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ABELLINUM

AND ITS WATER DISTRIBUTION SYSTEM: NEW EVIDENCES FOR A WIDER COMPREHENSION OF THE HYDRAULIC INFRASTRUCTURES

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Fig. 1 - Path of the Serino-Benevento aqueduct.

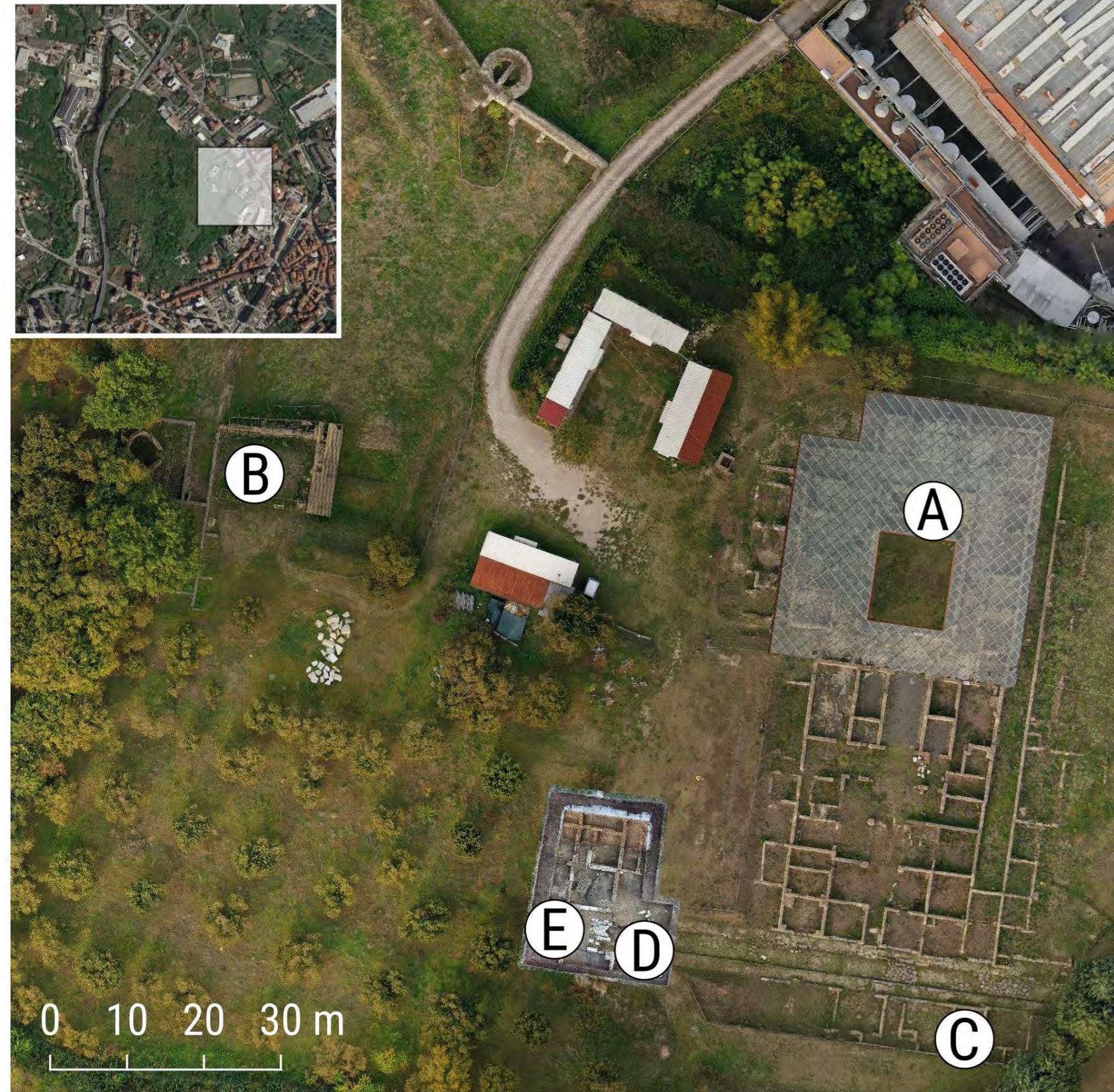


Fig. 2 - Plan of the North-eastern part of the city of Abellinum.

Situated on the left bank of the Sabato river, the city of *Abellinum* (Campania region, southern Italy) represents a tangible testimony to the influence of the Roman civilization in Irpinia. The archaeological evidences (e.g. city walls, Forum, baths, a *domus*, amphitheatre, tombs) are located mostly on and around the Civita plateau, where it is also possible to identify some structures connected to the water distribution system of the city. *Abellinum* was served by the Augustan Serino-Beneventum aqueduct (fig. 1). This infrastructure is part of the big Augustan project concerning also the better-known *Aqua Augusta Campaniae*.

The city of *Abellinum*, as far as is known from published studies so far (Colucci Pescatori 1991, Colucci Pescatori 2013), was served by the aqueduct arriving from Serino and had to enter the city from the south, while another aqueduct arriving from the east is assumed by a number of archaeological reports and actually in study within the SeBNA project (CIVIS3i postdoctoral fellowship, H2020-MSCA-COFUND-2020).

For the time being, research has yet to specify where the *castellum aquae* was located, or where the aqueduct entered the city walls. Within the city, evidence of the presence of a distribution system was unknown, until the excavations and surface investigations undertaken during the '*Abellinum. Piano per la conoscenza, la tutela e la valorizzazione dell'antico centro irpino*' project directed by A. Santoriello (DISPAC, University of Salerno; Musmeci 2023, Santoriello 2023).

The presence of a pool (fig. 2, A) inside the already known *domus* of *M. Vipsanius Primigenius* is one of the first clues within the city that give us information about the use of water supplied by the aqueduct. Surely, since there were private buildings that used large amounts of water, as is the case with the *domus* pool, there must have been a good urban water supply network, which primarily served public buildings. One of the public buildings that are surely served by the aqueduct are the public baths (fig. 2, B), dug in the last decades of the 20th century. The last evidence of structures related to water distribution within the city occurs in Barberio (Barberio 1778, p. 26) where the presence of '*acquedotti con canali di bronzo*' is mentioned.

There are now three new pieces of evidence to be linked to the water distribution system within the city, all of which are somehow related to each other and thus identify a widespread distribution system characteristic of every Roman settlement.

A piezometric tower or secondary castle (fig. 2, C) was identified along the eastern *cardo* south of the *decumanus*, in the part that had already been revealed by a survey in 2008. This artefact has a quadrangular plan (137 x 123 cm; preserved height 90 cm; fig. 3-5), is realized with bricks disposed in horizontal courses. At the front and rear is a recess 15 cm deep and respectively 30 and 23 cm wide, where should be situated the lead pipes going up and down from the cistern, made of the same material of the pipes, normally located at the top of the tower itself. The different width of the recess is probably due to a different thickness or number of tubes present. Direct comparison with the piezometric towers found in the Vesuvian towns of Pompeii and Herculaneum allows this archaeological evidence to be identified with this type of pressure regulation system along the distribution system.

A fountain pillar (fig. 2, D), on the other hand, was found in a disused context, in an area of intersection between the known *decumanus* and a *cardo*, brought to light during the same excavation phase in 2021. Of the fountain, which was most probably composed of four monolithic stone slabs (fig. 8), on the model of the better-known fountains of Pompeii and Herculaneum, only the small pillar remains, and due to the conditions and the context of its discovery, it is considered probable that it was placed in the open space between the two aforementioned road axes.

The pillar (height 108 cm, max. width 32,5 cm; fig. 6-8) had to be recessed inside the rear slab of the fountain, having the back side flush with the outside of the slab itself. At the rear it has the recess for the lead pipes (made of lead given the size of the recesses), which had to reach all the way to the fountain, which also had to have a tap at the front (diameter of hole 8,5 cm). The pillar has a bas-relief decorating the mouth of the fountain. According to iconographic comparisons with the fountain found just inside *Porta Stabia* in Pompeii, the representation could be that of a water deity; it could be possible otherwise think of a lion, or, although it seems the least plausible hypothesis, of a gorgoneion.

These two important elements of the distribution system are complemented by the discovery, during the 2023 excavation, of a lead *fistula* (length 190 cm, diam. 6 cm), which is still being excavated and studied.

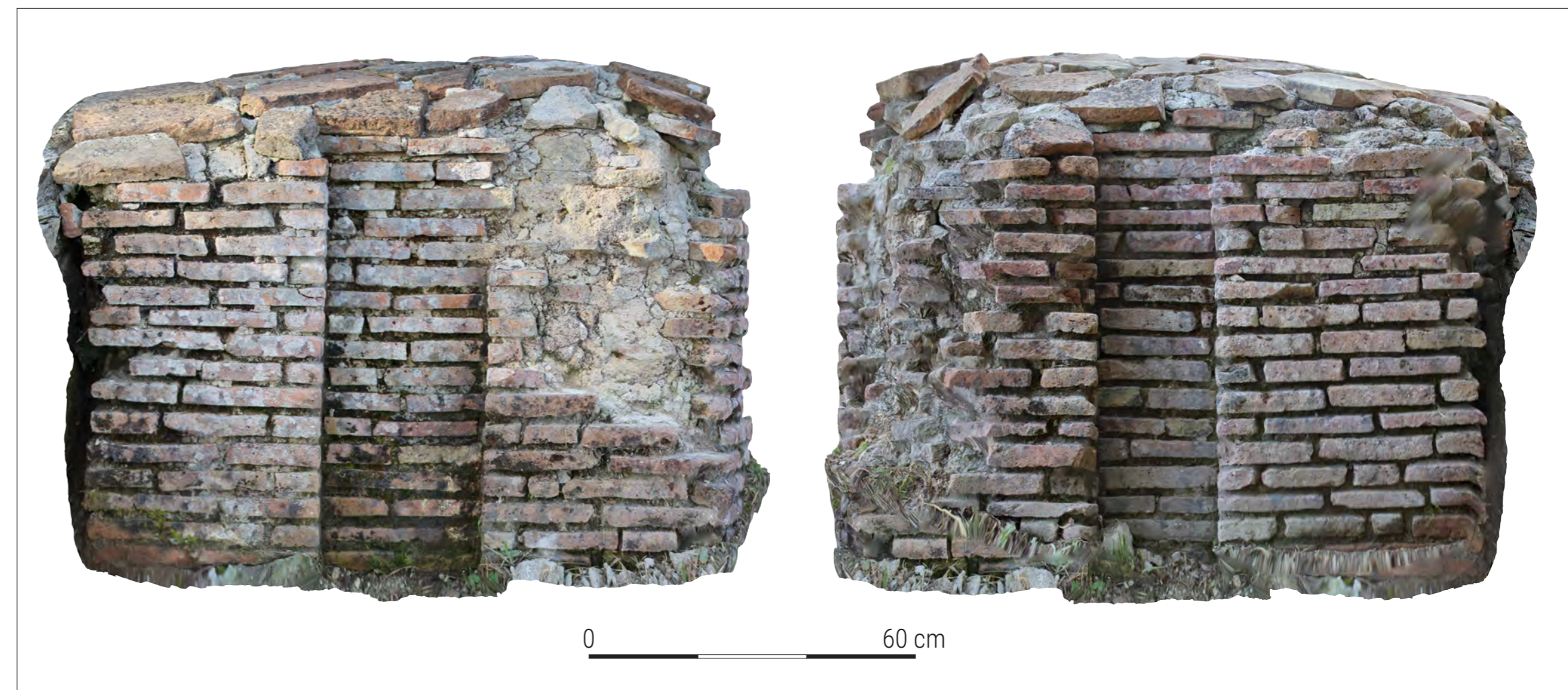


Fig. 3 - Northern and southern facing of the piezometric tower.



Fig. 4 - The piezometric tower in the *cardo*.



Fig. 6 - The fountain pillar in its context.

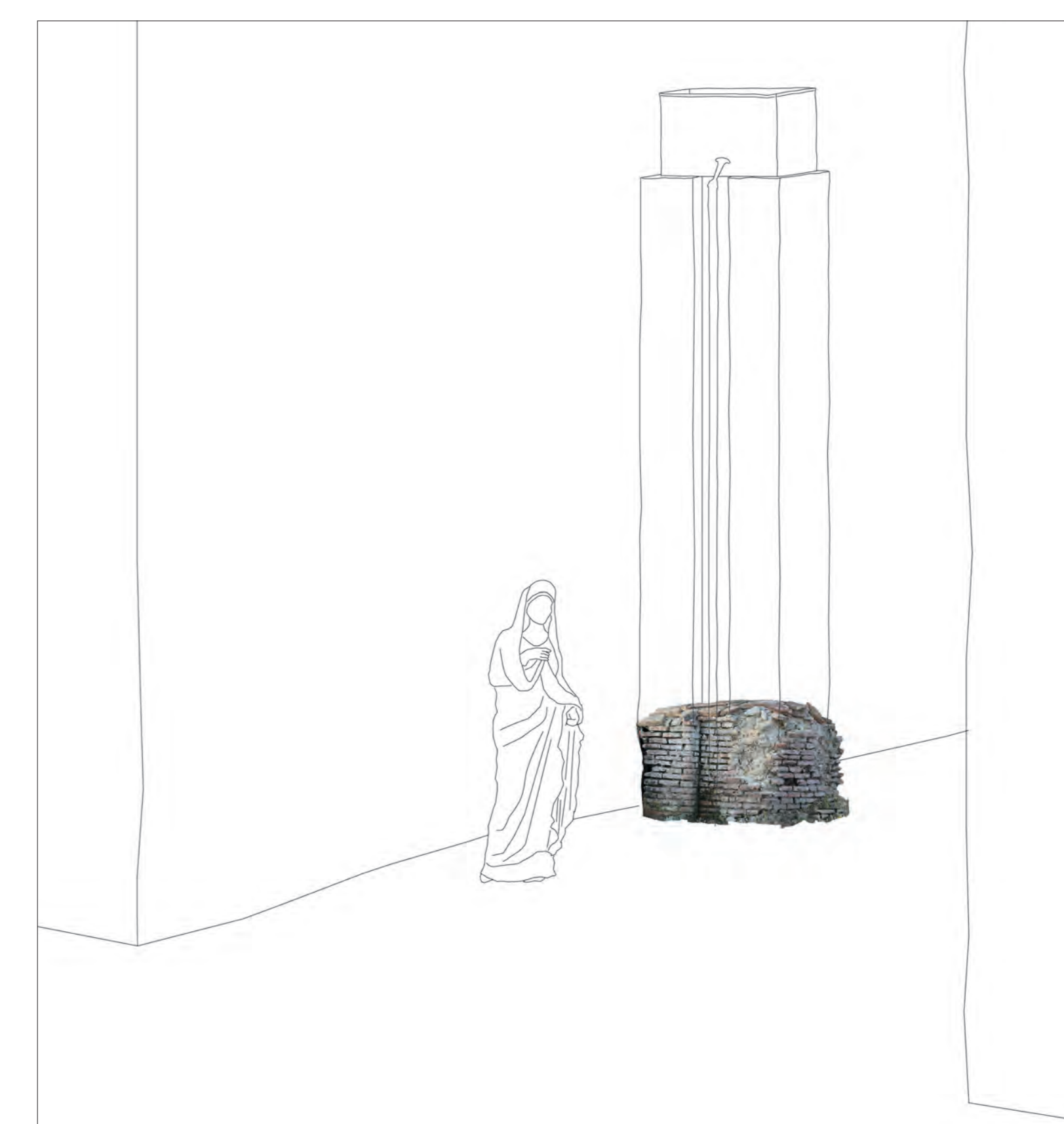


Fig. 5 - Reconstruction of the piezometric tower.



Fig. 7 - The face and the rear of the fountain pillar.

Fig. 8 - Reconstruction of the fountain.



In conclusion, we can begin to delineate the water distribution system within the city of *Abellinum*. Although, to date, the *castellum aquae* has not been identified, a canonical system is outlined with the presence of secondary *castella* (or piezometric towers) to regulate water pressure. Water was distributed in both public and private contexts through lead pipes. For private individuals who did not have a direct connection to the aqueduct, as in the *domus* of *M. Vipsanius Primigenius*, it was distributed along the streets by fountains.

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