Project Delivery Methods
vs.
Intended Outcomes.

What's Right for your Project?

Boise State University

BRAILSFORD & DUNLAVEY
Facility Planners • Project Managers

Catalysts for Building Community

Presentation Outline

- Introductions
- Programming vs. Design
- Project Delivery Methods
  - Traditional Methodology
  - Construction Management
  - Design-Build
  - Other Methods?
- Case Studies at Boise State University
- Discussion

Introduction

- **Jeff Turner**
  - Vice President, Brailsford & Dunlavey
  - Over 75 Campus Life Facilities
  - (rejected as an RA!)

- **Brian J. Hanlon, A.I.A.**
  - Vice President, Brailsford & Dunlavey
  - Registered Architect
  - (Big, likes cooler weather)

- Craig Thompson
  - Director of Housing, Boise State University
  - (Not a control Freak!)

Key Points

Delivery Strategies & Ownership Structures

- We Are in the Midst of the Most Challenging Student Housing Development Era Ever

- Market Shifts & Current Student Preferences Should Be Considered Permanent

- Market Conditions & Campus Priorities Are Unique So Responses Should be Customized

- If Out-sourced - Student Housing Developers Are Not All the Same but They Are All Prepared to be flexible

Programming and Design

1. How to get from Point "A" to Point "B"?

Pre-Implementation

POINT "A" Starts with:

- Housing Master Plan
- Market Analysis
- Project Feasibility/Financials
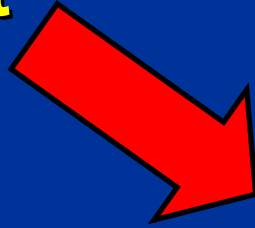- Detailed Programming
- Business Planning
- RFP Development

Implementation

POINT "B" Starts with:

- Design
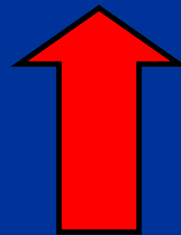- Construction

…And ends with…

- Satisfied Occupancy

Areas of Project Risk

Budget

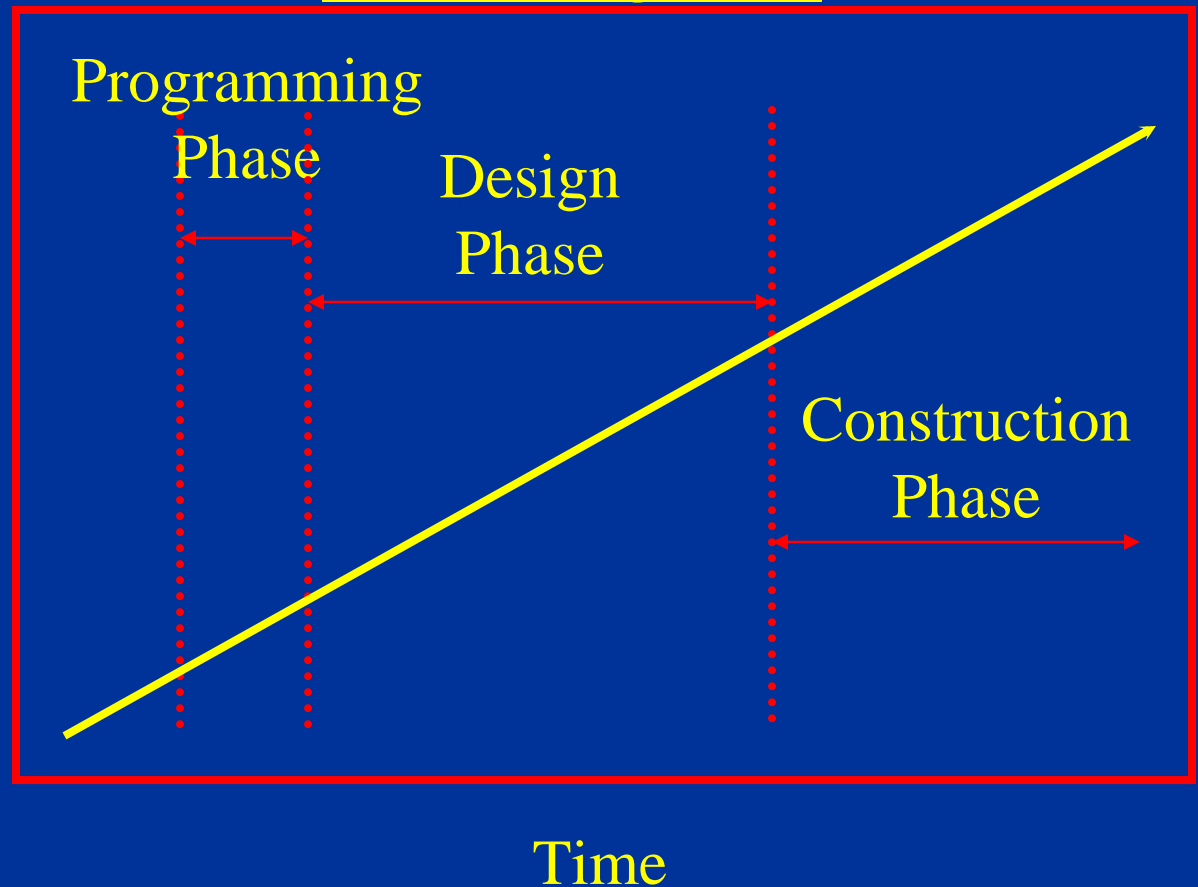**Schedule**

Rendering by Evergreene / KCB Architects
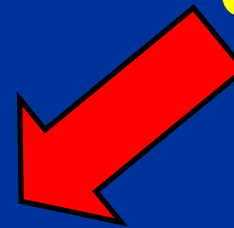
Quality

Programming and Design

Window of Opportunity

- Preliminary Outline Program
- Final Outline Program
- Detailed Program Document
- Final Building Program
- The Design Process

Risk Management

Programming Phase

Design Phase

Construction Phase

Cost $

Time

Project Delivery Methodologies

1. **Traditional Methods**
2. **Design-Bid-Build**
   a. **Design Assist….**
3. **Construction Management**
   a. **CM as Advisor**
   b. **CM as Agent**
   c. **CM as Builder**
4. **Design-Build**
   a. **Design-Build by Developer**
   b. **Bridging Documents**

Note:

No project delivery method is inherently superior to any other.

Regardless of the delivery methodology, a Client can have a highly satisfactory outcome mostly dependant on:

1. The integrity of the pre-implementation process
2. The relationship between the design documents and the design intent
3. The completeness and clarity of the design documents
4. Clear contractual relationships
5. The relationships of all involved
6. Experience

Basic Responsibilities

Owner Responsibilities:
- Project finance
- Provide program of requirements
- Provide accurate existing conditions data for site
- Provide testing & inspections
- Review & approve architects' CDs
- Provide timely decisions on points not delineated in contract documents
- Ultimate decision responsibility for schedule & cost

Architect Responsibilities:
- Provide Contract Documents
- Coordination of design consultants
- Assistance with preliminary cost estimates
- The approvals process
- Comment on builder's conformance to documents & design intent through construction
- Project finance Assistance thru bidding phase
- Construction administration

Builder Responsibilities:
- Provide Lump Sum or GMP Cost Guarantee
- Obtain Permits
- Guide/Manage construction process
- Coordinate Subs
- Fulfill requirements of the Construction Documents
- Guarantee quality and schedule

The Owner may elect to undertake project management duties

* or *

May designate either the architect or builder to undertake these duties

* or *

May hire a separate project management entity to act as his/her agent throughout the process

---

There may one architect or a design team comprised of the design architect, architect of record, etc.

BUT, there is one contractual relationship between the primary architect and the Owner.

The Lowest Bid does not mean the lowest Cost.

Aside from the completeness of the Contract Documents, the best way to manage cost risk is to hire a contractor with a solid reputation for delivering:

ON TIME

ON BUDGET

Traditional Methods

- <u>Design-Bid-Build</u>
  - Most common in the industry
  - Three phases
  - Separate contracts between Owner/Architect and Owner/Builder

- <u>Negotiated Select Team</u>
  - Similar to Above
  - Owner flexibility on selection of Team

- <u>Construction Manager</u>
  - Three Types:
    - **<u>CM as Advisor</u>**
    - CM as Agent
    - CM as Builder
  - Same three phase structure as before

Owner
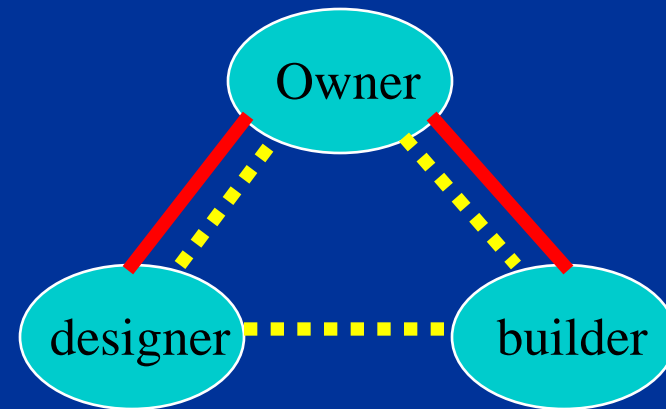
designer   builder

Project Communication

Contracts

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Owner

designer   builder

Project Communication

Contracts

CM Method

- **Design-Bid-Build**
  - Most common in the industry
  - Three phases
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- **Construction Manager**
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    - CM as Builder
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Owner

CM/Advisor

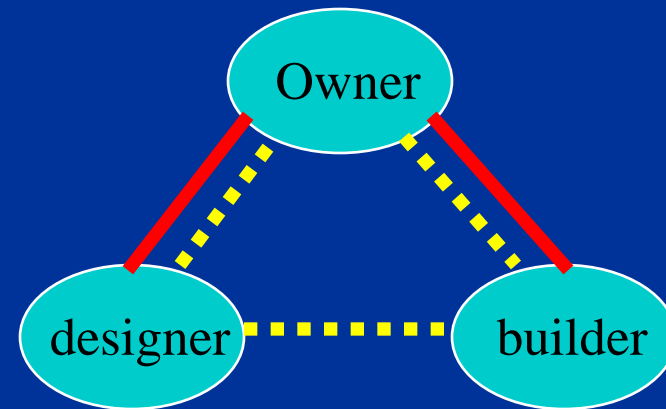designer

builder

Project Communication

Contracts

CM Agent Method

- Design-Bid-Build
  - Most common in the industry
  - Three phases
  - Separate contracts between Owner/Architect and Owner/Builder

- Negotiated Select Team
  - Similar to Above
  - Owner flexibility on selection of Team

- Construction Manager
  - Three Types:
    - CM as Advisor
    - **CM as Agent**
    - CM as Builder
  - Same three phase structure as before

Owner

CM/Agent

designer   builder

Generally, this method is utilized when the Owner is in a different geographic location than the project and desires greater on-site representation and therefore empowers a CM to act as Agent.
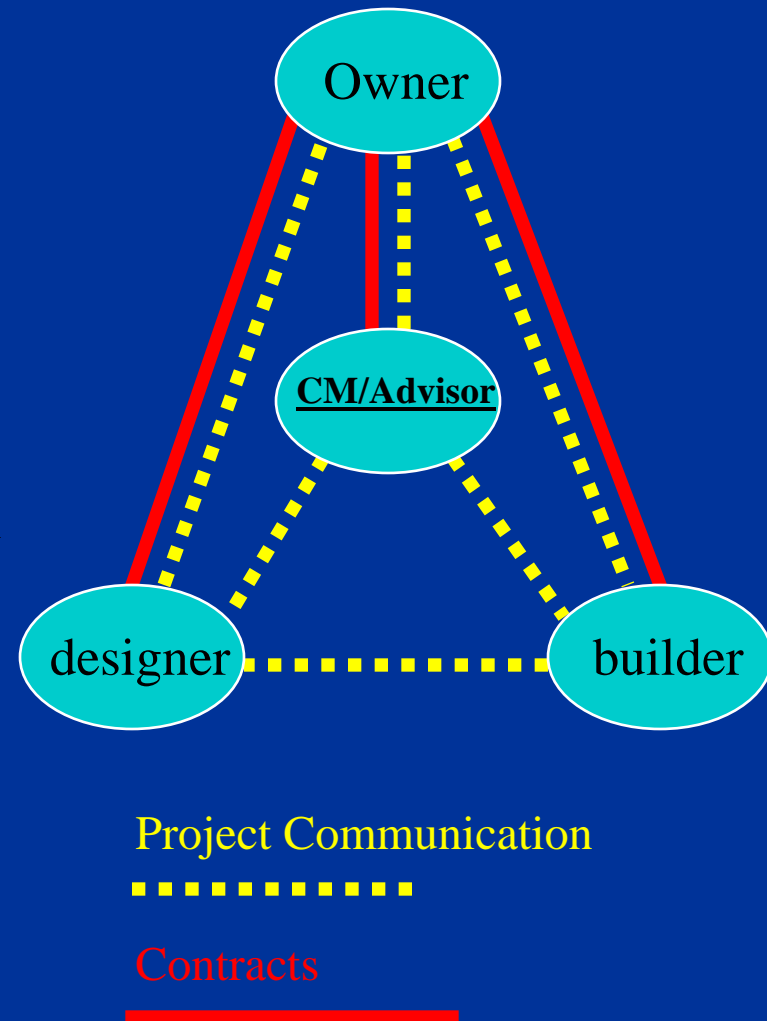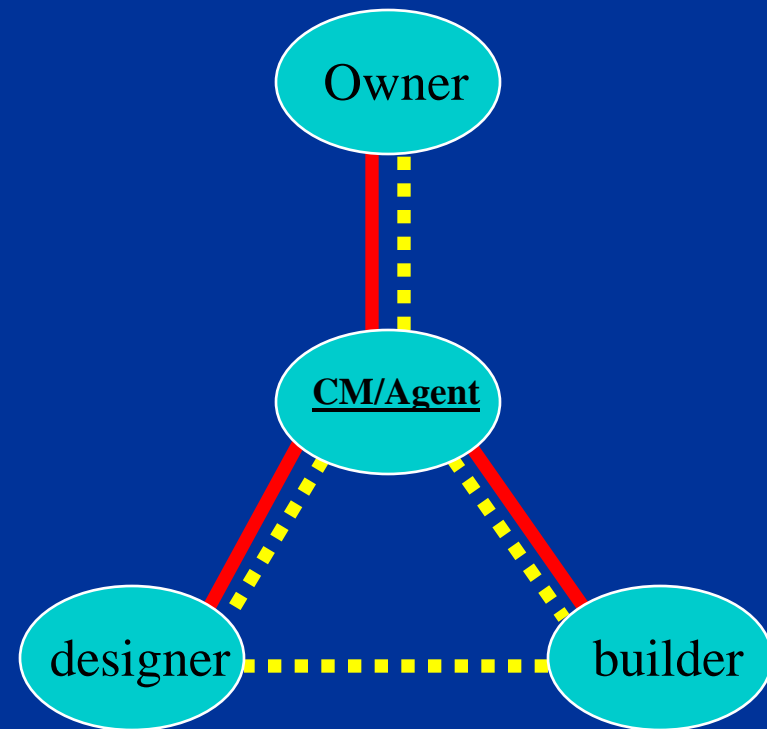
CM Builder Method

- **Design-Bid-Build**
  - Most common in the industry
  - Three phases
  - Separate contracts between Owner/Architect and Owner/Builder

- **Negotiated Select Team**
  - Similar to Above
  - Owner flexibility on selection of Team

- **Construction Manager**
  - Three Types:
    - CM as Advisor
    - CM as Agent
    - **CM as Builder (at Risk)**
  - Same three phase structure as before

Owner

designer

CM/builder

Multiple Prime Contractors
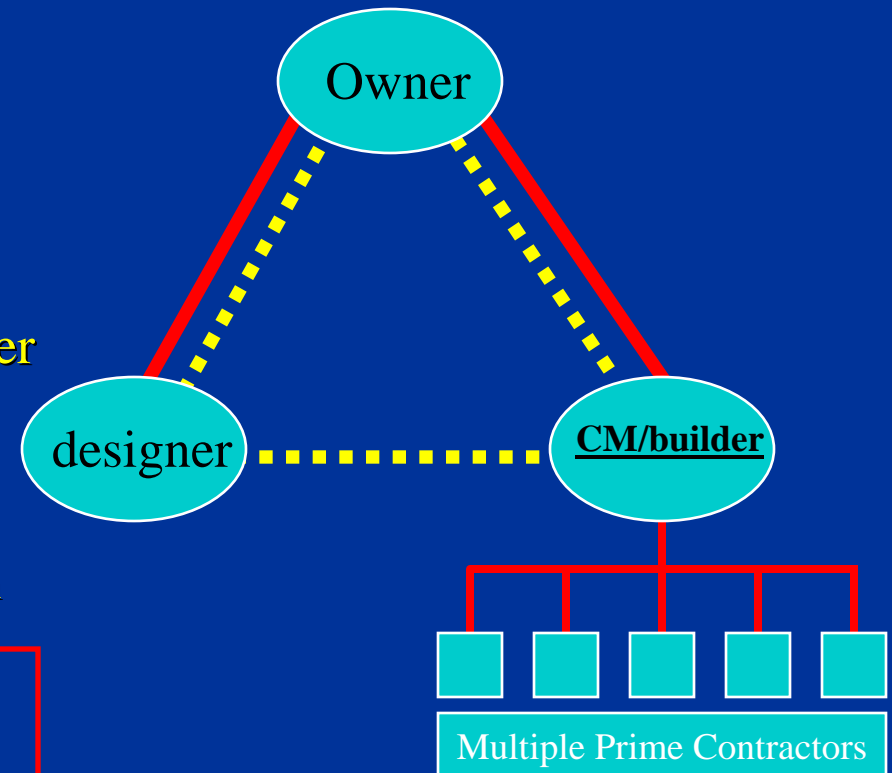
Project Communication

Contracts

The Non-traditional Approach

1. Why Design Build?

2. Why Project Outsource?

Design Build

- ## Design Build
  - Owner can contract with single DB Entity
  - Most prevalent in private sector
  - 2 Phase process: Design / Build

- ## Design Build by Developer
  - Often called "Turnkey"

- ## Design Build w/ Bridging
  - Combines Strengths of DBB and DB

Owner

Design Build Team

Design Builder

designer

builder

Project Communication

Contracts

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Design Build Team

Design Builder

designer

builder
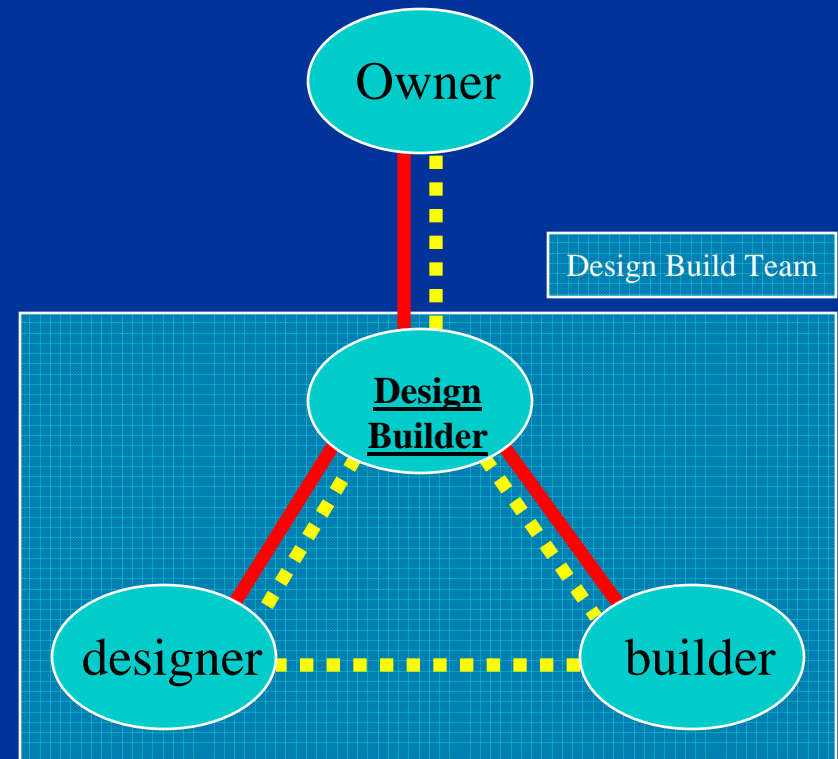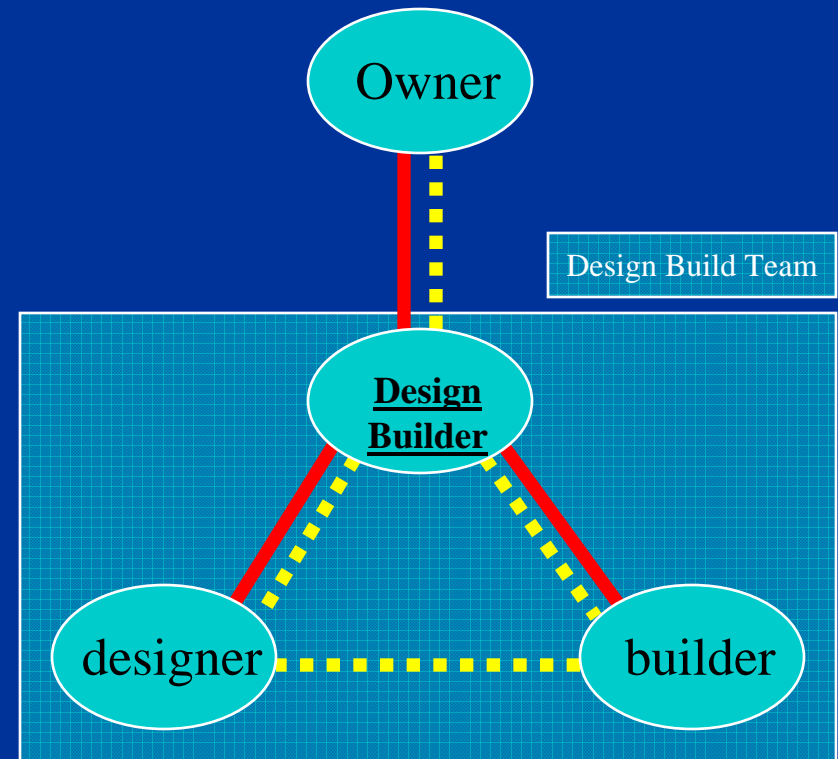
Project Communication

Contracts

Design Build

- <u>Design Build</u>
  - Other Methods include involving a consultant thru schematic design
  - Can be integrated with any of the previous approaches
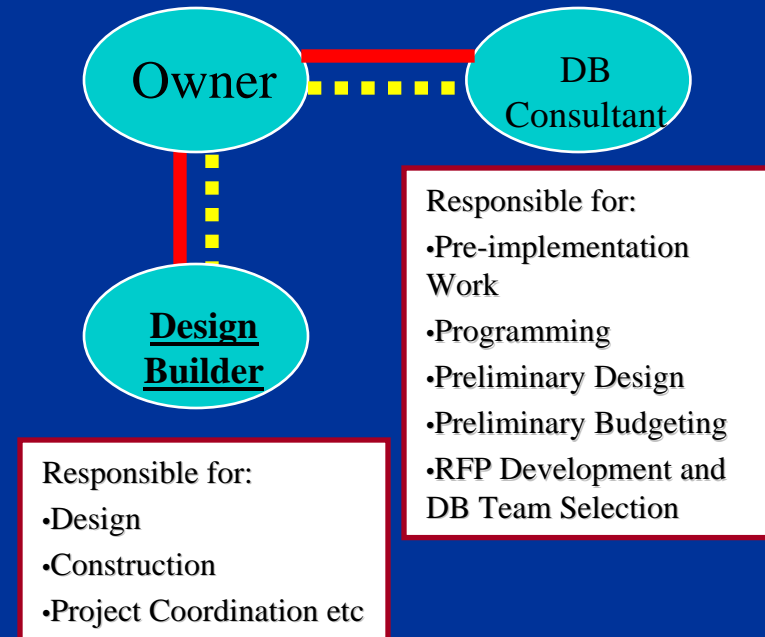
Owner ———— DB Consultant

Design Builder

Responsible for:
- •Pre-implementation Work
- •Programming
- •Preliminary Design
- •Preliminary Budgeting
- •RFP Development and DB Team Selection

Responsible for:
- •Design
- •Construction
- •Project Coordination etc

Project Communication

Contracts

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Owner

Design Build Team

Owner's designer

Design Builder

designer   builder
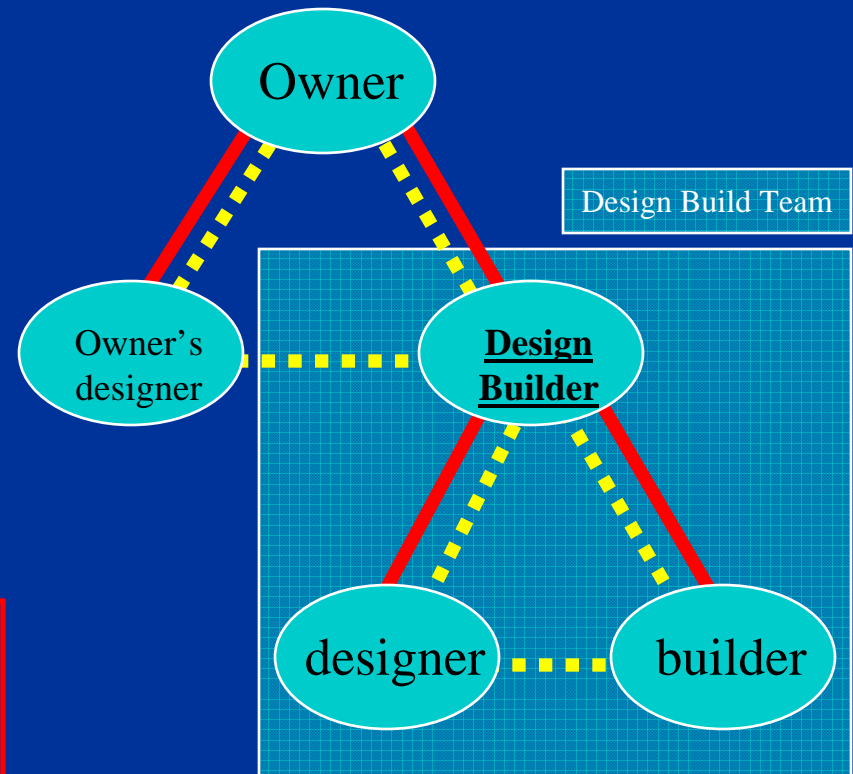
Project Communication

Contracts

Why Outsource?

Decision Matrix

Mission Central

1. Service Quality - Primary 2. Service Cost - Secondary	In-house Development
Consider Out-Source	1. Service Quality - Secondary 2. Service Cost - Primary

Mission Irrelevant

Lower Project Quality — *Excellent Project Quality*
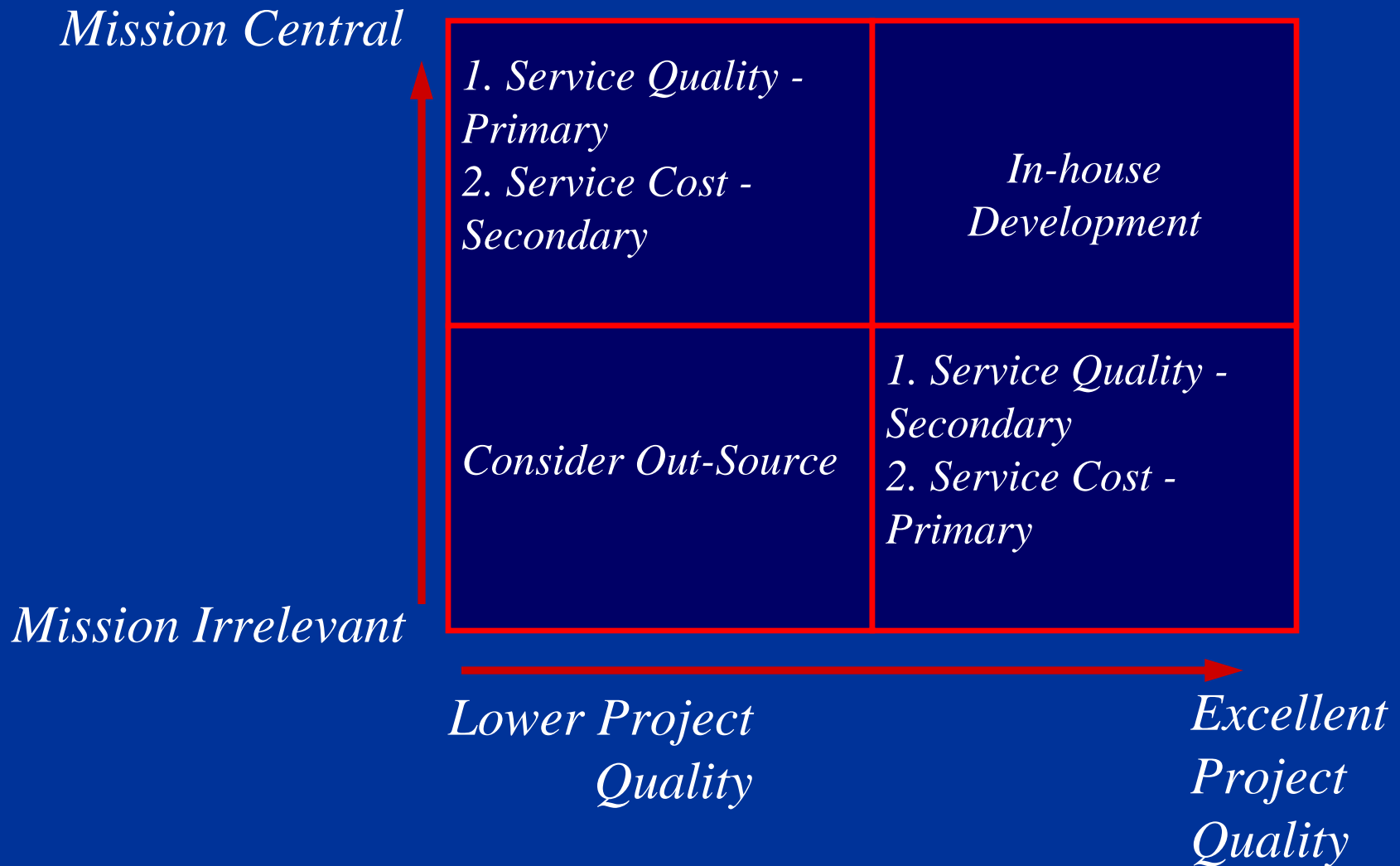
STRATEGIC ASSET VALUE ANALYSIS

		Targeted Strategic Value		
		High	Medium	Low
I.	**EDUCATIONAL OUTCOMES**			
	a. Supervision Through Maturity	X O		
	b. Proximity to Educational Resources		X O	
	c. Personal Development	X	O	
	d. Direct Curriculum Enhancement	X	O	
	e. Development Continuum	X	O	
II.	**ENROLLMENT MANAGEMENT**			
	a. Housing Market Supplement		X O	
	b. Competitive Amenity	X		O
III.	**CAMPUS COMMUNITY**			
	a. "Residential Campus" Designation	X O		
	b. Out-of-class Activity	X	O	
	c. Neighborhood Creation	X O		

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Mission Irrelevant

Lower Project Quality *Excellent Project Quality*

A Comparative Analysis

	A. DBB	B. NST	C. CM Advisor	D. CM Agent	E. CM Builder	F. Design Build	G. DB - Developer	H. DB Bridging Process
Characteristics	Three Linear phases: design, bid, build	Three Linear phases: design, bid, build	Three Linear phases: design, bid, build	Three Linear phases: design, bid, build	Three Linear phases: design, bid, build	Two continuous phases: Design and build	Two continuous phases: Design and build	Four Linear Phases: Prelim. Design, bid, design & build.
	Three prime players: Owner, Architect, Builder	Three prime players: Owner, Architect, Builder	Four prime players: Owner, CM, Architect, Builder	Four prime players: Owner, CM, Architect, Builder	Three prime players: Owner, Architect, CM Builder	Two prime players: Owner, Design Builder	Two prime players: Owner, Design Build Developer	Three prime players: Owner, Owner's Architect, Design Builder
	Two Separate Contracts: O/D and O/B	Two Separate Contracts: O/D and O/B	Three Separate Contracts: O /CM, O/D, O/B	Three Separate Contracts: O/CM, O/D, O/B	Two Separate Contracts: O/CM, O/D	Two Separate Contracts: O/D and O/B	One Contract: O/DB Dev.	Two Separate Contracts: O/D and O/DB
Responsibilities								
Owner	Program, Finance, Mgt.	Program, Finance, Mgt.	Program, Finance	Program, Finance	Program, Finance	Program, Finance	Program	Program, Finance, Mgt.
Manager	n/a	n/a	Coord. Arch & Builder	Legal Agent for Owner	Coord. Arch prior to construction	n/a	n/a	n/a
Architect	All Normal Services	All Normal Services	All Normal Services	All Normal Services	All Normal Services	All Normal Services	All Normal Services	All Normal Services
Builder	Prime & sub construction	Prime & sub construction	Prime & sub construction	Prime & sub construction	Prime & sub construction	Prime & sub construction	Prime & sub construction	Prime & sub construction
Selection Process								
Owner	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Manager	n/a	n/a	Qualifications	Qualifications	Qualifications	n/a	n/a	n/a
Architect	Qualifications	Qualifications / Negotiations	Qualifications	Qualifications	Qualifications	Qualifications / Negotiations	Qualifications / Negotiations	Qualifications / Negotiations
Builder	Lowest responsible bid	Qualifications / Negotiations	Lowest responsible bid or negotiation	Lowest responsible bid	Qualifications / Negotiations	Lowest responsible bid or negotiation	Lowest responsible bid or negotiation	Lowest responsible bid or negotiation

Perspectives: of Owner, Manager, Designer, Builder

Each delivery method column is sub-divided into **O M D B** (Owner, Manager, Designer, Builder) with color-coded ratings.

QUALITY
- High
- Good
- Moderate
- Low

SCHEDULE
- Fastest
- Faster
- Normal
- Slower

COST CONTROL
- Best
- Better
- Normal
- Less

LEGAL LIABILITY
- Least (best)
- Reduced
- Average
- Increased (worst)

	Residence Hall	**Univ. Courts Apts**
Delivery Method:	Design-Bid Build	Design Build
Total Beds:	340	504
Bed Type:	Suites	Apartments
Total Project:	$16.3 Million	$15.5 Million
Total Const:	$13.0 Million	$13.5 Million
Total SF:	115,000	215,000
Project Cost Per SF:	$142/sf	$72/sf
Const. Cost Per SF:	$113/sf	$63/sf
Cost Per Bed:	**$48,000**	**$31,000**

Courtesy: Evergreene & KCB Architecture

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Courtesy: Evergreene & KCB Architecture

Courtesy: Evergreene & KCB Architecture

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Overall Perspective

Courtesy: Anderson Mason Dale

Elevations

- South and west elevations of Campus Hall

Courtesy: Anderson Mason Dale

Partial Elevations
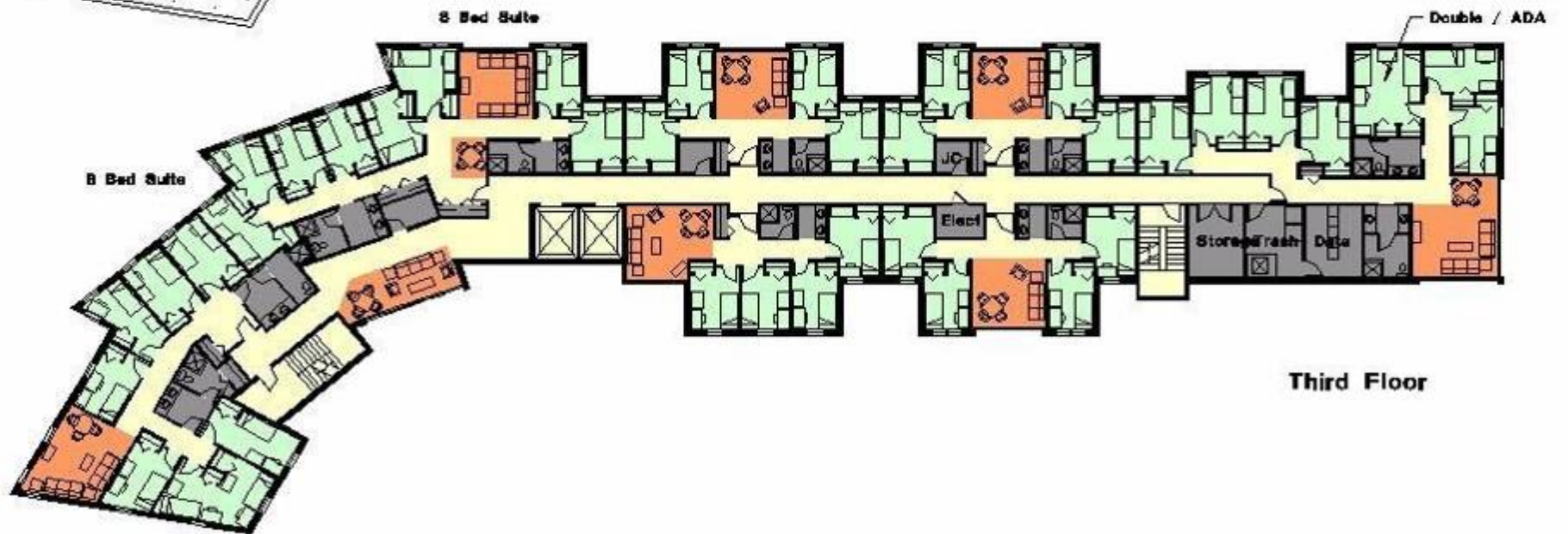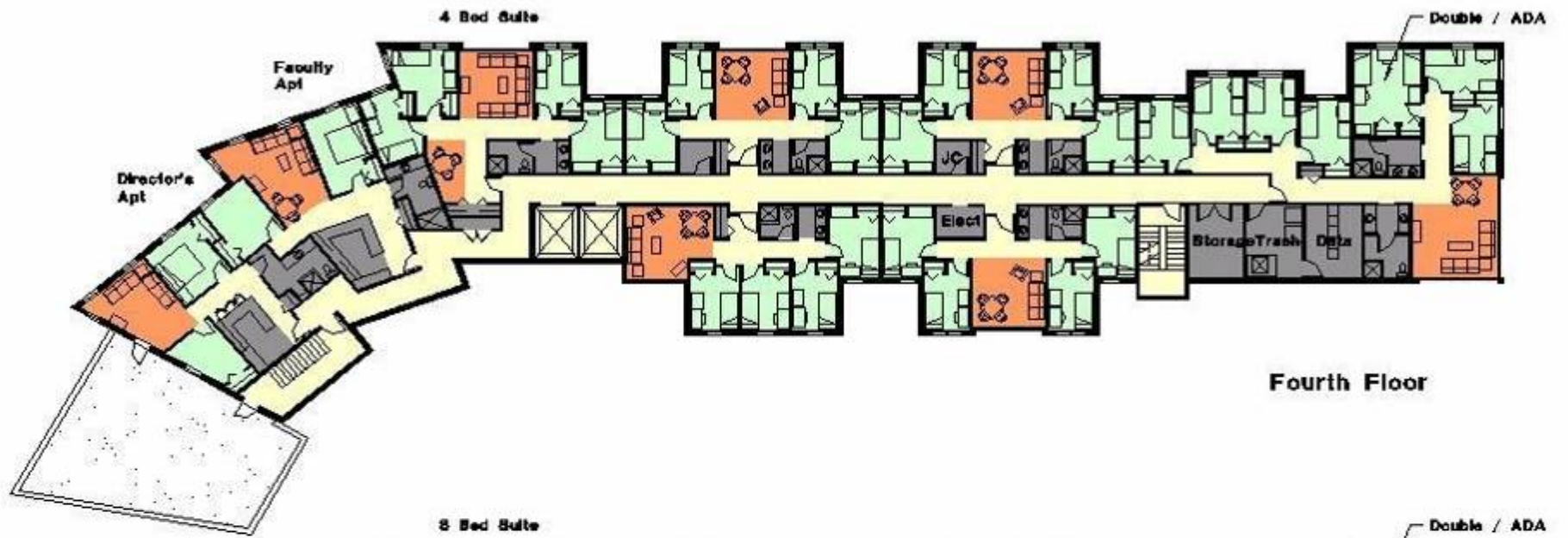
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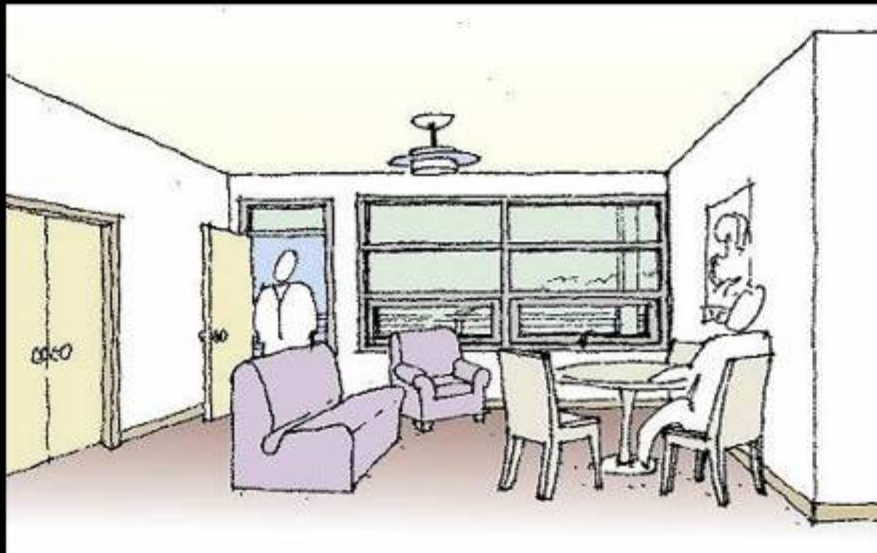
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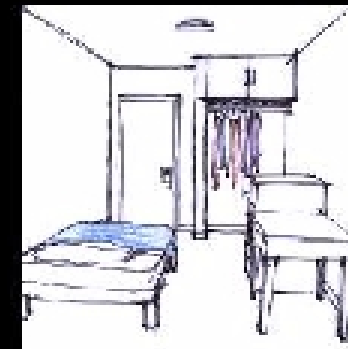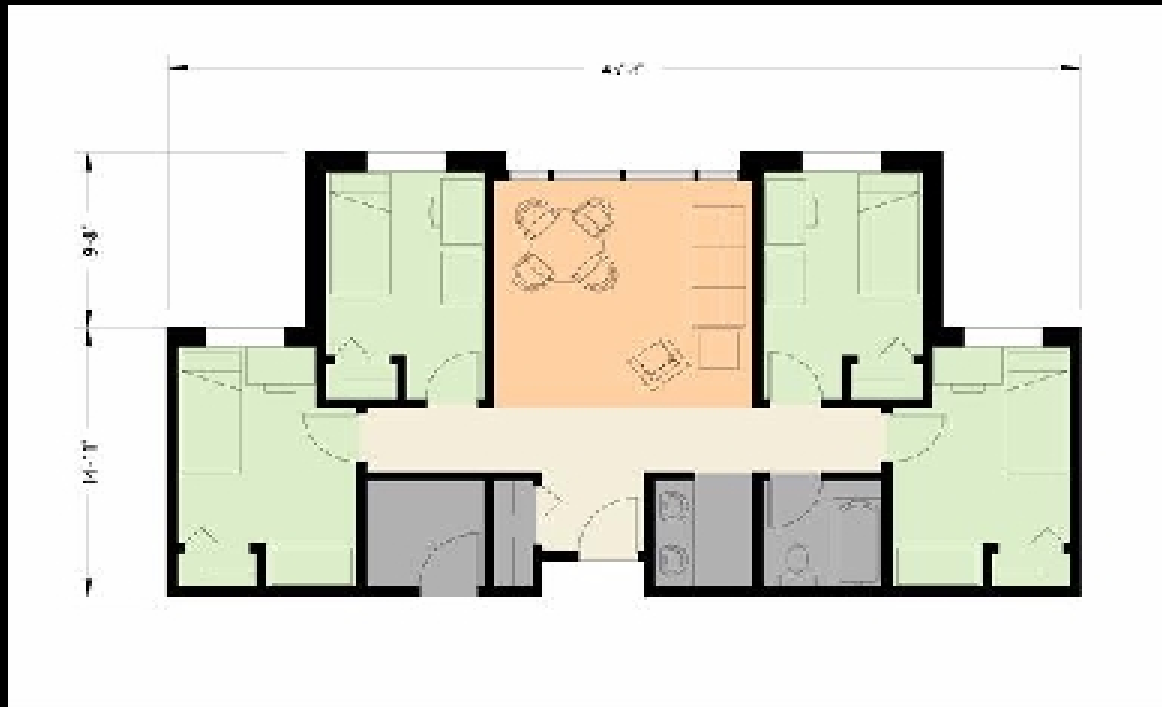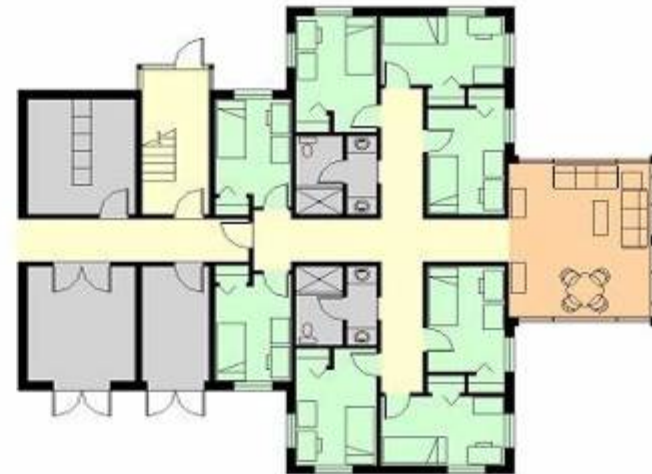
Question & Answer

www.facilityplanners.com