

History of Architecture

Romanesque Architecture



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Medieval Period

The Middle Ages

- The middle ages were the ages between the ancient civilization and the Renaissance
- Divided into 3 period:
 - Early middle ages (450-1000)
 - High middle ages (1000-1150)
 - Late middle ages (1150-1500)

Early Middle Ages
6th-10th century

High Middle Ages
11th-13th century

Late Middle Ages
14th-15th century

The Middle Ages

- Early middle ages (450-1000) :

- End of the Roman empire
- The dark ages (500-800)
- The rise of Charlemagne and the Frankish empire in the 9th century

- High middle ages (1000-1150) :

- Feudal system
- The eight Crusades against the Muslims
- Reemergence of cities as cultural and economic forces
- The revival of building in a large scale, especially churches
- The emergence of the Gothic style in the 12th century

- Late middle ages (1150-1500) :

- Maturation of a light and graceful gothic architecture
- The Black death
- The 100 years' war

History

When Rome fell apart, Europe was divided into individual kingdoms



History

- After 476, the Roman Empire stopped functioning administratively
- **Public buildings stopped** from the 5th century - the 9th century and reemerged with the appearance of Charlemagne



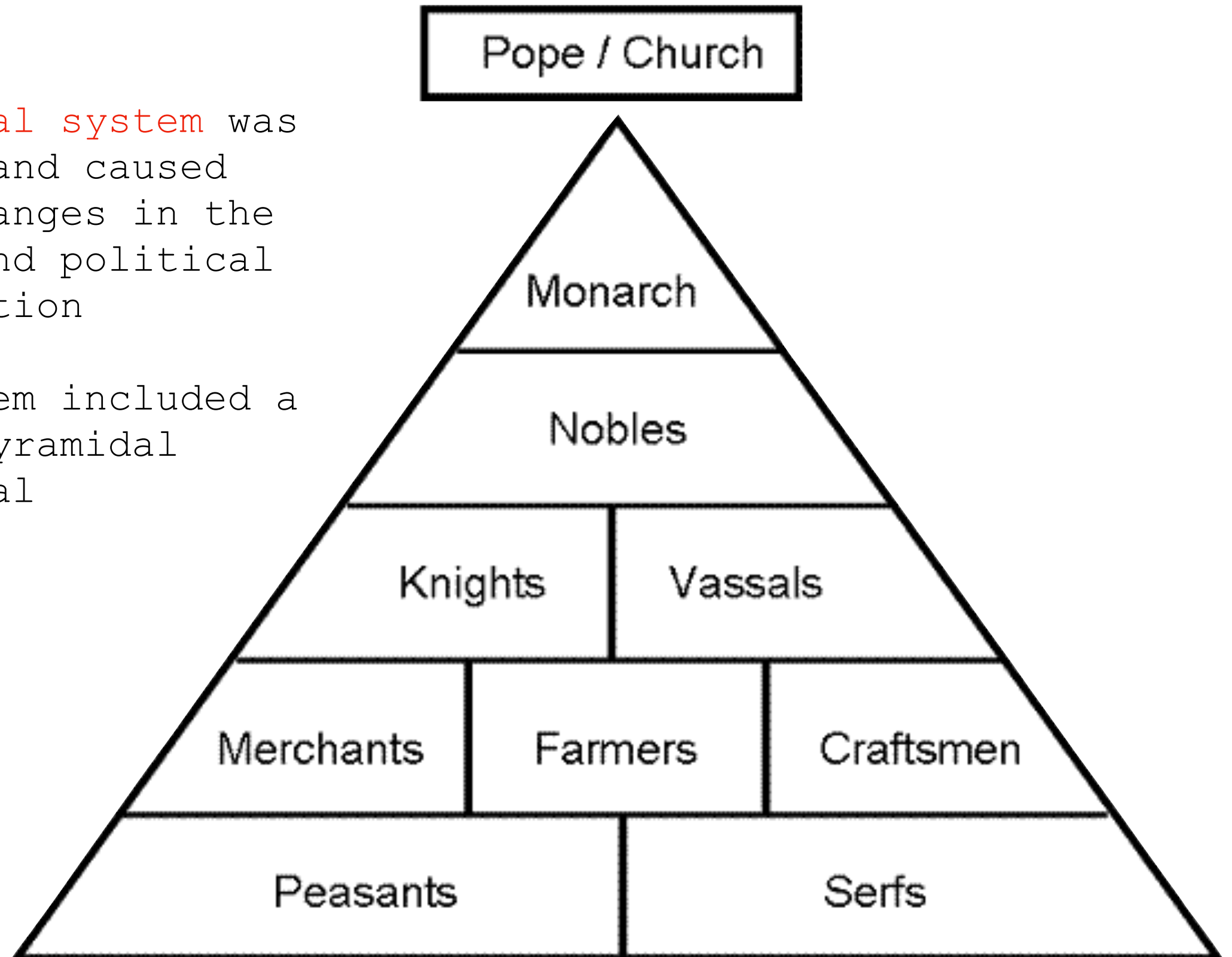
Religion

- The western church embraced a hierarchal structure
- The pope authority became over other bishops and kings
- The religious enthusiasm was strong - the loss of the Holy Places resulted in the Crusades (1096-1270)



Social & Political

- The **feudal system** was growing and caused major changes in the social and political organization
- The system included a social pyramidal hierarchal



Architecture

The main architectural building appeared:

- Dwelling
- Castles
- Monasteries
- Churches



Architecture

- Cities shrank upon themselves and productivity shifted to manors and fortified castles
- Other than the wood-framed manor house, the other major domestic construction was the **castle**

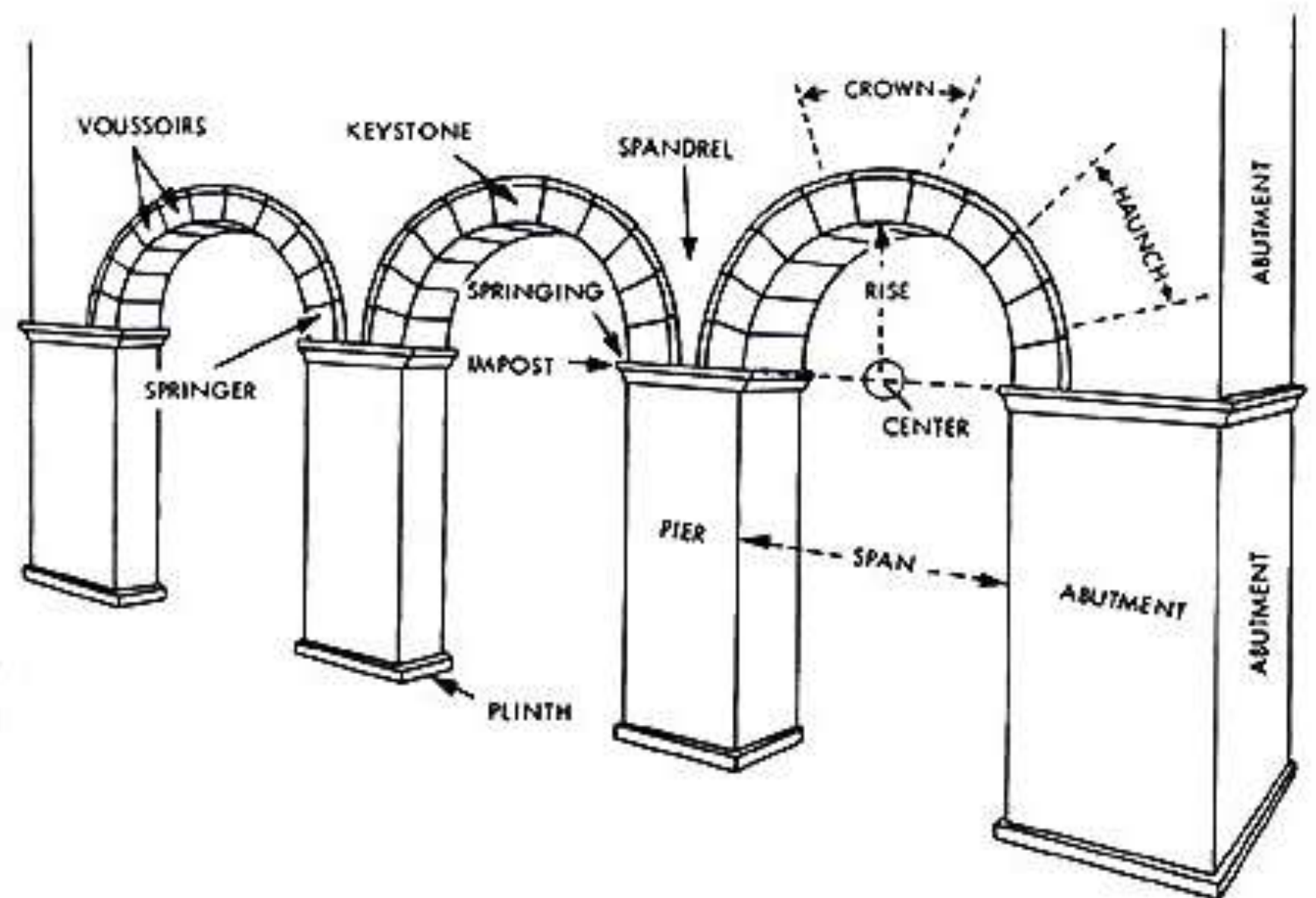


Romanesque Architecture

- The term Romanesque means the descended from Roman
- It describes the architecture of Western Europe between the 10th and 12th centuries
- Romanesque architecture was the first distinctive style to spread across Europe since the Roman Empire
- In different countries, regional tendencies were encouraged by local conditions



- As political conditions became more settled after 1000 AD, **building activity flourished**
- The memory of invasions and chaos was fresh in the mind that it encouraged buildings in which **structural masses dominated over void** and **windows were kept small**
- The memory of Rome was still strong and the new Romanesque elements - **piers and round arches** - were a recall to the strong presence and clear geometry of the Romans



Castles

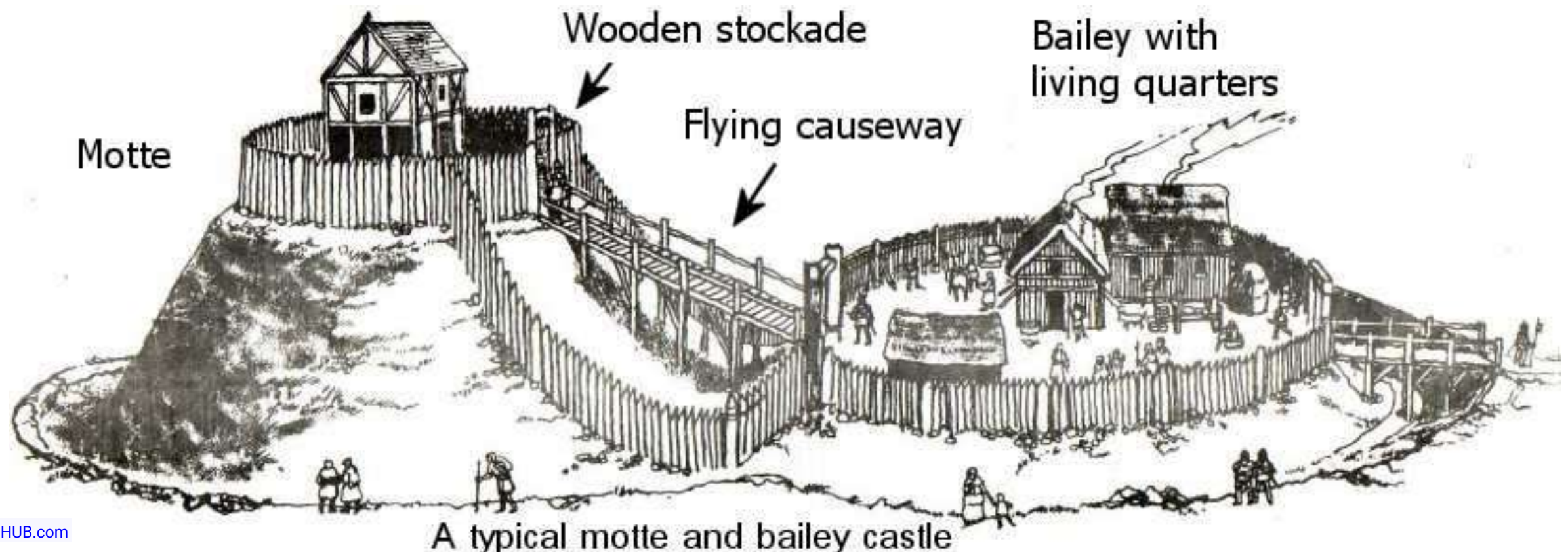
Middle Ages

- Castles were essentially **fortified villages** that replaced Roman cities
- The 12th century castles were **the centre of the government, home for the feudal lord** and his dependents, and a **military base**



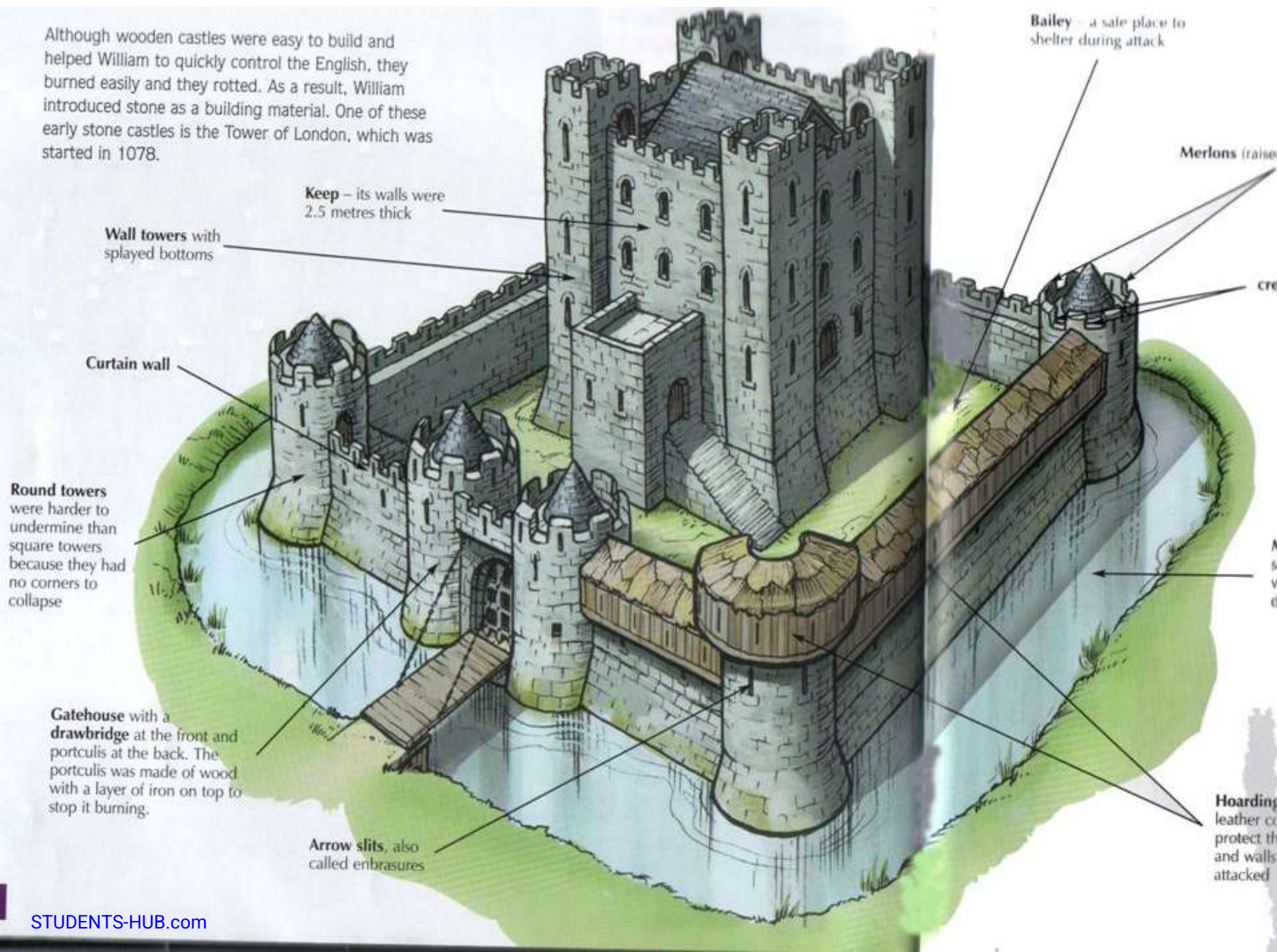
1. Motte and Bailey

- At first, the castle took the form of a motte (mound in old French)
- The motte was linked to a bailey (walled enclosure) with workshops, houses, etc.



2. Stone Keep

- The need to increase security replaced the wooden towers with **stone castles** (about 1000 AD)
- The Stone keep was **fortified**, it's walls could be about **4 meters thick**
- It has the **private dwelling** for the lord's family

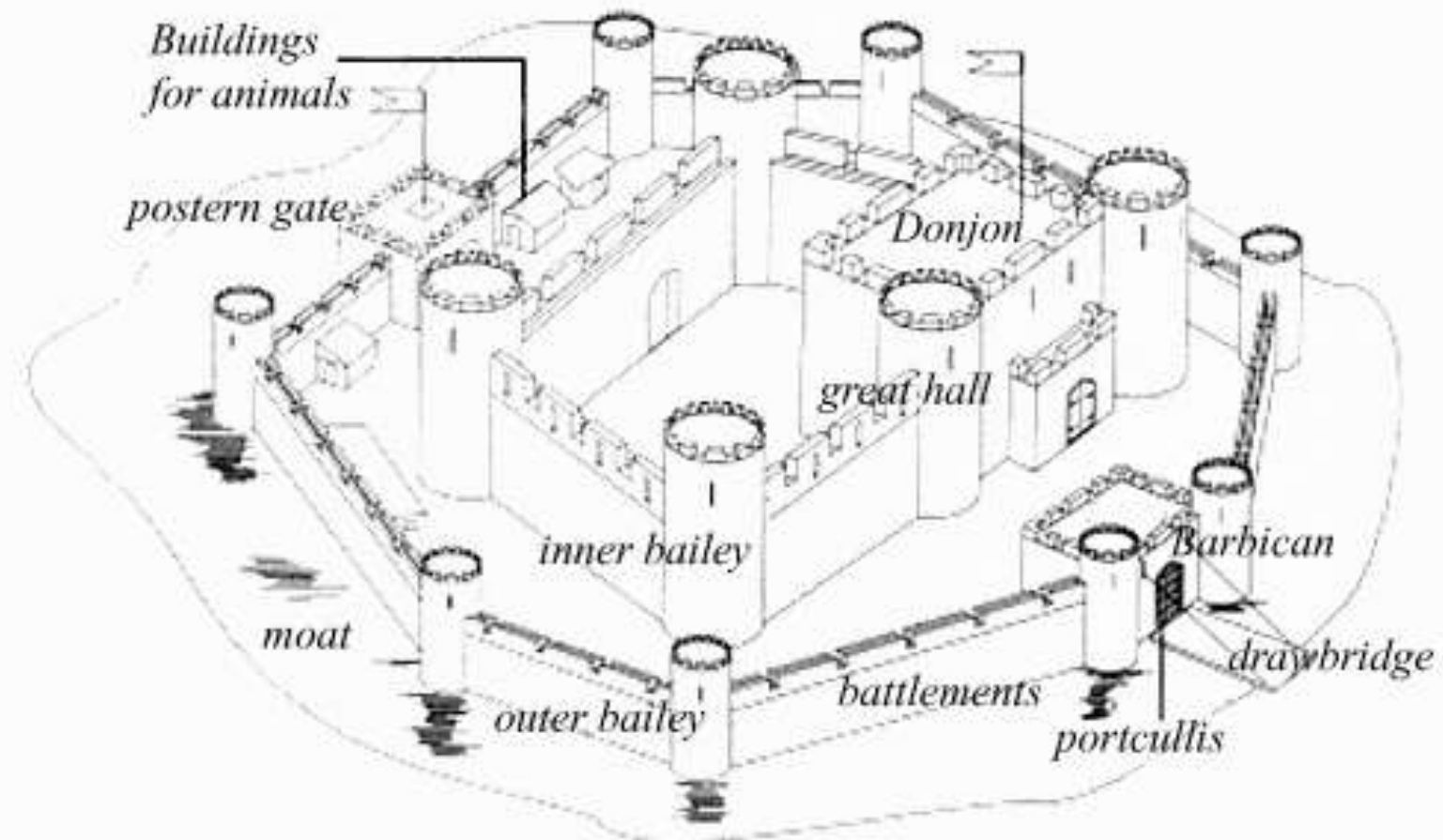


3. Concentric Castle

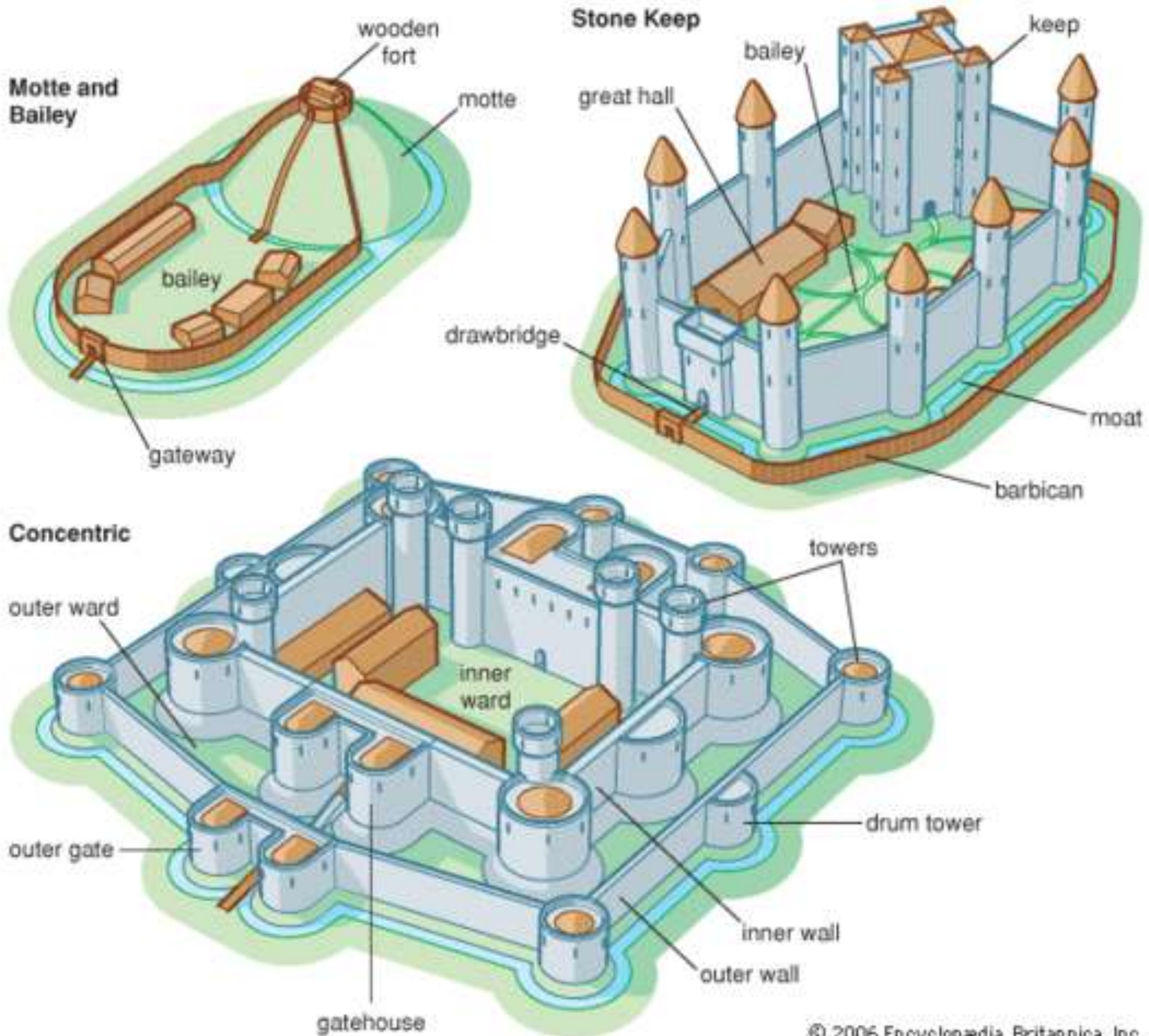
- The keep was fully brought inside the **stone fortified perimeter**
- The outer walls had **projecting towers** spaced at regular intervals
- The principal gate had **twin flanking towers**



Diagram of a medieval castle



Castle Evolution



Monasteries

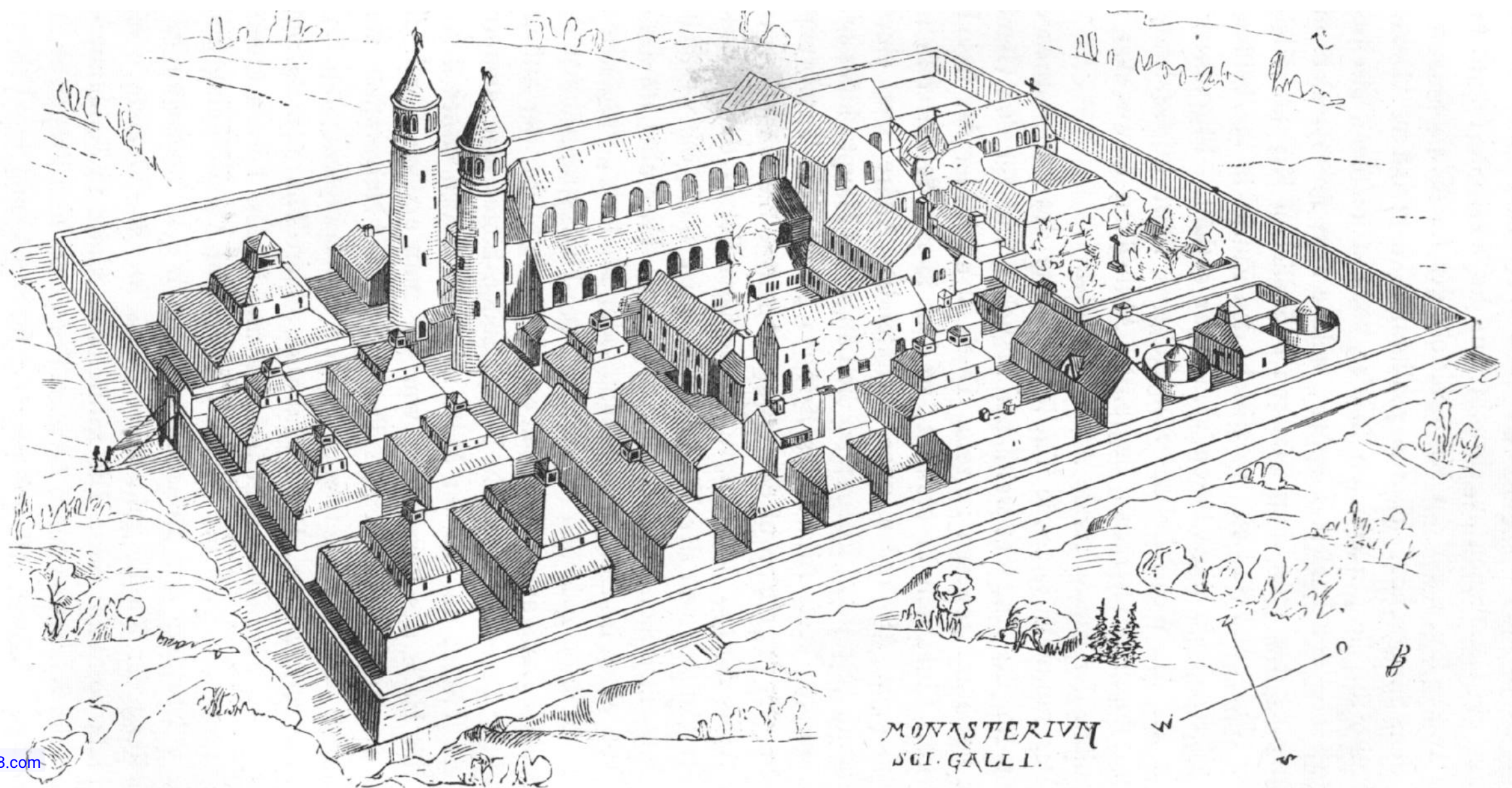
Middle Ages

- Monasteries came into existence with the aid of **Charlemagne**
- Monastic institutions sometimes had **schools** which functioned as **small universities**
- As monastic communities flourished, it required the development of **new building complexes**
- Monasteries formed **political, agricultural and cultural centre** of their surrounding regions

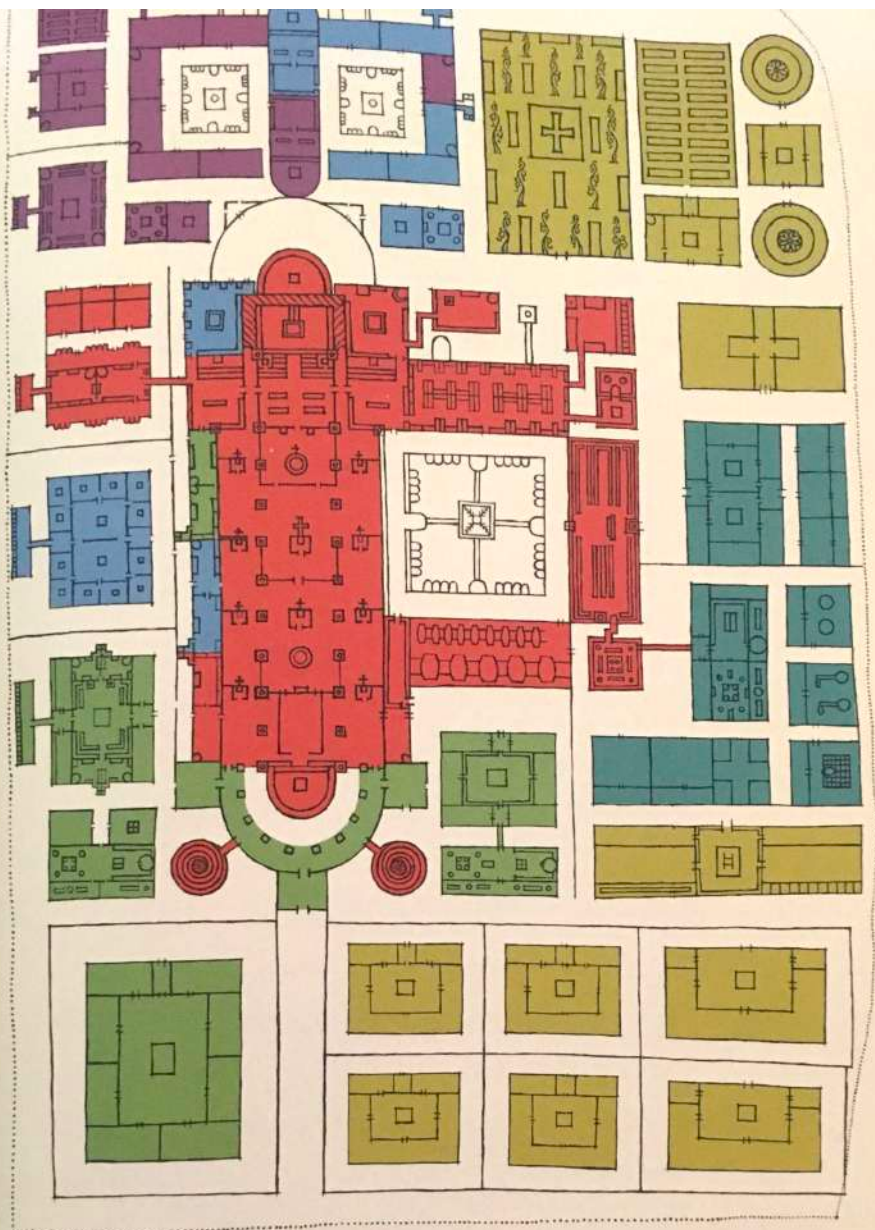


The Saint Gall Monastery, Switzerland (814)

- A design plan was drawn in 814, and it became the **conceptual blueprint for monasteries**. It provides an institution of about **forty buildings inhabited by about 110 monks**, with an equal number of laypeople who served as support staff

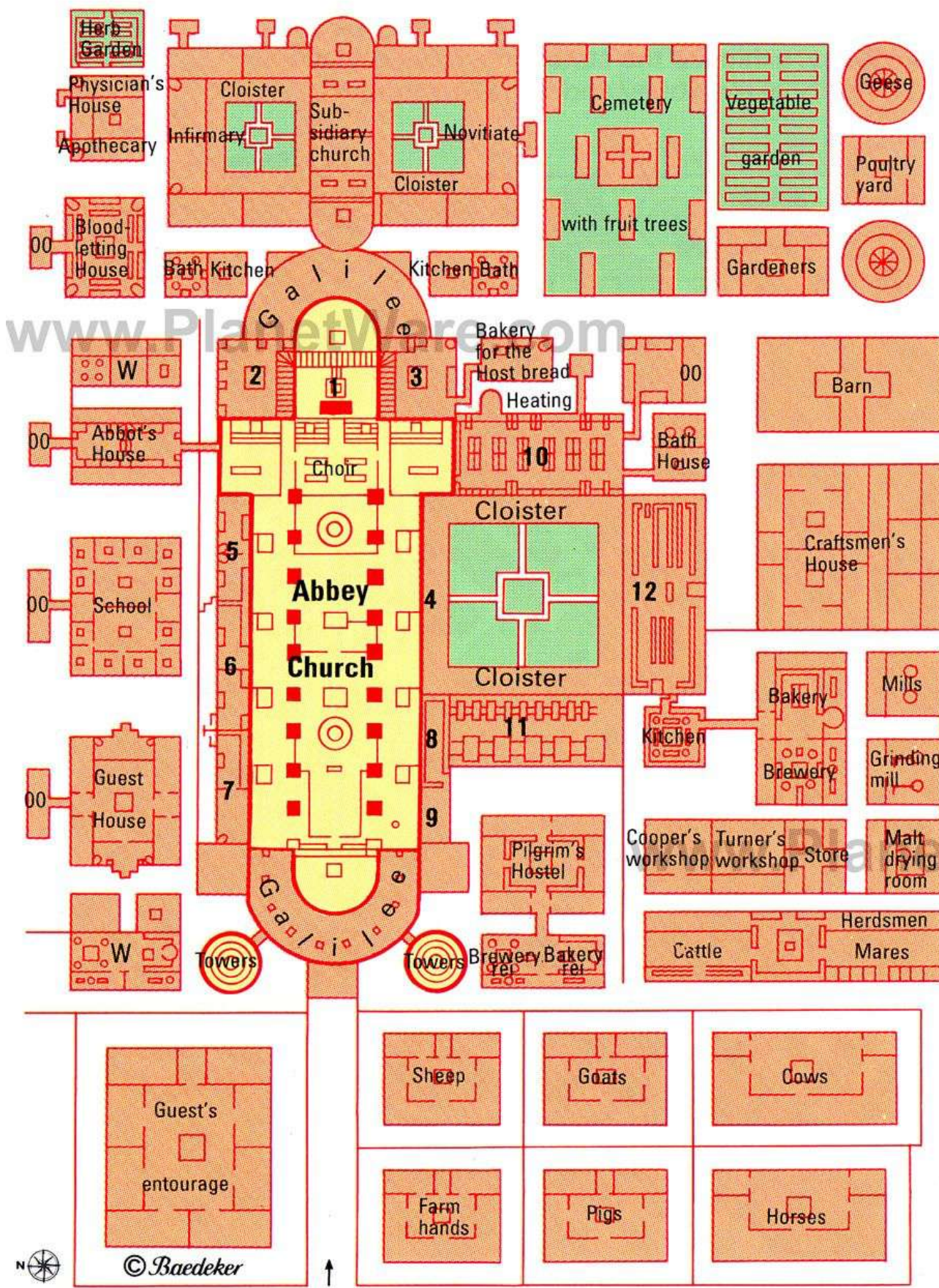


The Saint Gall Monastery, Switzerland (814)



LEGEND

- HEALTH, MEDICINE
- EDUCATION: Public, Novices
- RECEPTION: Nobles, Pilgrims, Paupers
- CHURCH & DEPENDENCIES
- AGRICULTURE: Pomology, Vegetables, Animal Husbandry
- CRAFTS, MILLING, BAKING



**Plan of
St Gallen
Monastery**

**Carolingian
idealised plan
(circa 820)**

- 1 Saint's tomb (beneath High Altar)
- 2 Scriptorium (below)
Library (above)
- 3 Sacristy (below)
Robing Room (above)
- 4 Chapter House
- 5 Clerical guests
- 6 School Master
- 7 Gatekeeper
- 8 Visitors' room
- 9 Old People's Warden
- 10 Heating room (below)
Dormitorium (above)
- 11 Provision store (cellar below)
- 12 Refectory (below)
Wardrobe (above)
- W Business rooms
- 00 Lavatories

Generalised plan



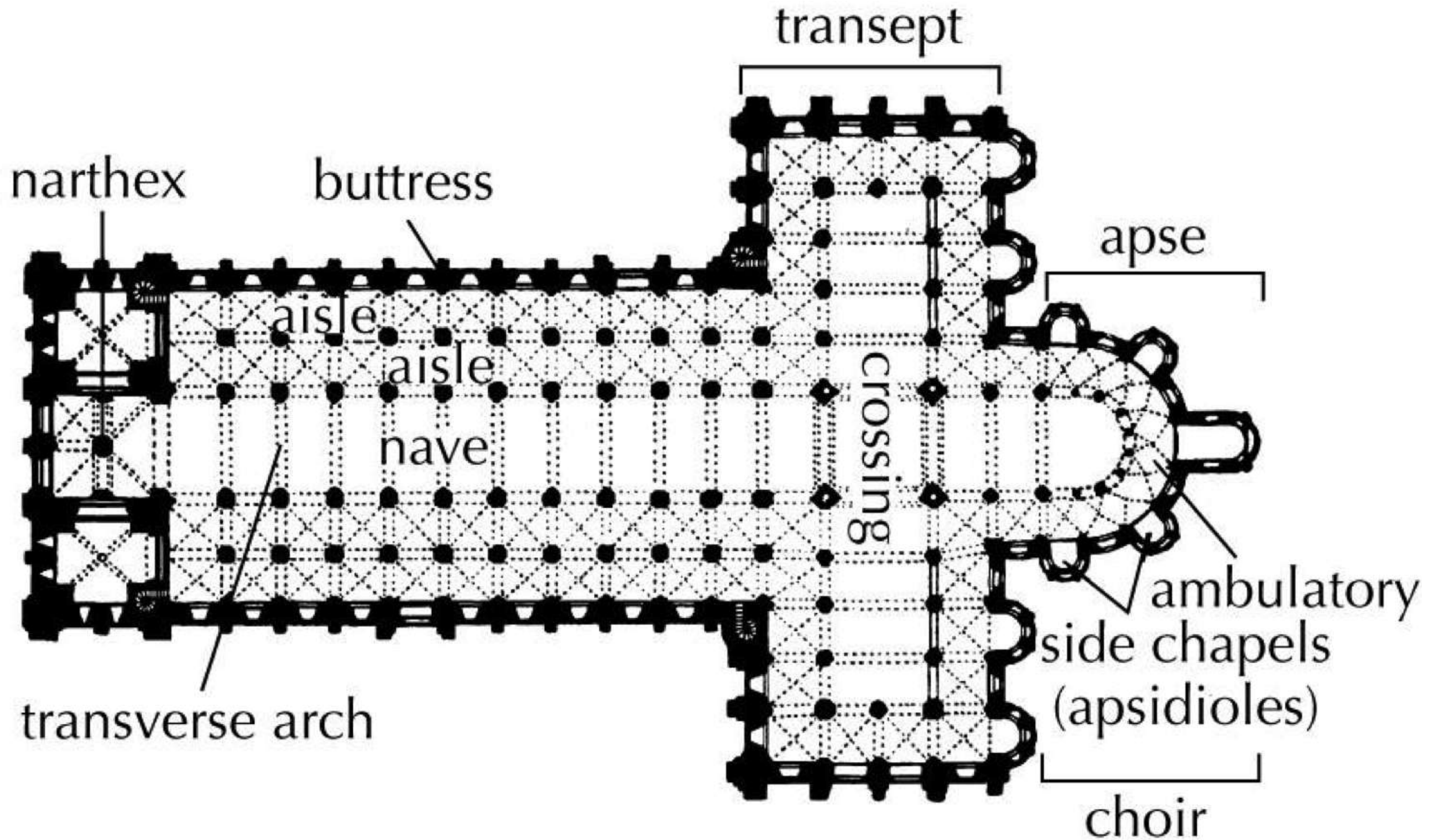
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Entrance

Churches

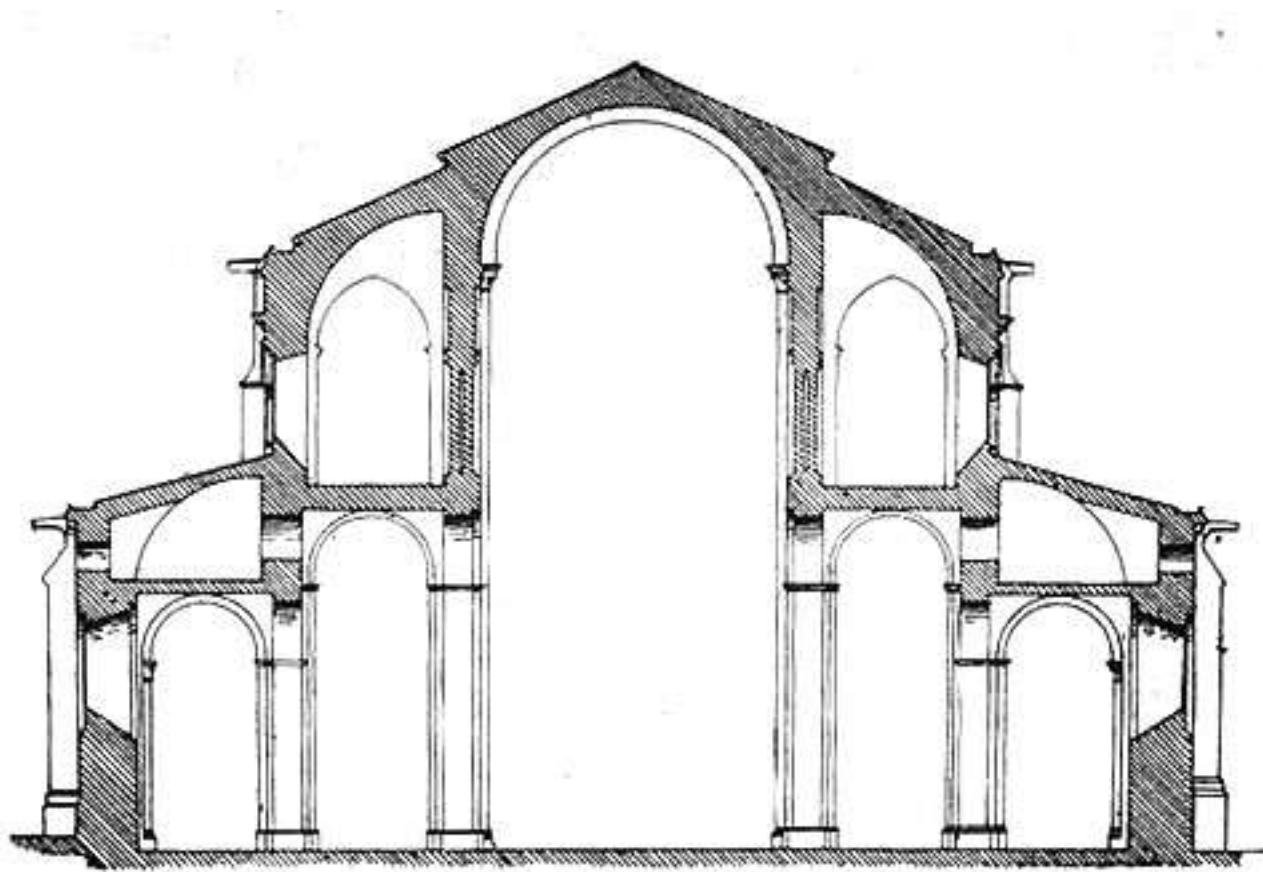
Architectural Character

Architectural Character

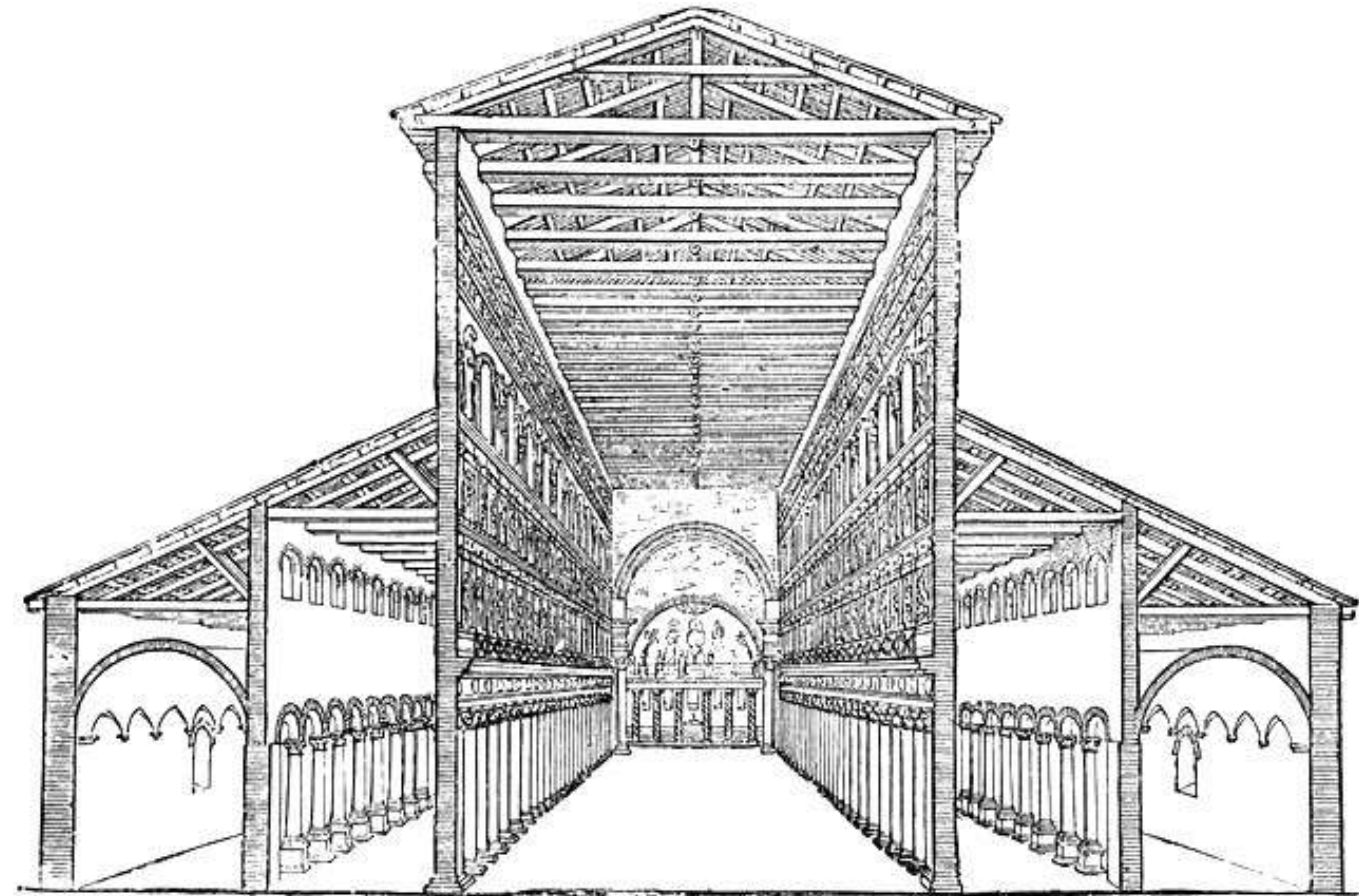


Architectural Character

1. Influenced by the Roman Basilica and Byzantine architecture; the main difference is that **the roofs are made of stone vaults**



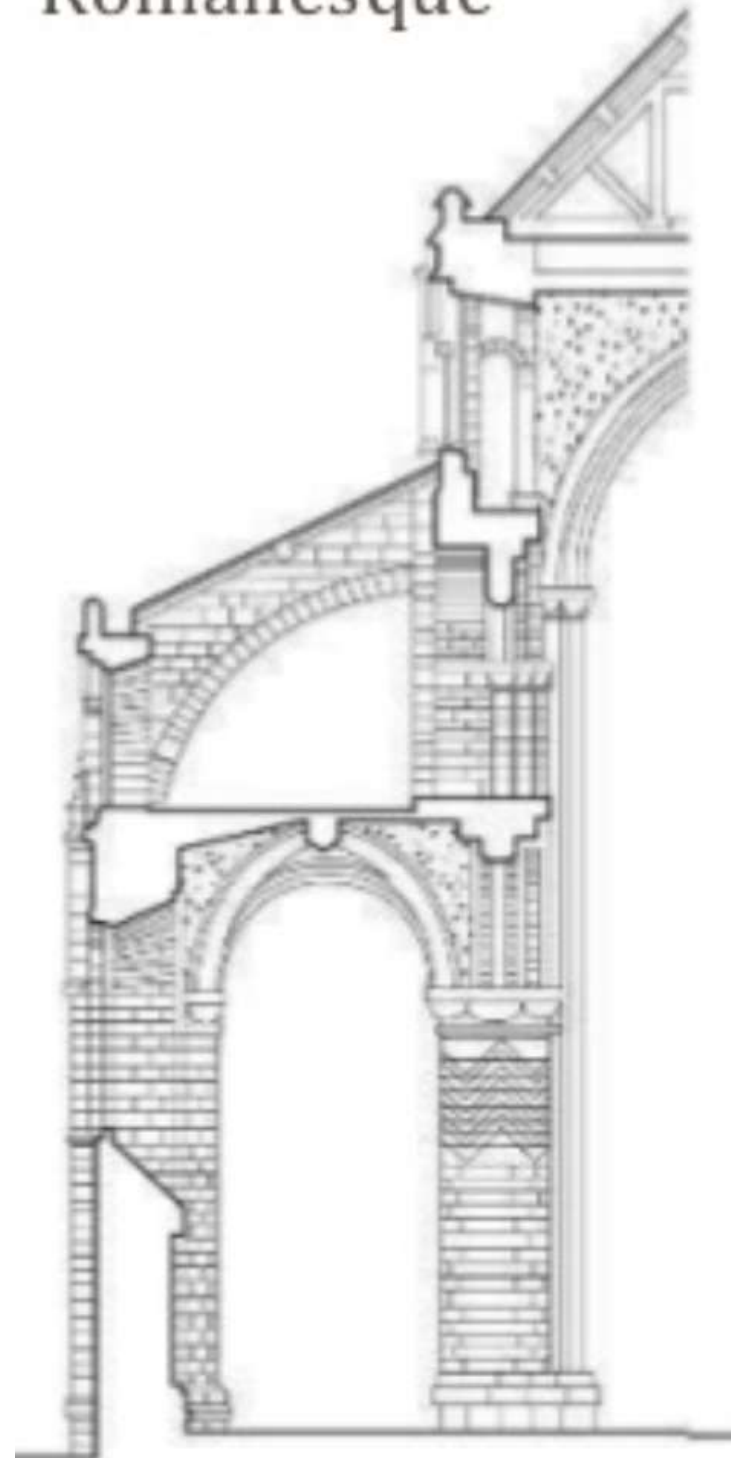
Romanesque Church



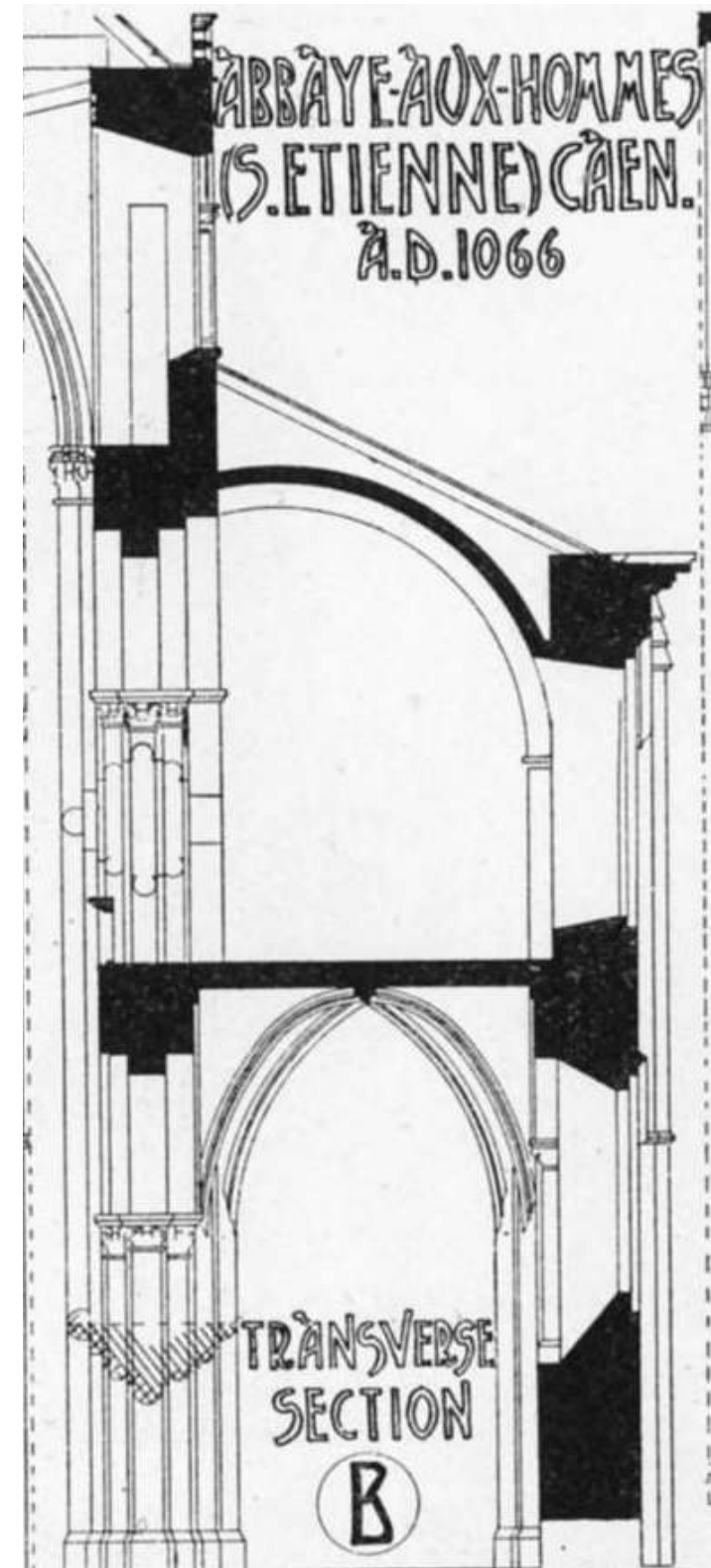
Roman Basilica

Architectural Character

Romanesque



2. The walls of Romanesque buildings have **massive thickness** with **few and comparatively small openings**



Architectural Character

3. Dark spaces with few openings



Dark interior



Few openings

Architectural Character

4. **Simple exterior:** The Romanesque style was a combination of **masonry**, **arches** and **piers**, and the main concept for the buildings was the addition of **pure geometric forms**



Cerisy la Forêt abbey, France



Southwell Cathedral, England

Architectural Character

5. Modest height and horizontal lines



Southwell Cathedral, England



Collegiate Church of Saint Gertrude,
Belgium

Architectural Character

6. **Multiple unites**; several geometric forms make up the building rather than one shape

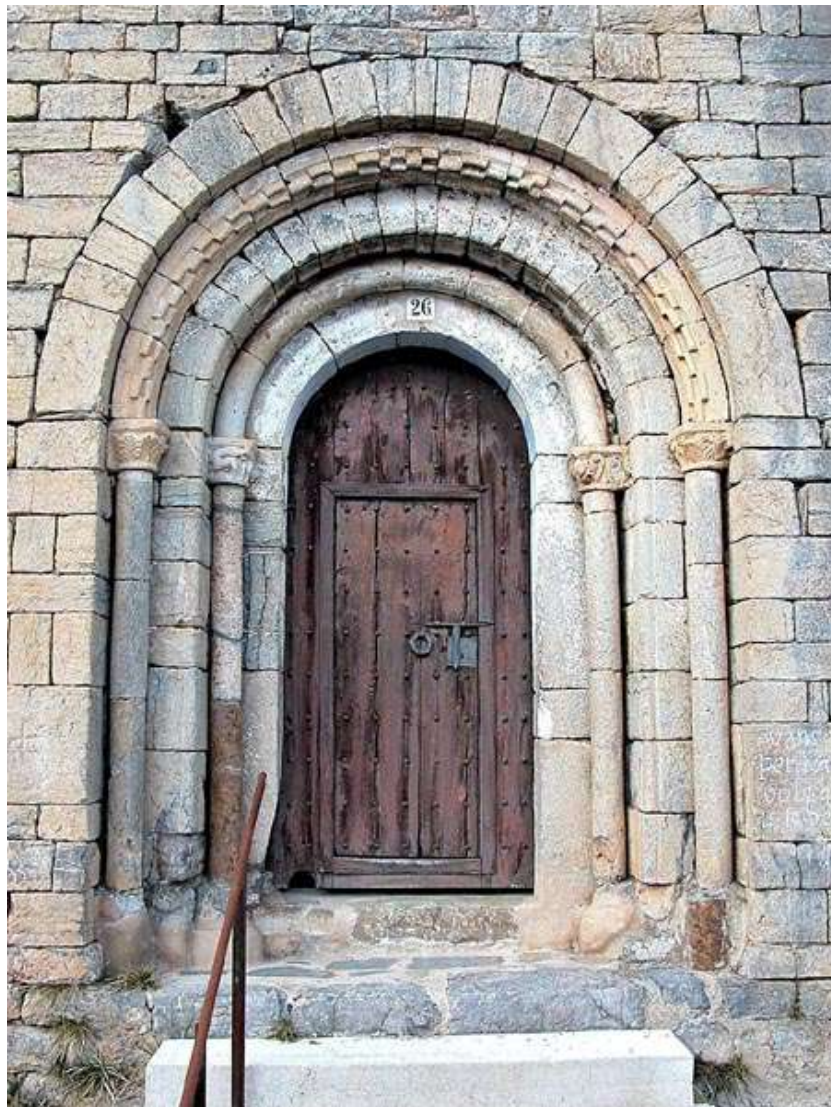


Churches

Architectural Elements

Architectural Elements

- **Round arches**, similar to those of the Roman
- They also used the **blind arcade**, which is composed of a series of arches applied to the surface of a wall as a decorative element



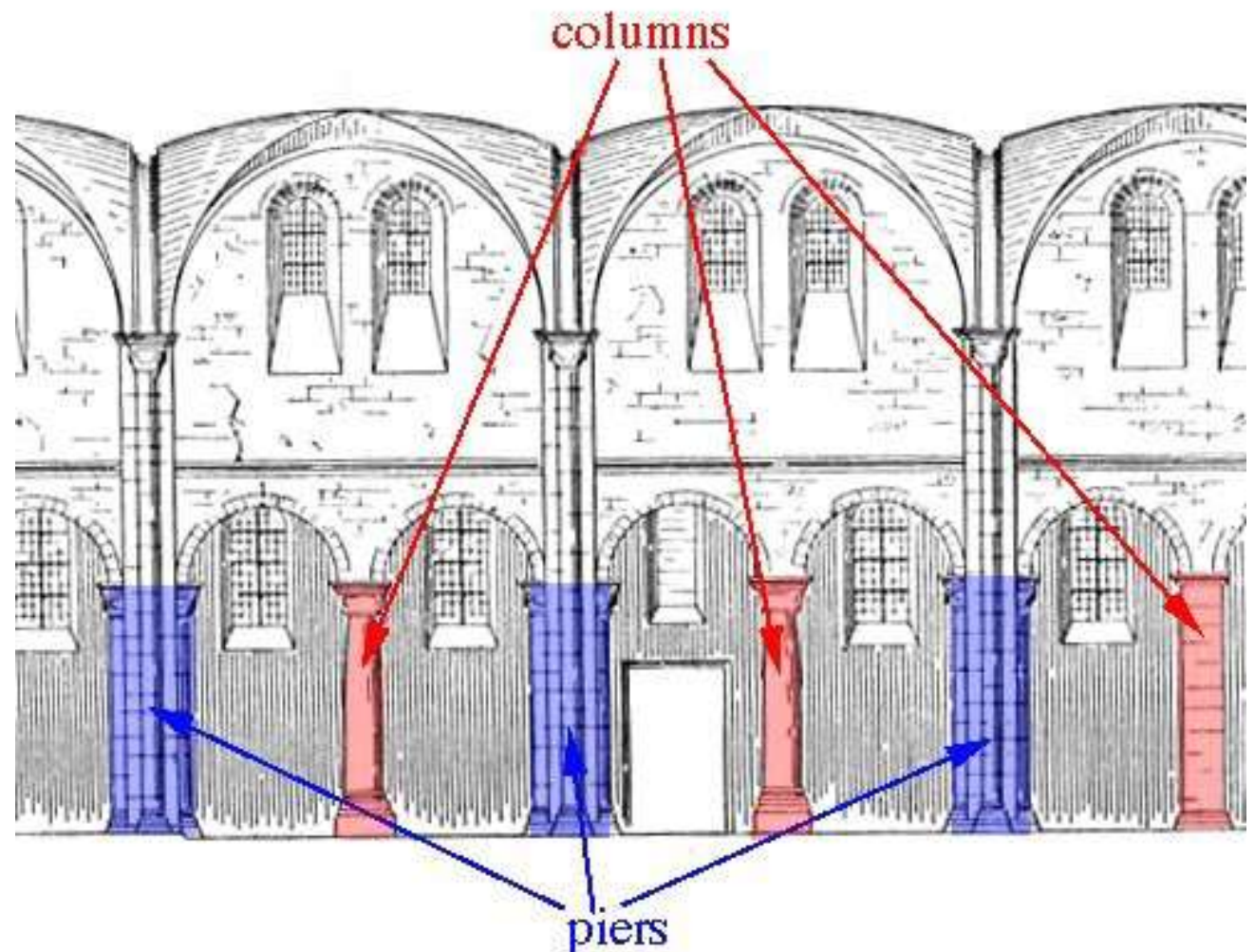
Architectural Elements

- **Barrel Vaults**; replaced the roman flat roof
- Barrel Vault is the simplest vault created by combining a series of round Roman arches
- Constructed from **stone**
- Supported by **solid walls**, or walls with **very small windows**



Architectural Elements

- **Piers supporting the vaults**; the barrel vaults creates higher ceiling, but needs large support
- The Pier is generally **square** or **rectangular** in plan, and considered better solution to support heavy masonry besides the columns

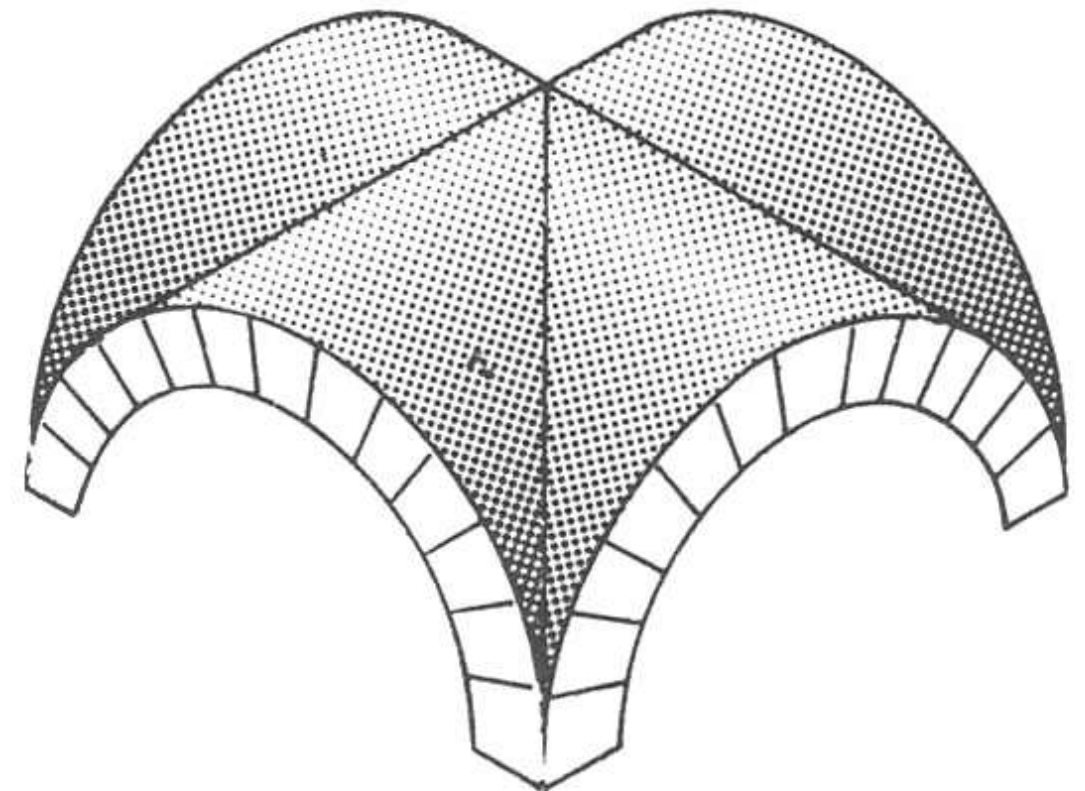


Architectural Elements

- **Groin Vaults (Cross Vaults)**: the advantage of the groin vault that its weight and thrusts are concentrated at the four corners
- A groin vault is almost always **square in plans**, and constructed of two barrel vaults intersecting at right angles



Groin Vault

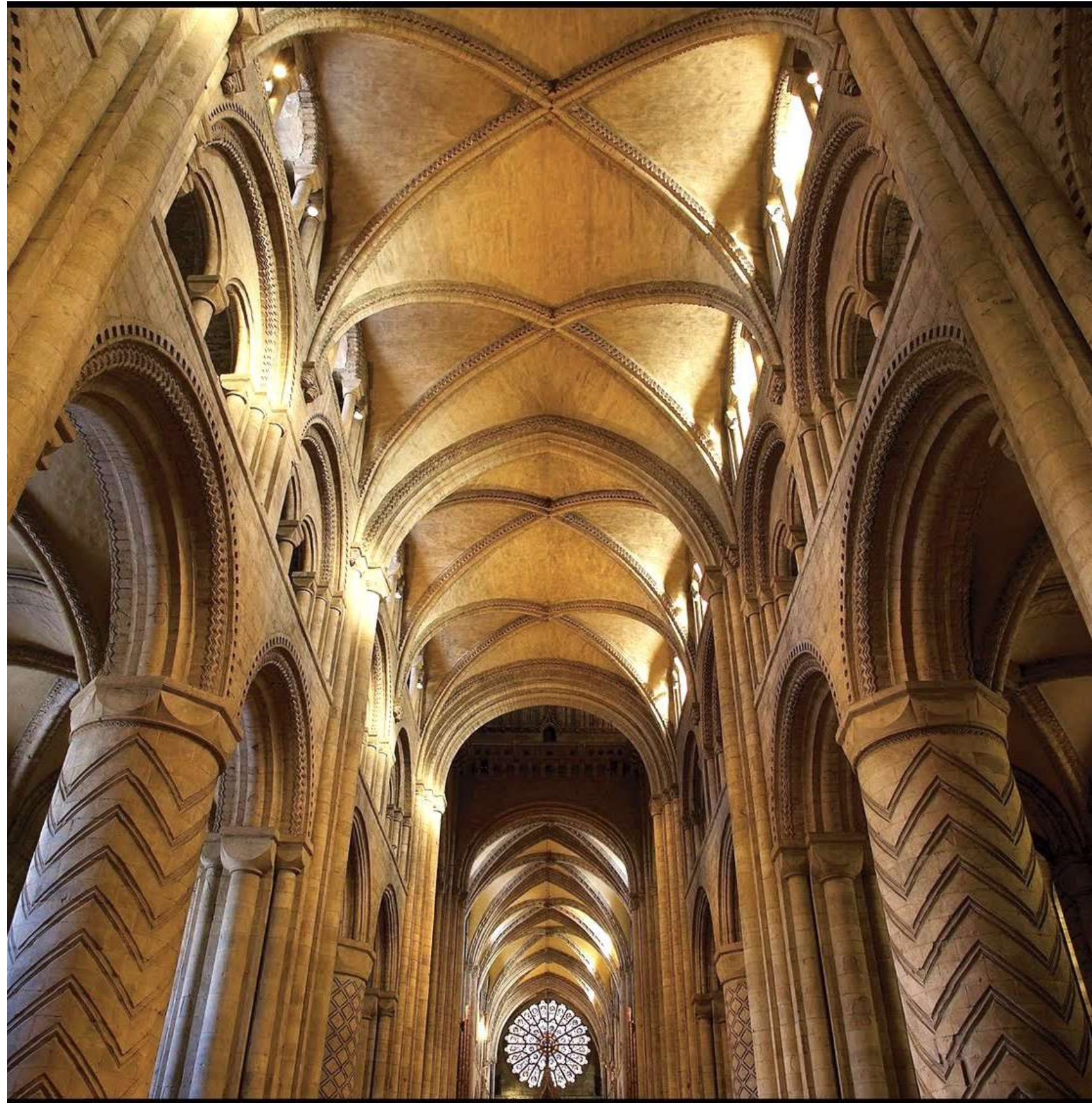
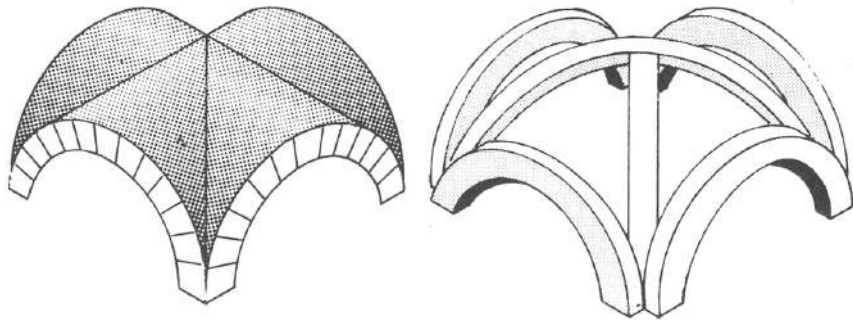


Architectural Elements

- **Ribbed Vault:** the ribs are the structural members, and the spaces between them can be filled with lighter, non-structural material

Groin Vault

Ribbed Vault



Churches

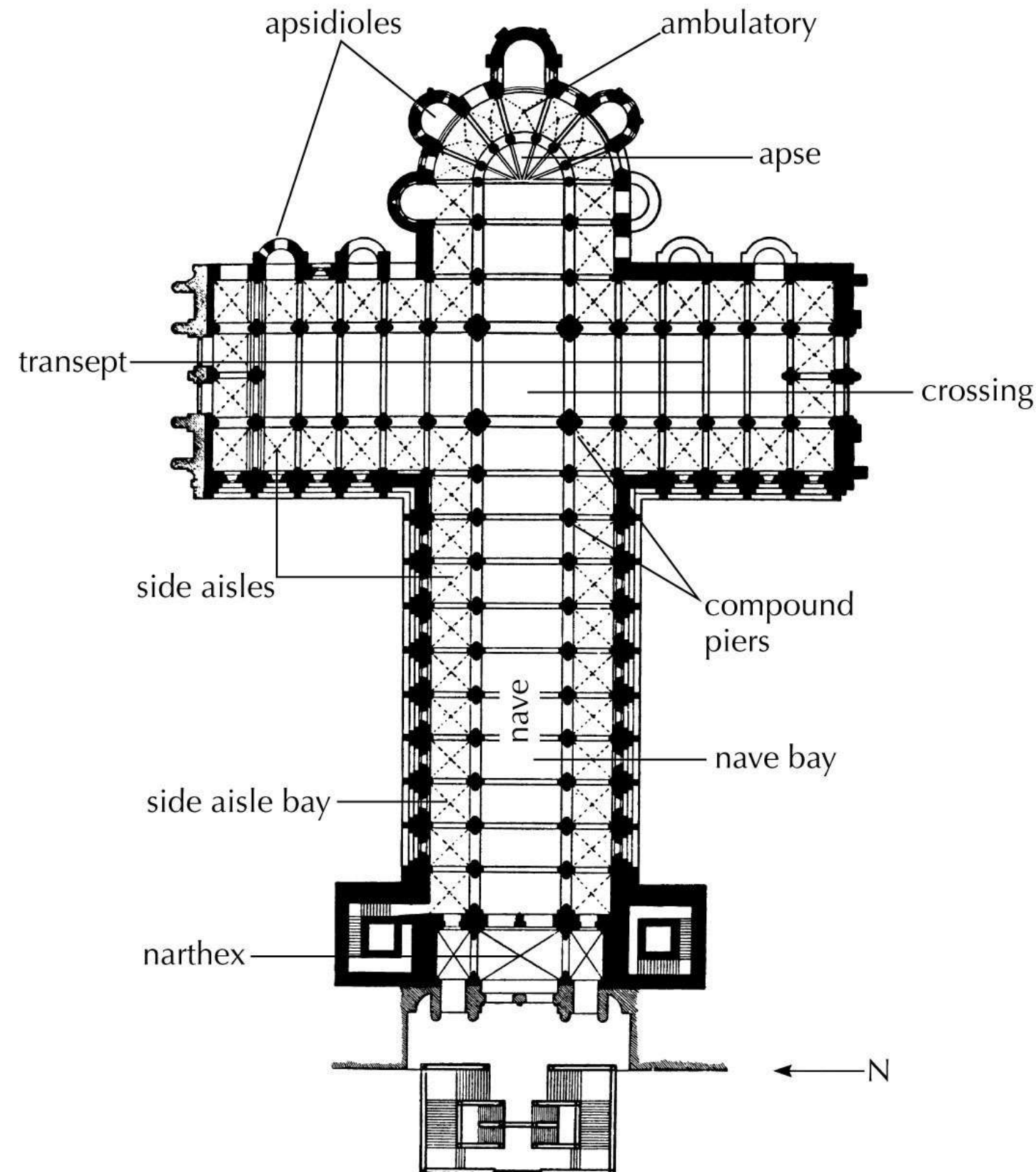
French Romanesque

Basilica of St. Sernin, Toulouse (1077-1125)



Basilica of St. Sernin, Toulouse (1077-1125)

- Basic **latin cross** plan
- Since pilgrims visits the relics interfered with daily church activities, the solution was to create a **loop circulation around the church**
- The church had **many chapels and an ambulatory**
- The nave has a **barrel vault with plain square ribs**



Basilica of St. Sernin, Toulouse (1077-1125)



Ambulatory around the choir (upper level)
and crypt (lower level)

Basilica of St. Sernin, Toulouse (1077-1125)



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Churches

Italian Romanesque

- Italy never completely embraced the Romanesque style
- This region was slow to adopt a new system of construction and preferred to concentrate on beauty and delicacy of ornamental detail, while the architectural character was much governed by classic traditions
- From one city-state to the other there were style variations
- A **bell tower** (campanile) towered over each city claiming its superiority and fame

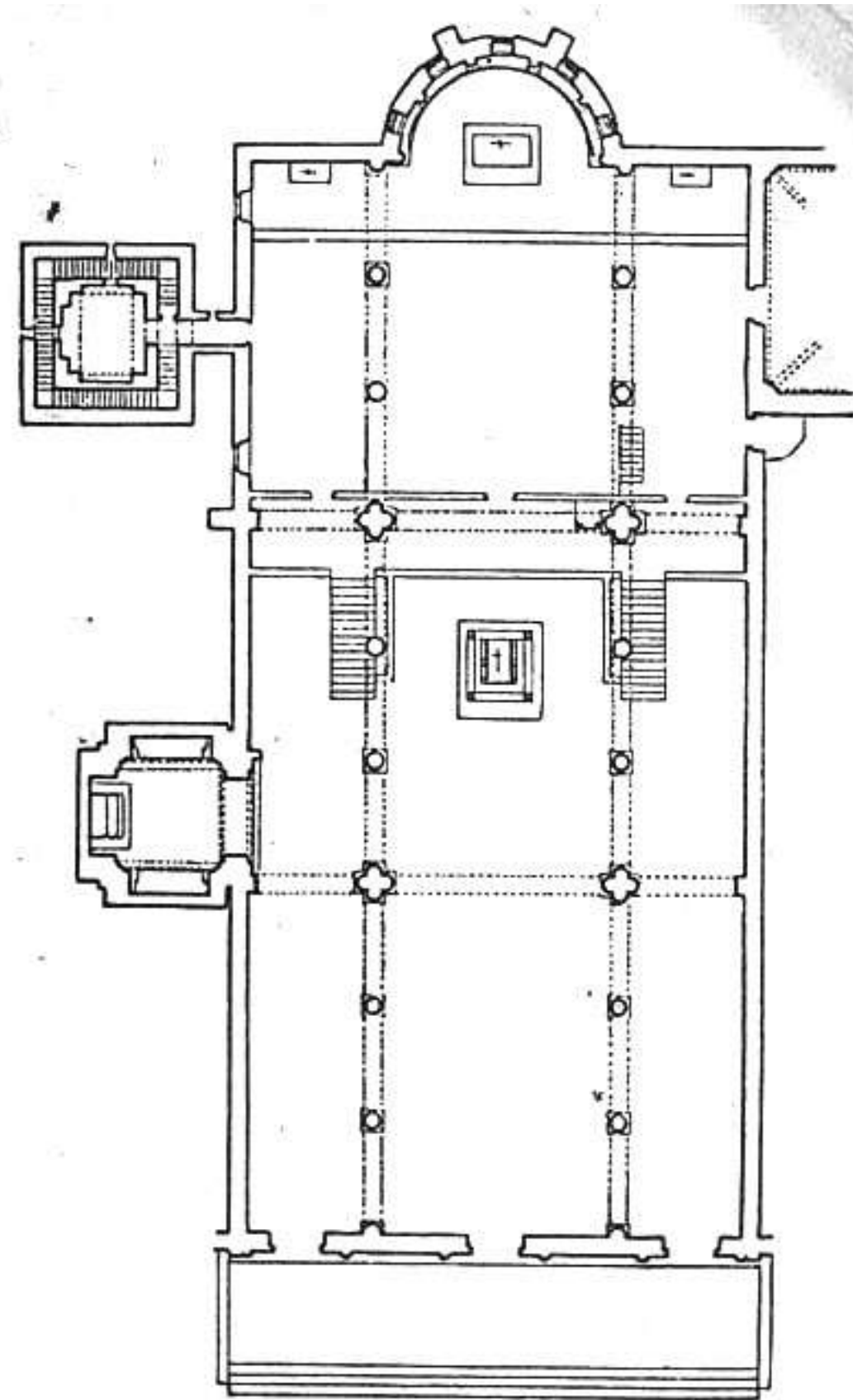


San Miniato al Monte, Florence (1062-1200)



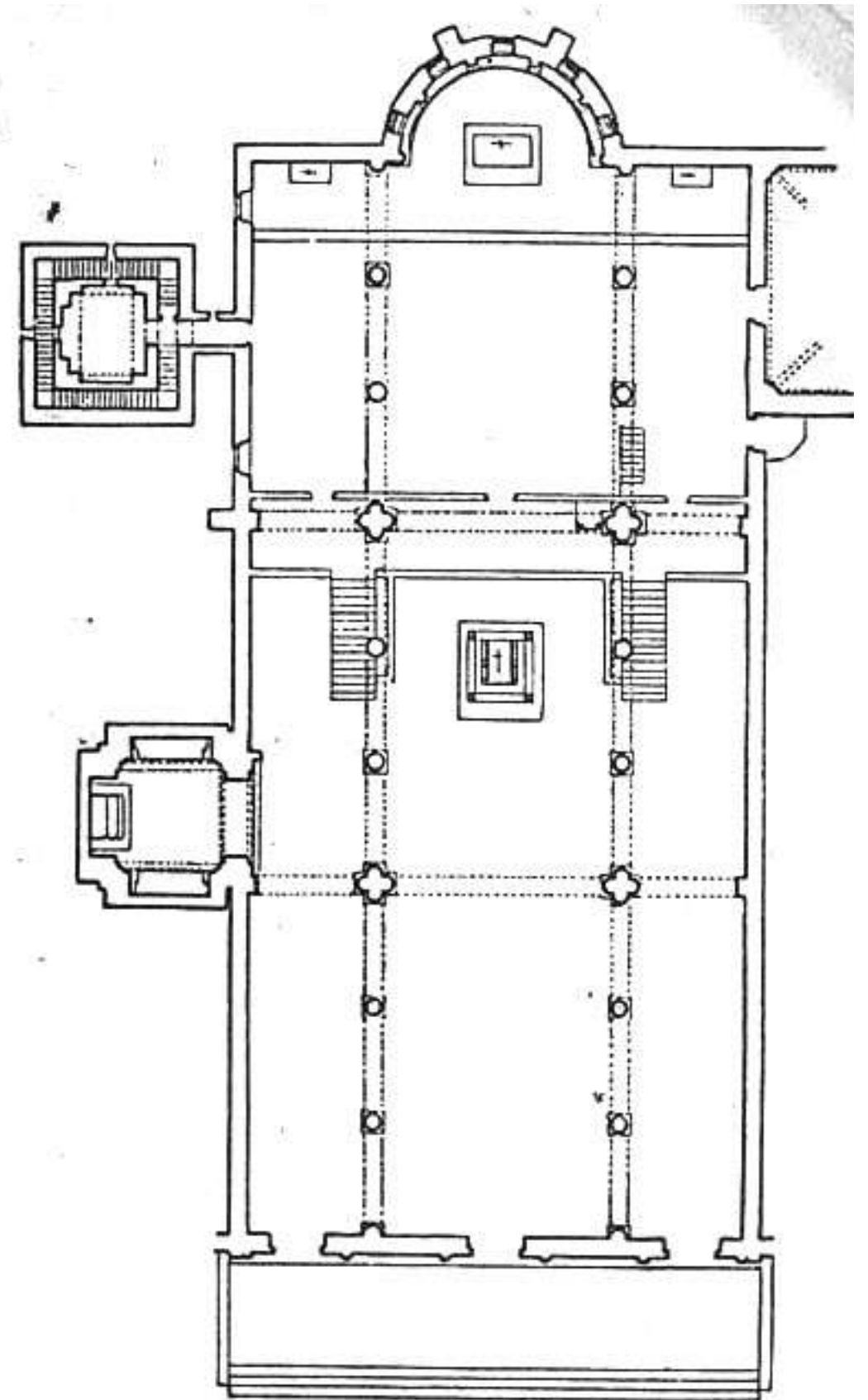
San Miniato al Monte, Florence (1062-1200)

- Basilica without a transept
- Classical influence
- Facade of 5 arches planed on Corinthian capitals

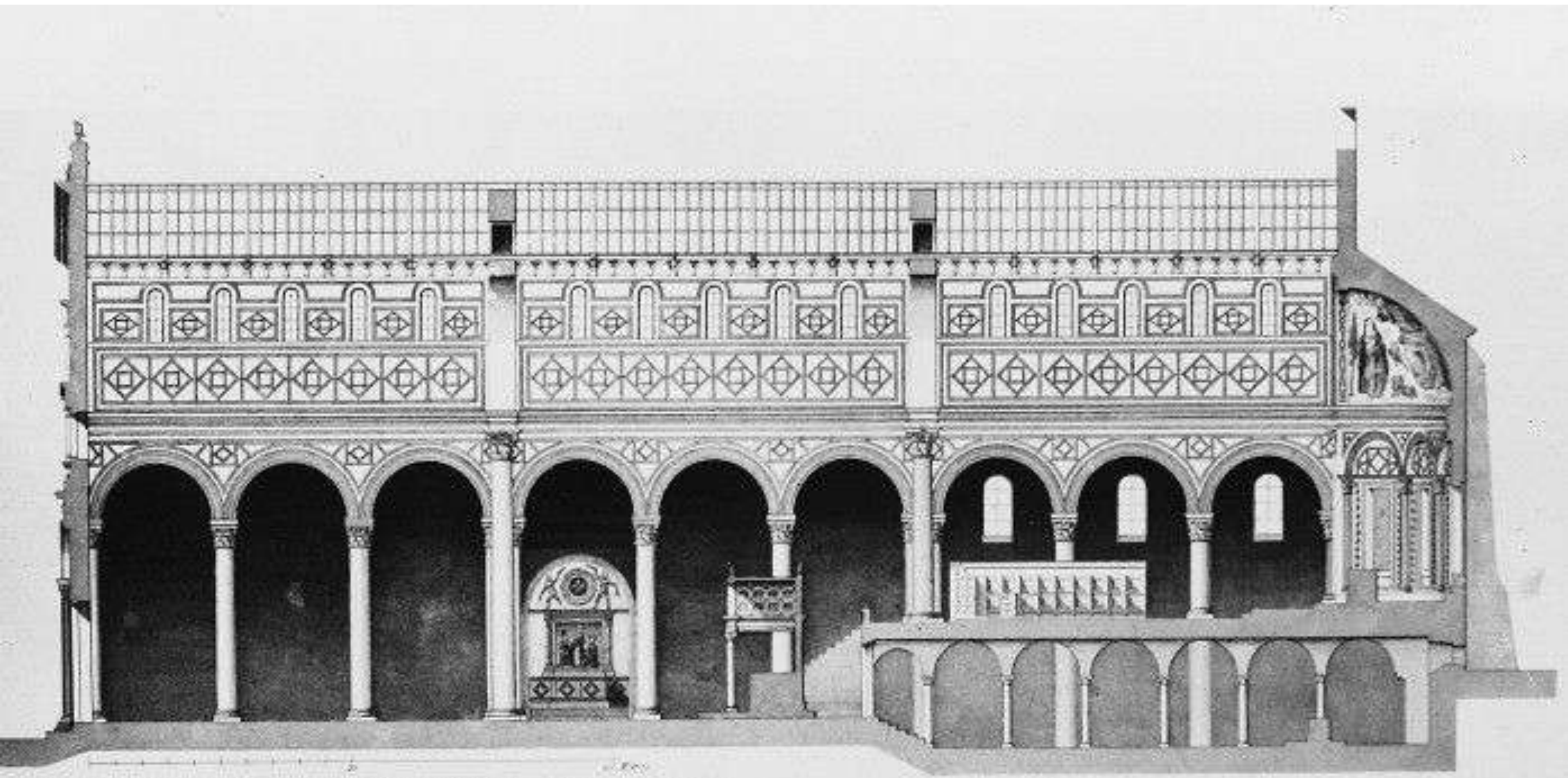


San Miniato al Monte, Florence (1062-1200)

- The length of the church is divided by **piers** and transverse arches into **three main sections**, of which the raised eastern portion has a crypt open to the nave and containing the tomb of the saint



San Miniato al Monte, Florence (1062-1200)



San Miniato al Monte, Florence (1062-1200)



Churches

English Romanesque

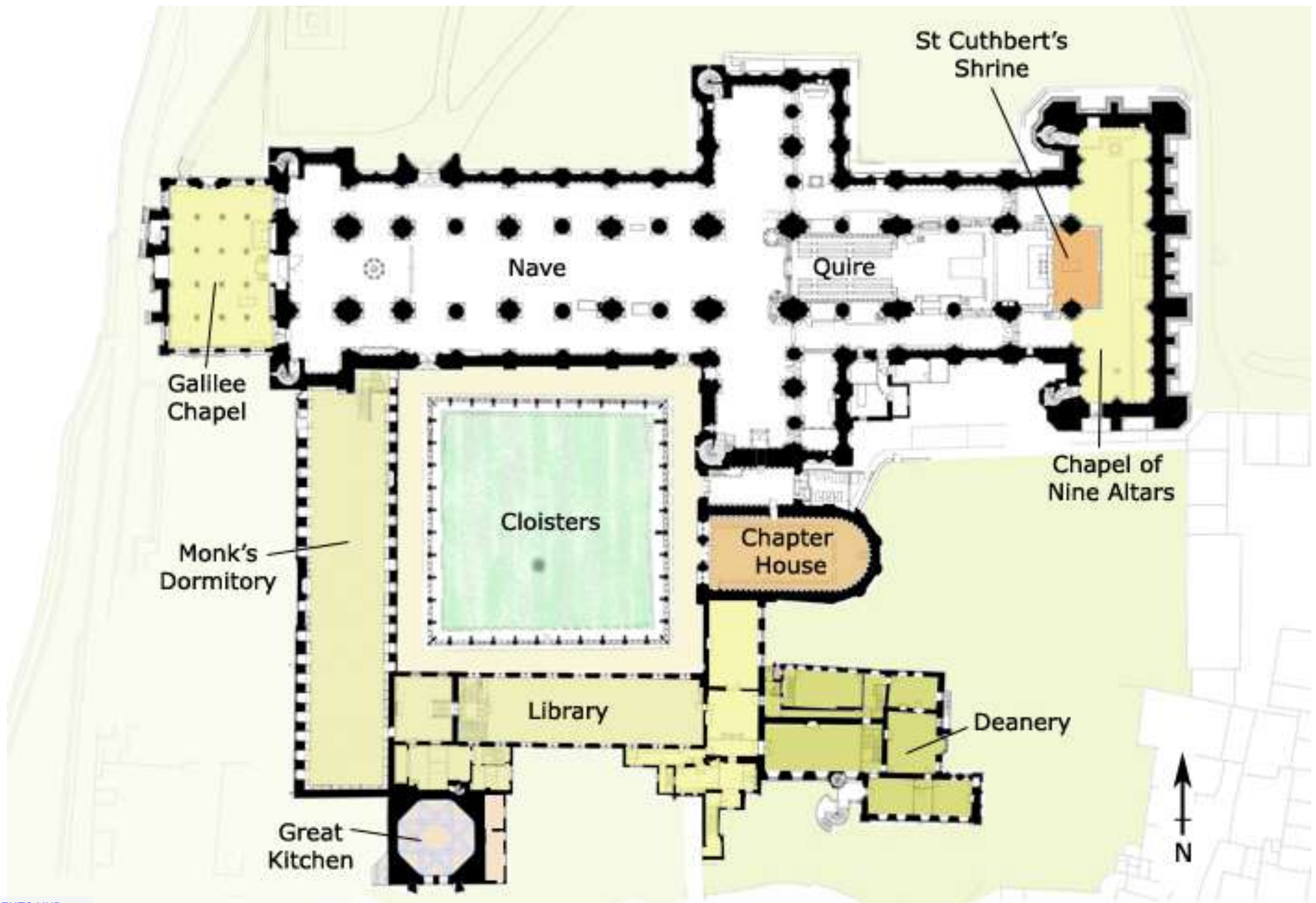
- The English Romanesque architectural character included:
- A **strongly cruciform character**
- A tower over the crossing
- Twin towers at the entrance
- A clearstory for light



Durham Cathedral, UK (1093)



Durham Cathedral, UK (1093)

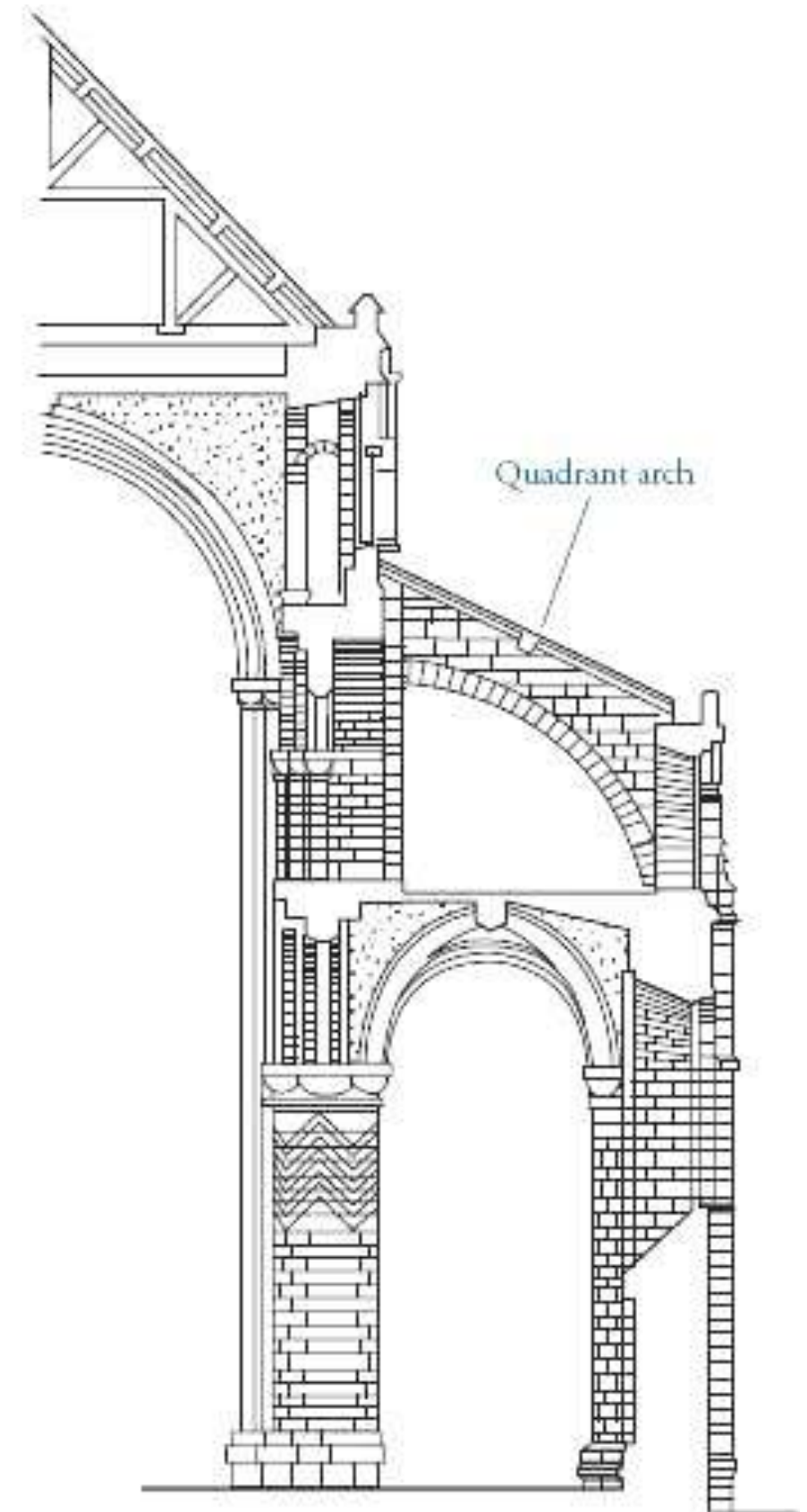


Durham Cathedral, UK (1093)



- To allow more light into the interior, **rib vaults** were used for the first time
- The stone ribs strengthen the lines of the groin vault and carried the weight of the roof more efficiently

Durham Cathedral, UK (1093)



Next lecture

Gothic Architecture