

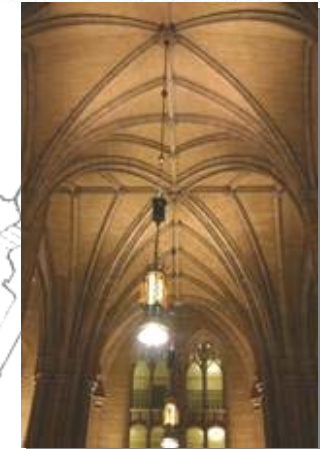
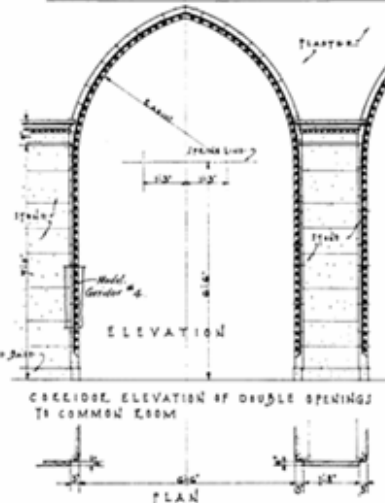


University of Pittsburgh

Facilities Management Division



Cathedral of Learning



Park Rankin, University Architect
Senior Manager of Planning and Design

Cathedral of Learning - Introduction

- The Cathedral of Learning, at 41 Floors and 535 Feet in Height Contains Approximately 600,000 GSF and 558,000 NSF
- Master Plan by Chancellor Bowman
- Construction Started in 1926 and completed in 1937, the 150th Anniversary of the University
- The Building is Steel Frame, Encased in Concrete with Reinforced Concrete Floor Construction
- Foundation Caissons Were Dug to a Depth of 60 Feet Through Grey Clay to a Firm Bearing on a Bluestone Strata.
- Cladding was a Select Indiana Limestone, Cut With Various Saw Blades, and Set with Both Horizontal and Vertical Coursing, to give it a distinctive “ Rustic” Appearance
- The Main Entry to the Cathedral is the Commons Room, a Spectacular “Great” Room
- The Commons Vaulted Ceiling Peaks at 52 Feet, and Has an Area Approximately 12,000 SF, Enough to Seat 2,000 People at Table for Events

Cathedral of Learning Archival Photos



Chancellors Rufus Fitzgerald and
John G. Bowman



Site Chosen for the Cathedral



September 25, 1926

Cathedral of Learning Archival Photos



November 1, 1926



Early Stages of Construction

Cathedral of Learning Archival Photos

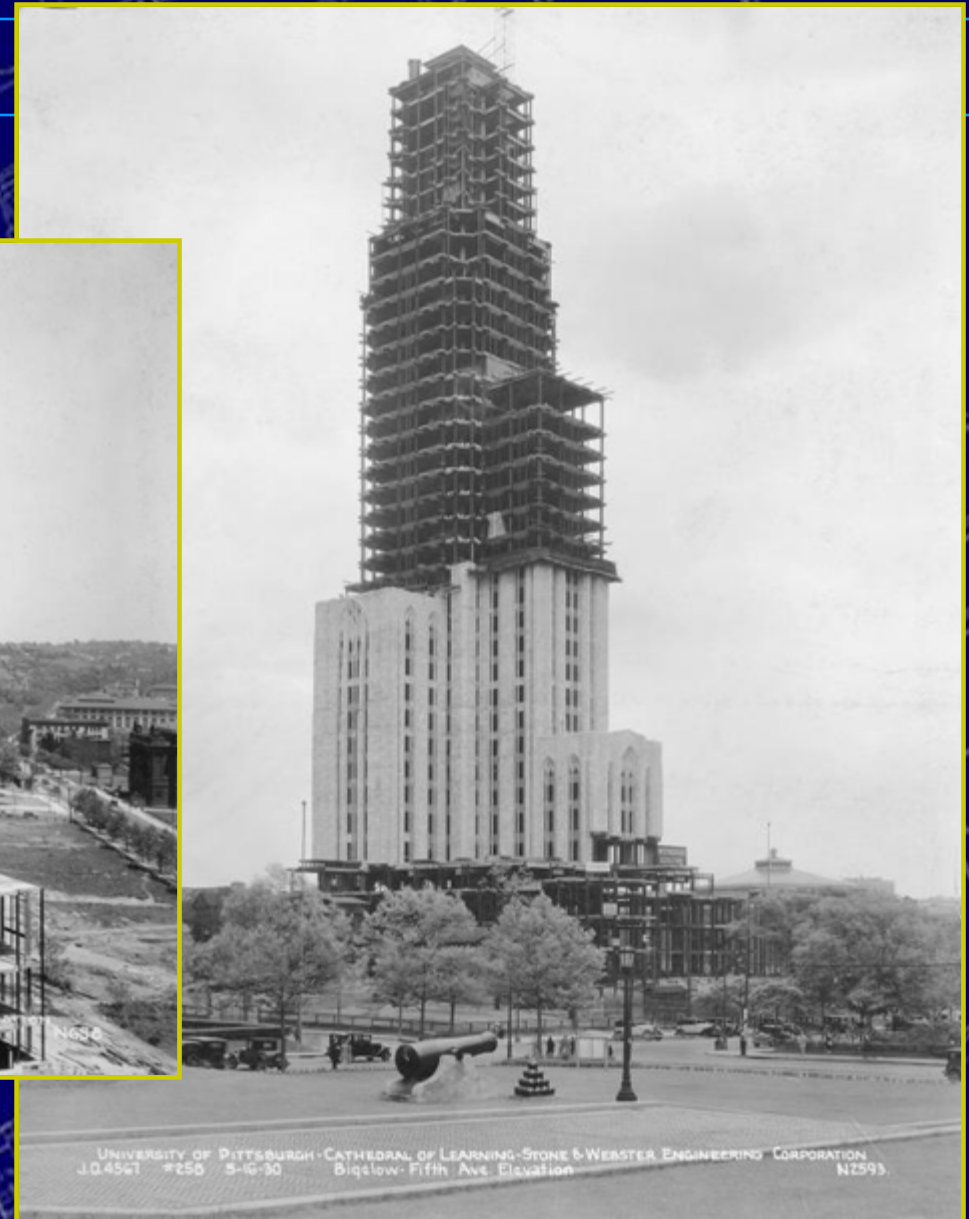


Construction May 1928 – October 1928

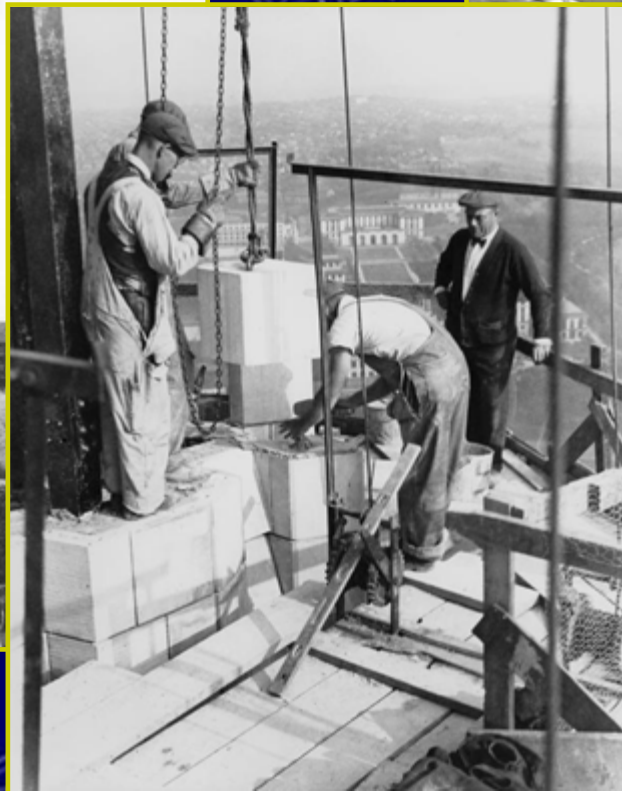
Cathedral of Learning Archival Photos



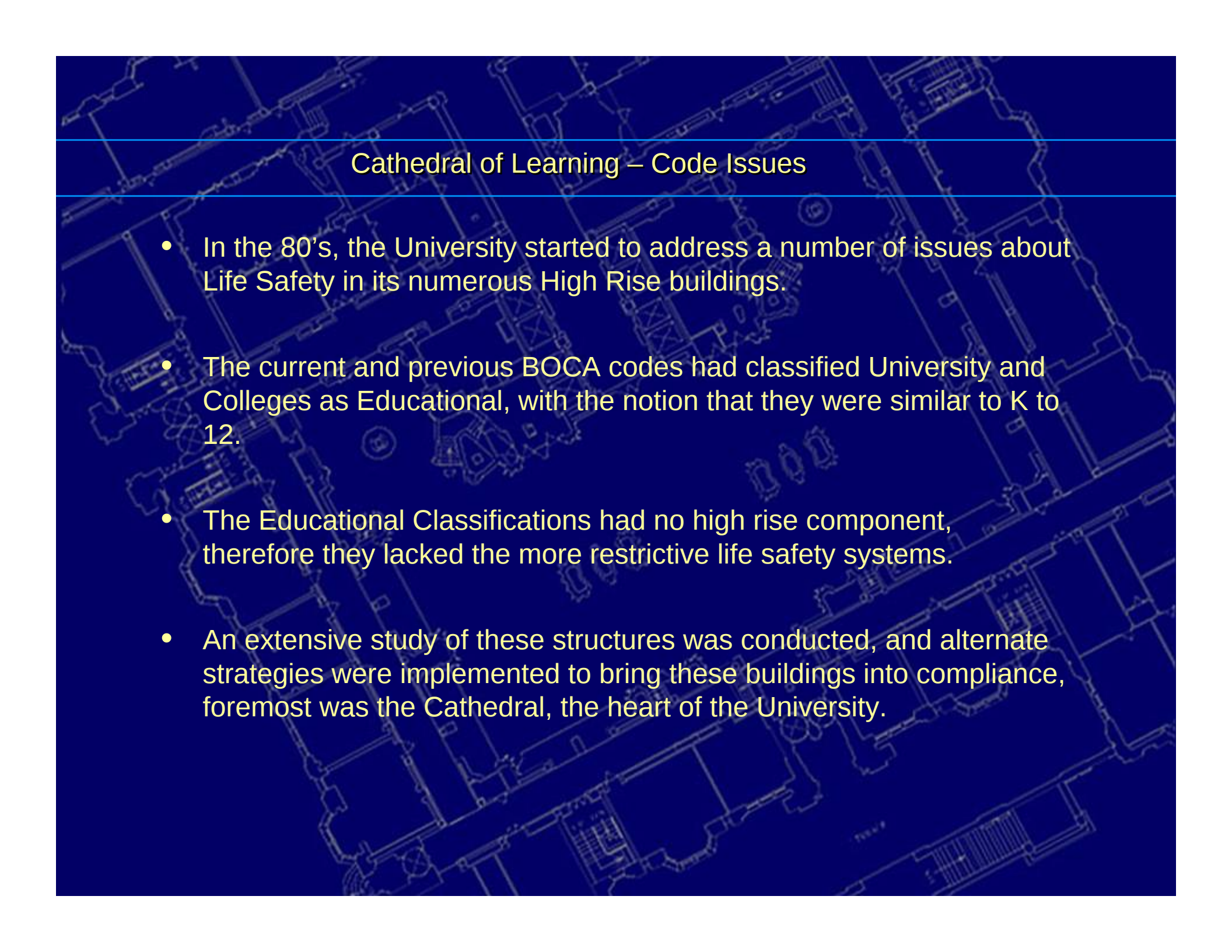
Construction May 1929 – May 1930



Cathedral of Learning Archival Photos



Dedicated in 1937

The background of the slide is a detailed, light blue architectural floor plan of a large building complex, likely a university campus. The plan shows various rooms, corridors, and structural elements. Overlaid on this background is a solid dark blue horizontal band that serves as a header for the title.

Cathedral of Learning – Code Issues

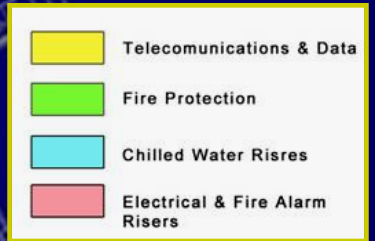
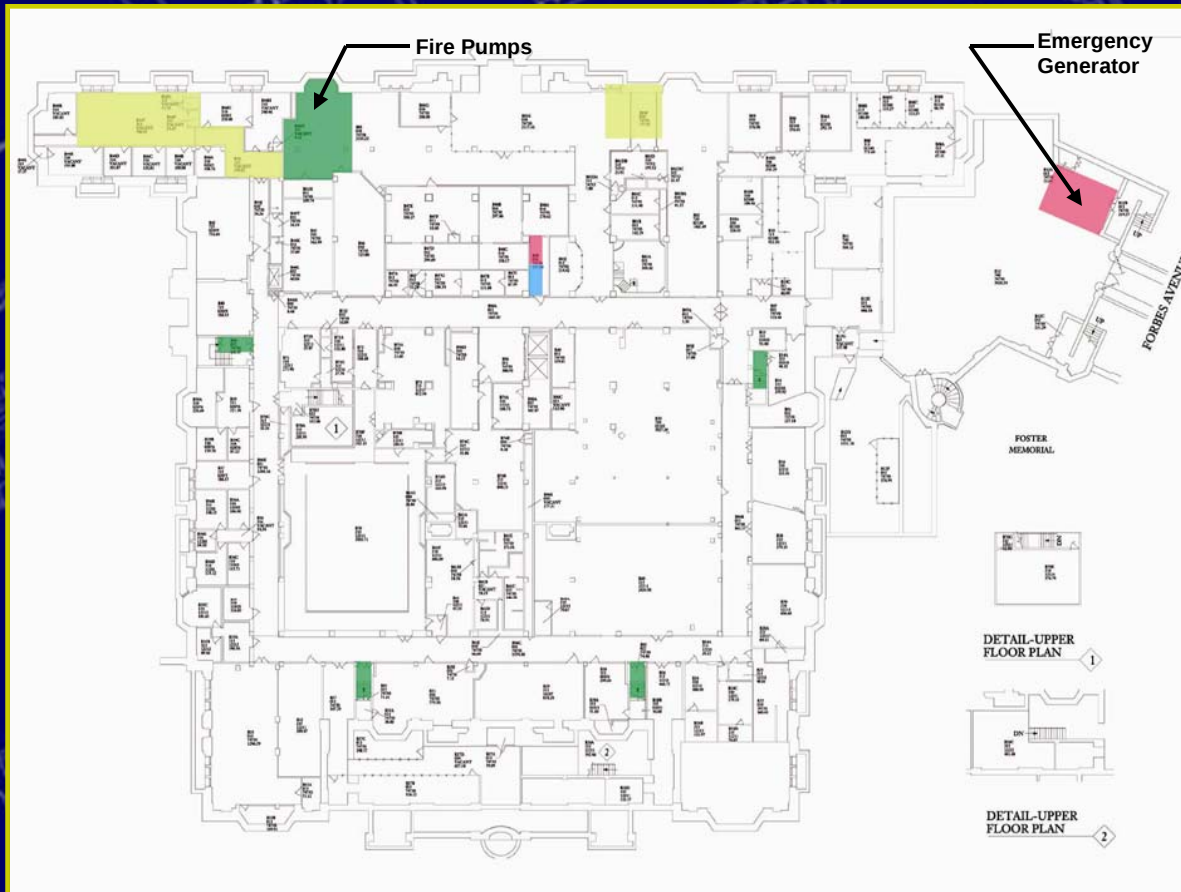
- In the 80's, the University started to address a number of issues about Life Safety in its numerous High Rise buildings.
- The current and previous BOCA codes had classified University and Colleges as Educational, with the notion that they were similar to K to 12.
- The Educational Classifications had no high rise component, therefore they lacked the more restrictive life safety systems.
- An extensive study of these structures was conducted, and alternate strategies were implemented to bring these buildings into compliance, foremost was the Cathedral, the heart of the University.

Cathedral of Learning – Current Occupancies

- The Cathedral remains an academic and administrative center for the University, and is the “Corporate Headquarters”, with offices for the Chancellor and Senior Vice Chancellors.
- Currently the Cathedral has over 87 classrooms at 48,000 NSF and over 179,600 NSF of administrative and departmental offices.
- There are over 125 window air conditioners.
- There are approximately 25 independent HVAC systems with roof top chillers or DX units.
- The Cathedral needed a unified strategy, to address where this building needed to go in the next 50 years.
- Provide an environment that was expected in a high rise and the technology needed for administration and education and the assurance that all would be safe and protected.

Phase 1A

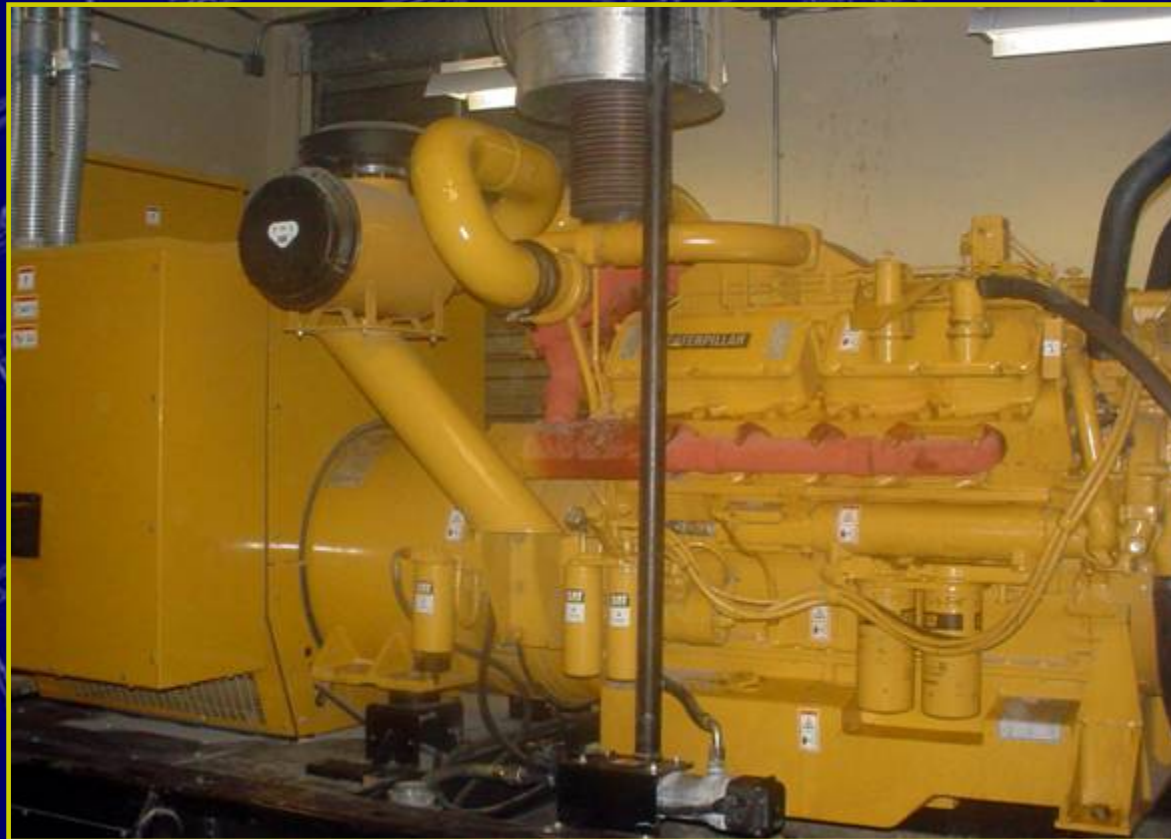
Basement Floor



Fire Protection & Fire
Alarm Risers

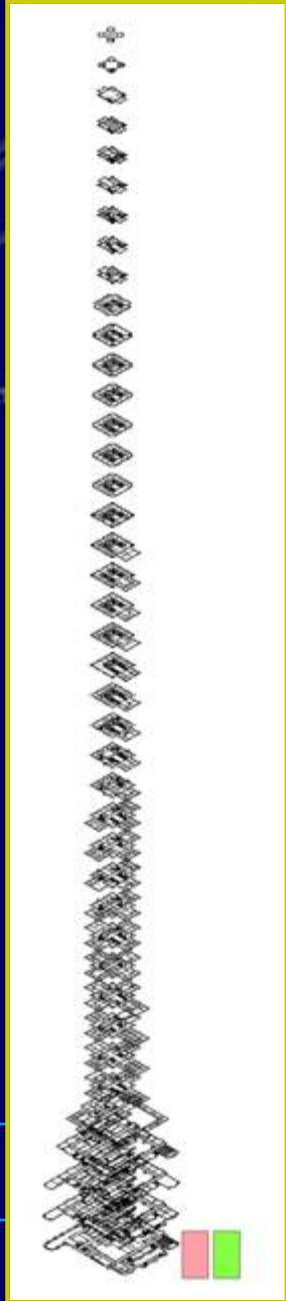
Cathedral of Learning - Infrastructure

Cathedral of Learning

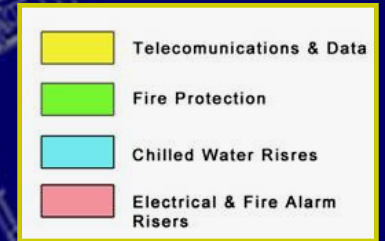


Generator

Phase 1A



Ground Floor

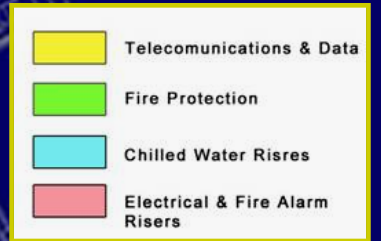
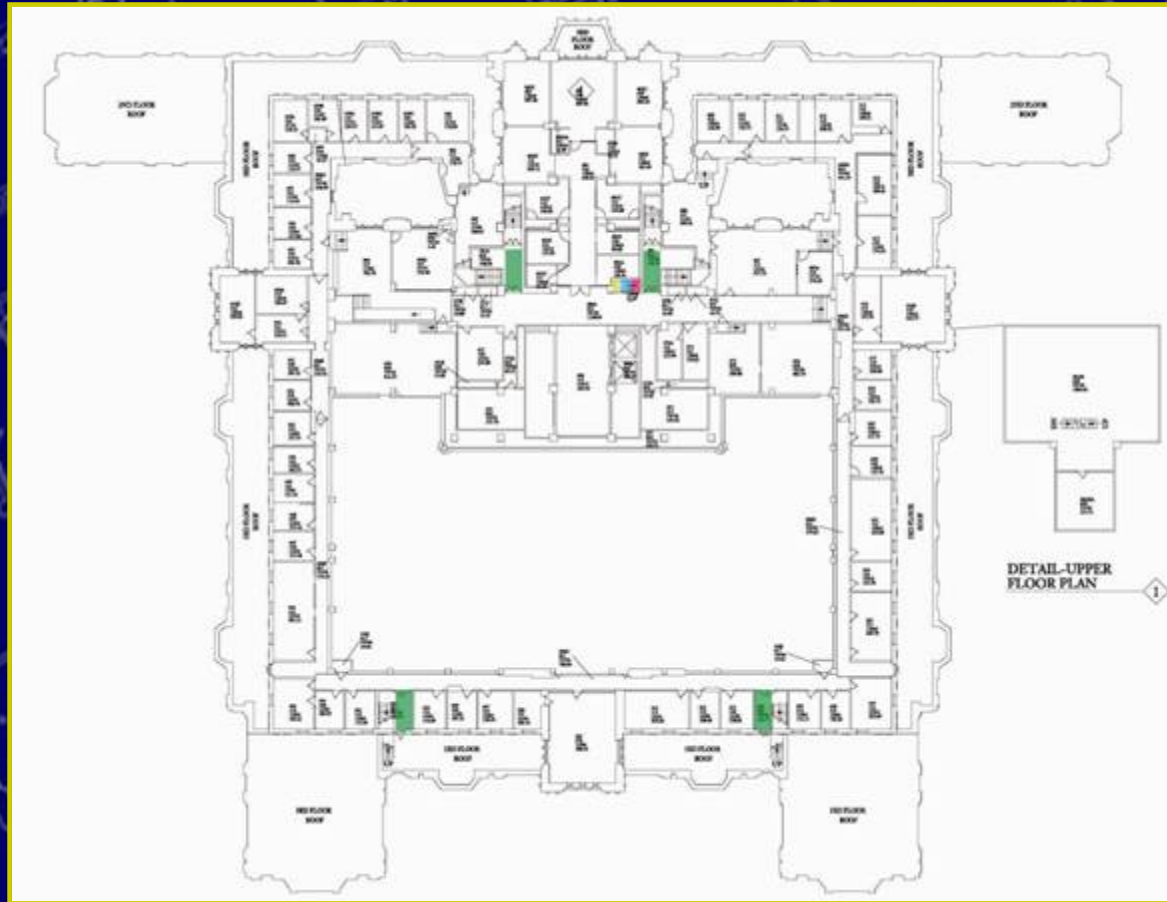


Cathedral of Learning - Infrastructure

Phase 1A

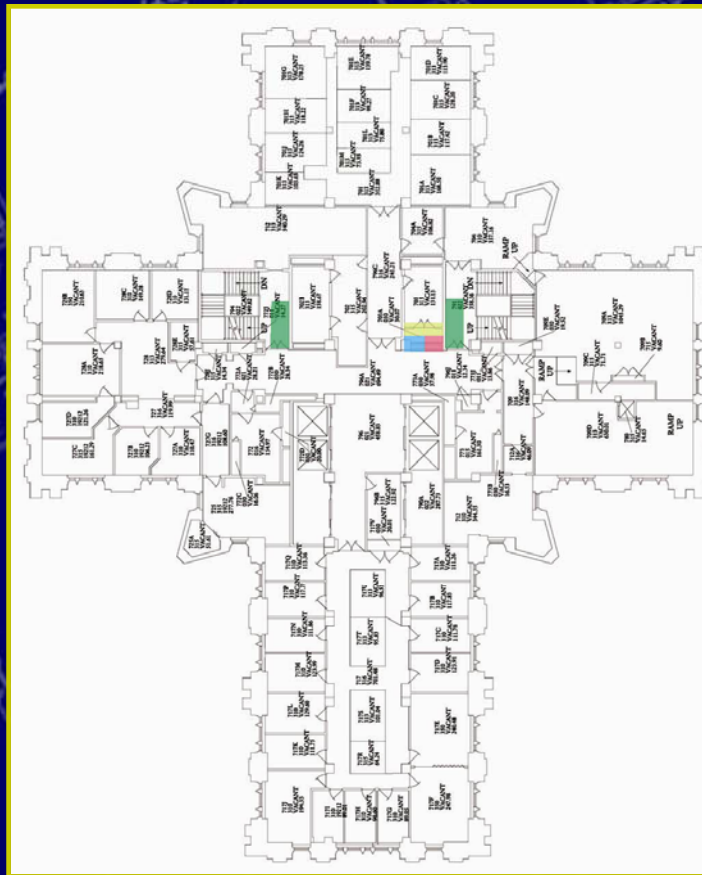
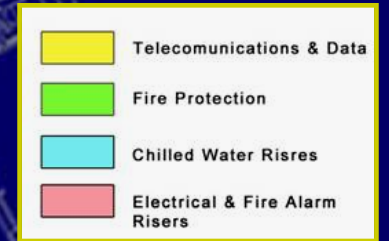
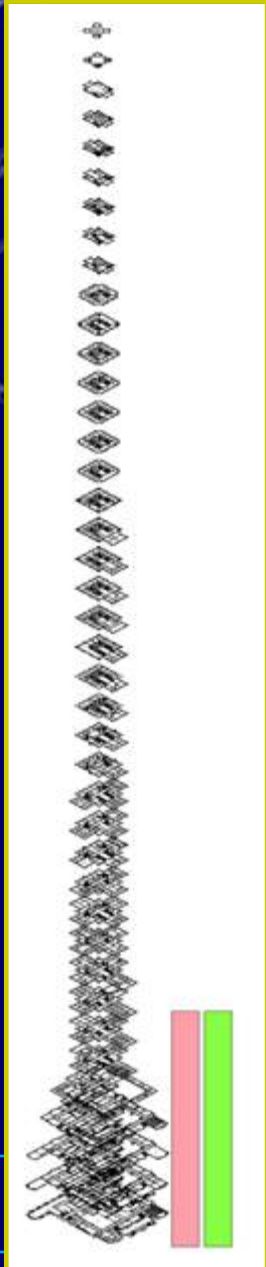


Fourth Floor

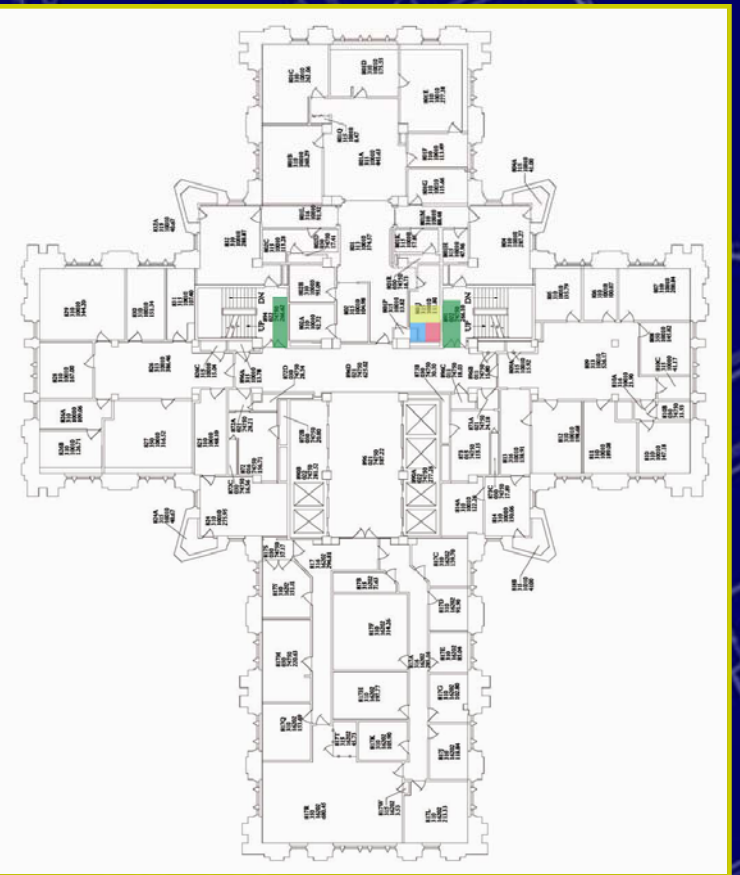


Cathedral of Learning - Infrastructure

Phase 1A



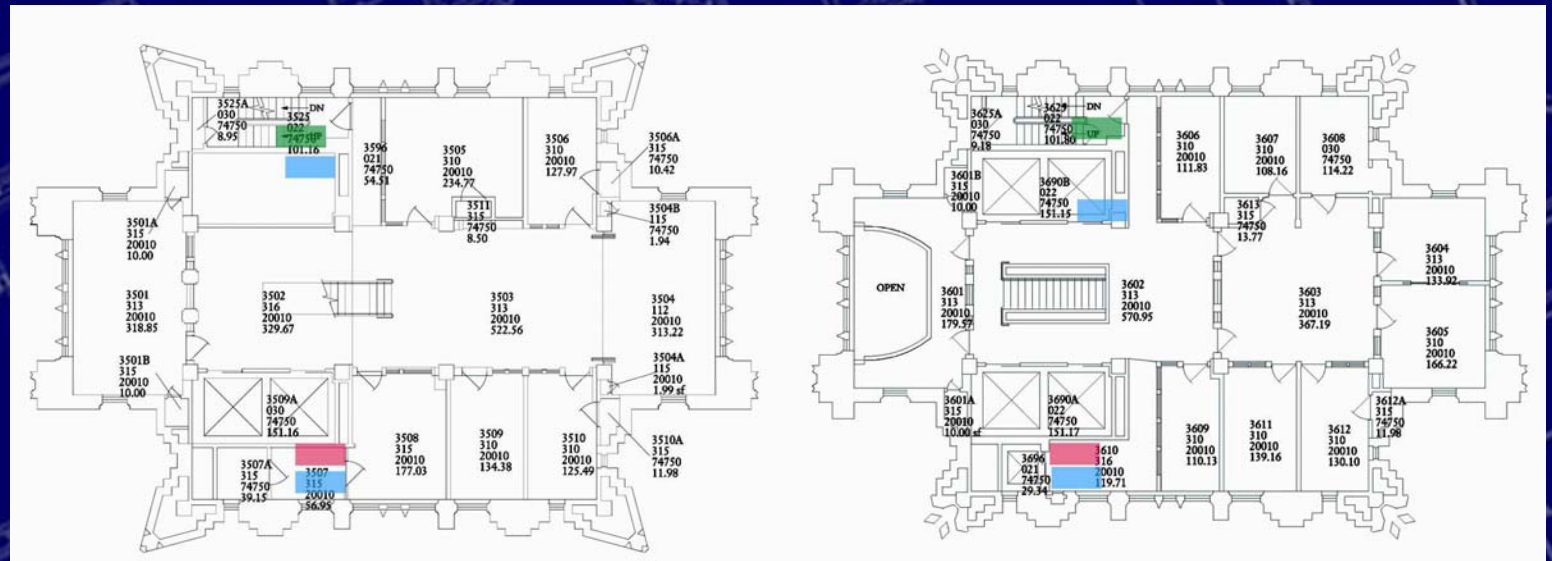
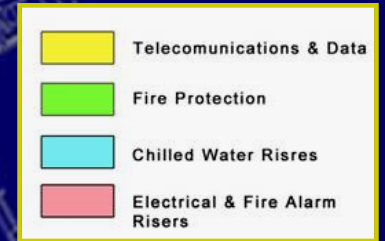
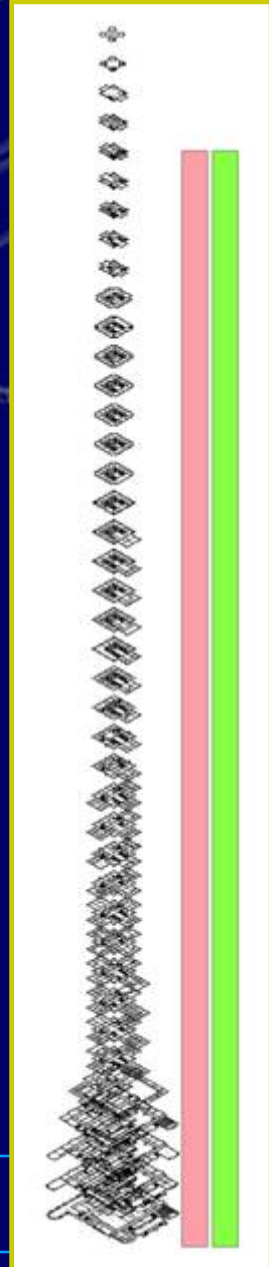
Seventh Floor



Eighth Floor

Cathedral of Learning - Infrastructure

Phase 1A

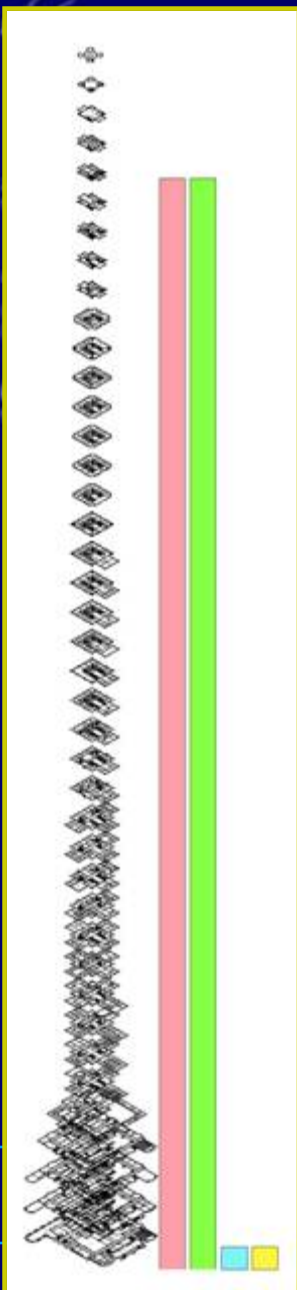


Thirty-Fifth Floor

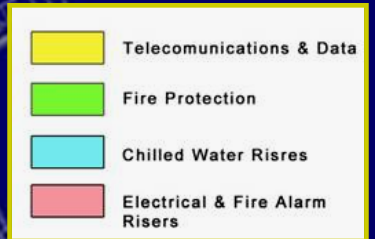
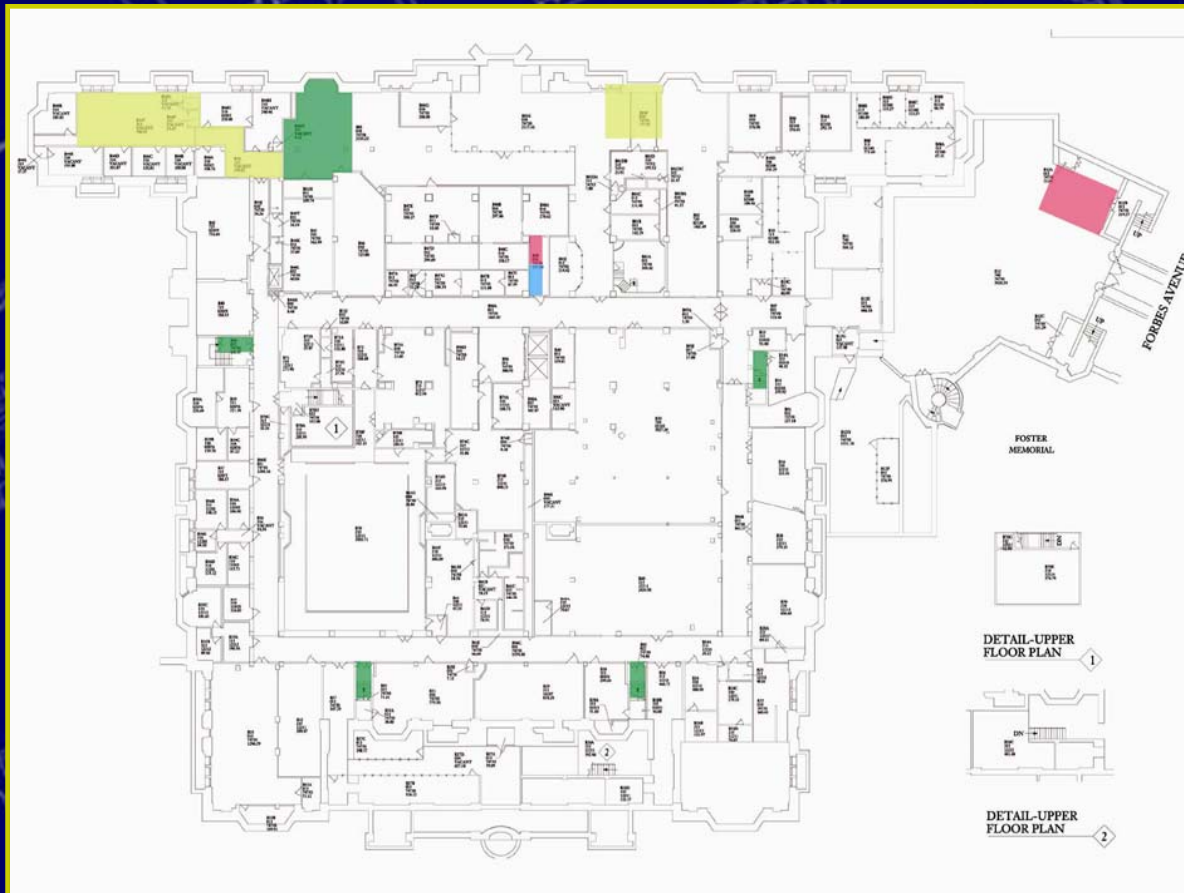
Thirty-Sixth Floor

Cathedral of Learning - Infrastructure

Phase 1B

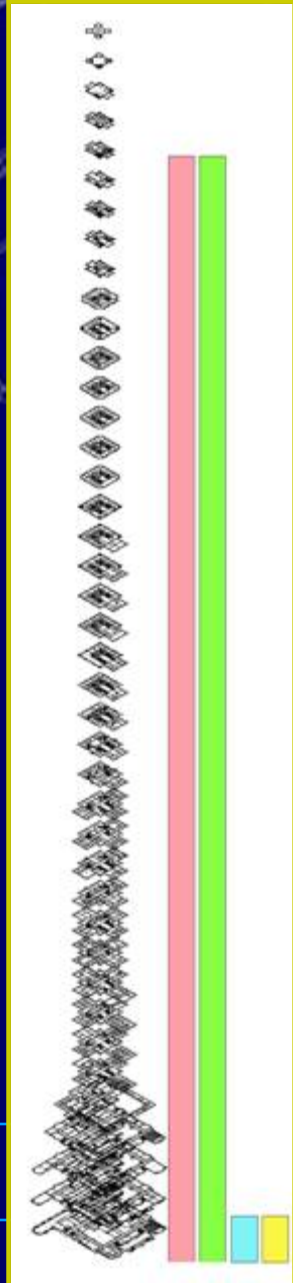


Basement Floor

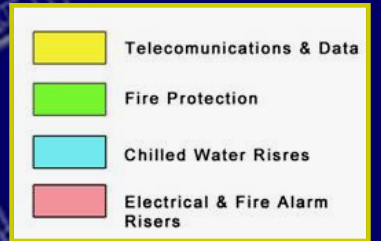


Chilled Water &
Telecommunications
Cathedral of Learning - Infrastructure

Phase 1B

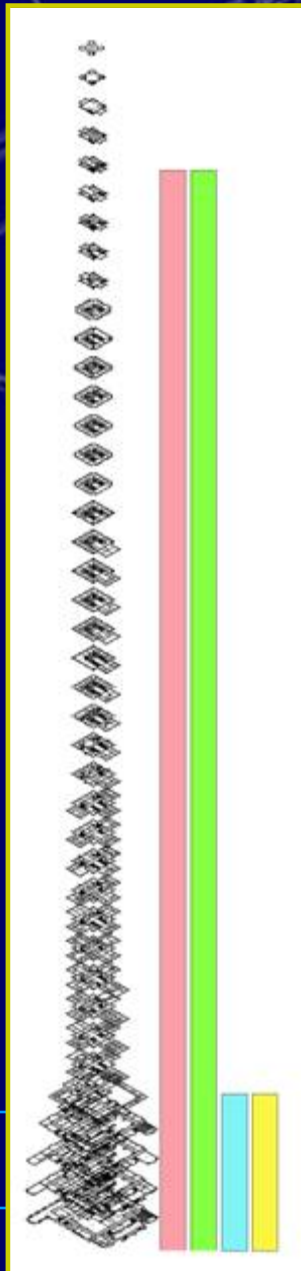


Ground Floor

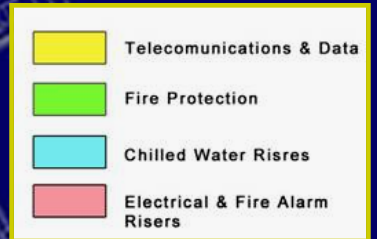
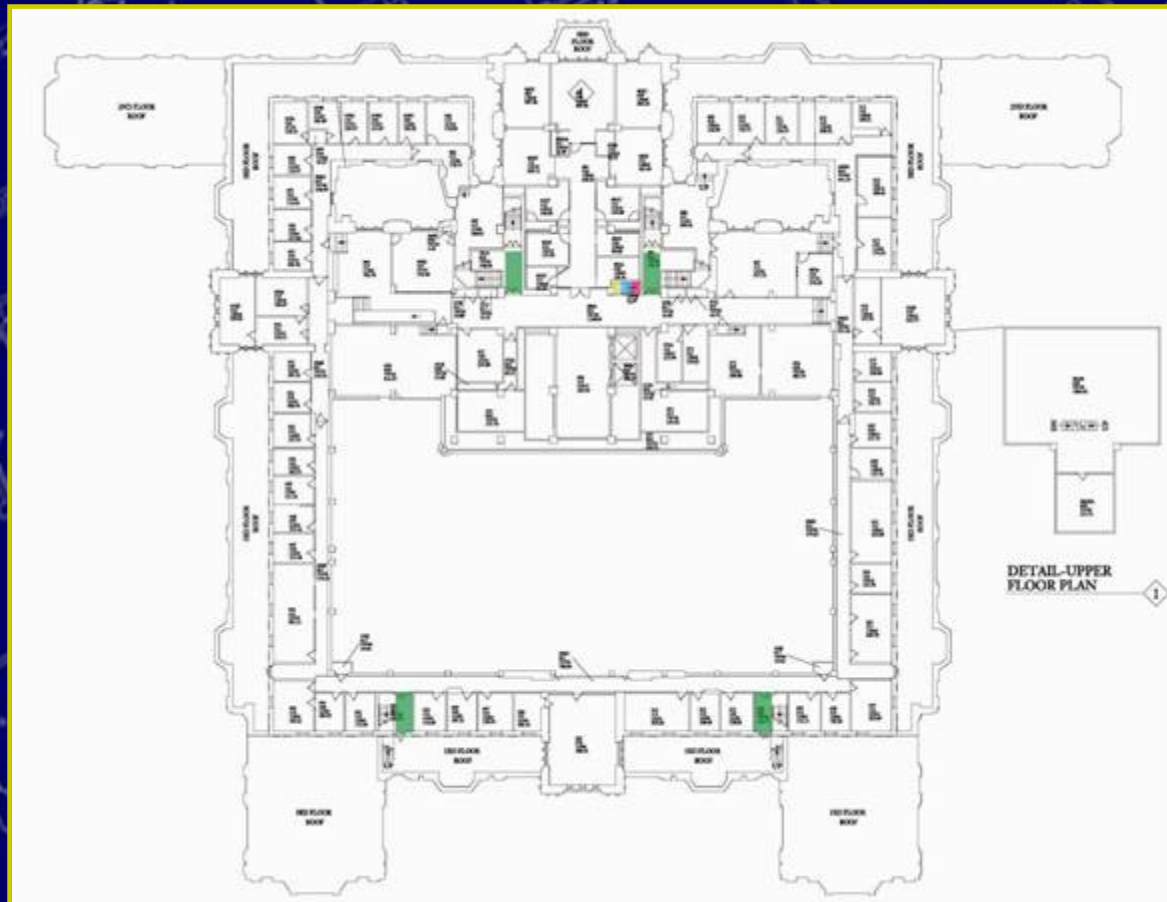


Cathedral of Learning - Infrastructure

Phase 1B



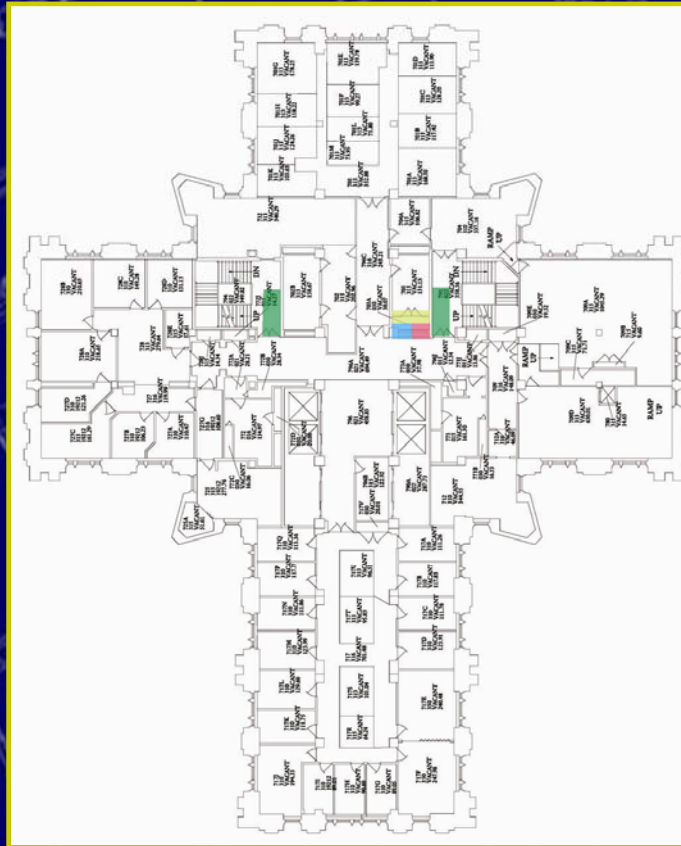
Fourth Floor



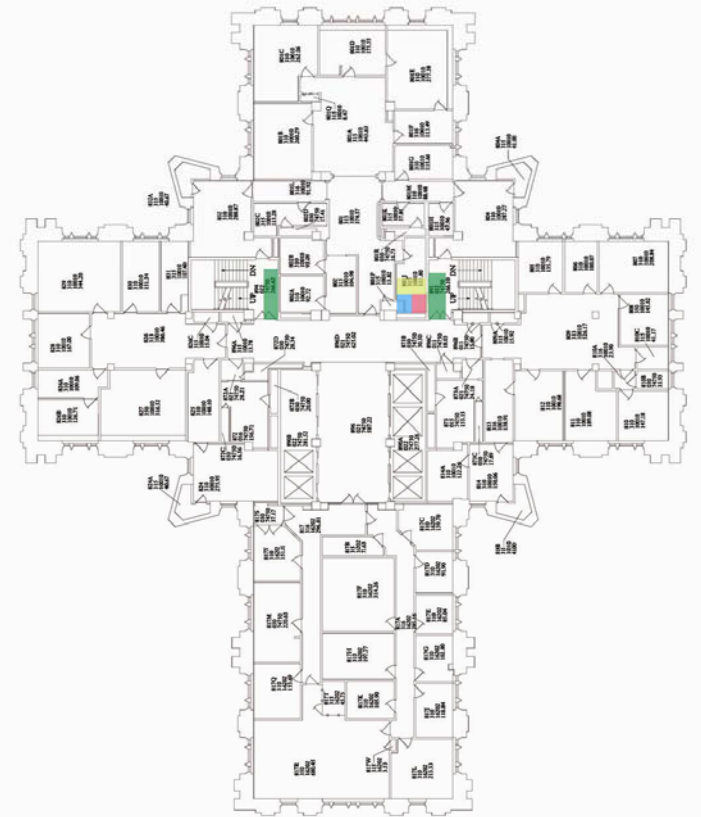
Cathedral of Learning - Infrastructure

Phase 1B

- Telecommunications & Data
- Fire Protection
- Chilled Water Risers
- Electrical & Fire Alarm Risers



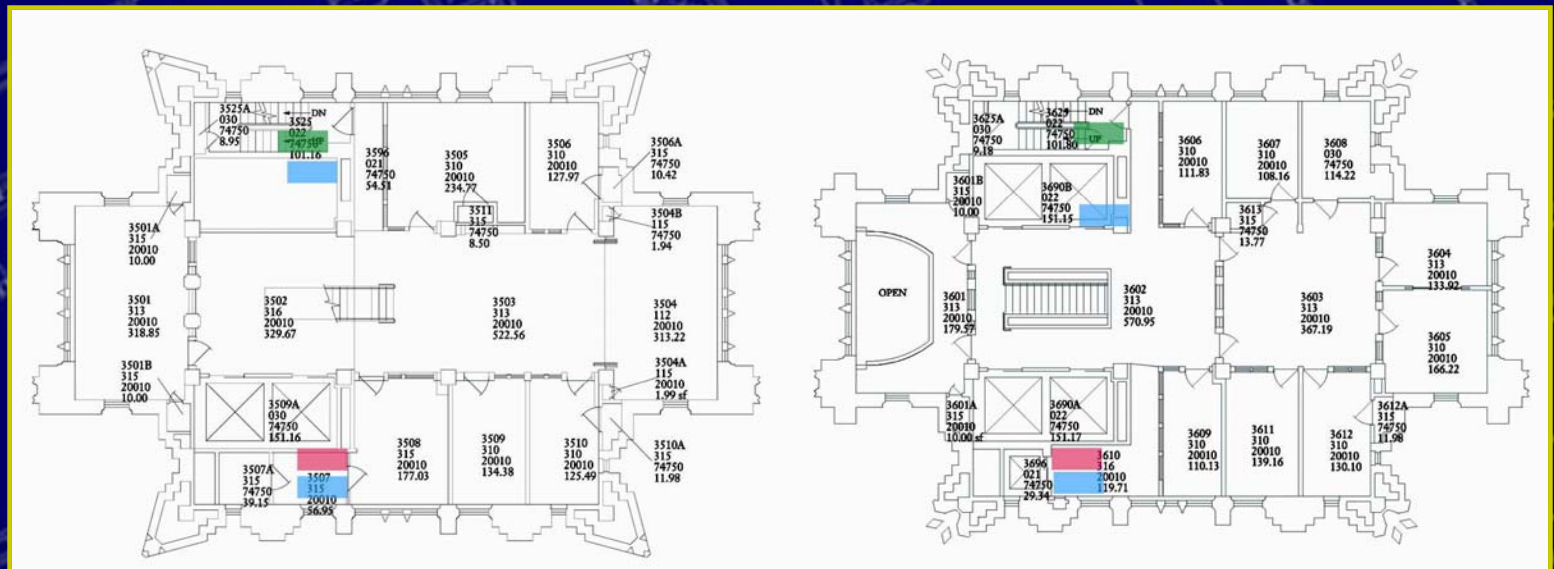
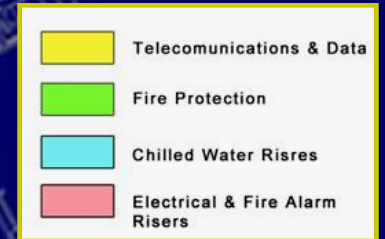
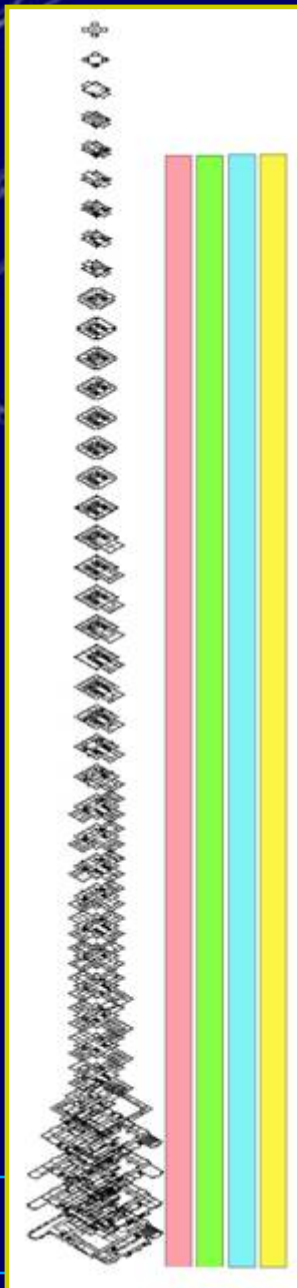
Seventh Floor



Eighth Floor

Cathedral of Learning - Infrastructure

Phase 1B

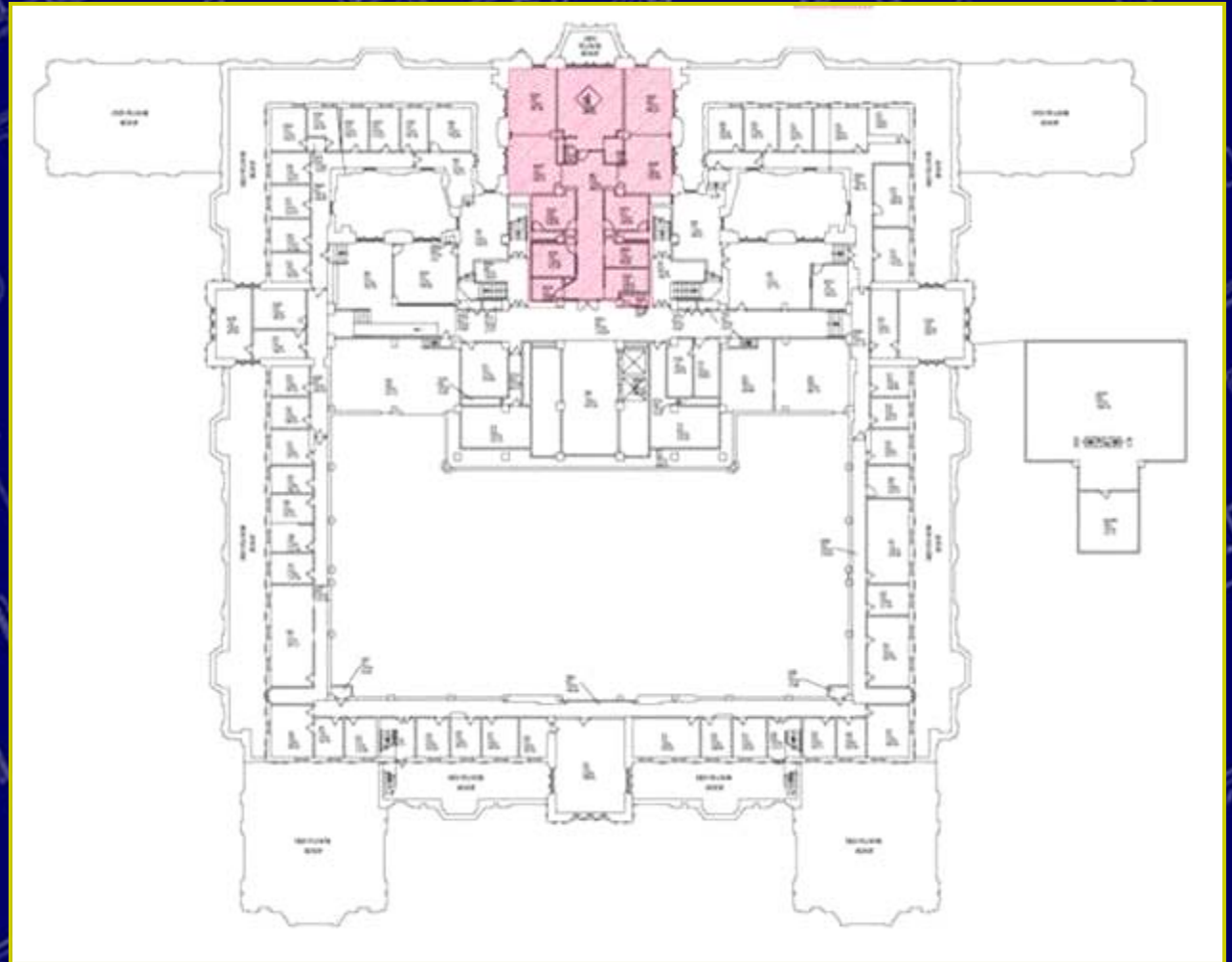


Thirty-Fifth Floor

Thirty-Sixth Floor

Cathedral of Learning - Infrastructure

Cathedral of Learning Fourth Floor Plan - Fire Protection



Key Plan

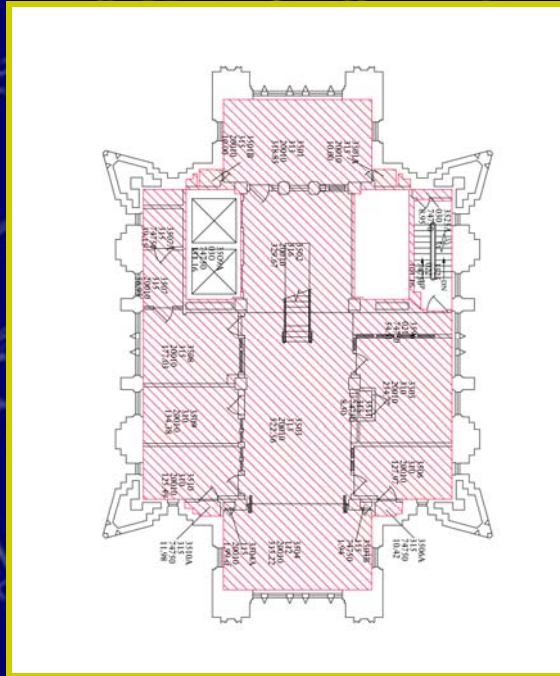
McCarl Center for Nontraditional Student Success 2002



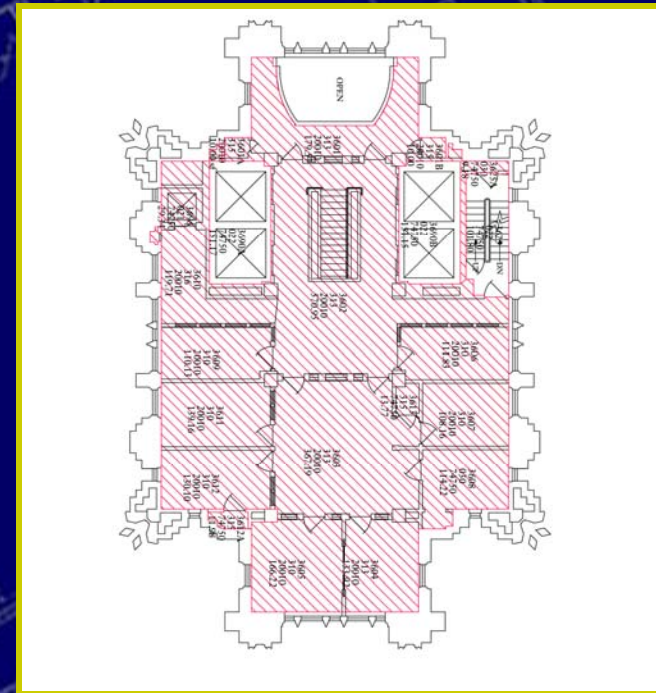
Cathedral of Learning - Fire Protection



Key Plan



Thirty-Fifth Floor Plan

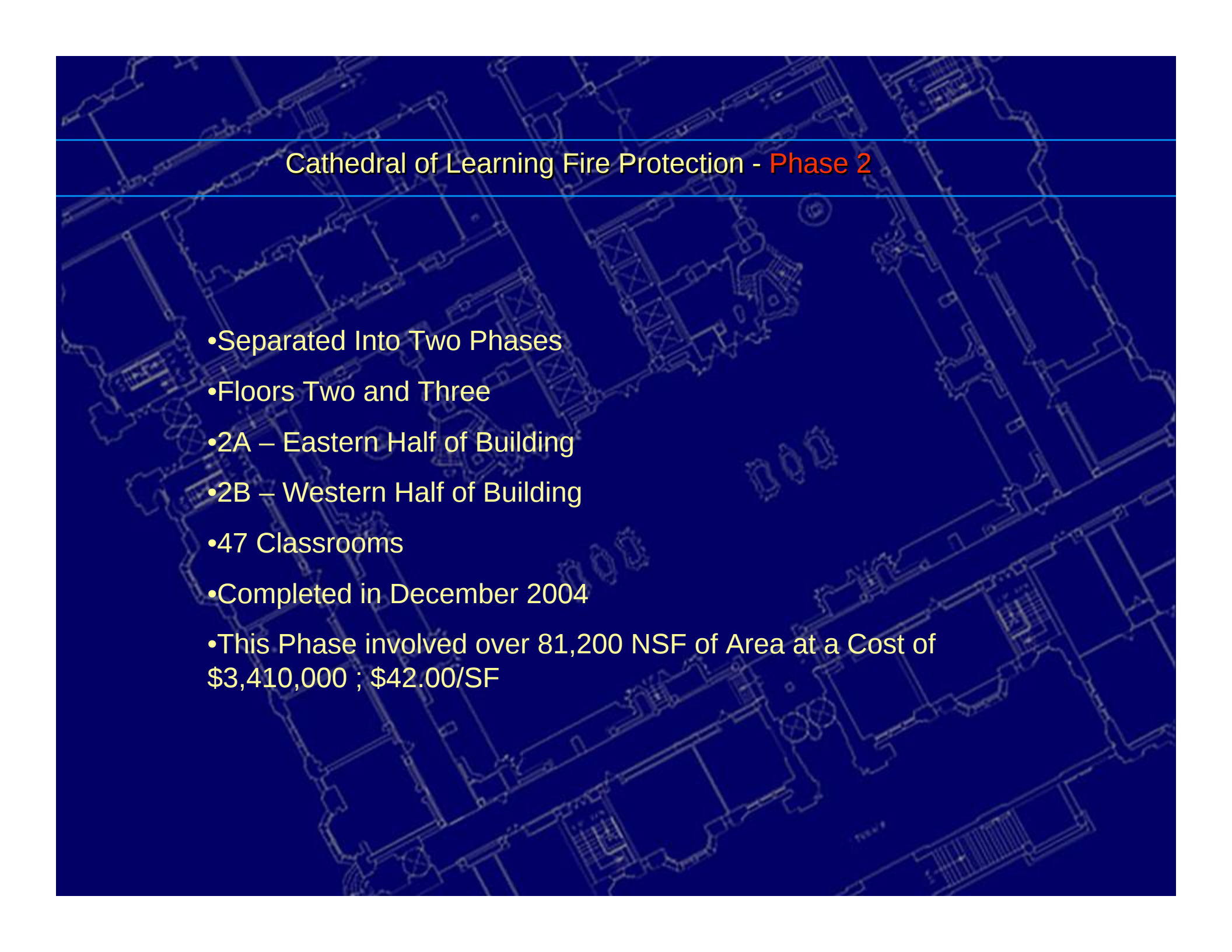


Thirty-Sixth Floor Plan Plan

Honors College 2004



© Ed Massey

The background of the slide is a detailed architectural blueprint of a large building, likely a school or university. The blueprint shows various rooms, corridors, and structural elements in white lines on a dark blue background. The text is overlaid on this blueprint.

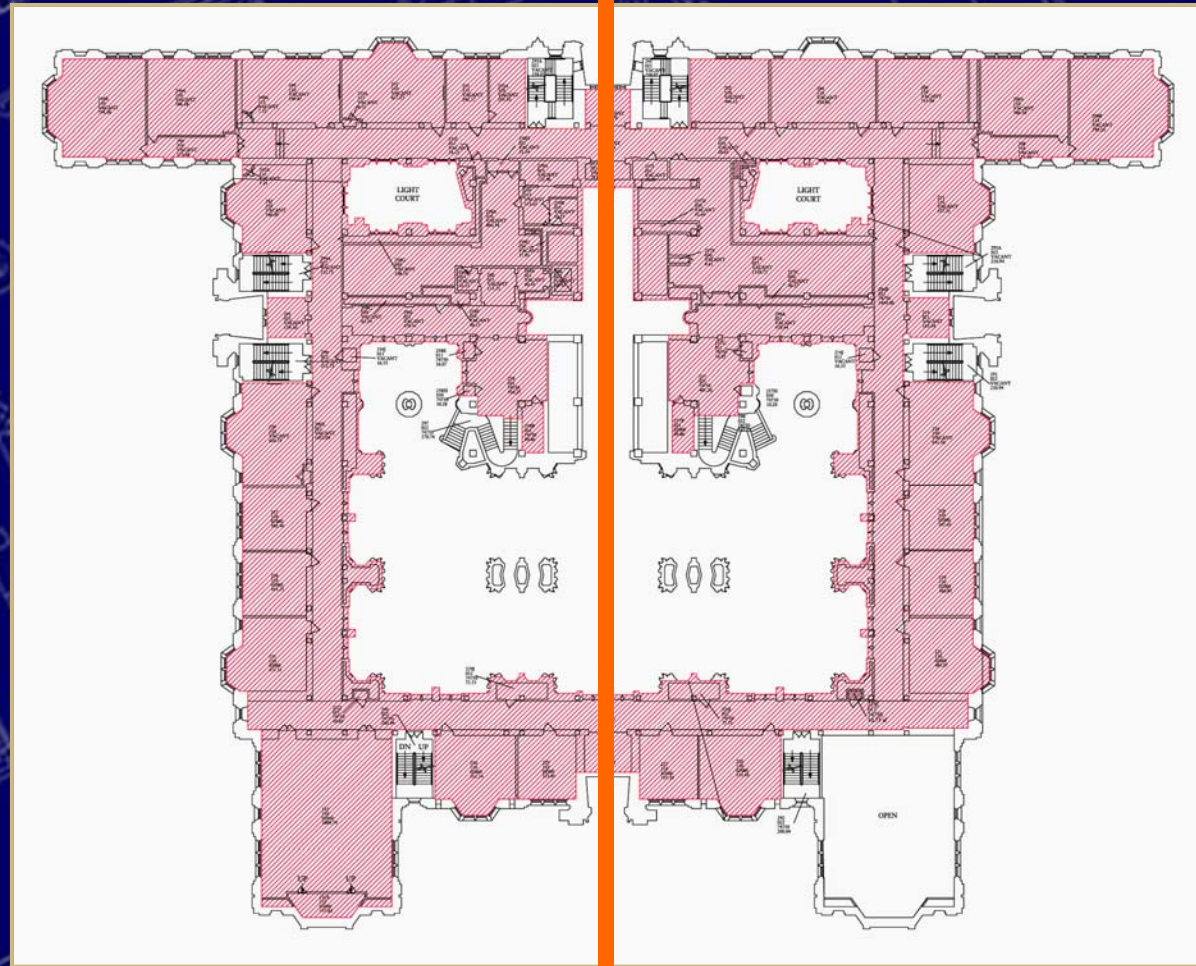
Cathedral of Learning Fire Protection - Phase 2

- Separated Into Two Phases
- Floors Two and Three
- 2A – Eastern Half of Building
- 2B – Western Half of Building
- 47 Classrooms
- Completed in December 2004
- This Phase involved over 81,200 NSF of Area at a Cost of \$3,410,000 ; \$42.00/SF

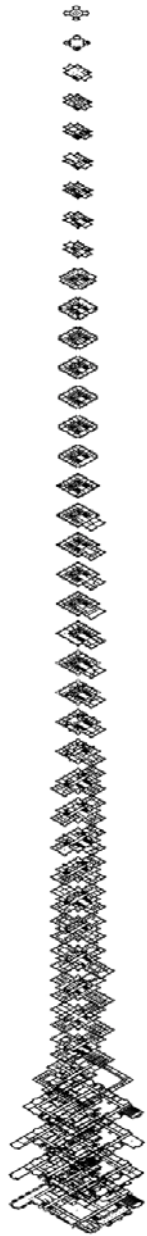
Cathedral of Learning Second Floor Plan - Fire Protection

Phase 2B

Phase 2A



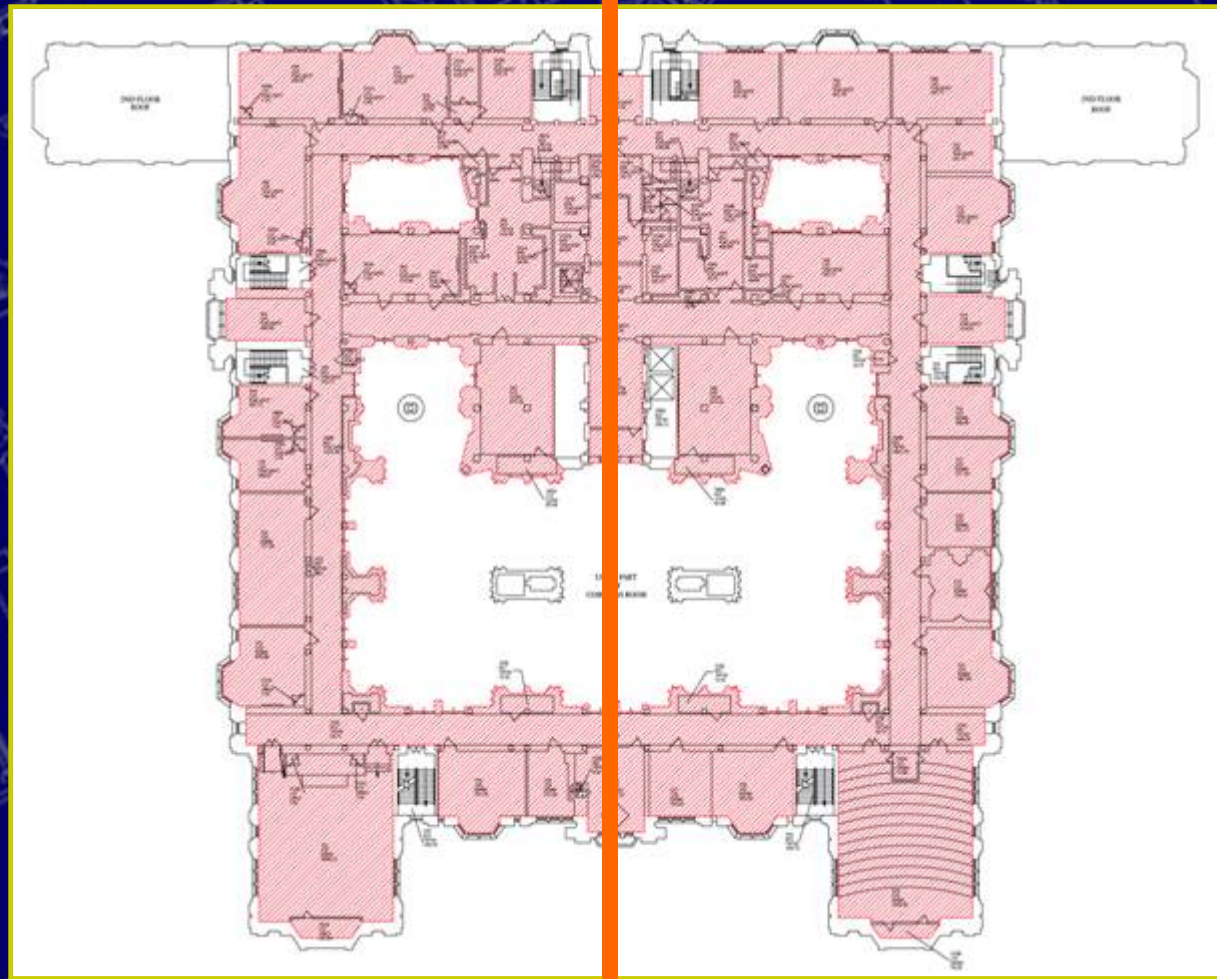
Key Plan



Cathedral of Learning Third Floor Plan - Fire Protection

Phase 2B

Phase 2A



Key Plan



Cathedral of Learning Archival Photos



Before



Construction



After

Cathedral of Learning



Construction
(During)



Construction
(After)

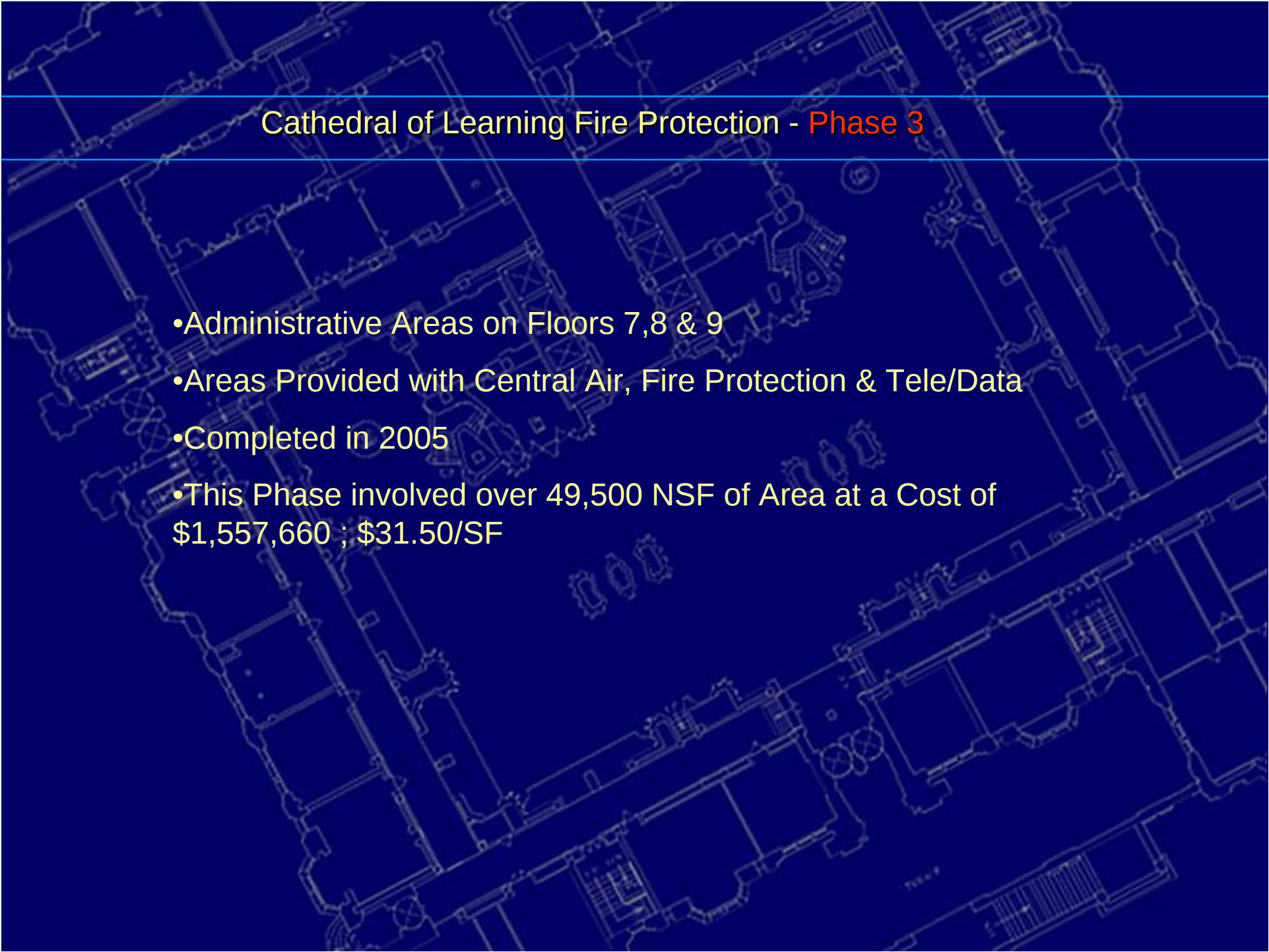
Cathedral of Learning – Typical Classroom



Construction
(During)



Construction
(After)

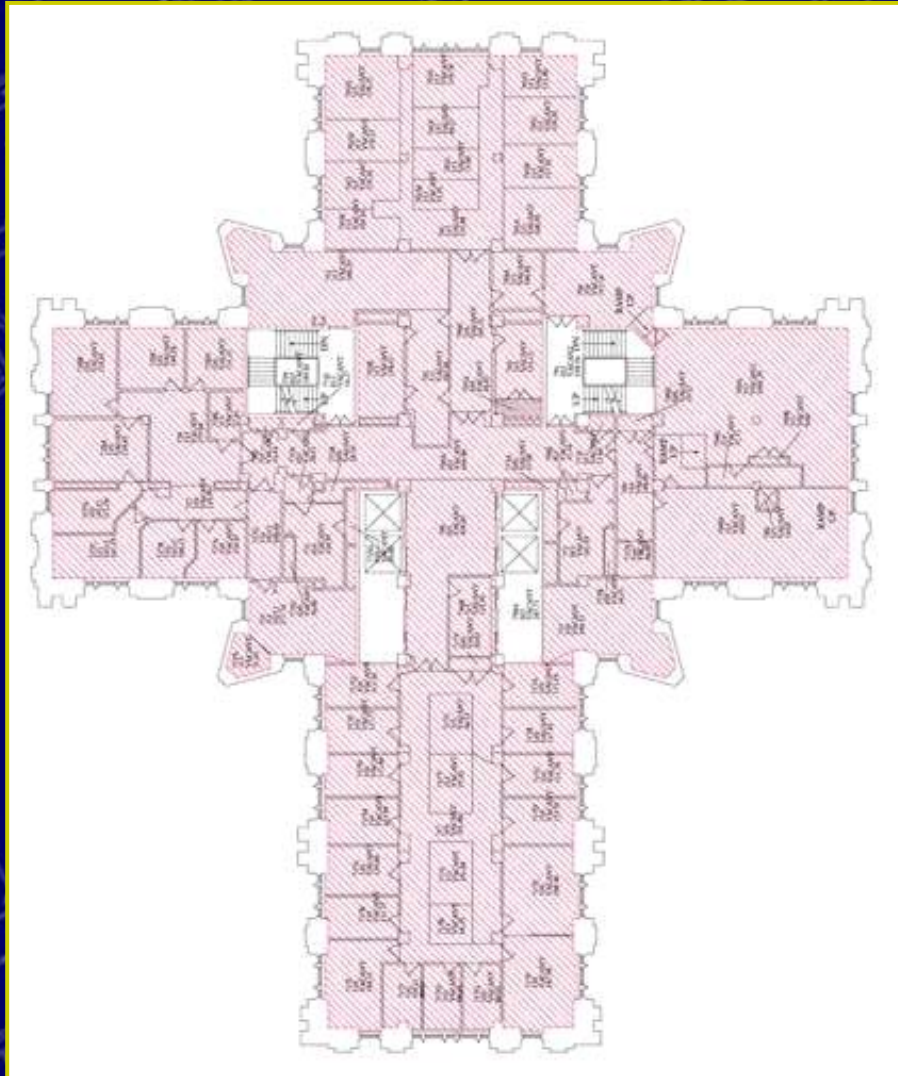
The background of the slide is a detailed architectural floor plan of a large building, likely a university or government structure. The plan shows various rooms, corridors, and service areas. The text is overlaid on this plan, with the title at the top and a bulleted list in the middle-left area.

Cathedral of Learning Fire Protection - Phase 3

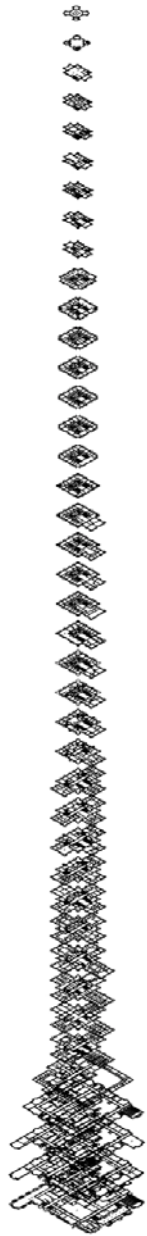
- Administrative Areas on Floors 7,8 & 9
- Areas Provided with Central Air, Fire Protection & Tele/Data
- Completed in 2005
- This Phase involved over 49,500 NSF of Area at a Cost of \$1,557,660 ; \$31.50/SF

Cathedral of Learning Seventh Floor Plan - Fire Protection

Phase 3

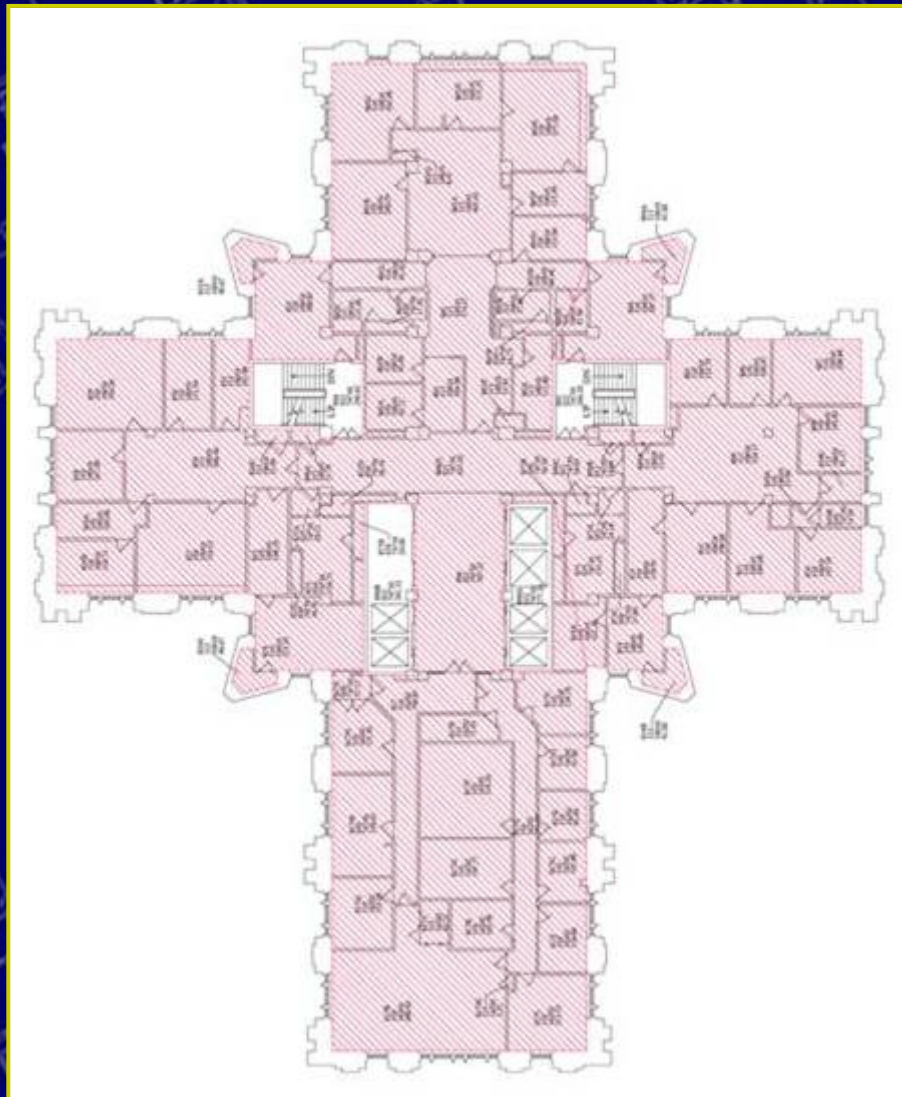


Key Plan



Cathedral of Learning Eighth Floor Plan - Fire Protection

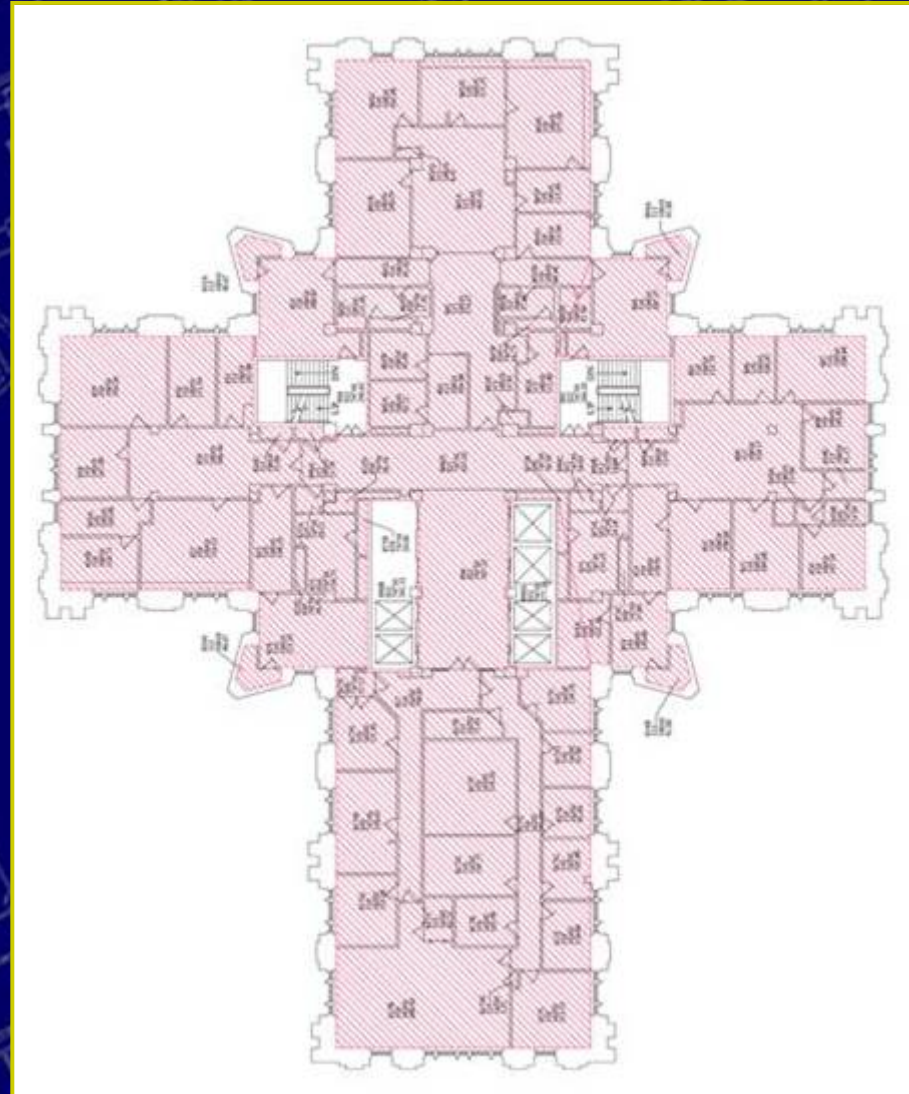
Phase 3



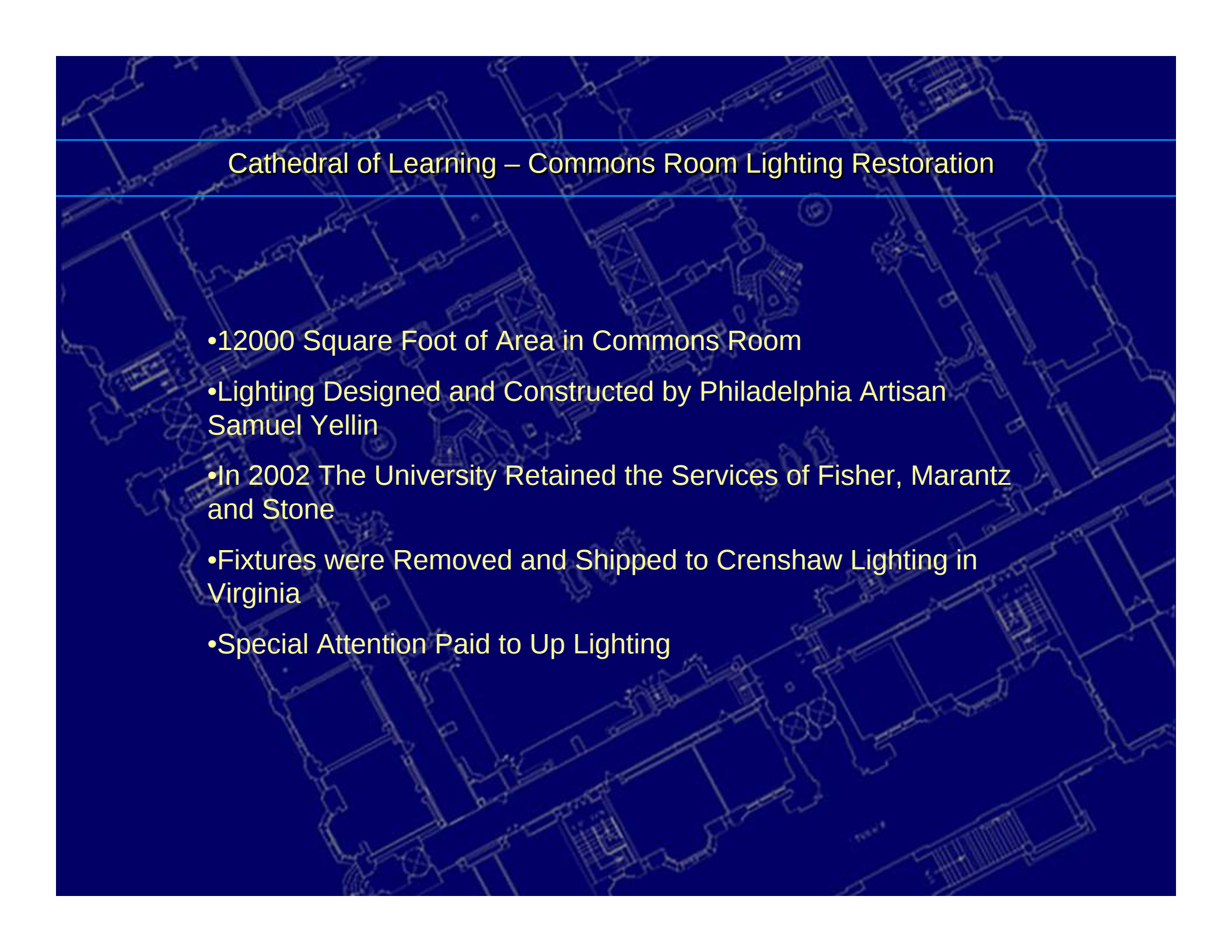
Key Plan

Cathedral of Learning Ninth Floor Plan - Fire Protection

Phase 3



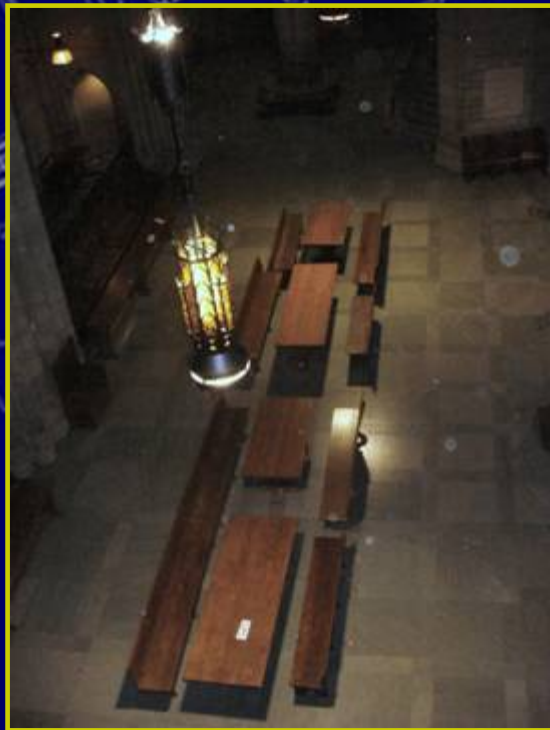
Key Plan

The background of the slide is a dark blue architectural blueprint of a building, likely a university commons room. The blueprint shows various rooms, corridors, and structural elements in white lines. The title is centered at the top.

Cathedral of Learning – Commons Room Lighting Restoration

- 12000 Square Foot of Area in Commons Room
- Lighting Designed and Constructed by Philadelphia Artisan Samuel Yellin
- In 2002 The University Retained the Services of Fisher, Marantz and Stone
- Fixtures were Removed and Shipped to Crenshaw Lighting in Virginia
- Special Attention Paid to Up Lighting

Cathedral of Learning – Common Room Lighting

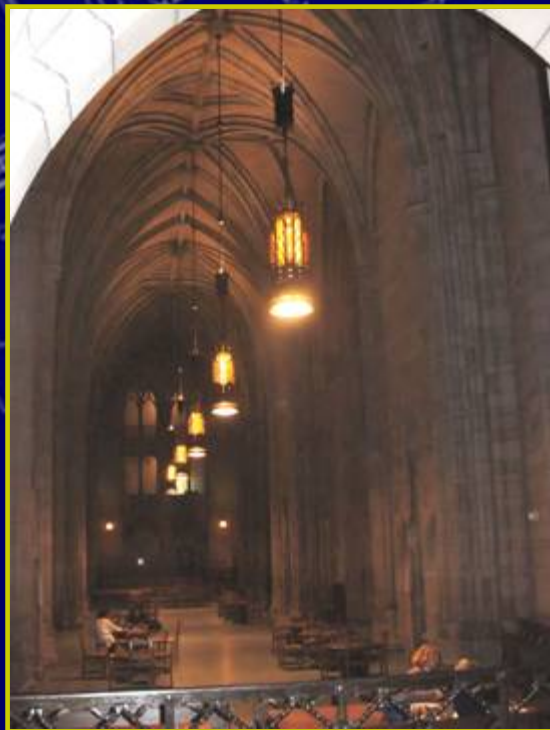


Before



After

Cathedral of Learning – Common Room Lighting



Before

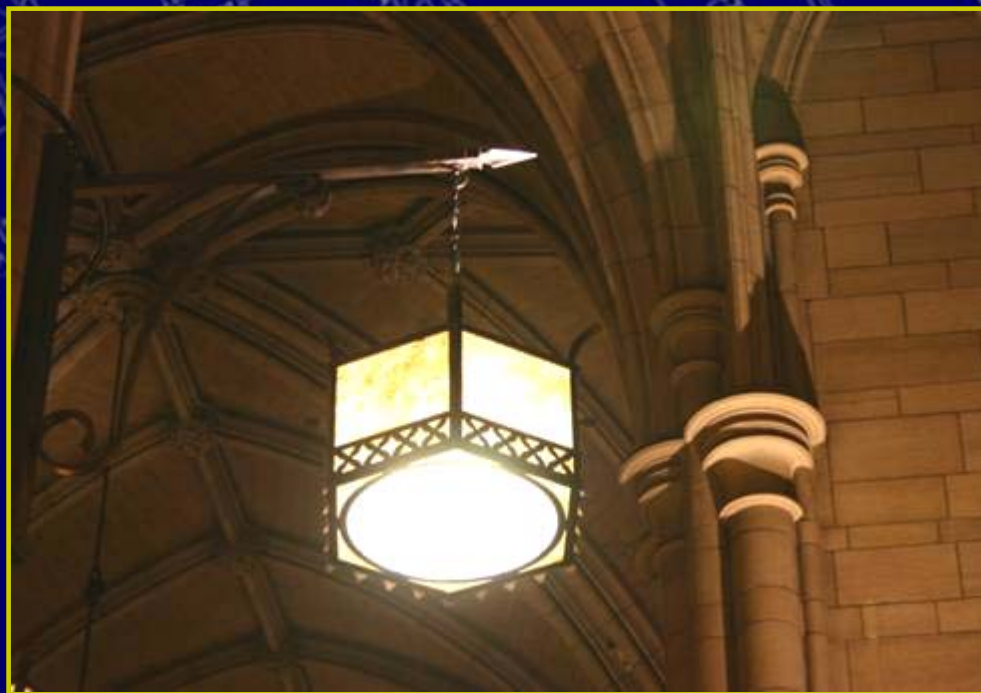


After

Cathedral of Learning – Common Room Lighting



Before



After

Cathedral of Learning – Common Room Lighting

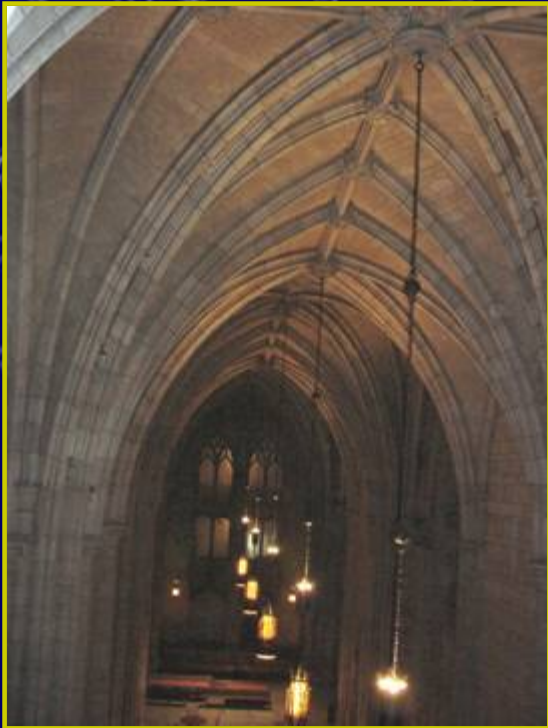


Before



After

Cathedral of Learning – Common Room Lighting



Before



After

Cathedral of Learning

Phase 1: Infrastructure

Area: 558,000 NSF

	Total	\$ / SF
Fees	\$294,200	
General Construction	\$680,000	\$1.22
HVAC	\$442,000	\$0.79
Fire Protection	\$710,000	\$1.27
Electrical	\$568,000	\$1.02
Trades & Support	\$45,100	
Total	\$2,400,000	\$4.30

Cathedral of Learning

Phase 2: Floors 2 & 3

Area: 81,200 NSF

	Total	\$ / SF
Fees	\$107,900	
General Construction	\$914,000	\$11.26
HVAC	\$1,210,000	\$14.90
Fire Protection	\$128,800	\$1.60
Electrical	\$1,000,000	\$12.32
Trades & Support	\$137,100	\$1.69
Commissioning	\$157,300	\$1.94
Total	\$3,410,000	\$42.00

Cathedral of Learning

Phase 3: Floors 7, 8 & 9

Area: 49,500 NSF

	Total	\$ / SF
Fees	\$66,600	
General Construction	\$462,500	\$9.34
HVAC	\$727,800	\$14.70
Fire Protection	\$150,200	\$3.00
Electrical	\$184,500	\$3.73
Trades & Support	\$84,700	\$1.70
Commissioning	\$32,600	\$0.66
Total	\$1,557,600	\$31.47

Cathedral of Learning

Summary: Total Costs

Phases 1, 2 & 3

	Total
Fees	\$468,700
General Construction	\$2,056,500
HVAC	\$2,379,800
Fire Protection	\$989,000
Electrical	\$1,752,500
Trades & Support	\$266,900
Commissioning	\$189,900
Total	\$7,367,700

Cathedral of Learning

Summary: Total Costs

Phases 1, 2 & 3

	Total
Fees	\$468,700
General Construction	\$2,056,500
HVAC	\$2,379,800
Fire Protection	\$989,000
Electrical	\$1,752,500
Trades & Support	\$266,900
Commissioning	\$189,900
Total	\$7,367,700



University of Pittsburgh

Facilities Management Division



Cathedral of Learning

