

# Rome's Marble Plan: Progress and Prospects

Elizabeth Wolfram Thill

Invited lecture presented through the Hillsdale College Classical Studies Department, Hillsdale, MI, 28 February 2020

[Slide 1] If you have studied ancient Rome in the last five or so centuries, you are likely familiar with the Great Marble Map of Rome, although you may know it by a different name. As with so many monuments we find fascinating and indispensable, the ancient Romans left no mention of it, so we do not know its ancient name, if any. [2] Modern scholars have assigned it various monikers, including the *Forma Urbis Romae*, the Pianta Marmorea, and the Severan Marble Plan. [3] At its essence, however, it is a Map of Rome, a monumental depiction of the city that purported to show in detail the layout of every neighborhood and every building, from the seating tiers of the Circus Maximus to the basins of local baths. Indeed it is our best source for urban features such as houses, streets, shops, and fountains, everyday elements that made up the majority of ancient Rome, but are now buried by their modern counterparts. Yet studying these ancient components on the Marble Map has been complicated by the sheer logistics of handling the artifact itself. [4] The display wall that once held the map is now the north exterior wall of the Basilica dei Santi Cosma e Damiano in the Roman Forum. These remains demonstrate that the map's original dimensions were a staggering 18 x 13 m (60 x 43 ft). Starting in the 16<sup>th</sup> century, the map was recovered in over eleven hundred identified fragments, some subsequently lost. Imagine a puzzle, then, where you have an estimated 10-15% of the picture, broken into eleven hundred mostly non-contiguous pieces, each of which can weigh dozens of pounds in marble.

[5] Launched in 2018, the Great Marble Map of Rome Project is employing cutting-edge technology, including Virtual and Augmented Reality, to bring new types of access to this essential artifact. The Project is a partnership between the Ancient World Mapping Center at UNC-Chapel

Hill and the Musei Capitolini and Sovrintendenza Capitolina ai Beni Culturali in Rome, with additional sponsorship from the IUPUI Arts and Humanities Institute, School of Liberal Arts, Center for Digital Studies, and University Library.

Our goal is to produce an open access online database that features high-resolution 3D scans of all identified fragments of the Marble Map and the Forum Romanum display wall. [6] This website will operate in coordination with a new museum opening on the Caelian Hill in Rome, where for the first time all the incised fragments of the Marble Map will be under one roof and available for display and research. Working together, the website and museum will bring the Marble Map to the world, and the world to the MarbleMap.

[7] The Great Marble Map has always presented particular challenges for scholarship and display. Indeed, academic debate on the artifact has been determined in part by these challenges. Up to this point interest in the map has focused on topographical problems. Scholars seek to piece the plan together, and to identify and connect depicted buildings with structures known from the historical or archaeological records. Both of these approaches tend to engage with the monument at the level of the fragment or individual depiction. To some extent this is a product of access, since it was difficult to study more than a few fragments at a time. While topographic inquiries are certainly worthy pursuits, recently scholars have pointed out that such approaches downplay the original display context of the map. New lines of research on the Great Marble Map are moving beyond previous focus on individual buildings, to look at what can be learned from the plan as a whole. Numerous approaches in this vein are possible but require better access to both the fragments and their original context.

[8] In 2018 we worked with a team led by Dr. George Bevan from Queens University to complete a photogrammetric scan of the Display Wall in the Forum Romanum. [9] Utilizing a methodology

designed for monitoring strip-mining operations, the resulting scan captured texture and scale with an accuracy of 1 mm. It serves as a detailed record of the preserved clamp holes that once held the marble slabs to the wall. Our original plan was to pair the wall scan with 3D models of the map fragments that we had inherited from the Stanford Forma Urbis Romae Project. [10] Once we actually opened the older files, however, we realized that technology had advanced to the point that the original scans, while cutting edge for their time, would not serve for the sort of detailed analysis we were hoping to accomplish.

[11] So we made new 3D scans of all the fragments. Thanks to a generous grant from the IUPUI Arts and Humanities Institute and additional support from the AWMC and the IUPUI University Library, our international team conducted a three-week scanning campaign in Rome this September. The American contingent included myself, Derek Miller from the IUPUI Center for Digital Scholarship, and Ryan Knapp from IUPUI's University Library.

We were welcomed by our Italian colleagues Dr. Francesca de Caprariis, Dr. Riccardo Montebalno, and their Musei Capitolini co-workers. We were privileged to be able to do the scanning in the new museum facilities, currently under renovation to become a beautiful exhibit space.

[12] To complete the scans, the team used two 50 mm, one 20 mm, and one Spark Craform GoSCAN! 3D handheld structured light scanners. The scanners capture the geometry of a scanned object by projecting light across the object surface and then reconstructing everything that shows upon the sensor. Color information is captured by taking one thousand photographs a second, then reconstructing those photos together to capture texture resolution up to sixteen thousand by sixteen thousand pixels. Accuracy for the Spark, just launched in June 2019 and generously lent to us by Craoform, can reach 0.05 mm. These scanners are widely used in historical preservation and engineering fields, and can scan objects much more quickly than other recording techniques.

[13] For the three weeks of scanning, Dr. de Caprariis, Dr. Montelbano, and I shared project management duties, supervising the selection, labeling, scanning, photographing, and recording of fragments. We somewhat fondly dubbed this process “Trelloing” after my organizational app. [14] In addition to operating the Spark, Derek Miller supervised all scanning and answered our panicked calls of “DEREK!” whenever our scanners did something weird. [15] Ryan Knapp divided his time between scanning and demonstrating our virtual reality features to a steady flow of visitors. [16] One such visitor, project co-director Dr. Richard Talbert, graciously found himself reduced to what we called “de-dotting,” collecting the reflective targets from the fragments after their scans—although I will point out that this was a case of self-demotion, since he declined to wield a scanner. [17] Our Italian colleagues showed no such hesitation. Everyone from Dr. de Caprariis, the museum Direttore, to Massimiliano Grasi and David Caria, our artifact lifters, did some scanning. Indeed, Massimiliano proved so adept at the process that he was unofficially promoted to deputy Derek. [18] Our team blew past our original goal of 200 fragments scanned, to scan all 816 inscribed fragments of the Marble Map, including those on loan or in the collections of four other museums.

[19] As you can see here, the new technology represents a significant leap forward in documenting the fragments. [20] In many cases there is an obvious increase in visible detail of the incisions, both on the front and the back of the fragments. [21] In addition, the new scans also capture color, texture, and scale, metrics not recorded in previous scans. [22] This makes a significant difference [23] even for fragments where the original scans recorded most of the incisions clearly. [24] This slide in particular shows the difference between what I was working with in my presentation last year, and what I have to work with today.

Now that we have the scans, we have embarked on the long work of making them available to the

public, both avocational and professional. Our first line of action has been to annotate each fragment scan by color-coding depicted structures according to architectural use. Maddie Theaman, our undergraduate intern, completes the post-processing of the scans, merging and cleaning the files using VXElements software. She then works with the files in Maya and Photoshop to reduce the size of the texture files to make them more manageable for the average computer. Finally she makes shaded and annotated versions of the models using Mudbox and Sketchfab, open access processing software. Maddie and I draw on previous research and evidence from our new scans and high-resolution photographs to mark each structure. [25] One of the advantages of digital publication is that no decision need be absolute or permanent. The shops space around the Circus Maximus can be shaded and displayed as entertainment AND imperial AND commercial facilities, or all three, or revised completely. [26] At the most basic level, these small rooms can also be individually numbered for study and reference, something that publication costs previously had made prohibitive for all the unnamed features of the MMR.

This process of shading and annotations has resulted in reflections and questions both shallow—"I don't like that color of pink"—and deep, such as how to identify and categorize domestic areas, how to indicate multi-purpose space, and what standards of confidence do we need to reach before admitting a structure is "unclear." [27] The main research question to emerge in this respect so far is a reconsideration of how the Map indicates terracing and topographical change. Are all the rooms shown for a given neighborhood representing the ground floor, as traditionally held? Or are we looking instead at a series of cross-sections, cutting through at a particular plain and capturing at a consistent height different levels of buildings?

[28] Our second line of investigation has been to design virtual reality applications that can further not only public engagement, but also professional research. While it may conjure up images of fanboys waving lightsabers in basements, Virtual Reality conveys numerous benefits for research. First, it vastly facilitates gathering many fragments within the same workspace. A scholar

interested in, say, the representation of temples, can examine in one virtual room all 66 fragments believed to show temples, with the ease of opening files. Second, manipulating the virtual scans is vastly easier than manipulating the actual fragments. Fragments can float in air, rotate with the flick of a wrist, or perhaps most cathartically, be tossed aside if no longer needed. Most importantly, Virtual Reality can allow a modern audience to experience a sense of scale difficult to achieve through imagination alone. This can take two forms. In Virtual Reality viewers can see the fragments restored to their original place on the display wall. And viewers can walk the streets of Rome as depicted on the map, following the map's consistent 1:240 scale. These virtual experiences can be shared online and integrated within the new museum's exhibit space.

With Virtual Reality, showing is better than telling. [29] This video shows what we call our Wall Room Build, a space where you can experience the 3D models of the fragments and the Display Wall scaled true to life. VIDEO 1. [30] This video shows one of our Walk A Fragment builds, where the viewer experiences fragment 11e sized up 240 times, to the dimensions indicated by the Marble Map's scale. VIDEO 2

[31] The future of the Great Marble Map Project looks busy and bright. In addition to continuing our current work, there are numerous lines of research to pursue. The main research question that I am intrigued by is the issues of the Map's execution and date. In short, there is a wide variety of quality of execution in the carving across the hundreds of fragments, from precise line work to drafting that may charitably be called sloppy. This variation occurs in closer proximity and across a wider spectrum than for similarly large projects such as the Columns of Trajan and Marcus Aurelius. This raises the intriguing possibility that the fragments may represent not only numerous different hands, but numerous different chronological moments, with panels being repaired, updated, or even replaced. [32] Compare here, for example, the careful lines of the Templum Pacis with the uneven columns and bizarre interior of the Temple of Minerva in the Forum Transitorium. Could the later temple have been squeezed in when the space was converted from a

road to monumental portico? [33] Or compare the uneven rendering in Fragment 021 c. [34] Why would the engraver make use of a simple tool, namely a straight edge, in one part of the representation [35] but not the other? We should consider the possibility that the freer engraving may represent later updates to previously empty space.

This sort of question can be approached in new and different ways through 3D modeling and Virtual Reality. The slope, angle, and depth of a given incision can be measured to the fraction of a millimeter. Dozens of fragments can be grouped and regrouped in virtual space for detailed comparison, or incisions can be traced precisely through Autocad and compared in different formats. Fragments can be placed back on the display wall to get a true sense of the physical distribution of carving styles.

[36] Naturally we are not arguing that working with virtual fragments can supplant working with the actual marble artifacts. Rather our work is meant to supplement such in person investigation, allowing for hypothesis testing before checking theories against the actual marble. 3D modeling and virtual reality are emerging and refining tools that can be employed for the ancient world as our imagination lets us.

Up to this point in my talk I have shown you why our project is important for the study of the Marble Map in particular. Now I hope to demonstrate why all this is important for our understanding of Rome in general, and indeed what the study of Imperial Rome, and Classical Studies more broadly, can contribute to a busy modern world.

One of the great advantages of the Marble Map as a source as of evidence for the ancient city is that it is our best documentation of the complex, dense urban network that made up the capital.

[37] Modern audiences, popular and academic alike, tend to envision Rome as a series of large-

scale architectural monuments built by famous powerful men. This phenomenon has several interlocking causes. Firstly, and most simply, those sort of structures are what we see preserved today. Large scale projects were the most durable and the most useful to subsequent generations. The Colosseum was turned into a fortress; the Pantheon was turned into a church (although both monuments were stripped for scrap first). Both now survive to be marveled at.

A second related reason we see Rome as a series of monumental projects is because those are what have interested archaeologists. The Circus Maximus, Forum Romanum, and imperial fora were all heavily silted up and built over in the Middle Ages, only to be cleared in more enlightened ages by scholars seeking past glories and officials seeking tourist dollars from the Grand Tour. These spaces and structures were, after all, the most famous and recognizable elements of the ancient world, given how much court poets, official or otherwise, discussed them.

[38] The Great Marble Map, in contrast, reminds us that Rome was crowded, chaotic, with every nook and cranny crammed full of occupation and life. Rooms run up against room after room after room. Narrow ramps and alleys, fountains and gardens, temples and baths all sit practically on top of each other. Grain warehouses dominate the riverfront. Shops run up to the Circus Maximus. Looking at the Marble Map, you realize that the clear open spaces and vistas of modern Rome are misleading, products more of Mussolini than Maxentius.

On its face, this is hardly intellectually surprising. People have to live and eat and work somewhere. Plautus, Martial, Juvenal, and Pliny are just some of the ancient authors who complain about Rome's noise and stink and dangerous overcrowding. But although modern scholars may give lip service to this idea, they rarely engage with it or follow it to its logistical conclusions.

[39] A good example of this is academic attitudes towards major imperial architectural projects. My research focuses on how architecture, particularly large-scale official projects, can be used as weapons in what today we would call the identity culture wars. My broad thesis is that the ruling



classes, including the imperial court and the senate, used depictions of buildings to argue that monumental architecture was somehow an intrinsic element of Rome and Roman cultural identity. This, naturally, was in their own interest, given that monumental architecture was a good only they could provide. In my experience, scholars' instinctive reaction to this thesis is often bewilderment. "Why would they need to justify imperial projects?" people ask me. As one reader of my book proposal protested, "building was just what good emperors did!"

It certainly is what they did: my question is was everyone particularly pleased with it. After all, you can only spend money once. Vanity projects like the Temple of Mars Ultor or the Forum of Trajan certainly ensured their patrons' everlasting fame and impressed their peers. [40] But you can't eat a peristyle, and you can't clothe your children in imported Egyptian marble. Every denarius spent on the Column of Trajan couldn't be spent on grain. We should ask ourselves how much utility the average Roman got out of the massive public spaces we modern viewers find so impressive.

One of the best examples of this line of thinking I have ever read actually was in the Collegian. In a 2016 letter to the editor, student Scott McClallen questioned the current trend of investing heavily in showy campus infrastructure, writing "It is often hard to look past these grandiose features and see instead what is not being built with this money." Other social classes and interests in ancient Rome probably could imagine other uses for the booty pouring in from Gaul or Dacia. We also know that this program of building immense vanity projects eventually proved unsustainable in Rome. To explain to students the magnificence of the Forum of Trajan, teachers often quote how a visitor to Rome in the 5<sup>th</sup> century marveled at the forum and the civilization that could build it. The broader context often goes unnoted: the rest of Rome was in such shambles that the Forum served as a reminder of what clearly had been lost. Certainly this is something to think about as campuses across the country pour money into elaborate infrastructure in an attempt to compete. Students of Classics can sound the warning bell that maybe the famous Roman imperial

fora are not the best architectural models to copy.

These massive architectural projects sponsored by the emperor may not only have failed to help people, they almost certainly actively harmed some of them. The Marble Map demonstrates that every inch of imperial Rome was occupied in some way. That would be true for the areas that eventually were dedicated to imperial projects. The imperial fora, the Pantheon, the baths of Titus, Trajan, Caracalla: all of these would have required buying up and clearing large tracts of occupied land. [41] Maps of Rome that show only public architecture could in fact be maps of dead zones, in terms of urban occupation. Every family that lost their home to the Forum of Caesar would have to find housing elsewhere. Every workshop that lost its oven, its kiln, its milling stations, would have to find space for those elsewhere in the city. Vast structures where elites could parade would probably be cold comfort for such city dwellers.

This is generally the point where other scholars start to protest. Hold on a second. After all, Ovid, Martial, Juvenal, Pliny, Suetonius, all the ancient historians sing the praises of these great imperial projects. This, I would argue, is neither here nor there. There have always been toadies ready to tell their sponsor that his vanity projects are great. And if the vanity projects are good for someone, the history-writing elites were it. The elites, after all, were landowners whose property could either be bought up for an imperial project, or increase in value when that project decreased the supply of land. Elites or their indebted freedmen owned the architectural contracting companies that supplied the construction projects and built the structures. Elites served in official capacities that met in the grandiose spaces erected for that purpose. If Ovid tells Augustus his new Forum looks great, that should hardly surprise us. But it should also not fool us into thinking this represents the majority opinion.

But hold on another second, you may protest. If people suffered from or objected to imperial architectural boondoggles, why do we never hear or see any evidence of this? My answer is that

the evidence is there, if you just think where to look. One source of comparanda that I explore is fires. Although the large-scale fires that periodically swept through Rome causing massive unplanned *destruction* may seem to have little in common with massive planned *construction* projects, they both cleared large areas of the city of occupation, often with little forewarning. Unlike imperial construction projects, however, fires didn't have PR, so we have a good deal of evidence of their unpleasant logistical effects. Ancient writers talk in the aftermath of fires about widespread homelessness, price gouging with rents, dangerous housing being thrown up hastily by speculators and collapsing on inhabitants. It is reasonable to suspect that the extensive disruption of an imperial project could have similar effects. True, a new religious complex honoring a victorious god wouldn't be quite as sudden or surprising as a fire. But imperial building projects could be quickly executed, going from military victory to construction in a matter of months. The Forum of Trajan, for example, went from an empty lot to an architectural wonder of the world from just 104 to 112 CE. Once the ball got moving on a project, it is not clear how much time your average Gaius would have to react and adjust. Regardless of timing, it is indisputable that the land had to be cleared and everyone living or working there had to go elsewhere.

Another line of evidence is that elites did complain quite a lot, when it was their houses and property on the line. [42] The most famous fire is that of 64 CE, when a blaze vacated a quarter of the land in the city, mostly in elite neighborhoods on the Esquiline and Palatine Hills. When the smoke cleared, Nero conveniently had blueprints at hand for a massive pleasure palace occupying exactly the area that had been laid bare. The elite repaid his confiscation of their living space by hounding him to suicide—although I would note only after the Domus Aurea, and the building contracts thereof, were safely complete.

A third, more indirect line of evidence that I am just beginning to explore is how one emperor would react to a previous emperor's projects. [43] One of the last projects undertaken by Domitian was a grand vision of connecting the existing imperial fora and expanding them to the northeast.

[44] One aspect of this project was to take the main street leading into the Subura, a particularly crowded part of the city, and turn that street into a monumental portico in the vein of the fora of Julius Caesar, Augustus, and Vespasian. [45] This included cramming in a temple along the long axis of the Forum, even though there was clearly not enough space, [46] and doing so effectively strangled the main route between the Forum Romanum and the domestic Subura. [47] The second part of Domitian's grand vision included razing a large swath of occupied land in the area of what would become the Forum of Trajan. Perhaps not coincidentally, this was the point at which the previously popular Domitian seems to have appeared sufficiently politically vulnerable for the Senate to feel comfortable having him murdered by his praetorian guard.

[48] Notably, when Trajan picked up the project begun by his predecessor, he did not include a temple. [49] Instead the building at the top of the long axis was a much more practical basilica.

[50] Drawings of the Marble Map tells us, furthermore, that this Basilica Ulpia housed the Atrium Libertatis, the civic office where masters freed their slaves. This meant that the basilica tied together a spectrum of social classes. Was Trajan reacting to opprobrium directed towards Domitian, when that emperor had prioritized pious architectural vanity over the practical needs of his people?

[51] To conclude: the Marble Map of Rome is important because it reminds us that glorious Rome was gloriously messy, a haphazard conglomeration of urban life that was more complex than our modern imaginations often allow. This probably also included a more complex range of attitude towards imperial architecture than we typically appreciate. Today the public vigorously debates official architectural adventures, be they a football stadium, or a new museum, or border walls. There is no *a priori* reason to believe ancient Romans were different.

[52] Finally, this understanding of a complex Rome was also a vision that the Romans showed

themselves, notably in the public forum of the Temple of Peace. The Marble Map was intended to glorify Rome, and it is notable that the city is not presented as a whitewashed, orderly series of monuments. Rather the Romans found unity in their diversity, a vision of Rome that took in all of the dense, disorderly occupation that made up the single capital of a diverse, disorderly empire. E pluribus unum, in a Marble Map. [53]

# Rome's Marble Plan: Progress and Prospects



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# Nomenclature

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**Great Marble Map of Rome**

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***Forma Urbis Romae***

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**Pianta Marmorea**

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**Severan Marble Plan**



Temples to Iupiter and Iuno in Porticus Octaviae  
(AG 031 aa, bb, u, v; Thill)

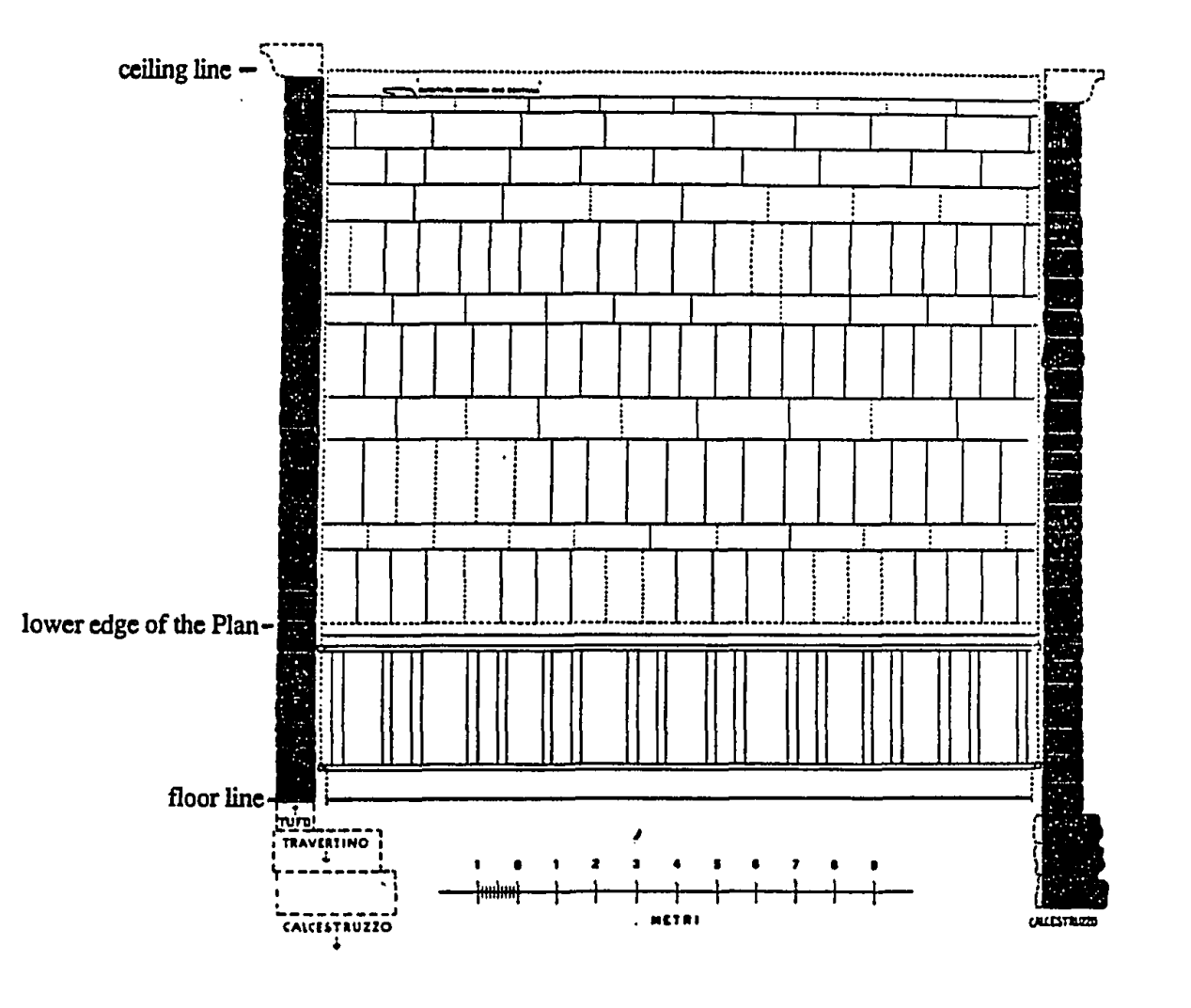
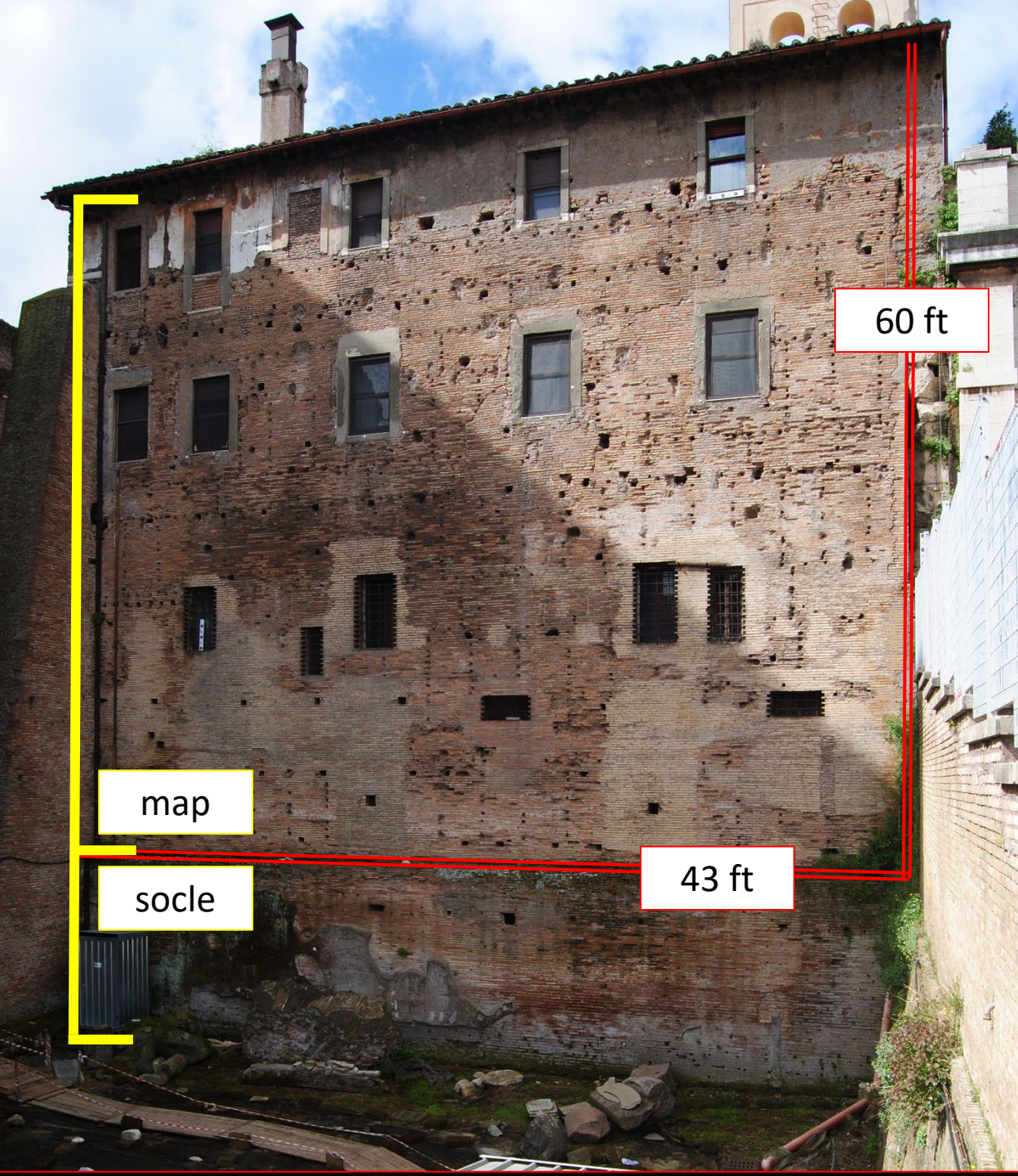


Above L: Temples in the Forum Holitorium? (AG 031 h,i,l; Thill)

Below L: Theater of Marcellus (AG 031 q-s; Thill)

Above R: Roman *insula*, including domus, fountain, shops, and stairway (AG 101 l-m; Thill)



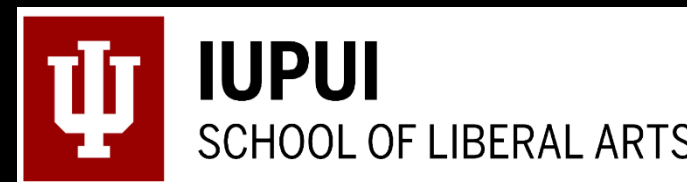


Reconstruction of layout of slabs on wall (Reynolds 1996: fig. 1.32)

north exterior face of the Basilica dei Santi Cosma e Damiano (Thill)

# Great Marble Map of Rome Project

- Ancient World Mapping Center (UNC-Chapel Hill)
- Musei Capitolini and Sovrintendenza Capitolina ai Beni Culturali (Rome)
- IUPUI Arts & Humanities Institute
- IUPUI University Library and Center for Digital Scholarship
- IUPUI School of Liberal Arts

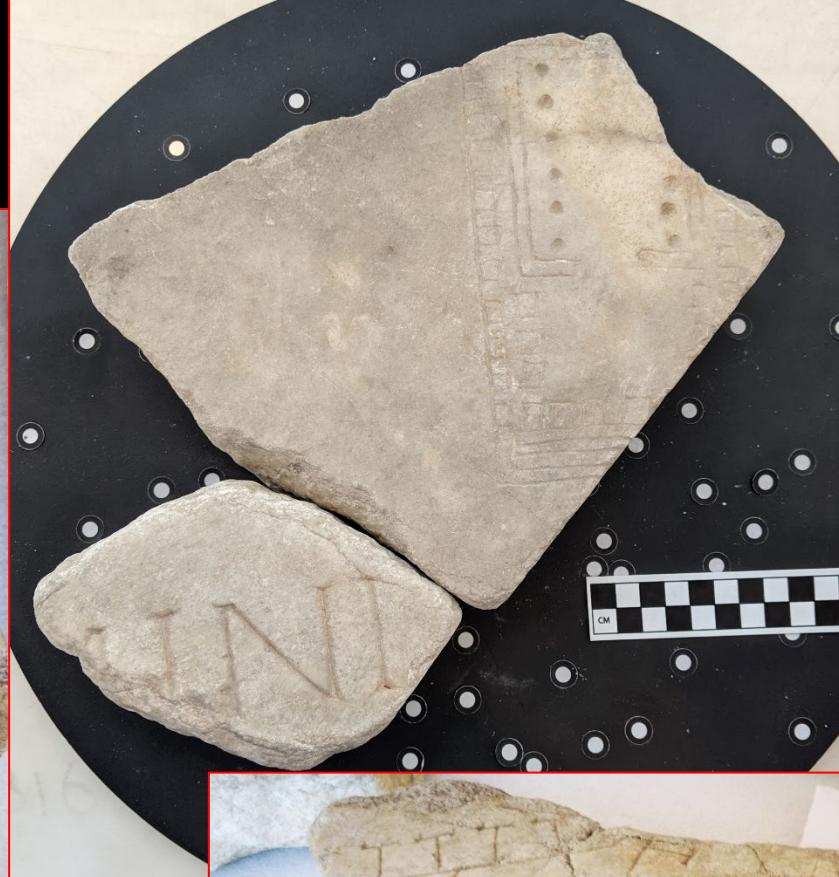




PARCO ARCHEOLOGICO DEL CELIO

Artist's rendition of Great Marble Map display room in Caelian Hill  
Archaeological Park (© Sovrintendenza Capitolina)

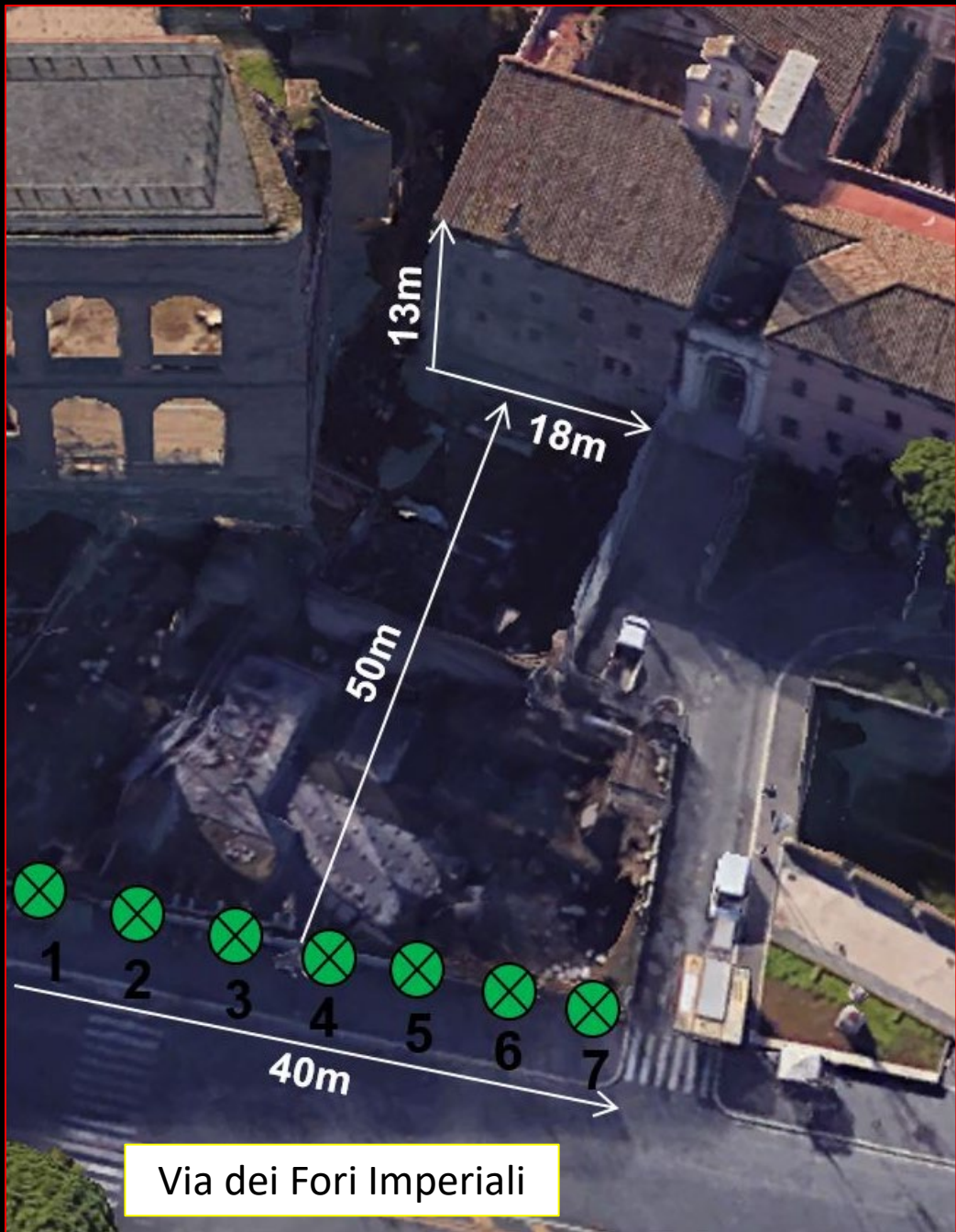
Templum Pacis (AG 015 c; Thill)



Porticus Minucia  
(AG 035 ee,ff; Thill)

Templum Pacis  
(AG 015 ab; Thill)

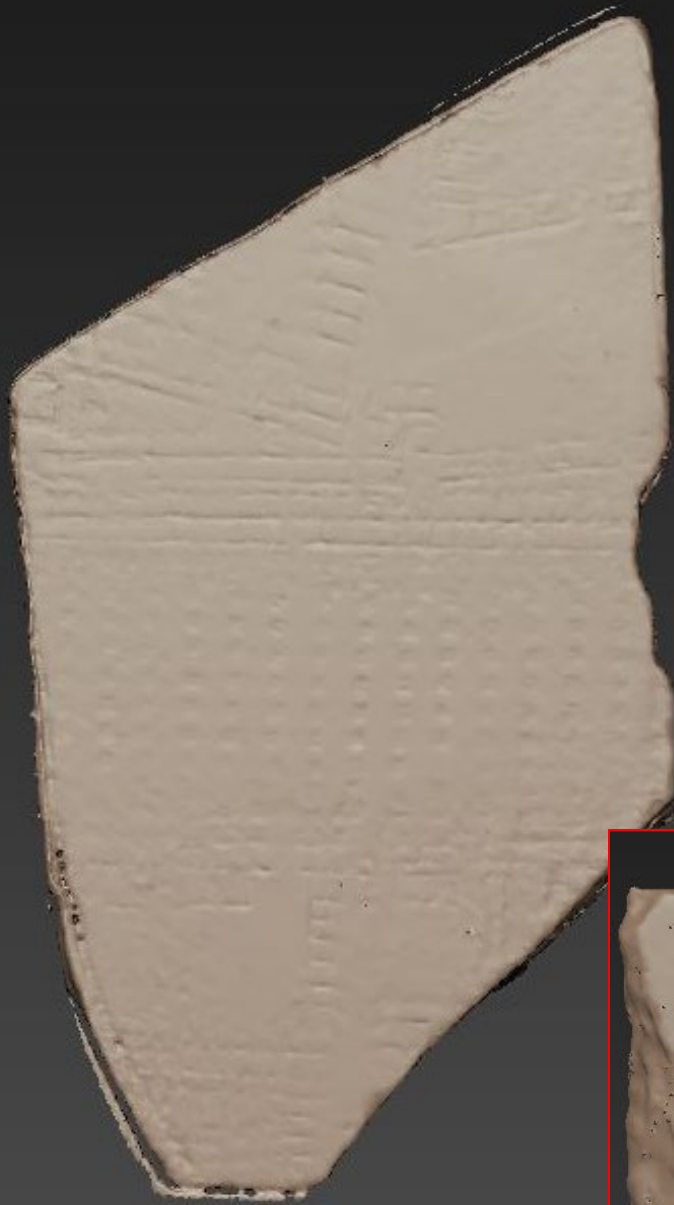






AutoCad scale line drawing of wall holes with later construction (K. Jones)

Final still orthophoto of Display Wall (K. Jones)



AG 024 c

AG 025

3D Scans from *Stanford Forma Urbis Romae Project* (c. 2000)



AG 001 abcd











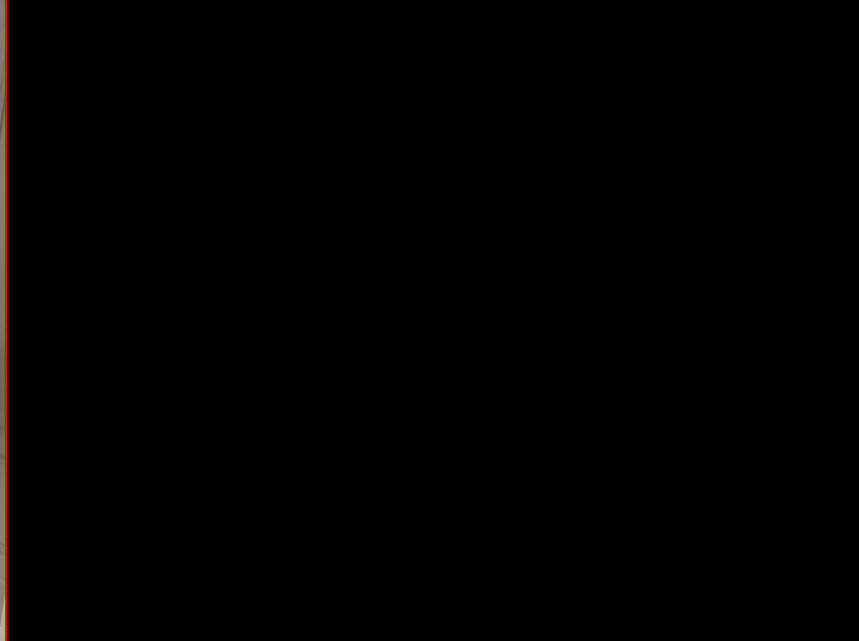
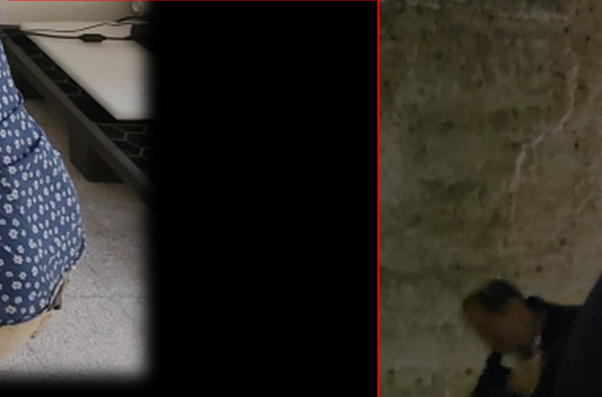
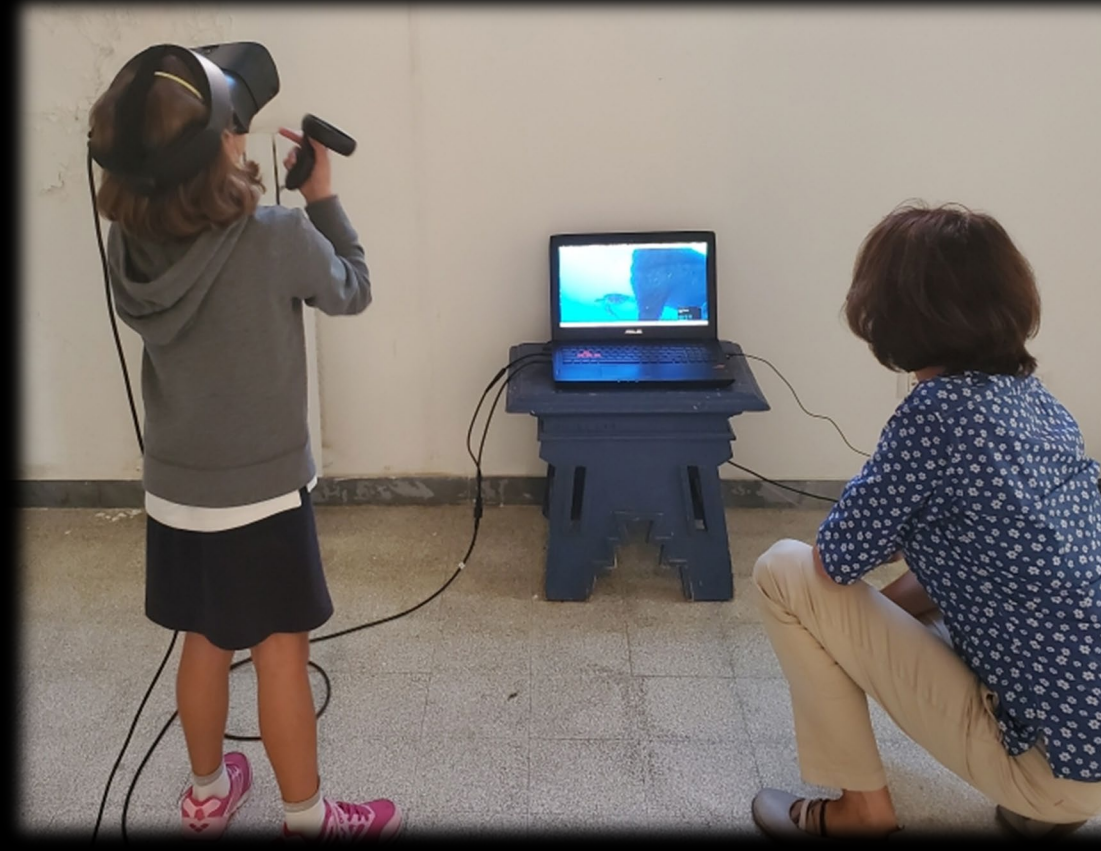
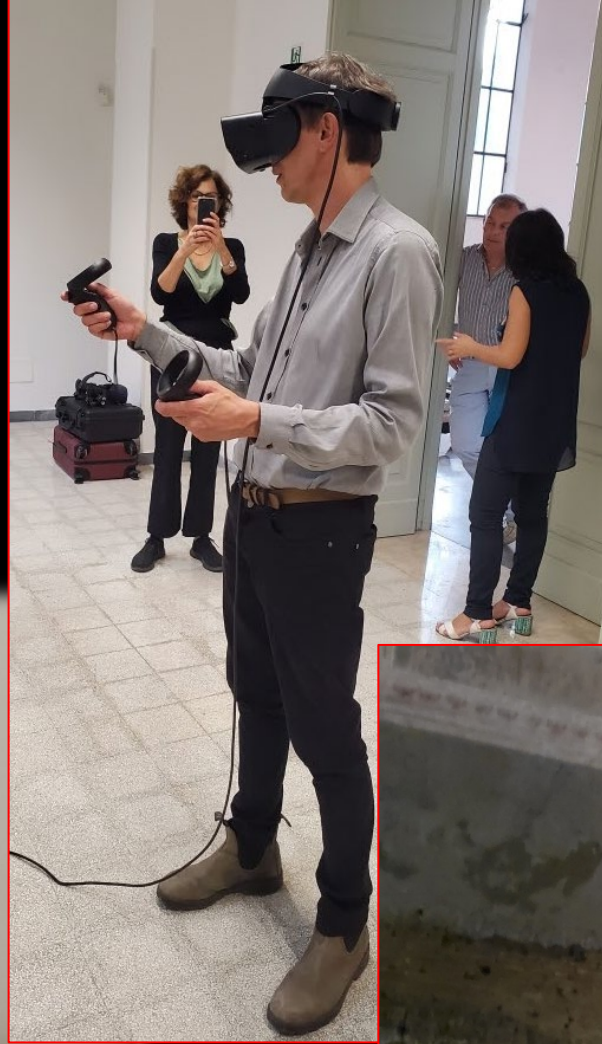
**Riccardo Montelbano**  
(AWMC)



**Elizabeth Thill** (IUPUI)

**Derek Miller (IUPUI) and his beloved  
Creoform Spark scanner**





Ryan Knapp (IUPUI)

Richard Talbert (AWMC)



**Francesca de Caprariis**  
(Musei Capitolini)



**Massimiliano Grasi**  
(Musei Capitolini)





Stanford FUR Project (c. 2000)



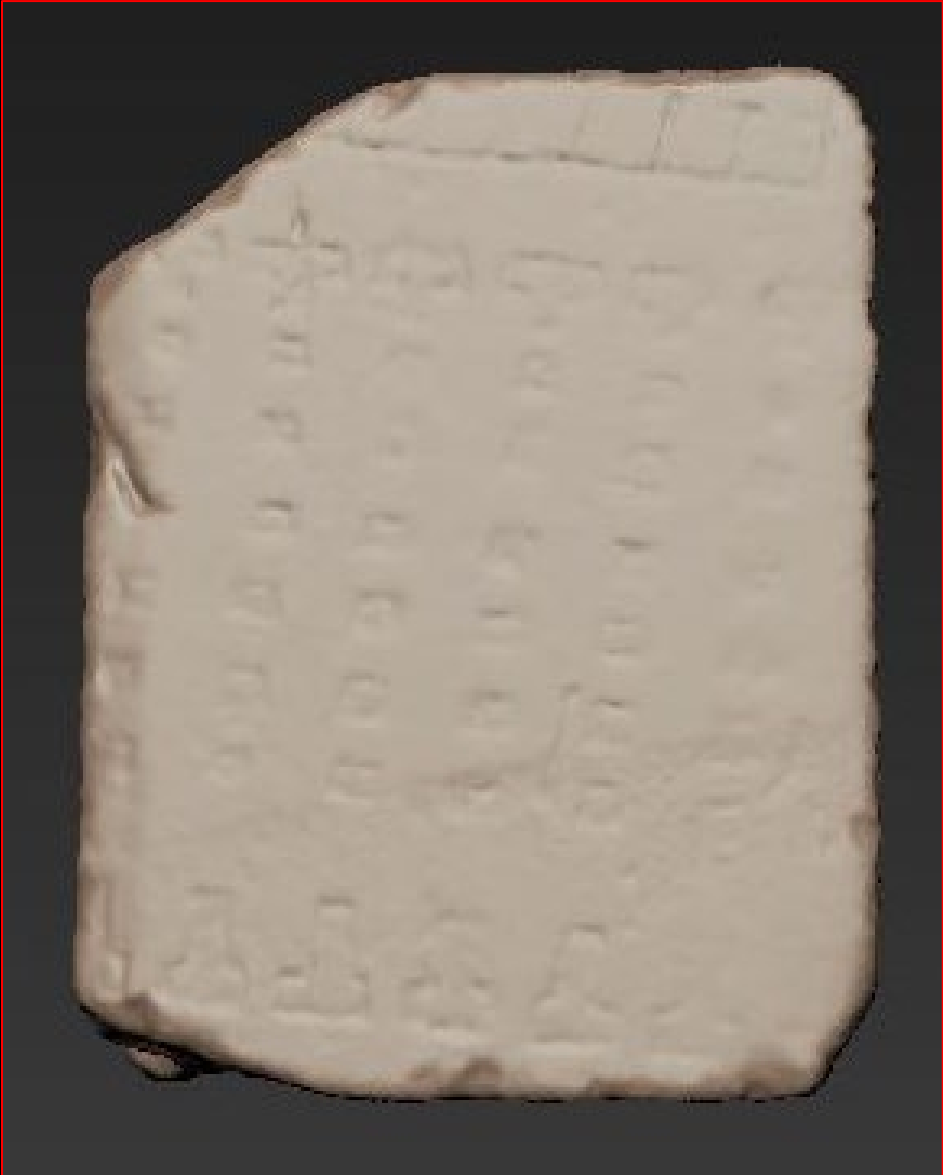
3D Scans of  
001 abcd

Great MMR Project (2019)





Stanford FUR Project (c. 2000)



3D Scans of  
024 b

Great MMR Project (2019)

Stanford FUR Project (c. 2000)

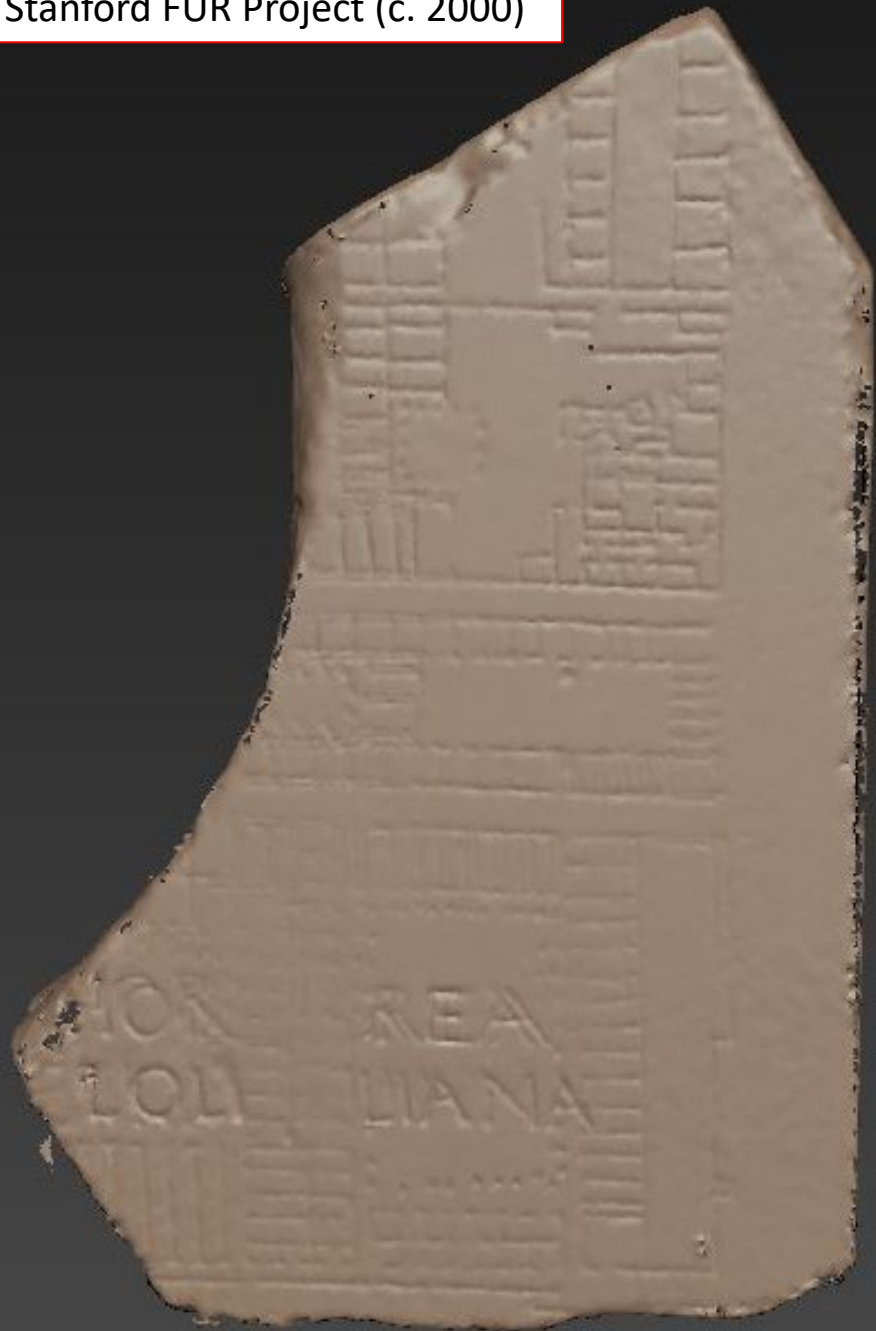


3D Scans of  
024 c



Great MMR Project (2019)

Stanford FUR Project (c. 2000)



3D Scans of  
025



Great MMR Project (2019)

Stanford FUR Project (c. 2000)



3D Scans of  
024(A)



Great MMR Project (2019)

Stanford FUR Project (c. 2000)



3D Scans of  
003 b



Great MMR Project (2019)

Shaded Models  
007 abcd  
Circus Maximus



© Roma, Sovrintendenza Capitolina ai Beni Cult



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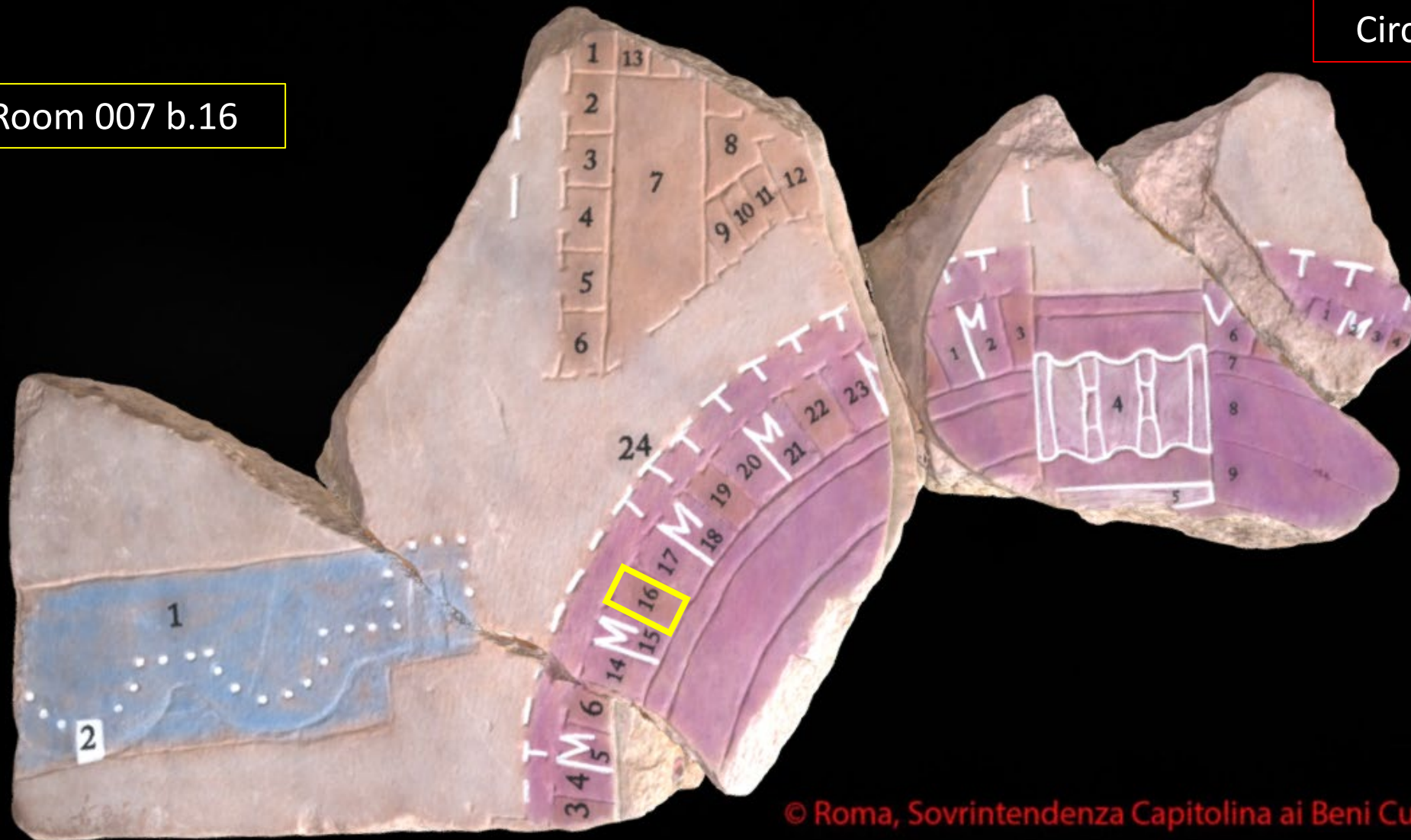


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Shaded Models  
007 abcd  
Circus Maximus

Room 007 b.16

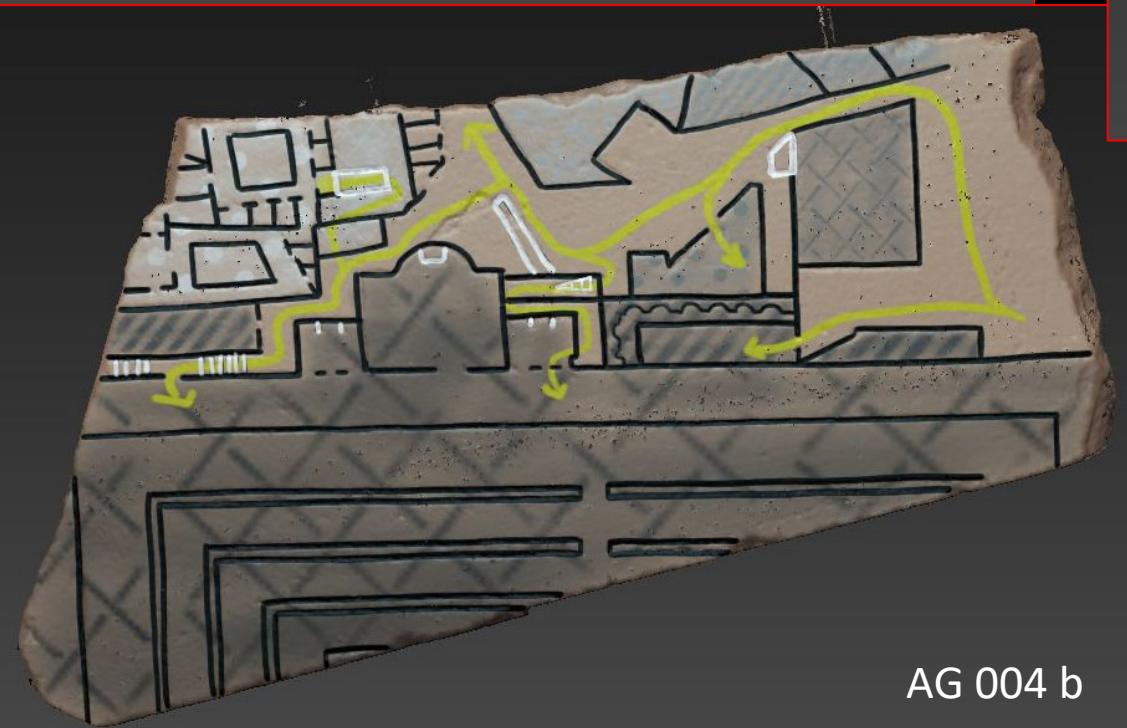


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AG 004 a



AG 010 g



AG 004 b

Shaded models showing possible terracing levels



Virtual Reality (VR) reconstructions  
of Fragments AG 018 a, c,  
Temple of Castor and Pollux  
and Basilica Iulia





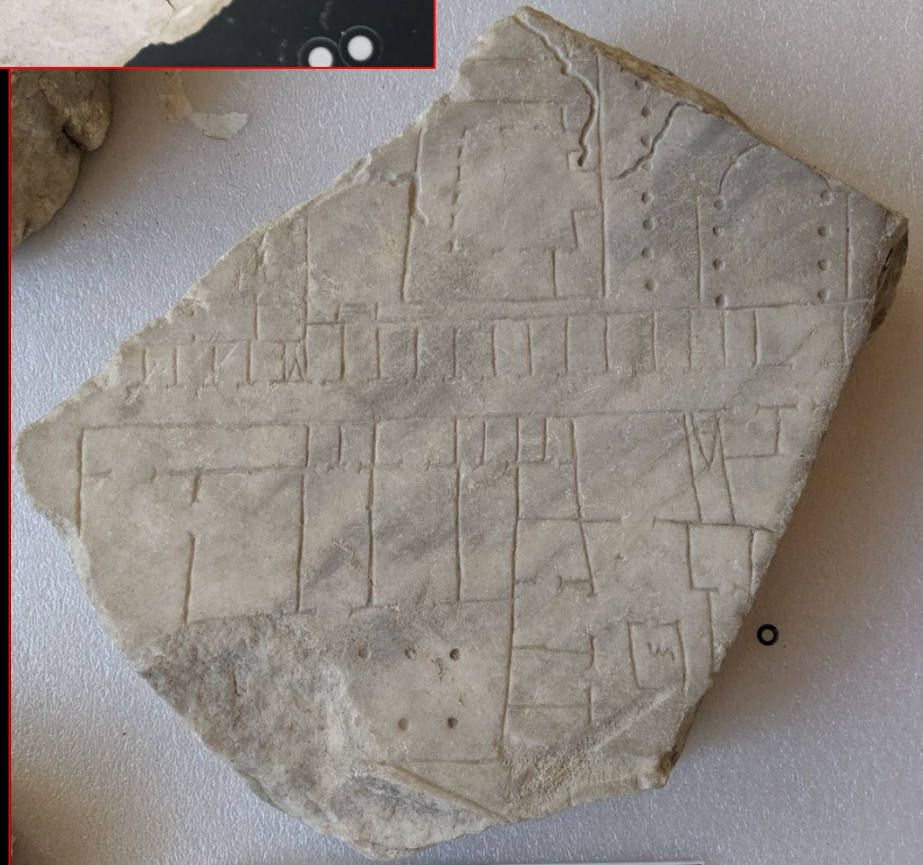




AG 061 ac



AG 005(A) a, c



AG 011 d

Temple of Minerva



Templum Pacis

Fragment AG 016 a  
Temple of Minerva,  
Forum Transitorium  
and Templum Pacis

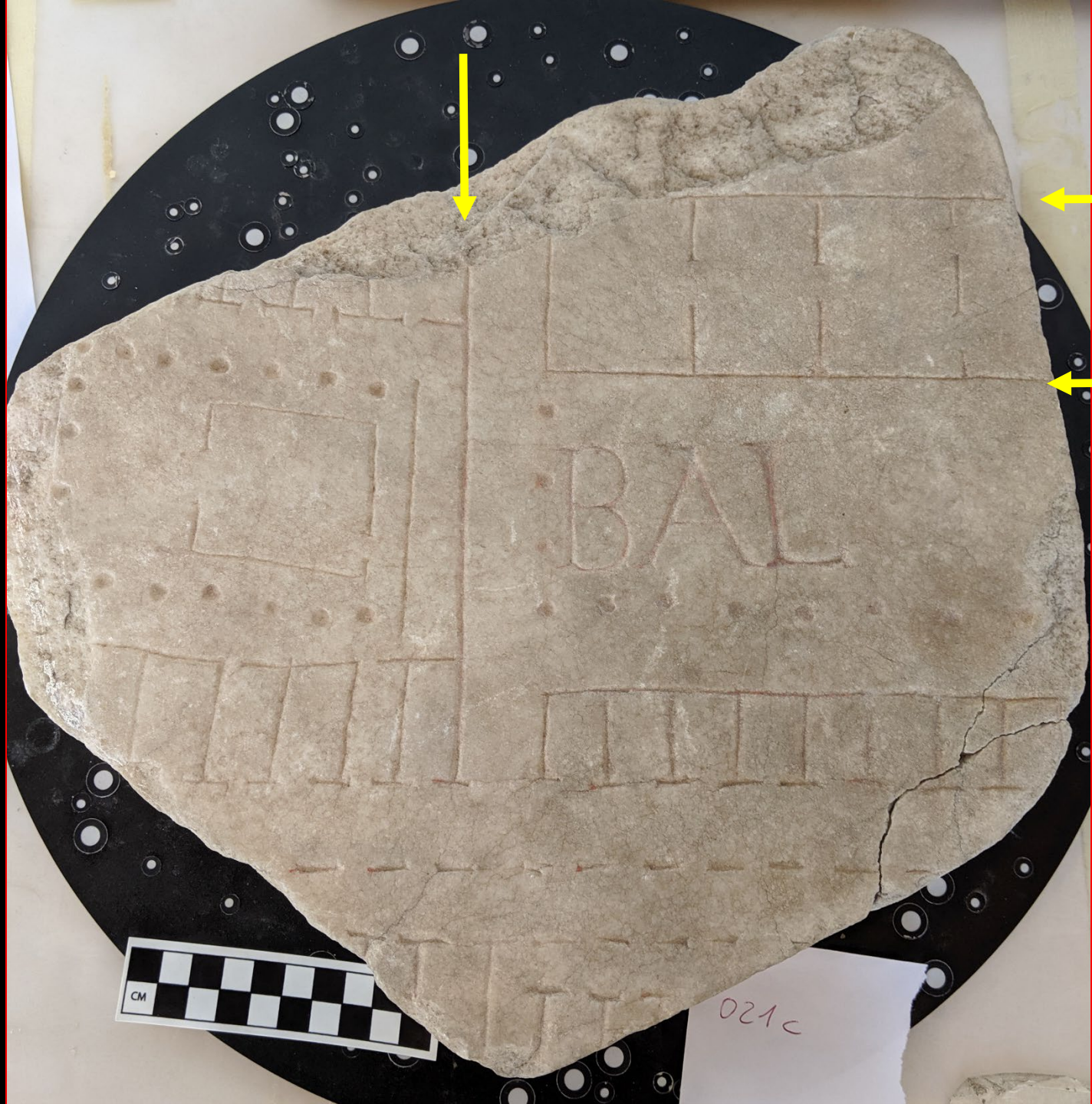




AG 021 c



021c



021c

AG 021 c

AG 021 c

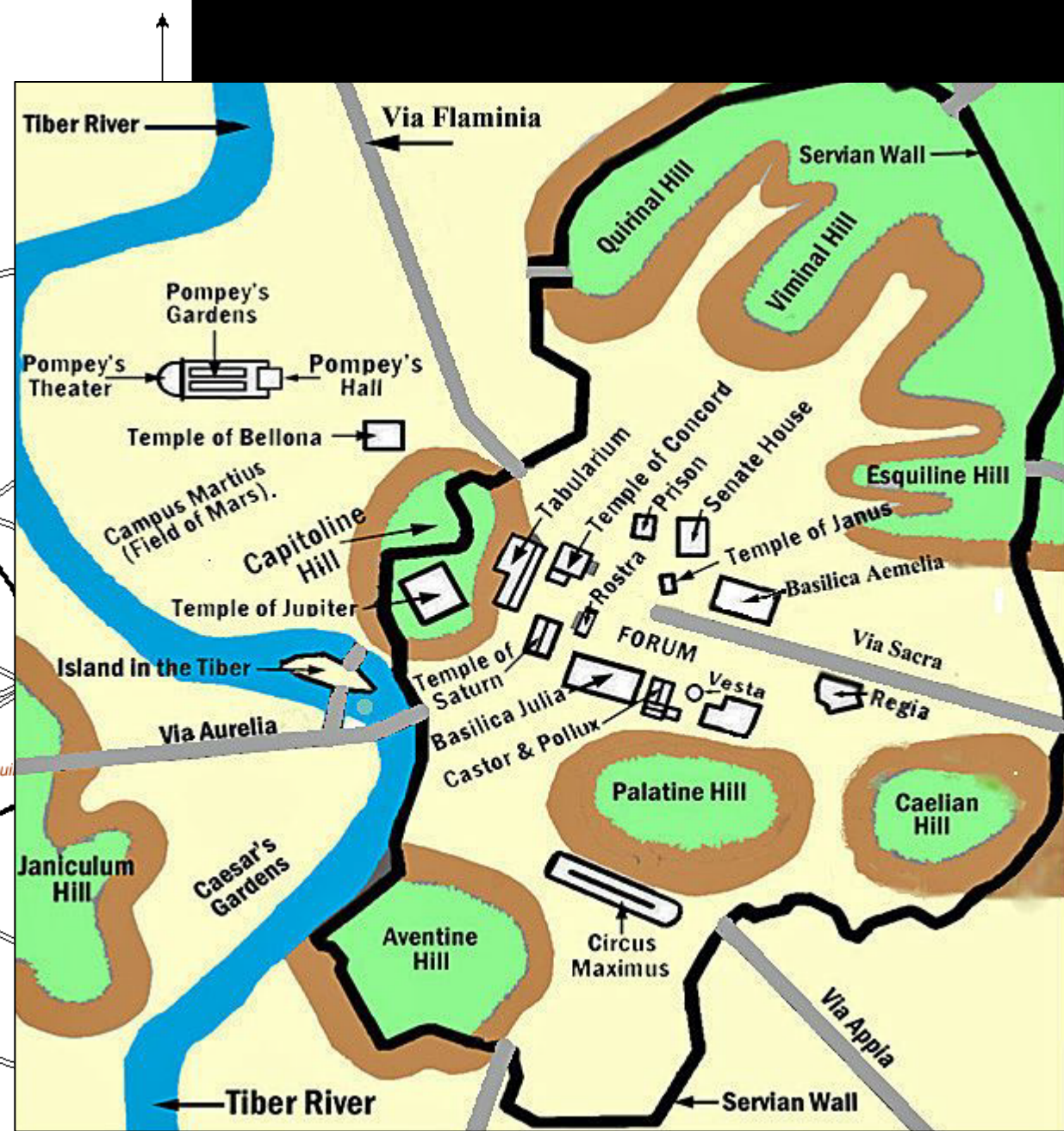


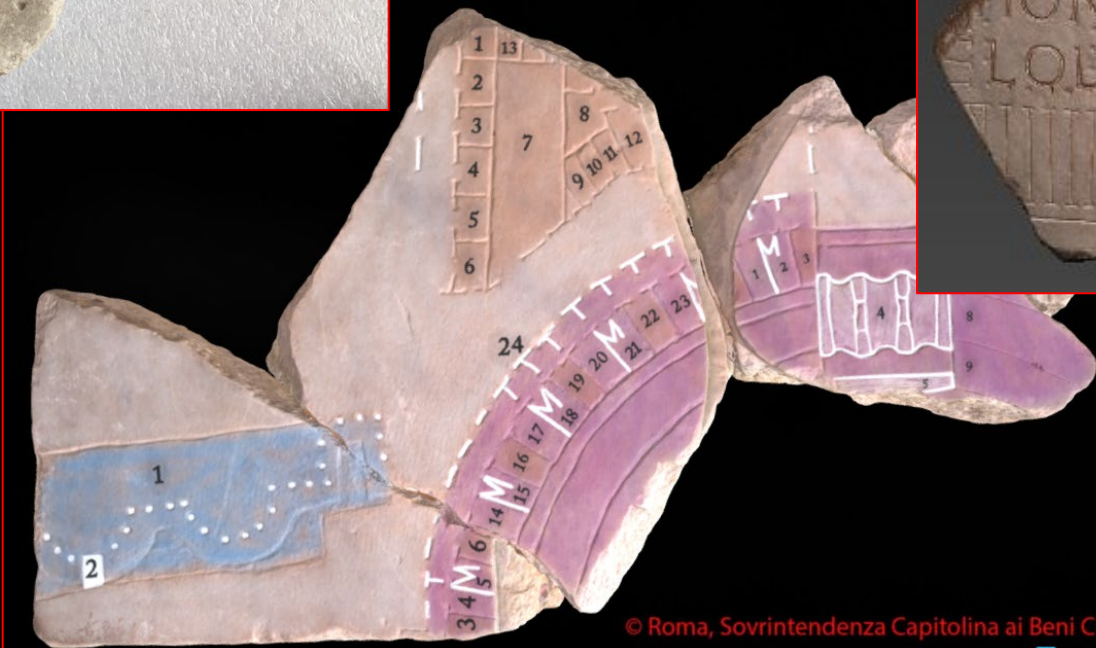
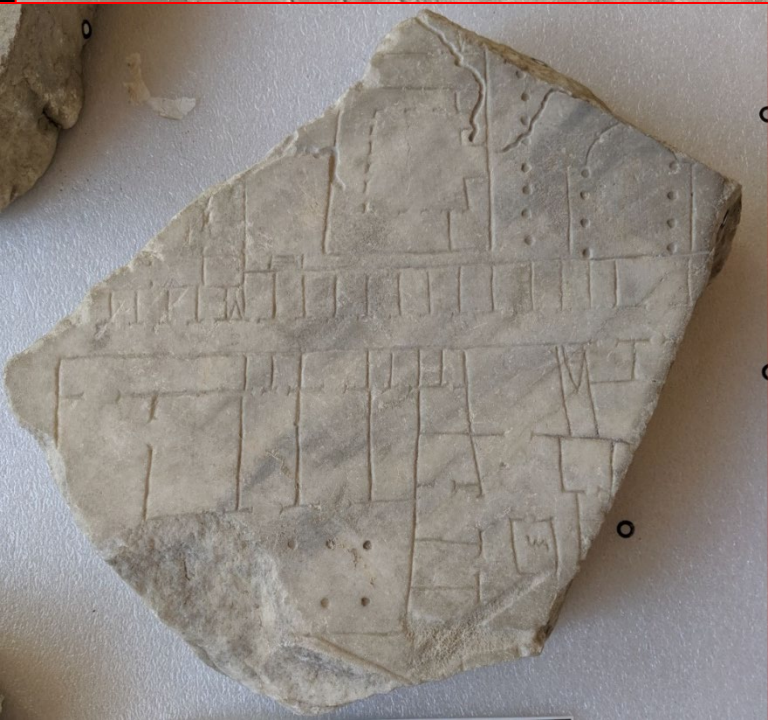
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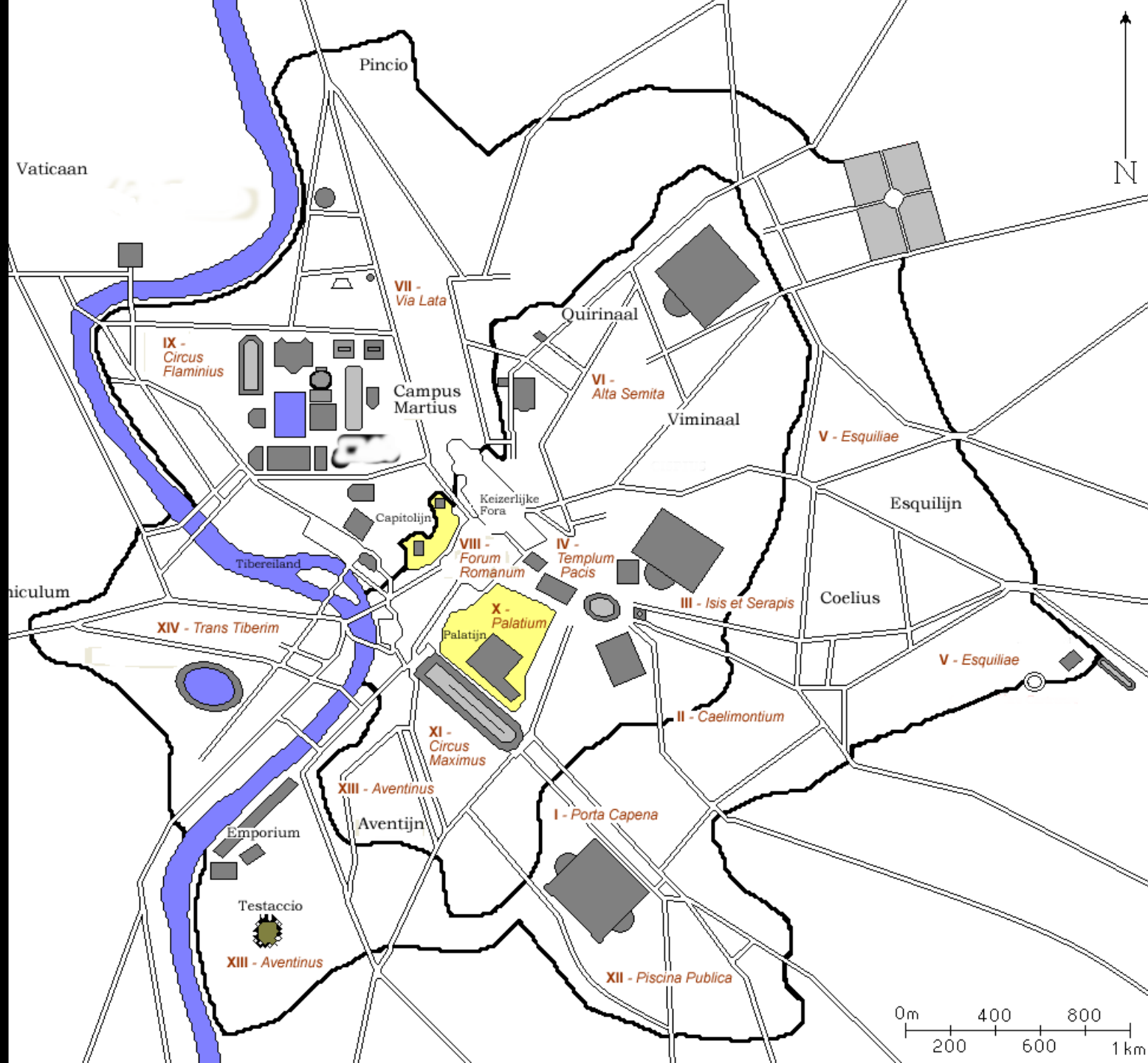








Go on, take it.





Altare della Patria

Capitoline Museums

15th-century museum of Roman antiquities

Foro Romano

Theater

Piazza della Consolazione

Via dei Foraggi

Via di S. Teodoro

Via dei Cerchi

Circo Massimo

Roseto di

Pasta Chef Monti

Ice Club

Ristorante La Base

Hotel Fori Imperiali Cavalieri

Basilica di Massenzio

Colossus Neronis

PALATINUM

Via dei Cerchi

San Gregorio al Celio

Mercato Monti

Via Leonina

Basilica di San Pietro in Vincoli

Via degli Ambasciatori

Domus Aurea (Stagnum)

Templum Divi Claudii

Viale di Parco del Celio, 20, Roma, Italy

Clivo di Scauro

Cavour

Via in Selci

Via delle Sette Sale

Basilica dei Santi Silvestro e...

Voodoo Bar

OPPIUS

Thermae Neronis?

Domus Aurea (Opplus)

DOMUS AUREA

Nymphaeum Neronis

Vicus Caput Abitane

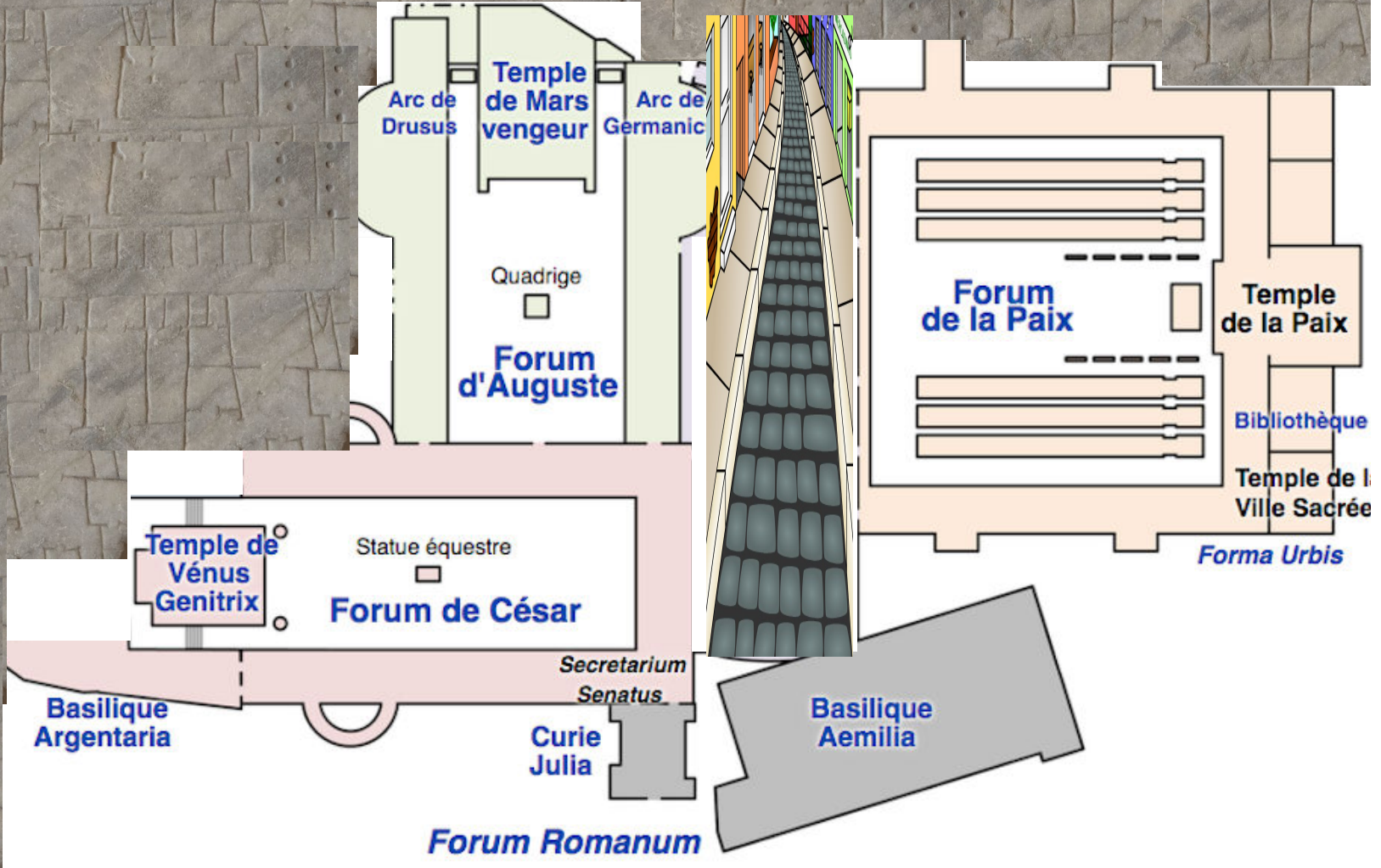
Nymphaeum?

Policlinico

Domus Saeloni

Subure

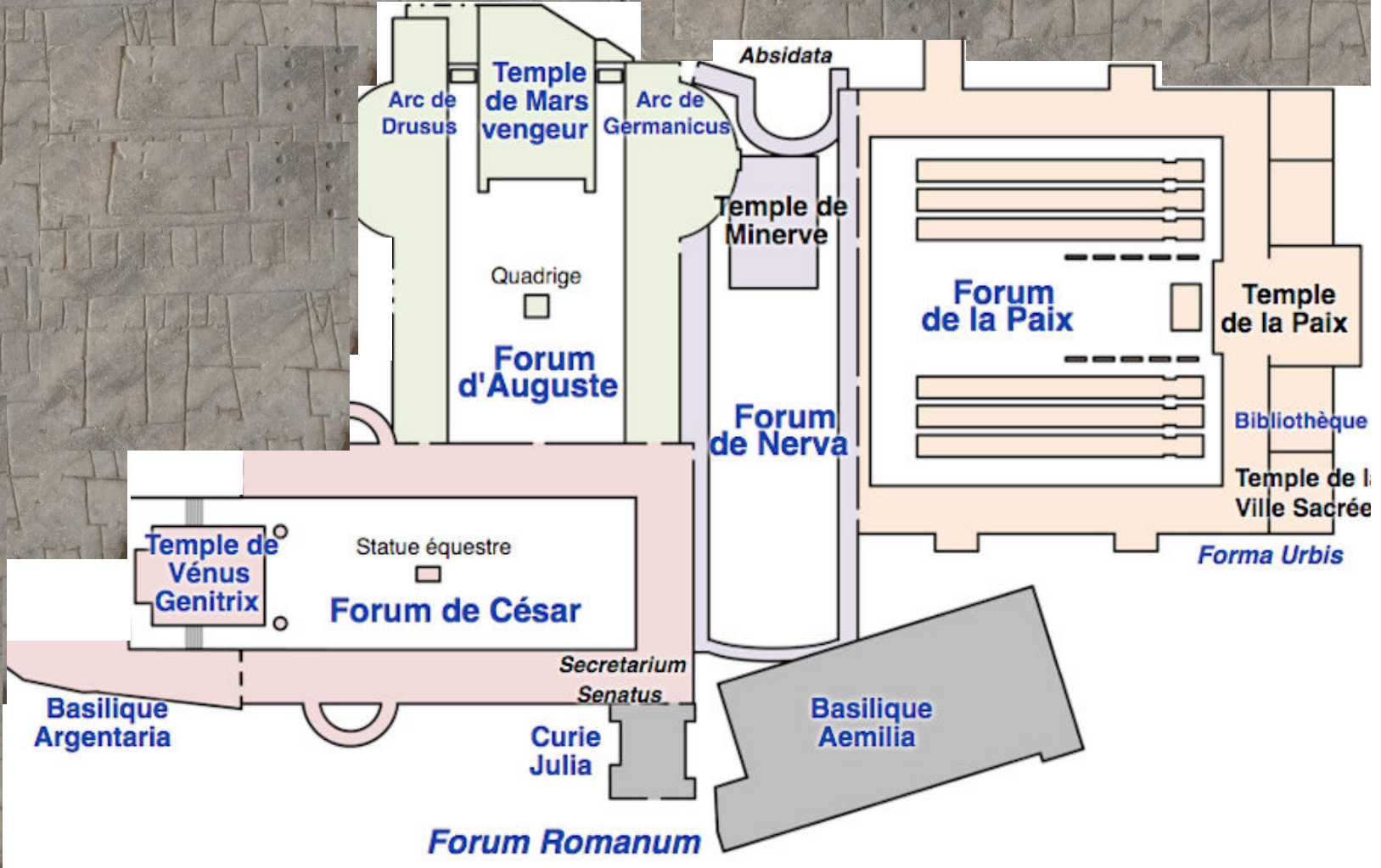
Argilète

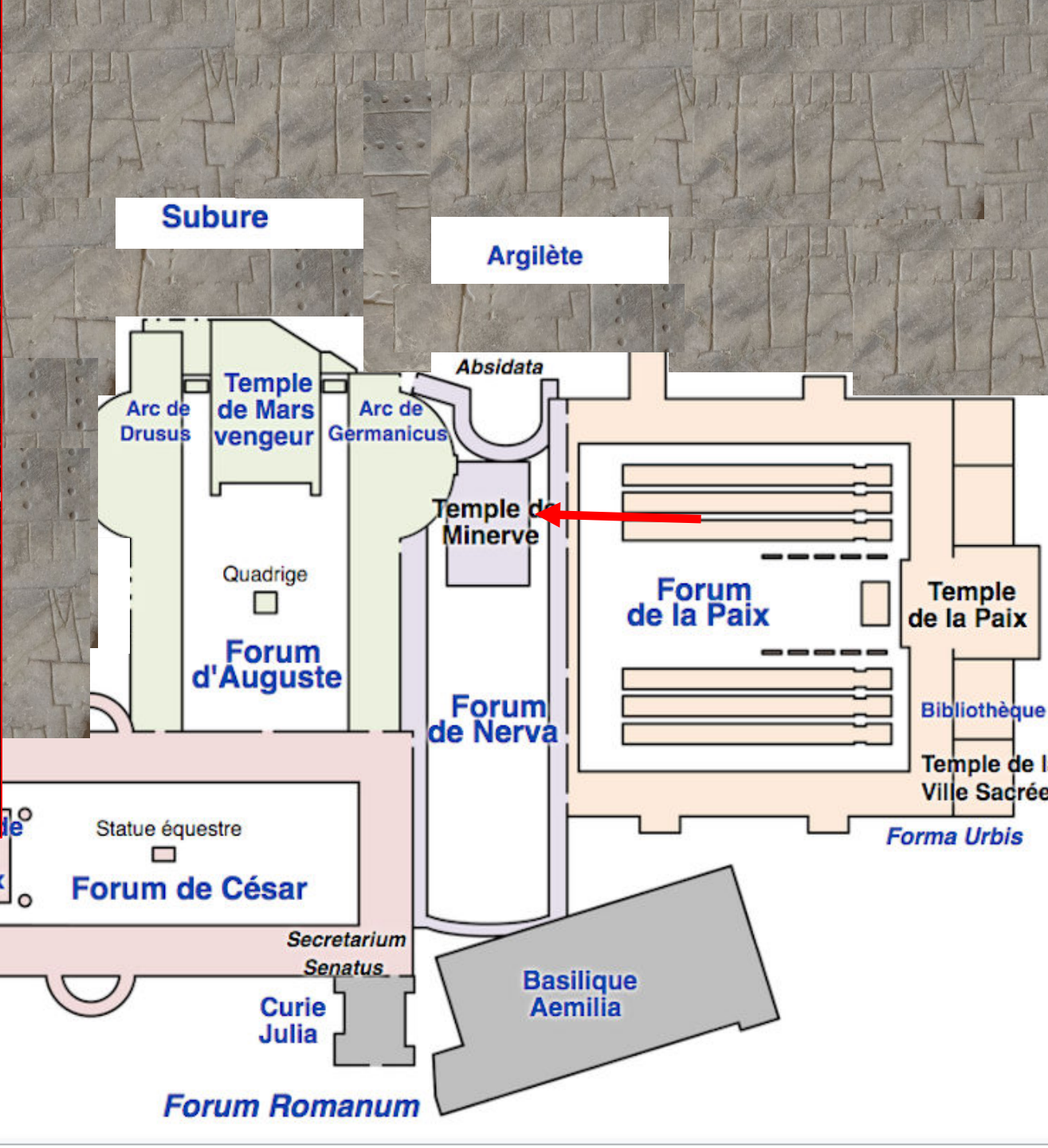


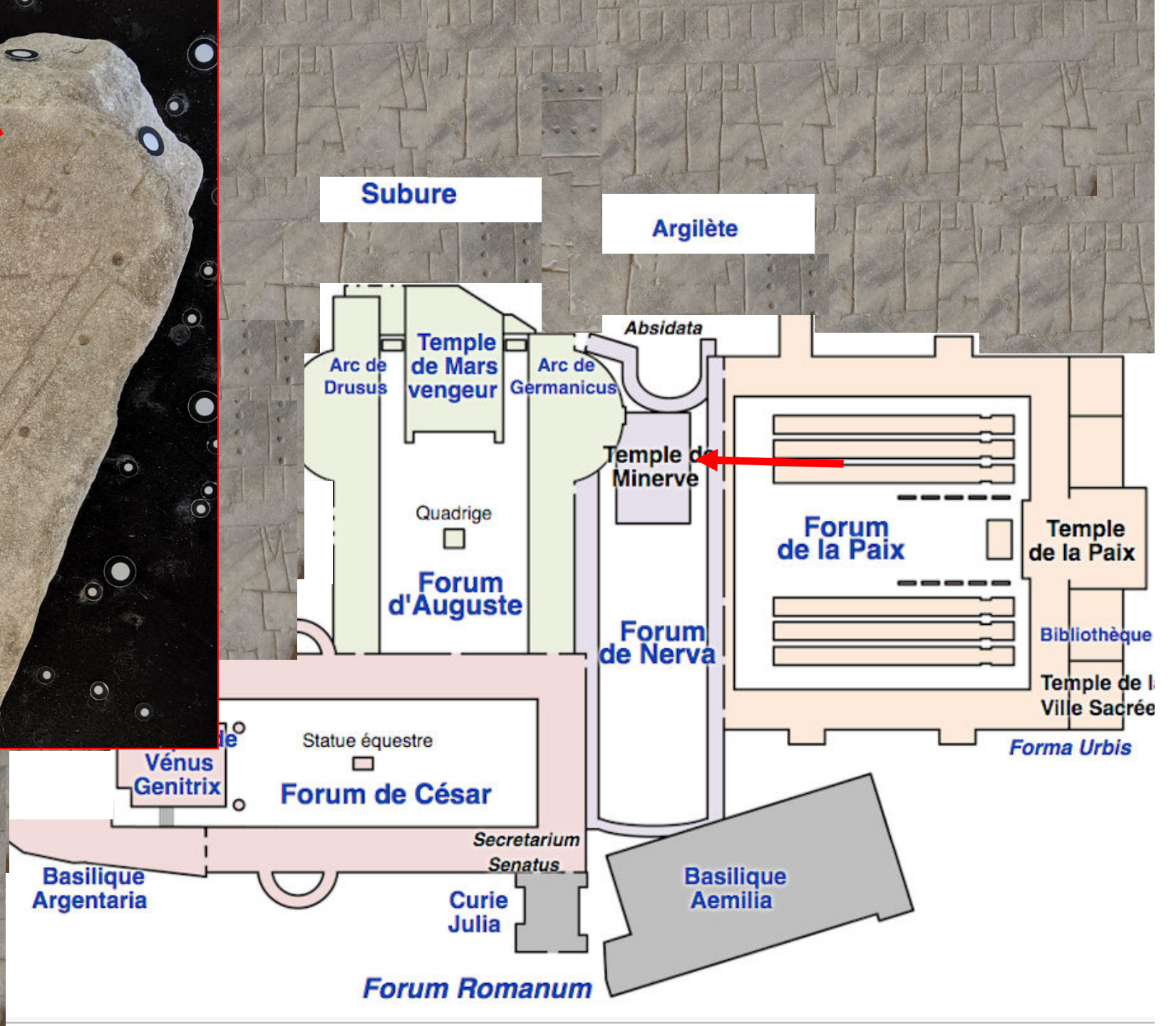
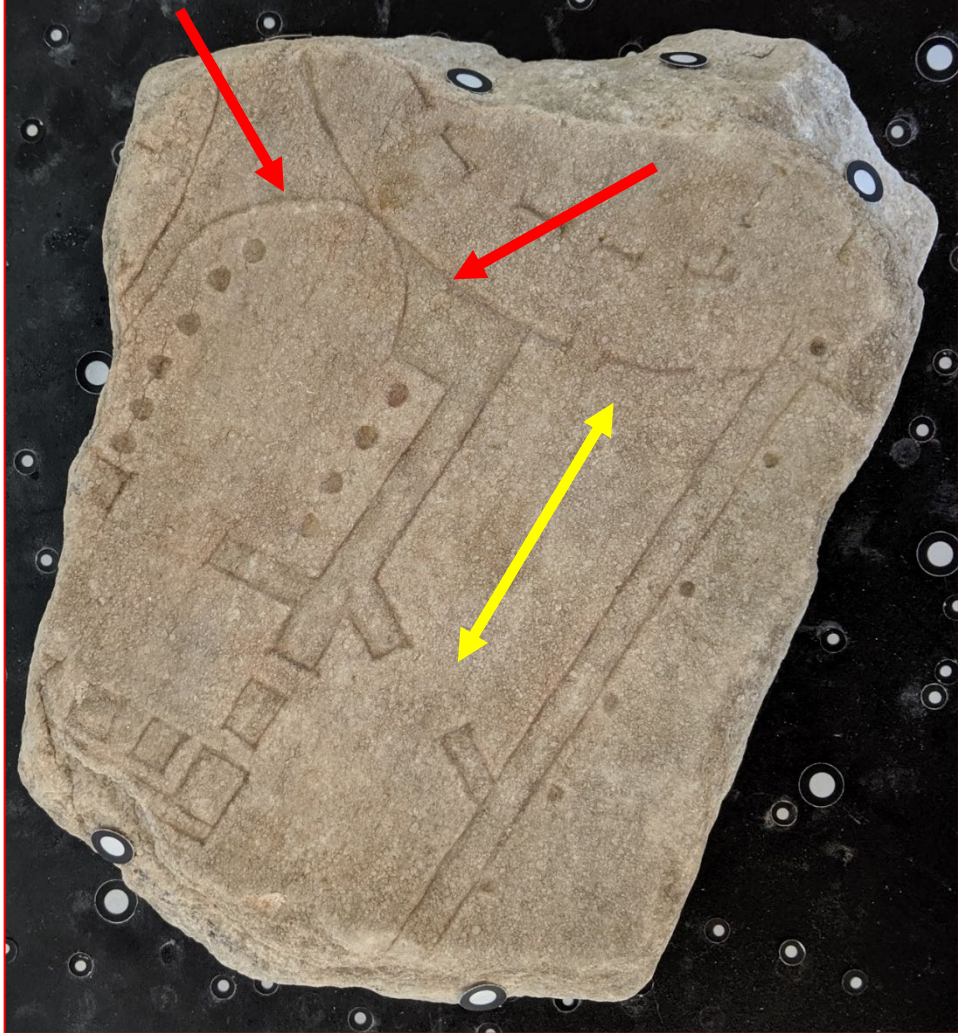


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Argilète

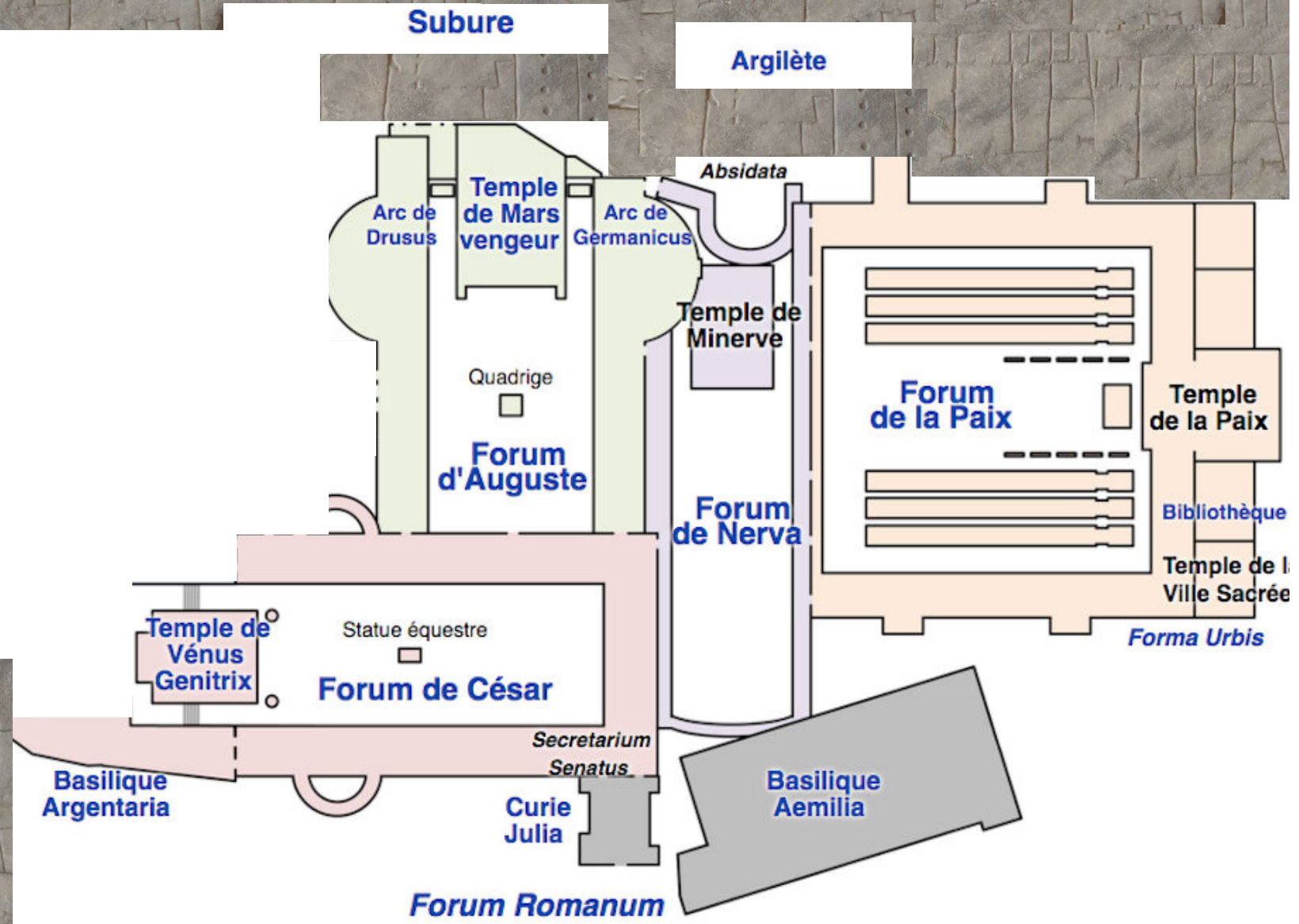


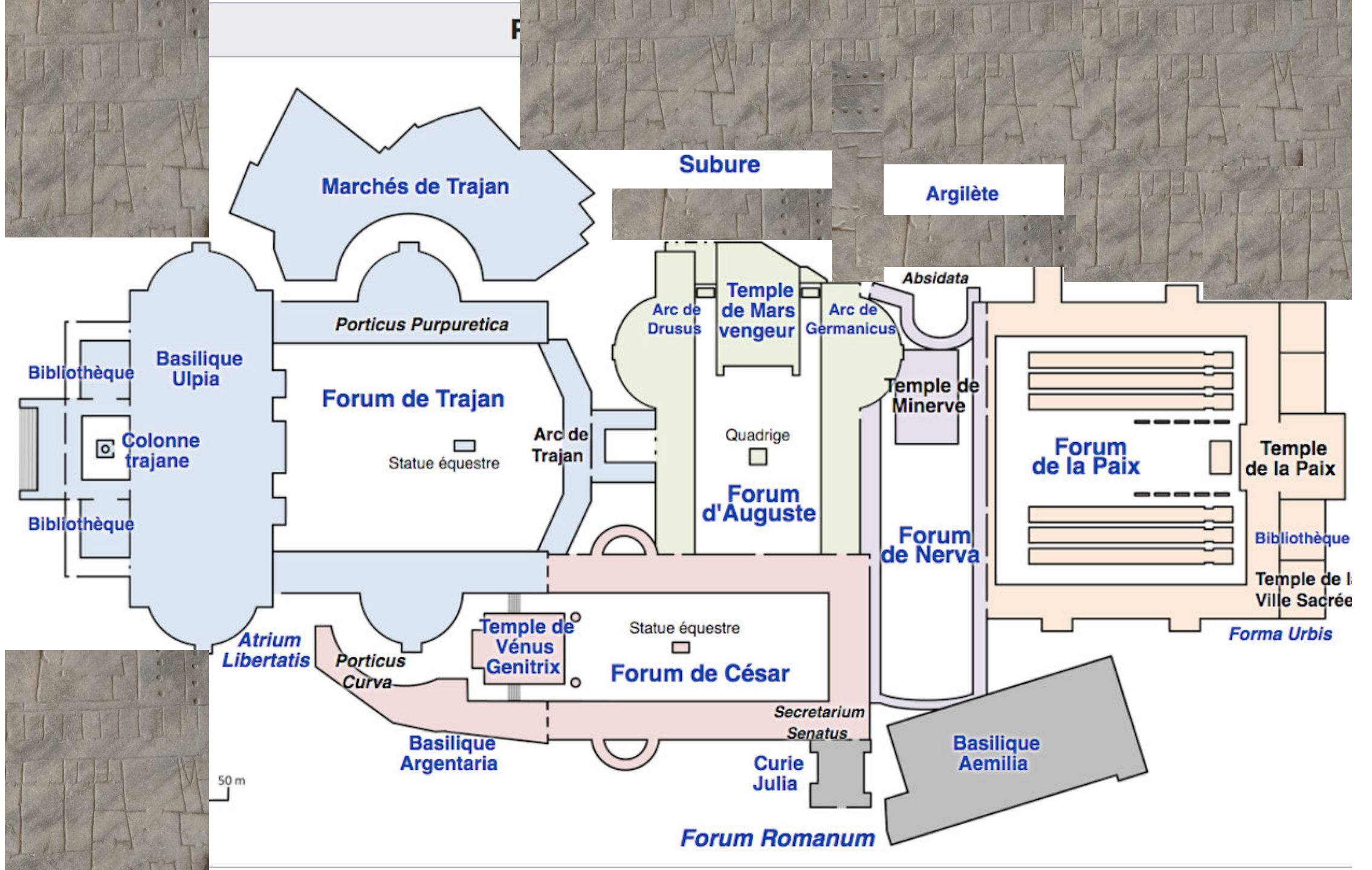


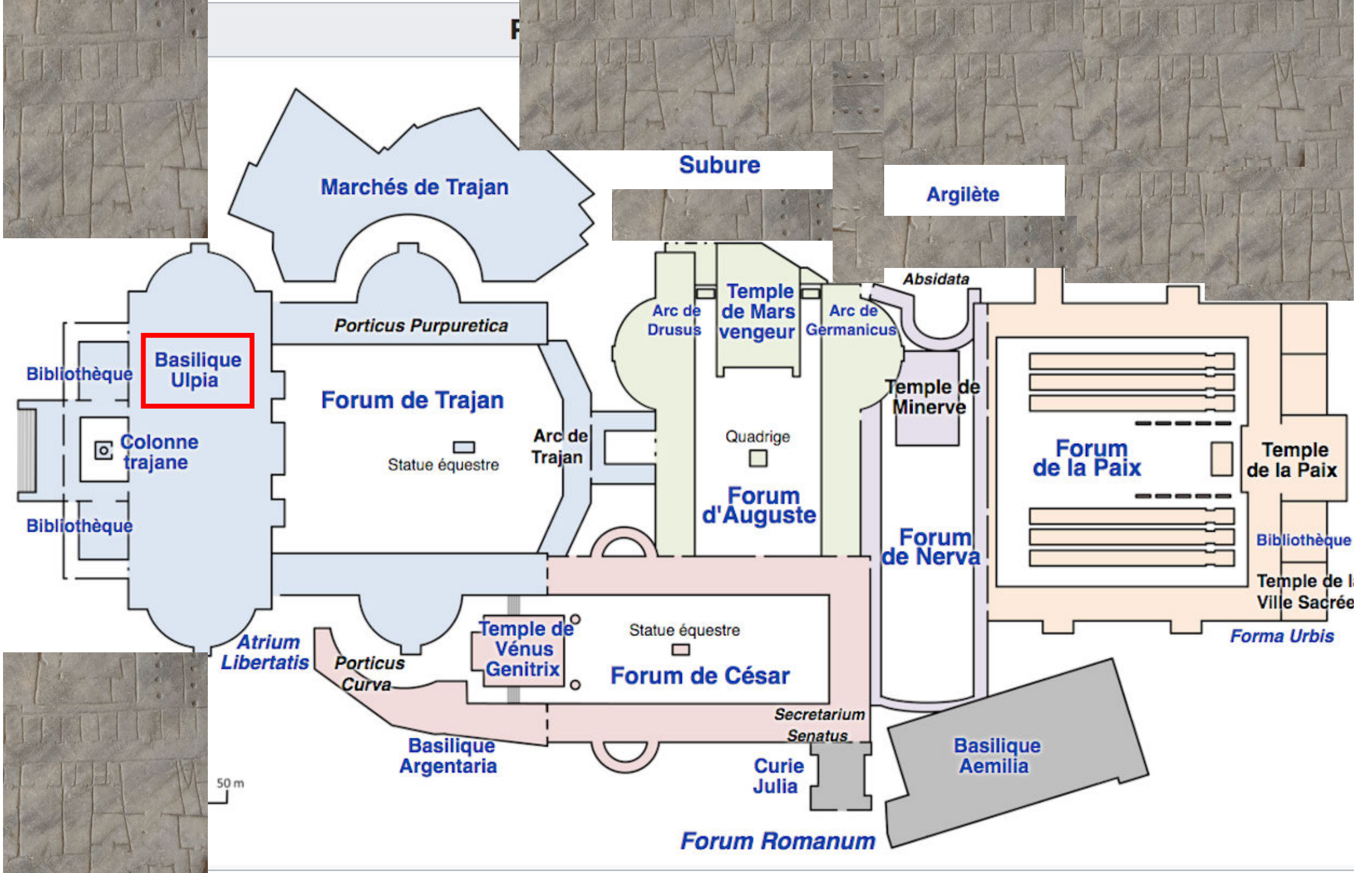


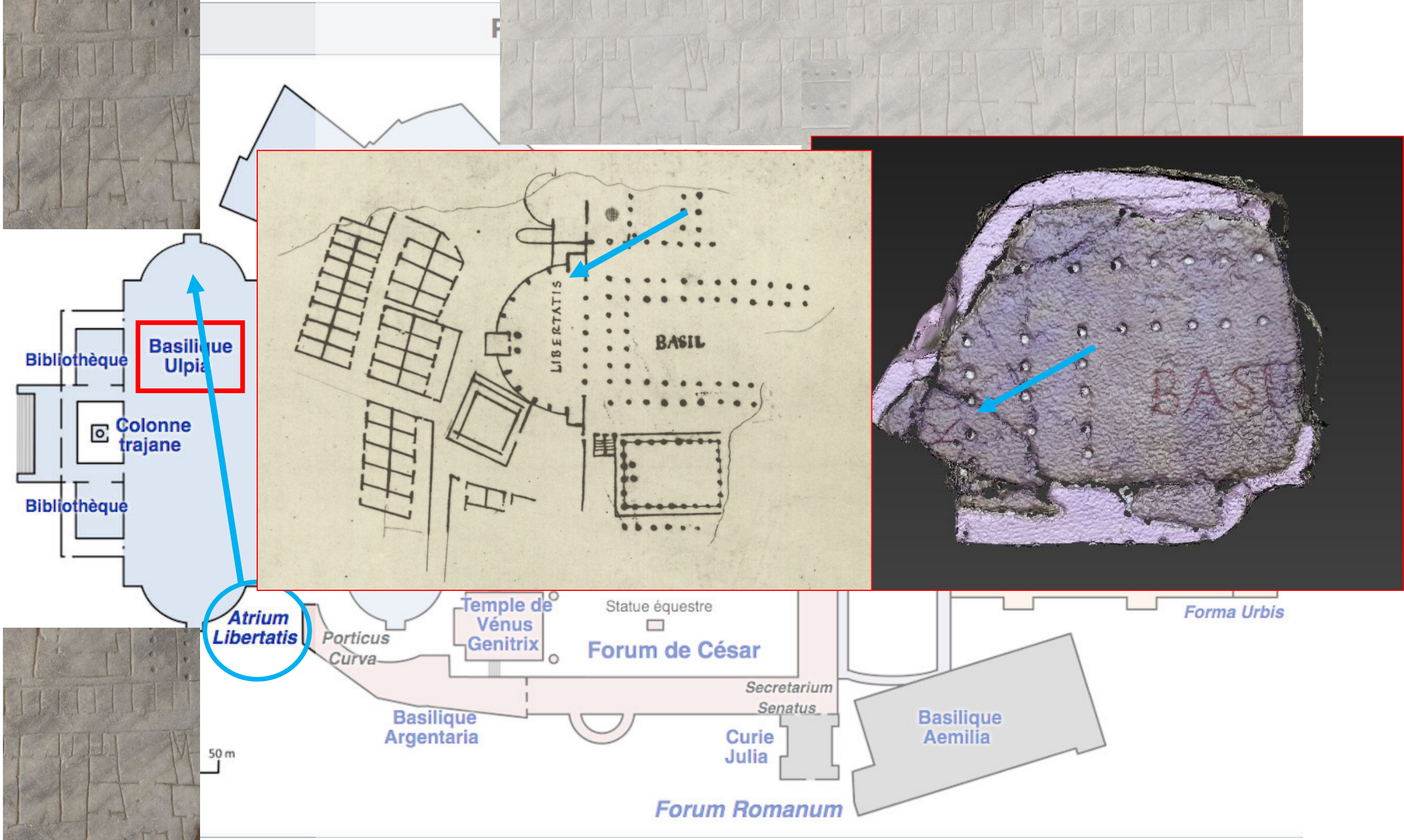
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Argilète















# Out of the Magazine, Into the Cloud: Virtual Modeling of the Great Marble Map of Rome

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