

Readings

Pages 78- 85
Great Architecture of the World

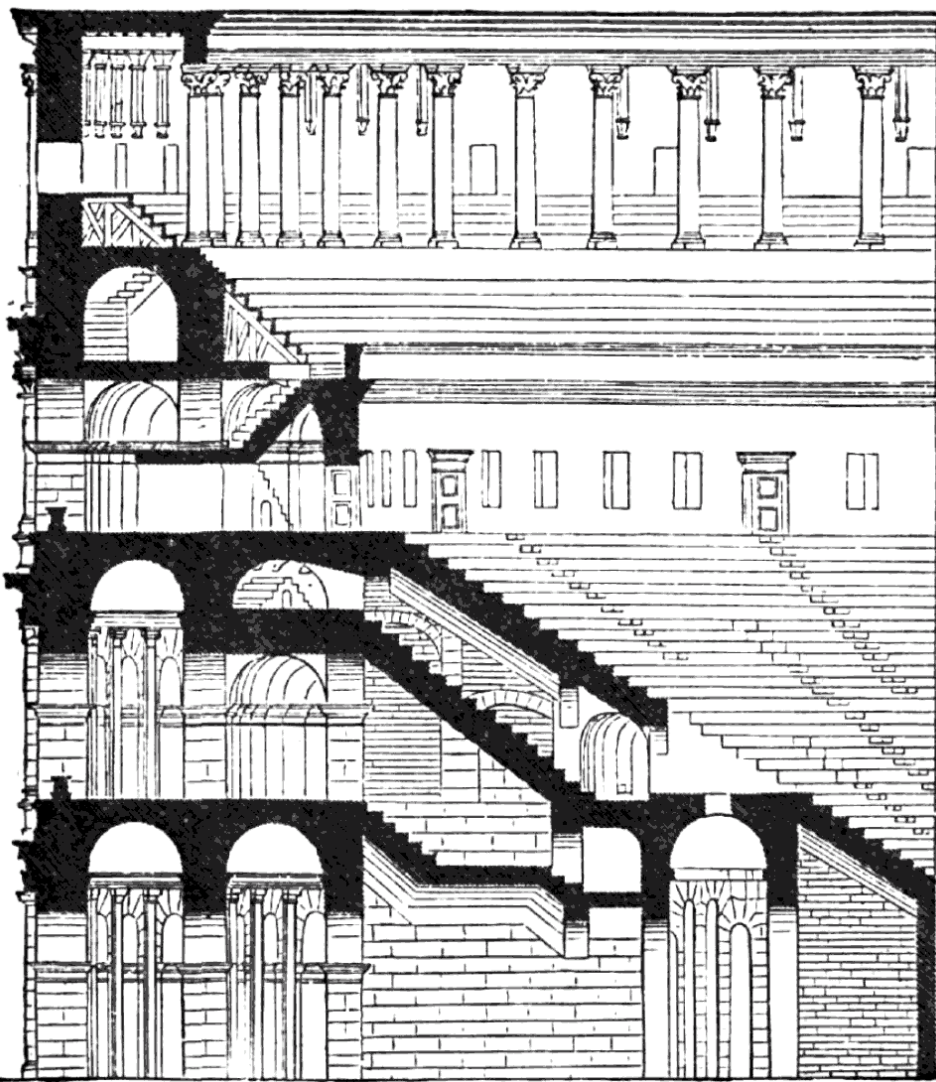
Colosseum (Flavian Amphitheater): 80CE (AD)

- Begun by Vespasian on Nero's Lake of his Golden House
- 2 complete passageways encircling it with ramps from seating areas – allowed for handling of large audiences



Colosseum (Flavian Amphitheater): 80CE (AD)

- Used as late as 523 CE (AD)



Temples:

Often for 3 Gods – individual chambers (Cellas)

Divine accommodations were pushed back on high podium

Viewed from only one viewpoint – the front

Ideal position was at the end of the open space / axis

Flat, frontal view

1st Century Augustus and Tiberius rebuilt most of the temples in Rome – Retained base, but changed the exterior to meet current Hellenistic and Roman style

Pantheon: 25 BCE -213 CE (AD)

One of the last great Pagan Temples

Portico: Corinthian granite columns by Agrippa (25 BCE)

120-124AD Hadrian built the rotunda, with an oculus at the highest point, an opening through which the sun shines





Pantheon: 25 BCE -213 CE

142' spherical rotunda with a 30' oculus,
height of dome equals diameter of the floor plan
(in theory could hold a sphere).

Cofferred ceiling: once embellished with stucco,
was introduced to reduce weight.

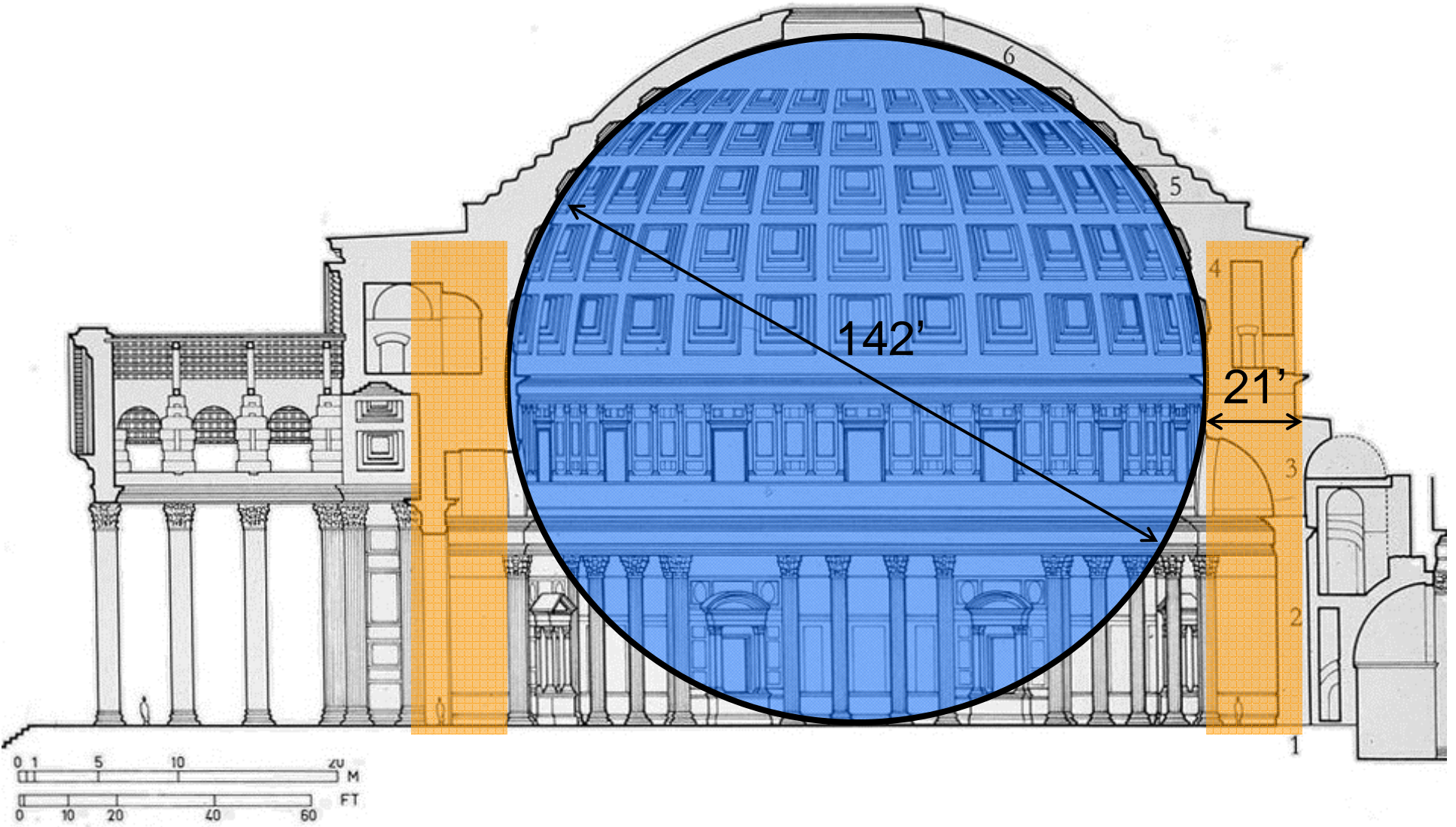


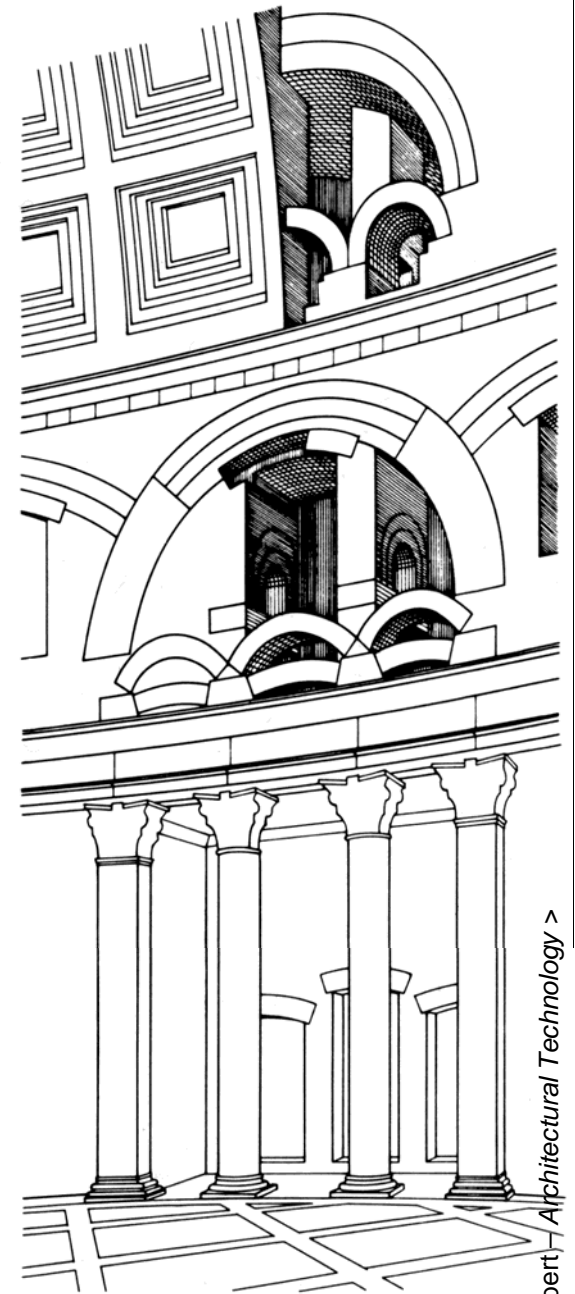
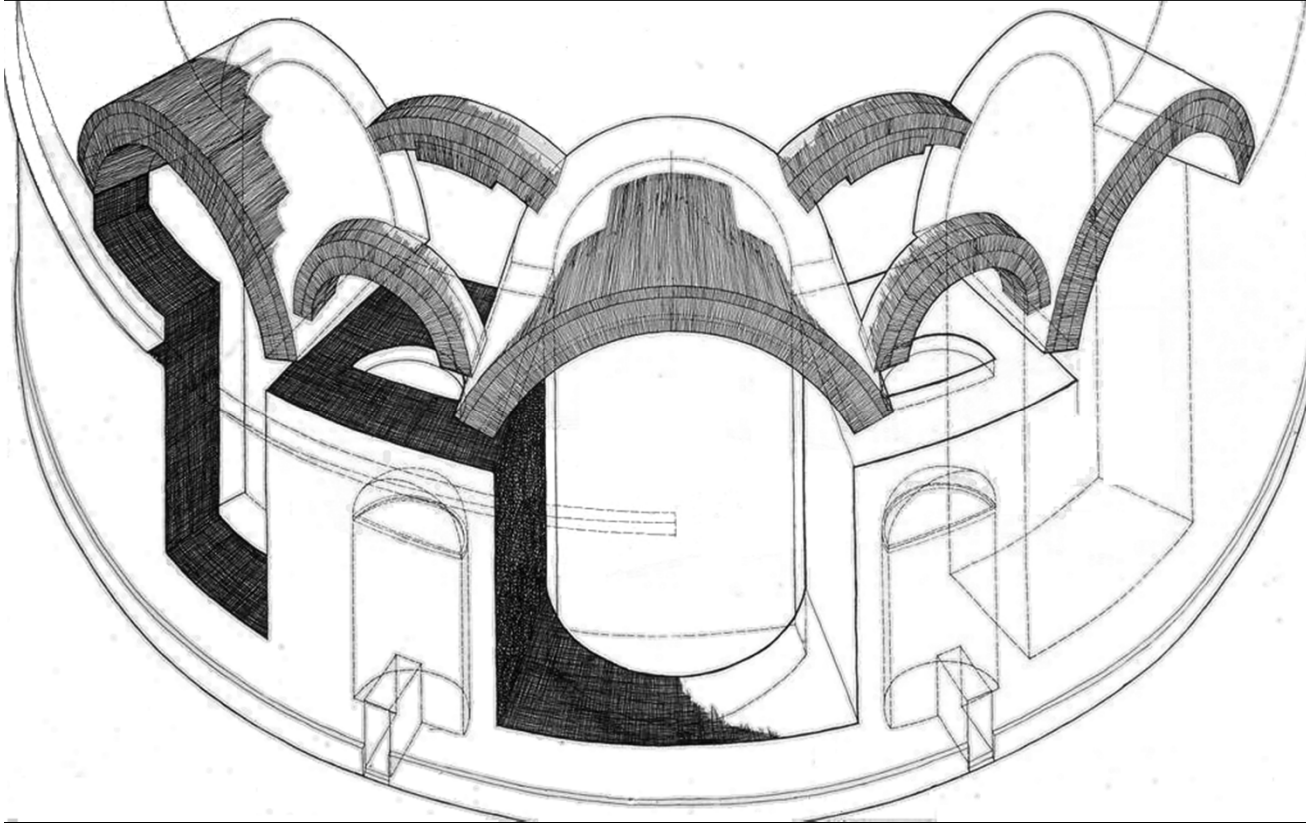


By féileacán
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By irene
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3.37 Pantheon: relieving arches in the wall (MacDonald).

Pantheon:

25 BCE - 213 CE

Built with 8 great recesses
7 for major gods
1 for the entrance

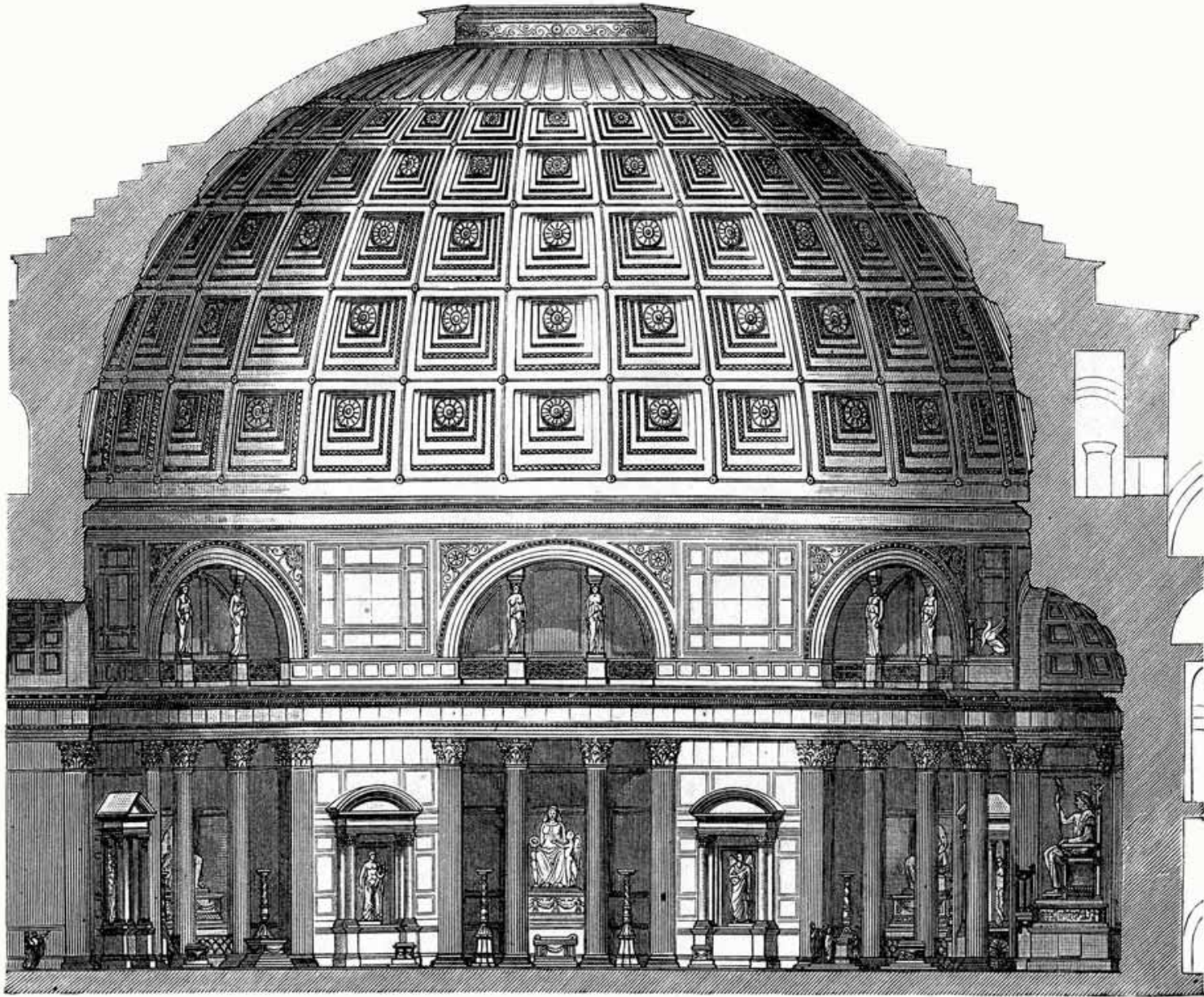


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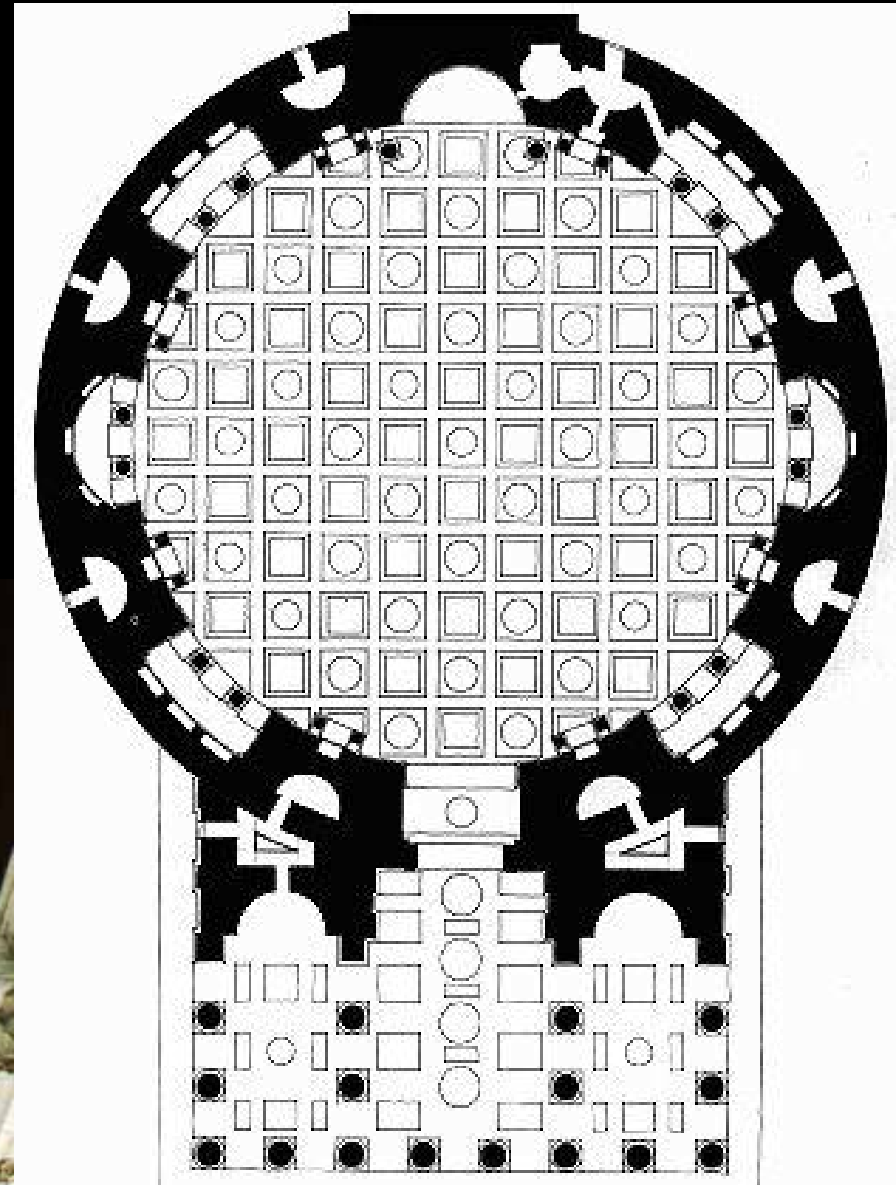
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ARTIFICIUM ET DOCTRINA

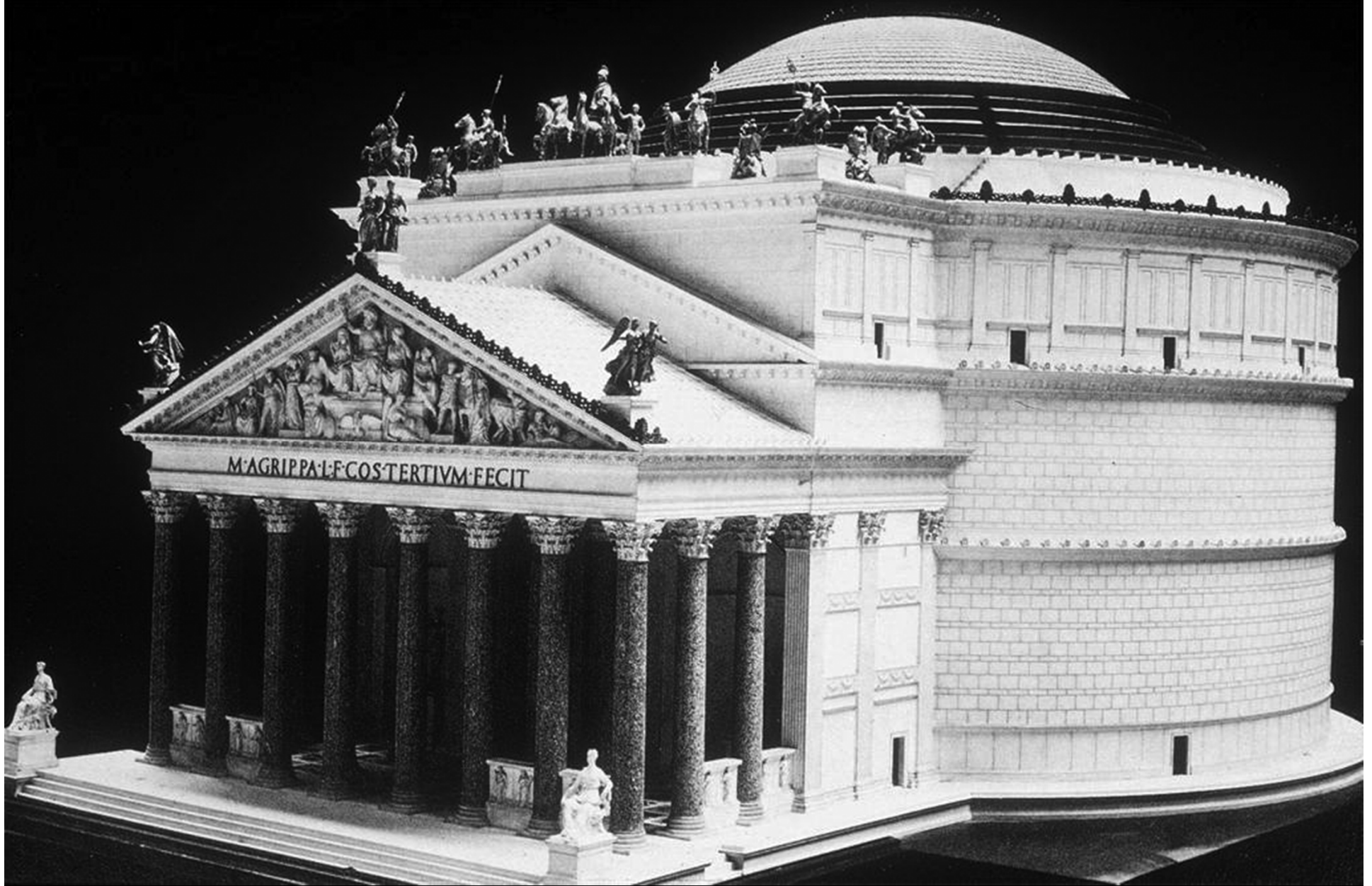


14. Section of the Pantheon. Original disposition. (According to Adler.)

Pantheon: 25 BCE -213 CE: Its monumental size is unparalleled by any other masonry structure up to now



Pantheon: 25 BCE -213 CE



Welcome to architecture 1121- **HISTORY OF ARCHITECTURAL TECHNOLOGY**
Class 6 - Early Christian, Byzantine and Carolingian Architecture.



Byzantine mosaic
Mausoleum of Galla Placidia, Ravenna
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Last years of the Roman Empire

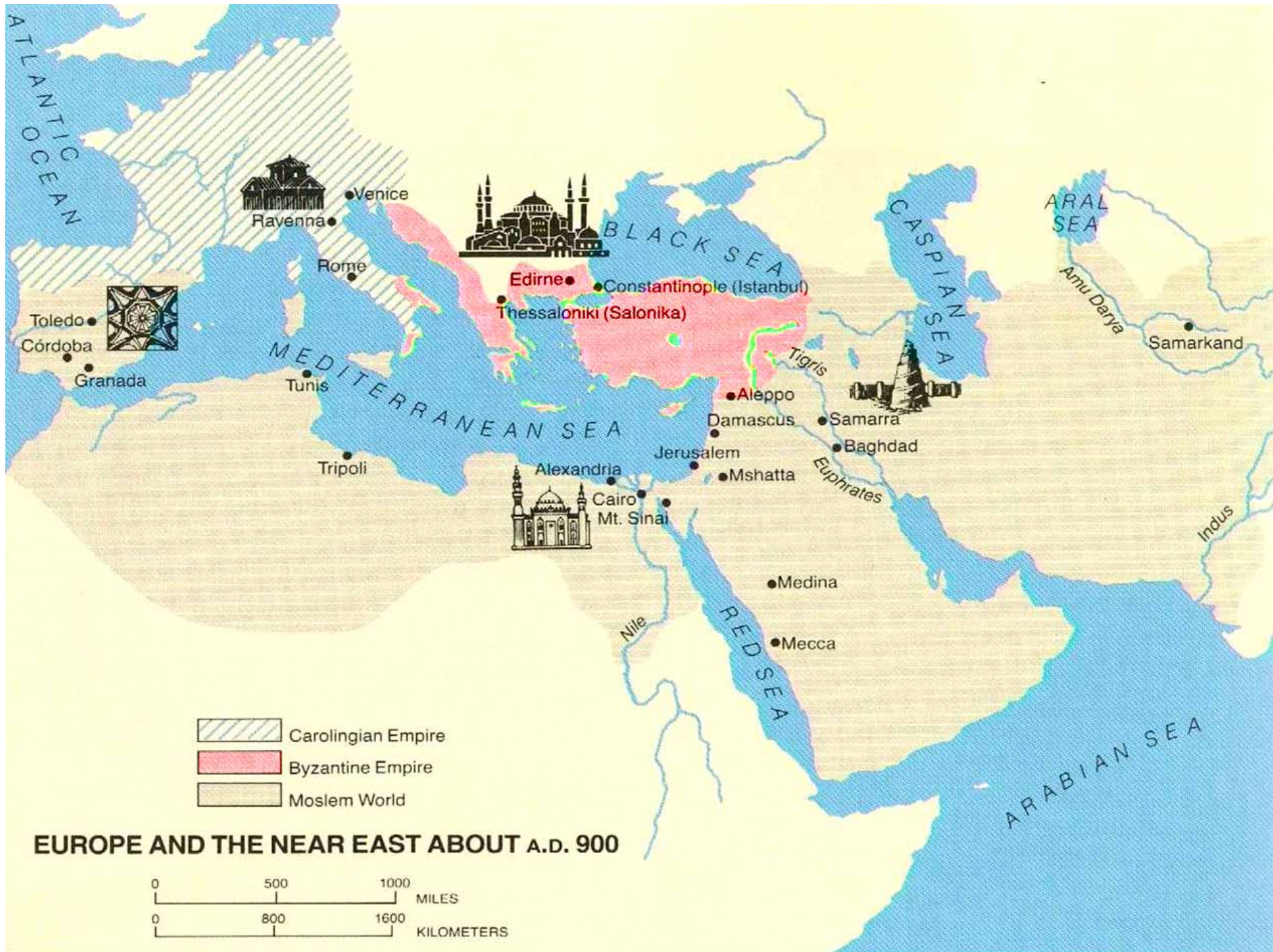
395 CE Roman Empire Divided

East in Constantinople, West in Rome

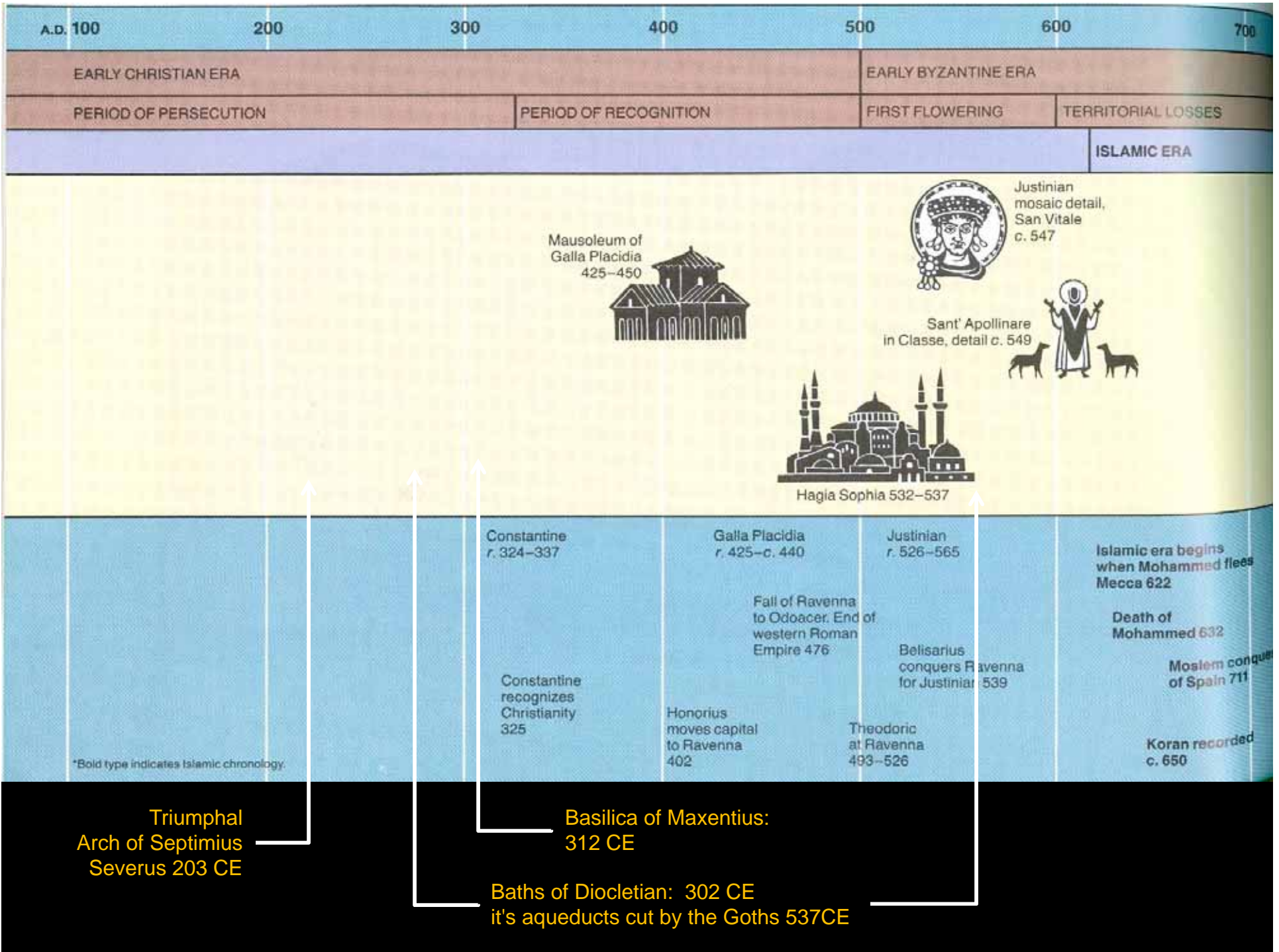
402 CE (AD) Moved capital to Ravenna

476 CE (AD) Western Roman Empire fell to the Ostrogoth

493-553 Ostrogothic Kingdom



EUROPE AND THE NEAR EAST ABOUT A.D. 900



Early Christian Architecture: from the collapse of the Roman Empire to the rise of the great monasteries and Gothic cathedrals

Middle Ages 500 – 1420 CE (AD)

Dark Ages were 500-800CE(AD) –many invasions and warfare

313 CE (AD) Emperor of Constantine adopted Christianity

330 CE (AD) moved Capital to Constantinople (=Istanbul)

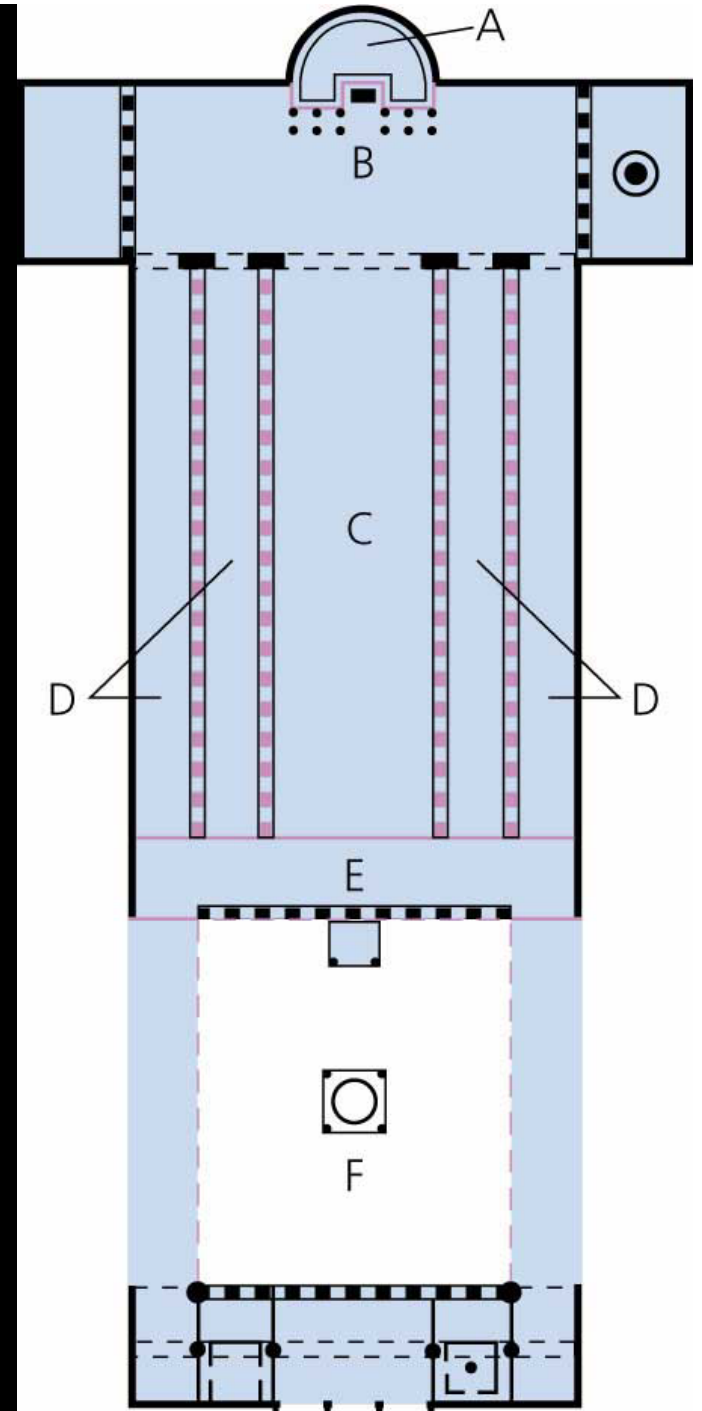


Church Building began

There were two types:

I. Basilica: A Christian church building having central nave with a semicircular apse at one or both ends and two side aisles formed by rows of columns, a narthex, and a clerestory.

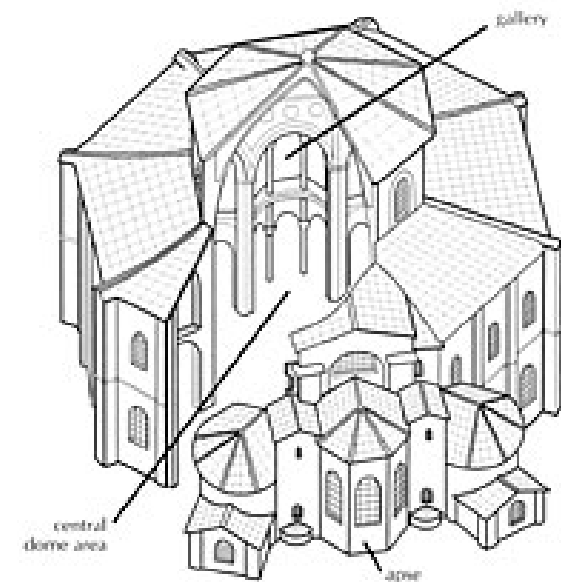
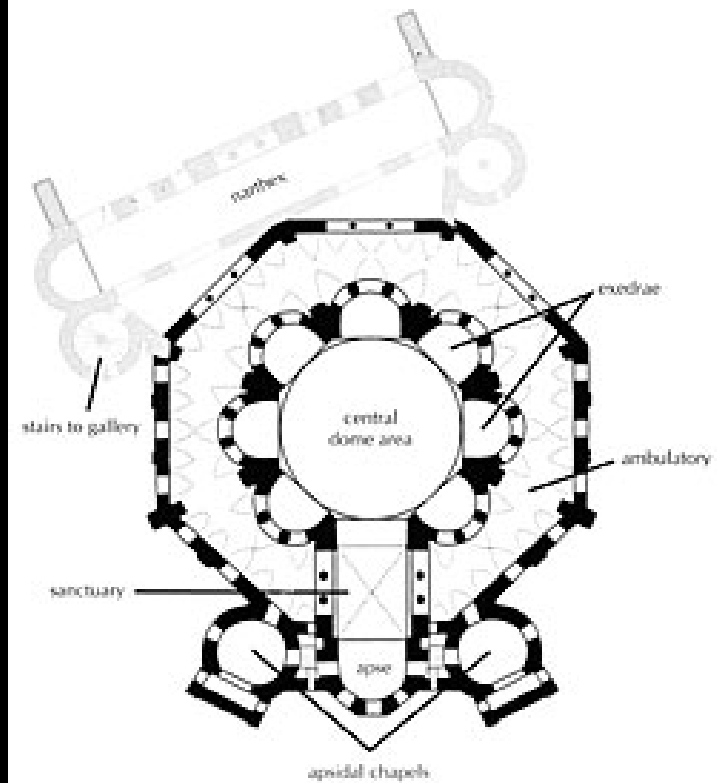
- A. Apse – semicircular termination
- B. Transept – projecting arm
- C. Nave – central space
- D. Aisles
- E. Narthex - vestibule
- F. Atrium - courtyard



Church Building began
There were two types:

II. Circular or Octagonal: A center space covered by a dome, surrounded by an ambulatory with clerestory lighting.

Ambulatory- continuous aisle



Church Buildings

East preferred the Circular or Octagonal: more mystical with a pure form – the circle and dome; also see the Greek cross plan with four equal arms, which could be inscribed in a square.

West preferred the Basilica, as they focused more on congregational worship, cruciform shape symbolizing the cross, with a longer central axis.

Byzantine 330 – 1453 CE (AD)

Mostly Churches

Plan – Cross in a square capped with domes

Support - Pendentives and piers

Décor – Lavish inside (mosaics), plain outside

Effect – Mysterious

Inspiration – Heavens

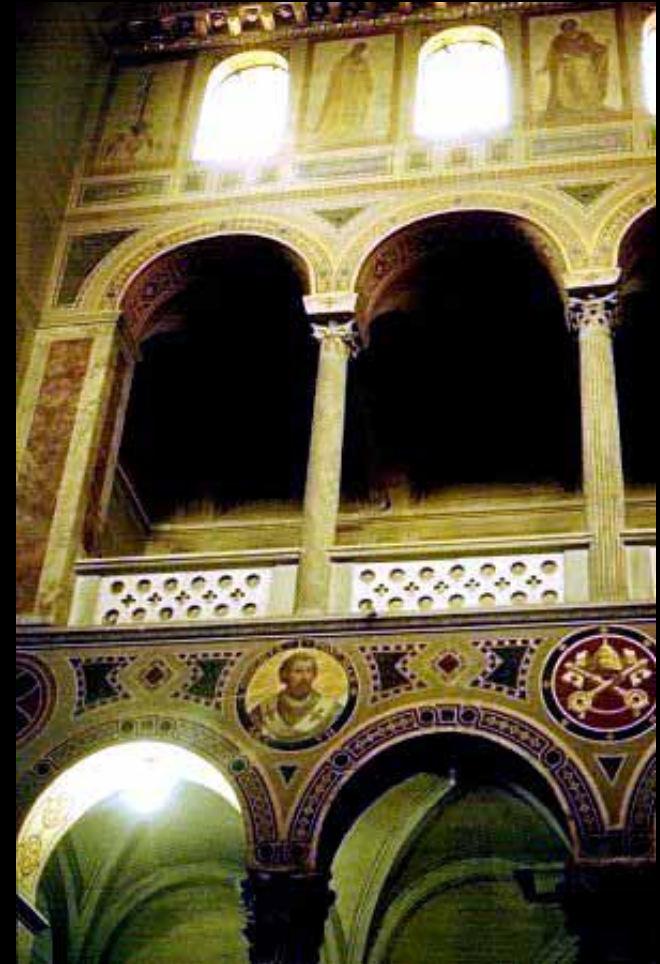
Goal – arouse emotion and transport

Rome

Christianity starts early with followers in 1st Century

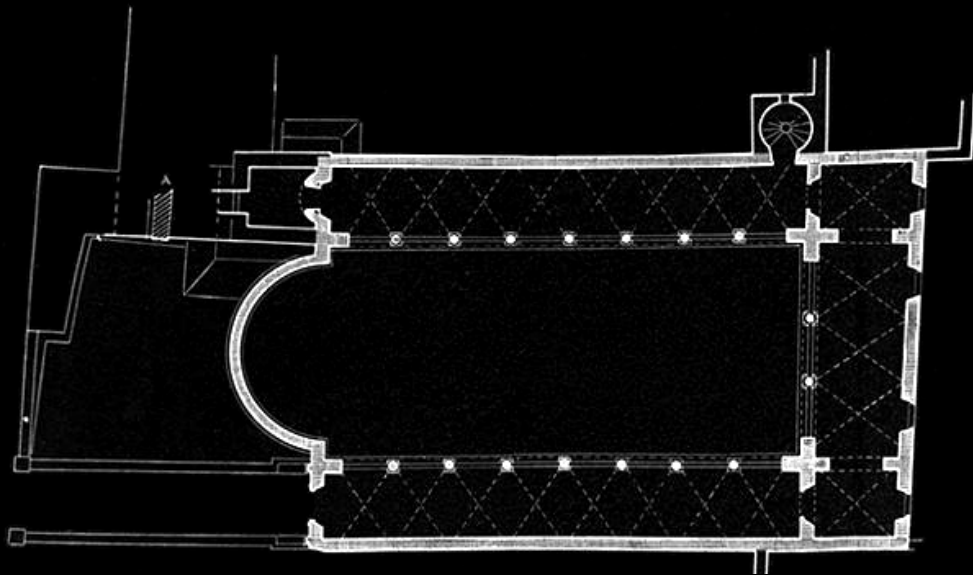






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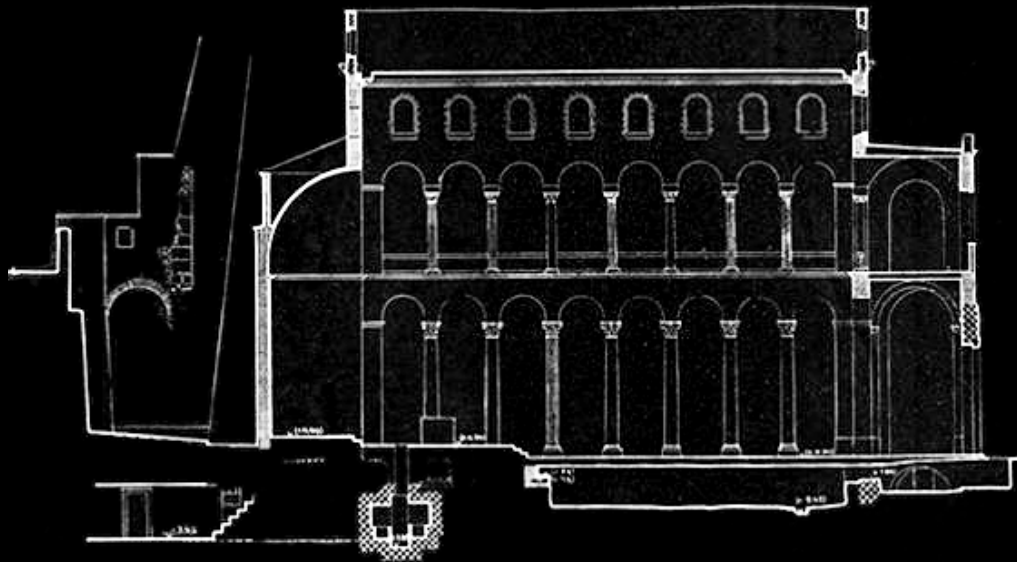
Sant' Agnese Fuori 630 CE (AD) Basilica with columns supporting arches along the aisles

1. GROUNDPLAN GALLERIES

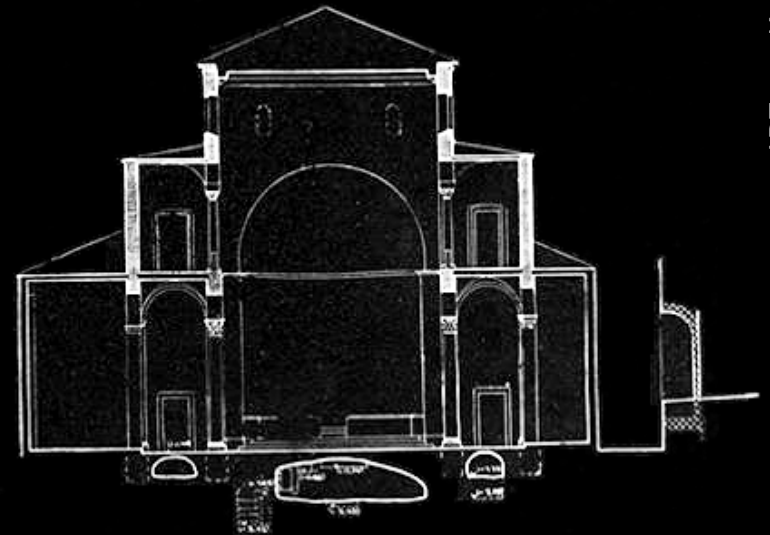


-  Roman tufblocks (A)
-  Opus irregulare and brickwork IV cent. (system B)
-  Opus irregulare and opus mixtum VII cent. (system C)
-  Medieval brickwork

2. LONGITUDINAL SECTION



3. TRANSVERSAL SECTION



GRAVINGS P. MARK

Sant' Agnese Fuori 630 CE (AD) Basilica with columns supporting arches along the aisles

Rome



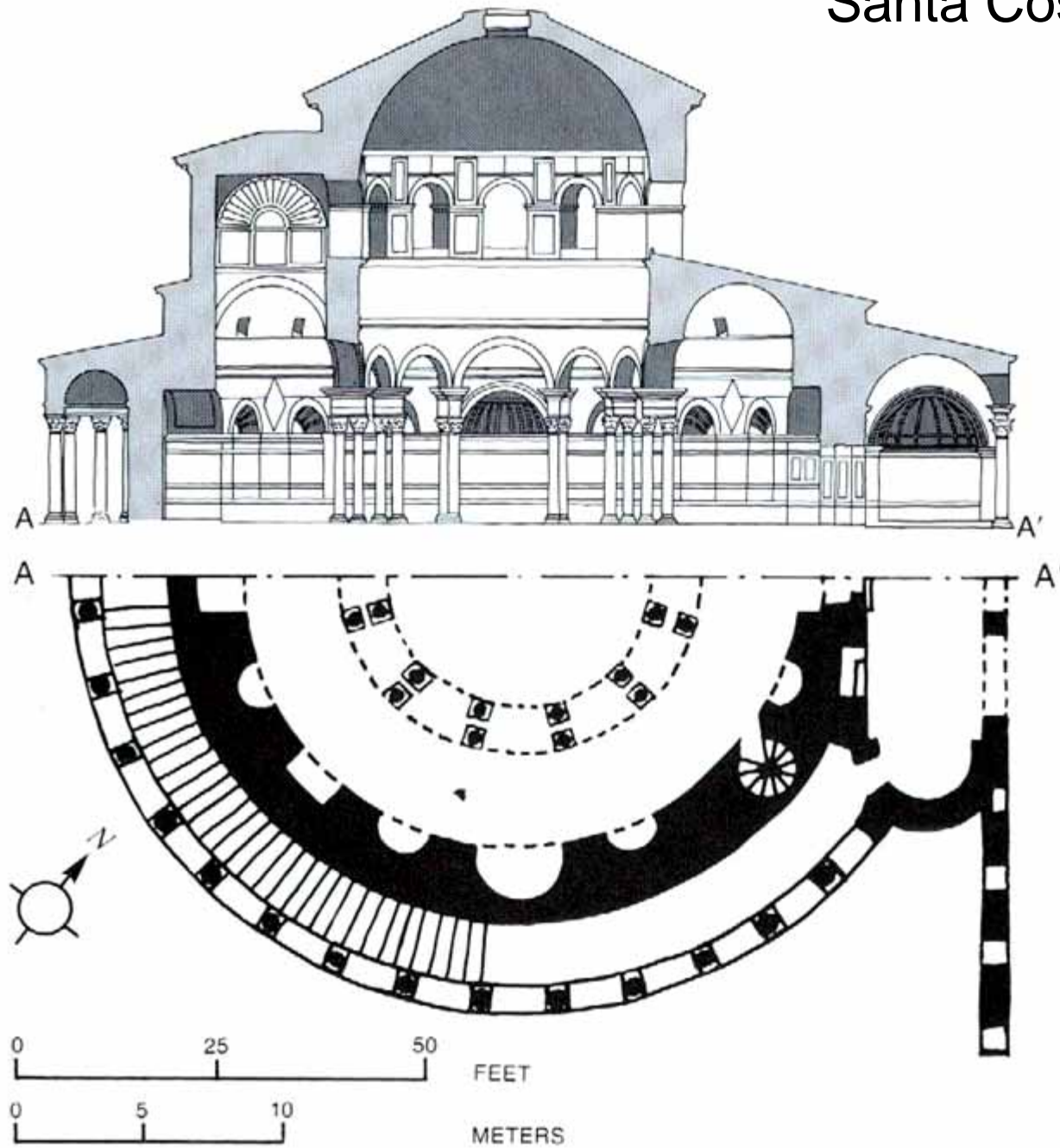
Santo Stefano Rotondo: 468 CE (AD) , diameter is 210',
huge nave encircled by ionic columns, 22 clerestory windows

Rome

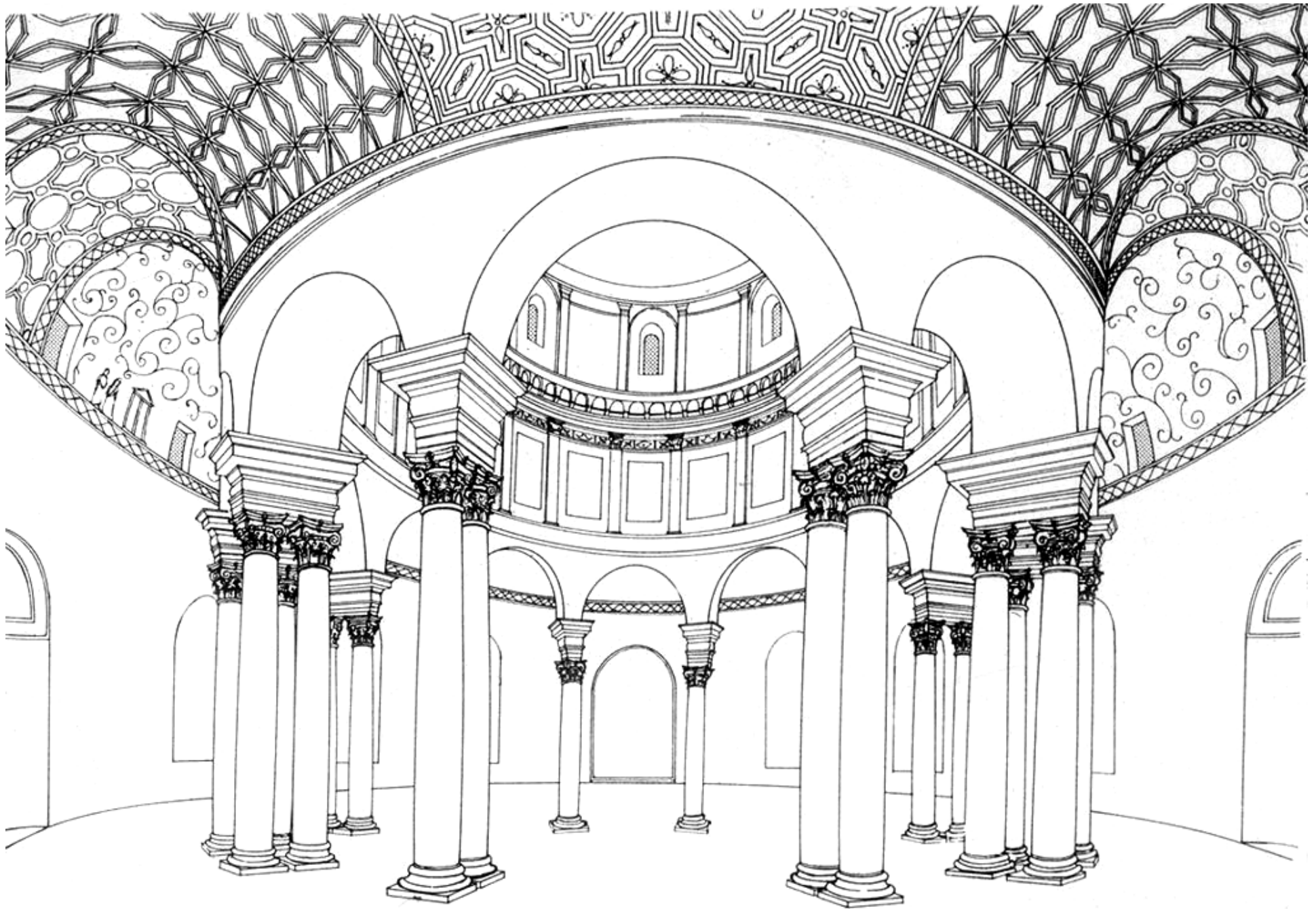


Santa Costanza 330 CE, Circular church, domed brick roof, tomb for Constantine's daughter

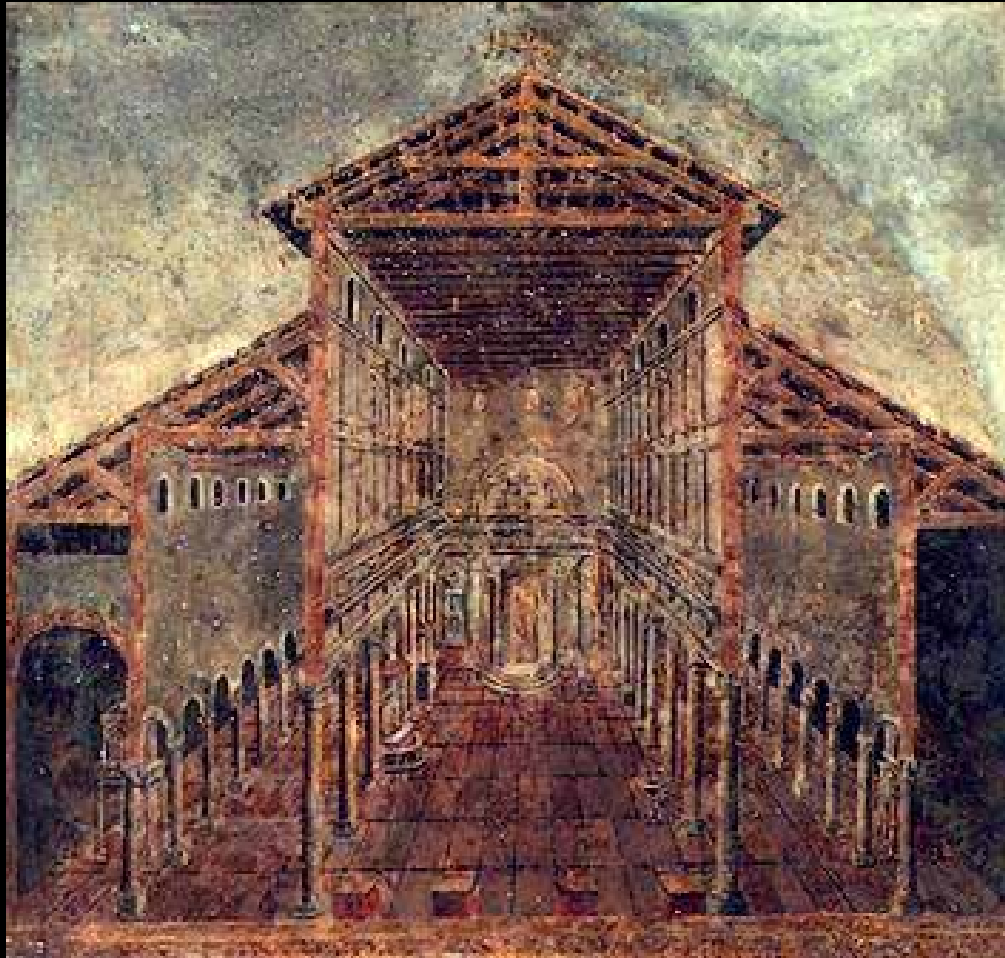
Santa Costanza 330 CE



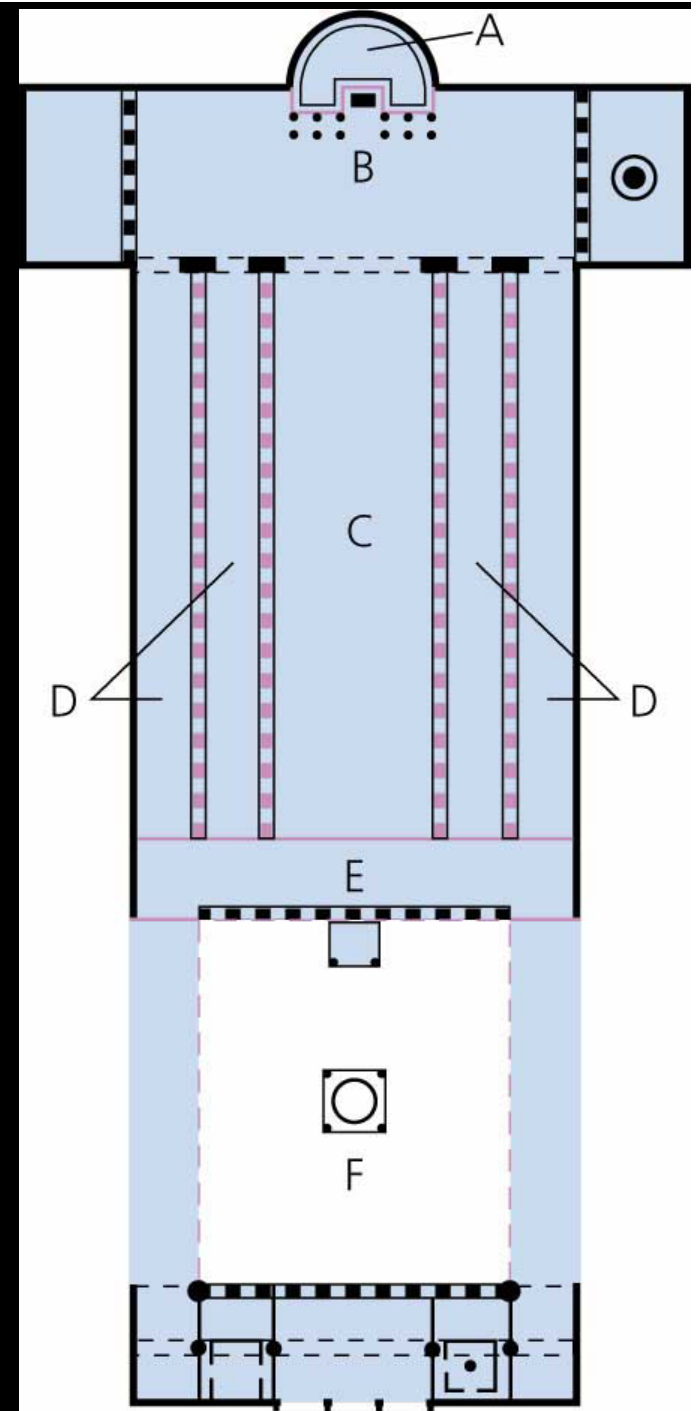
Santa Costanza 330 CE



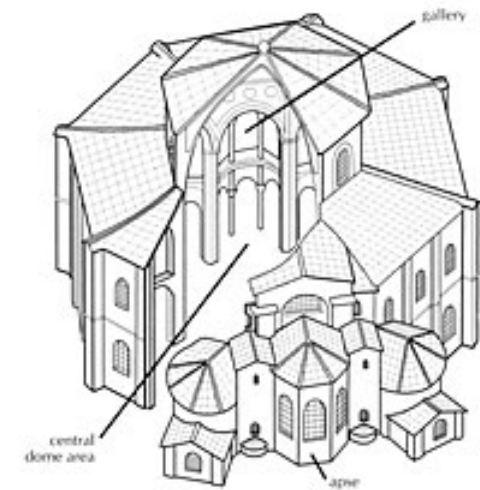
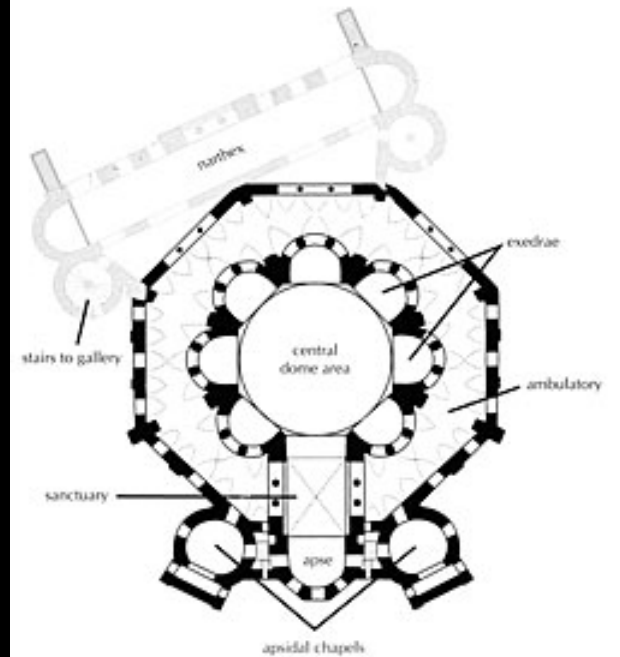
Rome



Old St. Peters 326CE – 200' long nave,
timber roof, rows of closely spaced
columns

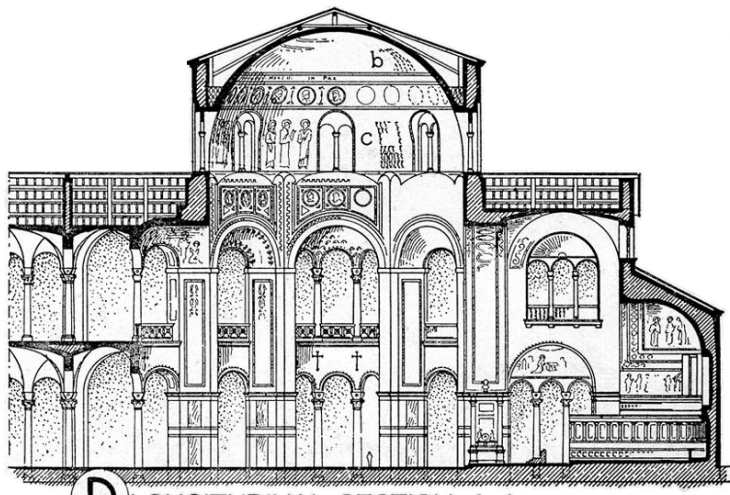


Ravenna City of Mosaics

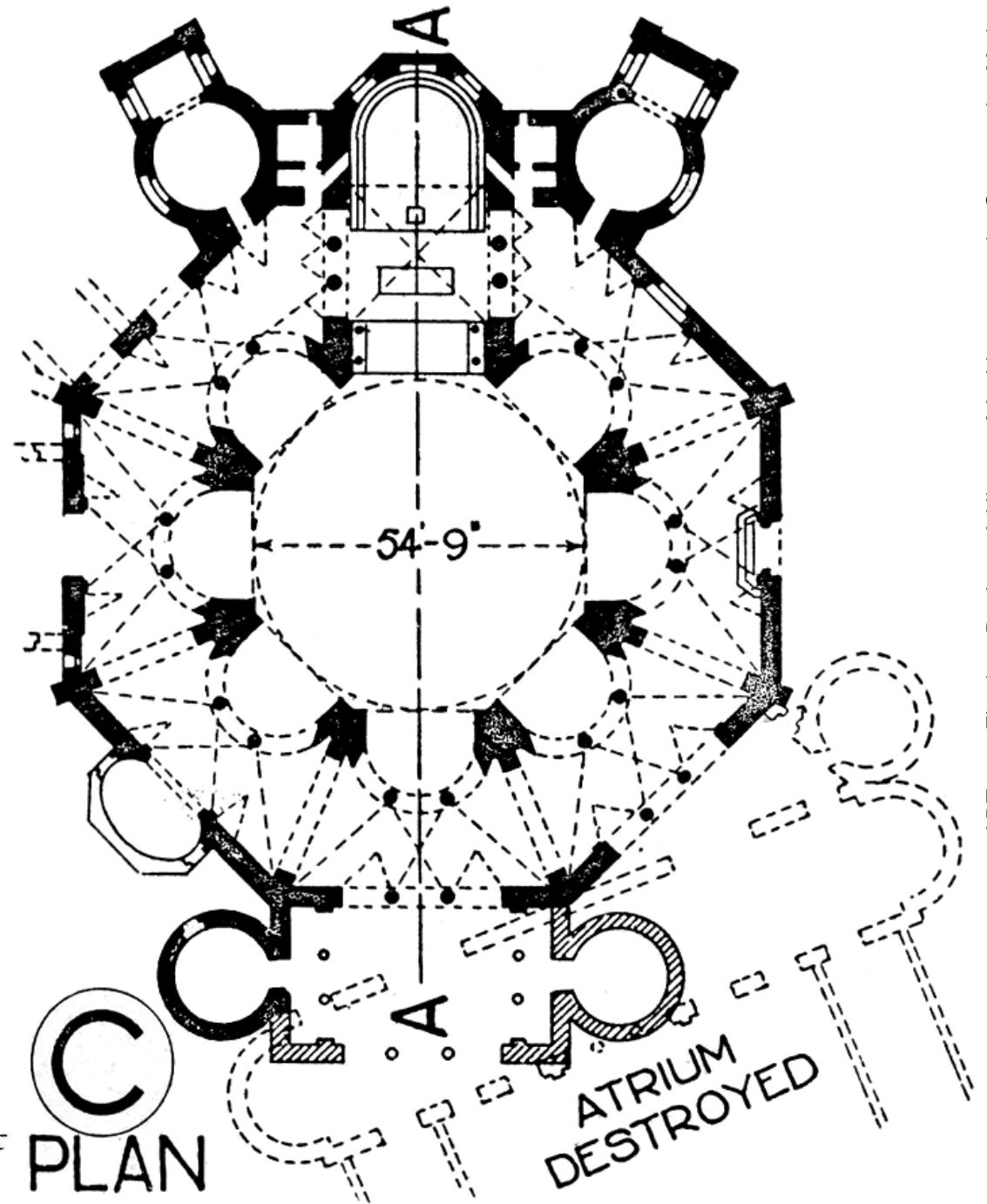


San Vitale 526-547 CE. Two concentric octagonal domes made of clay pots fitted into one another, covered w/timber roof and tiled

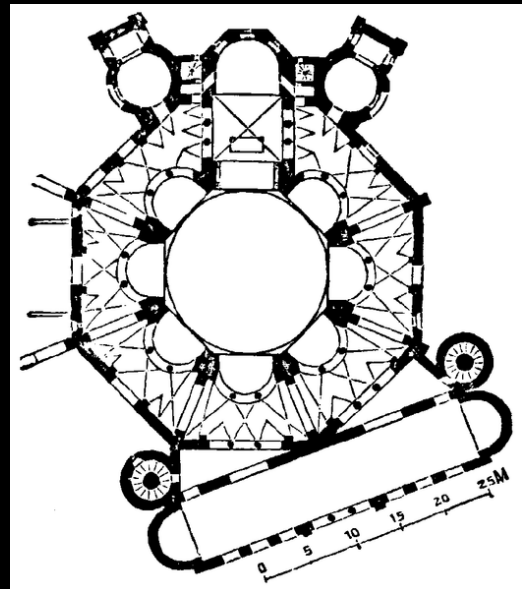
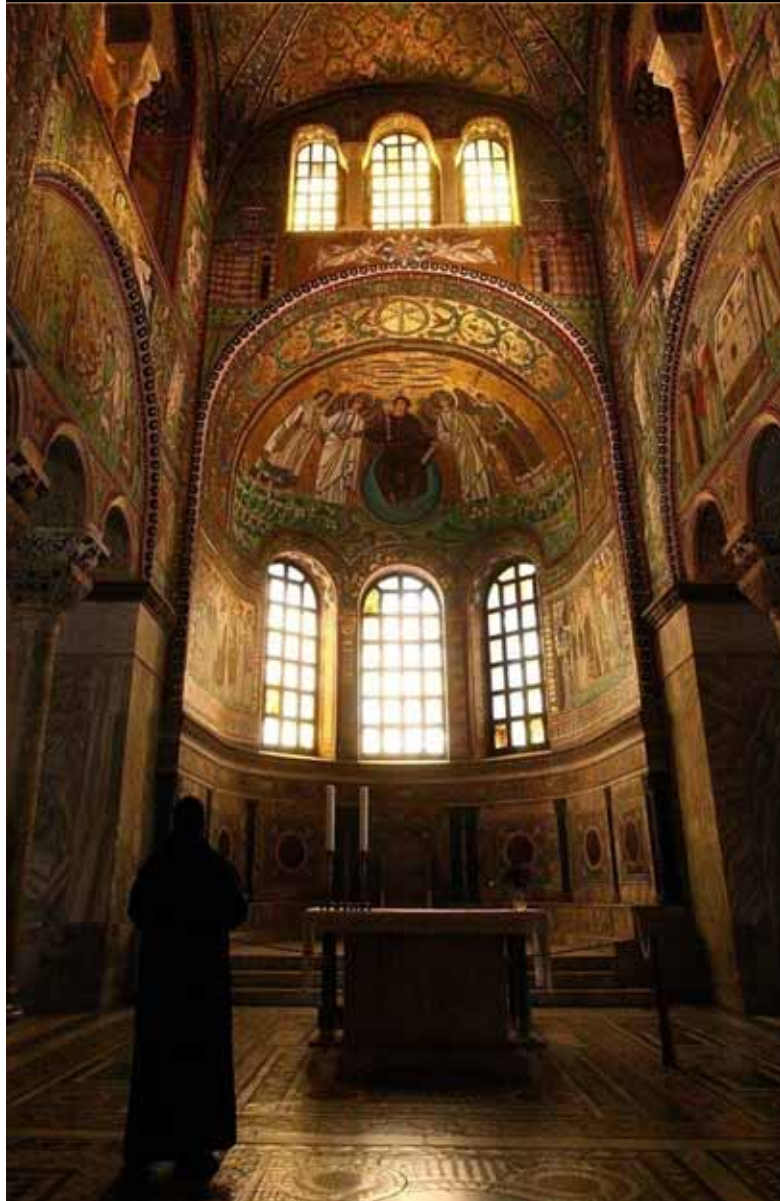
San Vitale 526-547 CE



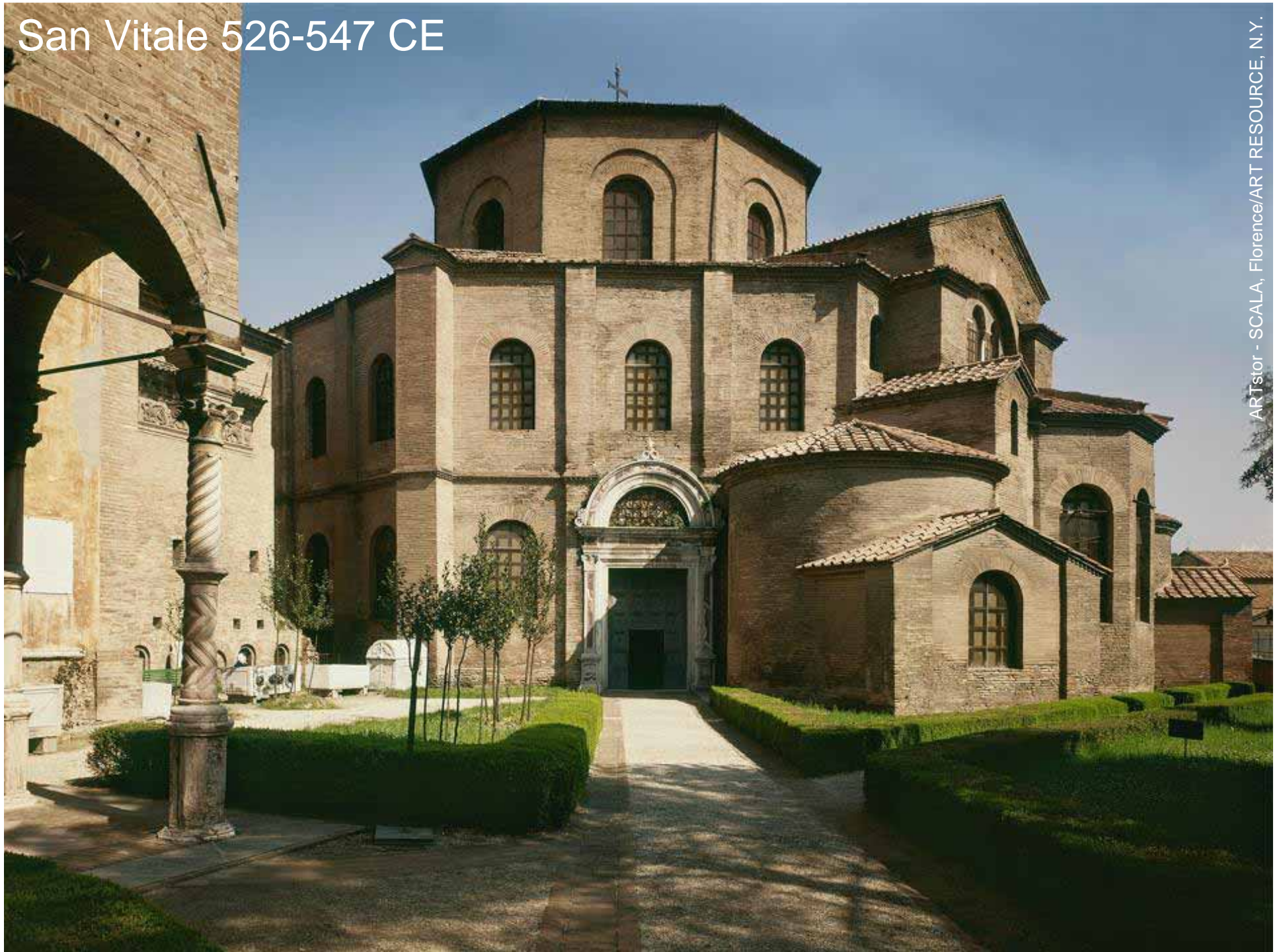
D LONGITUDINAL SECTION A-A



San Vitale 526-547 CE



San Vitale 526-547 CE



San Vitale 526-547 CE



Hagia Sophia 532-37 CE (AD). Istanbul, Turkey

Architects: Isidore of Miletus and Anthemius of Tralles

Almost Square – walls broken by aisles

Light breathtaking, enters through a wreath of window around the dome.

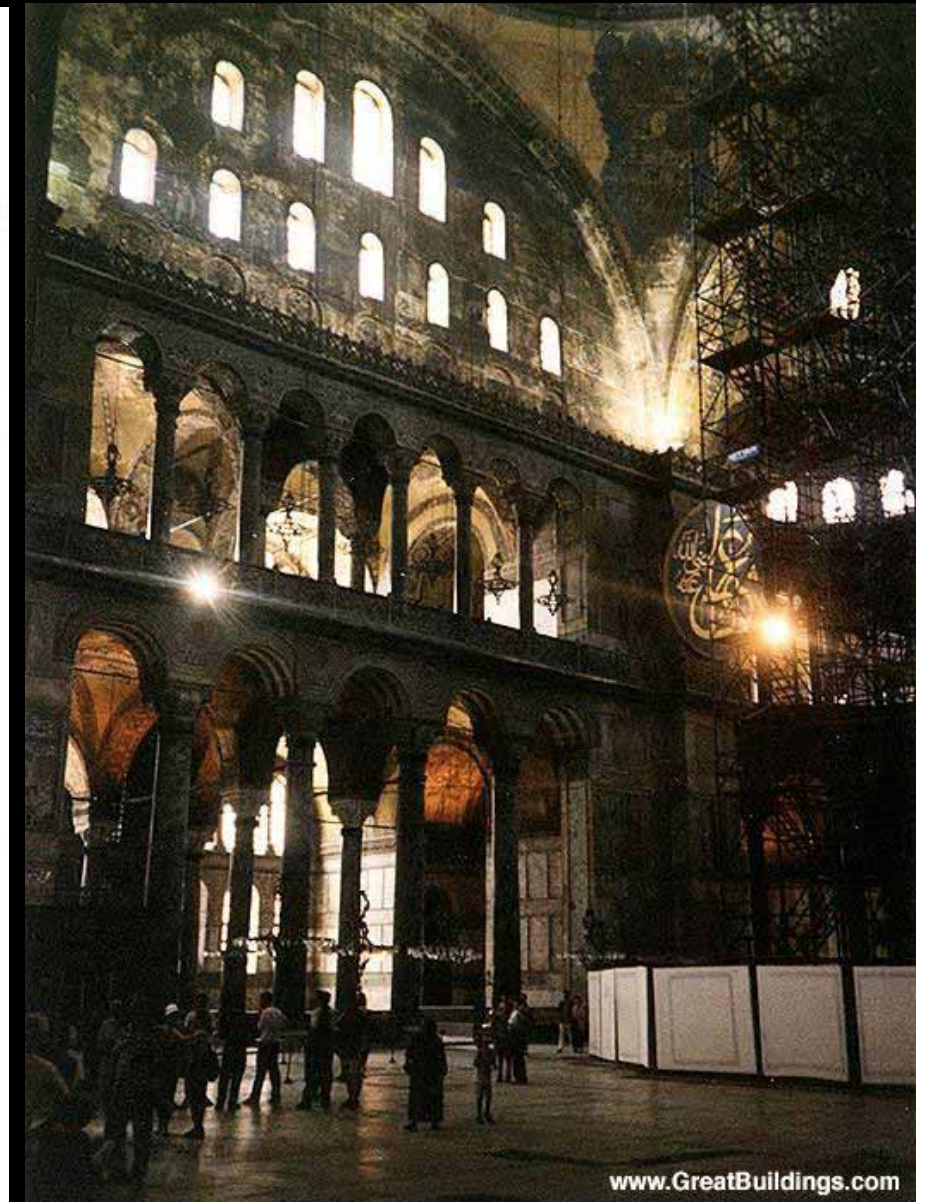
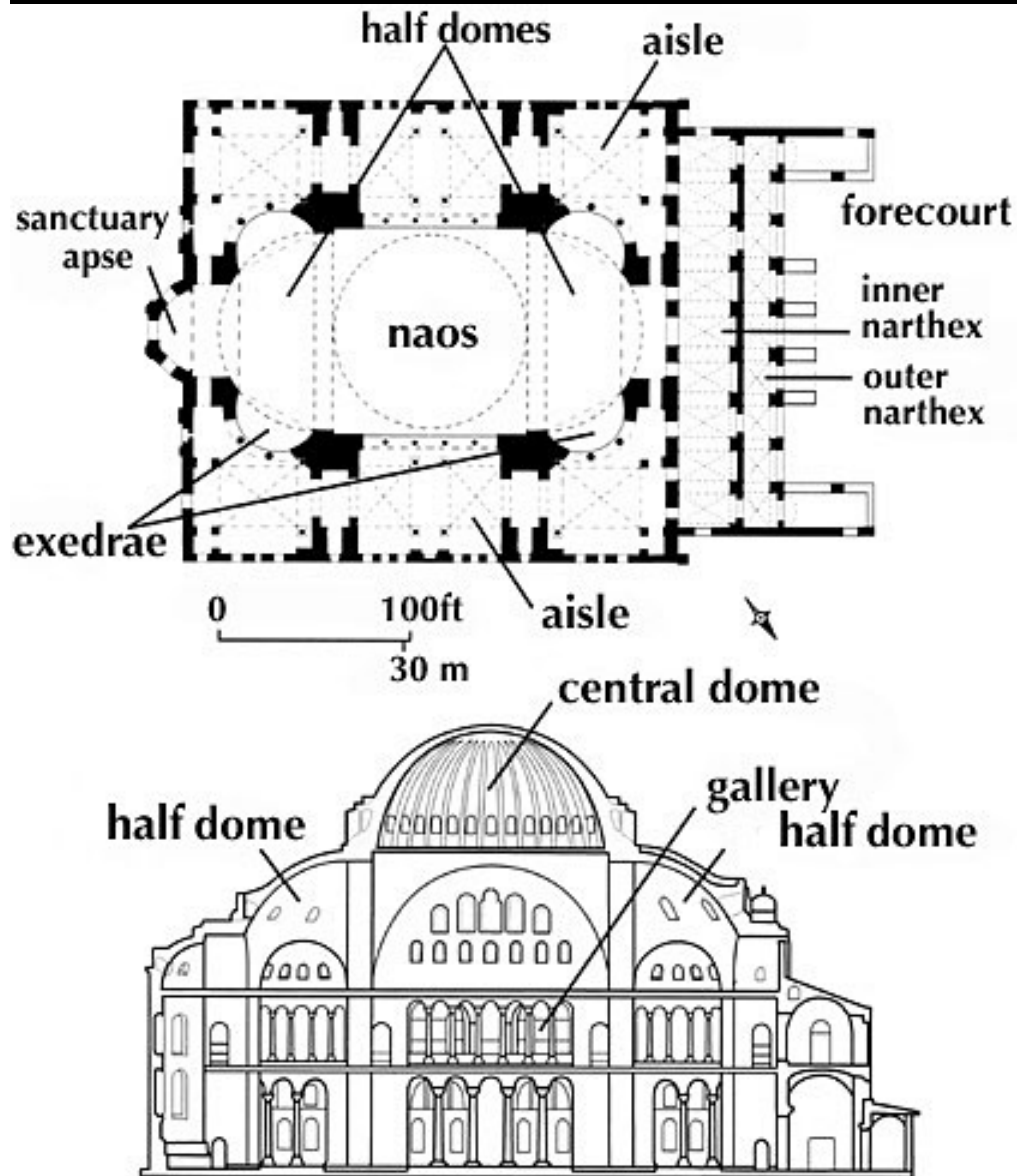
Converted to a Mosque in 1453 CE

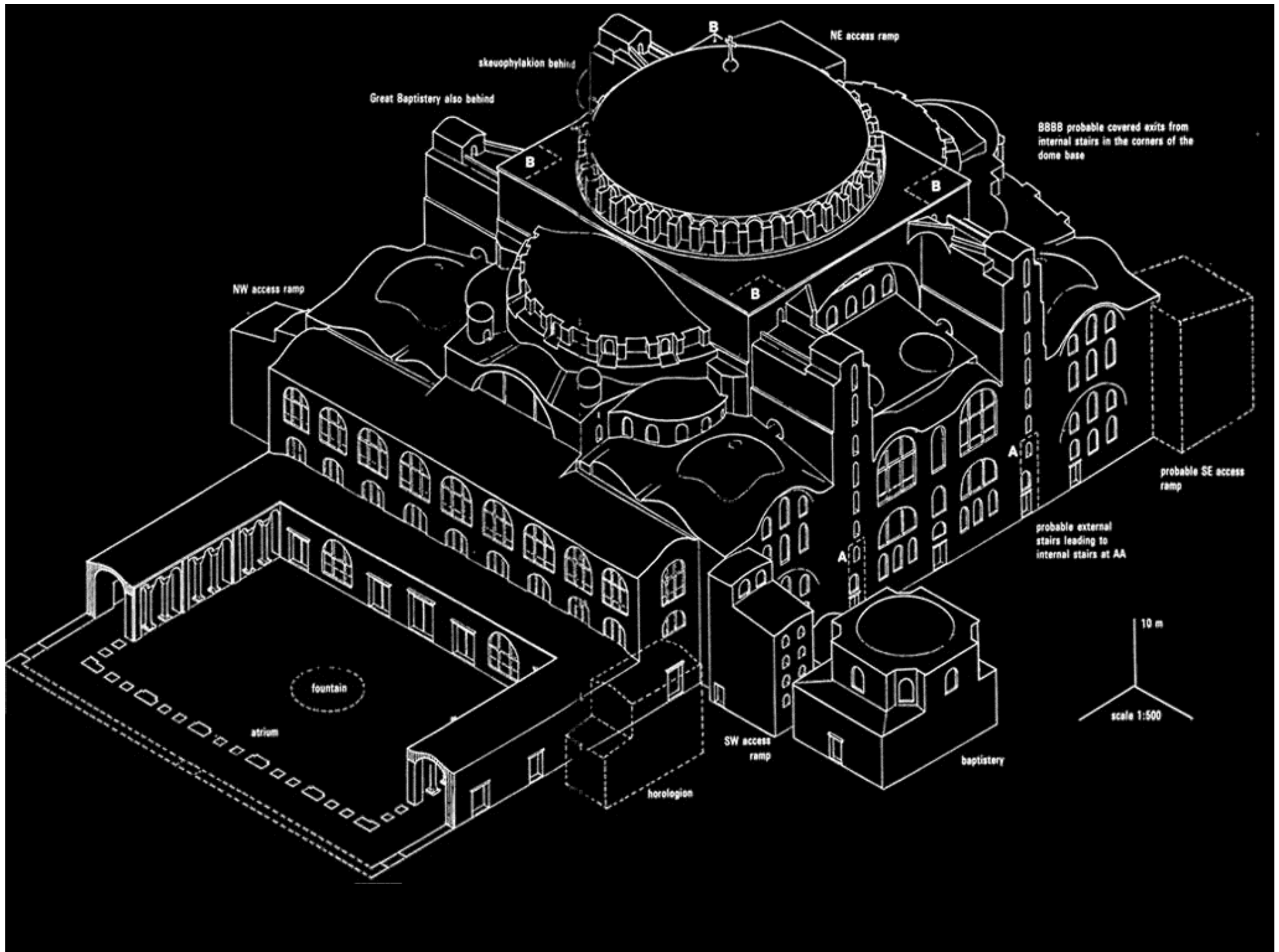
Soaring height 182'

Diameter of 102'

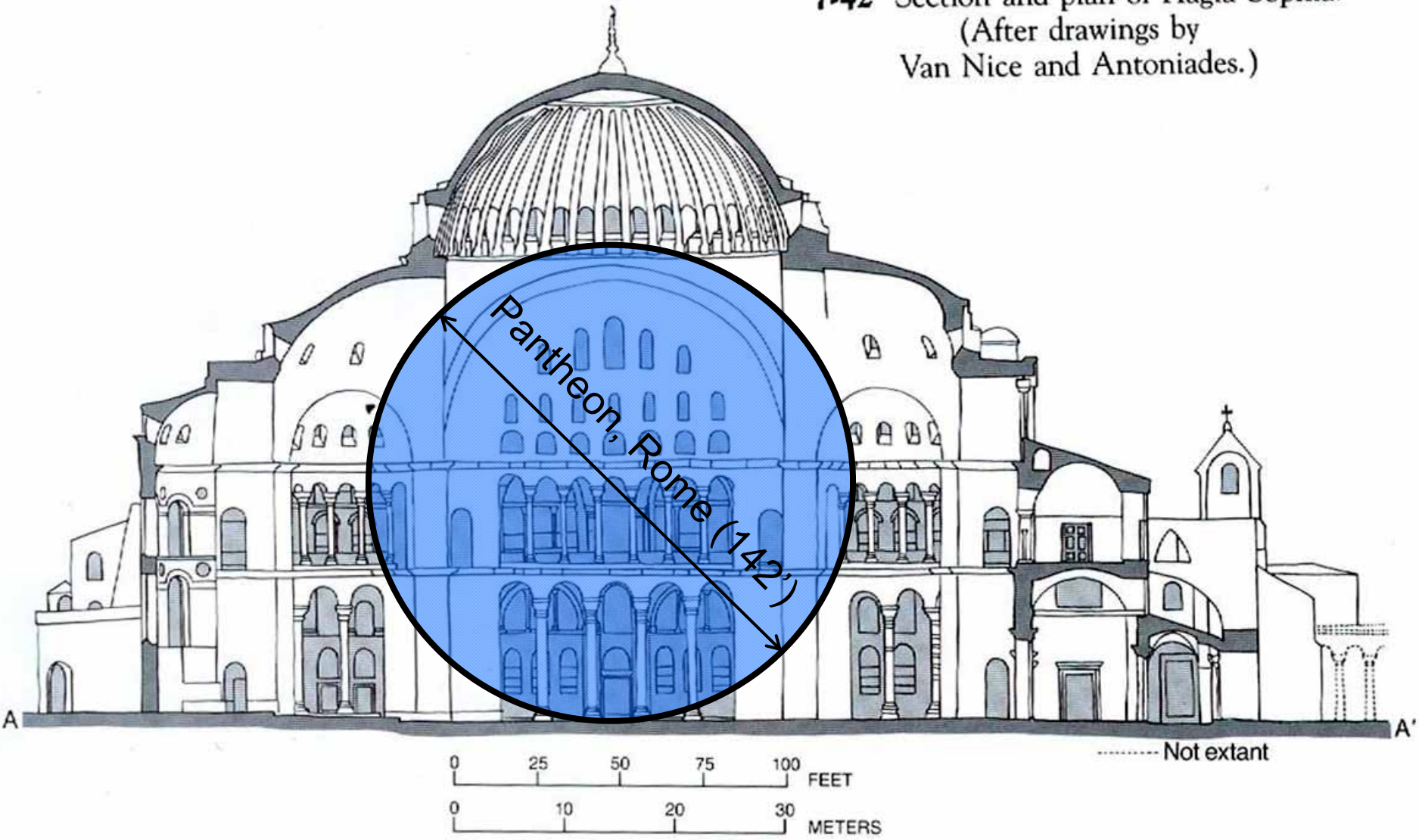


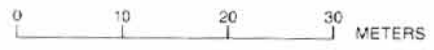
Hagia Sophia 532-37 CE (AD), Istanbul, Turkey



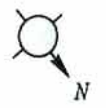
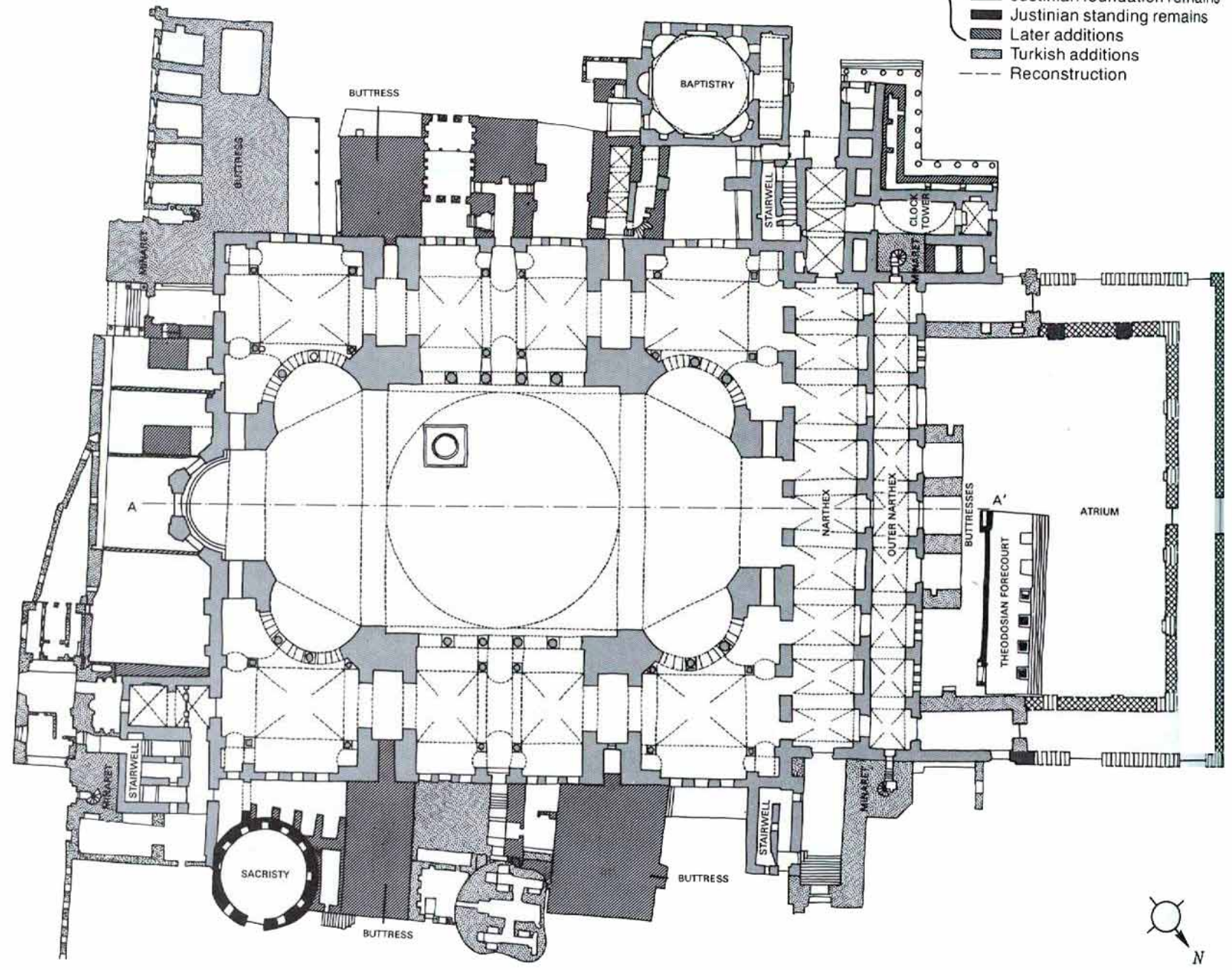


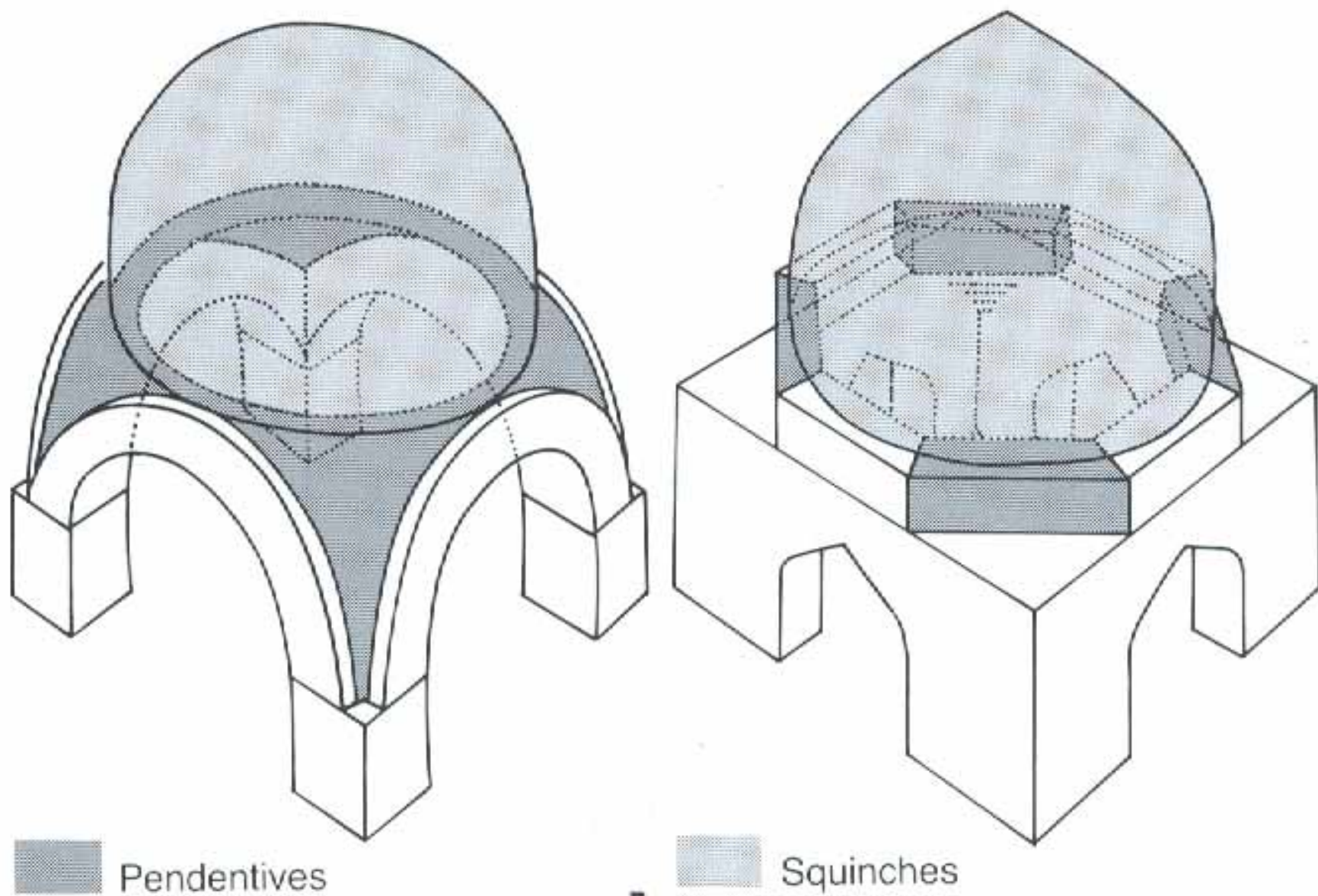
7-42 Section and plan of Hagia Sophia.
(After drawings by
Van Nice and Antoniadès.)





- BYZANTINE
- Theodosian
 - Justinian intact
 - Justinian speculative
 - Justinian foundation remains
 - Justinian standing remains
 - Later additions
 - Turkish additions
 - Reconstruction

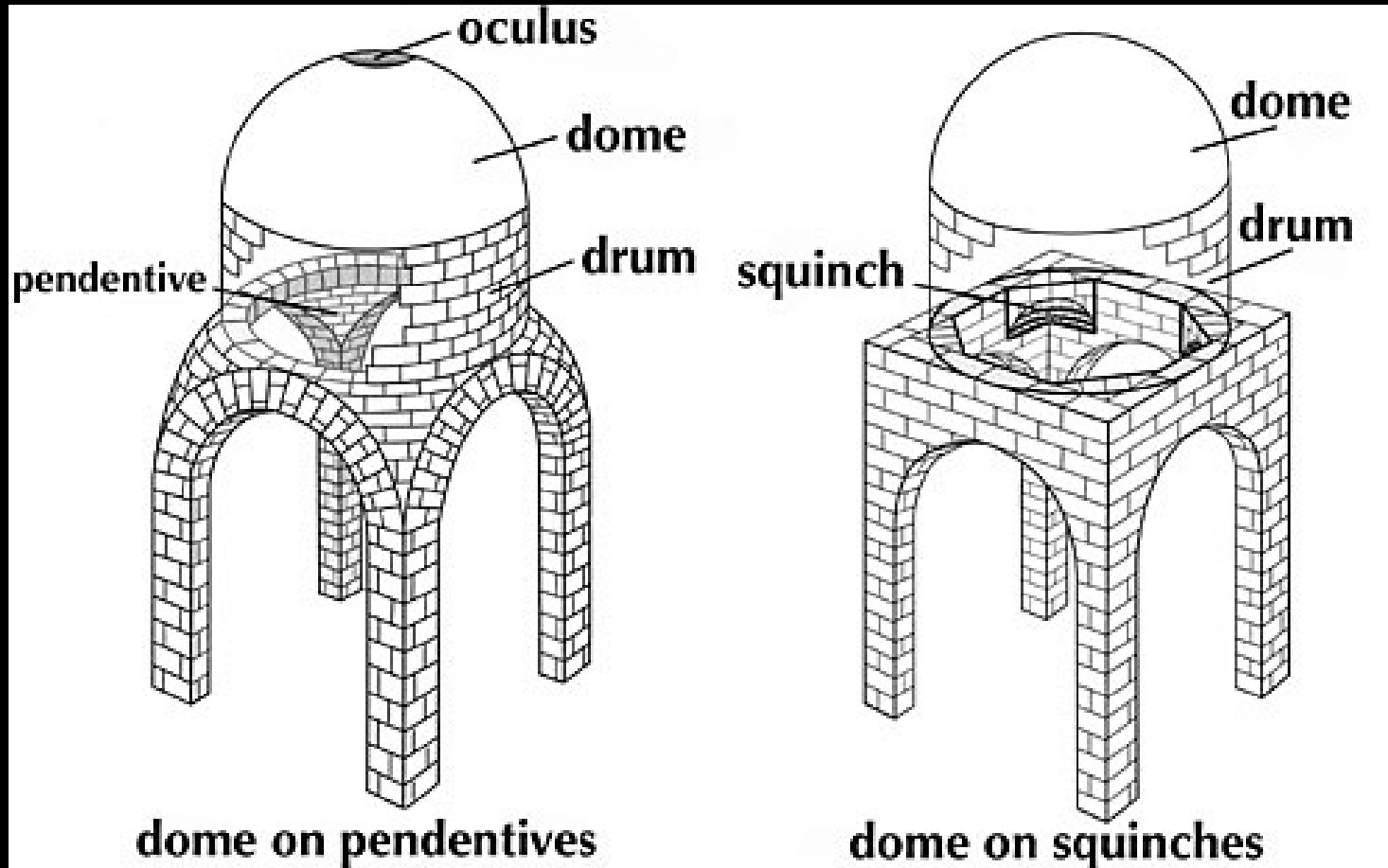




7-45 Domes on pendentives (*left*) and squinches (*right*).

Pendentives

Solved the problem of placing a dome over a square base – squinches were awkward. Previously domes had rested on circular buildings, ie. the Pantheon in Rome.



Hagia Sophia 532-37 CE (AD), Istanbul, Turkey

Commissioned by the Emperor Justinian, means Divine Wisdom

Shallow dome supported by four pendentive vaults that rise from the four lofty arches that define the space below

Design allowed vast place for congregating, free from walls and columns

A brake with classicism of Rome: column capitals decorated with serpentine foliage, reflecting the more sensual and organic architecture of the East.

One of the most influential buildings in history, because of the soaring space and stunning play of natural light.

Hagia Sophia 532-37 CE Istanbul, Turkey



Hagia Sophia 532-37 CE Istanbul, Turkey





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Greece

Little Metropolis Church
13 th century

Athens Greece

38' x 25'

Smallest Cathedral

Antique marble reliefs



Russia

988 EC, Adopted Christianity

Borrowed arch from Constantinople

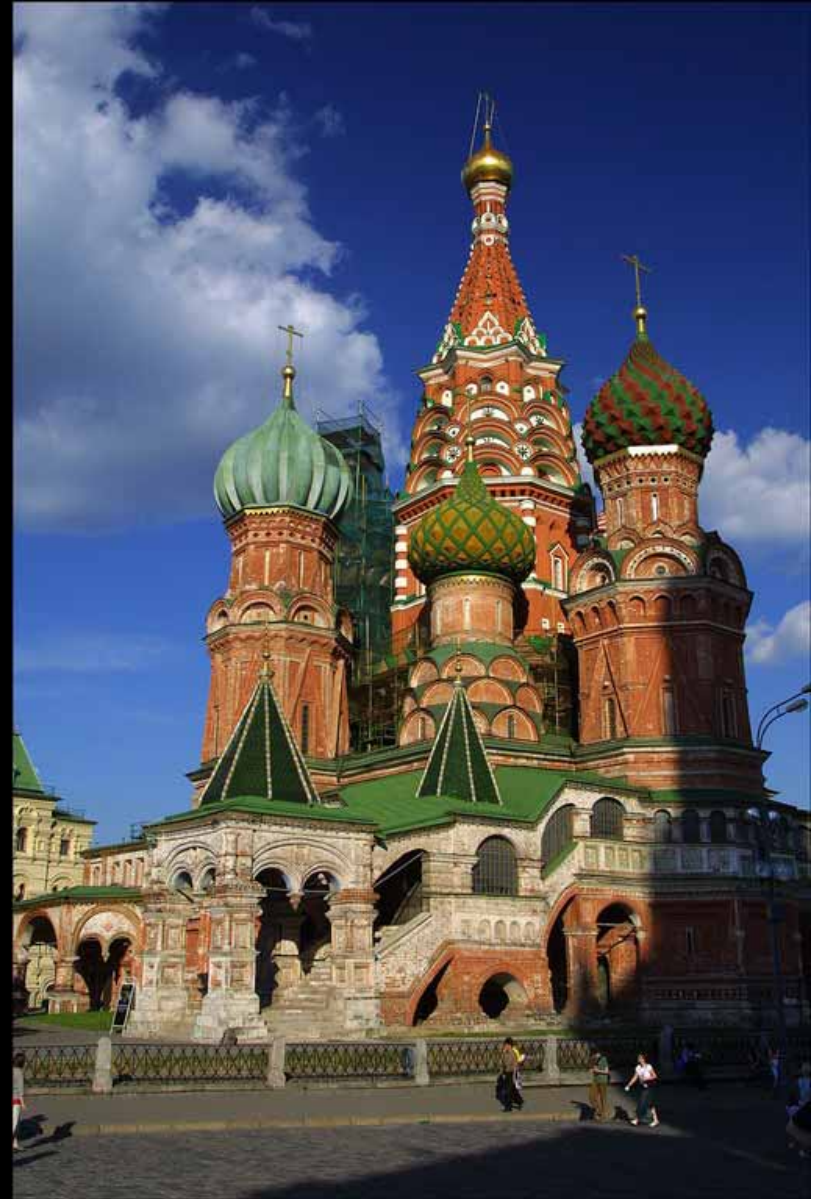
Shallow Dome failed with snow loads

Thus – the Russian Onion Dome

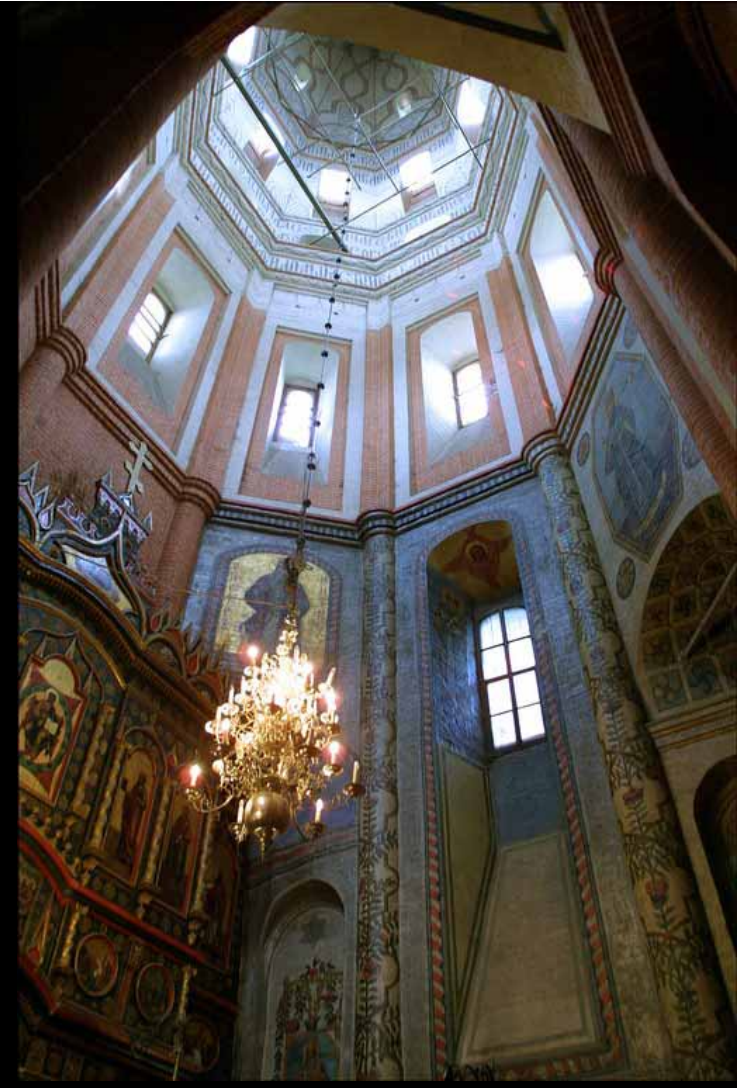
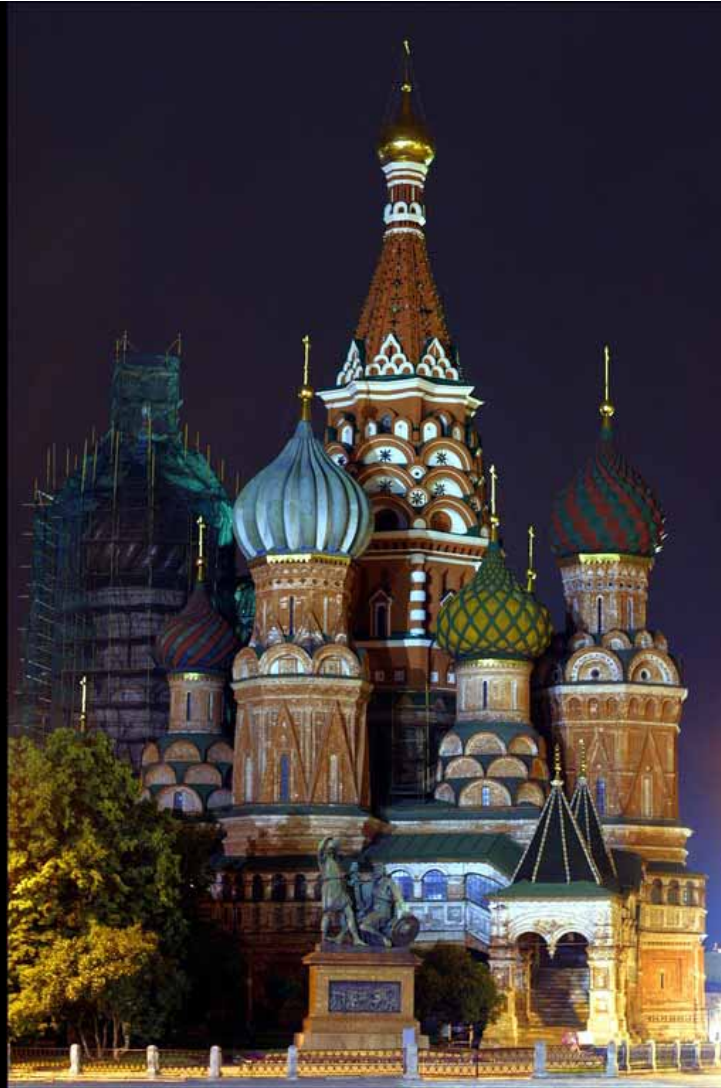
St. Basil's Red Square,

Moscow 1550-60 CE

Commissioned by Ivan the
Terrible

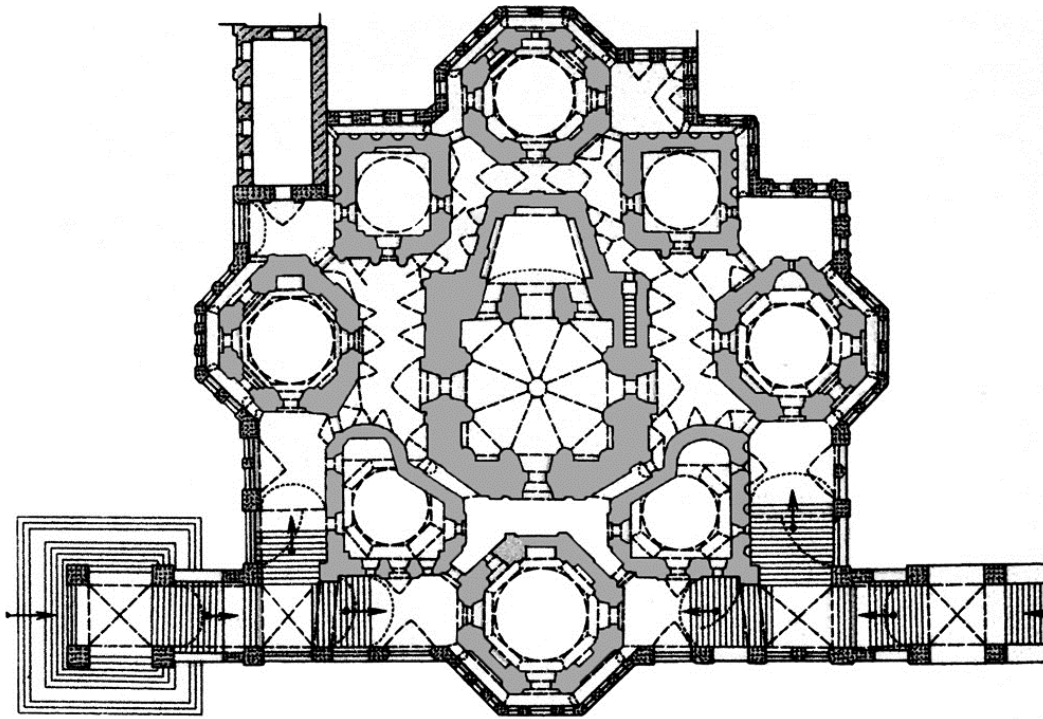


Russia



St. Basil's Red Square, Moscow 1550-60 CE
Commissioned by Ivan the Terrible
8 small churches clustered around one main church
Originally white, but was painted in the 17th century

St. Basil's 1550-60 CE (AD)



Plan is basically a greek cross



Church of the Transfiguration, Kizhi Russia 1714



Venice, Italy

5th Century
founded on a
Lagoon cut off
from Mainland
Escaping
Barbarians



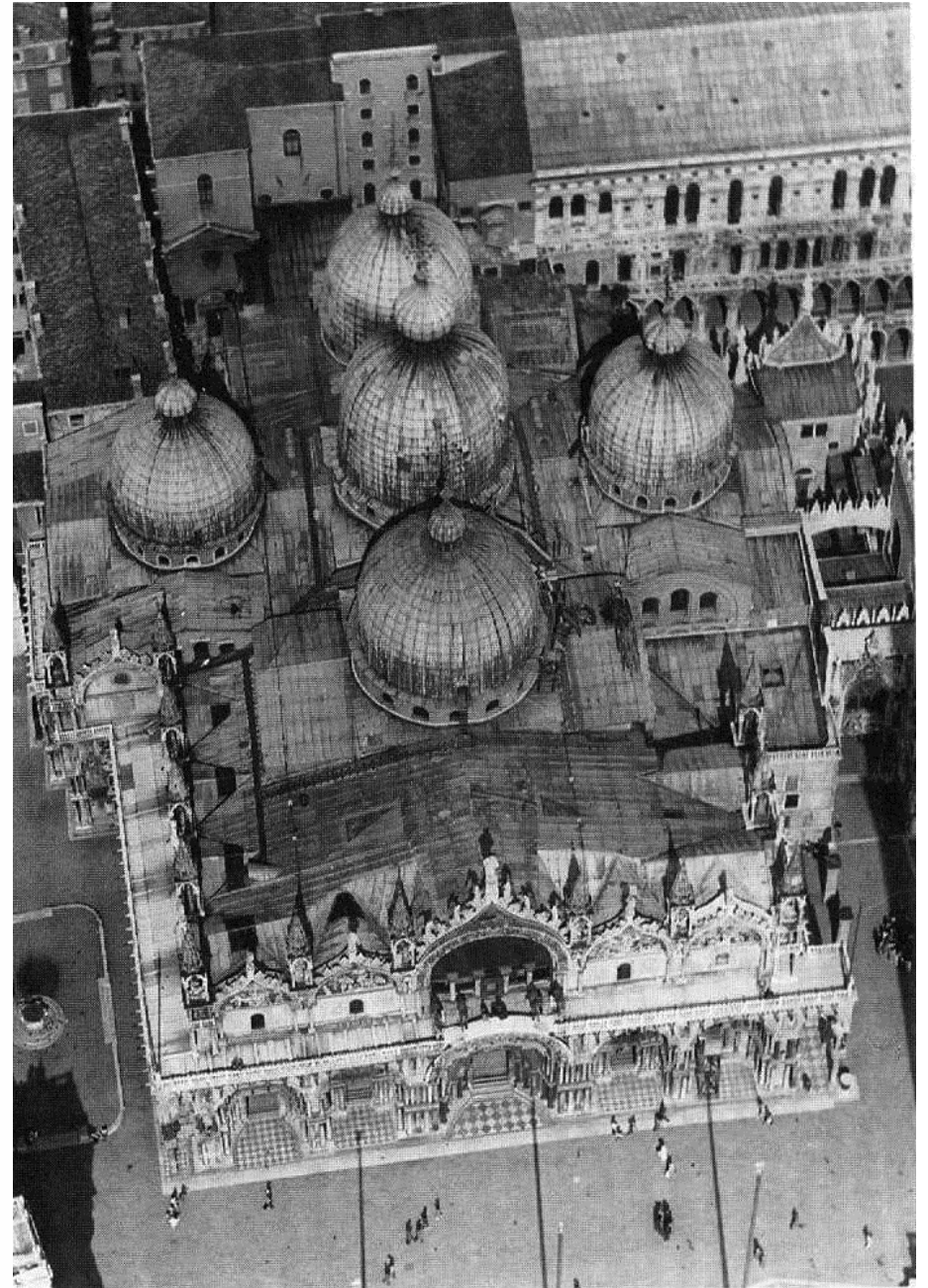
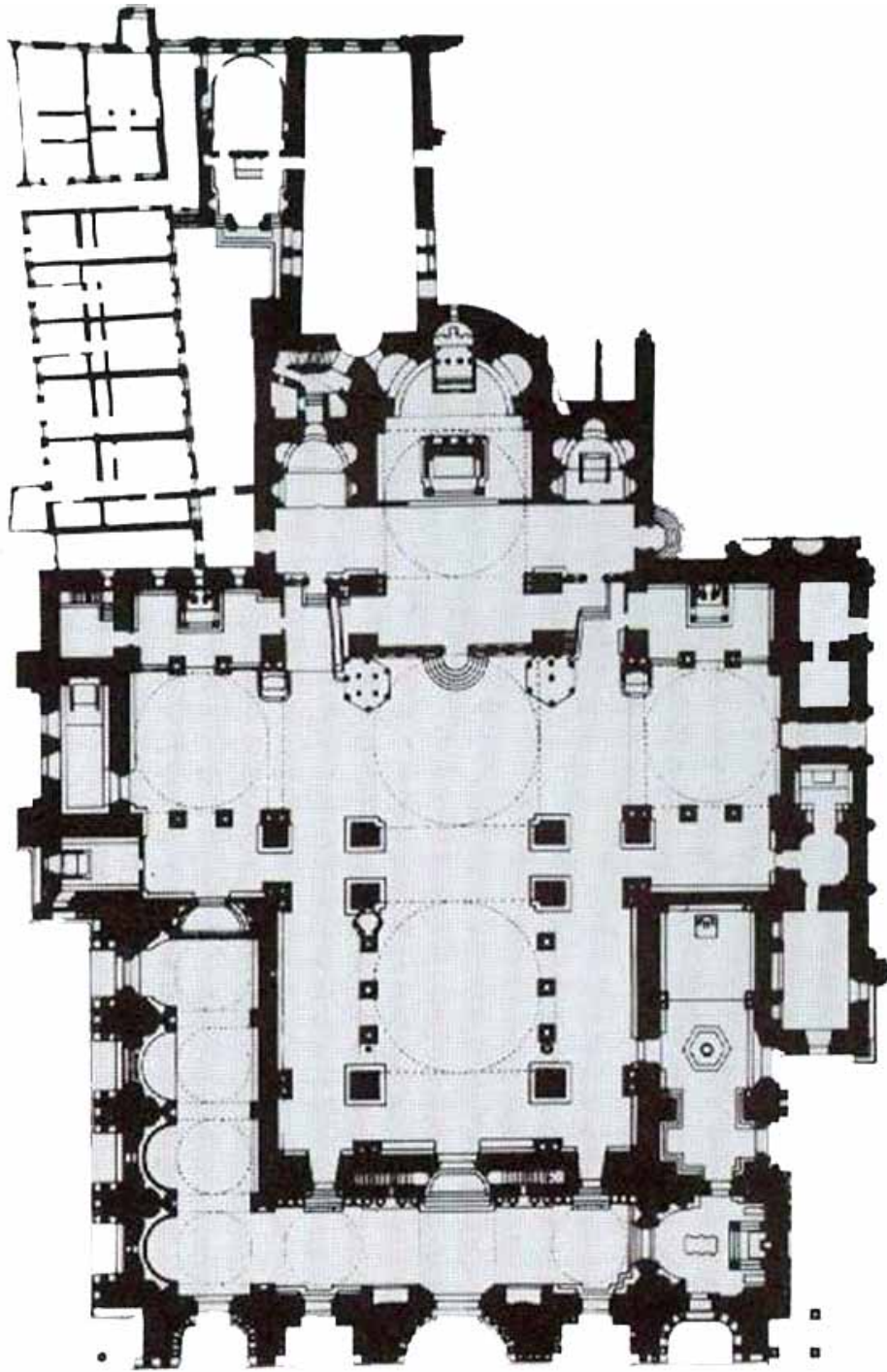
St. Marks St. Marks Square Venice, 1063-1073 CE (AD)

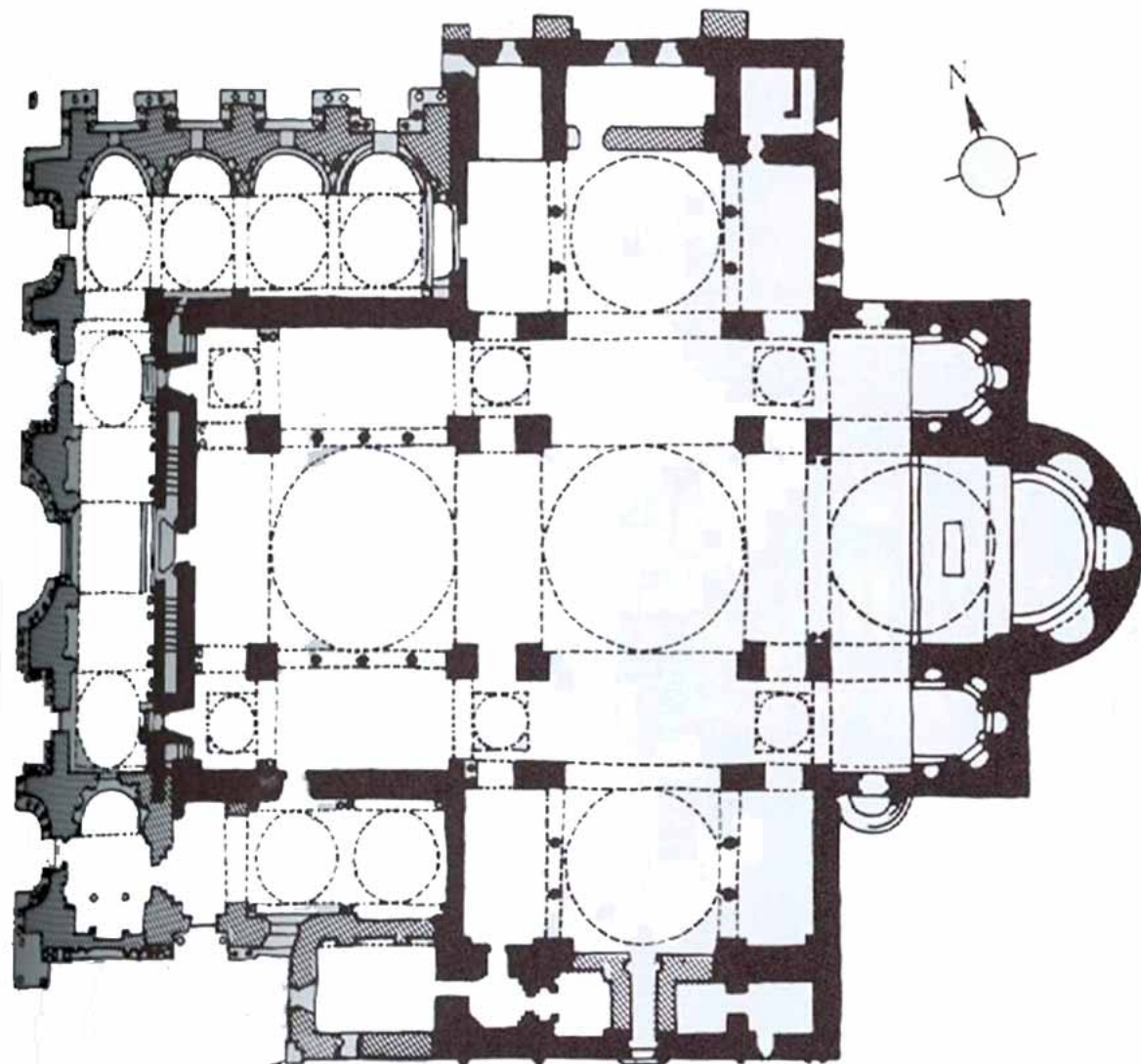
Venice, Italy



St. Marks St. Marks Square Venice 1063-73 CE
Looks East rather than West for influences
Almost 100' central dome 42' in diameter
Mosaics from different periods
5 deep recessed west portals lead into the Narthex







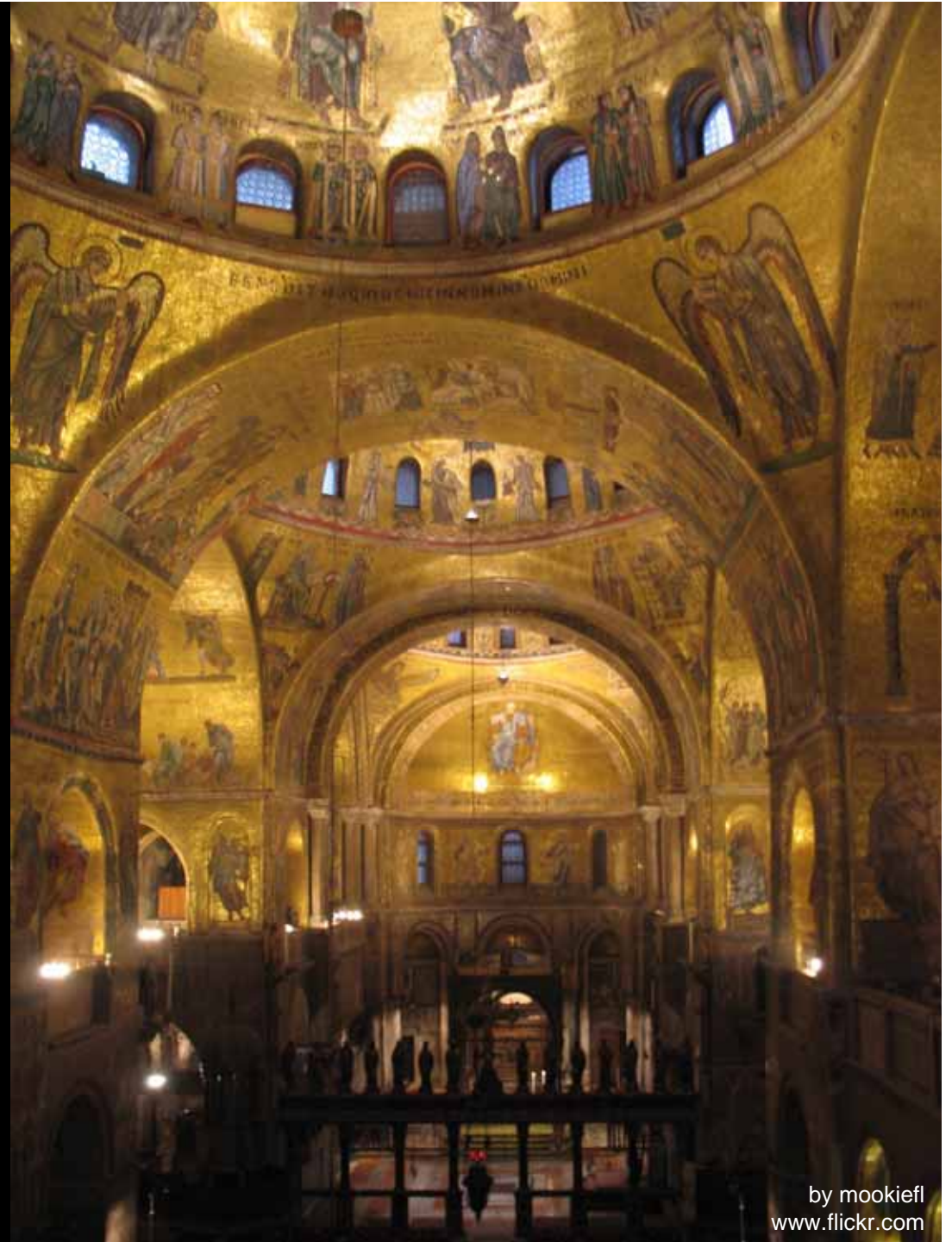
← The Tetrarchs of San Marco (FIG. 6-94)

Additions to original structure

0 25 50 FEET

0 10 20 METERS

7-48 Plan of St. Mark's. (After Sir Banister Fletcher.)



St. Marks St. Marks Square Venice, 1063-73 CE

Looks East rather than West for influences, reflecting Venice's extensive trade patterns with the East

Greek cross plan and 5 domes each resting on four piers

Almost 100' central dome 42' in diameter

Mosaics from different periods

5 deep recessed west portals lead into the Narthex





ARTstor - Andrew Dickinson White Collection of Architectural Photographs (Cornell University Library)