, S2503, the stone lid with handle S2444, the crucible G207, the oil lamp Sh550 and the decorated boss (?) Sh574.



Decorated shell Sh574 (reworked version by S. Lischi)

Furnace in square A20

A productive installation was already exposed in SUM13C, but, due to the lack in time, the excavation was not completely carried on.



The hard accumulation clearly visible on the left side of the installation has been removed, revealing the existence of a new furnace named US648. The furnace consists of a big storage jar upside-down with a maximum diameter of 60 cm connected with a neck of amphora (diam. 17.5) used to regulate the air inside the furnace. The completely absence of working traces in the area and inside the furnace at a first sight let to connect the furnace with a simple installation (tannur) for food preparation. However, the peculiarity of the structure and, above all, the placing of the pipe to regulate the air, seems more suitable for a furnace linked with metalworking. The furnace could be used to create the metal objects (plaques, votive items) for the temple.



Filling (US649) of furnace US648: burnt stones, charcoal and ash.

The filling of the furnace (US649) has been completely removed. It consisted in: ash, baked clay, fragments of pottery collapsed from the structure itself, very few small bones, a large amount of charcoal with the appearance of large blocks and, at the bottom, burnt stones and a lot of ash and charcoal.

The installation was delimited in the southern part by wall M602 and furnace US648 was supported by a semi-circular structure in regular masonry blocks. On the top of the “mouth” (i.e. the neck of amphora) a block measuring 39x13x9 was placed.

The area was delimited, towards north, by two walls actually not named, one leaning to M92 and measuring 57x61x15 and a second one, leaning to M68 which supported the furnace excavated in SUM04A.



View of the productive installation with the walls delimiting it from the top of M92.

Area F, Monumental Building 2 (trench supervisors: Alexia Pavan, Carlotta Rizzo)

In order to guarantee a proper safety before the beginning of the works, a preliminary cleaning with the removal of some crumbling black stones have been performed on the top of walls M119, M92 and M93.



The interior of Monumental Building 2 at the beginning of January 2014.

During the first two weeks of the campaign a deep sounding have been dug at the corner between M92 and M93 with the goal to check the elevation of the bedrock inside the structure.

Two different layers have been so far individuated: US650 to be interpreted as a collapse/intentional accumulation (already excavated in SUM04A and SUM13C) and US651, localized in the lower part of the “filling”, with rare masonry blocks, with very compact loam light brown in colour, few broken mud-bricks and a small amount of bones, marine shells and pottery shards.

Between US651 and the bedrock a different layer has been recognized but the sounding was too small to be sure about its interpretation and to give a new number.

The bedrock has been reached at 24.93. Walls M92 and M93 have been built directly on the bedrock. No foundation filling or other “levelling” layers have been discovered.

Excavations have been carried on after a break, with the digging of a trench (4.80x4.58) in the central part of the structure.

Works started from an elevation of 26.56 with the removal of US651. The following small finds have been recovered: a stone container (S2438), a faceted ball (S2445), a whet- stone (S2572), a hand stone (S2584), a complete soft stone pendant (S2586), an incense burner (S2587), three oil lamps (Sh551, Sh617, Sh619), a shell bead (Sh605), a spindle whorl (Sh607), a Tutufa Bardeyi (Sh618) and a bronze clamp (MB853).

In the lower part of US651, traces of burnt and broken mud-bricks have recognized.

At an elevation of 24.82/25.04 a more compact loam very light brown in color was found (see above the layer not identified) with two bases of pillar (and maybe another one, near the southern section), made in stone, and a base of column.

The measures are the following: 1: 52x50; 2: 42x44; 3: 41x47.



Bases of pillars and columns.

Beside the pillar bases, a second amazing discovery has been done. Cleaning walls M92 and M93 a series of interesting and well carved decorations have been brought light.



Carved decorations on M93 wall: a camel and an ibex



A complex scene probably depicting a hunting scene in M93.



Traces of ancient South-Arabian letters in M93.



Traces of ancient South-Arabian letters in M92.

Area F, sq. g-h/6 (trench supervisor: Silvia Lischi)

SUM14A excavation in Area F have been carried on with a double purposes. The first was investigation of the lower stratigraphy of the city in order to understand both the possibility existence of a previous settlement and on the development plan of the city. The second was to investigate the relationship with adjacent structures of the Monumental Building 2, one of the most considerable buildings of the city.

The excavation started under the southern modern platform to clarify the situation of A142 and A143.

Room A143

This squared room, individuated during SUM09B and SUM09C, was delimited by the walls M383 (north), M382 (west), M349 (south) and M384 (east). The excavation extended outside the room allowed to confirm the idea made during SUM09C: the walls M382 e M383, better built and well preserved in comparison with the late M349 and M385, clearly belong to a more ancient phase. Also the room A143 constituted a single unit with the room A142 in the ancient phase, as appears clear without the late walls M349 and M385. The continuation of M382 under M349 and inside A142 confirms this hypothesis.

Room A142

This rectangular room, individuated during SUM09B and SUM09C, was delimited in the south by the wall M381, at the western side by the wall M385, at the eastern side by the damaged wall M384 and in the northern side by the wall M349. The western (M385) and northern (M349) walls, completely collapsed at their junction, are constituted by two rows of medium size stone blocks and they are clearly related to a late constructional phase of the city.

Inside the room there was US365, which was removed during SUM09C. During this campaign has removed the US56 up to the top of M382, inside A142. So I can remove the late walls M385 and the west part of M349 to verify the hypothesis of SUM09C and for the safety of the deep sounding on the west of these walls. The US56 inside the room composed by few medium size collapsed stones, compact earth, animal bones, shells, pottery fragments and small finds.



A142: before excavation.



A142: after excavation.

The south-west corner of square A20, BF8

We assumed that this corner was part of the big square A20, already individuated and excavated in front of the temple of Sin (BF3). After removed the accumulation called US56 (compact light brown earth mixed with medium and small stones, animal bones, seashells including oliva bulbosa and arcidae, pottery fragments and small finds), situated between M382, M381, M93 and the trench on the west excavated by Dr. Condoluci in SUM13C, we found a US56floor (heavily packed earth) and the walls M627, M628 and M629. The US56, accumulation and floor, found in all Area F6 (square A20, streets A29 and A32).



Before excavation.



After removed the US56 accumulation.

The discovery of M627, M628, M629 and M631 showed the presence of a more complex situation than we had imagined. We have thus identified two confined spaces: A216, squared and small room and A217, probably identifiable as a street situated between M382 and M627, M381 and M628.

When we removed the US54 accumulation (compact and hard light brown loam mixed with animal bones, pottery fragments, seashells and small finds) in the west part of excavation, near M629 and M93, we have brought to light a new wall, M632 (leaned to M629) and a sandstone staircase called M633. The staircase is between M632 (east), M603 (west) and M628 (south). During the use of US54 floor, the staircase was partially in use, there was only the intermediate landing with the stone with hole probably where insert a wooden pole (perhaps for a wooden roofing) and the last two steps. This staircase probably led on the top of the room A216.



M633 (sandstone staircase) after excavation.

Room A216

The small room defined by the walls M627 to the east, M628 to the south, M629 to the west and M631 to the north. Inside A216 after removed US56 accumulation (not found US56 floor) there was US655 (=US659). This deposit consisted of loose brown loam mixed with fragments of plaster, sandstone slabs, few big stones, mud-brick fragments (light grey in colour), pottery shards, animal bones and bronze pieces. Given the neat and clear stratigraphy of the layer (mud-bricks, sandstone slabs, big stones and plaster) it seems possible to identify it as a collapse. It covers the US656, this deposit consisted of very loose dark brown loam mixed with very few material. Under this layer we found the medium compact surface, US656 floor, which directly covers the bedrock (25,77).



A216: during excavation (US655).



A216: after excavation.

Room A217

This space probably identifiable as a street defined by the walls M382 to the east, M627 to the west, M381 to the south and M628 to the north. As you can see in fig. 2 the first layer was the US56 accumulation. This deposit consisted of compact light brown earth mixed with medium and small stones, animal bones, seashells including *oliva bulbosa* and *arcidae*, pottery fragments and small finds. Under this compact accumulation layer found the US56 floor consisted of heavily packed earth. US56 floor covered the US54, an accumulation layer consisted of compact and hard brown loam mixed with animal bones, pottery shards, seashells and small finds. The US54 floor found under the accumulation layer, consisted of compact grey loam with animal bones, charcoals and small finds. In the corner between M628, M381 and the limit of the west trench excavated in SUM13C was found a new staircase, called M634. The US659 found under the US54 floor. This layer consisted of brown loam mixed with sandstone slabs, big stones, mud-brick fragments (light grey in colour), animal bones, seashells and small finds. In this layer were found fragments of a whale bone near M628. This layer is comparable with the US655, given the neat and clear stratigraphy of the layer it seems possible to identify it as a collapse. The US659 floor was found throughout the area and consisted of a compact and grey surface with many fragments of mud-bricks.

When we started remove the US660, soft brown layer mixed with pottery shards, animal bones, seashells and small find, we started see the upper part of a gypsum basin near the corner between M382 and M381. When it was completely remove the US660 allowed to show the structure that is shown in fig. 6, composed of two basin out of line and connected by a path composed of trapezoidal stone slabs linked by plaster. The US660 covers the medium compact grey surface, US660 floor.



M634 during excavation.



A217: structure with basin, stone slabs and plaster.

Room A223

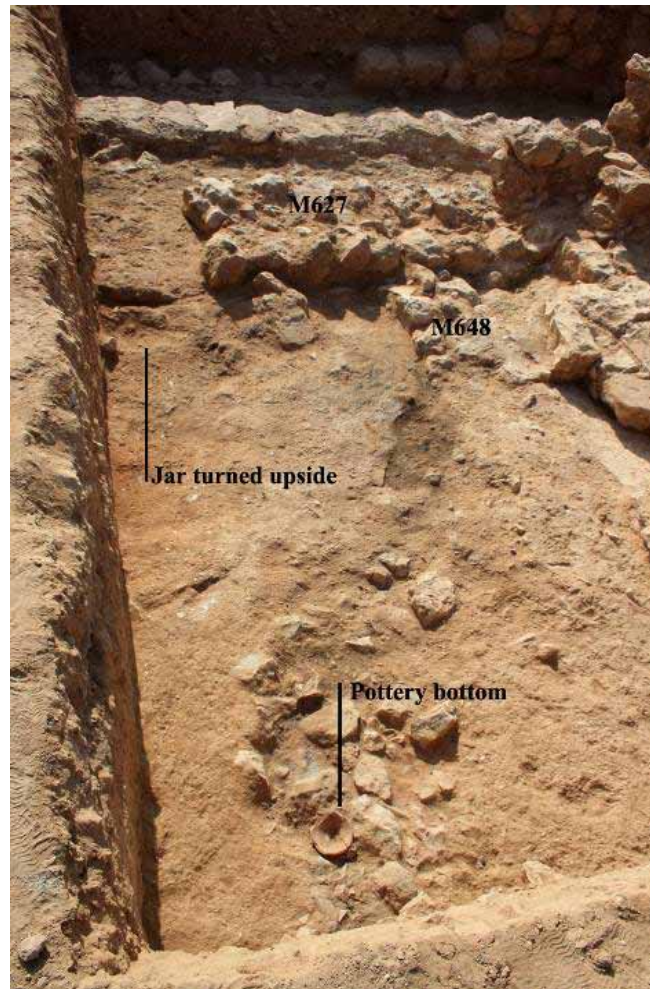
This room is located to the north of the A216 and between A217 and M633. After remove US54 floor that were substantially the same throughout the area, we found US659. This layer consisted of brown loam mixed with few fragments of sandstone slabs, big stones from the old collapse of M631, few mud-brick fragments, animal bones, seashells and small finds. Under this layer we found a stone slabs floor (US675) and, as you can seen in the north-west corner, this stone floor is on a more oldest plaster floor (US676).



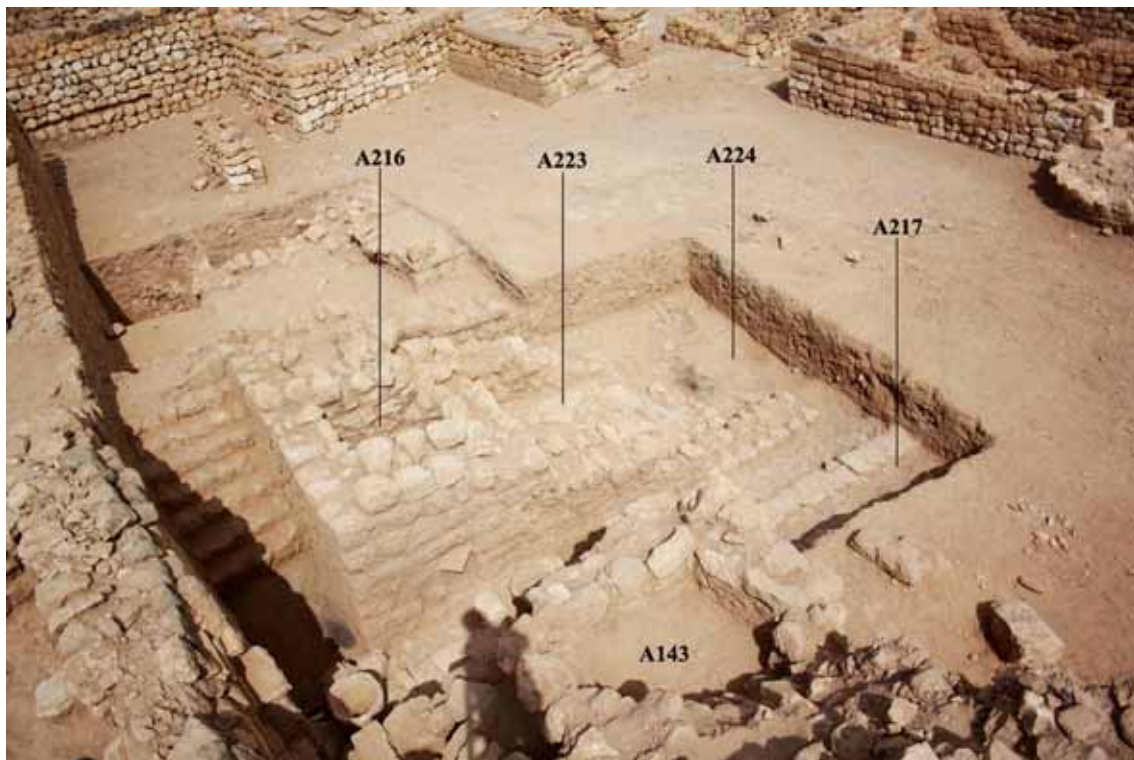
A223: after excavation.

Room A224

This hypothetical room whereof, at the moment, we see only the east outside wall (M627) and the south outside wall (M648) seems proceed toward north direction. Inside the room we removed the US54floor, US659 and US659floor like in A217. Under US659floor found US660 accumulation: soft brown layer mixed with pottery shards, animal bones, seashells and small find. This layer covered, near the north limit of the trench, a medium jar turned upside down and the pottery bottom on the US660floor. In this area there are many lenses of ash and traces of burning.



Localization of pottery found in situ.



General view after excavation, from the east.



General view after excavation, from the north.



General view after excavation, from the south.

Preliminary conclusions

During the excavation it was possible to understand the development of this area. At this point it is clear that in the early phases of the city, square A20 had a smaller size than the contemporary phase of the temple of Sin or it could have another destination of use (to be checked). It is certain that the structures identified in the south-east of A20, founding on bedrock, testify the presence of ancient structures, probably contemporary with the MB2 and perhaps BF8, partially covered by the modern platform.

Phase 1. In this phase A217 was probably a street that was leading from the area in front of the temple (at an earlier stage?) at the stairs M634 placed between A216 and the north perimeter wall of BF5. It is possible that these transmitted on a platform or directly on top of M93 (BF5). The use of this street was likely contemporary use of the sandstone stairs (M633) that conducted above the coverage of the A216 environment.

Phase 2. This phase is due to the structure located at the A217 center, consisting of stone slabs joined together by mortar and the two stone basins (restored with gypsum plaster). It is likely that, in this period, the internal space of A216 has undergone a phase of abandonment, and therefore the accumulation of debris (US656), while the stairs M633 were still in use. The stairs M634 are likely that they were, at least partly, still in use.

Phase 3. At this time we are witnessing a collapse that affects a large part of the area under consideration. The coverage of A216 collapses inside the room and to the north in A223. Even in A217 there are stones of the wall, sandstone slabs, mud-bricks and plaster attributable to a slump. All this material goes to completely close the opening that led into A216 and the structure composed to the stone slabs, plaster and stone basins in A217. Obliterates even the beautiful stone floor in A223. At this time the area loses some of his early functions.

For level the collapse (US54) will go to cover the stairs (M633 and M634) and the room A223. A216 are visible only to the upper part of the walls. A217 back to being a street leading from the

square A20 to the south. M349 and M385 are built for divide the previous room in two little and squared rooms (A142 and A143).

Phase 4. The A217 road is slowly incorporated into the square A20; in a late phase the square arrive to M93 and M381 at south and M382 at east.

Square A20 (trench supervisor: A. Sedov)

During the SUM14A season excavations at the SW corner of the square A20 were carried out, discovered the ruins of structure built against the external wall M93 of the so-called Monumental Building 2 and adjacent building, represented by the wall M381. It seems, that quite a large structure, probably building BF8, consisting of several rooms and a street (A217) in front of it (from E) were excavated (see report of Silvia Lischi). The following rooms constituted the new building BF8: room A216 (a staircase well), room 223 (with paved floor and adjacent staircase M633), room A224 (partially excavated), room A227 (partially excavated), room A228 (partially excavated). The following walls delimited the staircase well (room A216): M628 (on the S), M 627 (on the E), M 629 (on the W) and M631 (on the N). The following walls delimited the room A223 (1.7x2.0 m in size): M631 (from the S), M627 (from the E), M648 (from the N), M632 (from the W). The entrance to the room A223, 0.7 m wide, was located in its NW corner, between walls M648 and 632. A staircase M633 run along the rooms A216 and A223, and was separated by the walls M628 (from the S), M603 (from the W) and M629 (from the E). Most probably, it had a turn in opposite direction (towards the N) while running to the first floor of the building. The staircase M633 led from the SW corner of the room A224, where we discovered a sort of threshold. The staircase has 9 steps leading from N to S, 2 steps leading from W to E and 1 step leading from S to N). The width of steps is 0.8-0.9 m. The room A224 located north of the room A223. The following walls delimited the room: M 627 (from the E), M 648 and M632 (from the S), M603 (from the W). The room was partially excavated (its northern part run beyond the trench limits), and measures 1.45x2.9 m. The room had, probably, two entrances: in the wall M627 (c. 0.5 m wide), the main entrance to the building BF8 from the street A217, and symmetrical entrance (c. 0.75 m wide) to the adjacent room A227 in the wall M603. The room A227 (partially excavated) locates west of the room A224. The following walls delimited the room: M603 (from the E), M600 (from the S), limits of trench separated the room from the N and W. It has two entrances – in the wall 603, connecting the A224 and A227, and in the SE corner, 0.8 m wide, connecting A227 with A228. The following walls delimited the room A228, 3.0x3.9 m in size, located south of the room A227: M602 (from the E), M600 (from the N), M 601 (from the W). Remains of mud-brick platform with stone-foundation (continuation of M634) delimited the room A228 from the S. *Note: According to the report of C. Condoluci (SUM13C), there were two walls, M600 and M601, built in different technique. But our excavations showed it undoubtedly that there was a single wall, M600 according to our nomenclature, which had a sort of destruction in its centre.*

The cultural deposits in all above-mentioned structures can be described as followers.

Room A224

The deepest layer reached in A224 was US660: “soft brown layer mixed with pottery shards, animal bones, seashells and small finds”. There were found also a jar turned upside down and pottery bottom (on US660floor) (report of S. Lischi). There were accumulations denoted as US54floor, US659, and US659floor above the US660. But as we can clearly see in the section on the southern limit of trench, all above-mentioned cultural deposits constitute a sort of pit, dug from the SUM54floor, and, in this case, it must be contemporary with US54floor (*in cards attached to the bags with pottery, shells and bones in the field it was mistakenly denoted as US55=US660 accumulation*). It seems the pit ends at US660floor, which was traced at elevation 26.017 m.

Room 227

Probably, similar situation was traces in the room A227, although the presence of a pit dug from US54floor is much less clear. It seems that cultural deposits accumulated in this room should be

referred to the stratum of US55 in the square A20. Excavations stopped at the elevation 26.019, which might represent a sort of floor.

Room A228

Cultural deposits in this room were denoted as US687 and they are equal to US55 in the A20. Excavations stopped at the elevation 26.020, which might represent a sort of floor.

Preliminary conclusions

It seems that in the trench at A20, which we can consider as deep sounding, we revealed a certain structure belonged to the one of the earliest phase of the city existence. It was erected at least previous US55 accumulation in the square A20 and was partially destroyed during the construction of the US54 floor. Later, during the period of accumulation of US54 deposits, and, probably, later, only part of the building BF8 was in use, namely the room A223 and adjacent staircase M633 with staircase well A216. In addition, the staircase M634 and adjacent mud-brick platform were in use to get the access on the top structures of the Monumental Building 2.

A piece of burnt frankincense was found in US687 in A228 against the wall M600.

Area F, room A221 (trench supervisor: Said al-Hamri)

The new room has been excavated south of M381. Leaning to the east to the north-east corner of the Monumental Building 2. The room is delimited by wall M381 to the north, M636 to the west, M638 to the south and M637 to the east. The superficial cultural deposit US662 has been excavated. US662 consists of grayish brown loam, incorporating many limestone blocks and some sand stone slabs. Few pottery fragments were recovered and some small finds: an oil lamp (Sh561), shell beads (Sh562, Sh565), an incense burner (S2480), two fragments of mortars (S2490, S2491), a whetstone (S2489) and a loom-weight (S2510).



After excavation.

Area F, building BF4, room A220 (trench supervisor: Said al-Mashani)

The room A220 was located between the city wall M115 and M119. Inside was found and excavated the layer called US667. The layer consist of soft soil mixed with ash, charcoal and some materials such as bones, shells and pottery fragments. Below the US667 was found the US683 which consisted of mud-bricks, fragments of plaster and some masonry limestone.

At south-west of the building BF4 was destroyed a wall which probably represents the late phase of occupation at Sumhuran. The filling of this wall was consisted of loose and ashy soil with few shards of pottery.




North-east view of the area.




North-west view of the area.


Object Index Card

Registration Nr. SUM14A, M9, 1 MB828				
Provenance				
Drawing code Nr.				
Definition Protome	State of preservation Good	Measures l. w. 3.1 h. 6.0 th. 1.4 diam.		Shape
Material Bronze	Preserved part Complete (see below)			Section
Description SUM14A, M9, 1 Bronze object in form of ibex protome. The item is well preserved, complete except for the lower part of one of the bended legs and for the tip of one of the curved horns. The protome is well characterized with pointed ears and beard. The object has a cavity on the back, probably to insert a metal handle. The ibex could be interpreted as the final of a lamp.				
Responsible Alexia Pavan		Date 15/02/2014		


Object Index Card

Registration Nr. SUM14A, US54,90 S2452			
Provenance Area F, street A217			
Drawing code Nr.			
Definition Incense burner	State of preservation Good	Measures l. w. 13.1 h. 24.5 th. 11.3 diam.	Shape Truncated-pyramid base
Material Limestone	Preserved part Almost complete		Section
Description SUM14A, US54,90 Almost complete limestone incense burner with truncated-pyramid shaped base surmounted by a projecting cuboid element showing an incised and a bas-relief decoration. On the top there is a well defined recess deep 3cm. The rim is squared, badly preserved in the left part. At each corner a squared merlon was supposed to be placed: one is completely preserved, two are fragmentary and one is completely lost. The frontal face shows a bas-relief decoration. On the top is visible a frieze with recessing, vertical and rectangular panels. Under the frieze there is the astral motif with the crescent moon and the disc inside a squared panel. On the right side of the frontal face there are small incised squared panels to be interpreted as rielaboration of false-windows. The two lateral faces probably have the same decoration which is better preserved on the right face. On the top there is an incised frieze of vertical, rectangular panels. Under the frieze there is a decorative motif showing projecting and recessing big vertical and rectangular panels. The back face shows an incised decoration with crossed oblique lines. Between the upper cuboid element and the base there is another element (h. 2.5 cm.), projecting from the base and showing a dentil decoration. The base shows the four well smoothed faces without decoration.			
Responsible Cleto Carbonara		Date 07/02/2014	


Object Index Card

Registration Nr. SUM14A, US662,5 S2480			
Provenance Area F, h6			
Drawing code Nr.			
Definition Incense burner	State of preservation Good	Measures l. w. 11 h. 18.7 th. 10.7 diam.	Shape Truncated-pyramid base
Material Limestone	Preserved part Almost complete		Section
Description SUM14A, US662,5 Almost complete limestone incense burner composed by a projecting cuboid element (w. 11 cm; h. min 10 cm – max 10.6 cm) surmounting a truncated-pyramid base (w. 10 cm; h. 8.7 cm; th. 10 cm). The cuboid element shows on the top a squared recess deep 1 cm with flat squared rim (th. 1.5 cm). Traces of burning are visible inside. The decoration is placed on the frontal and lateral faces. On the frontal face there is in the middle a projecting curved element in a rectangular panel. Below there is the astral motif of the crescent moon with the disc on a trapezoidal base. On the sides there are several recessing and projecting rectangular panels. On the two lateral faces there is an incised consists of a pattern of oblique lines to form a series of lozenges. The surfaces of the back face and of the base doesn't show any kind of decoration and are well smoothed.			
Responsible Cleto Carbonara		Date 10/02/2014	


Object Index Card

Registration Nr. SUM14A, M25 S2492			
Provenance			
Drawing code Nr.			
Definition Incense burner	State of preservation Good	Measures l. w. 9.3 h. 25.3 th. 10.8 diam.	Shape Truncated-pyramid base
Material Limestone	Preserved part Almost complete		Section
Description SUM14A, M25 <p>Almost complete limestone incense burner composed by a tall truncated-pyramid base with a cuboid element on the top that projects only on three sides. The back face is completely straight. The cuboid element (w. 9.1cm; h. 10.5cm; th. 10.3cm.) is not perfectly preserved, but should not present any decoration. On the top there is a squared recess (6X6.5) with traces of the squared rim (th. 1.9 cm). The rim was decorated with merlons on every corner, but only one is preserved. The base (w. 9.3 cm; h. 14cm; 10.8 cm.) shows a decoration which imitates architectural façades only on the frontal face. This consists of three flat projecting elements separated by two recessing elements wide 2 cm. The projecting element on the left side is not preserved. The central one is wide 2 cm and the right one 1.4 cm.</p>			
Responsible Cleto Carbonara		Date 10/02/2014	


Object Index Card

Registration Nr. SUM14A, M25 S2493			
Provenance			
Drawing code Nr.			
Definition Incense burner	State of preservation Good	Measures l. w. 12.9 h. 27 th. 11 diam.	Shape Truncated-pyramid base
Material Limestone	Preserved part Almost complete		Section
Description SUM14A, M25 Almost complete limestone incense burner composed by a truncated-pyramid base (w. 13 cm; 13.1 cm; th. 11 cm) and a cuboid element (w. 12.9 cm; h. 13.6 cm; 11.1 cm) projecting from the base on three sides. The back face of the object is completely straight. The cuboid element shows on the top a squared recess (9x6.2) deep 1.7 cm. The squared rim (th. 2 cm) is decorated with squared merlons on every corner. The frontal side has also a central merlon which probably was also on the back side. Only the frontal face of the cuboid element is decorated. The decoration consists of incised traits forming a stylized human face. There are two curved lines for the eyebrows, two oval for the eyes with in the middle a rectangle for the nose. This is the first example of this kind of decoration on an incense burner. It was usually found on the stelae. The base doesn't shows any kind of decoration.			
Responsible Cleto Carbonara		Date 11/02/2014	


Object Index Card

Registration Nr. SUM14A, US662, 3 Sh564			
Provenance Area F, US662, h6			
Drawing code Nr.			
Definition boss	State of preservation good	Measures l. 8,17 cm w. 4,5 cm h. 3 cm th. diam.	Shape circular
Material shell	Preserved part fragmentary		Section convex
Description SUM14A, US662, 3 Fragment of decorated shell boss. Internal and external surfaces well smoothed. The incised and champ-levé decoration consists in 4 concentric stripes, with different and continuous motifs. From the external edge: first stripe (h. 0.75 cm) a row of triangles or saw-tooth motif realized in champ-levé. Second stripe (h. 1,5 cm) after two incised lines a “pomegranate-flower” motif realized in champ-levé. Third stripe (h. 0,9 cm) a row of concentric squares. Fourth (h. 0,3 cm) after two incised lines a zig-zag line realized in champ-levé.			
Responsible Silvia Lischi		Date 02/02/2014	

Object Index Card

Registration Nr. SUM14A, US660,8 Sh569			
Provenance Area F, A217			
Drawing code Nr.			
Definition Boss	State of preservation Good	Measures l. w. h. 2.8 th. diam. 8.9	Shape Circular
Material Shell	Preserved part Complete		Section
Description SUM14A, US660,8 Complete shell boss slightly circular in shape. The upper surface is convex. On the concave surface are visible four circular, not through, holes. On the convex surface there are incised decoration consisting of: four rectangular and four triangular registers separated by couples of incised lines. In the rectangular registers there are two rows of impressed triangles, one row of impressed lozenges, two rows of incised lozenges. In the triangular registers there are incised and impressed triangles.			
Responsible Cleto Carbonara		Date 17/02/2014	

Object Index Card

Registration Nr. SUM14A, US657, 8 Sh574			
Provenance AREA F, A43			
Drawing code Nr.			
Definition Boss (?)	State of preservation Fair	Measures l. w. h. th. diam.	Shape Circular
Material Shell	Preserved part Half complete		Section
Description SUM14A, US657, 8 Half complete shell, probably used as a boss. Internal and external surfaces well smoothed. On the upper surface there is an etched decoration with figurative scene. The etched decoration consists in a stylized sun in the middle, two spotted quadrupeds animals (probably feline) and a bird. Along the edge and for filling the surface of the shell there are stylized representations of flora and a tripod object that could be interpreted as an incense burner.			
Responsible Silvia Lischi		Date 19/06/2014	

**RESTORATION WORKS AT SUMHURAM
(ARCHAEOLOGICAL PARK OF KHOR RORI)
(Sultanate of Oman)
CAMPAIGN Jan - May 2014**

IMTO

Italian Mission To Oman



Technical Report

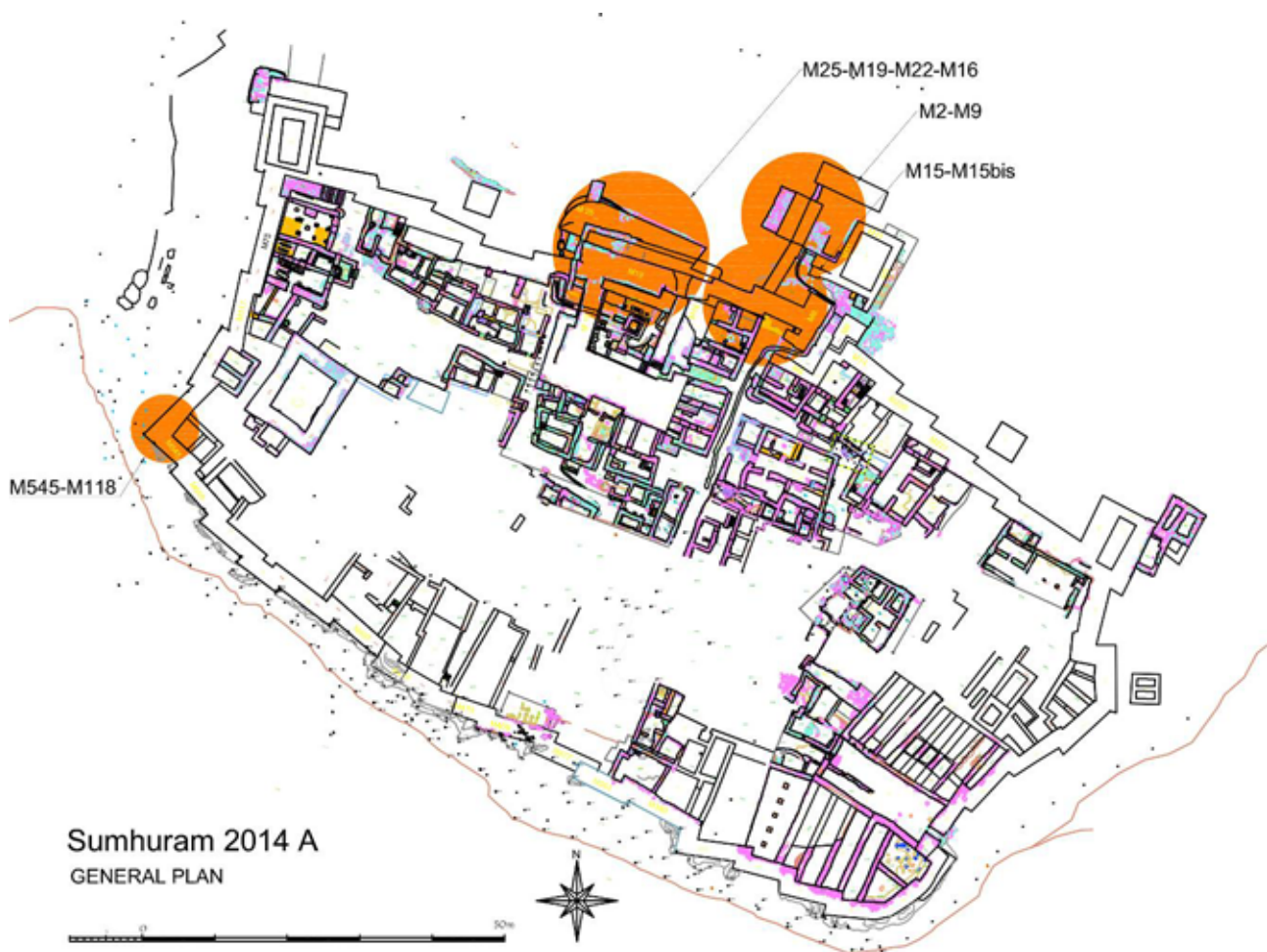
09th January – 20th March 2014

Valter Filatondi

Introduction

The restoration activities, during this campaign, regards the completion of the restoration of the walls surrounding the water well (Monumental Building 1) M19–M22–M313–M16–M664–M665–M15, the rising up of the following two walls: M545–M118 and the reconstruction of the tower M2–M9. All these walls are located at the north and west sides of the city walls.

The following map shows all the locations:



Worker Teams

Four teams of workers of twelve people each have been engaged for all the needed operations to complete the reconstruction of the above mentioned areas. One team of eight people was engaged to prepare the mortar and it is also necessary other four masons to follow and control all the workers

Working progress status

In order to check the advancement of the works, we daily took a significant number of pictures of the areas. The number of the pictures and the point of viewing from which they are taken from, are hereby reported in order to have a daily update about the working progress status.

Mortar preparation

The mortar, to be used for the connection between the stones, is the same used during the previous campaigns: **80** parts of brown colour with **200** parts of yellow colour.

The mix of the mortar is composed by the oxide colours mentioned above plus **4 buckets** of sand with eight scoops (**600grams**) of lime powder.

Therefore we have two different kinds of mortar:

- **stone mortar**, used for the external leaves of stones, obtained by the mix of sieved sand, hydrated lime, brown and yellow oxides for the chromatic tone.
- **filling mortar**, used for the back filling of the structure, made with the same components, except the use of raw sand instead of sieved sand without any brown and yellow oxides.

Completion of the Monumental Building

M313 - M22 - M16 – M19 – M664 – M15 - M665 – M15 - M179

On 09th January 2014 we started the cleaning of all the walls surrounding the water well. More in detail, we had to start with the reconstruction of the walls M22 and M21, that are located around the water well, because they are not easily reachable from outside. Then, for the same reason, we started with the restoration of the wall M16 before restoring the wall M19.



Rising up of the wall M22

The situation of the wall M22 on 09th January 2014 was as shown on the picture below.



On 11th January 2014 the cleaning and the preparation for the restoration started.



On 16th January 2014 the restoration was as shown below.



On 28th February 2014 the restoration was finished as shown below.



Rising up of the wall M313

The situation on 19th February 2014 was that shown on the picture below.



On 28th February 2014 the restoration was finished as shown below.



Rising up of the wall M16

The situation of the wall M16, west side, on 09th January 2014 was as shown on the picture below.



On 20th March 2014 after the restoration the situation was as shown on the picture below.



Rising up of the wall M16 (continue)

The situation of the wall M16, east side, on 09th January 2014 was as shown on the picture below.



On 20th March 2014 after the restoration the situation was as shown on the picture below.



Restoration of the wall M15

The situation on 09th January 2014 was that shown on the picture below.



The restoration was finished on 20th March 2014 as shown on the picture below.



Restoration of the walls M2-M9

The situation on 09th January 2014 was that shown on the picture below.



During the demolition of the filling of the wall M9, we discovered the following object (see the Archaeological Report).

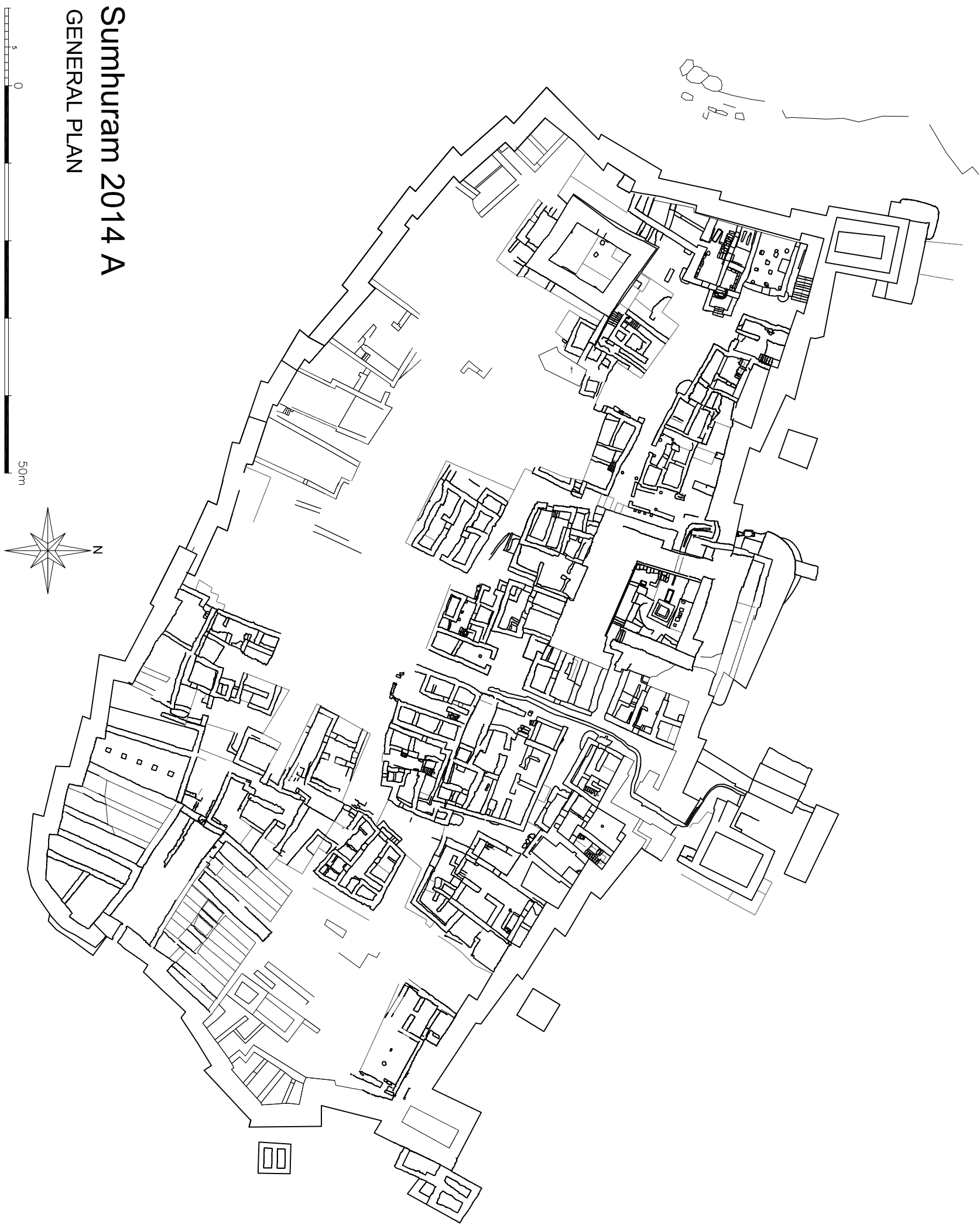


The situation of the restoration on 16th February 2014 as shown on the picture below.

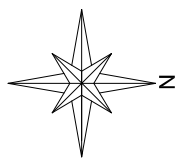


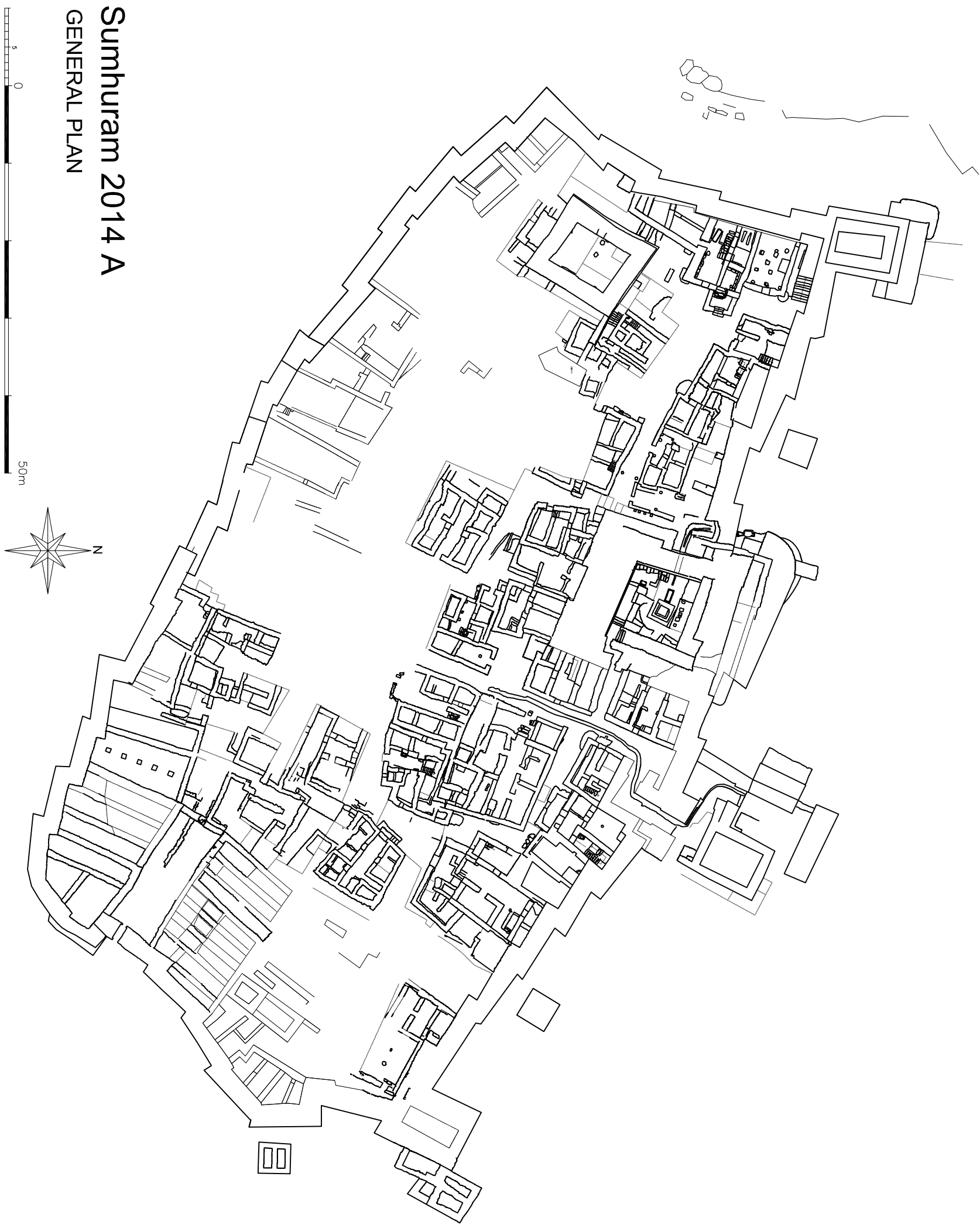
The restoration was finished on 26th February 2014 as shown on the picture below.





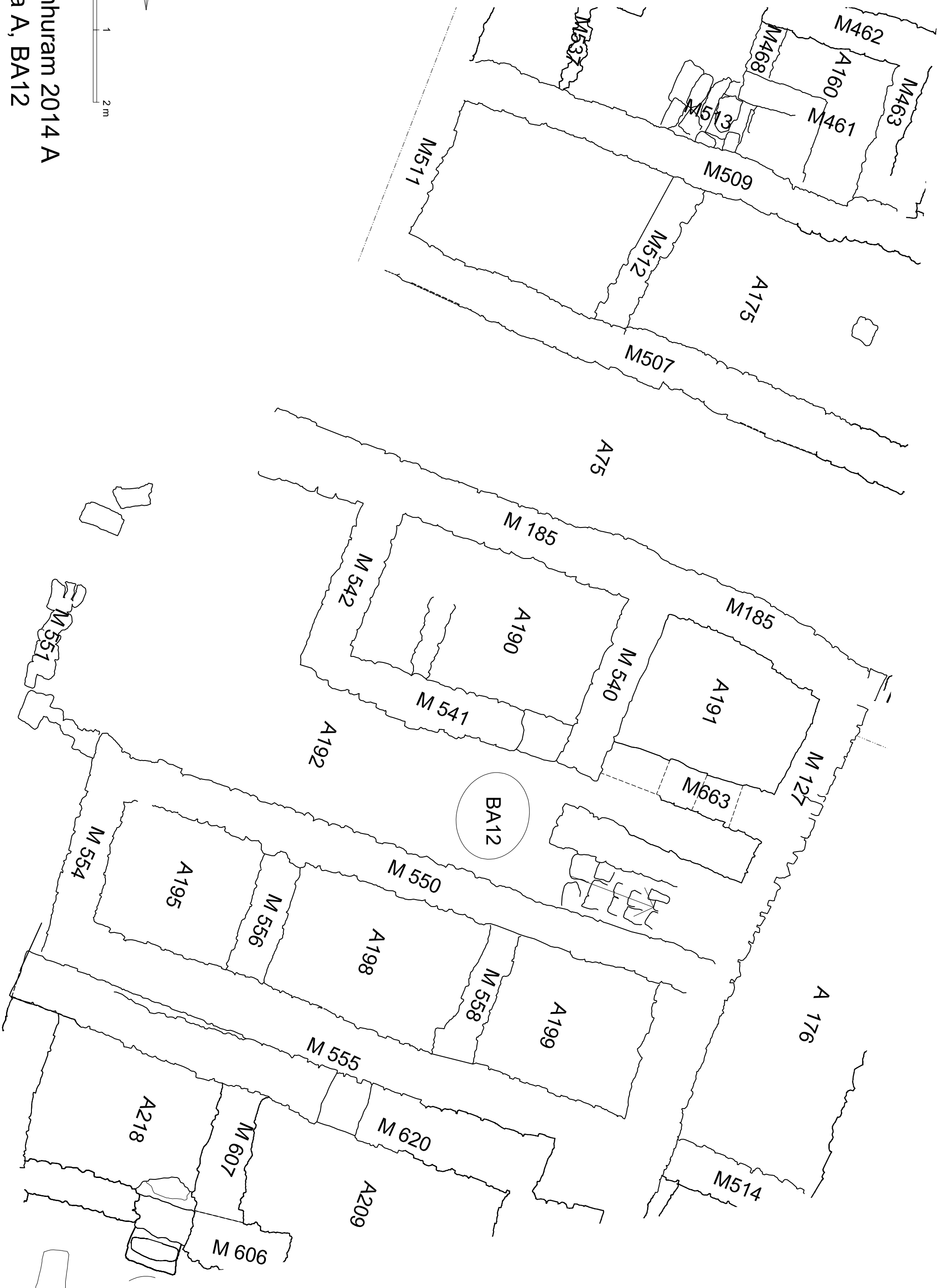
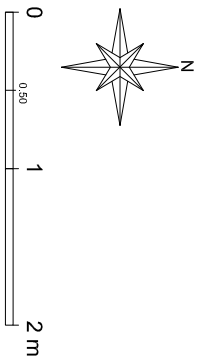
Sumhuram 2014 A
GENERAL PLAN



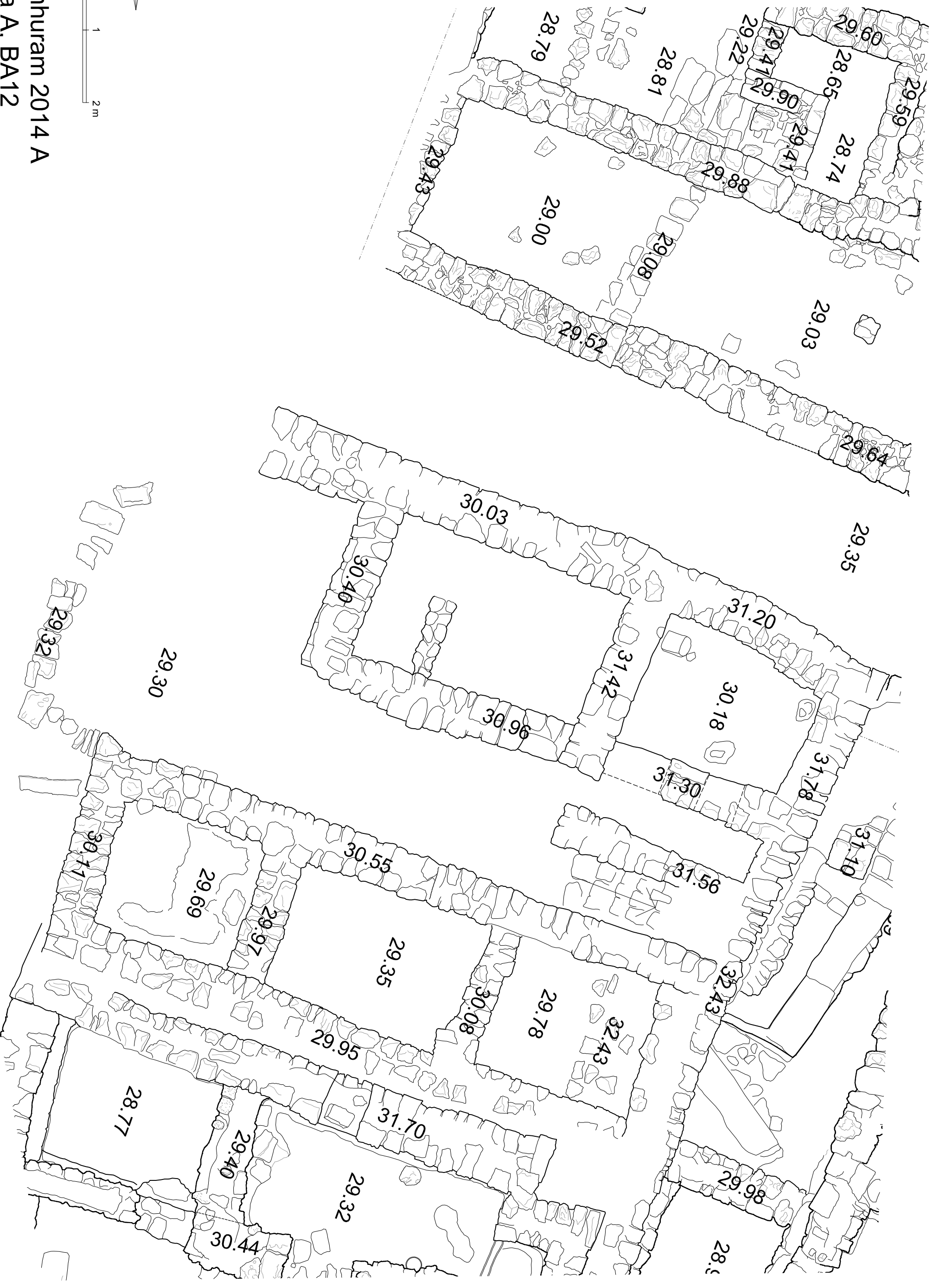


Sumhuram 2014 A
GENERAL PLAN

Sumhuram 2014 A
Area A, BA12
rooms A190, A191
rooms A190, A191



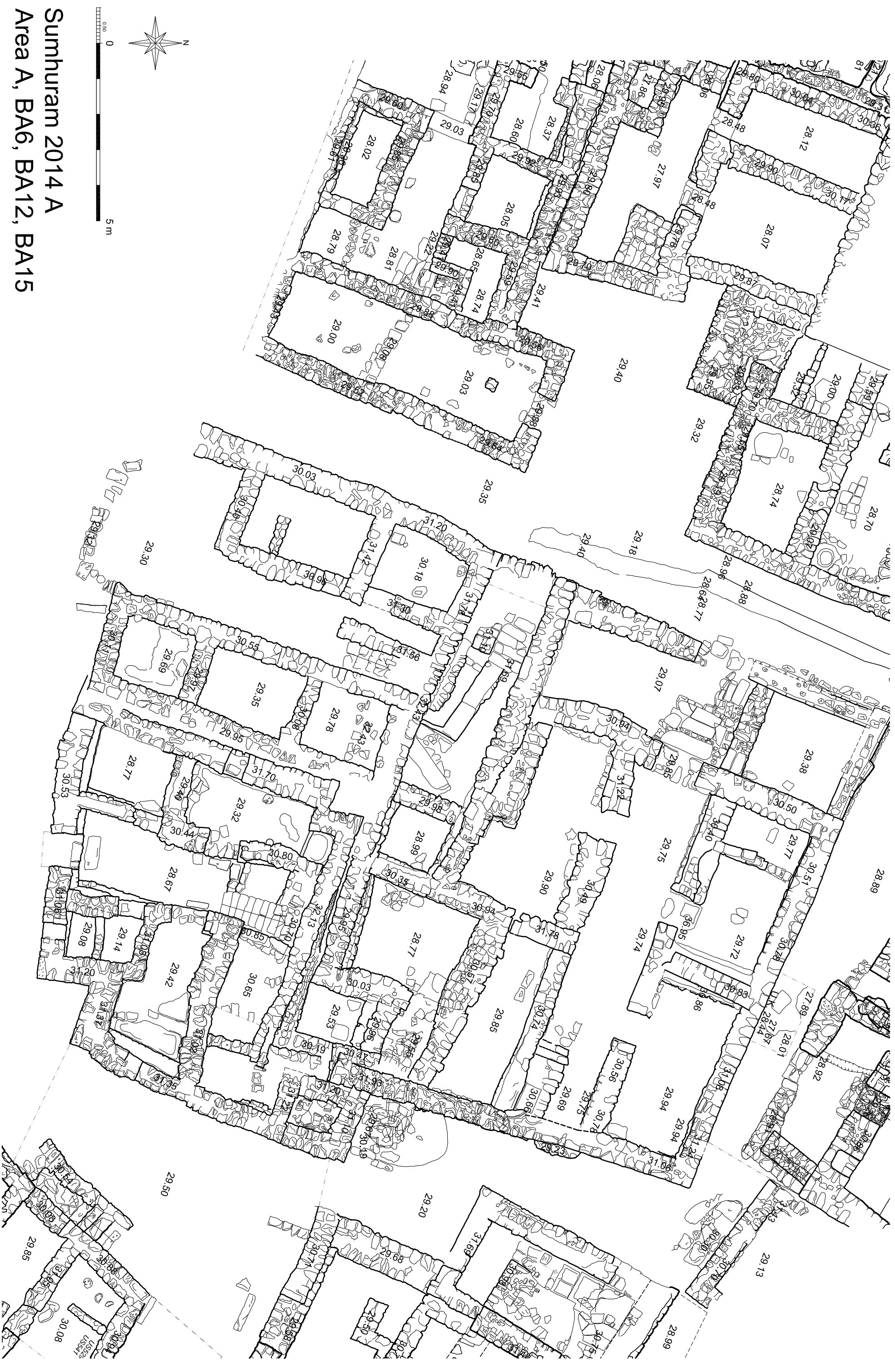
Sumhuram 2014 A
Area A, BA12
rooms A190, A191



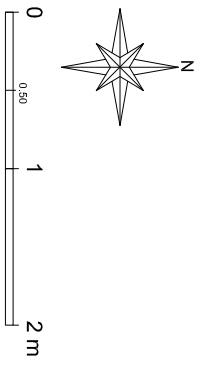


Sumhuram 2014 A
Area A, BA6, BA12, BA15

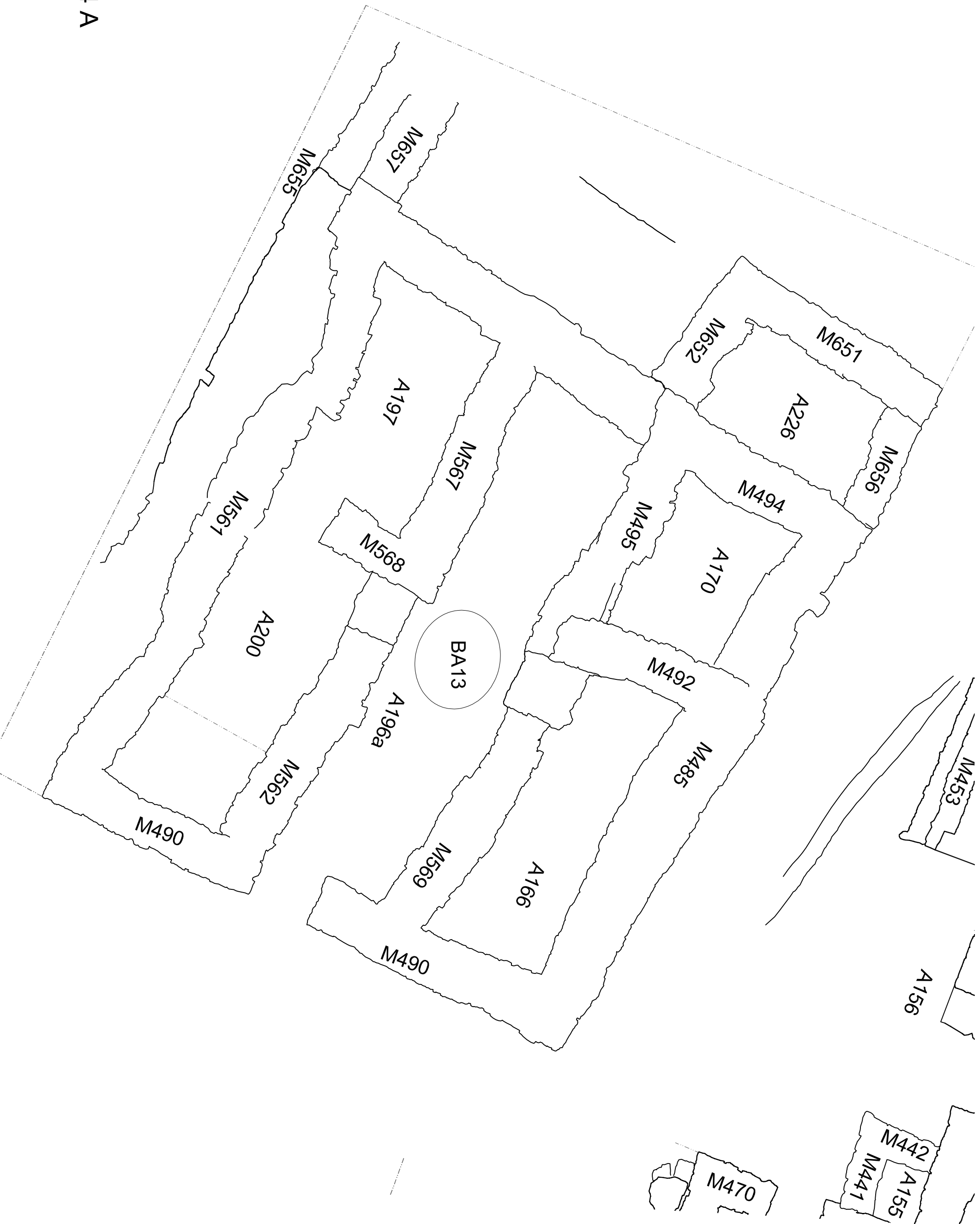


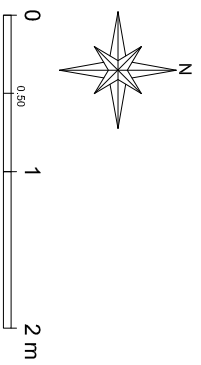


Sumhuram 2014 A
Area A, BA6, BA12, BA15

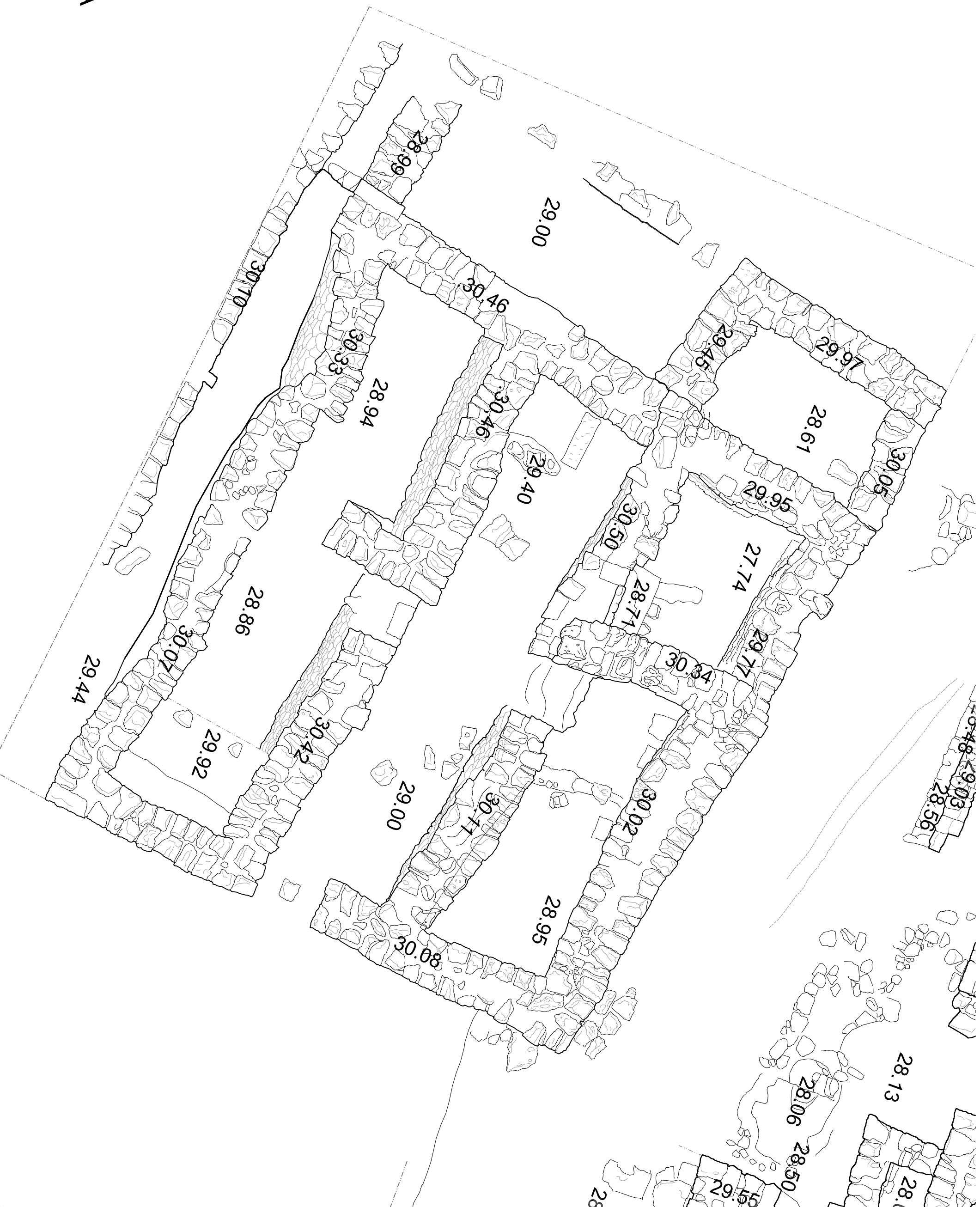


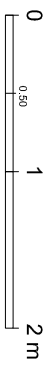
Sumhuram 2014 A
Area A, BA13

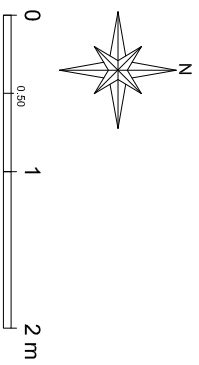




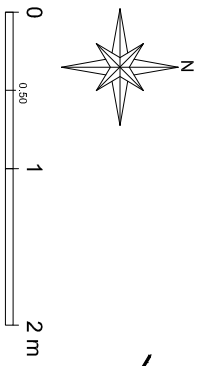
Sumhuram 2014 A
Area A, BA13



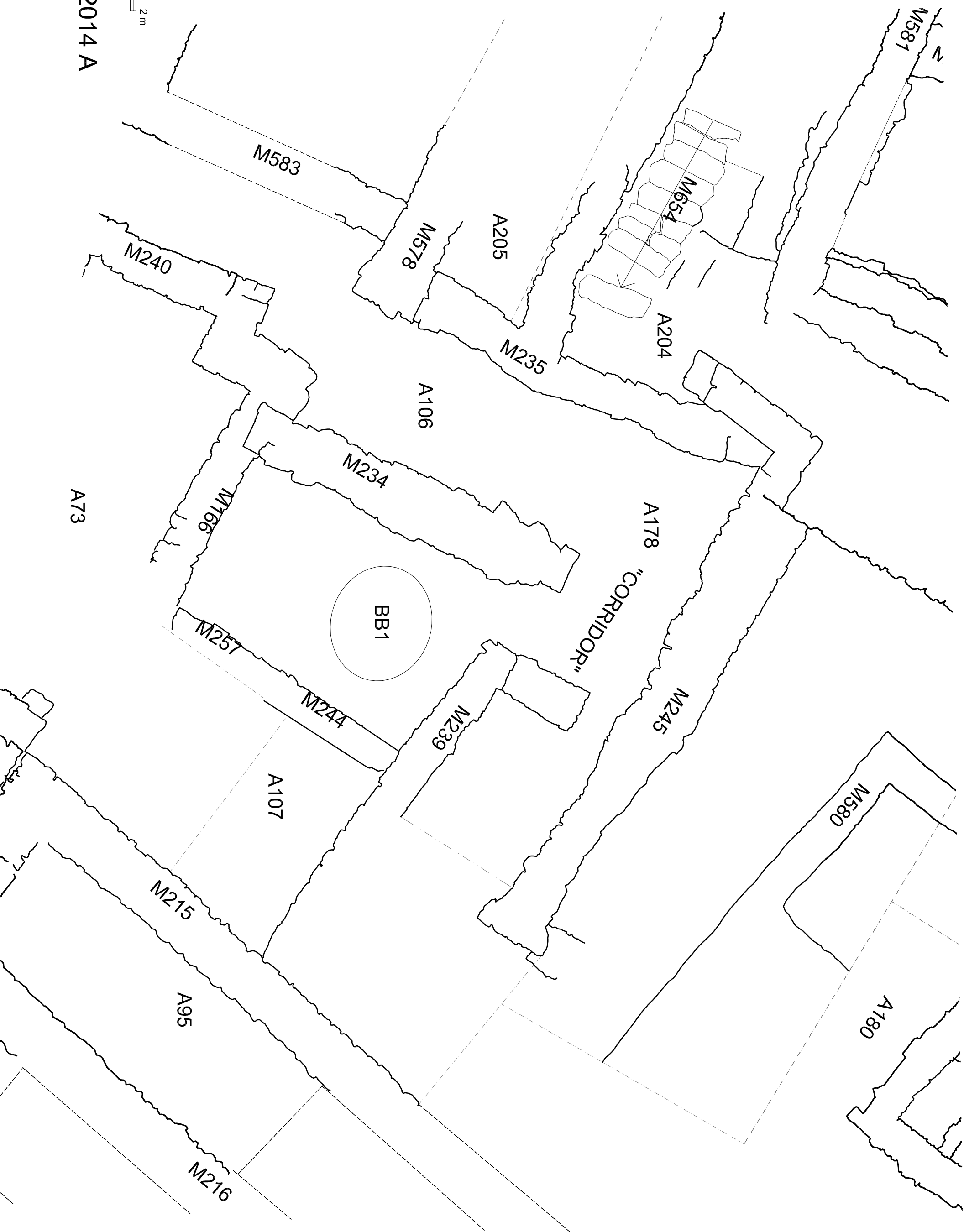


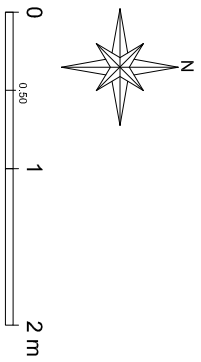
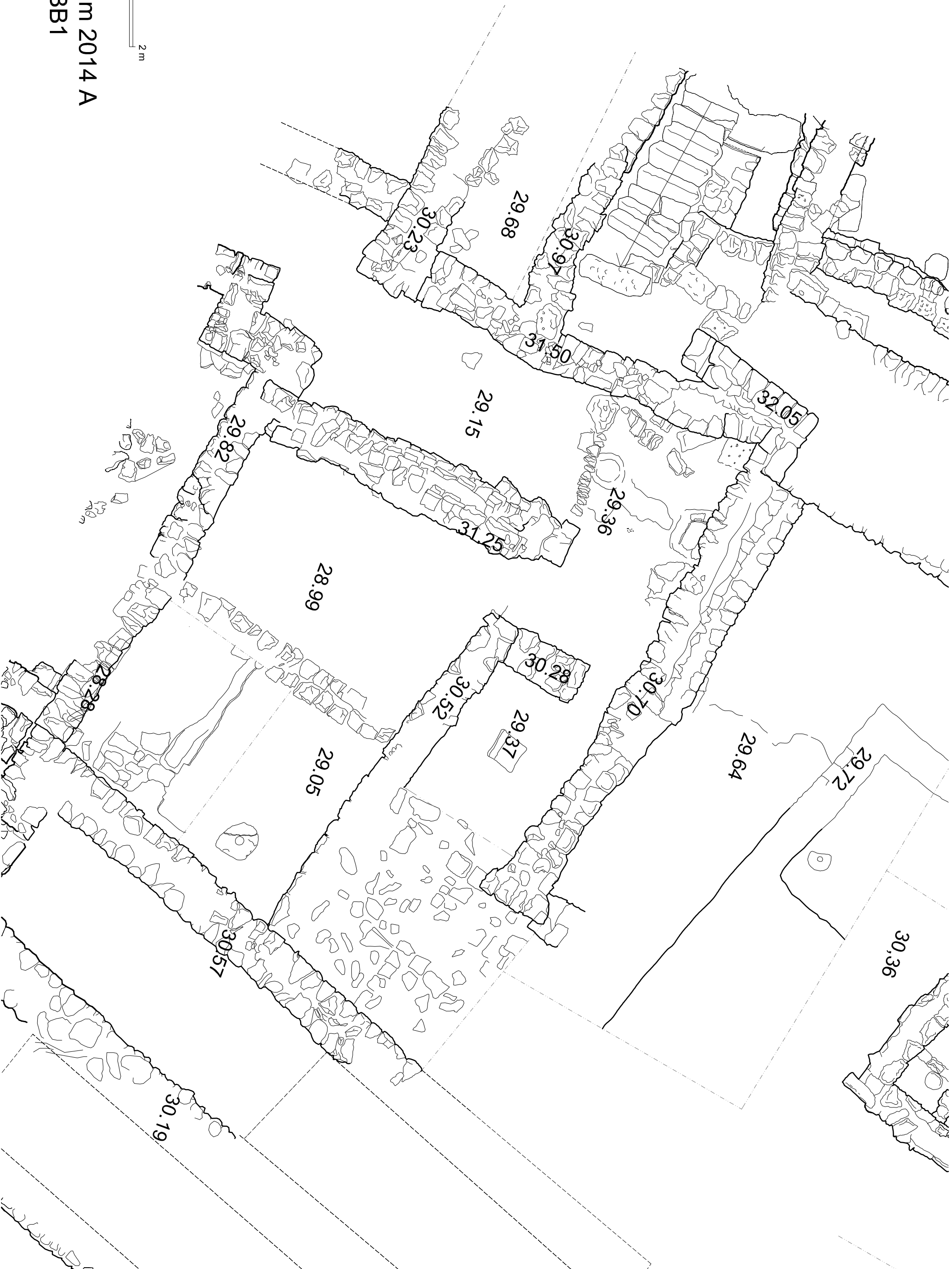


Sumhuram 2014 A
Area A, BA15

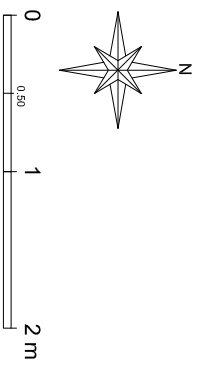


Sumhuram 2014 A
Area B, BB1

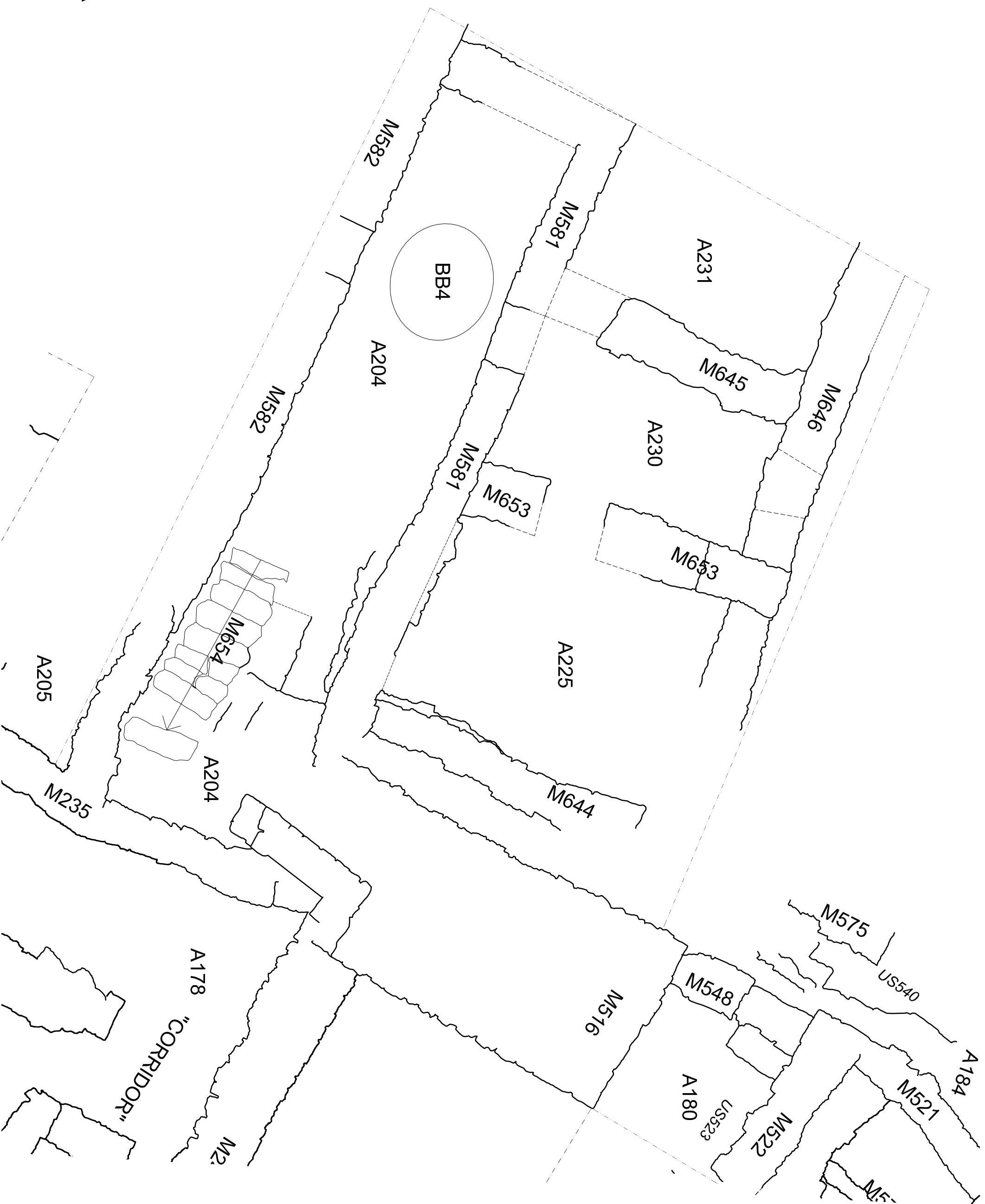


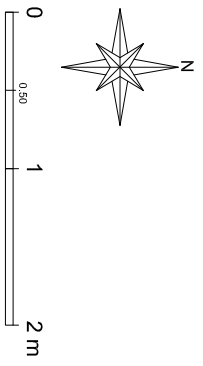


Sumhuram 2014 A
Area B, BB1

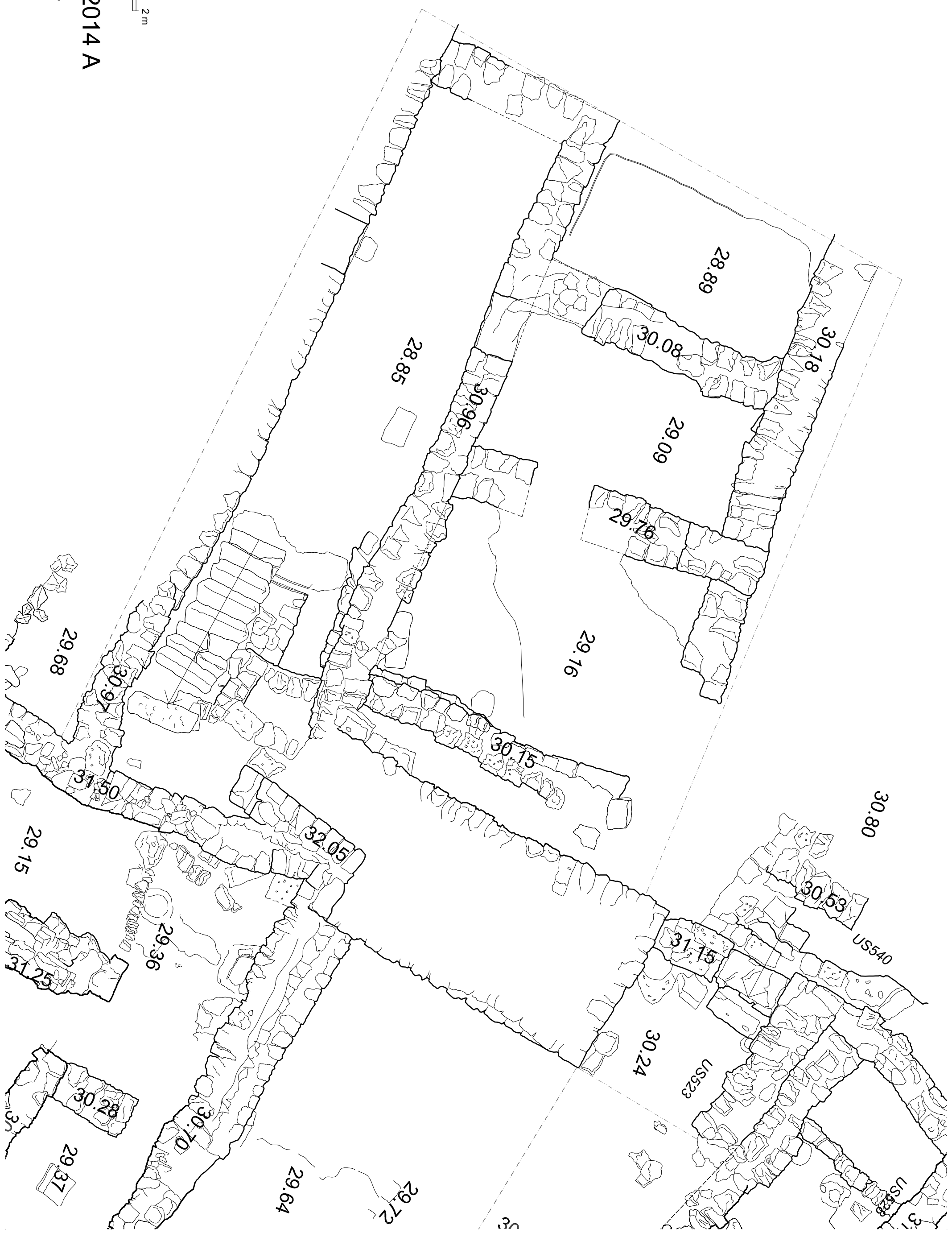


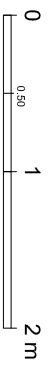
Sumhuram 2014 A
Area B, BB4





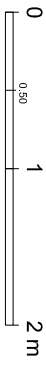
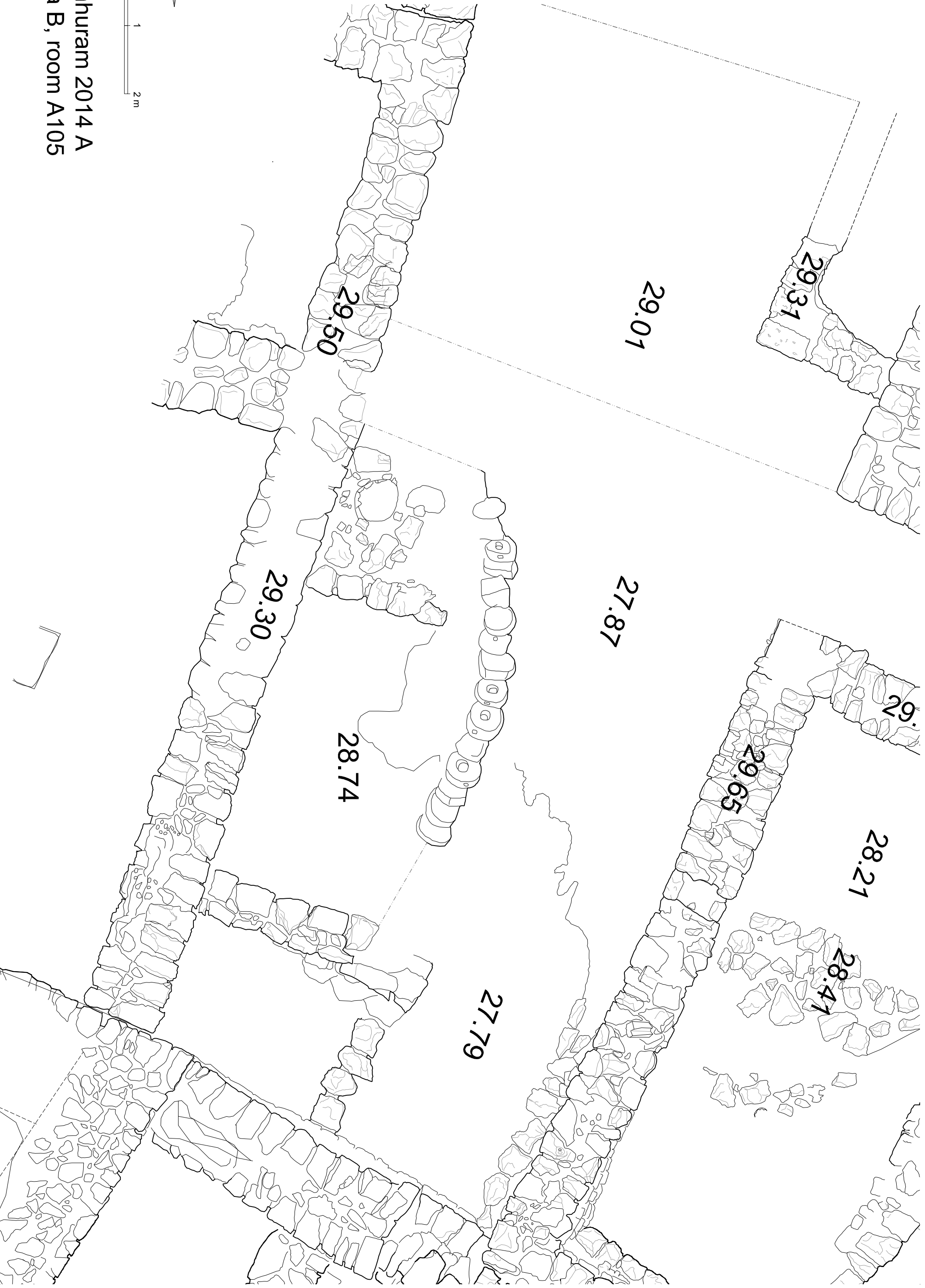
Sumhuram 2014 A
Area B, BB4





Sunthuram 2014 A
Area B, room A105





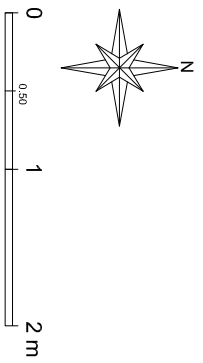
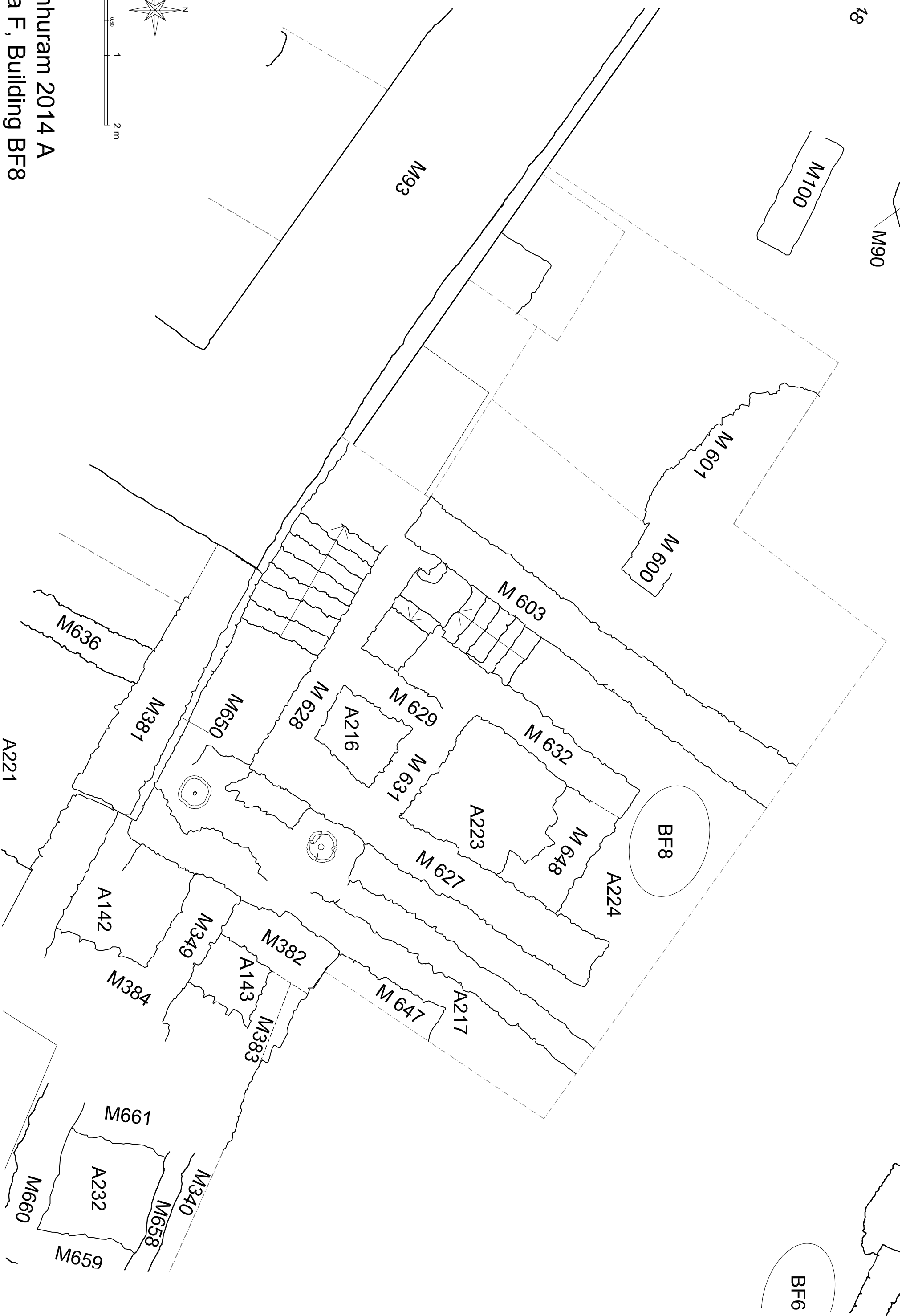
Sumhuram 2014 A
Area B, room A105



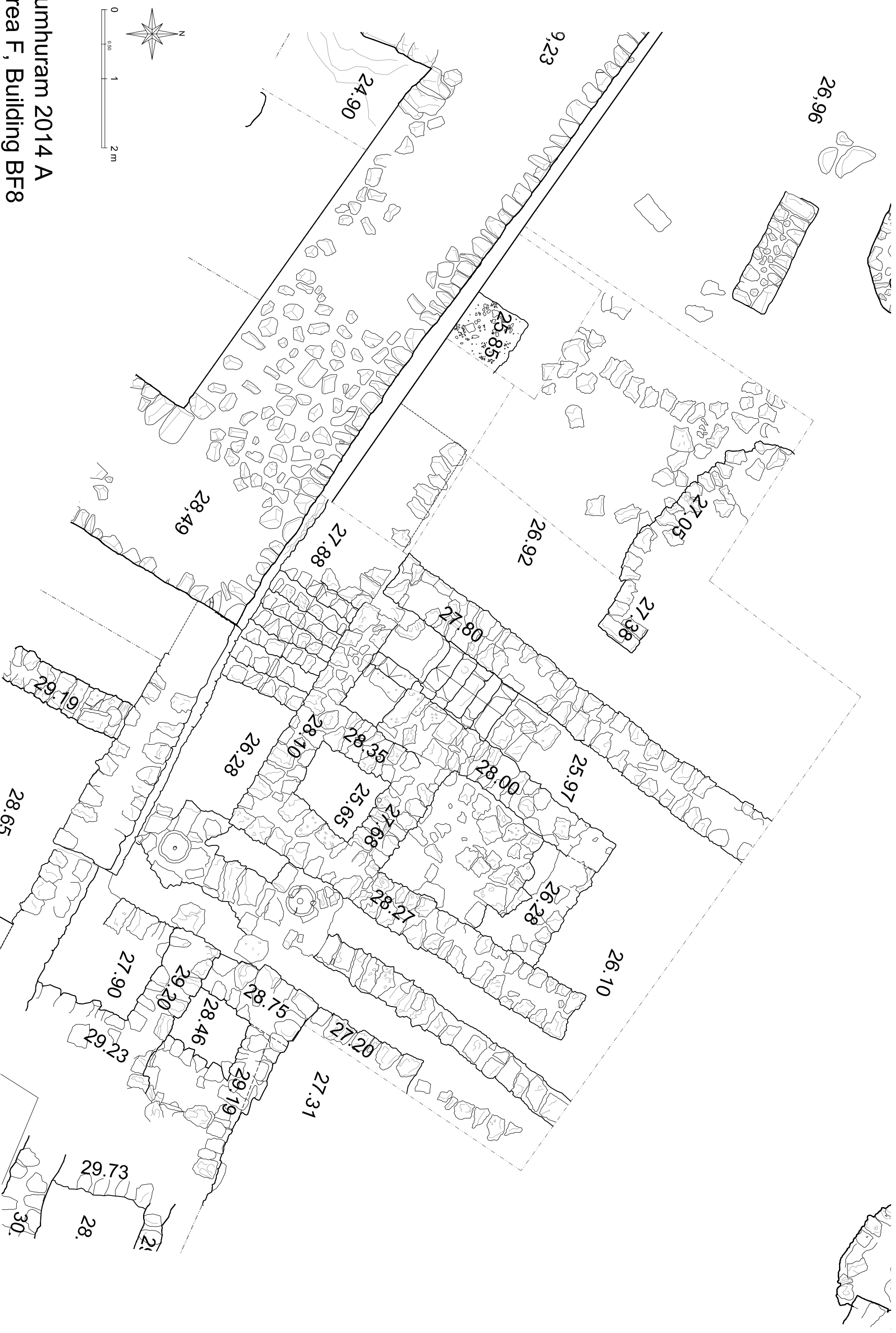
M90

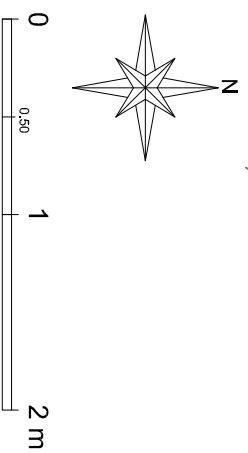
M100

BF6



Sumhuram 2014 A
Area F, Building BF8





Sumhuram 2014 A
Area F, SQUARE h-6
rooms A221, A232



Sumhuram 2014 A

Area F, SQUARE h-6

rooms A221, A232

