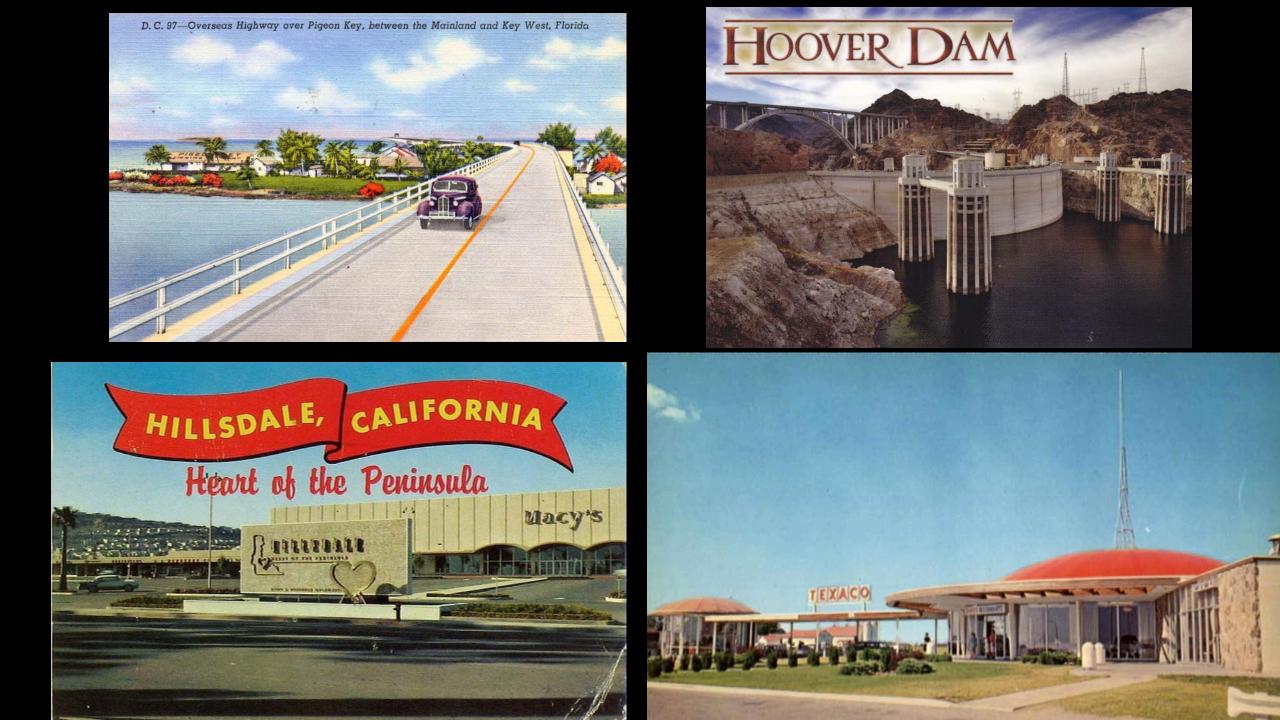
### AHST 2331-001 (21414) Understanding Art Dr. Charissa N. Terranova Tuesdays and Thursdays 11:30-12:45 ATC 1.102

### **Thursday January 18**

**Roman Urbanism, Architecture, and Infrastructure** 

# Why do we love infrastructure?



Why does an ancient sewer system, the Cloaca Maxima, become the subject of a poem in the 21<sup>st</sup> century?



G. Cottafavi dis, e inc

CLOACA MASSIMA

#### Cloaca Maxima By Elizabeth Campbell

Any, every, thing that was exposed goes underground and is washed into the Tiber. This is what some people do

with faces, burying. You see them, the heavy ones, chests like rivers, their heads bowed down with great

antlers of thought invisible. After many seasons, the fronts of their bodies terribly developed to carry them.

Venus of the Drains, the woman with the scum at the corners of her mouth who talked for a long time, scarred by burning, perilous thin,

then told us we had made her day. It is seen, what should not be seen. It is I sees it. Shameful, to feel so heavily the shame

of others — to hear and echo that note always waiting in the voice to be sung. Do I make it happen

to her by having

face and chest that wash with red?



How does that sewer system become a beloved artefact and the picturesque subject matter of a watercolor sketch?

### ROMANTIC AND PICTURESQUE

John Singer Sargent, Washerwoman at the Cloaca Maxima, 1869

Watercolor over graphite on off-white wove paper

15.2 cm. x 24.2 cm



How does an aqueduct become a beloved artefact and the subject of a collectible print?

Giovanni Battista Piranesi, The Aqueduct of Nero Leading to the Palatine, 1775

> Etching 17" x 26 3/8"

## Why do we design train stations that look like public Roman baths?

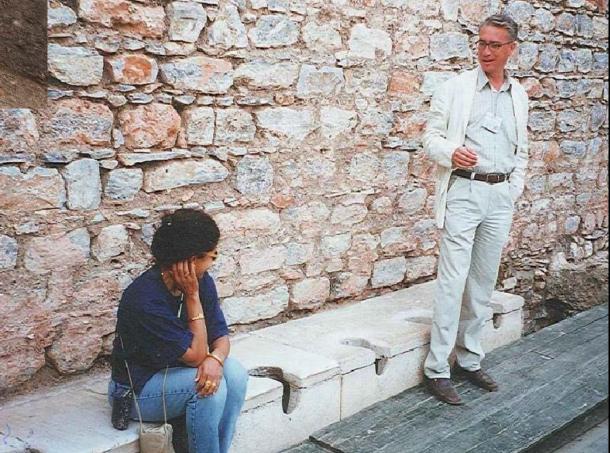




McKim, Mead, and White, Penn Station, New York City, 1905-1964



Why do ancient Roman toilets become tourist destinations and make the perfect photo opportunity?

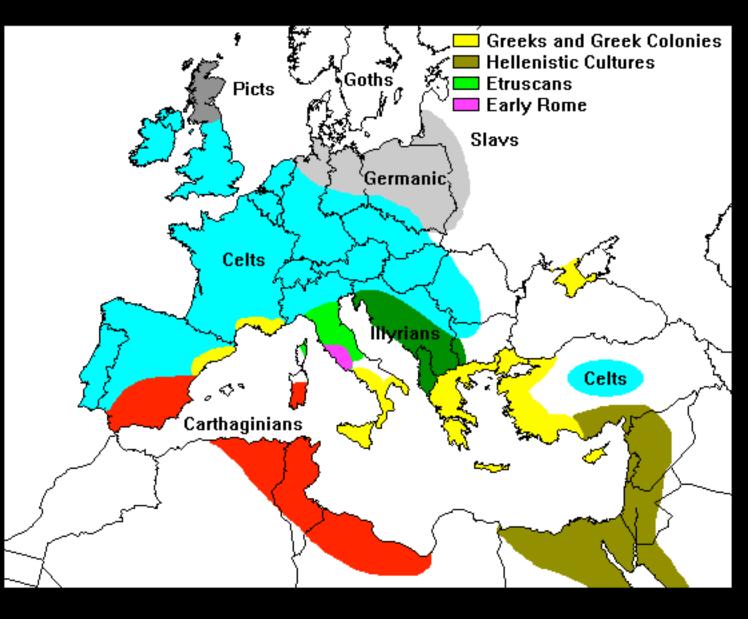


<u>Infrastructure</u>: The term infrastructure refers to the basic, underlying framework or features of a system or organization. Often, these basic frameworks serve a country, city, or defined area. Examples include sewer and light systems, transportation and communication systems, power plants, and schools.

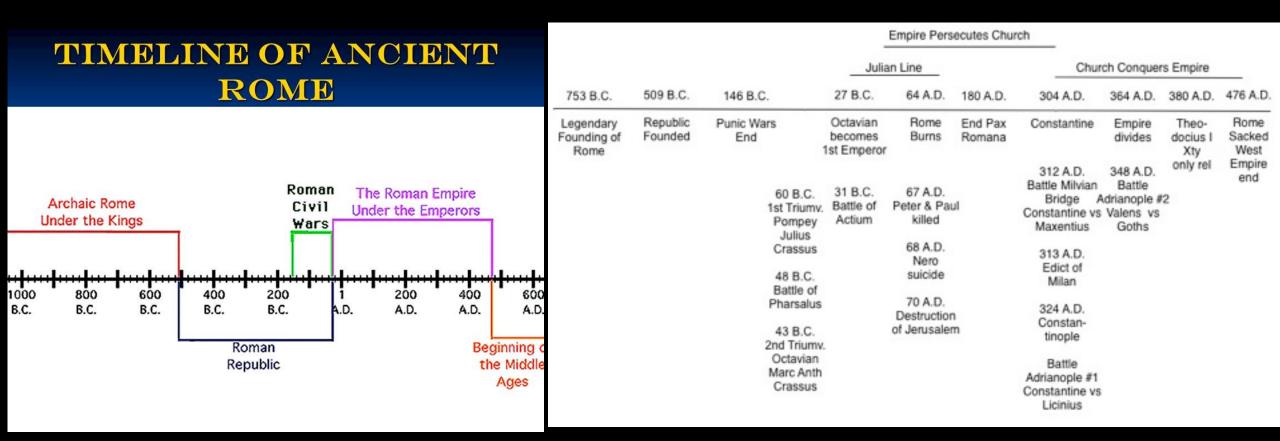
Ancient Roman water flow, waste management, and hygiene ...and the role of art and aesthetics therein.

- Roman Urbanization
- Cloaca Maxima
- Public Latrine
- Aqueduct
- Bath



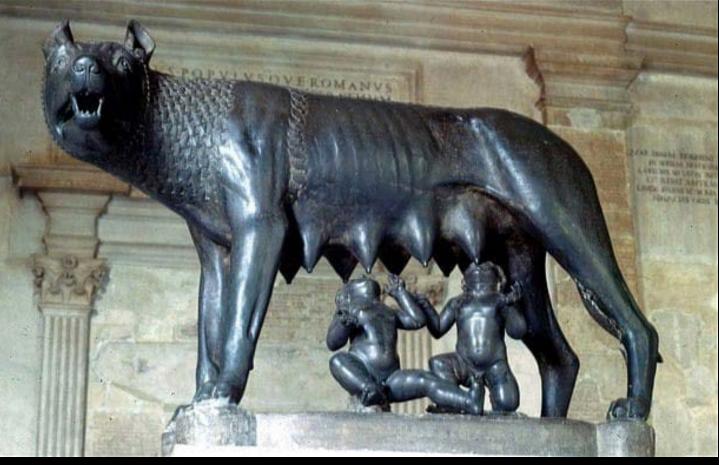




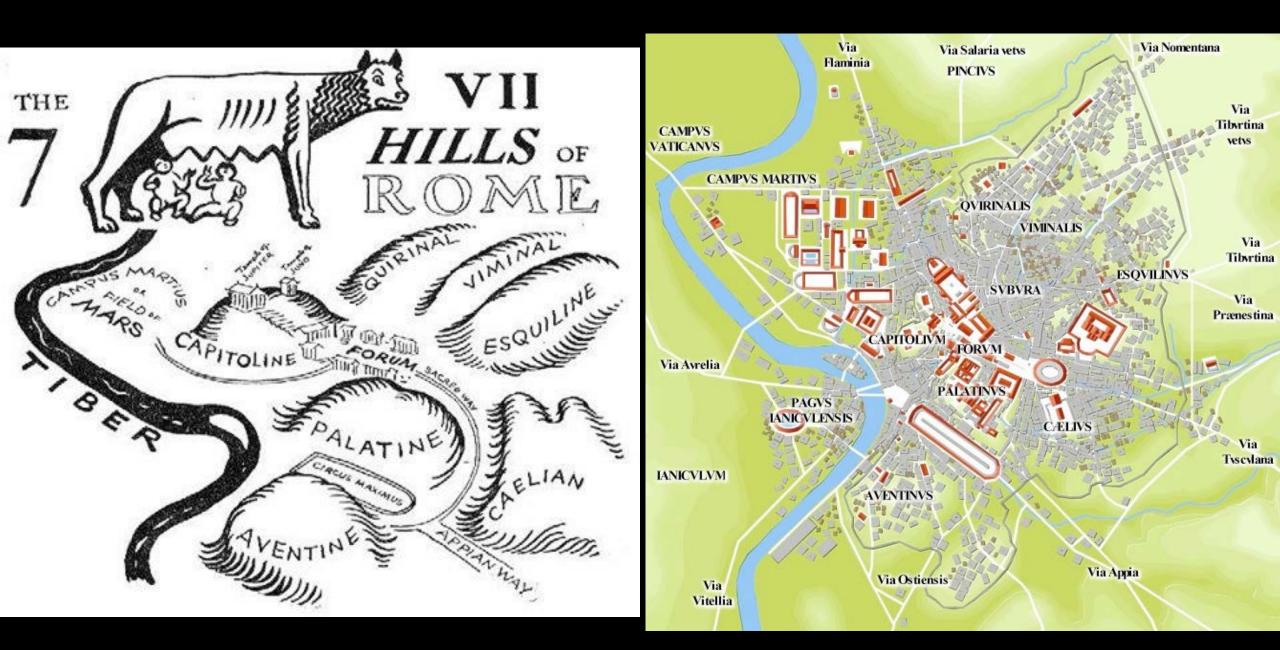


Timelines of Ancient Rome: 753 BCE-1453 Fall of Constantinople





"In those days the countryside there was wild and empty. The story goes that when the waters receded, the basket in which the twins had been abandoned was left on dry land. A she-wolf, on her way from the hills round about to drink, came across the howling infants. She gave them her teats to suck, and was so gentle with them that the king's shepherd found her licking them with her tongue" (Livy, History of Rome, 1. 4). Above: Medieval bronze sculpture of the Capitoline wolf and twins, Romulus and Remus, 13<sup>th</sup> century



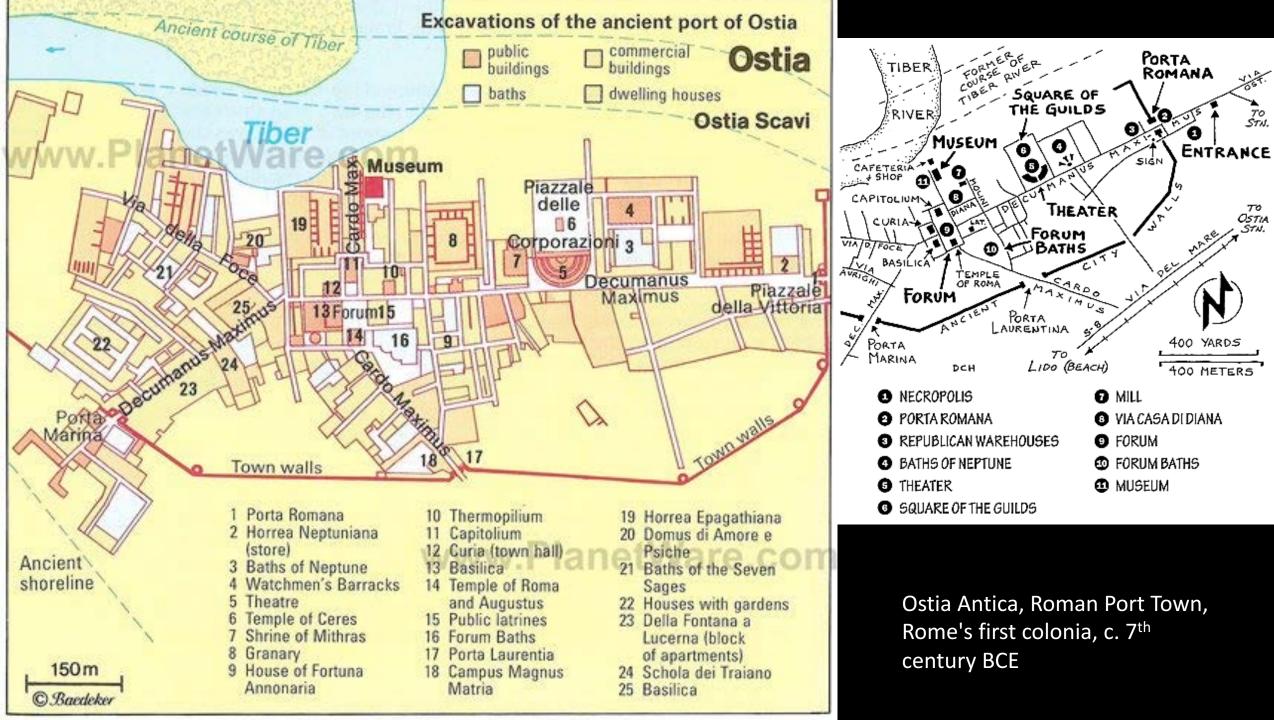
### Seven hills of Rome:

- Aventinus (Aventine)
- Caelius (Caelian)
- Capitolium (Capitoline)
- Esquiliae (Esquiline)
- Palatium (Palatine)
- Quirinalis (Quirinal)
- Viminalis (Viminal)



# Roman Urbanization

- Cadastral survey: Gridiron; cadastral surveys shows the extent, value, and ownership of land, especially for taxes
- Castra or Castrum: Military camp; in Latin *castrum* was originally the term for an estate or a tract of land enclosed by a fence or a wooden or stone wall
- Cardo Maximus: primary north-south road that was the usual main street
- Decumanus Maximus: east-west-oriented road in a Roman city
- Forum: located close to this intersection of the Decumanus Maximus and the Cardo Maximus



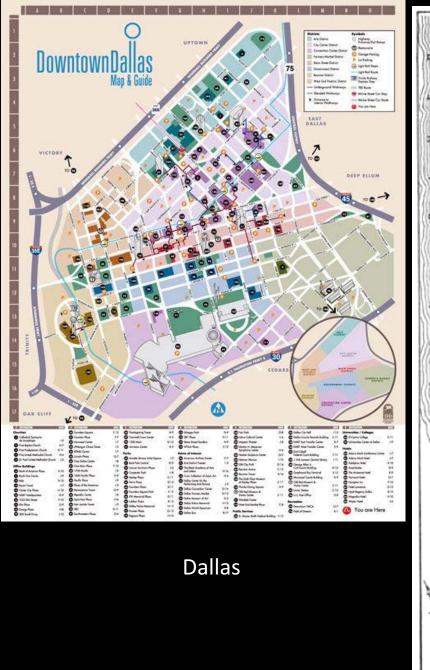


Chicago

#### INHERITING GRIDIRON

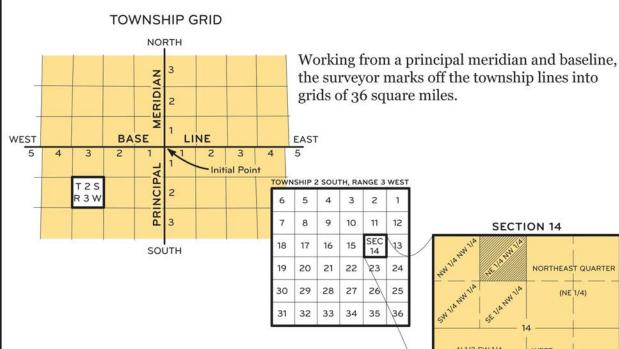
LOGIC OF THE GRID

#### RATIONALIZATION OF SPACE





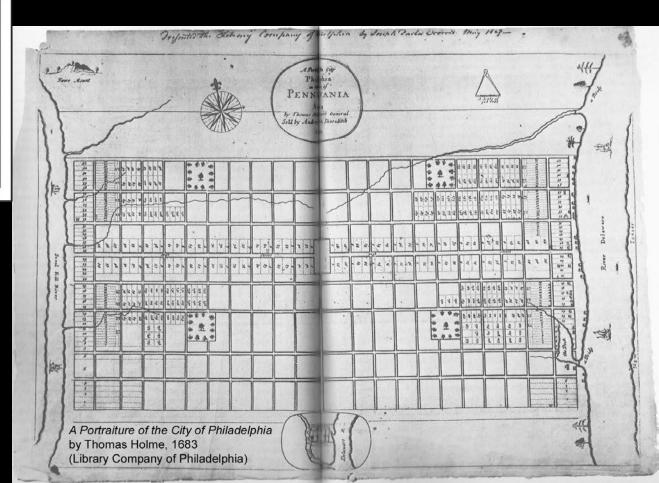
New York



**SECTION 14** 22 NORTHEAST QUARTER (NE 1/4) N 1/2 SW 1/4 WEST HALF OF E 1/2 SE 1/4 SOUTH LOT 1 EAST QUARTER LOT 2 Lake

Townships are further divided into sections of 1 square mile (640 acres). Sections are then numbered from 1 to 36.

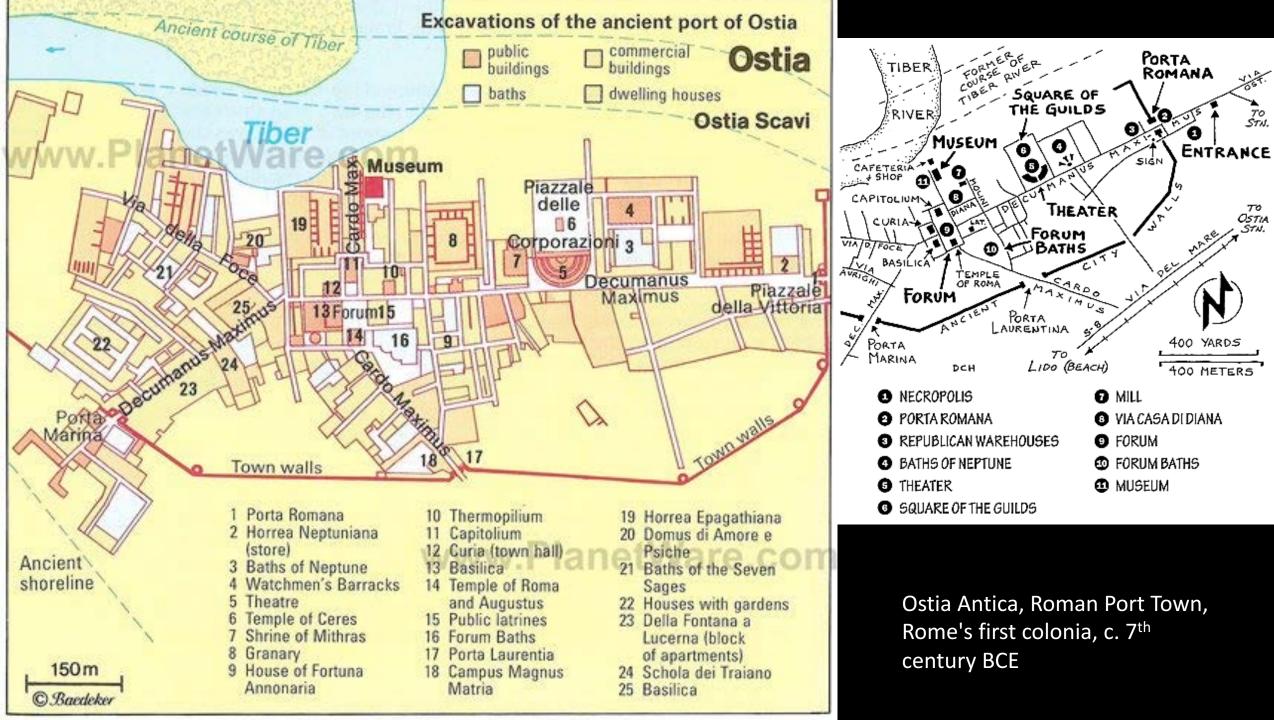
Public Land Survey System Thomas Jefferson, 1785 Used to divide public lands into rectangles Townships – 6 square miles Sections – 1 square mile



## INHERITING THE GRIDIRON

## LOGIC OF THE GRID

## RATIONALIZATION OF SPACE





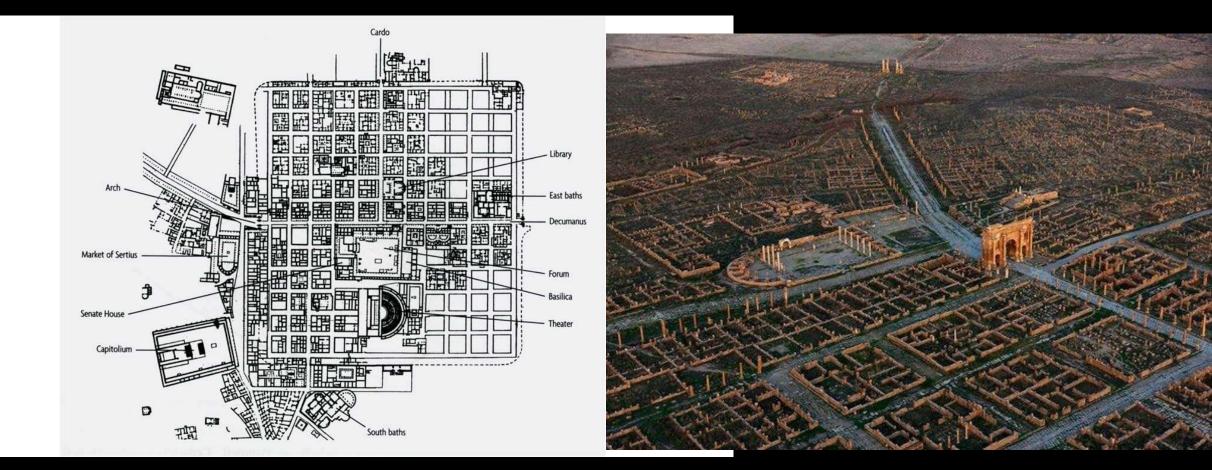








Above: Pompeii and Mt. Vesuvius, the Volcano that destroyed the city in the 79 CE Left: Annotated map of Pompeii, founded between 4<sup>th</sup> and 2<sup>nd</sup> century BCE

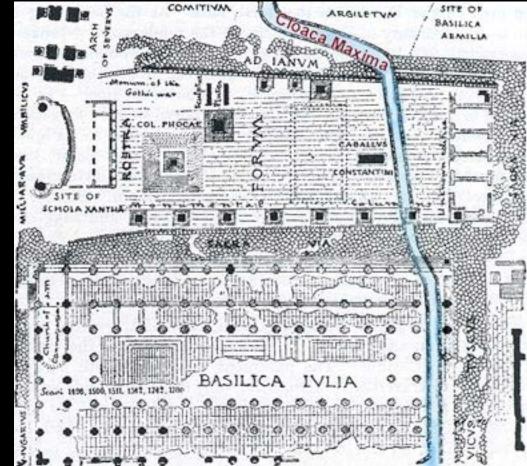


Timgad, Roman-Berber town in the Aurès Mountains of Algeria, founded 100 CE

The <u>Cloaca Maxima</u> – the Greatest Sewer – was one of several large ditches that drained water from inhabited areas of the City of Rome. The Cloaca Maxima drained the valleys between the Esquiline, Viminal, and Quirinal Hills. Construction began c. 600 BCE and continued into the age of the aqueducts, c. 2<sup>nd</sup> c. CE

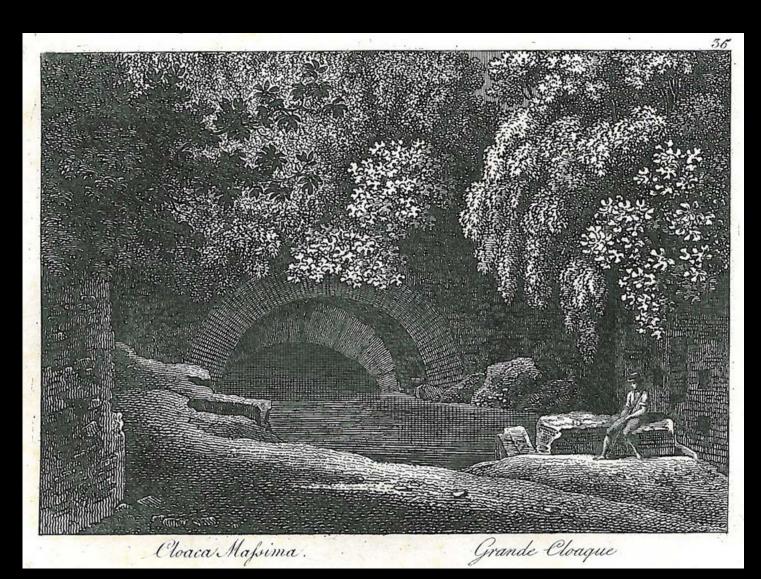


## Cloaca Maxima or the Greatest Sewer of Ancient Rome



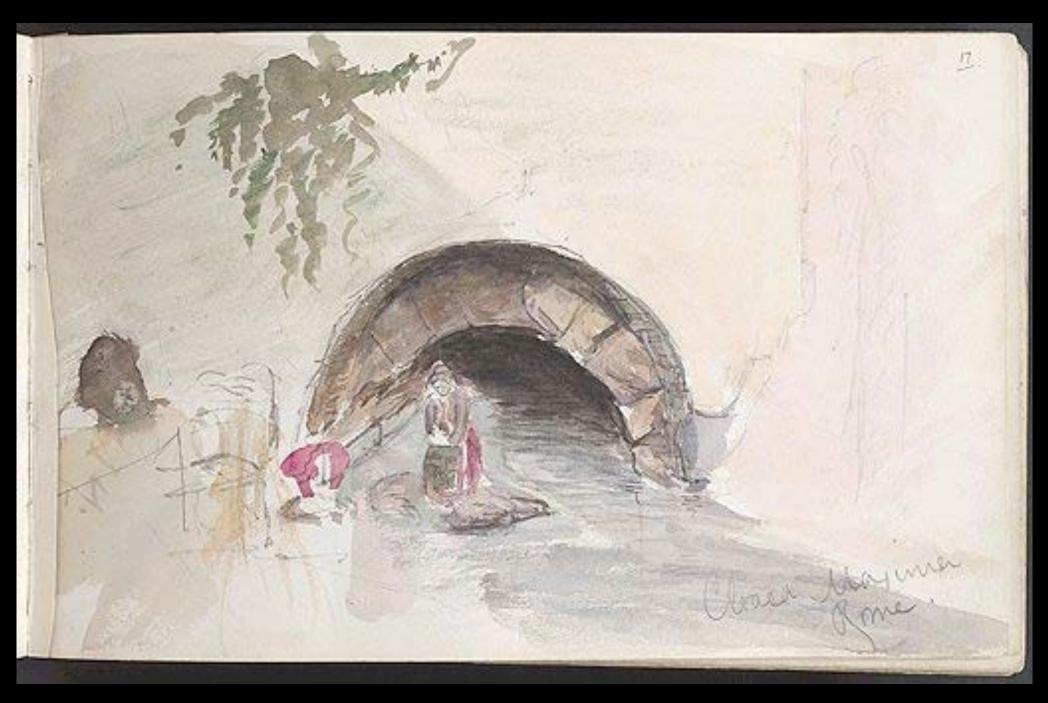
cloaca *noun*: 1.) a common cavity at the end of the digestive tract for the release of both excretory and genital products in vertebrates (except most mammals) and certain invertebrates. Specifically, the cloaca is present in birds, reptiles, amphibians, most fish, and monotremes; 2.) a sewer.





Sketch of the Cloaca Maxima (1850) – primary sewer system of Rome, Italy along the Tiber River.





### ROMANTIC AND PICTURESQUE

John Singer Sargent, Washerwoman at the Cloaca Maxima, 1869

Watercolor over graphite on off-white wove paper

15.2 cm. x 24.2 cm



Giovanni Battista Piranesi, The Mouth of the Cloaca Maxima, 1778

Etching 17" x 26 3/8"

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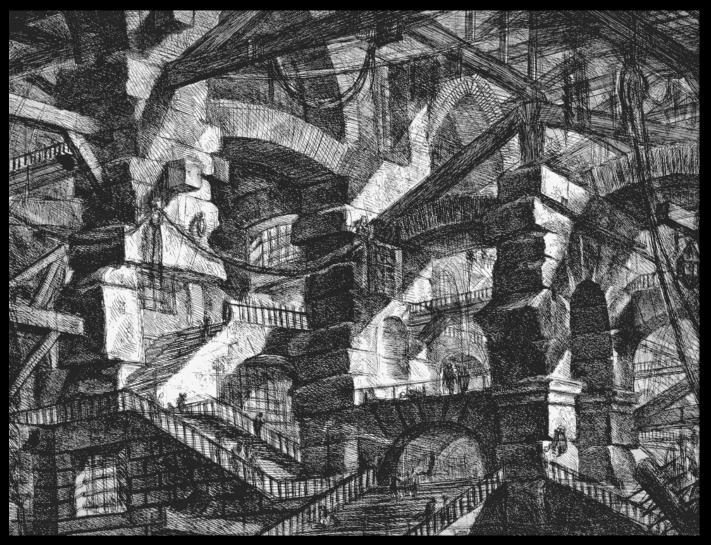
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# Giovanni Battista **Piranesi** [1720-1778]

# **Piranesian Space**



Pietro Labruzzi, Portrait of Giovanni Battista Piranesi, 1738



Giovanni Battista Piranesi, Etchings from The Carceri/The Prison series, 1720-1778

> Piranesian Space; Atmospheric Sublime + Incommensurable





Lodovico Carracci, St. Sebastian Thrown into the Cloaca Maxima, 1612

Oil on canvas

167 × 233 cm (65 3/4 × 91 3/4 in.)



Above: Lodovico Carracci, St. Sebastian Thrown into the Cloaca Maxima, 1612 Right: Andrea Mantegna, Martyrdom of St. Sebastian, 1480

St. Sebastian is commonly depicted in art and literature tied to a post or tree and shot with arrows





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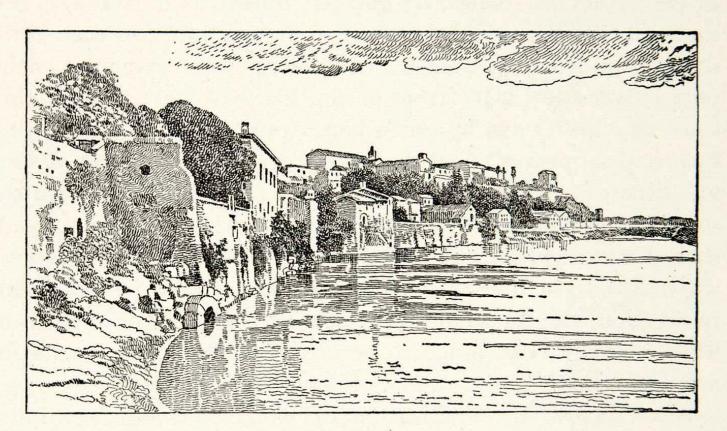
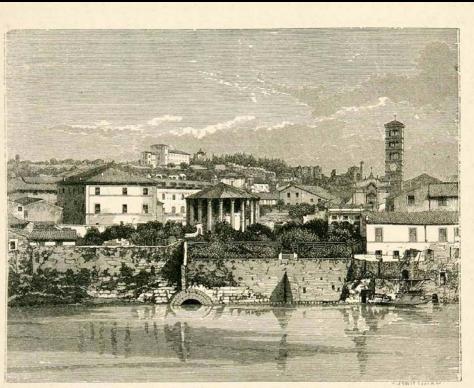


FIG. 146. A VIEW OF THE TIBER WITH THE AVENTINE HILL AND THE ETRUSCAN DRAIN

As we look *down* the Tiber in this view we stand not far from our former position looking *up* the river (Fig. 144). The Aventine Hill is at the left. Along its foot, at the water's edge, extend the houses of modern Rome. At this end of this row of houses we see the arched opening of the ancient Etruscan sewer, which served to drain the Forum under which it passed. The Romans called it the *Cloaca Maxima* (chief sewer). Although much altered in later times, its most ancient portions are probably the oldest surviving masonry at Rome

### Tourism and the Cloaca Maxima



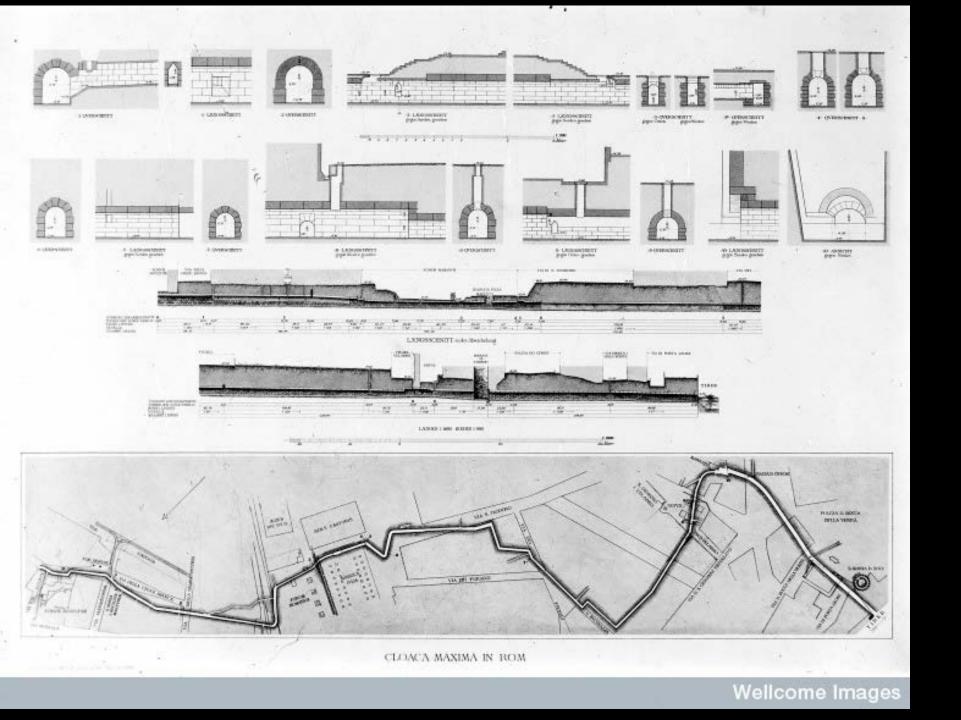
MOUTH OF THE CLOACA MAXIMA AND TEMPLE OF HERCULES (VESTA). (In the background are the Villa Mills, the Palatine Hill, and the campanile of S. Maria in Cosmedin.)

#### Left: From a travel guide Above: 1876 Wood Engraving of the Cloaca Maxima Greatest Sewer Tibur Temple Hercules





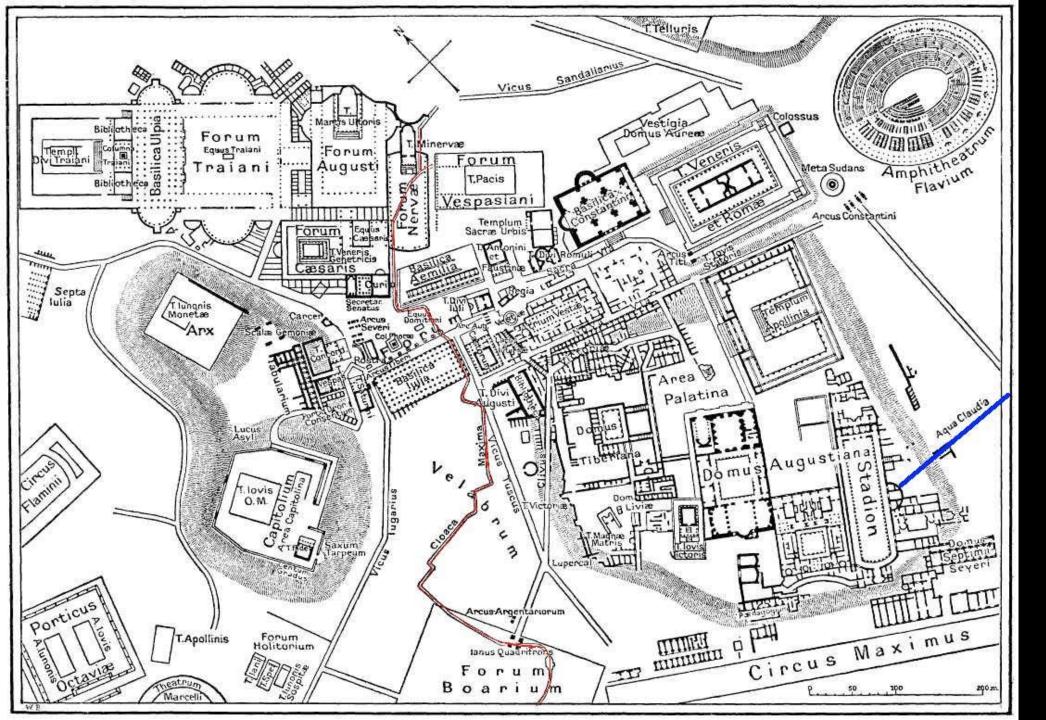
Hills were tunneled into the course of the construction of the sewers, and Rome was a "city on stilts" beneath which men sailed when Marcus Agrippa was aedile. Seven rivers join together and rush headlong through Rome, and, like torrents, they necessarily sweep away everything in their path. With raging force, owing to the additional amount of rainwater, they shake the bottom and sides of the sewers. Sometimes water from the Tiber flows backwards and makes its way up the sewers. Then the powerful flood-waters clash head-on in the confined space, but the unyielding structure holds firm. Huge blocks of stone are dragged across the surface above the tunnels; buildings collapse of their own accord or come crashing down because of fire; earth tremors shake the ground - but still, for seven hundred years from the time of Tarquinius Priscus, the sewers have survived almost completely intact. Pliny the Elder [23-79 CE]



The Cloaca Maxima in Rome. Various sections and a plan of its course.

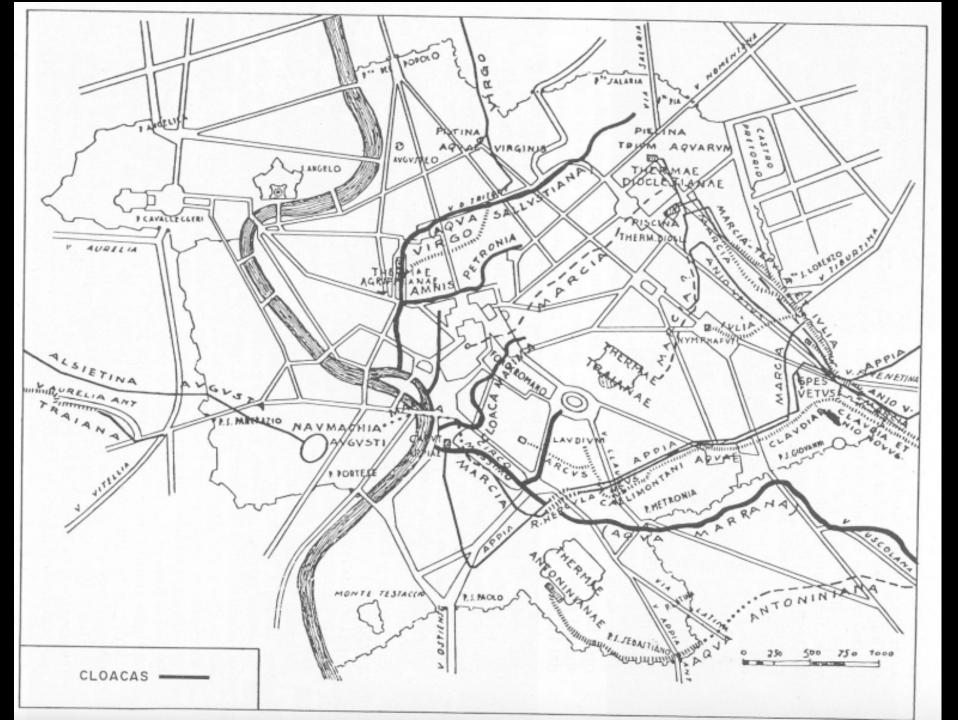
> by Antike Denkmaler Volume I Plate 37

PATH OF CLOACA MAXIMA SECTIONAL RENDERINGS



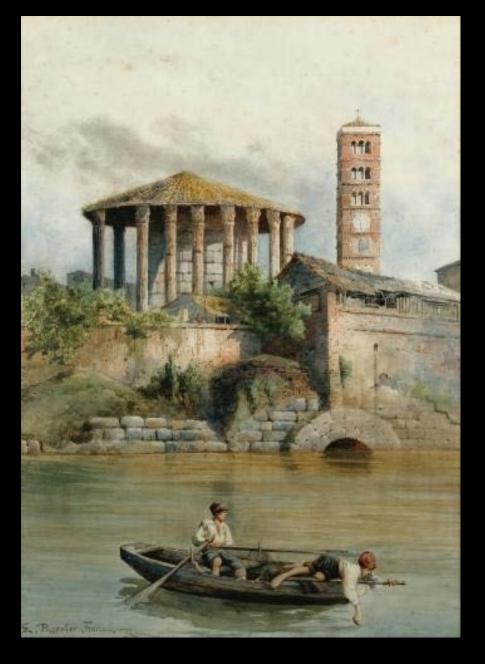
#### **URBAN PALIMPSEST**

Map of central Rome during the time of the Roman Empire, showing Cloaca Maxima in red



The famous Cloaca Maxima which drained the Forum was not the only sewer in ancient Rome. Some sewers were large enough for men and, in some places, for boats to move around underneath the city. Some sewers were just open ditches.

http://www.romanaqueducts.info/picturedicti onary/pd\_onderwerpen/wastewater1.htm



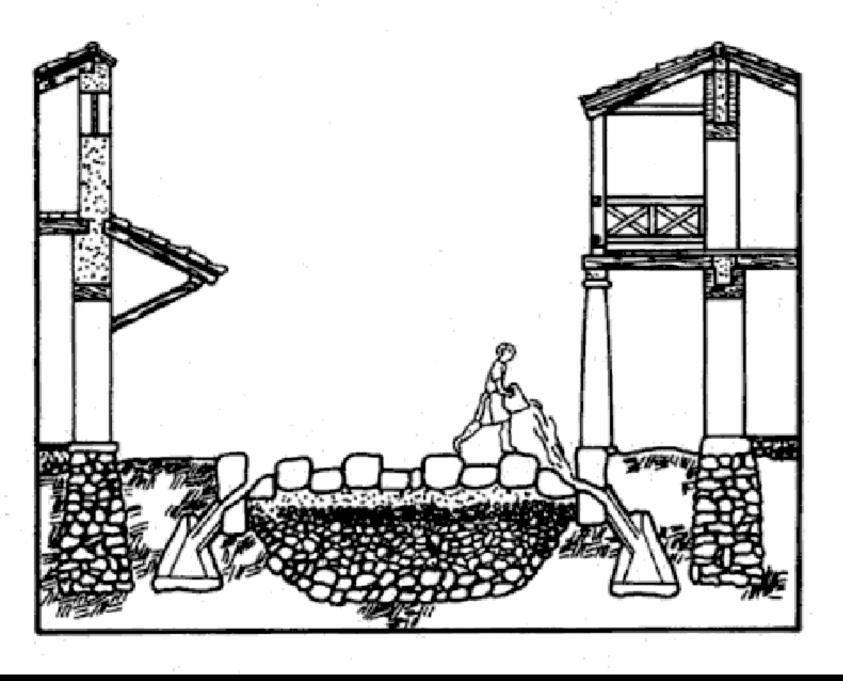


### Ettore Roesler Franz, Cloaca Maxima Rome, c. 1890

Waste Management

Public Latrines

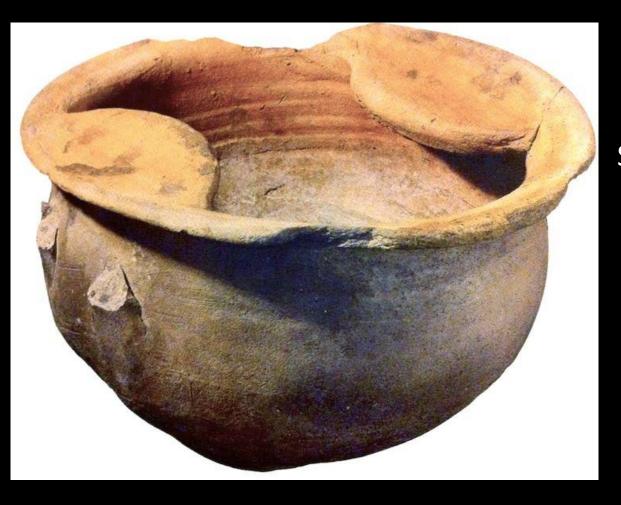
Ancient Rome





Waste was frequently emptied into the gutters or straight into street-side openings to the roman sewers. The sewers carried off sewage, urban runoff, and drainage water together (based on Macaulay).

http://www.romanaqueducts.info/picturedictionary/pd\_onde rwerpen/wastewater1.htm

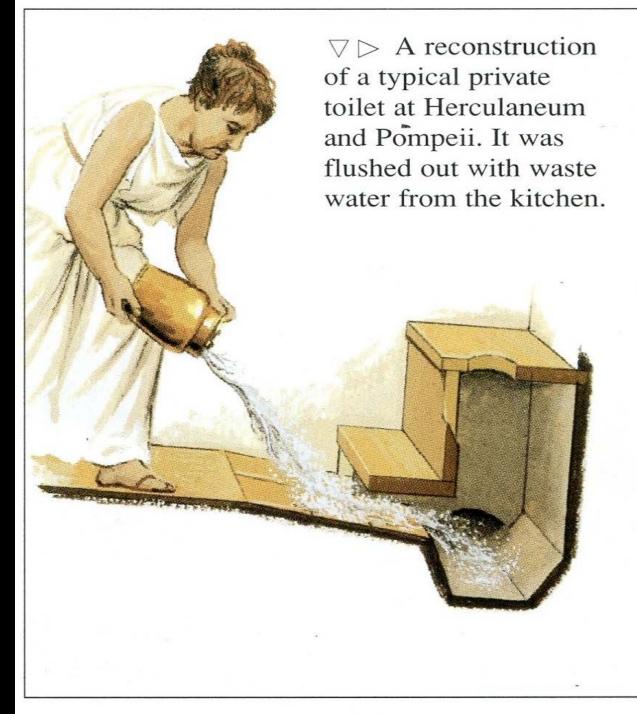


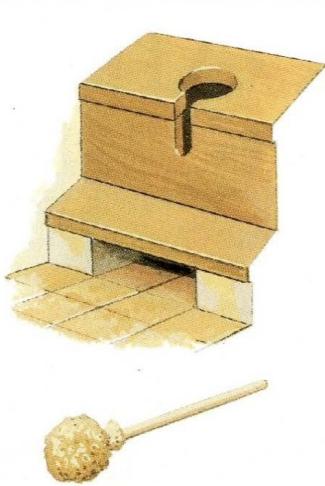
Poem to the chamber pot by Juvenal

From every towering roof the rubbish falls, striking the head, and injuries grow rank. See how pots strike and dint the sturdy pavement There's death from every window where you move. You'd be a fool to venture out to dine, Oblivious of what goes on above, Without you having penned the dotted line Of your last testament, You can but hope they spill a chamber pot.

Roman chamber pot from Pompeii with flanges for sitting

--Juvenal, Roman poet active in the late 1st and early 2nd century CE



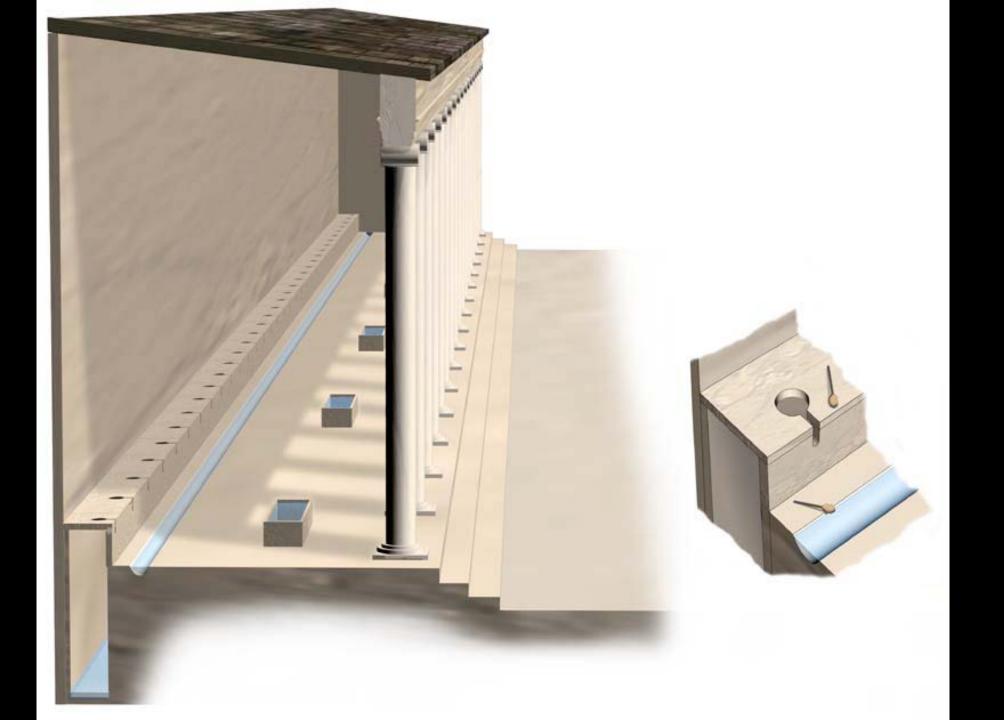


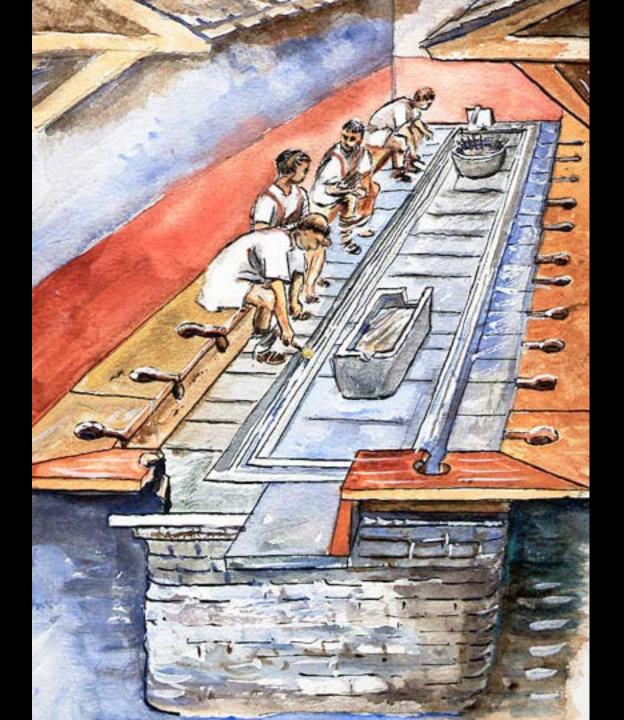
 $\triangle$  A sponge stick, the ancient equivalent of toilet paper, well known from literary sources.

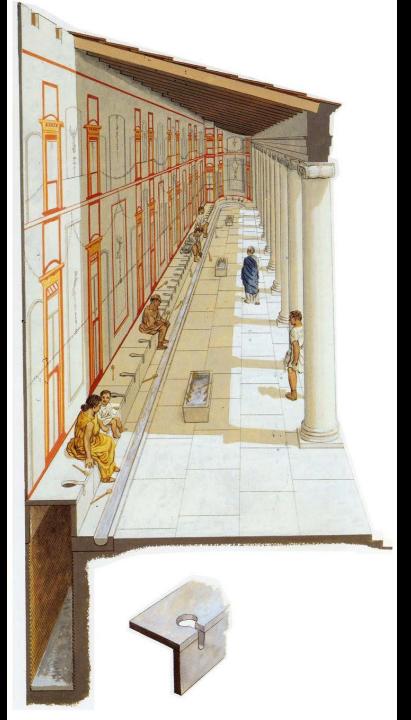


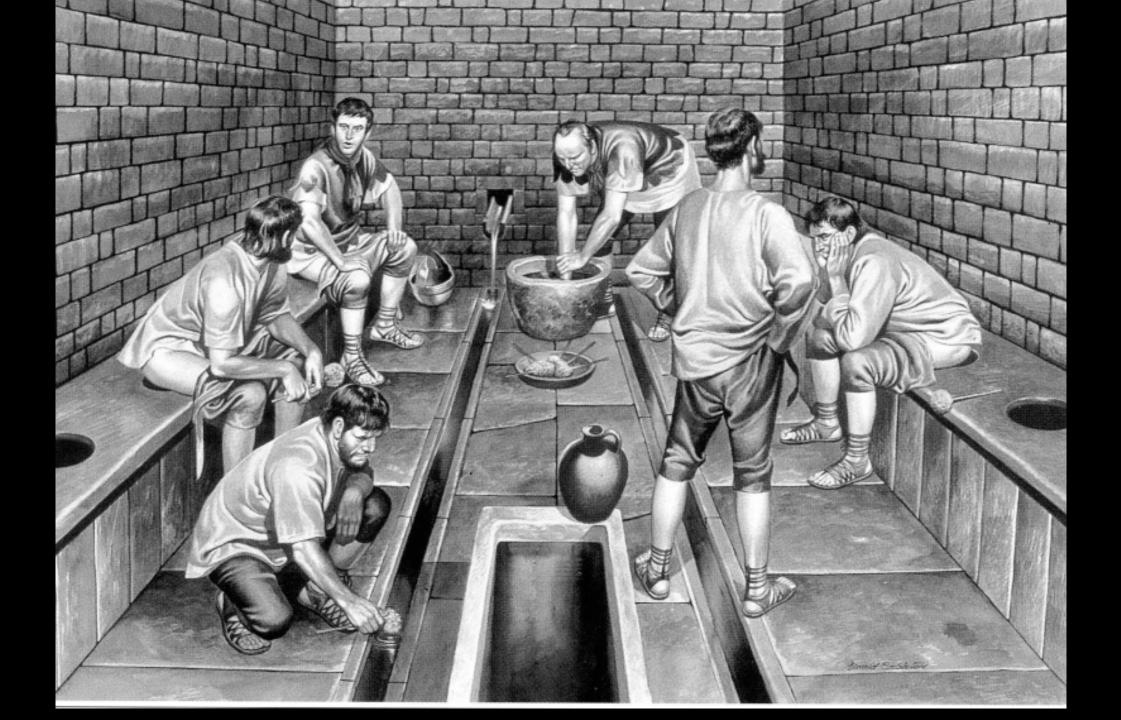
Ancient Roman Public Latrine

Remnants of a **public latrine** built in Ostia Antica, harbor city of Ancient Rome









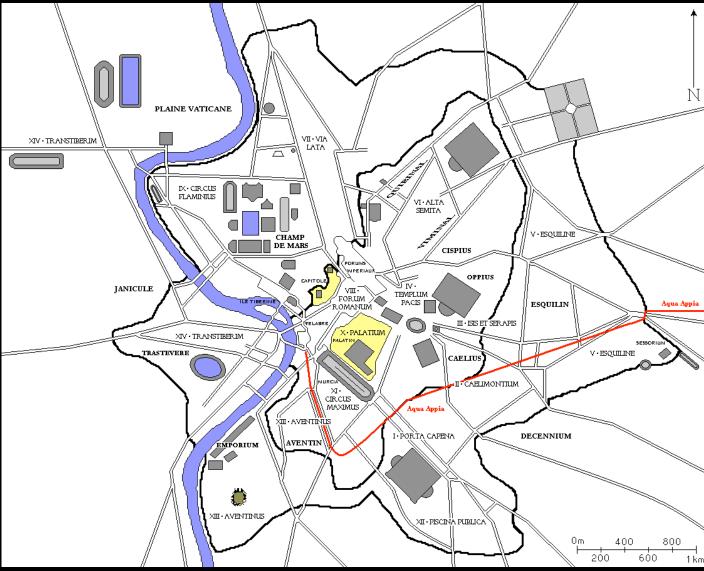


## AQUEDUCT

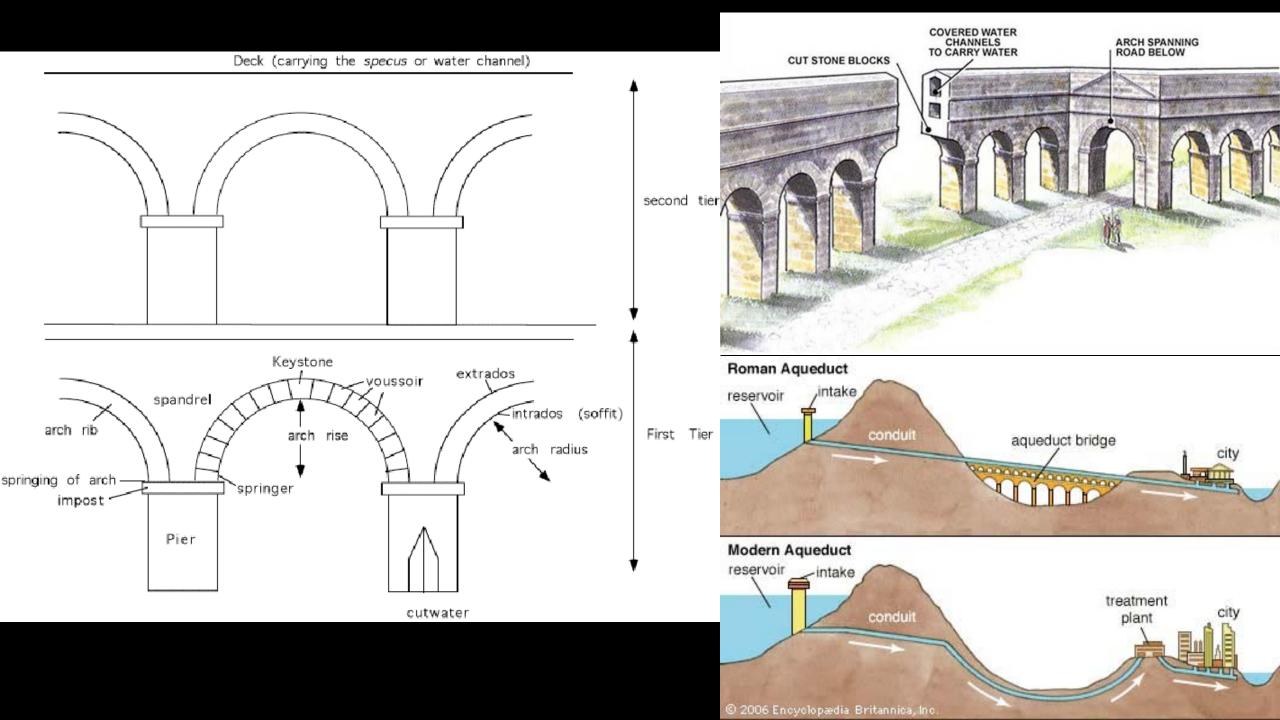
The arches of an elevated section of the Roman provincial Aqueduct of Segovia built in the 1<sup>st</sup> century CE, in modern Spain.



The 11 Aqueducts of Ancient Rome: Aqua Appia, Aqua Anio Vetus, Aqua Marcia, Aqua Tepula, Aqua Julia, Aqua Virgo, Aqua Alsietina, Aqua Claudia, Aqua Anio Novus, Aqua Traiana, Aqua Alexandrina



Aqua Appia, Rome's first aqueduct, 312 BC





### RUINS

Giovanni Battista Piranesi, The Aqueduct of Nero Leading to the Palatine, 1775

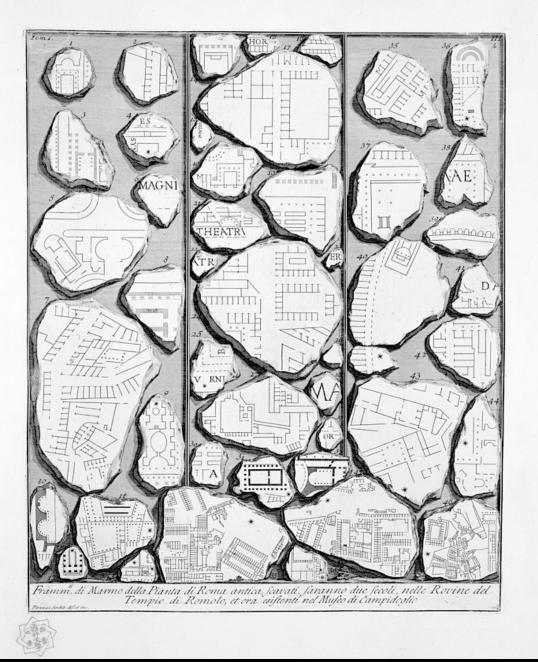
> Etching 17" x 26 3/8"

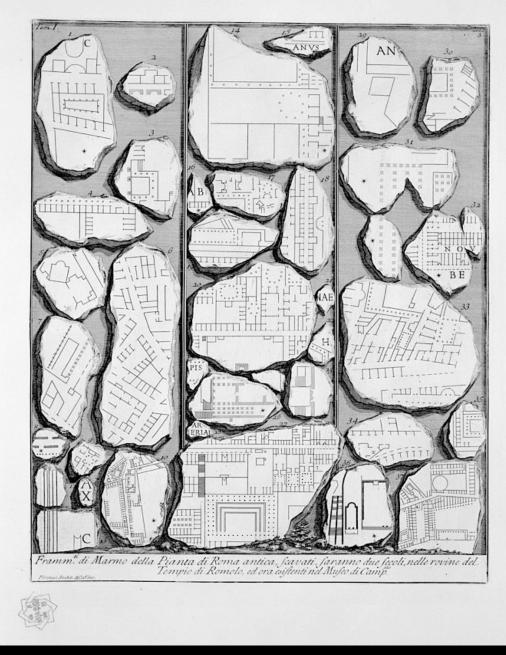


### RUINS

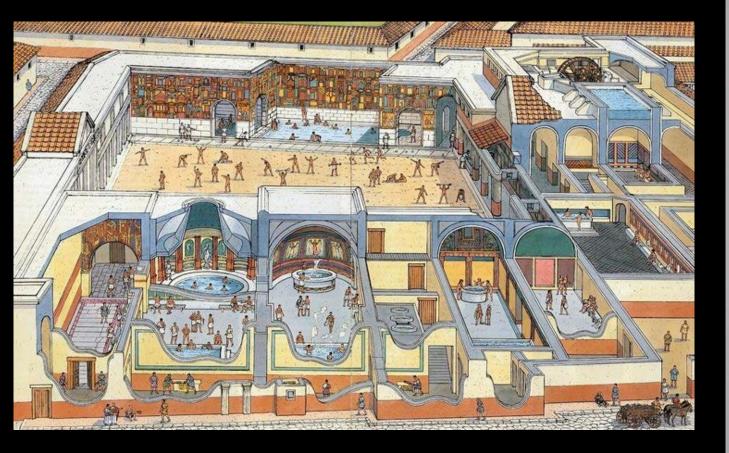
Giovanni Battista Piranesi, Veduti or Views of Rome, c. 1747

> Etching, 17" x 26 3/8"



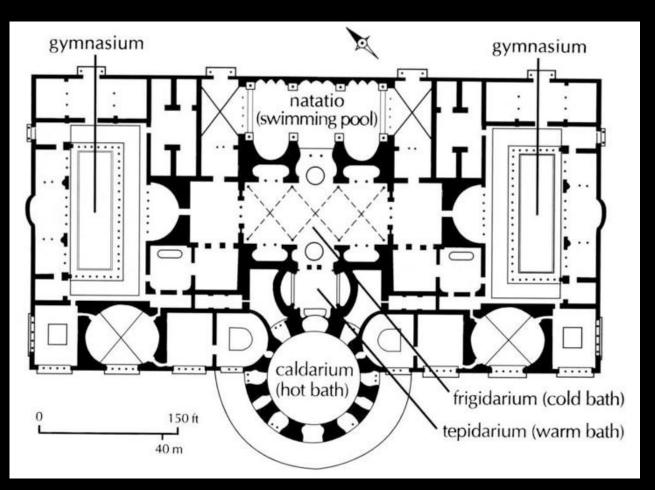


Giovanni Battista Piranesi, Fragments of an Antique Map of Rome, c. 1750





Ancient Roman Baths Also referred to as *Thermae* and *Balneae*  Mosaic bath sign from Sabratha, Libya, showing bathing sandals, three strigils, and the slogan *SALVOM LAVISSE*, "A bath is good for you." A strigil is an instrument with a curved blade used, especially by ancient Greeks and Romans, to scrape sweat and dirt from the skin in a hot-air bath or after exercise; a scraper.



### plan of a Roman bath

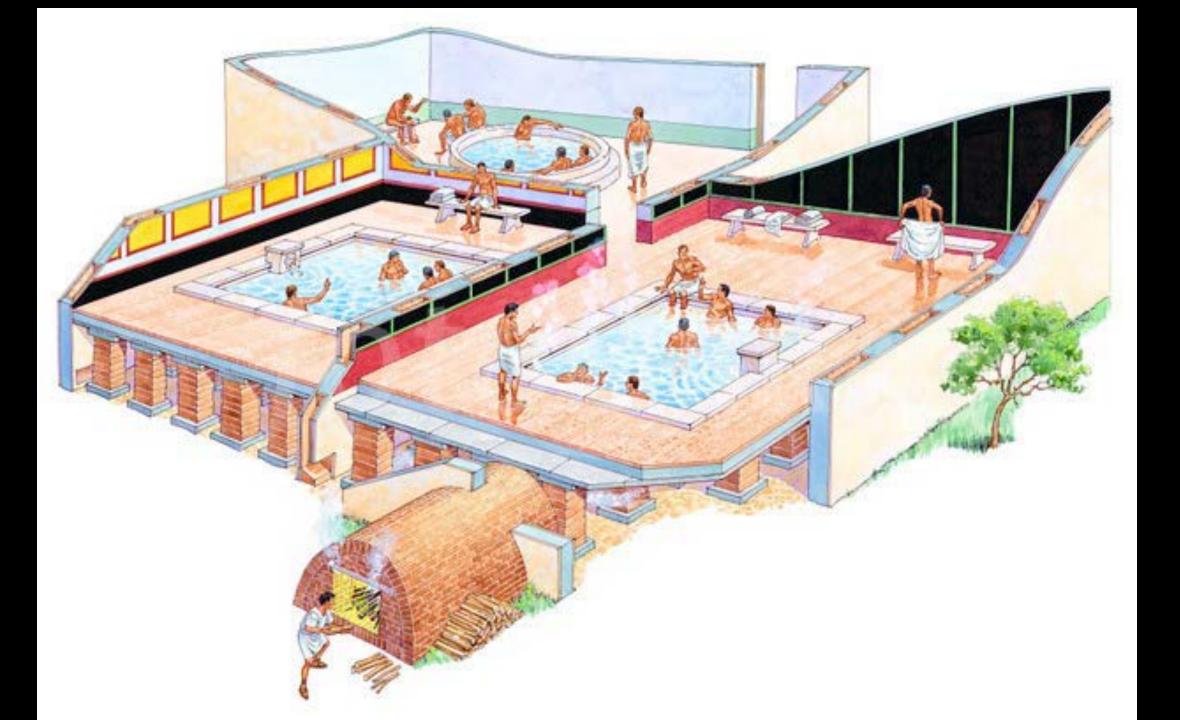


#### **Typical Features:**

apodyterium - changing rooms. palaestrae - exercise rooms. natatio - open-air swimming pool. ephebeum - a place for gymnastic exercises. laconica and sudatoria - superheated dry and wet sweating-rooms. calidarium - hot room, heated and with a hot-water pool and a separate basin on a stand (labrum) tepidarium - warm room, indirectly heated and with a tepid pool.

*frigidarium* - cool room, unheated and with a cold-water basin, often monumental in size and domed, it was the heart of the baths complex.

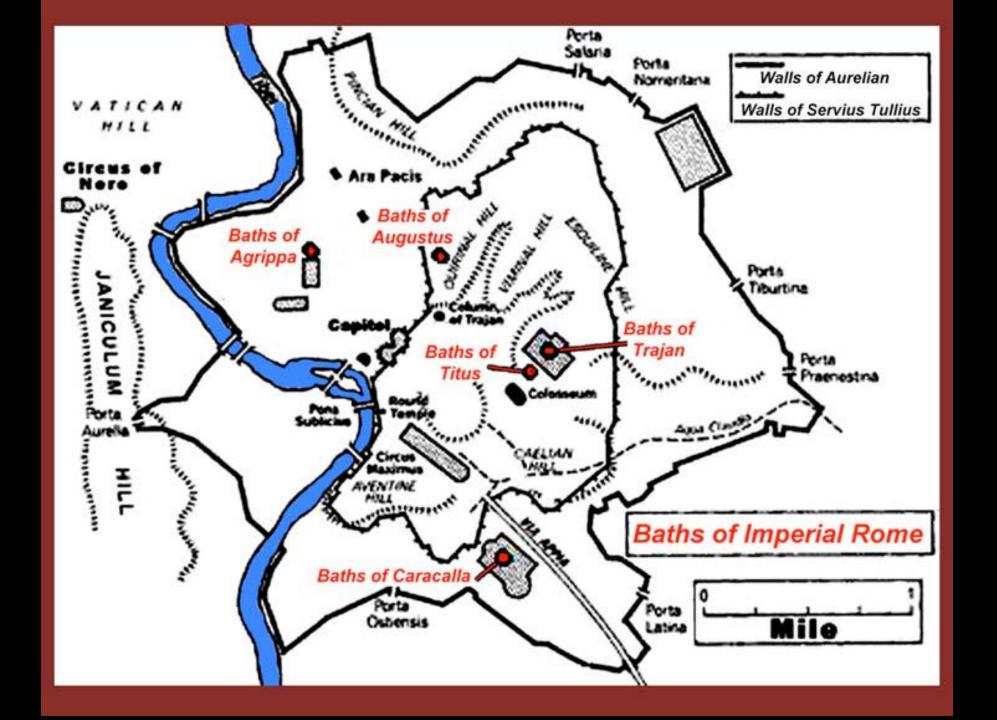
rooms for massage and other health treatments.



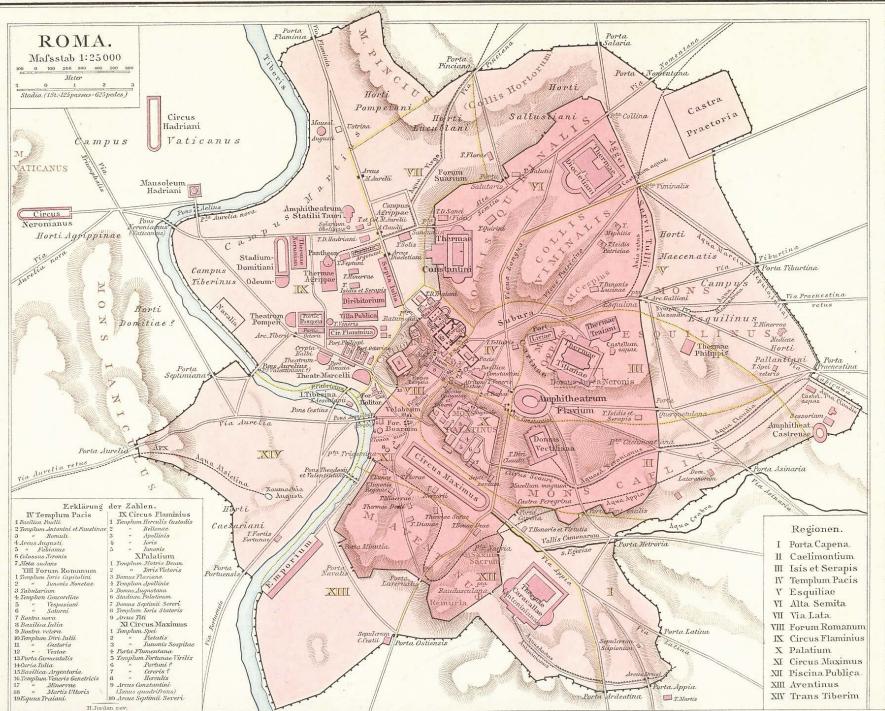


"Chamber of the Ten Maidens" (Sala delle Dieci Ragazze in Italian). Informally called "the bikini girls", the maidens appear in a mosaic artwork which scholars named Coronation of *the Winner*. The young women perform sports including weight-lifting, discus throwing, running and ball-games. A girl in a toga offers a crown and victor's palm frond to "the winner."

Villa Romana del Casale, in Modern Sicily, 325 CE



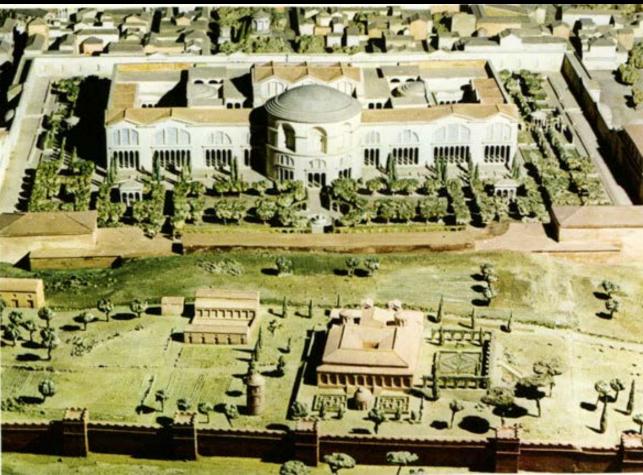




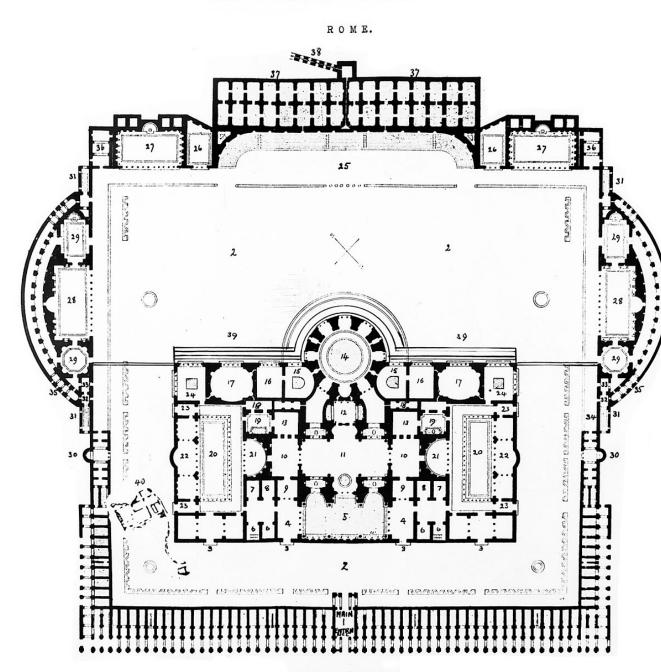
Baths of Caracalla in the Regione XII Piscina Publica, 212-217 CE



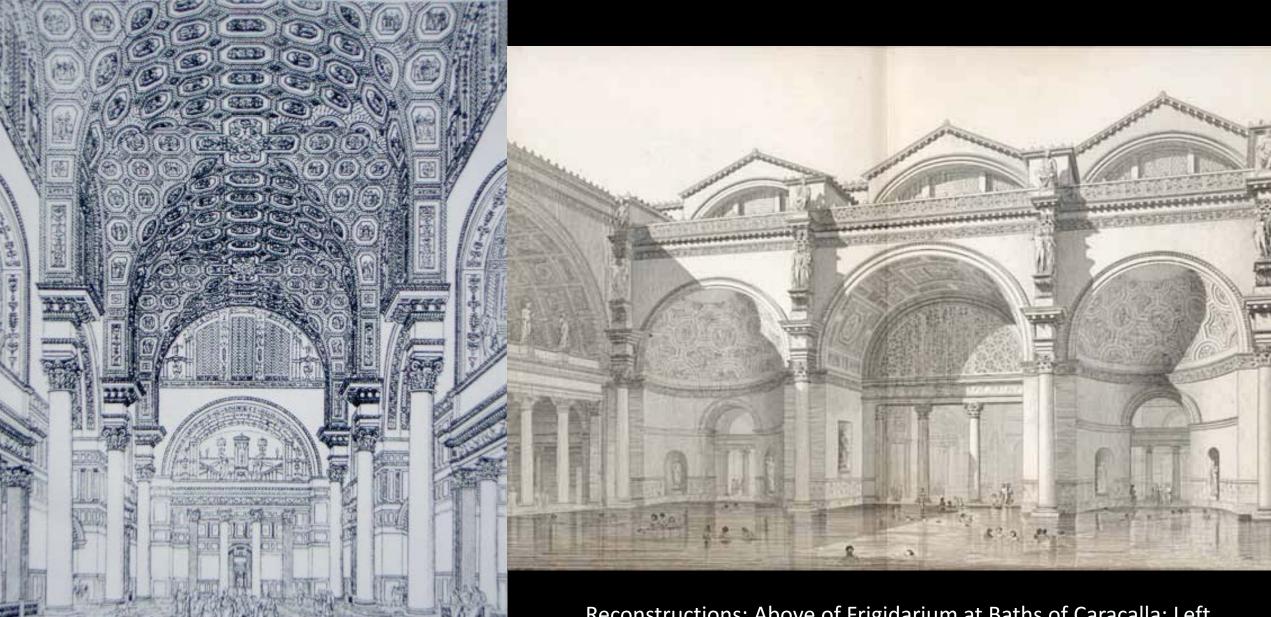
Ruins of Baths of Caracalla



Reconstruction of Baths of Caracalla



- Main Entrance.
  The Great Court.
- 3. Four Entrances.
- 4. Vestibules of the Frigidarium.
- 5. Frigidarium.
- 6. Apodyterium undressing rooms.
- 7. Conisterium sand for wrestlers.
- 8. Electesium ciling room.
- 9. Conversation Halls.
- 10. Halls for wrestlers and spectators.
- Sphaeristerium Grand Hall of Tepidarium.
- 12. 2nd Tepidarium vestibule of Tepidarium.
- 13. Courts for the bath service.
- 14. Calidarium.
- 15. Halls of Transition (Calidarium Tepidarium).
- 16. Halls of Transition (Tepidarium Frigidarium).
- 17. Uncovered halls for athletics.
- 18. Small warm rooms, leading to -
- 19. Sudatorium hall for inducing perspiration.
- 20. Peristyles (Palestrae) wrestlers, gym, etc.
- 21. Exedrae. Philosophers, rhetoricians, scholars.
- 22. Ephebeum for beginners at gym.
- 23. Four secondary entrances.
- 24. Lutron cold baths for those using -
- 25. Xystum open space for running, gym, etc.
- 26. Uncovered halls for use of Xystum.
- 27. Library halls; one for Greek; one Latin.
- 28. Palaestrae uncovered gymnastic games.
- 29. Halls for academic discussion.
- 30. Exedrae Philosophers meeting places.
- 31. Staircase to next floor.
- 32. Vestibule.
- 33. Conisterium sand for wrestlers.
- 34. Mithraeum Temple to God Mithras.
- 35. Porticoes for gymnastic teachers.
- 36. Two staircases.
- 37. Two storied reservoir.
- 38. Large aqueduct.
- 39. Subterranean galleries for summer promenades.
- 40. House of Asinius Pollio.



Reconstructions: Above of Frigidarium at Baths of Caracalla; Left General View ; NOTE: BOLD VOLUMETRIC



NOTE: BOLD VOLUMETRIC





When asked by a foreigner why he bathed once a day, a Roman emperor is said to have replied, "Because I do not have time to bathe twice a day."

Above: Italy, Campania, Bay of Naples, Neapolitan Riviera, floor of tepidarium in Roman central baths, mosaic depicting Triton surrounded by dolphins Far Left: Baths of Caracalla in ruin, Rome; NOTE: BOLD VOLUMETRIC Near Left: Roman Bath Pool With Mosaic - Museum of the Bardo Museum, Tunis





Above: Restored mosaics from the Baths of Caracalla formed the floors of the public libraries in the exedrae on the east and west sides of the baths

Left: Statue of Hercules from Baths of Caracalla



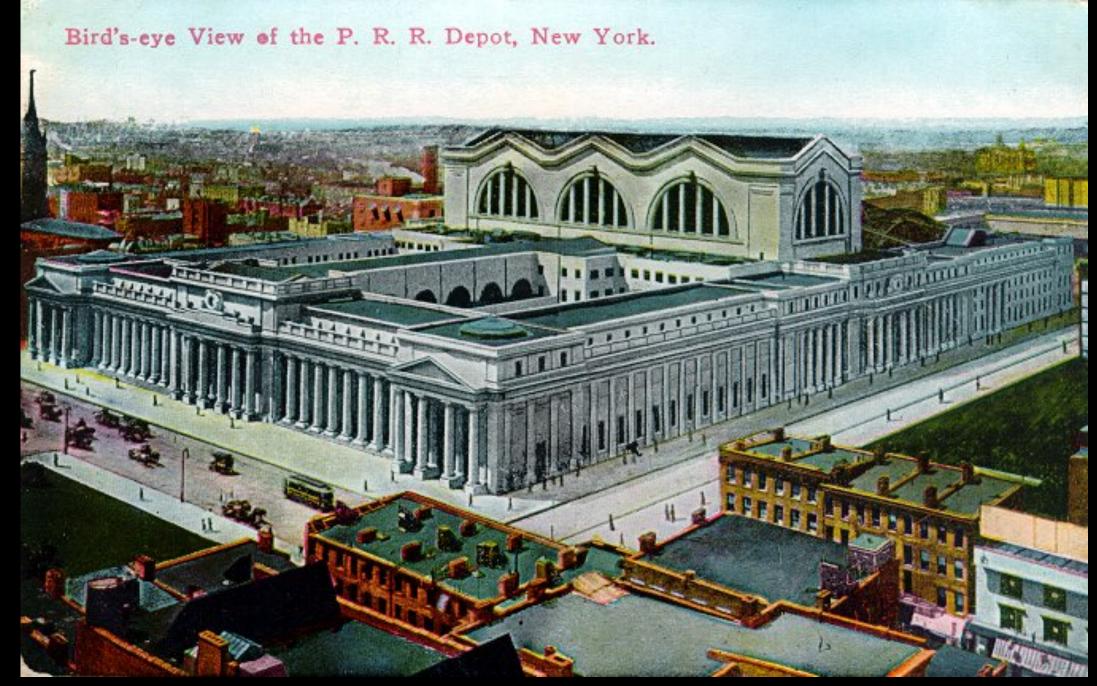


Fresco of the Mithraeum at Marino, Italy, shows the god Mithras slaying a bull

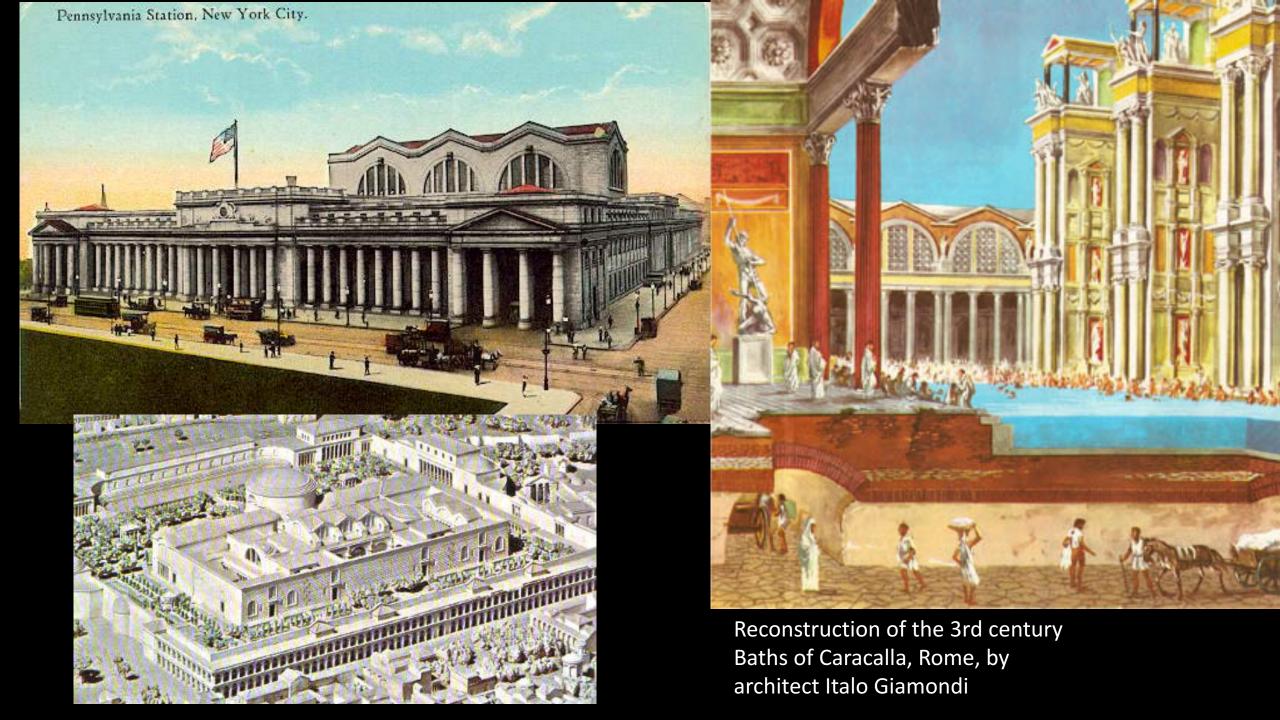


Mithras slaying the bull ca. 140 – 160 A.D. Roman

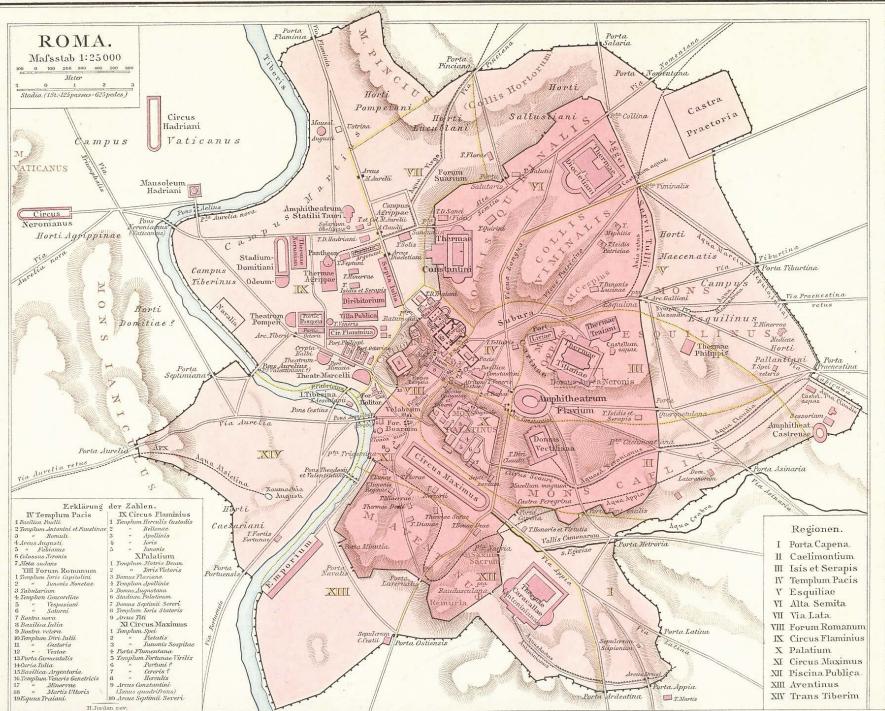
The underground network of passages beneath the Baths of Caracalla and a Mithraeum. A **Mithraeum** is a temple erected in classical antiquity by the worshippers of Mithras.



McKim, Mead and White, Penn Station, New York, 1910 (demolished 1963)







Baths of Diocletian in the Regione VI Alta Semita, 298-306



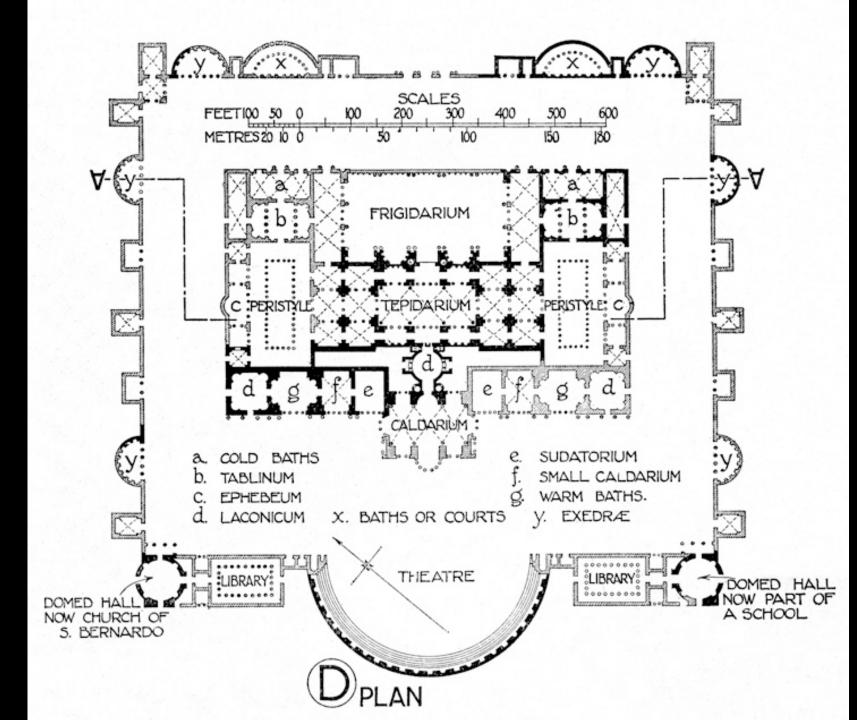
Reconstructions of the Baths of Diocletian, 298-306



Above: Lodovico Carracci, St. Sebastian Thrown into the Cloaca Maxima, 1612 Right: Andrea Mantegna, Martyrdom of St. Sebastian, 1480

St. Sebastian is commonly depicted in art and literature tied to a post or tree and shot with arrows





*apodyterium* - changing rooms. *palaestrae* - exercise rooms. *notatio* - open-air swimming pool. *ephebeum* - a place for gymnastic exercises.

*laconica* and *sudatoria* superheated dry and wet sweatingrooms.

*calidarium* - hot room, heated and with a hot-water pool and a separate basin on a stand (*labrum*) *tepidarium* - warm room, indirectly heated and with a tepid pool. *frigidarium* - cool room, unheated and with a cold-water basin, often monumental in size and domed, it was the heart of the baths complex. rooms for massage and other health treatments.

Plan of the Baths of Diocletian





Basilica of Santa Maria degli Angeli e dei Martiri in Rome – derived from the frigidarium, whose three soaring transept vaults provide one of the few glimpses of the original splendor of Roman building

# thermal window





Reconstructed interior of Baths of Diocletian

Interior of Church



# Cats of Rome



http://www.romancats.com/torreargentina/en/introduction.php