



LIFE OF A CAPITAL PROJECT

CAPITAL ASSET STRATEGIES (CAS)

ARCHITECTS AND ENGINEERS (A&E)



5/4/2017

EARLY STEPS OF A MAJOR CAPITAL PROJECT (>\$750,000)

Scoping & Feasibility

- Project sponsor and campus leadership work together to establish the project and commit time and resources
- Includes examination of **financial feasibility** and formation of a **funding plan**
- CAS and A&E assist with project definition, Request for Qualifications for Design Services, and screening and selection of Executive Architect or Engineer as required

Programming

- A work group is often established to define **project scope, schedule & budget**
- Typically includes key stakeholders/building users and campus internal consultants, such as: CAS; A&E; Environment, Health & Safety; and Computing & Communications who steward the project and are accountable to the project sponsor and campus leadership

Approvals

- Project and budget approvals per University Policy
- Facilitated by Capital Planning: based on total project cost and funding source

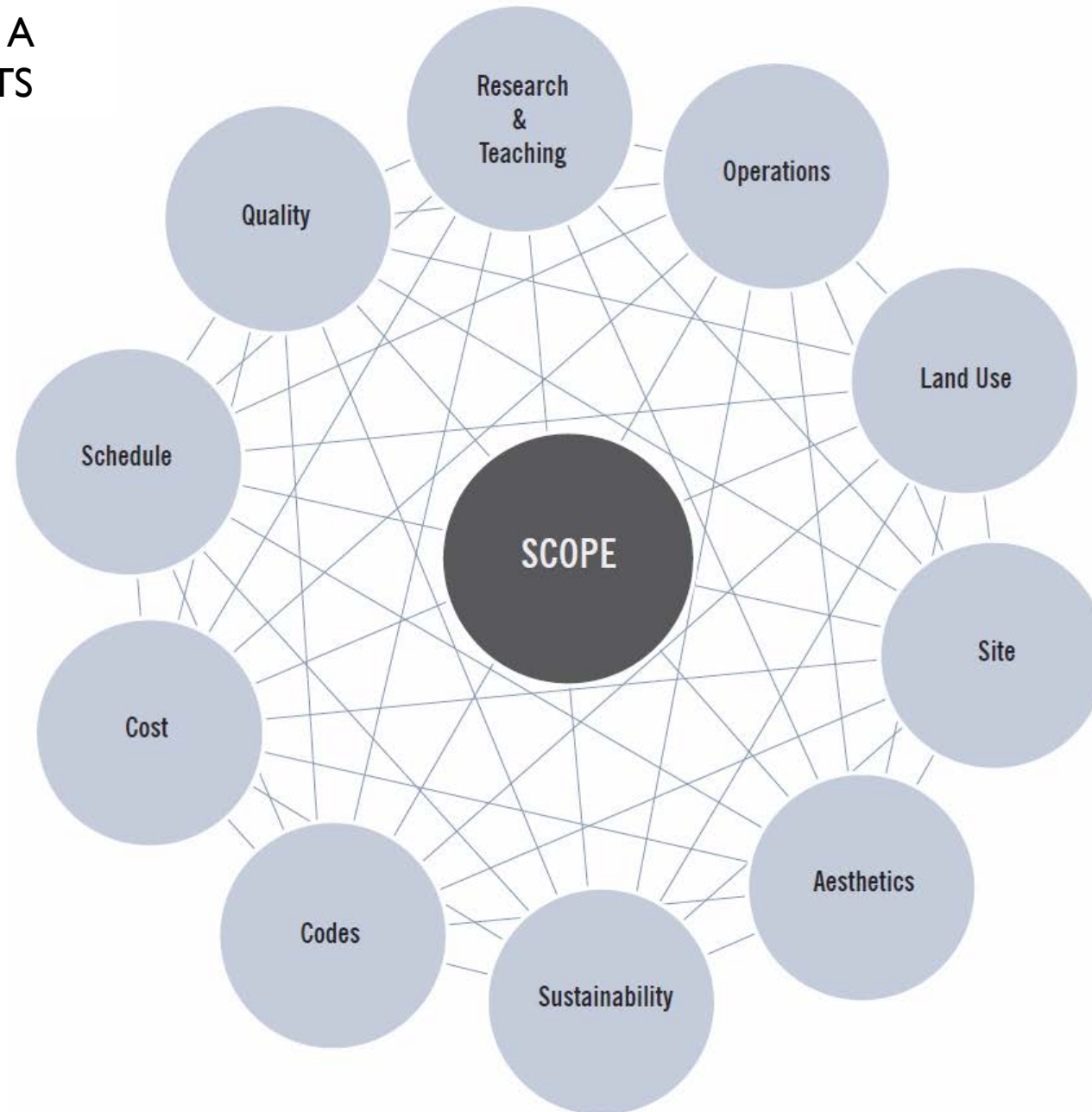
PROJECT PHASES		LEAD
1.	Pre-Planning: <ul style="list-style-type: none"> • Scoping • Feasibility and funding plan • Programming/options analysis 	CAS
2a.	Preliminary Plans- Schematic Design: <ul style="list-style-type: none"> • Refine programming design requirements • Identify preferred option • Commit to project scope, schedule & budget 	A&E
2b.	Preliminary Plans- Design Development: <ul style="list-style-type: none"> • Detailed drawings • Commitment to major building systems and equipment • Cost reconciliation 	A&E
3.	Working Drawings: <ul style="list-style-type: none"> • Complete set of building & site plans and specs used to bid the project • Cost reconciliation 	
4.	Construction	A&E
5.	Equipment: <ul style="list-style-type: none"> • Commissioning & Move-in • Final fit-out (furnishings) • Project budget closeout 	A&E



	PHASE	LEAD	PARTICIPANTS
PRE-"P"	Feasibility	CAS	Project sponsor, campus leadership
	Programming	CAS	Workgroup*
PRELIMINARY PLANS	Schematic Design	A&E	Workgroup*
	Design Development	A&E	Workgroup*
WORKING DRAWINGS	Construction Documents	A&E	Workgroup
CONSTRUCTION	Construction	A&E	Workgroup
EQUIPMENT	Activation & Occupancy	A&E	Workgroup, Occupants, Business & Finance

*Heaviest Participation

PROJECTS MUST BALANCE A VARIETY OF REQUIREMENTS



UCR MUST ALSO BALANCE GOALS FROM ESTABLISHED
PLANNING AND POLICY DOCUMENTS

UC SEISMIC
SAFETY POLICY

UC SUSTAINABLE
PRACTICES
POLICY

LONG RANGE
DEVELOPMENT
PLAN

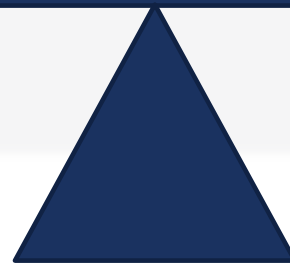
UCR 2020: PATH
TO PREMINENCE

MINIMUM RATING
OF LEED SILVER

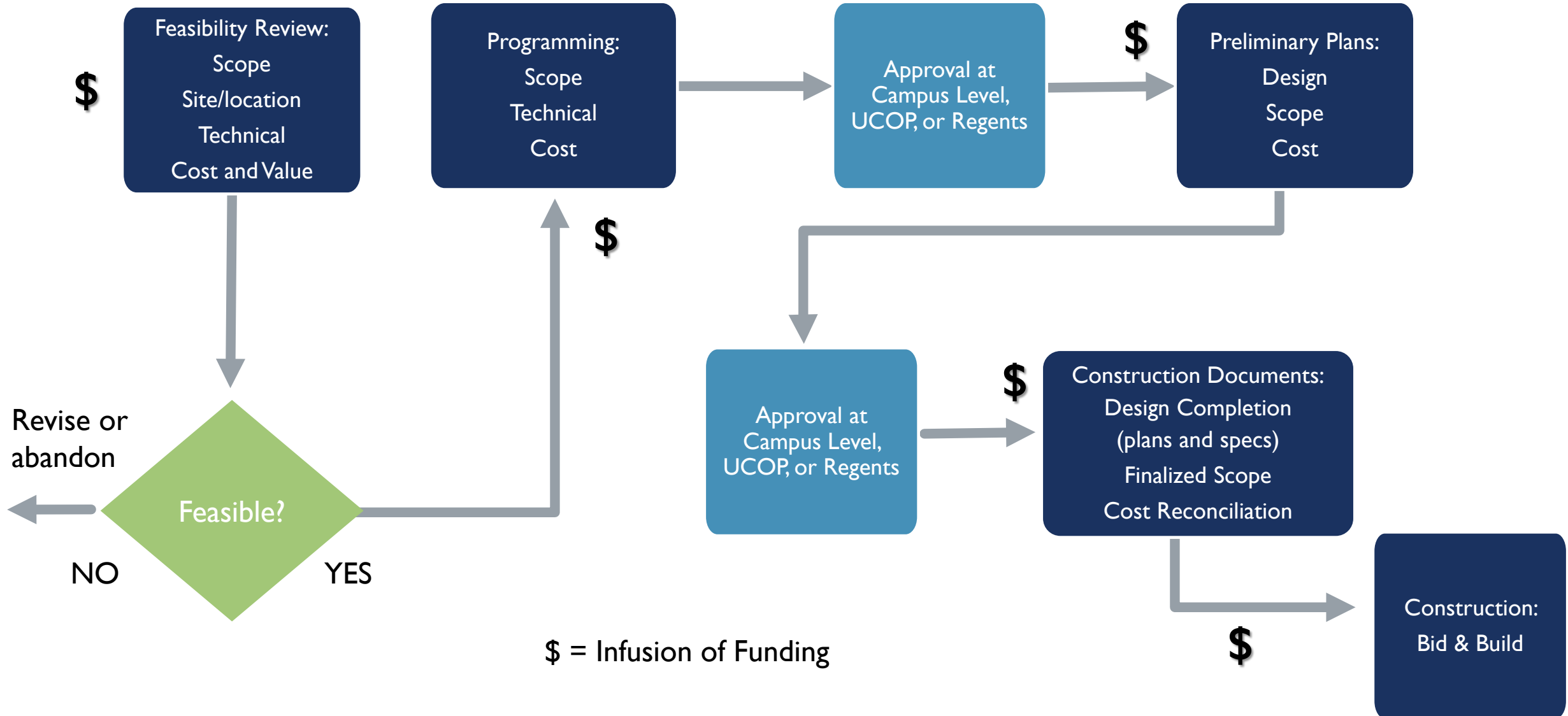
MASTER PLAN
STUDY &
NEIGHBORHOOD
STUDIES

UCR PHYSICAL
DESIGN
FRAMEWORK

STRATEGIC AND
ACADEMIC PLANS



CAPITAL PROJECT PROCESS



SCHEMATIC DESIGN PHASE



The project team further defines the design requirements developed in the Programming phase



The project sponsor and campus leadership must commit to project parameters, including scope, schedule, and budget



The work group is provided with information and options on layouts and early design features that are evaluated by the various campus stakeholders



Key sustainability features are defined in Schematic Design

DESIGN DEVELOPMENT PHASE

In the **Design Development** phase:

- Drawings are developed to a level of detail necessary to prepare a clear, coordinated description of all aspects of the project
- Major project elements are designed and coordinated through enlarged scale drawings and detailed elevations and plans, including:
 - Equipment
 - Fire protection
 - Structural system
 - Mechanical systems
 - Electrical systems
 - Plumbing systems
 - Telecommunications
- The project manager and general contractor may engage design/build subs to ensure well-coordinated drawings and cost estimates

WORKING DRAWINGS (CONSTRUCTION DOCUMENTS)

In the **Working Drawings** phase:

- Include building plans, specifications, and supporting documents used during the completion of a construction project.
- Help translate the needs to a buildable format that can be universally understood within the construction industry
- Allow the University to put the project out for bid and to obtain approvals related to constructability, life safety and accessibility
- Provide comprehensive instructions to the contractor as to how the project should be constructed
- Are used by the University in obtaining overall project bids, which are project cost estimates, from contractors

CONSTRUCTION PHASE

- Construction is the process of constructing a building or infrastructure
- Construction can include demolition and site clearance, building construction, exterior utilities and site development including landscaping and hardscaping
- Included in construction is fixed equipment such as built-ins or permanently affixed equipment to a building or structure
Examples are fixed laboratory benches, fixed sterilizing equipment, fixed seating in auditoriums and lecture halls, and permanent television distribution equipment
- Building systems, such as heating systems, exhaust and air conditioning systems, and elevators are part of construction

MOVEABLE EQUIPMENT

- Also known as Furniture, Fixtures and Equipment (FFE)
- Includes general-use building furniture and furnishings, for example, private office and open office furniture systems, and areas where the public congregates e.g. lobby furniture
- Also includes portable laboratory and classroom equipment such as rolling furniture, glassware, microscopes and centrifuges
- Includes portable A/V equipment