

# Architecture & Design

Education / Careers / Profession



Ronald C. Weston, AIA

*Vice President at PS&S Architects & Engineers*

*2018 President at AIA Newark & Suburban Architects*

# ABOUT TODAY

## What I hope to accomplish

Give you some information about me

- Introduce reasons to consider becoming an architect
- Convey the importance & impact of good design
- What you can study to prepare for architecture school
- Discuss the education path towards becoming an architect
- Outline design and construction process & tools
- Introduce allied design & engineering fields
- End with questions & discussion

# Architect: [ahr-ki-tekt] *noun*

1. A person who engages in the profession of architecture.
2. A person professionally engaged in the design of certain large constructions other than buildings and the like: landscape architect; naval architect.
3. The deviser, maker, or creator of anything.



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# REASONS

## to become an Architect

- You get to see your work built
- You can positively affect people's lives
- So..... you can make the world a better place
- It is a diverse, changing and creative profession
- Architecture is a respected profession



# Architecture

can make places special

The Coliseum in  
Rome, Italy



AT&T Stadium  
Dallas, TX

# Architecture

can make places special

New York Towers



Eiffel Tower



# Architecture can make places special



**Rockefeller Center**  
Architect: Raymond Hood

The Center at Christmas time



# Architecture

can make places special



The Disney Castle

**Neuschwanstein Castle**  
the inspiration for the Disney Castle



# WHAT you can study to prepare for Architecture School

- Art, Drafting and Drawing
- Photography
- Graphic Design & Gaming Software Applications
- Math (Geometry & Trigonometry)
- Science (Physics & Materials)
- Social Studies & History



# HOW

## do you become an Architect

- College Degree in Architecture –
  - 5-year Accredited Bachelor of Arch Degree
  - Bachelor Degree + 2-year Master of Arch Degree
- Gain work experience
  - Intern / Apprentice for 36 months
  - NCARB AXP experience hours
- Take and pass a state licensing exam
  - NCARB ARE Exam
  - State Boards of Architecture issue license



# U.S. Schools of Architecture (2017)

## The Top 10 Undergraduate Programs

- 1 Cornell University
- 2 California Polytechnic State University, San Luis Obispo
- 3 Syracuse University
- 4 Rice University
- 5 Virginia Polytechnic Institute and State University
- 6 University of Texas at Austin
- 7 Rhode Island School of Design
- 8 Pratt Institute
- 9 Auburn University
- 10 Southern California Institute of Architecture

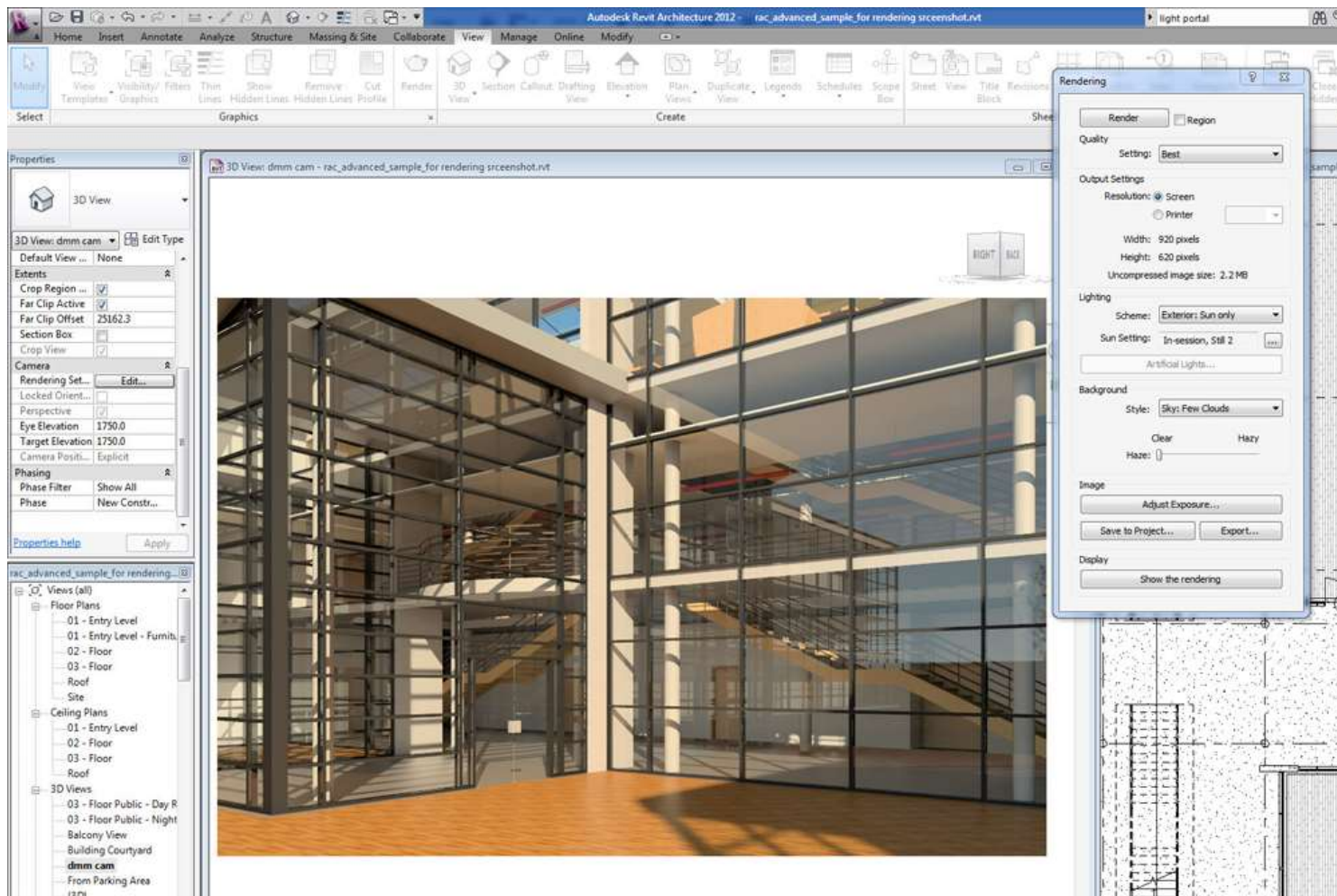
## The Top 10 Graduate Programs

- 1 Harvard University
- 2 (TIE) Cornell University\*  
Massachusetts Institute of Technology
- 4 Columbia University
- 5 Yale University
- 6 University of California, Berkeley
- 7 University of Michigan
- 8 Syracuse University
- 9 Rice University
- 10 University of Pennsylvania

Source: 2017 Design Intelligence

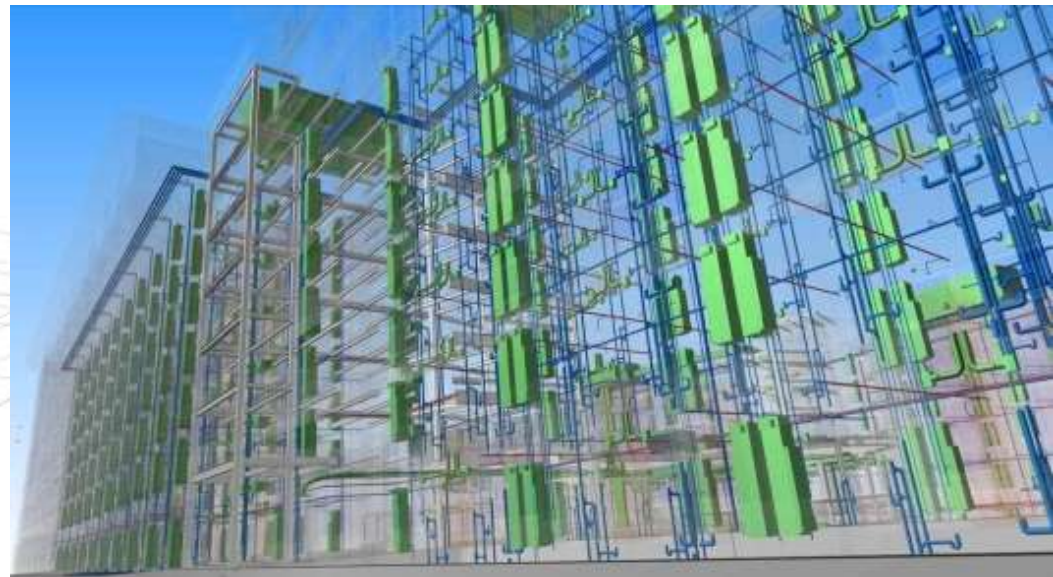
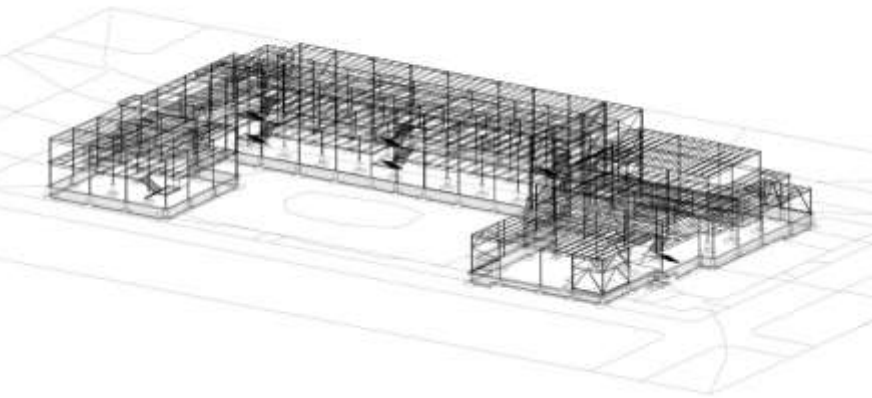


# ARCHITECTS NEW DESIGN TOOLS: CAD & Building Information Modeling



# ARCHITECTS NEW DESIGN TOOLS: CAD & Building Information Modeling

- Structural Model
- Mechanical, Electrical and Plumbing Models



# ARCHITECTS NEW DESIGN TOOLS: CAD & Building Information Modeling



# ARCHITECTS NEW DESIGN TOOLS: 3D Virtual Reality (Oculus Rift)



# ARCHITECTS NEW DESIGN TOOLS: 3D Printed Models (MakerBot)





Planning + Design Phase

# Site Analysis



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Planning + Design Phase

# Adjacent Land Use



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# Zoning



Planning + Design Phase

# Architectural Forms

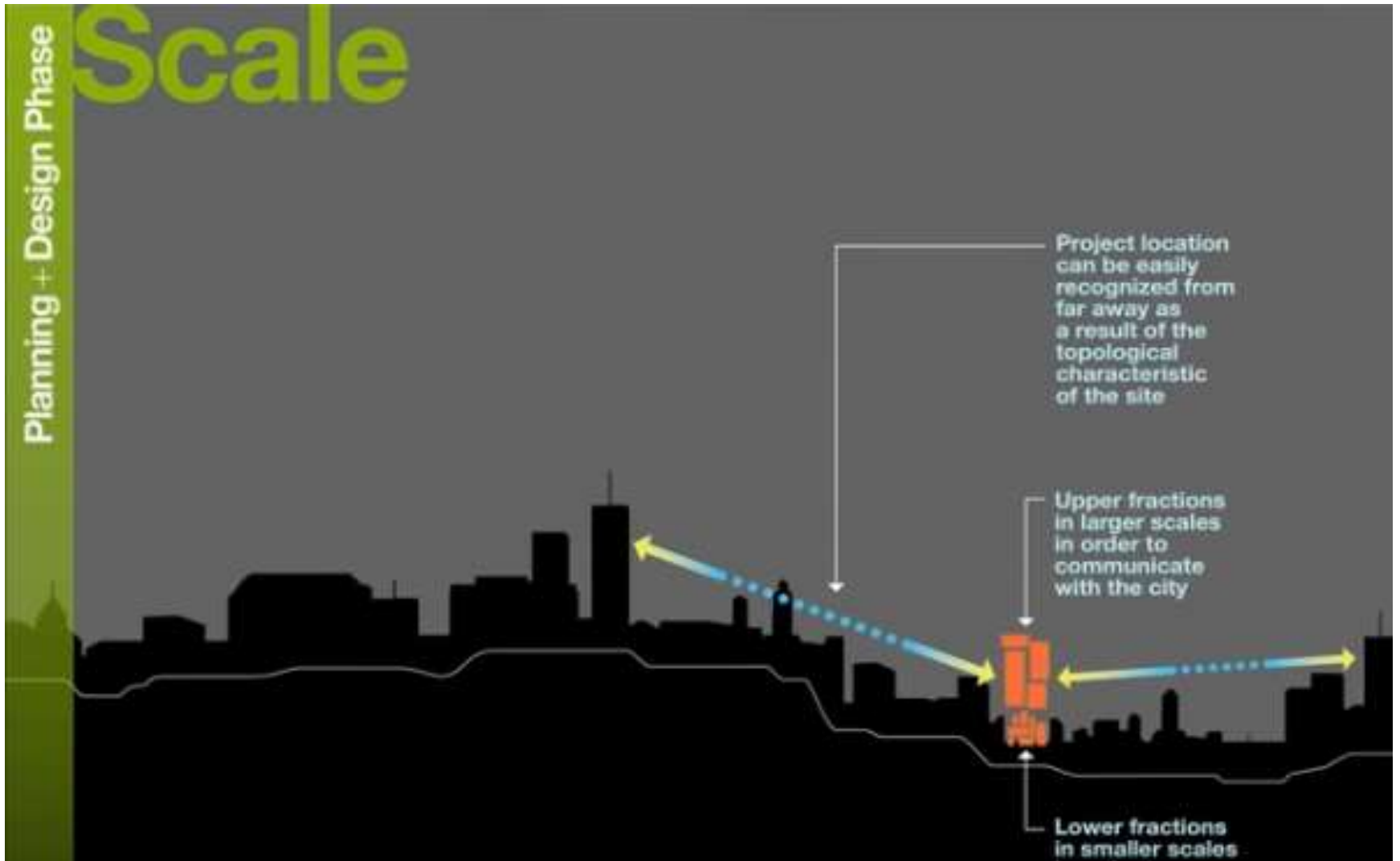


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# Scale



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Planning + Design Phase

# Massing



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# Construction Documentation Phase Instructions to Build



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Construction Documentation Phase—Instructions to Build

# Systems Integration

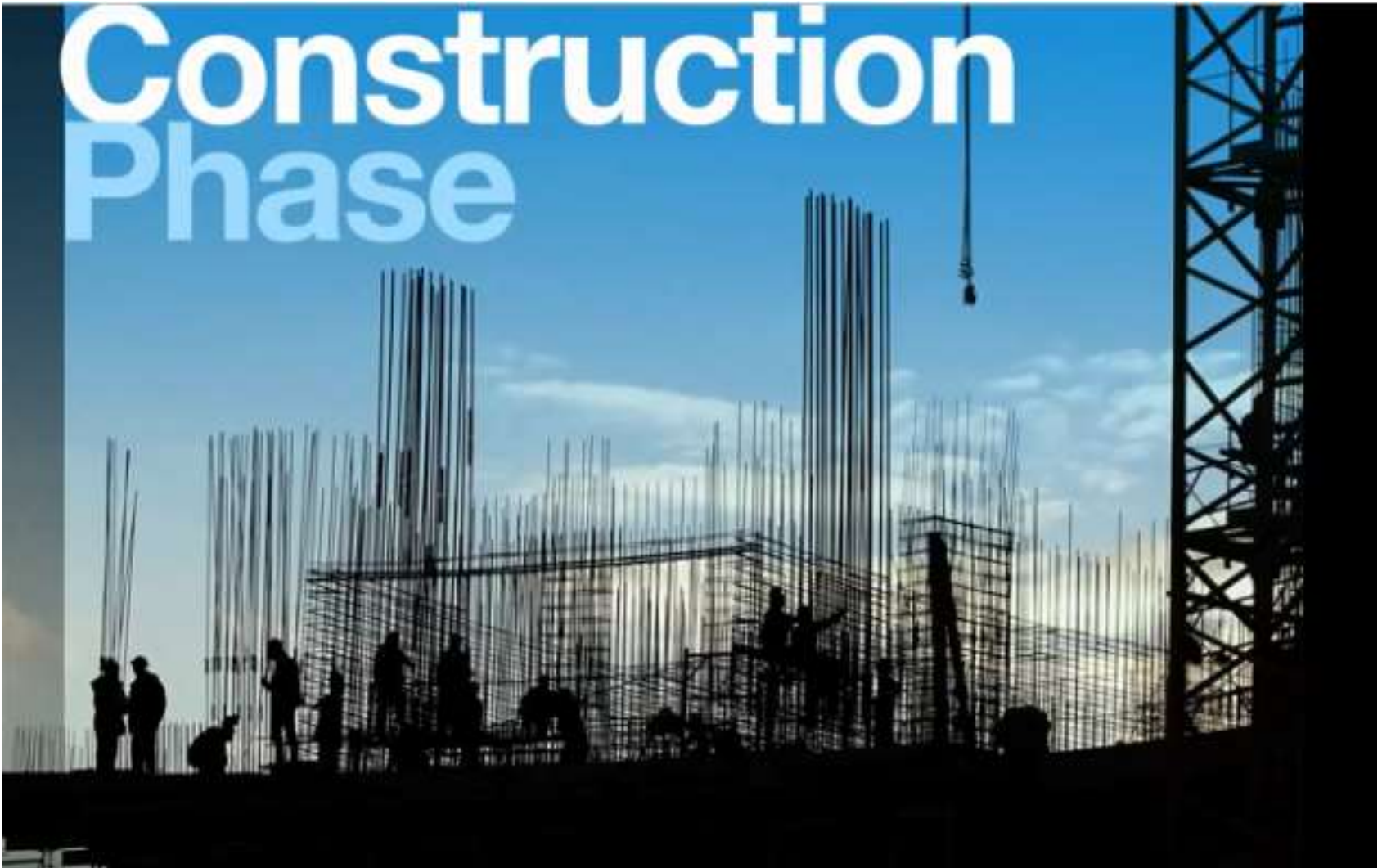


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# Construction Phase



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Construction Phase

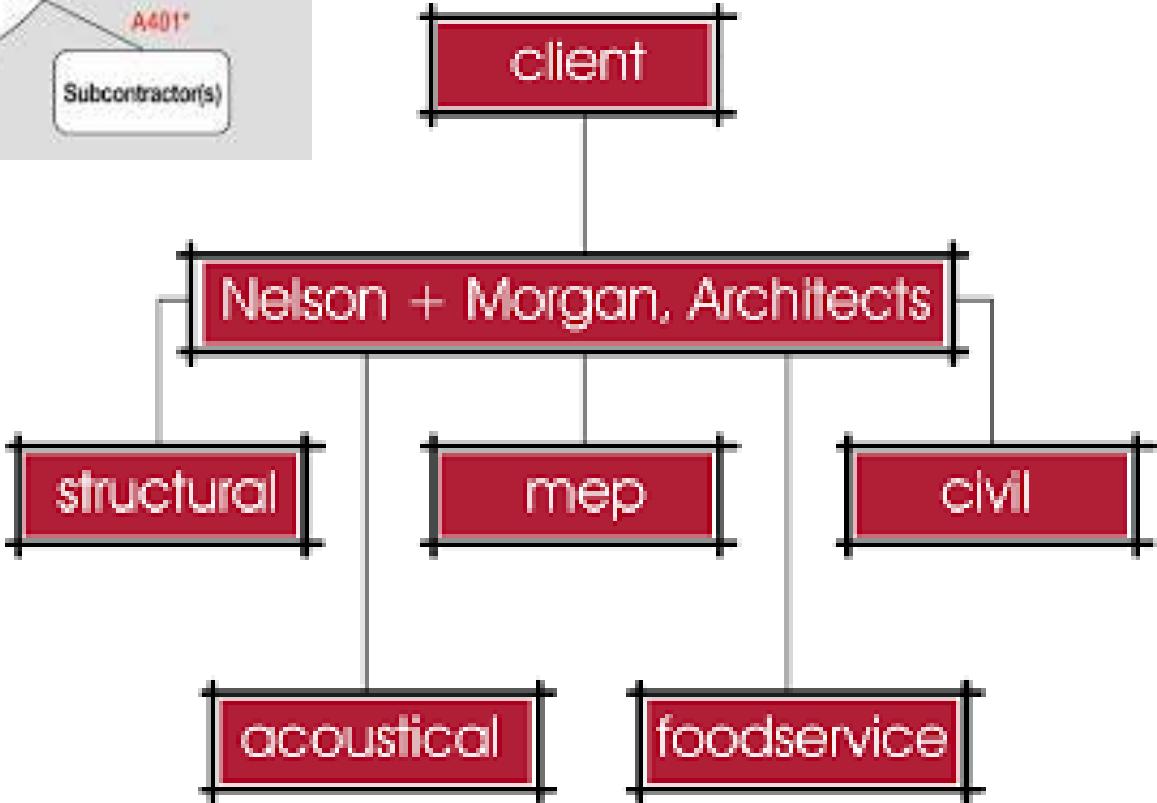
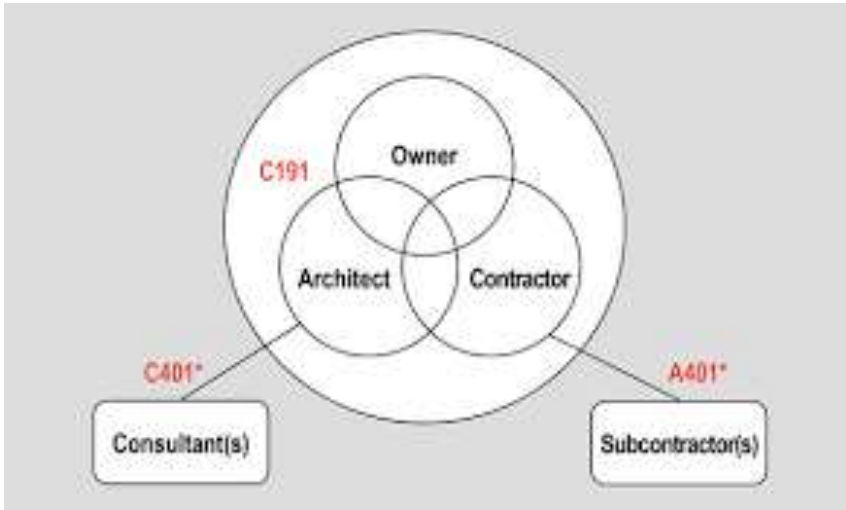
# Coordinating Inspections



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# Architect cross-over careers:

1. Interior Designer
2. Urban Designer / City Planner
3. Landscape Architect
4. Product or Lighting Designer
5. Lighting Designer
6. Acoustic Designer
7. Kitchen Designer
8. Real Estate Developer
9. Builder / Construction Manager



# Building Engineering Disciplines

1. Civil Engineers
2. Structural Engineers
3. Mechanical Engineers (HVAC & Plumbing)
4. Electrical Engineers
5. Fire Protection Engineers



VIDEO LINK 1: Look Up

[https://www.youtube.com/watch?v=FS3\\_LKot7J0](https://www.youtube.com/watch?v=FS3_LKot7J0)



VIDEO LINK 2: Look Up to America's Future  
[https://www.youtube.com/watch?v=FS3\\_LKot7J0](https://www.youtube.com/watch?v=FS3_LKot7J0)



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# Questions ? Discussion



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