

# Early Christian, Byzantine & Carolingian



Byzantine mosaic  
Mausoleum of Galla Placidia, Ravenna  
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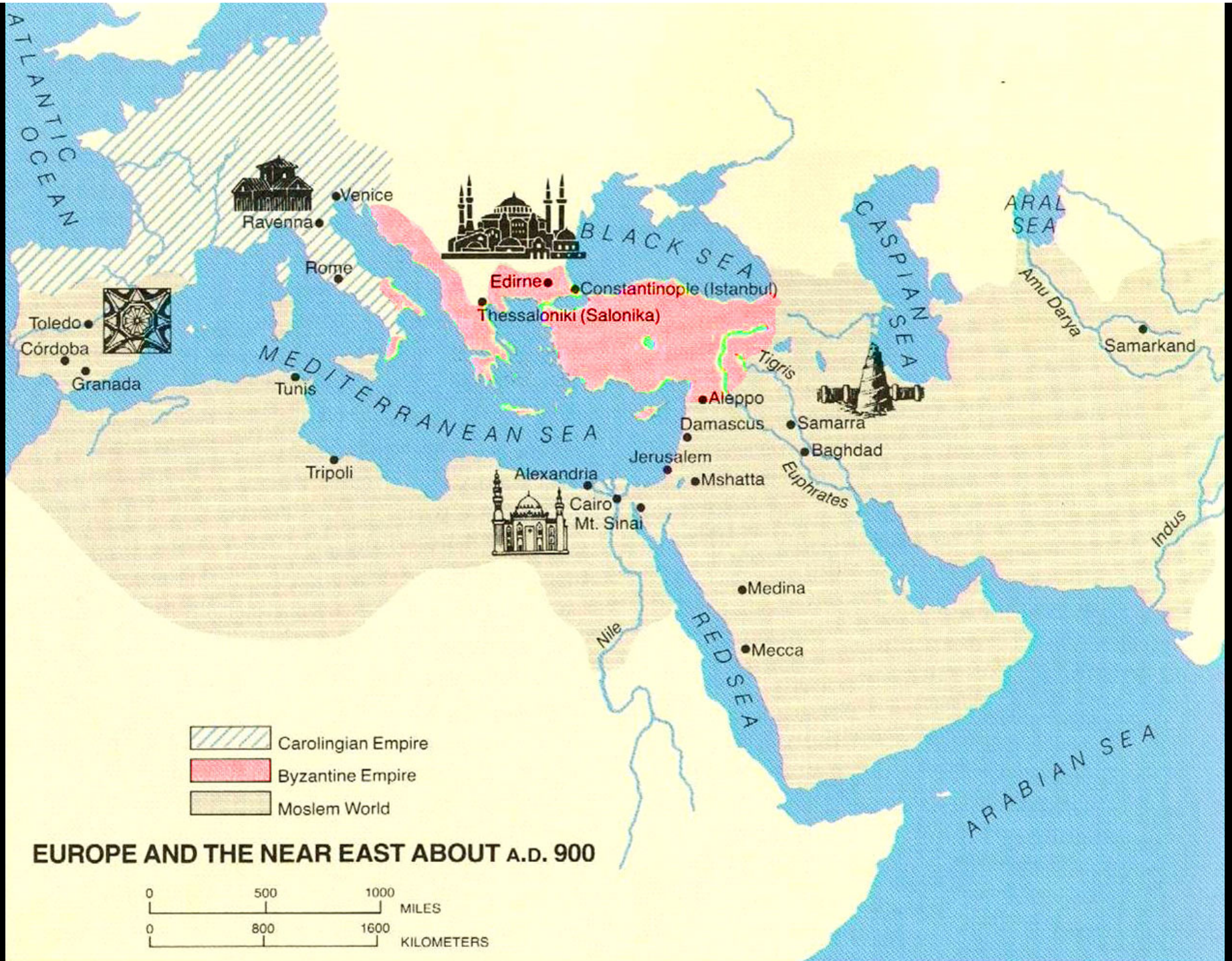
# ARCH 1121 - HISTORY OF WORLD ARCHITECTURE TO 1900

## Early Christian & Byzantine

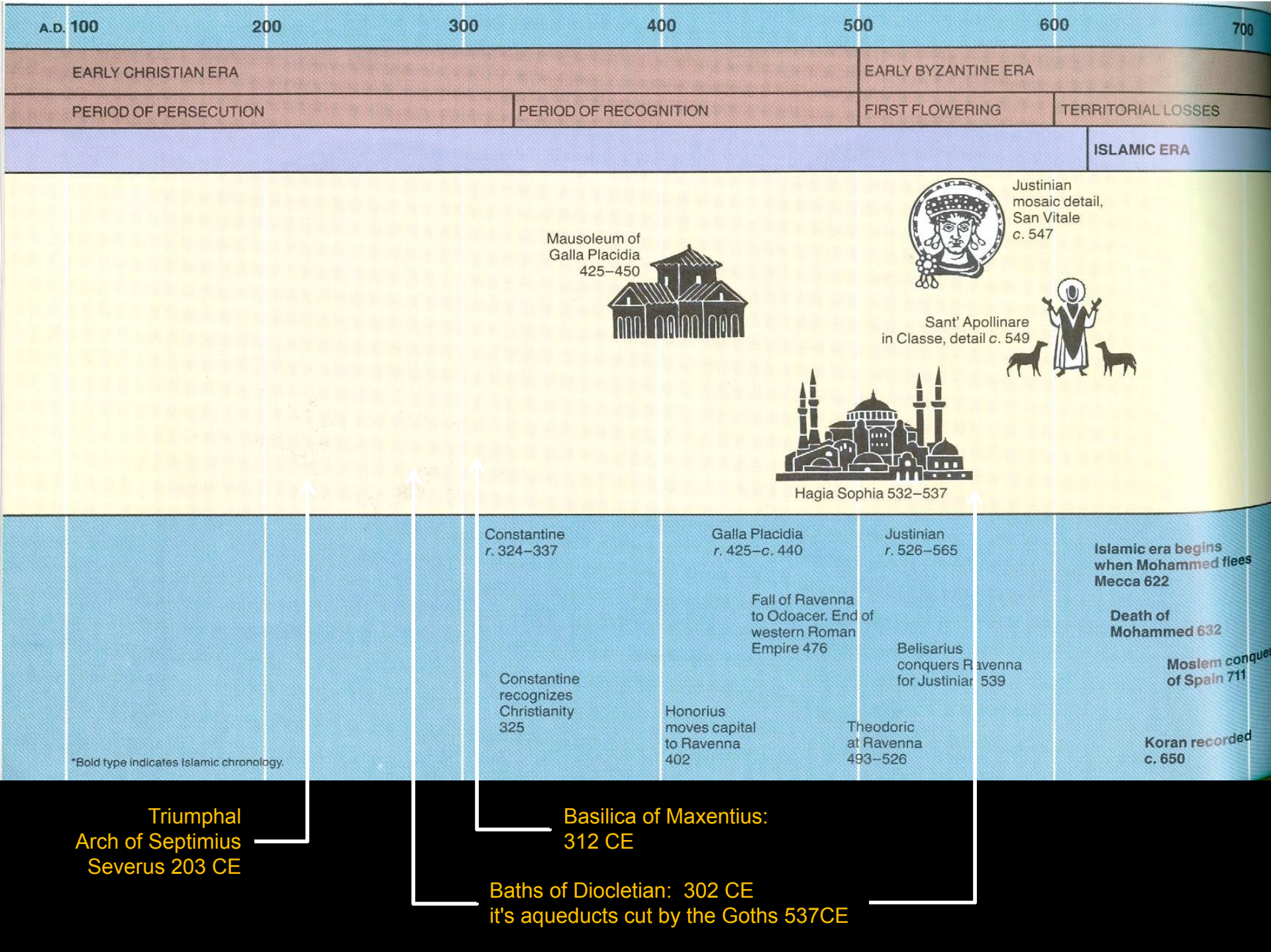
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### Course Overview:

- What is architecture? What is history?
- Prehistoric, Mesopotamia, Egypt
- Early Aegean, Greece
- India & Southeast Asia, China & Japan
- Rome, **Early Christian & Byzantine**, Islamic
- Early Medieval, Romanesque, Gothic
- The Pre-Columbian Americas, Africa
- The Renaissance, Baroque, Rococo in Europe
- 18th Century & Neo-Classicism in Europe & America



**EUROPE AND THE NEAR EAST ABOUT A.D. 900**



800

900

1000

1100

1200

1300

1400

1500

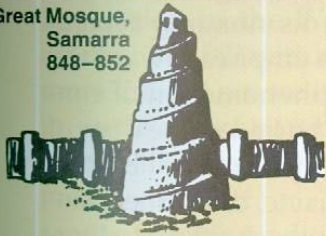
LATE BYZANTINE ERA

SECOND FLOWERING

PERIOD OF DECLINE

THIRD FLOWERING

Great Mosque,  
Samarra  
848–852



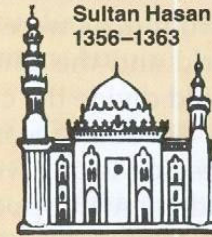
Paris Psalter  
c. 960

St. Mark's,  
Venice  
begun 1063



The Vladimir Madonna  
12th century

Mausoleum of  
Sultan Hasan  
1356–1363



The Harrowing  
of Hell  
c. 1310–1320



Mosque, Córdoba  
8th–10th centuries

Church of the  
Katholikon  
c. 1020

Turks convert to Islam  
9th–10th century

Osman I, founder  
of Ottoman Empire  
r. 1290–1326

Battle of  
Poitiers 732

First Crusade  
1095–1099

Fourth Crusade  
1202–1204

Ottoman  
conquest of  
Constantinople  
1453

Iconoclastic  
Controversy  
730–843

End of  
Caliphate of  
Córdoba 1031

**Early Christian Architecture:** from late Roman period to the rise of the great monasteries and Gothic cathedrals

**Middle Ages 500 – 1420 CE**

500-800 CE – “Dark Ages” many invasions and warfare

313 CE – Emperor Constantine adopted Christianity

324 CE Capital moved to Constantinople, formerly Byzantium (modern Istanbul, Turkey)



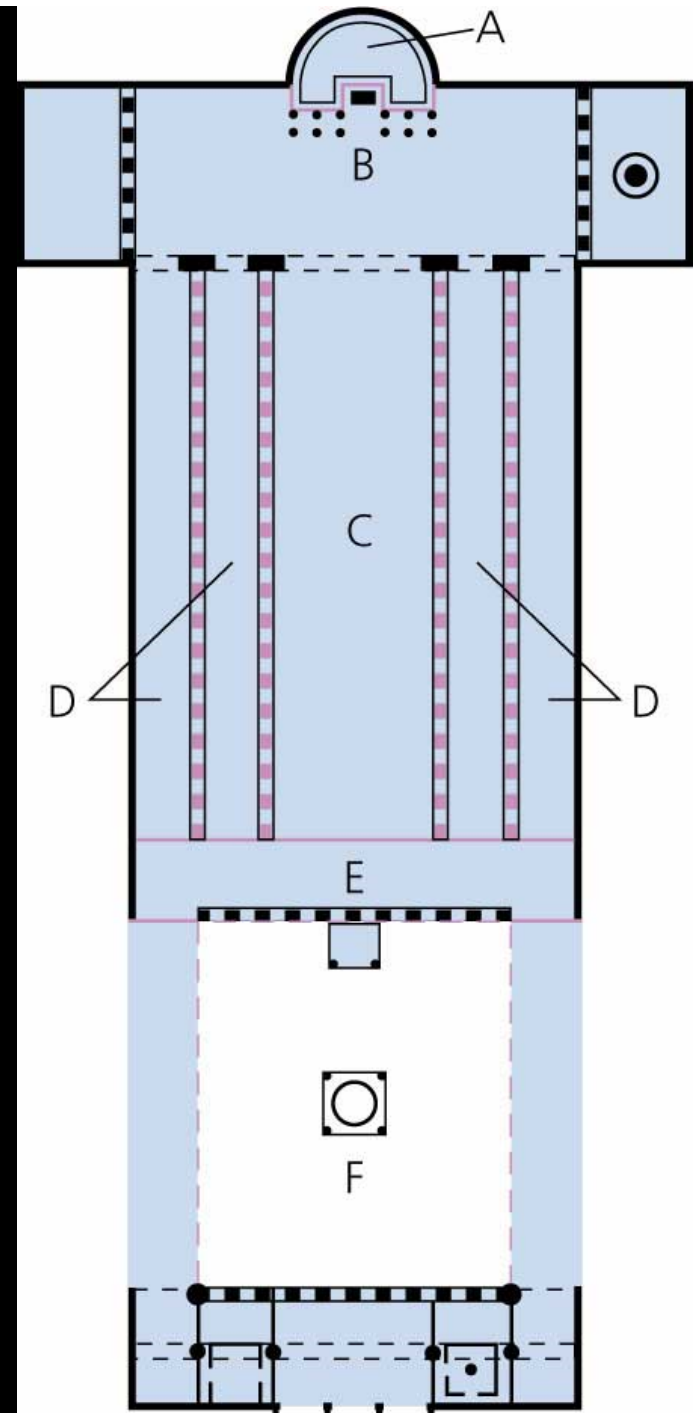
# Early Christian Churches

- I. Basilica plan
- II. Central plan

## 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

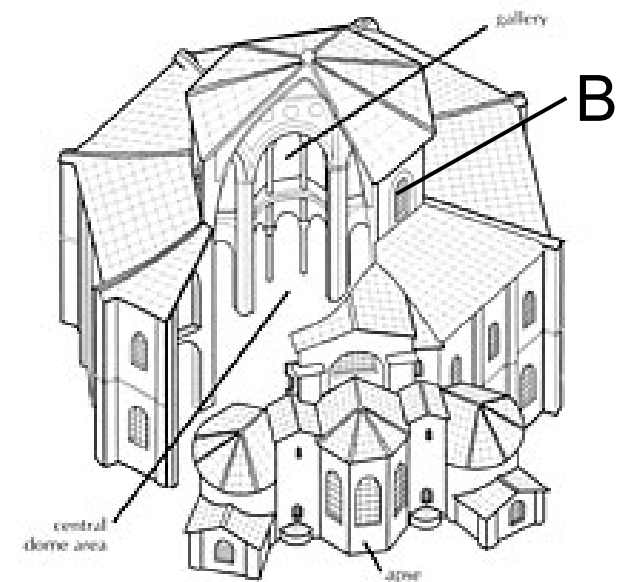
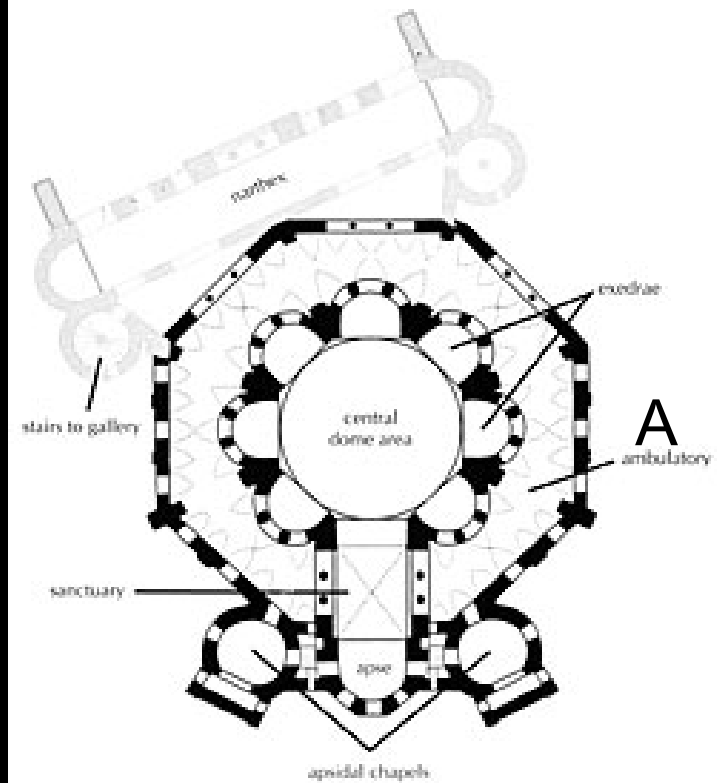


# Early Christian Churches

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

A. Ambulatory - continuous aisle

B. Clerestory windows





# 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.

Martyria – memorials for Christian saints

Baptisteries – frequently octagonal, 8 sides symbolized the resurrection of Jesus on the 8th day

Mausolea – contain tombs of important people

# 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 1<sup>st</sup> Century

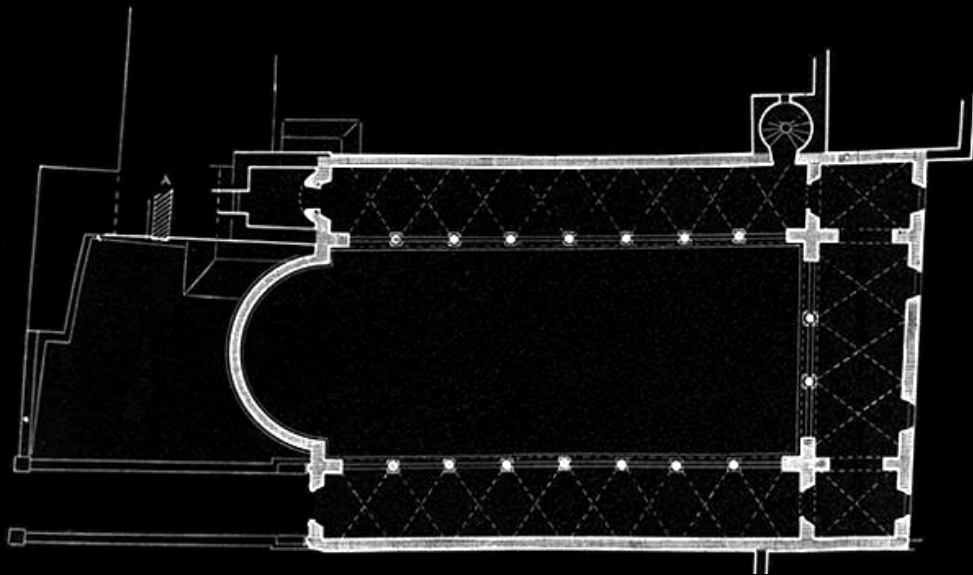






ARTstor - University of California, San Diego



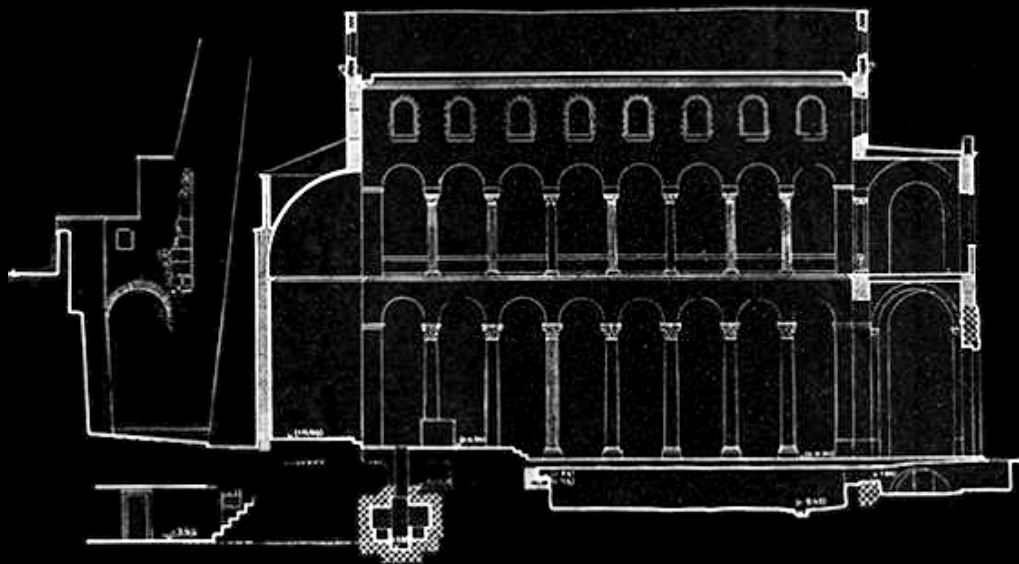
Sant' Agnese Fuori 630 CE (AD) Basilica with columns supporting arches along the aisles

1. GROUNDPLAN GALLERIES

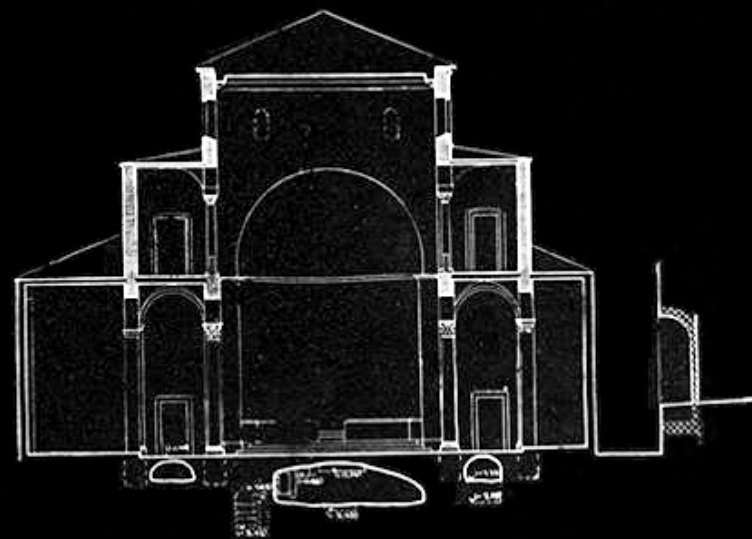


-  Roman tufblocks (A)
-  Opus irregulare and brickwork IV cent. (system B)
-  Opus irregulare and opus mixtum VII cent. (system C)
-  Medieval brickwork

2. LONGITUDINAL SECTION



3. TRANSVERSAL SECTION



GRAVINGS P. MARK

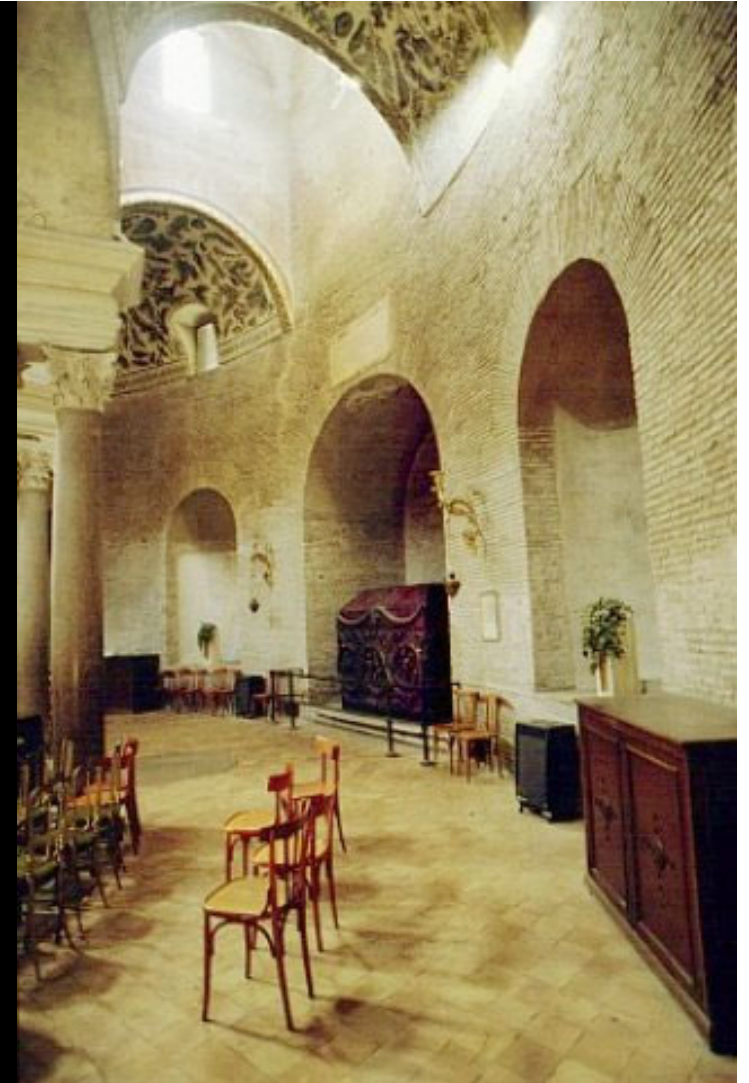
Sant' Agnese Fuori 630 CE (AD) Basilica with columns supporting arches along the aisles

# Rome



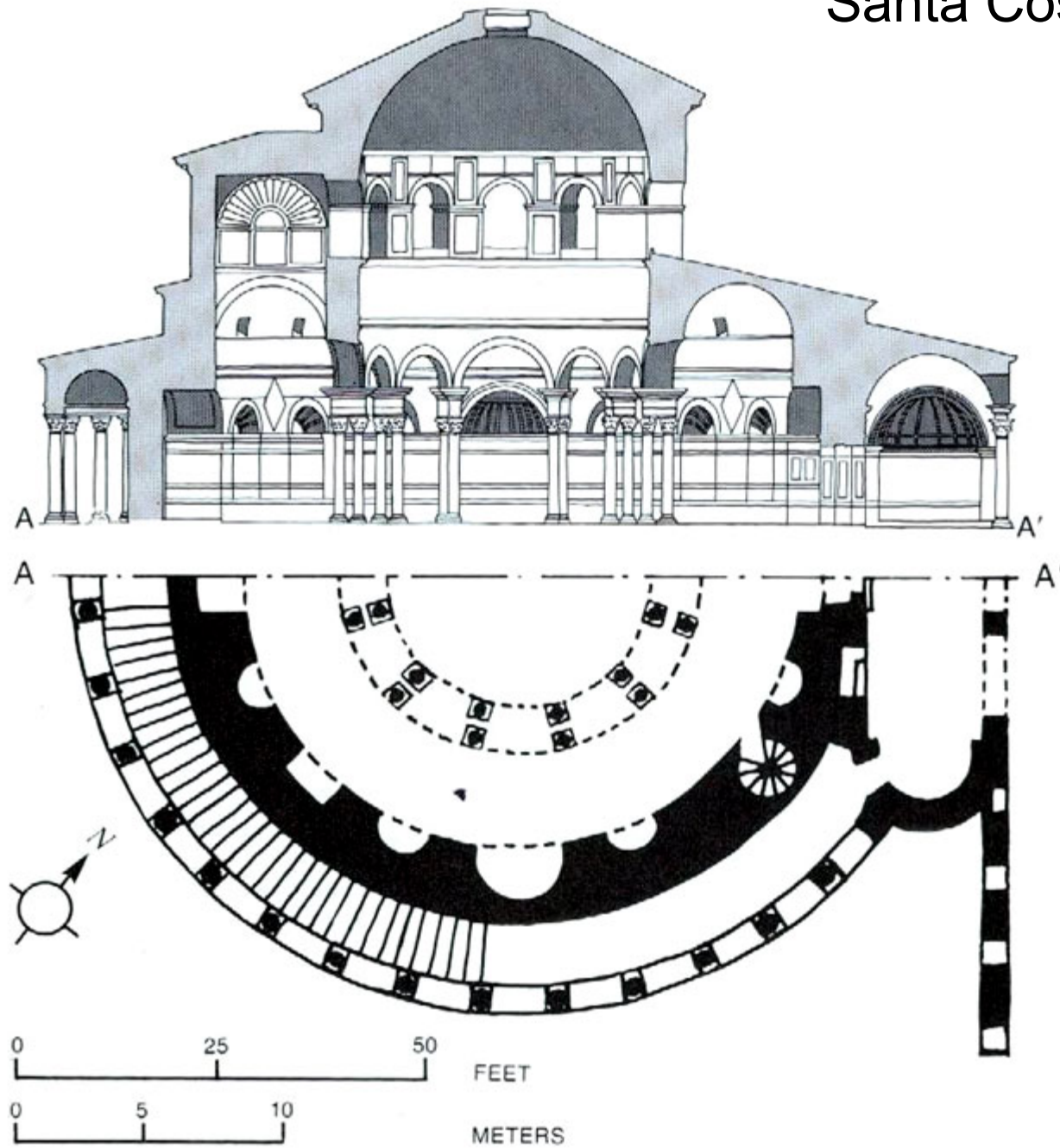
Santo Stefano Rotondo: 468 CE (AD) , diameter is 210',  
huge nave encircled by ionic columns, 22 clerestory windows

# Rome



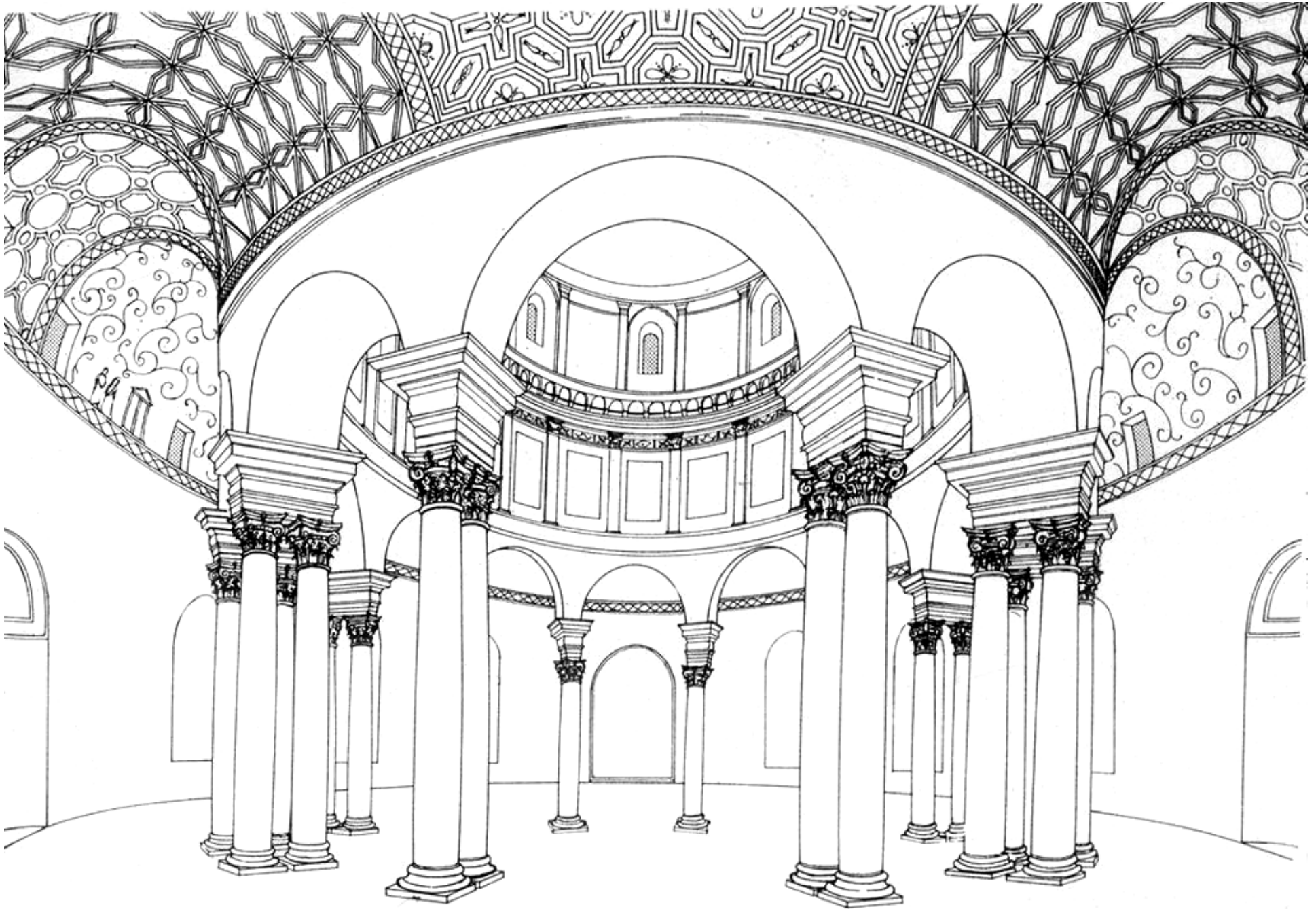
Santa Costanza 330 CE, Circular church, domed brick roof, tomb for Constantine's daughter

# Santa Costanza 330 CE





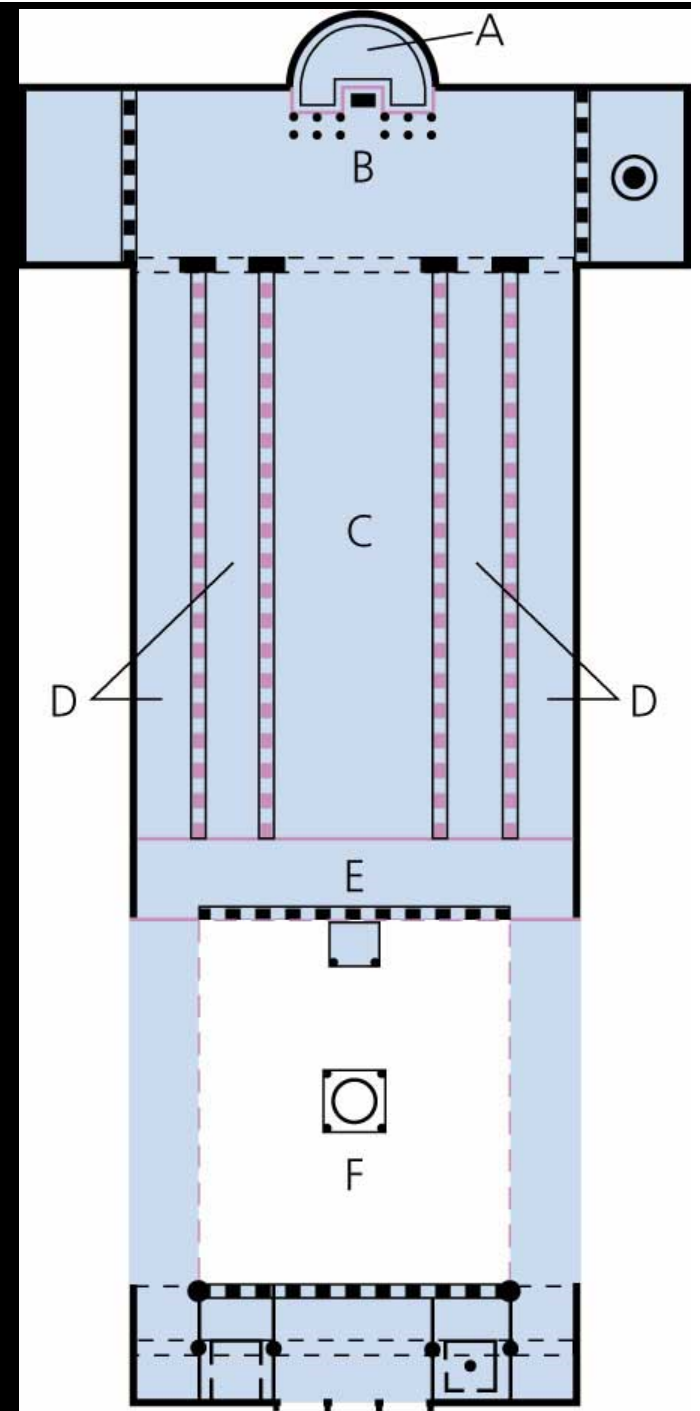
# Santa Costanza 330 CE

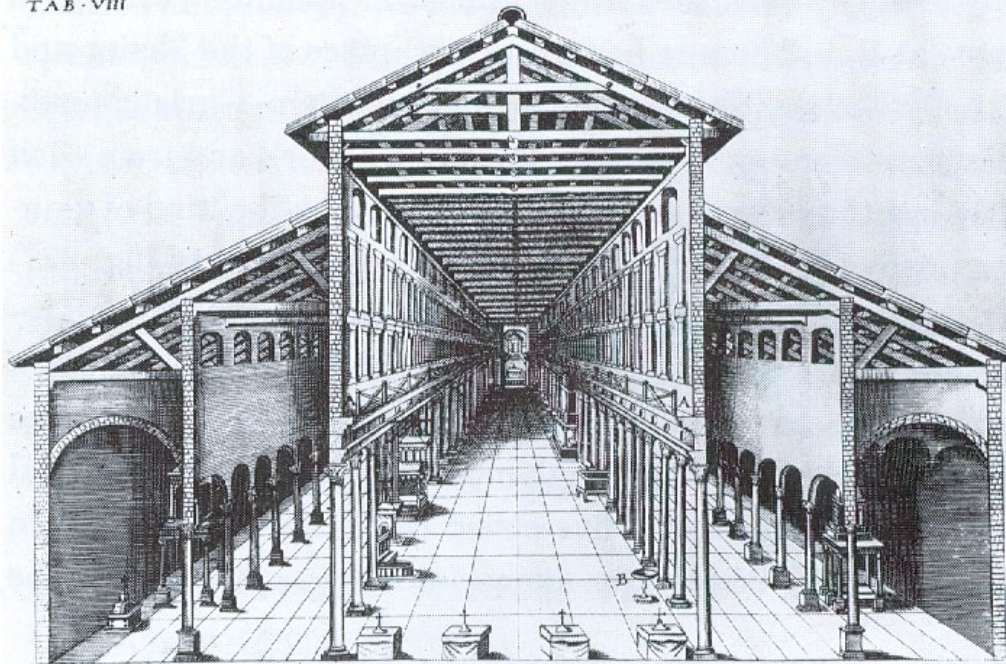


# Rome



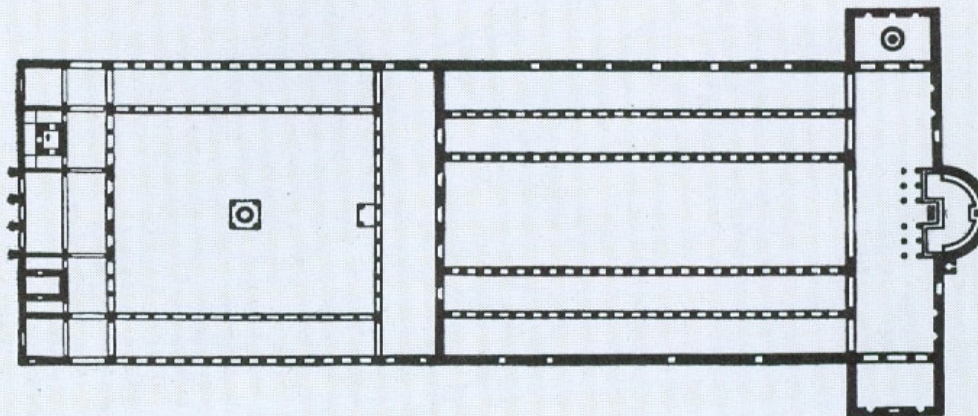
Old St. Peters 326CE – 200' long nave,  
timber roof, rows of closely spaced  
columns

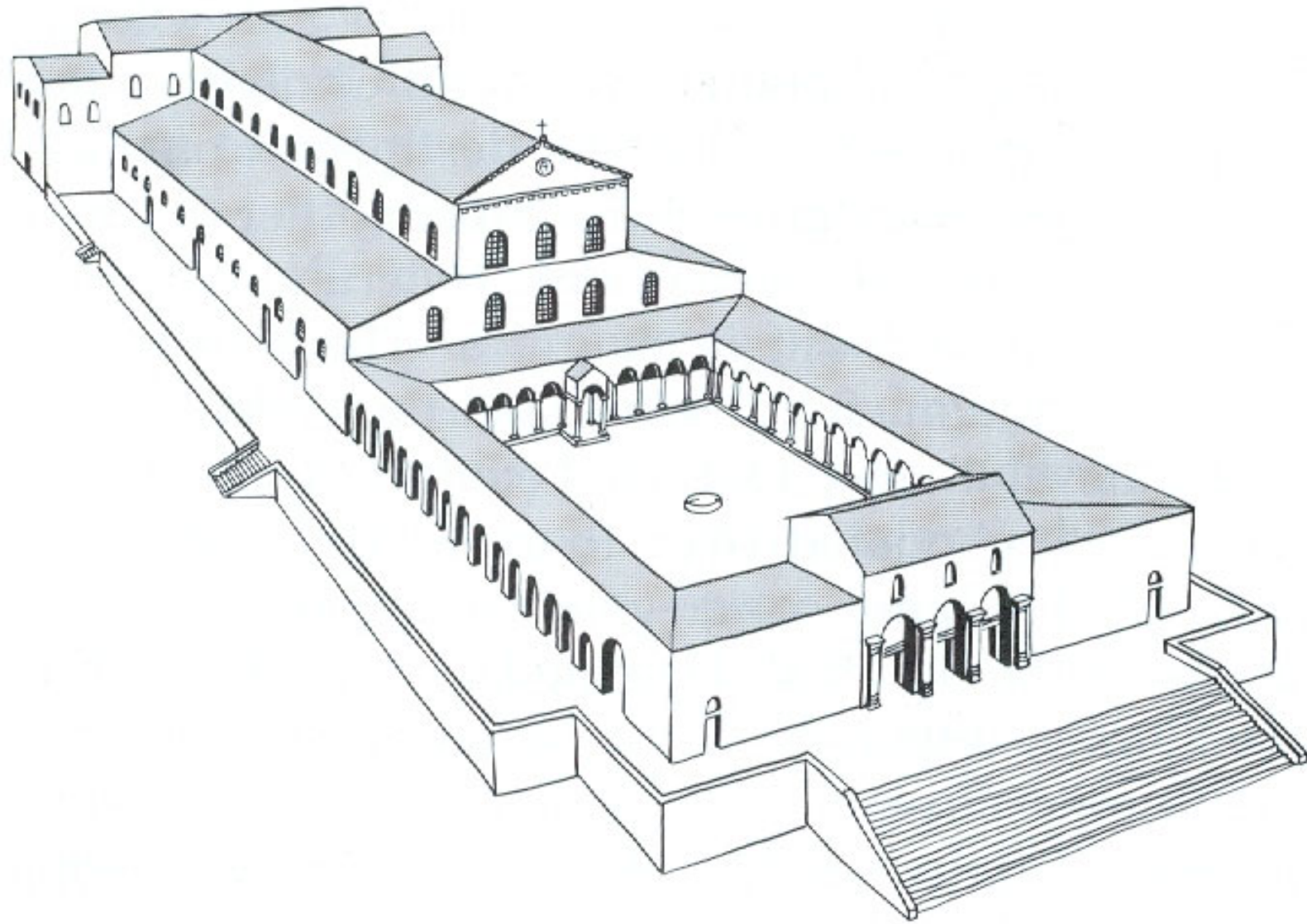




225 *Old St. Peter's. Rome. Begun c. 333. (Drawing by J. Ciampini, 1693)*

226 *Plan, Old St. Peter's*





**7-6** Conjectural reconstruction of Old St. Peter's, Rome.  
(After K. J. Conant.)

# Last years of the Roman Empire

395 CE Roman Empire Divided

East in Constantinople, West in Rome

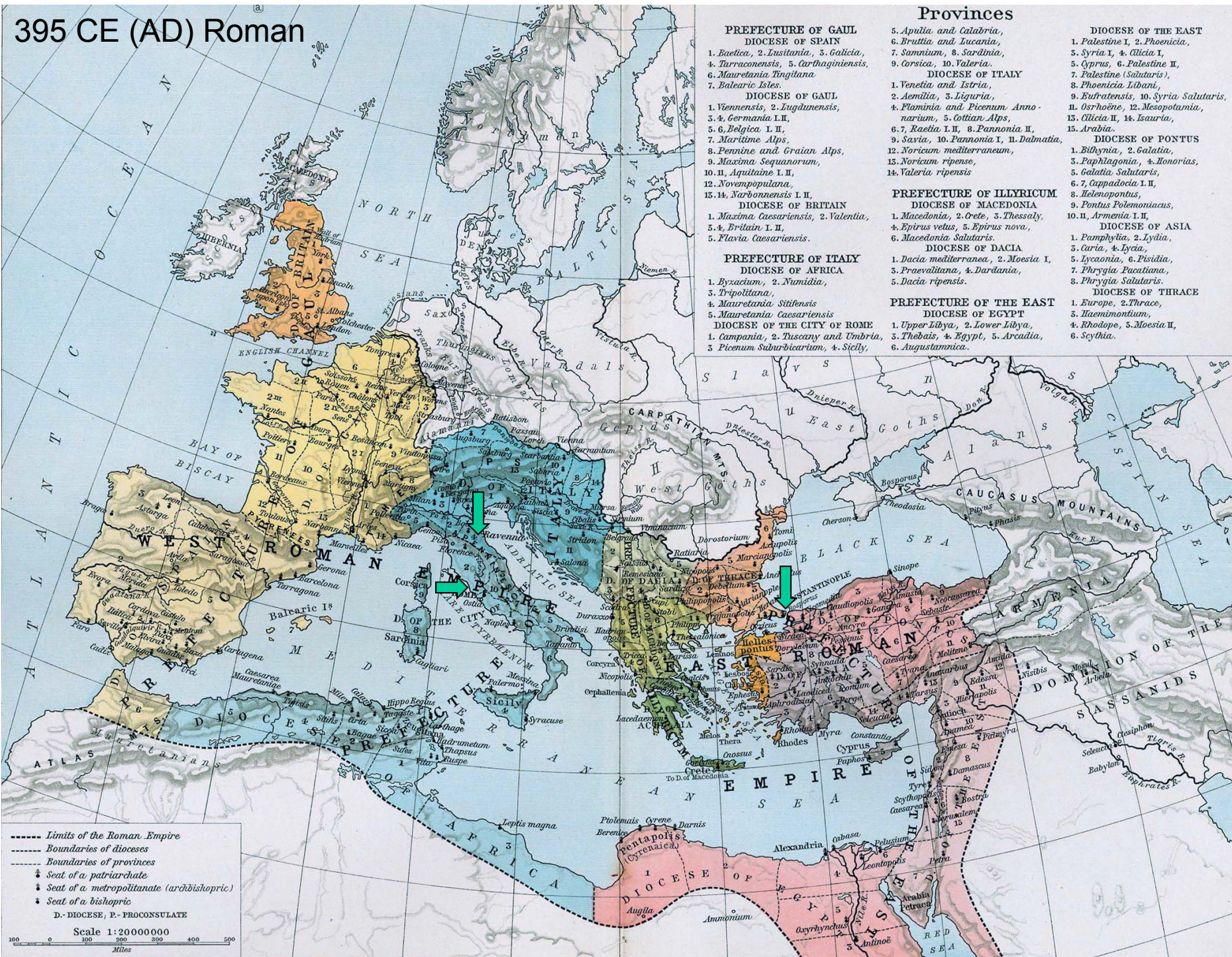
Rome under attack and malaria

402 CE (AD) Moved capital to Ravenna

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

493-553 Ostrogothic Kingdom

# 395 CE (AD) Roman



- PREFECTURE OF GAUL**  
**DIocese OF SPAIN**  
 1. Baetica, 2. Lusitania, 3. Galicia,  
 4. Tarraconensis, 5. Carthaginensis,  
 6. Mauretania Tingitana  
 7. Balearic Isles.
- DIocese OF GAUL**  
 1. Viennensis, 2. Lugdunensis,  
 3. 4. Germania I II,  
 5. 6. Belgica I II,  
 7. Maritime Alps,  
 8. Pennine and Graia Alps,  
 9. Maxima Sequanorum,  
 10. 11. Aquitaine I II,  
 12. Novempopulana,  
 15. 14. Narbonensis I II.
- DIocese OF BRITAIN**  
 1. Maxima Caesariensis, 2. Valentia,  
 5. 4. Britain I II,  
 5. Flavia Caesariensis.
- PREFECTURE OF ITALY**  
**DIocese OF AFRICA**  
 1. Byzacium, 2. Numidia,  
 3. Tripolitana,  
 4. Mauretania Sitifensis  
 5. Mauretania Caesariensis
- DIocese OF THE CITY OF ROME**  
 1. Campania, 2. Tuscany and Umbria,  
 3. Picenum Suburbicarium, 4. Sicily,

- Provinces**
- DIocese OF THE EAST**  
 1. Palestine I, 2. Phoenicia,  
 5. Syria I, 4. Cilicia I,  
 5. Cyprus, 6. Palestine II,  
 7. Palestine (Salutaris),  
 8. Phoenicia Libani,  
 9. Eufrotensis, 10. Syria Salutaris,  
 11. Osrhoene, 12. Mesopotamia,  
 15. Cilicia II, 14. Isauria,  
 15. Arabia.
- DIocese OF PONTUS**  
 1. Bithynia, 2. Galatia,  
 5. Paphlagonia, 4. Monorais,  
 5. Galatia Salutaris,  
 6. 7. Cappadocia I II,  
 8. Helenopontus,  
 9. Pontus Polemoniacus,  
 10. 11. Armenia I II.
- DIocese OF ASIA**  
 1. Pamphylia, 2. Lydia,  
 5. Caria, 4. Lycia,  
 5. Lycania, 6. Pisidia,  
 7. Phrygia Lycutiana,  
 8. Phrygia Salutaris.
- DIocese OF THRACE**  
 1. Europe, 2. Thrace,  
 5. Haemimontium,  
 4. Rhodope, 5. Moesia II,  
 6. Scythia.
- PREFECTURE OF ILLYRICUM**  
**DIocese OF MACEDONIA**  
 1. Macedonia, 2. Crete, 5. Thessaly,  
 4. Epirus vetus, 5. Epirus nova,  
 6. Macedonia Salutaris.
- DIocese OF DACIA**  
 1. Dacia mediterranea, 2. Moesia I,  
 5. Praevaltana, 4. Dardania,  
 5. Dacia ripensis.
- PREFECTURE OF THE EAST**  
**DIocese OF EGYPT**  
 1. Upper Libya, 2. Lower Libya,  
 5. Thebais, 4. Egypt, 5. Arcadia,  
 6. Augustamnica.

----- Limits of the Roman Empire  
 - - - - - Boundaries of dioceses  
 - - - - - Boundaries of provinces  
 † Seat of a patriarchate  
 † Seat of a metropolitanate (archbishopric)  
 † Seat of a bishopric

D. - DIocese, P. - PROCONSULATE

Scale 1:20000000

0 100 200 300 400 500  
 Miles

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

Architects: Isidore of Miletus and Anthemius of Tralles

Almost Square – walls broken by aisles

Breathtaking use of light, entering through a wreath of window around the dome

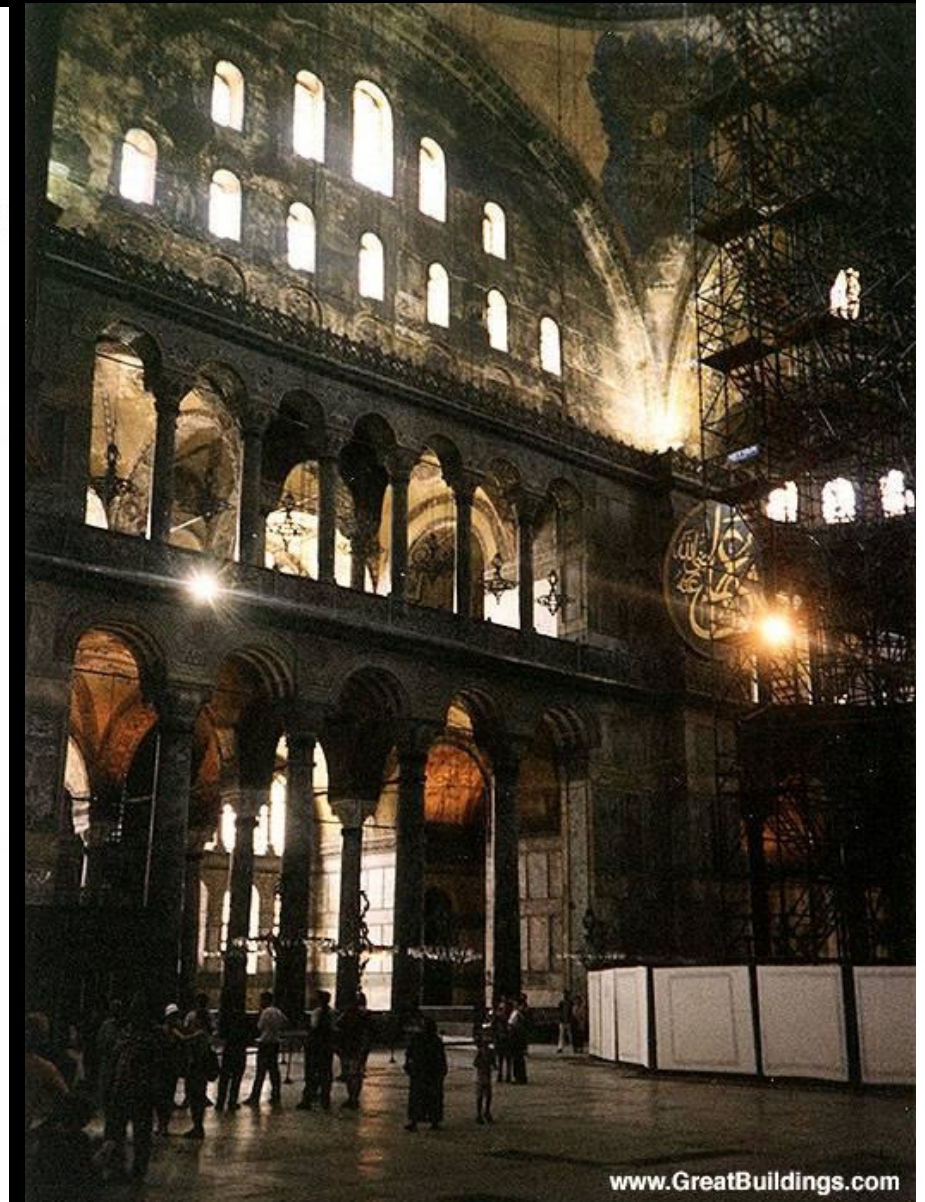
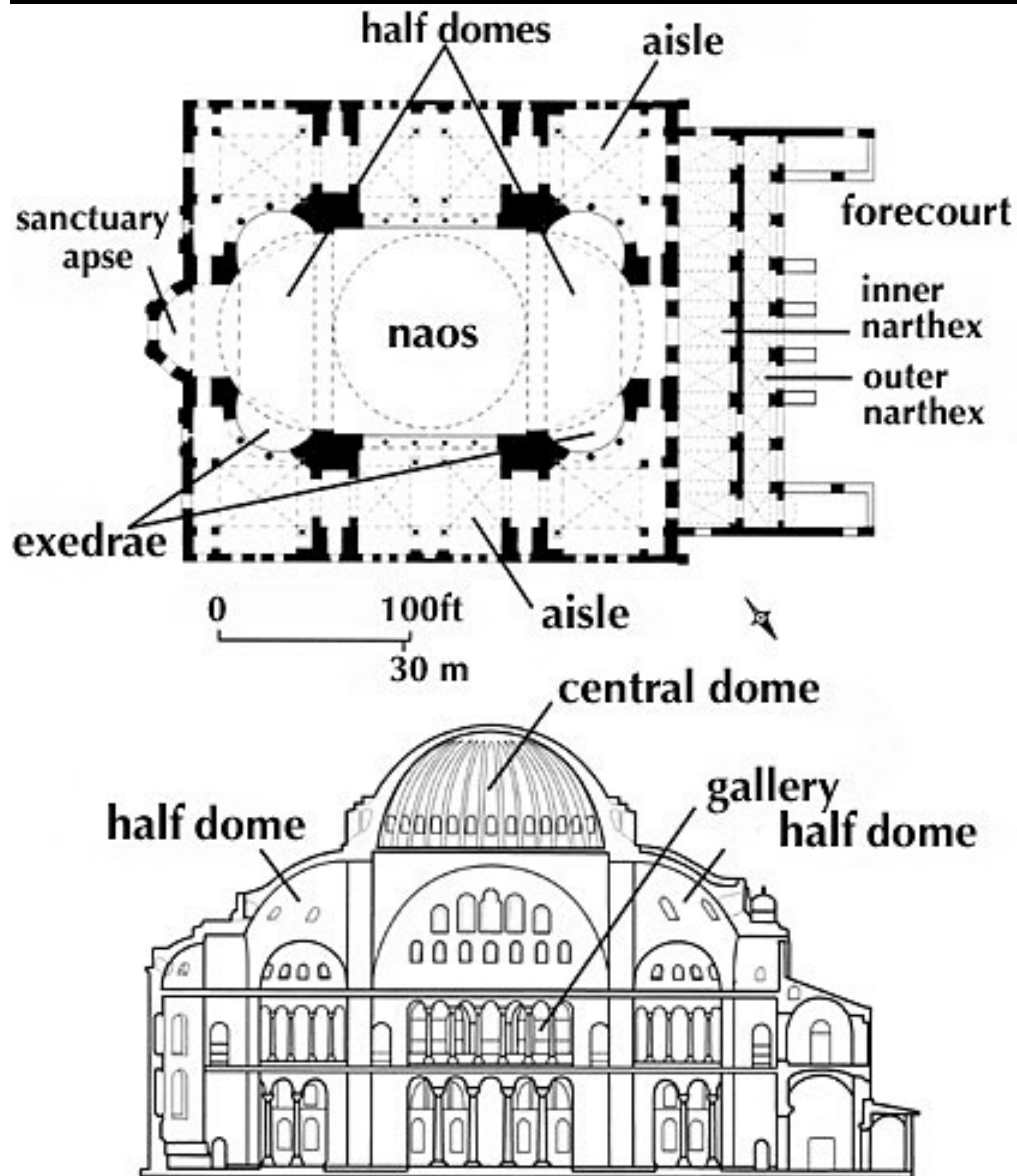
Converted to a Mosque in 1453 CE

Soaring height 182'

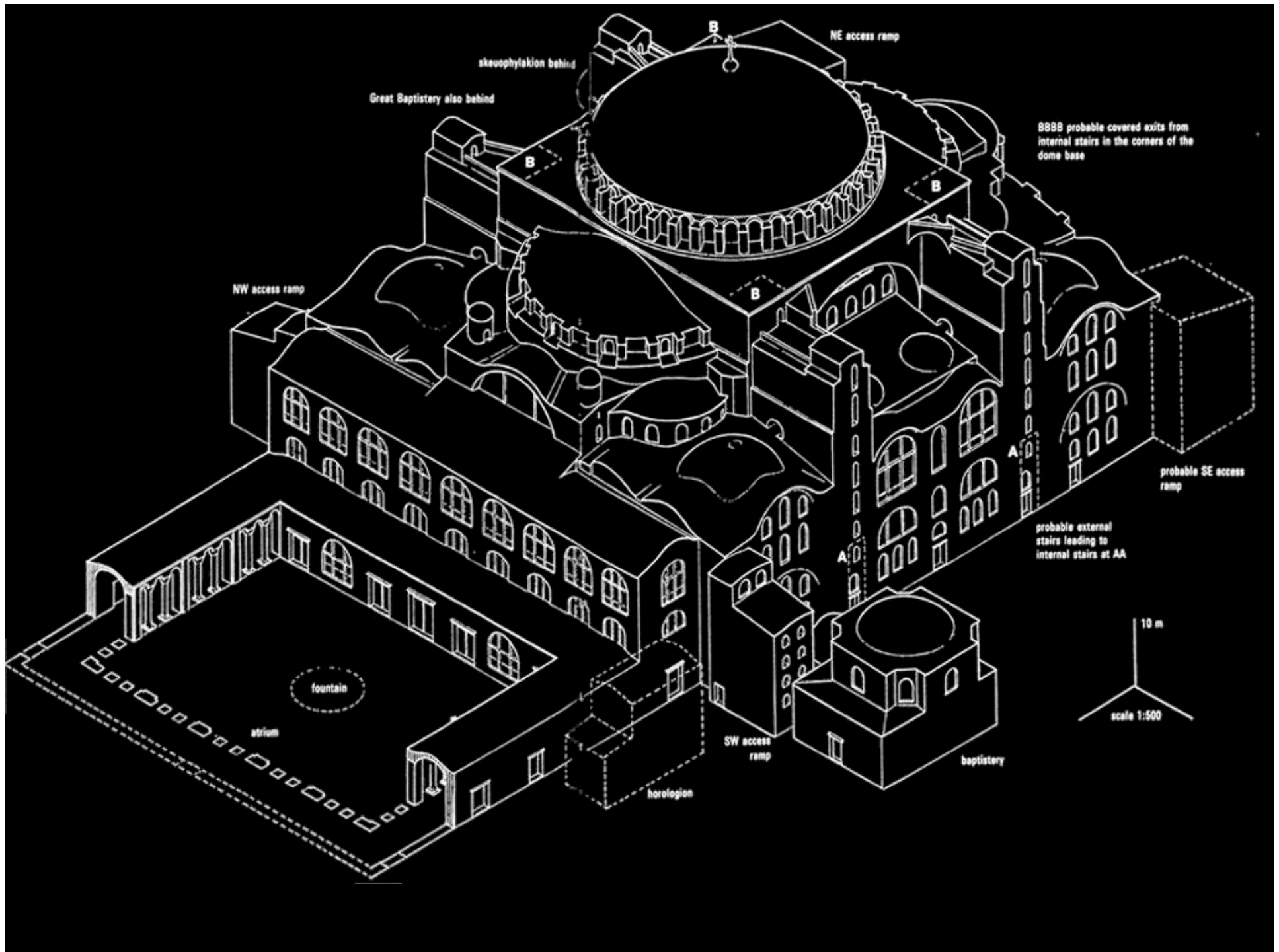
Diameter of 102'



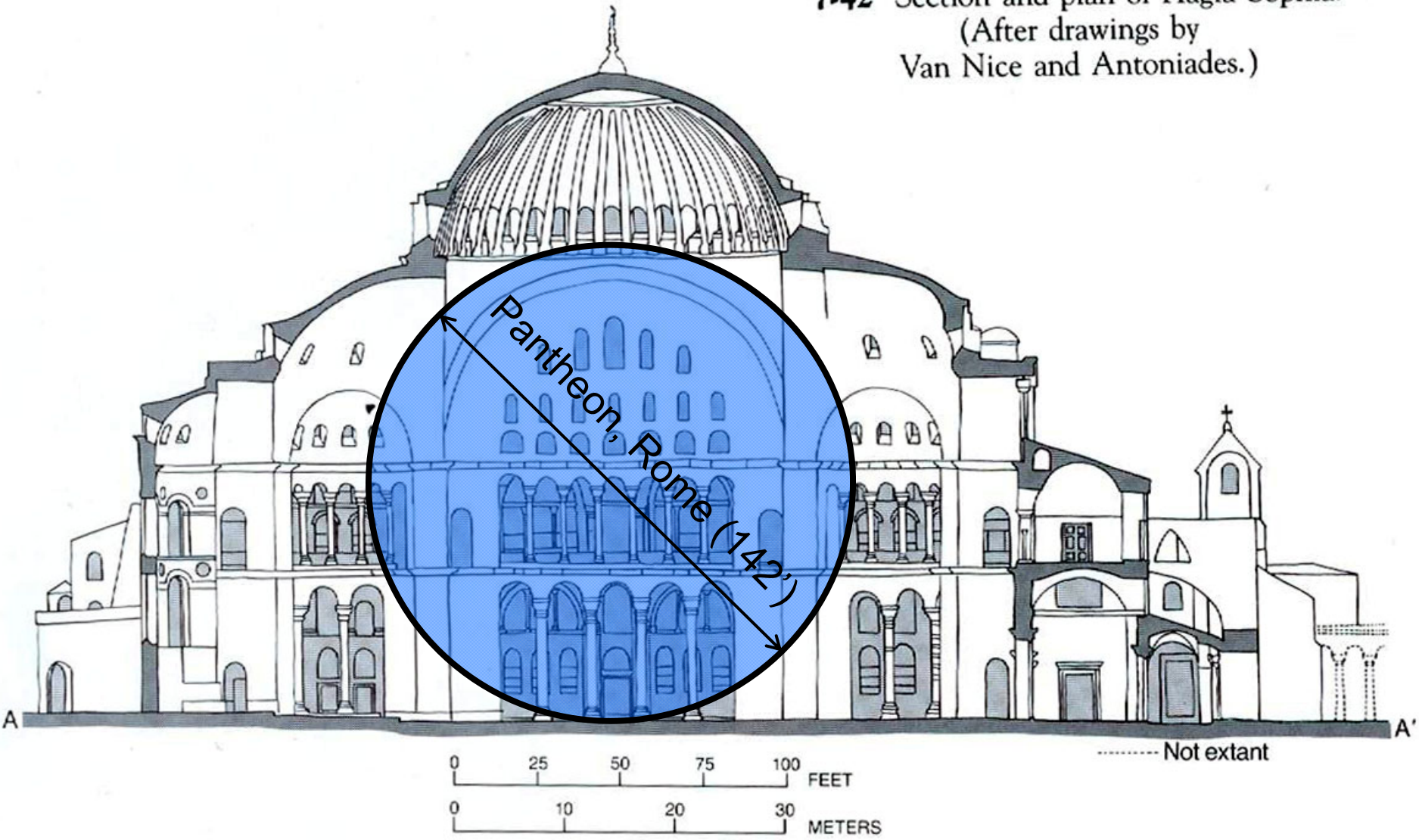
# Hagia Sophia 532-37 CE (AD), Istanbul, Turkey

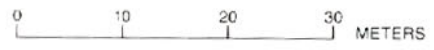




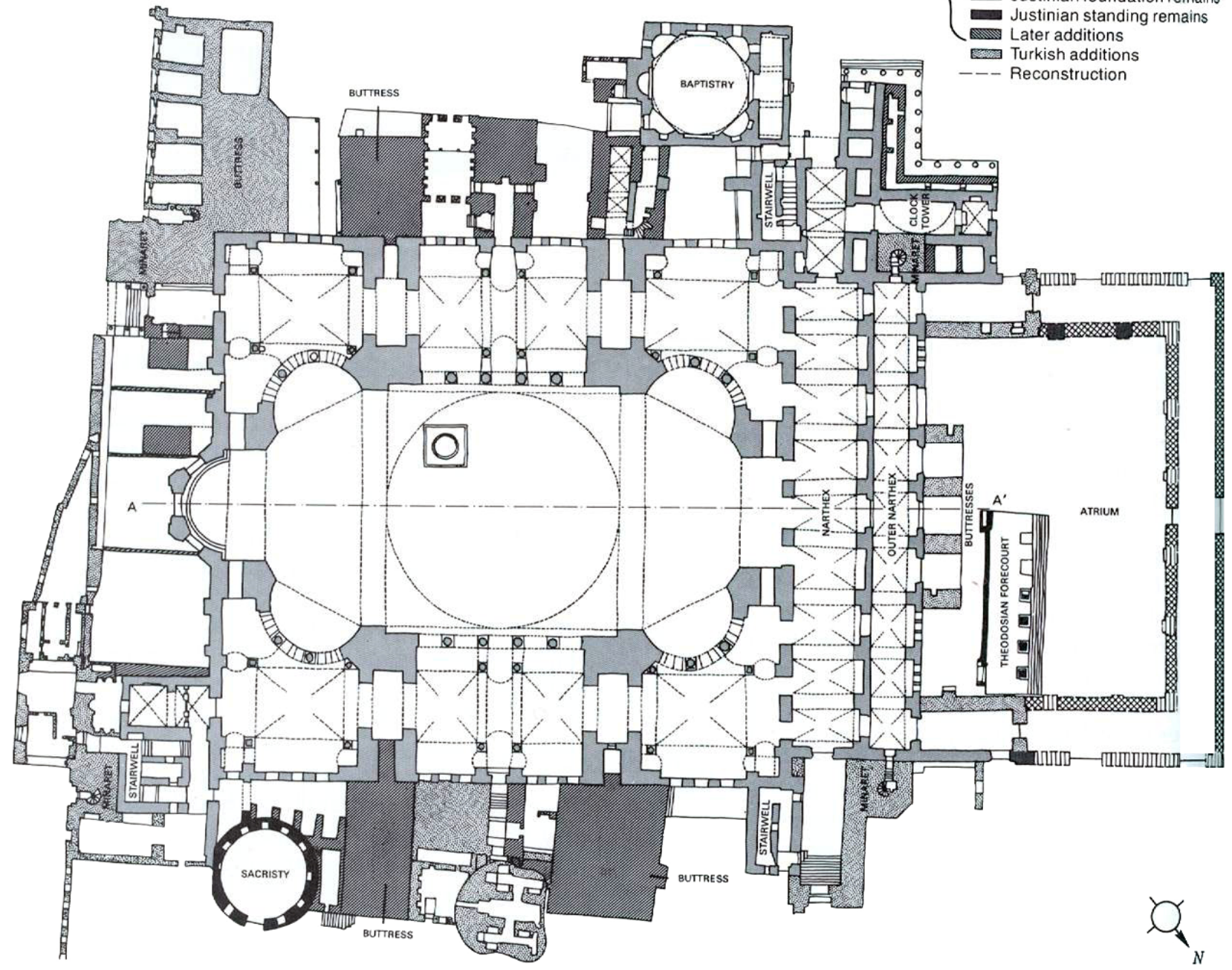


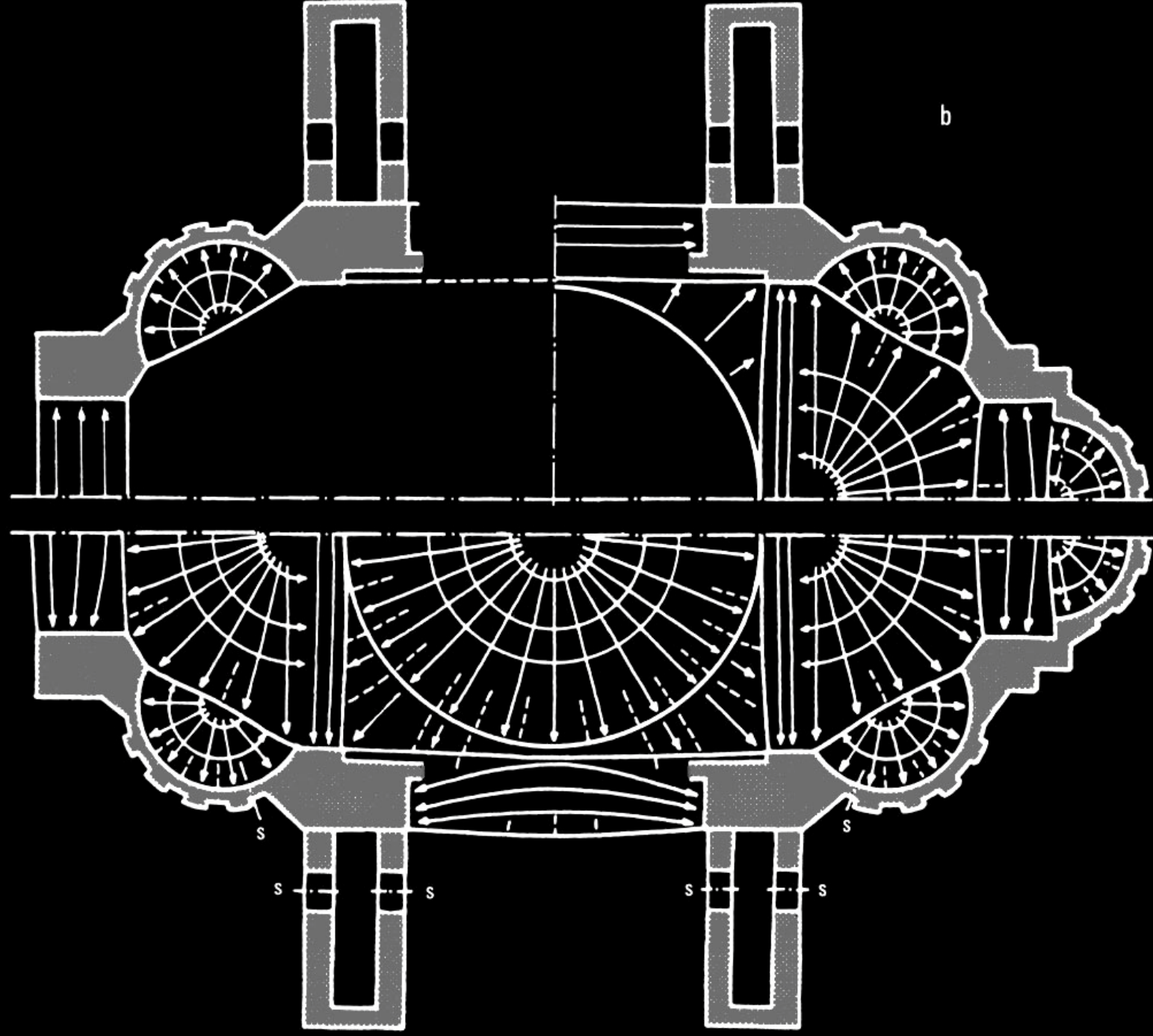
7-42 Section and plan of Hagia Sophia.  
(After drawings by  
Van Nice and Antoniadès.)

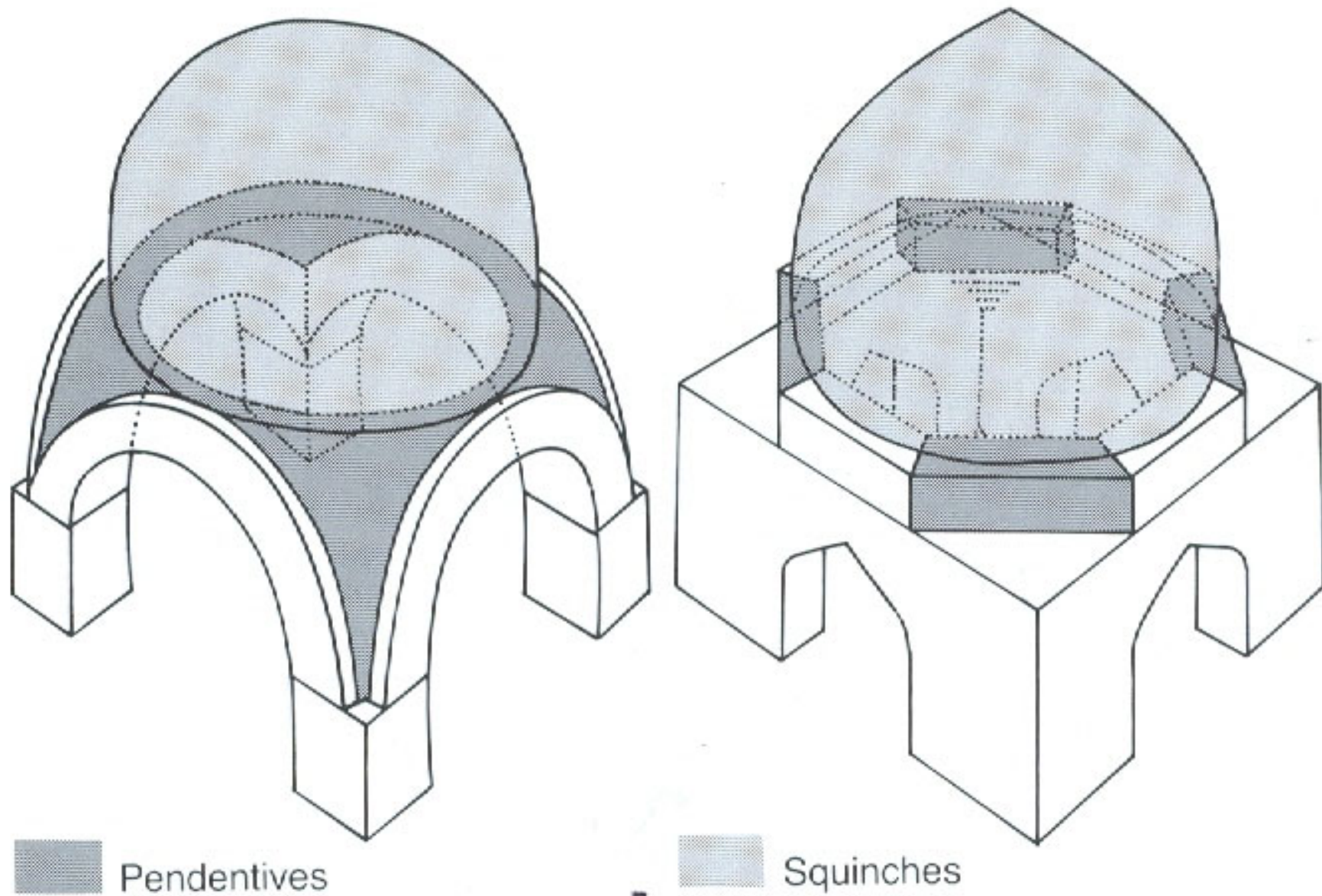




- BYZANTINE
- Theodosian
  - Justinian intact
  - Justinian speculative
  - Justinian foundation remains
  - Justinian standing remains
  - Later additions
  - Turkish additions
  - Reconstruction



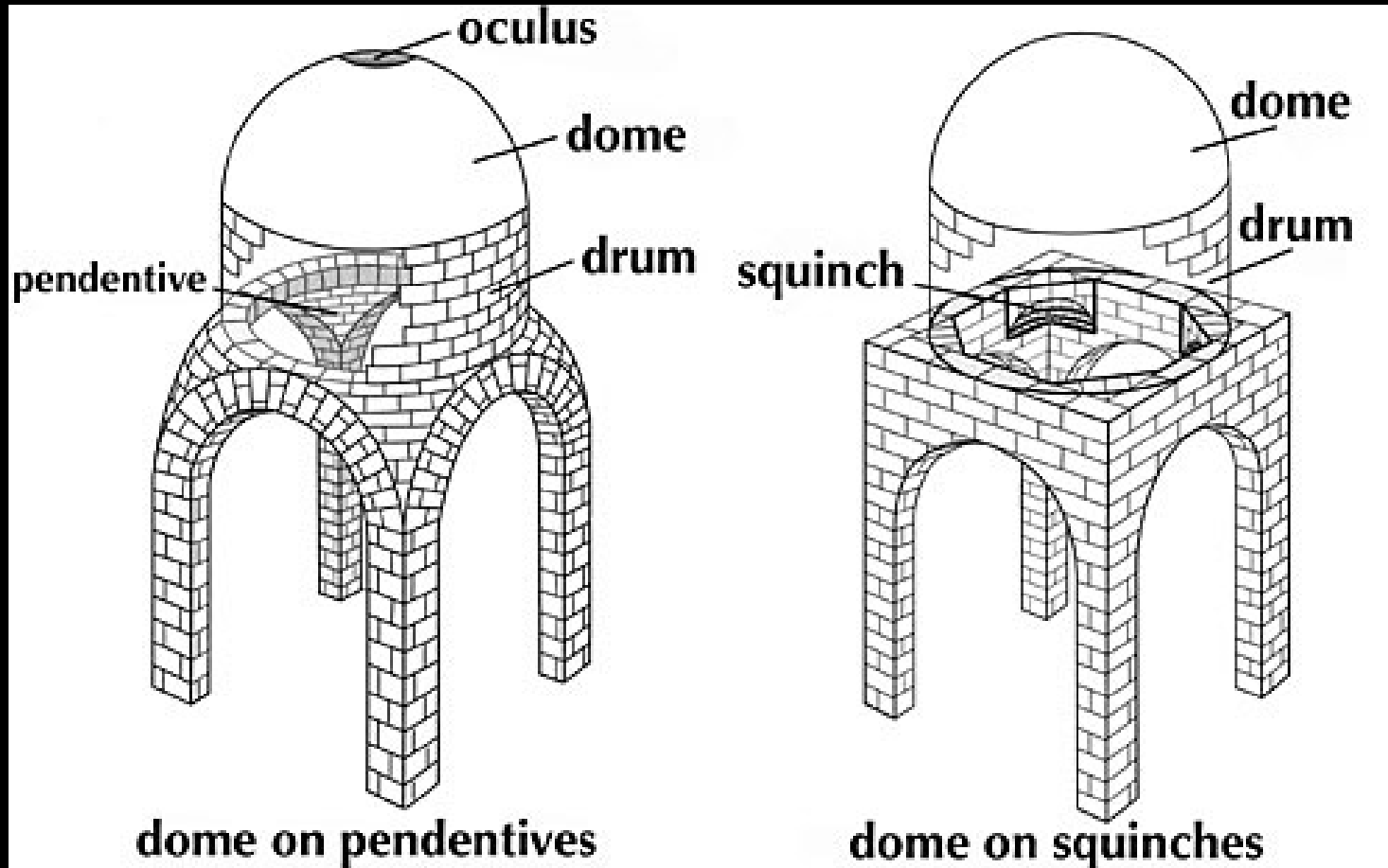




**7-45** Domes on pendentives (*left*) and squinches (*right*).

# 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 break 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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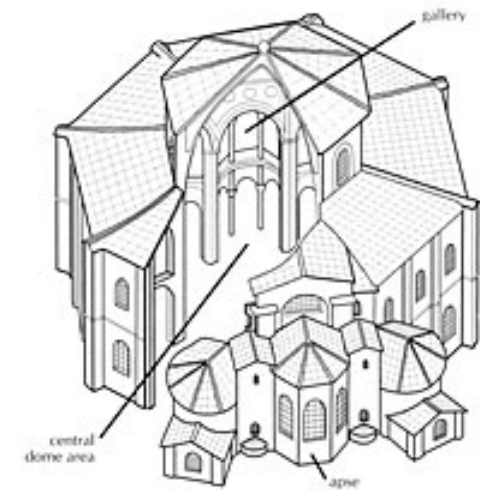
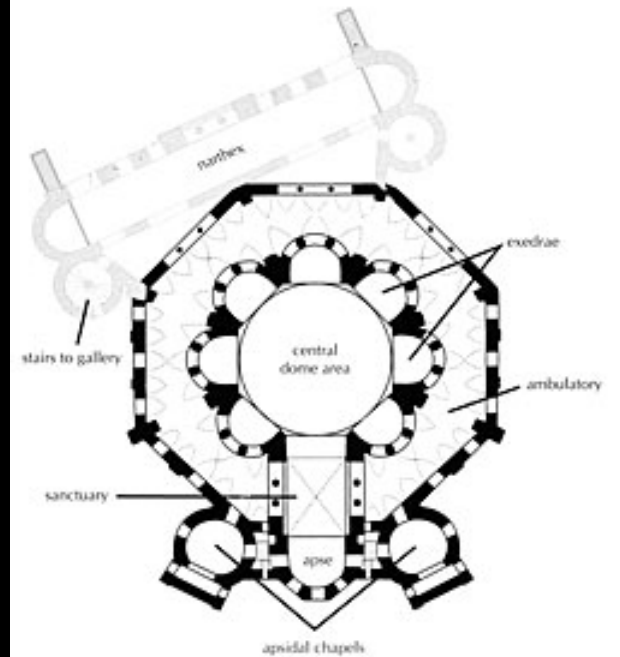


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by Vince Millett



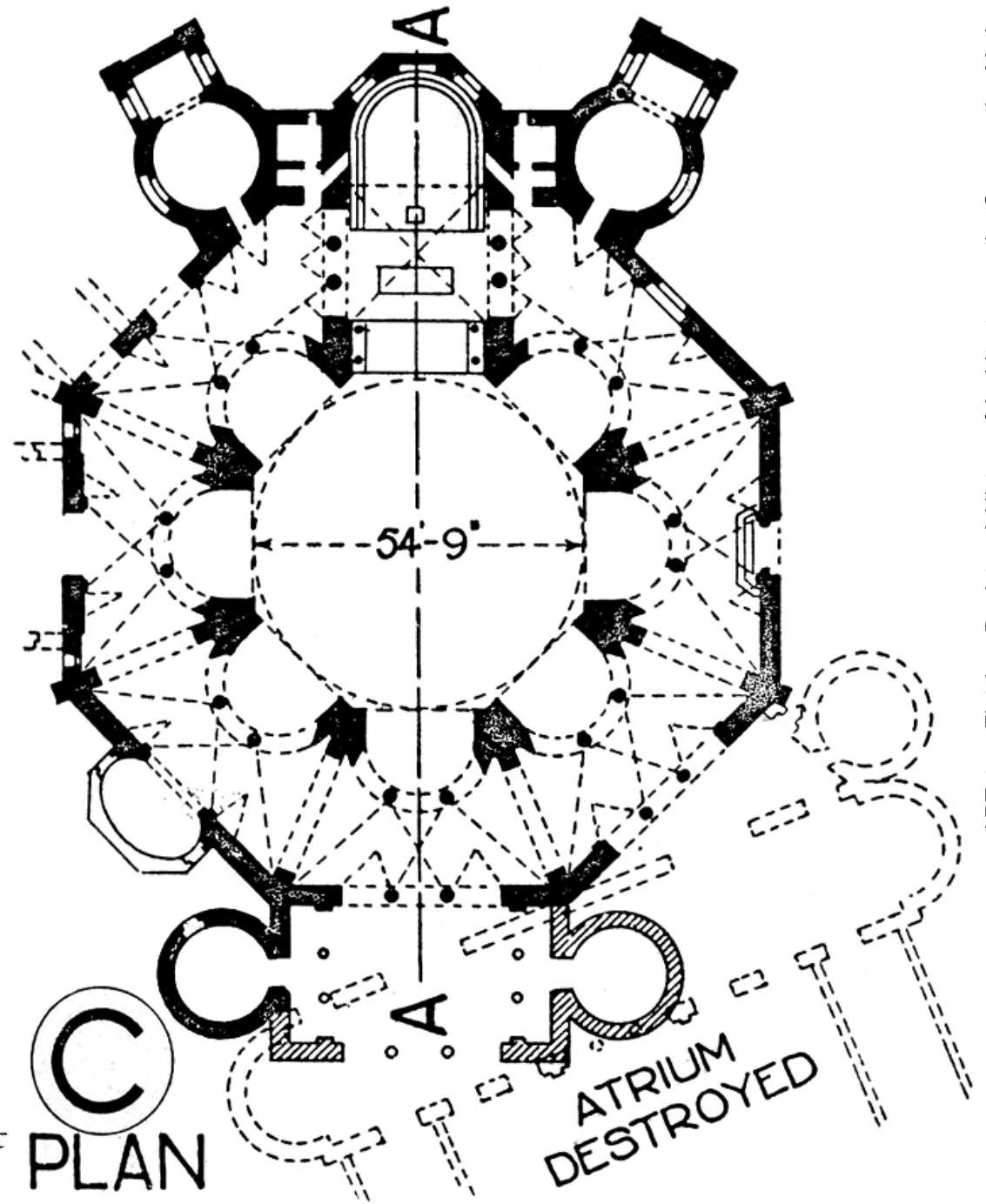
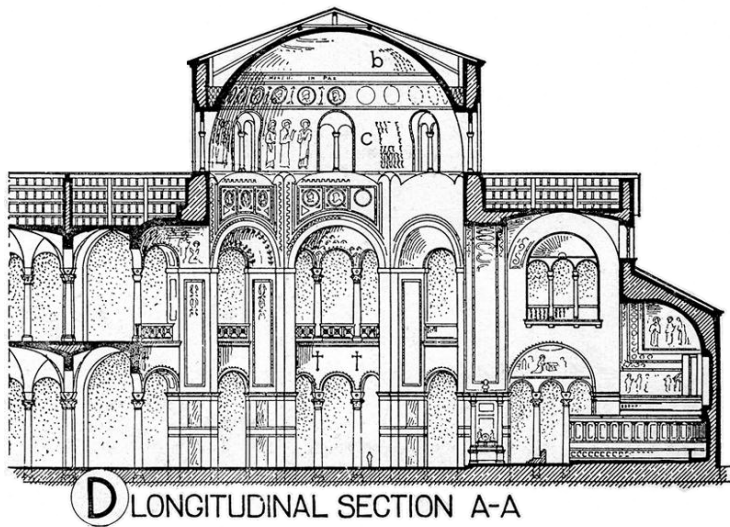
Wikimedia Commons <http://commons.wikimedia.org>

# Ravenna City of Mosaics

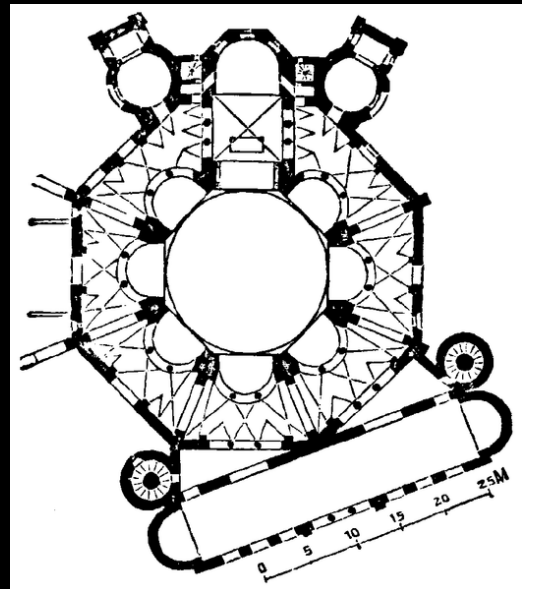


San Vitale 526-547 CE. Two concentric octagonal domes made of clay pots fitted into one another, covered w/timber roof and tiled

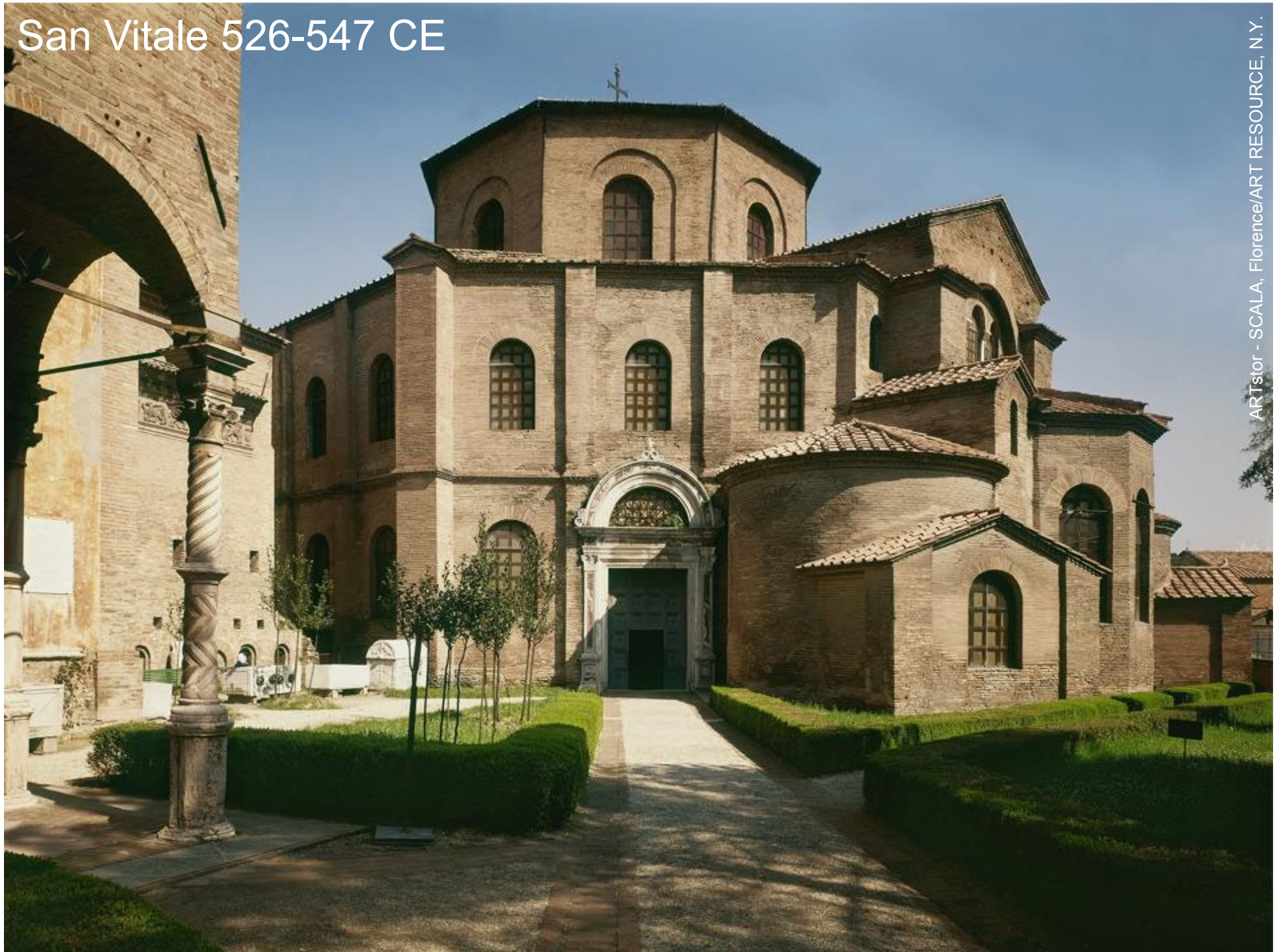
# San Vitale 526-547 CE



# San Vitale 526-547 CE



San Vitale 526-547 CE



San Vitale 526-547 CE



# Venice, Italy

5<sup>th</sup> Century  
founded on a  
Lagoon cut off  
from Mainland  
Escaping  
Barbarians



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

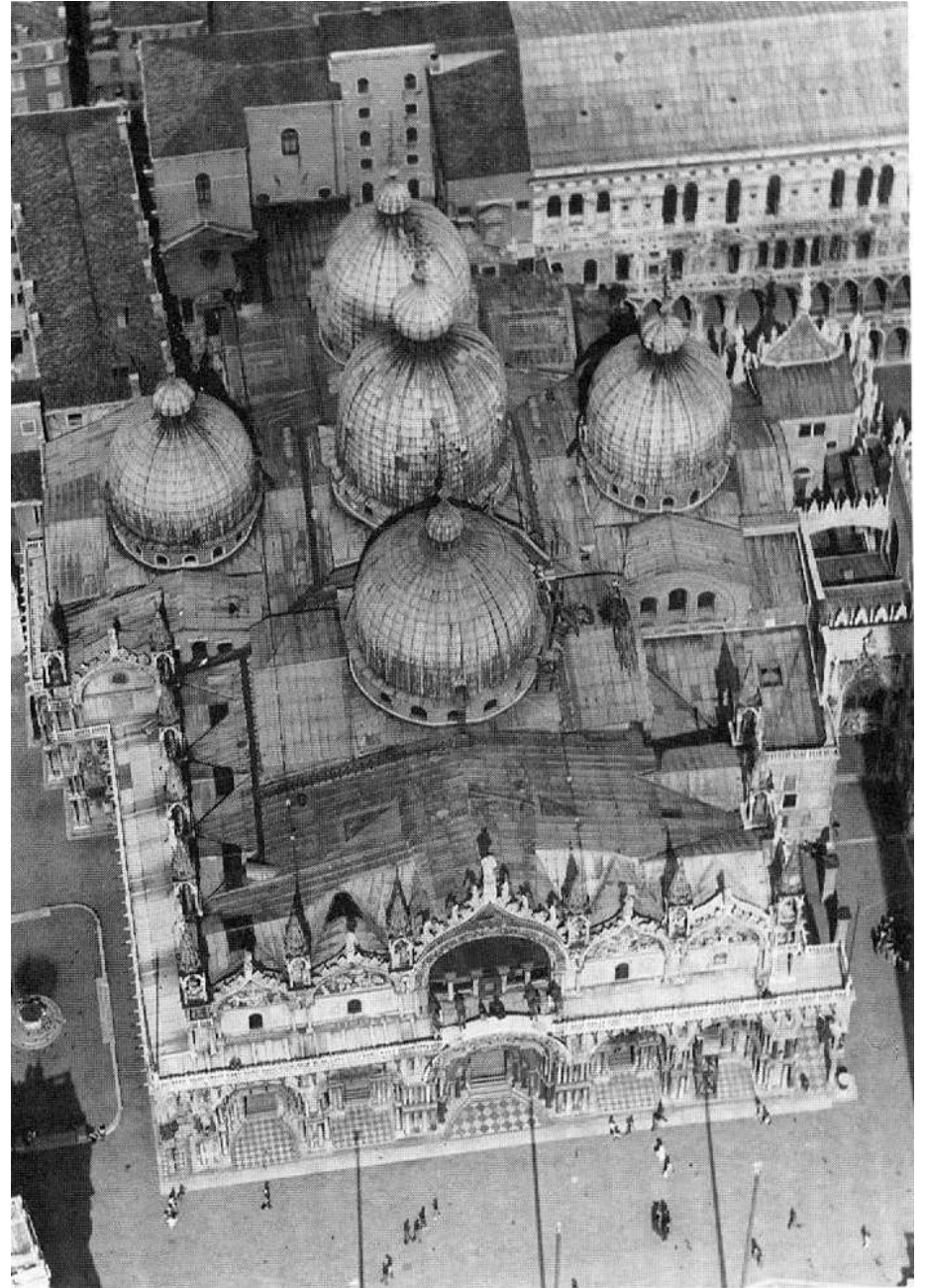
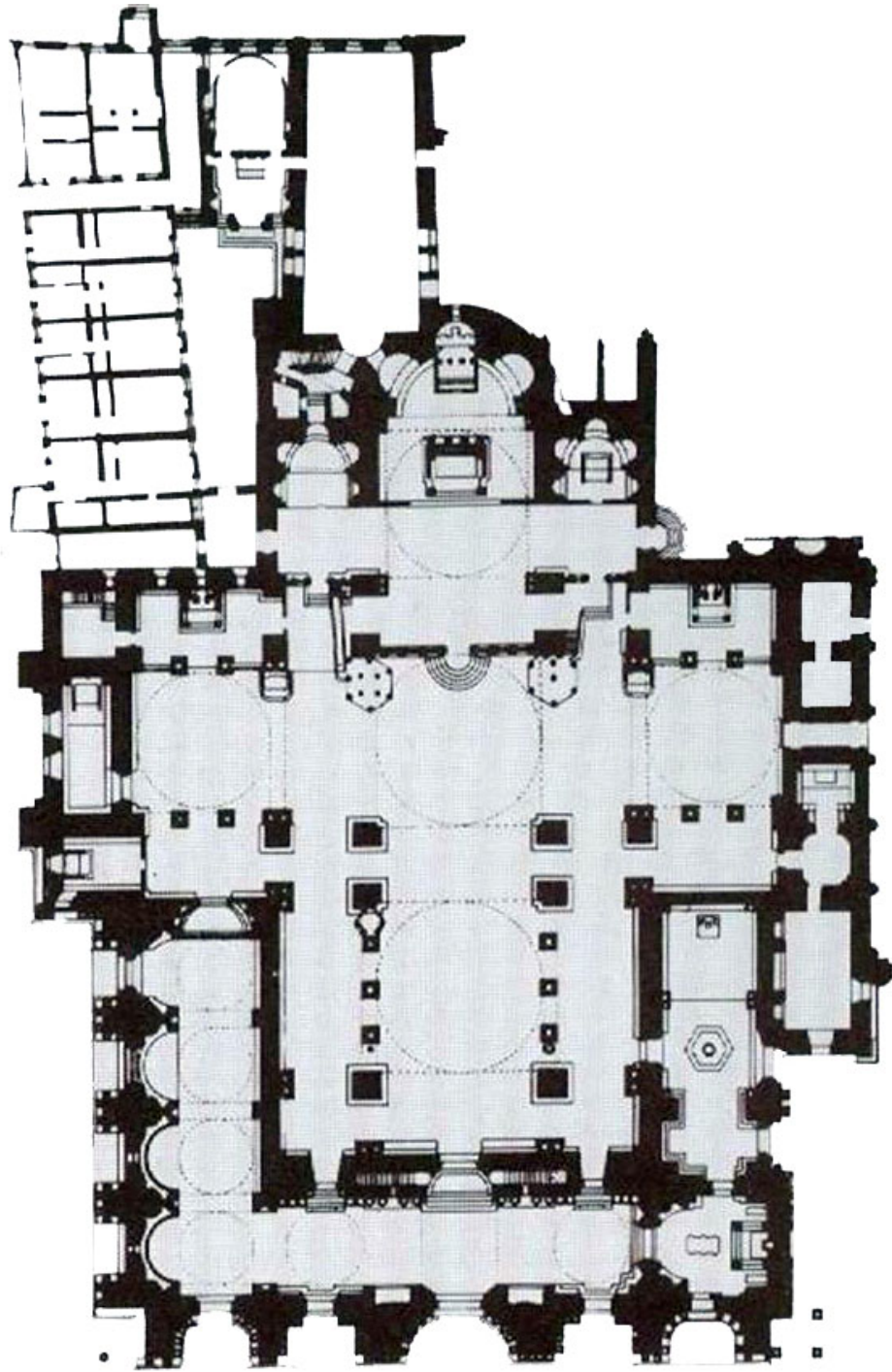


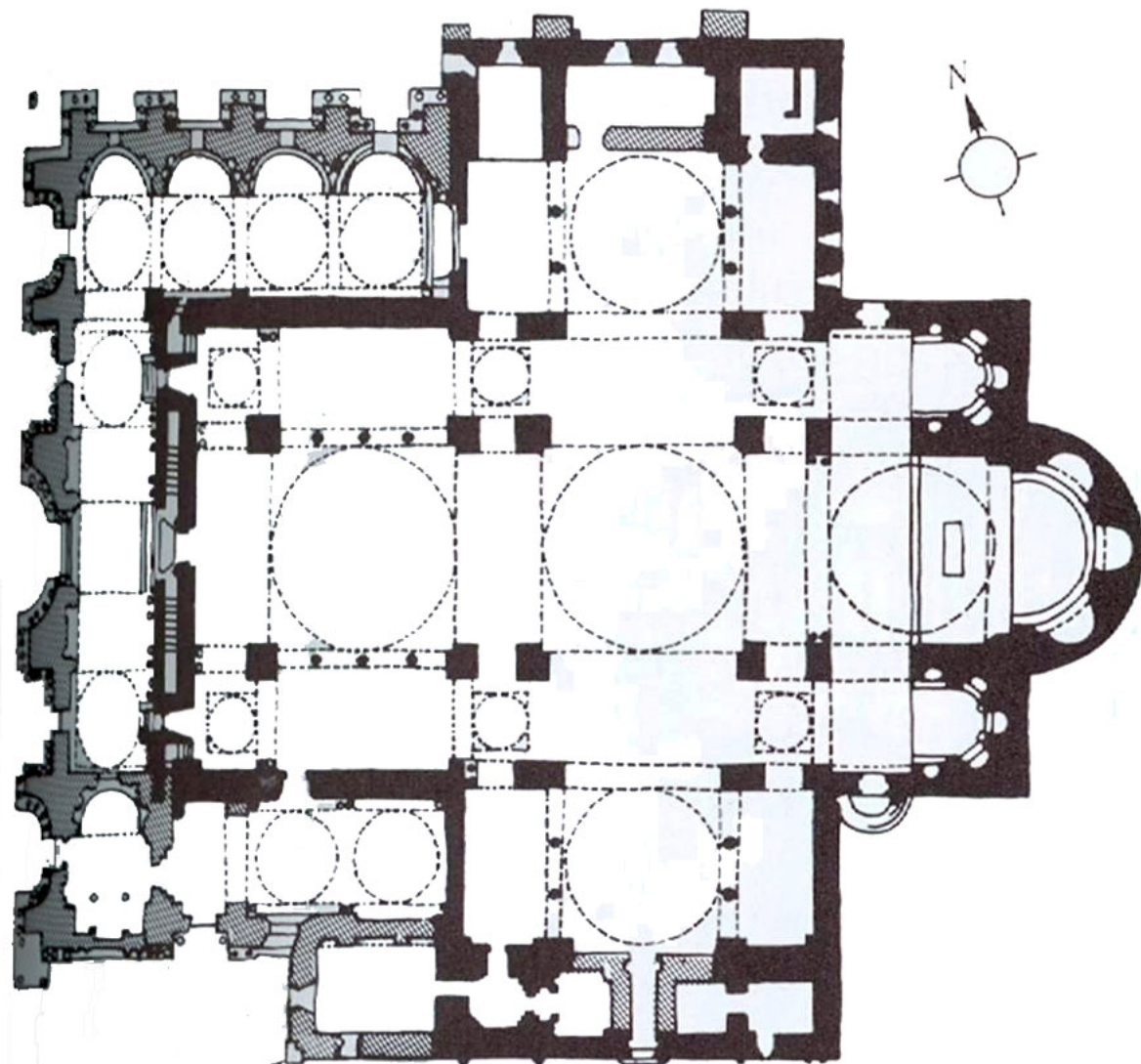
# Venice, Italy



**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.)

7-49 Interior of St. Mark's (view facing east).





# S. Marco, Venice, 1063-89 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
- 5 deeply recessed west portals lead into the Narthex
- Mosaics from different periods



# Greece

Little Metropolis Church  
13 th century

Athens Greece

38' x 25'

Smallest Cathedral

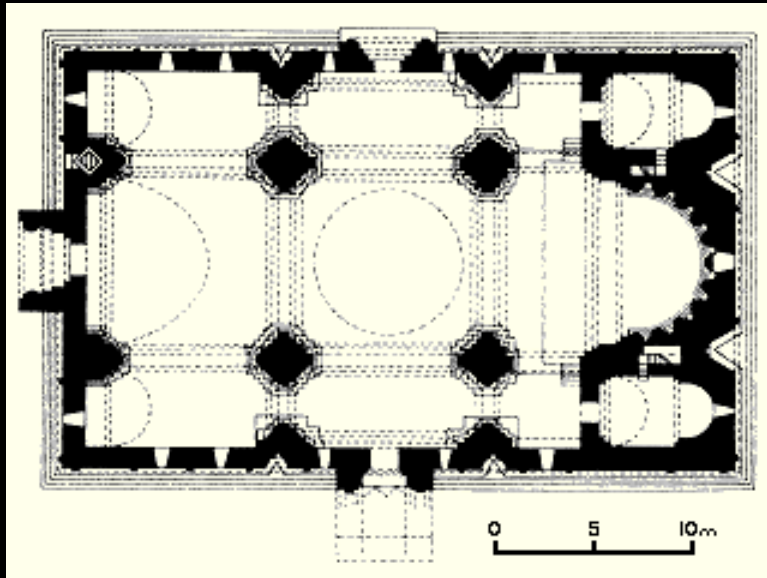
Antique marble reliefs





# Armenia High Plateau east of Euphrates

1<sup>st</sup> to adopt Christianity as state religion 301 CE



## Cathedral of Ani 989-1001 CE

Trdat was the Architect – no European Influence

Covered Domes with conical caps

Walls with reliefs, pointed arches, clustered piers

Almost a century before we see this in the West

# Russia

988 EC, Adopted Christianity

Borrowed arch from Constantinople

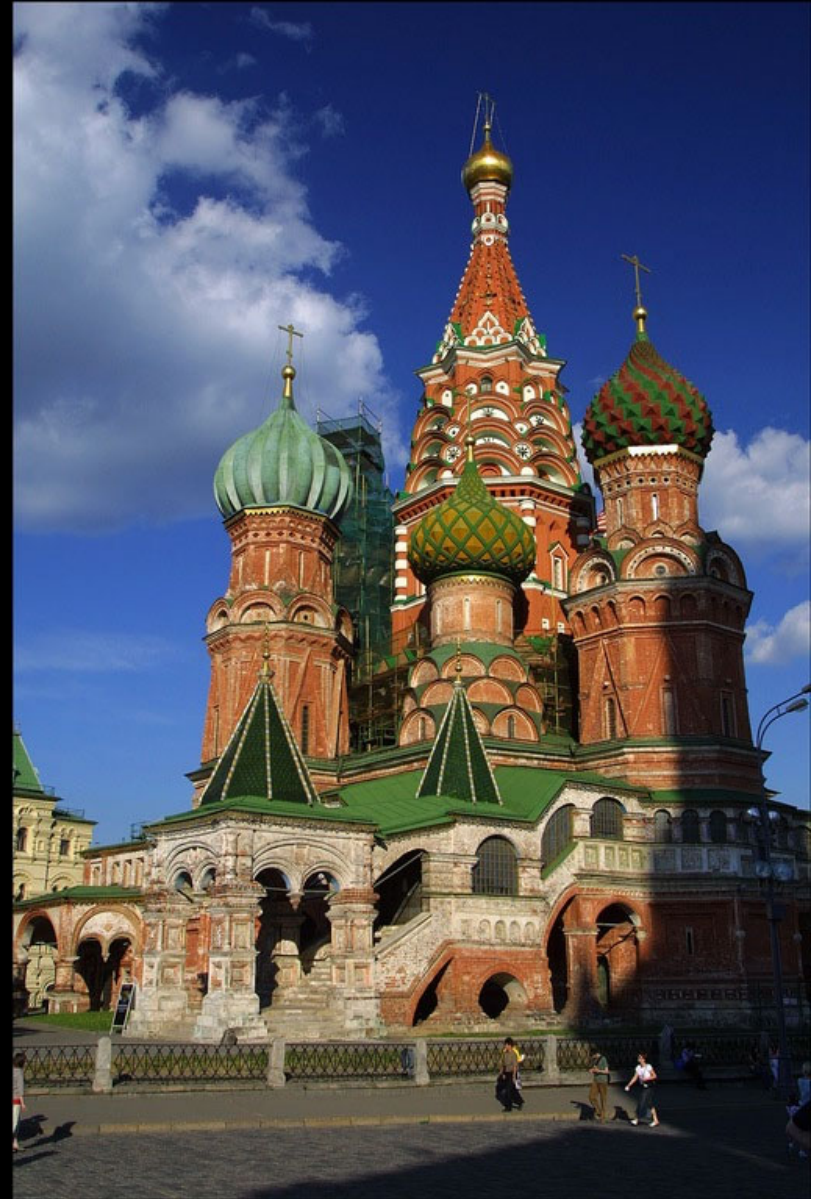
Shallow Dome failed with snow loads

Thus – the Russian Onion Dome

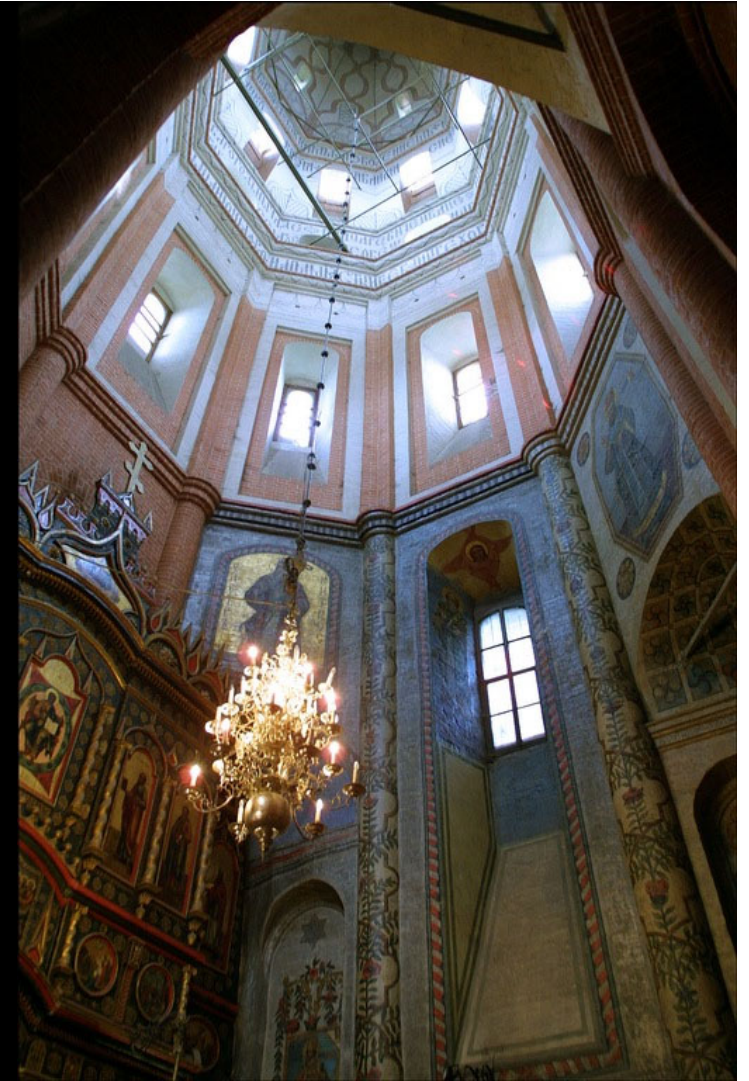
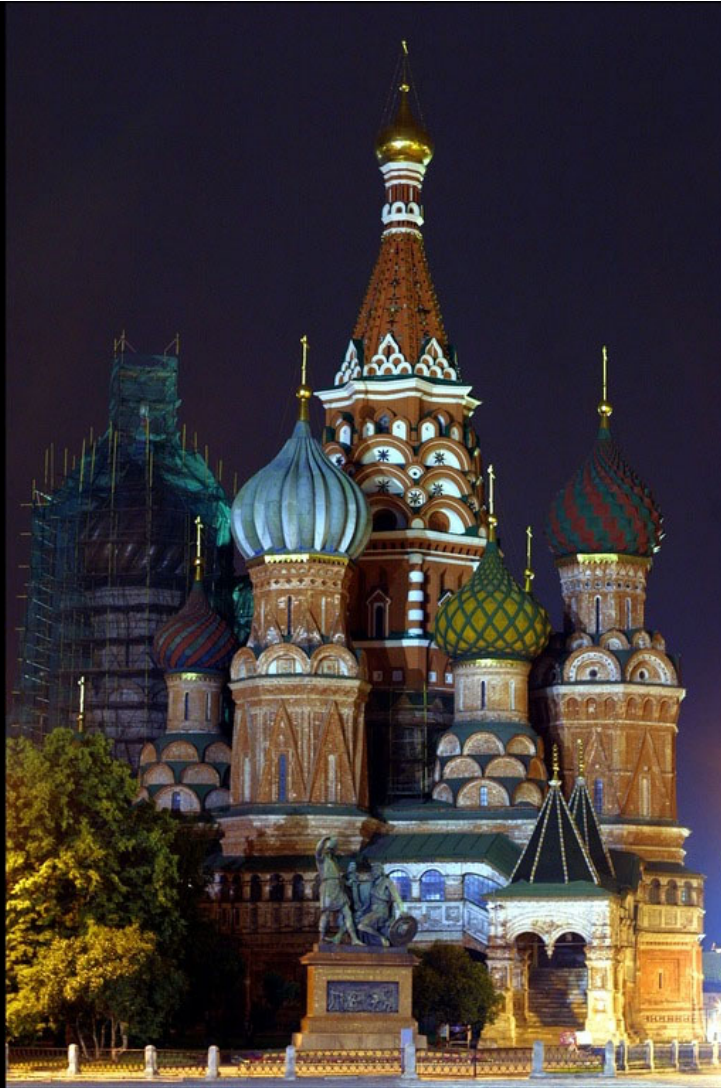
**St. Basil's** Red Square,

Moscow 1550-60 CE

Commissioned by Ivan the  
Terrible

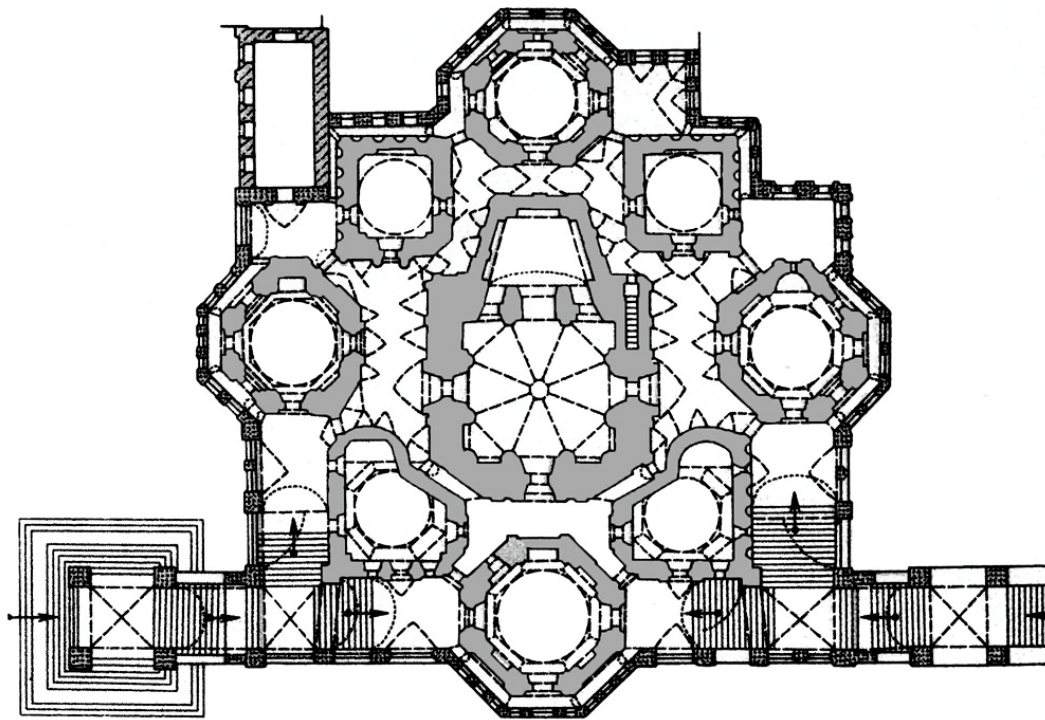


# Russia

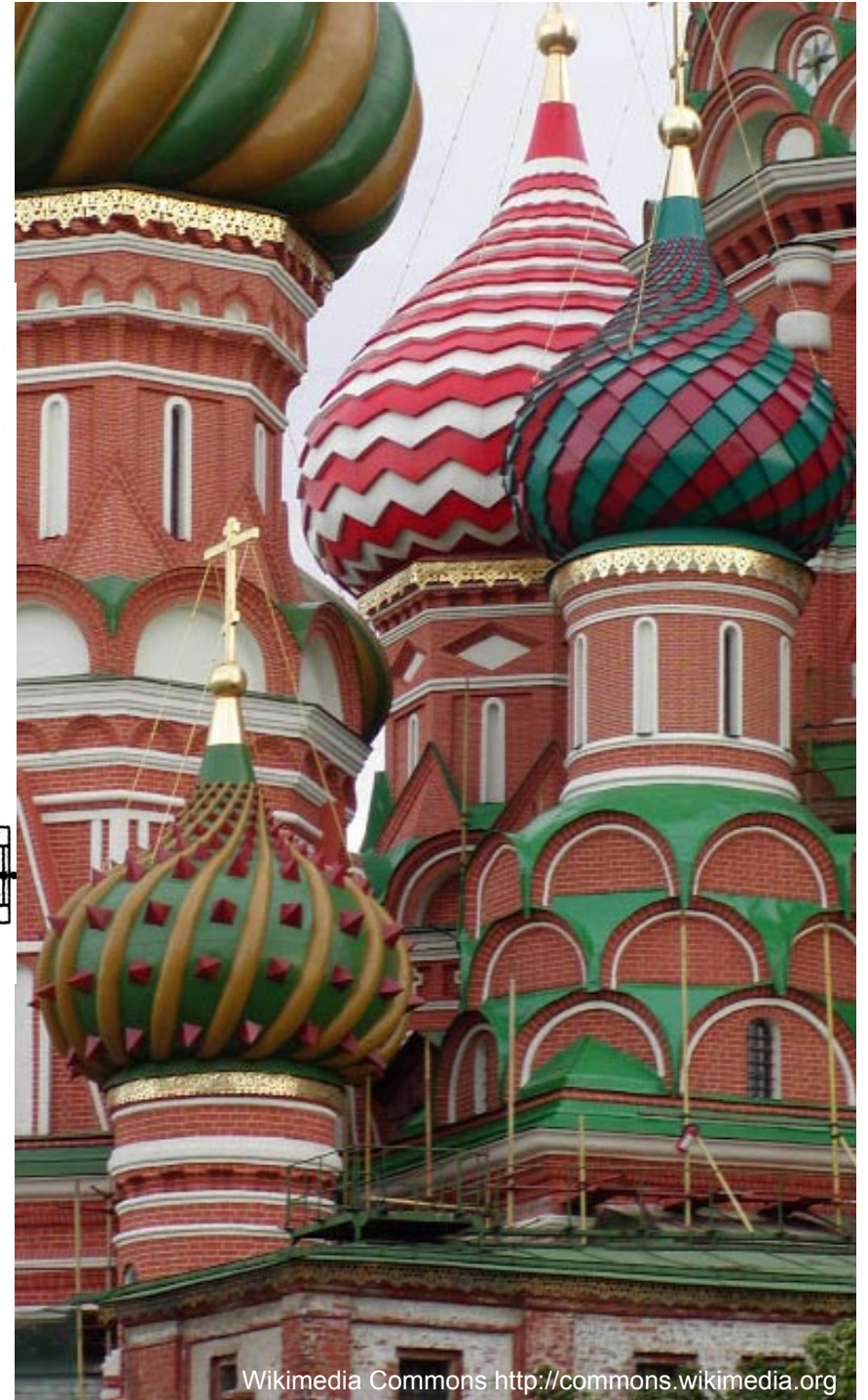


**St. Basil's** Red Square, Moscow 1550-60 CE  
Commissioned by Ivan the Terrible  
8 small churches clustered around one main church  
Originally white, but was painted in the 17<sup>th</sup> century

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



Plan is basically a greek cross

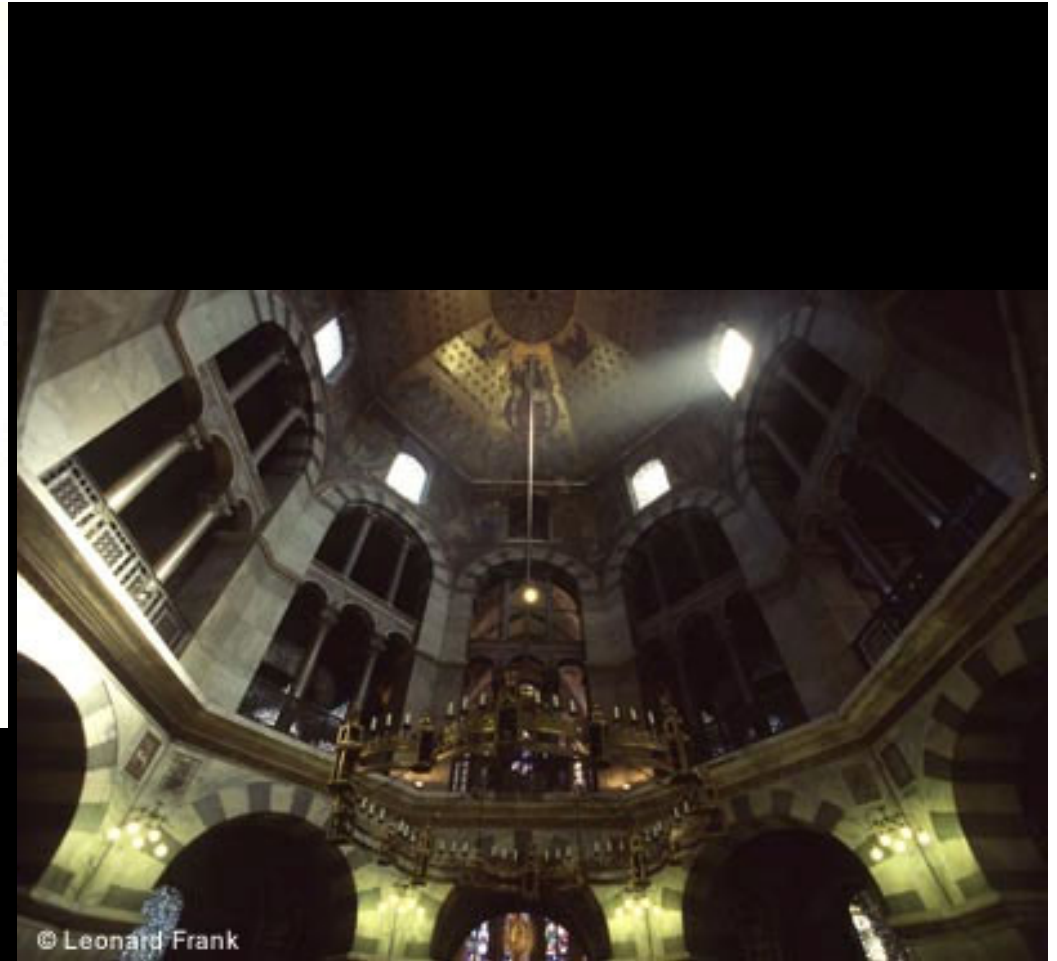
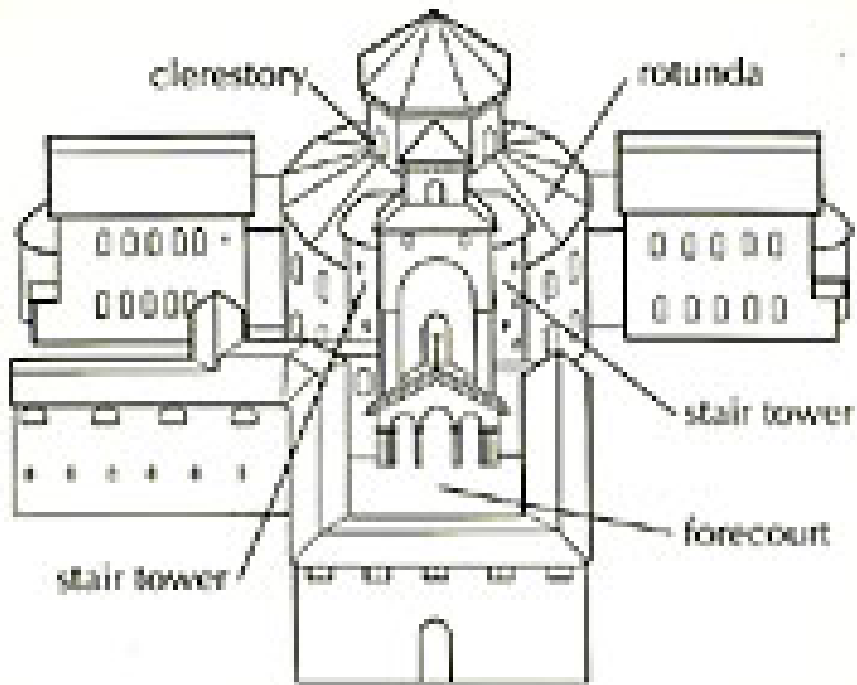


# Church of the Transfiguration, Kizhi Russia 1714



**King Charlemagne** Emperor 800-814 CE

Carolingian Architecture continued to the 10<sup>th</sup> Century  
550 –1050 CE were the doldrums of Western Architecture



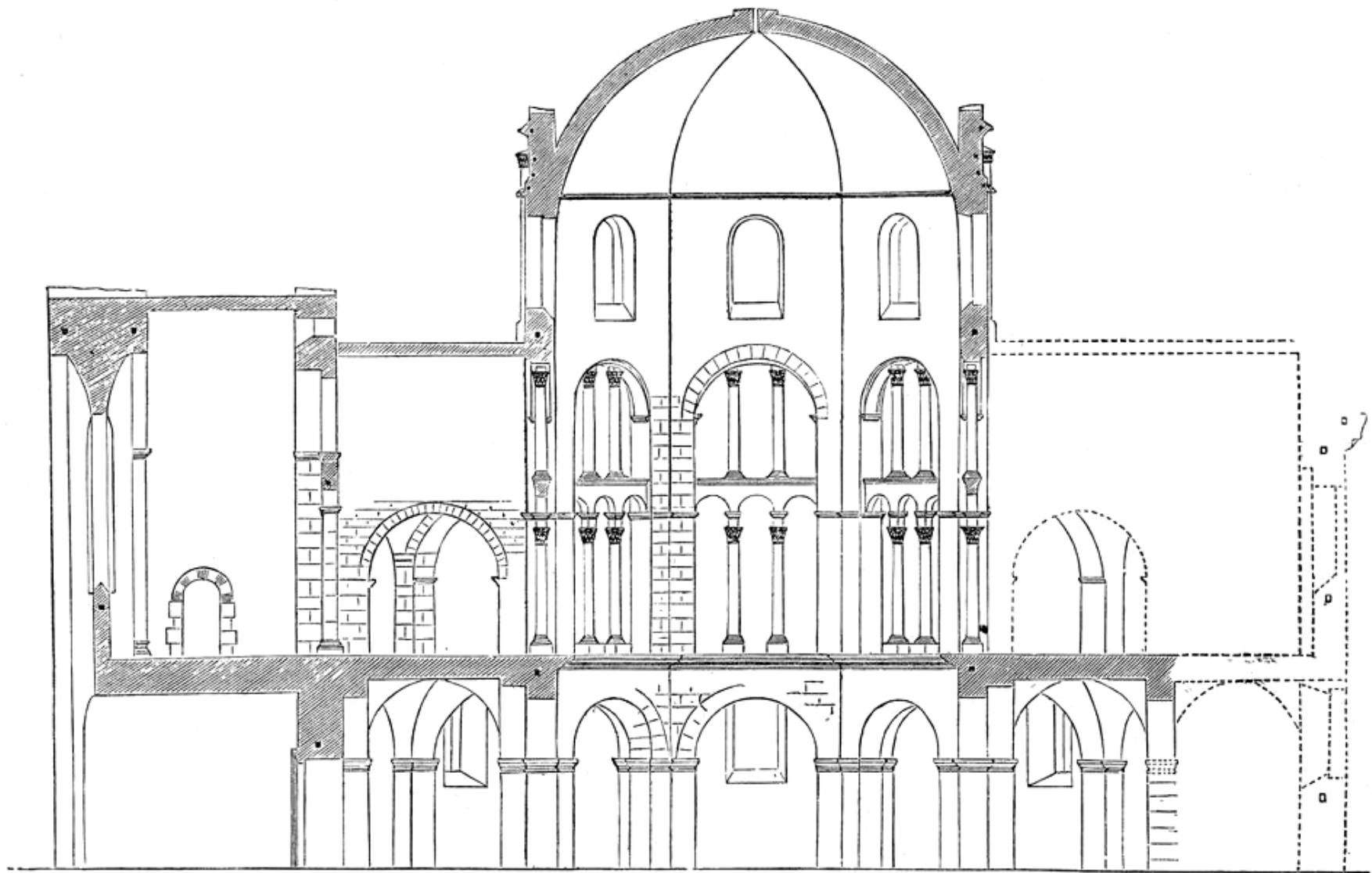
## Royal Chapel 805 CE, Aachen, Germany

Roman and Byzantine Influences

Construction Techniques were Roman

Designed based on San Vitale, but a very heavy building

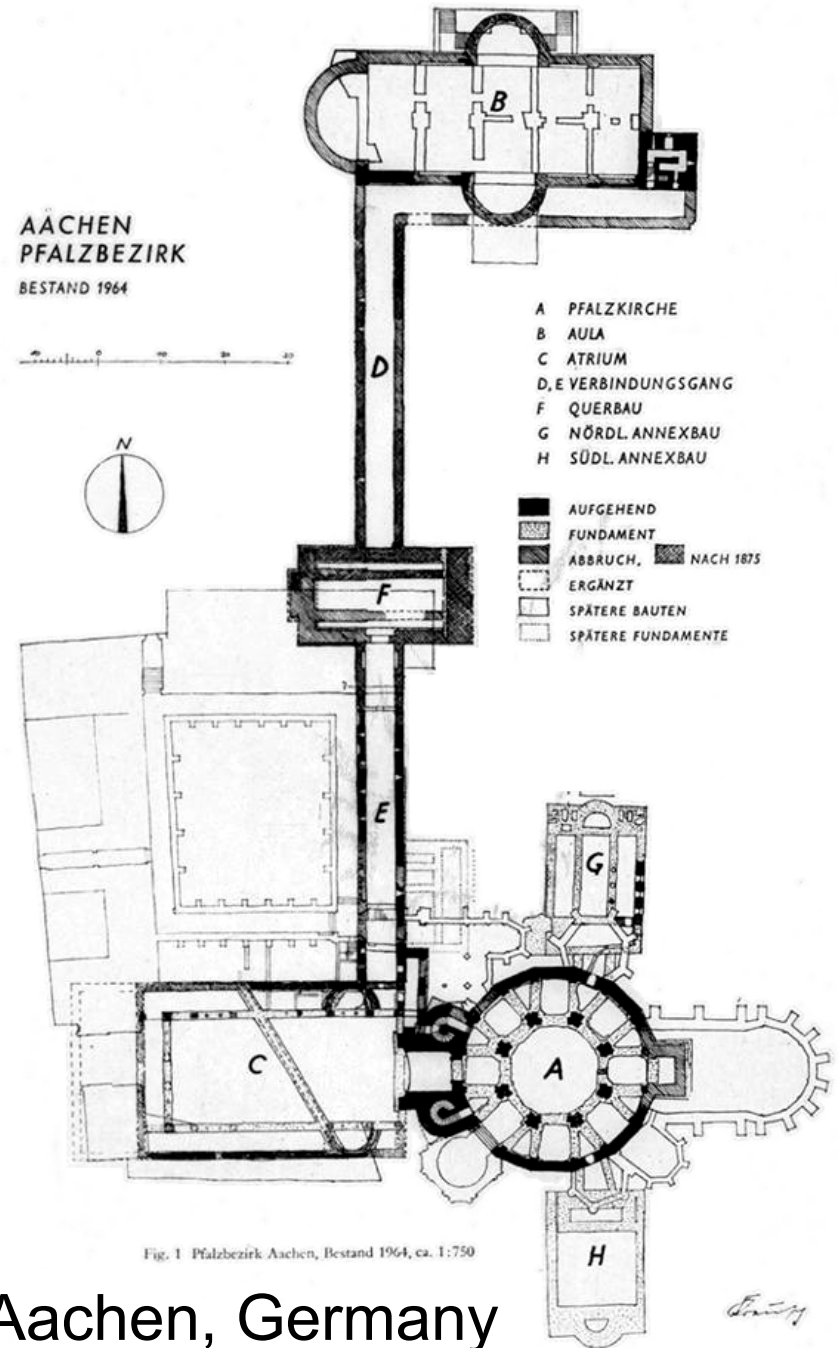
Palace Chapel and mausoleum for Charlemagne



Met.

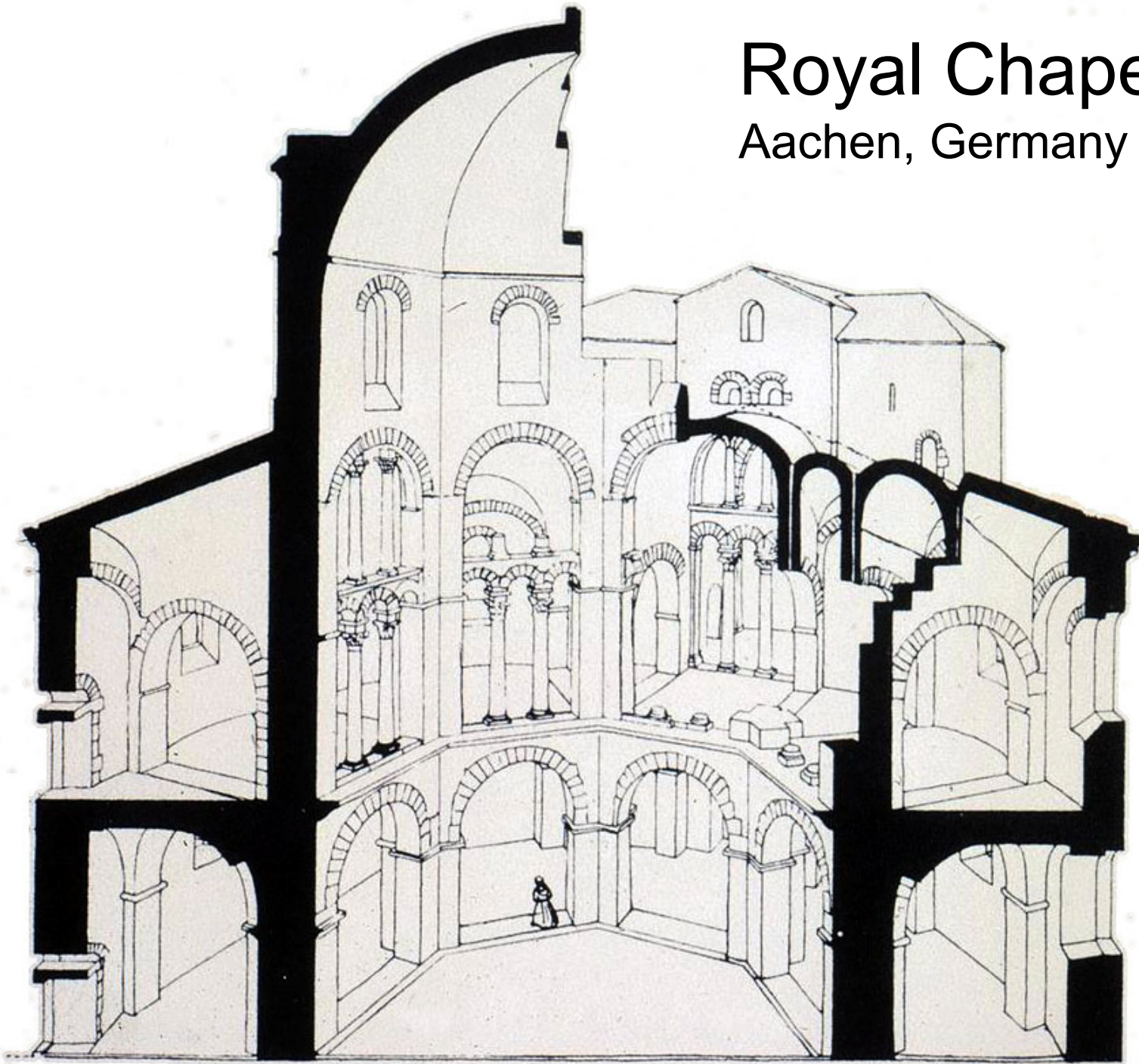
Royal Chapel 805 CE, Aachen, Germany





Royal Chapel 805 CE, Aachen, Germany

# Royal Chapel 805 CE, Aachen, Germany





**Reading: Fazio, Moffet & Wodehouse**  
***A World History of Architecture or Buildings Across Time***  
**Chapter 6 and Carolingian section of Chapter 8**

