UC San Diego
FACILITIES MANAGEMENT

June Brown Bag Lunch Presentations

Presentation 1: PM Organization Structure & Recharge Rates

Presentation 2: Trash Control Requirements for UC San Diego

Presentation 3:Project Charter Overview

FM Project Management

Organizational Structure & Recharge Rates

June 27, 2017

- PM Team Metrics
- Organizational Chart
- Upcoming Rate Structure Changes

Provide leadership in advancing the renovation and alteration of facilities and infrastructure in support of the education and research mission of UC San Diego. Responsibly manage the project's schedule, cost, scope, and quality to meet the customer's needs and achieve a successful project outcome.

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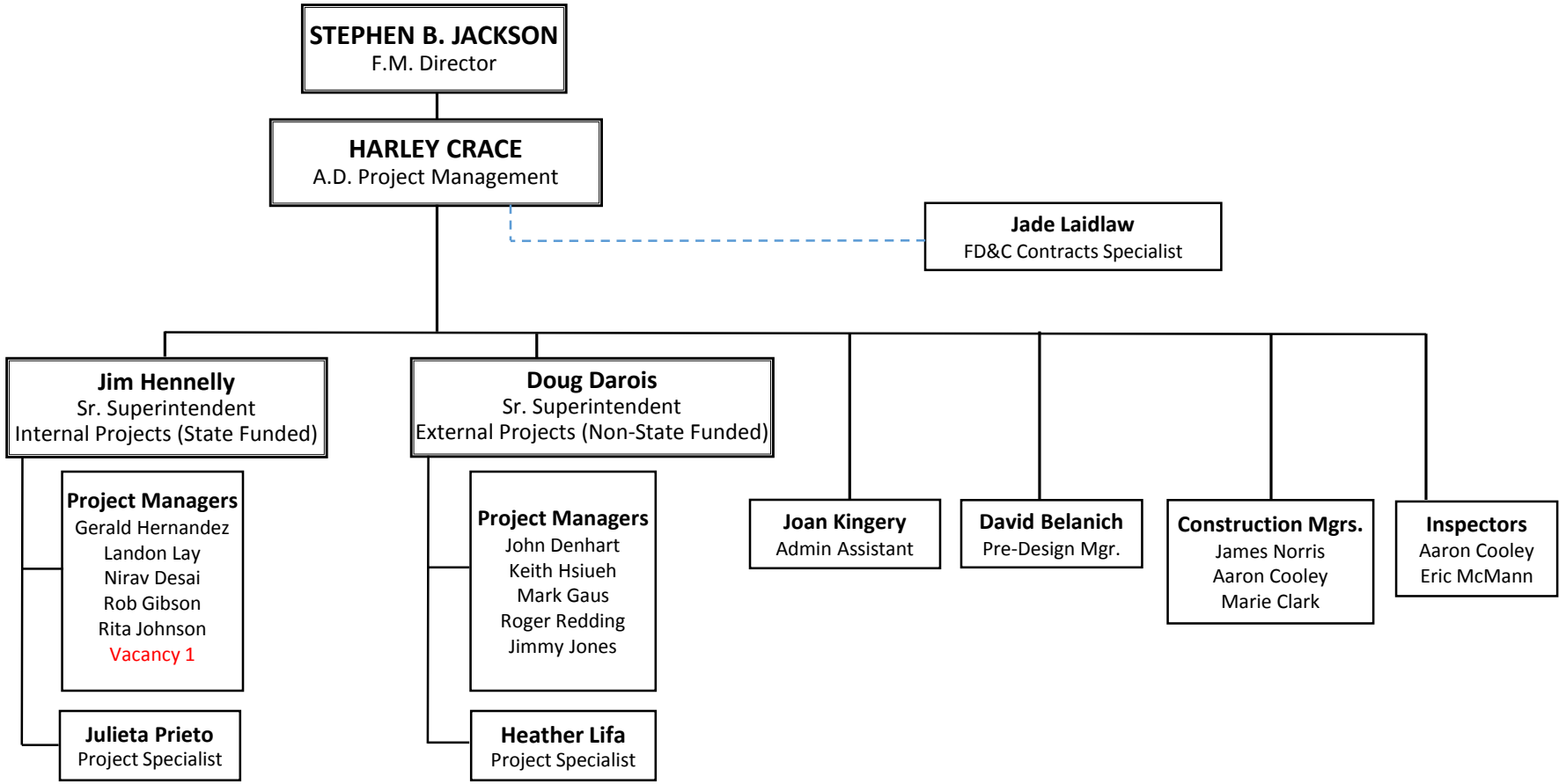
Facilities Management
Supporting Educational and Research Environments

The core function of the PM team is to manage scope, budget, schedule, and quality.

– Annual Construction Execution = $40M - $45M
– Annual Overhead Cost = $3.9M
– Annual Projects Completed = 725
– Average Projects per PM = 35
– 90% of Project Volume is under $50K
– 7% of Project Volume is between $50K & $750K
– 3% of Project Volume is over $750K


STEPHEN B. JACKSON
F.M. Director
HARLEY CRACE
A.D. Project Management
Jade Laidlaw
FD&C Contracts Specialist
Jim Hennelly
Sr. Superintendent
Internal Projects (State Funded)
Doug Darois
Sr. Superintendent
External Projects (Non-State Funded)
Joan Kingery
Admin Assistant
David Belanich
Pre-Design Mgr.
Construction Mgrs.
James Norris
Aaron Cooley
Marie Clark
Inspectors
Aaron Cooley
Eric McMann
Project Managers
Gerald Hernandez
Landon Lay
Nirav Desai
Rob Gibson
Rita Johnson
Vacancy 1
Julieta Prieto
Project Specialist
Project Managers
John Denhart
Keith Hsiueh
Mark Gaus
Roger Redding
Jimmy Jones
Heather Lifa
Project Specialist

The current recharge structure bills projects a flat percentage based on the total project cost and all PM labor is charged directly to overhead.

1. Projects < $750K are charged 15% on top of the sum of all contracts (construction and design). These projects account for approximately $15M in revenue.

2. Projects > $750K are charged 5% on top of the sum of all contracts (construction and design). These projects account for approximately $30M in revenue.

Over the past 7 years the PM team has netted significant surplus monies, reaching a peak of $6.5M in FY14/15. This surplus has been used to fund FM and Campus priorities in the following major categories:

1. Infrastructure Projects: $3.35M
2. Maximo System Upgrades: $1M
3. Maintenance Projects: $845K
4. Animal Care Projects: $530K
5. FM Space Renovations: $190K
6. Craft Center Demo: $177K

Beginning July 1, 2017 we'll be moving to an hourly rate structure which mirrors FD&C's recharge system and ensures projects are charged for actual work performed.

Facilities Management
AVC = $0
Director = $0
Assistant Director = 66% of time @ $160/HR.
PM Supervisors = 100% of time @ $150/HR.
PM's = 100% of time @ $127/HR.
FM Admin = 100% of time @ $85/HR.
Contracts Assistant = 100% of time @ $58/HR.

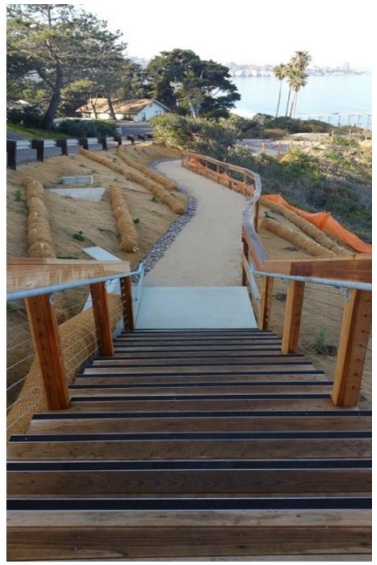
FD&C
AVC = 66% of time @ $210/HR.
Directors = 100% of time @ $180/HR.
Assistant Director = $0
PM Supervisors = $0
PM's & Engineers = 100% of time @ $118/HR.
Admin Staff = 100% of time @ $58/HR.
Contracts Assistant = 100% of time @ $58/HR.

Productivity Breakdown (except A.D.):

- Vacation & Sick Leave (320 HRS +/-) = 15% of Time
- Training & Internal FM Meetings (80 HRS) = 3.5% of Time
- Billed Directly to Projects (1688 HRS) = 81.5% of Time

- Projects will be billed 100% of labor costs in 15 minute increments.
- A fee will be associated with each work order assigned to FM Project Management.



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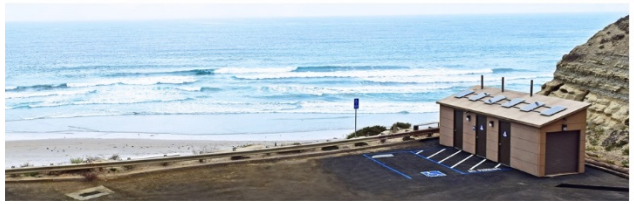
Facilities Management



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Trash Control Requirements for UC San Diego

What is the most common type of litter found on our beaches?

Trash Policy Adopted by the California State Water Resources Control Board

- Each UC campus must implement controls to prevent trash from leaving campus and getting into the storm water conveyance system or into local waterways
- There are two “tracks” for complying with the trash requirements, Track 1 and Track 2
- By September 1, 2017, each campus must identify which track they will implement
- Each campus will have 10 years to achieve full compliance

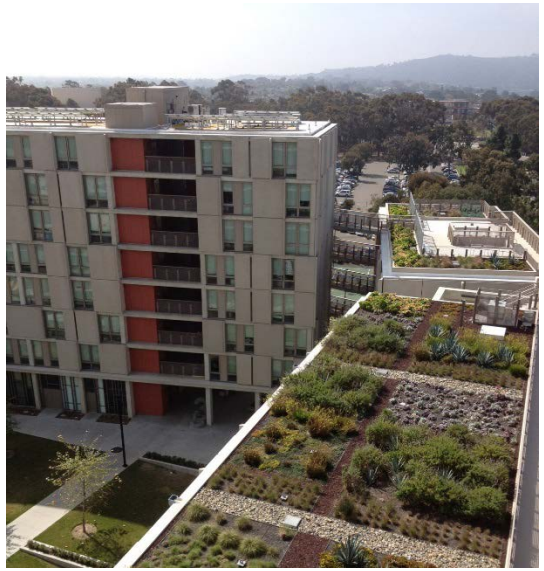
Track 1 vs. Track 2

- **Track 1** - Install, operate, and maintain full capture systems for storm drains that capture runoff from the priority land uses (or equivalent)

- **Track 2** - Install, operate, and maintain a combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls
  - Must demonstrate that the campus is achieving full capture system equivalency

WHERE ARE TRASH CONTROLS REQUIRED?

PRIORITY LAND USE AREAS:



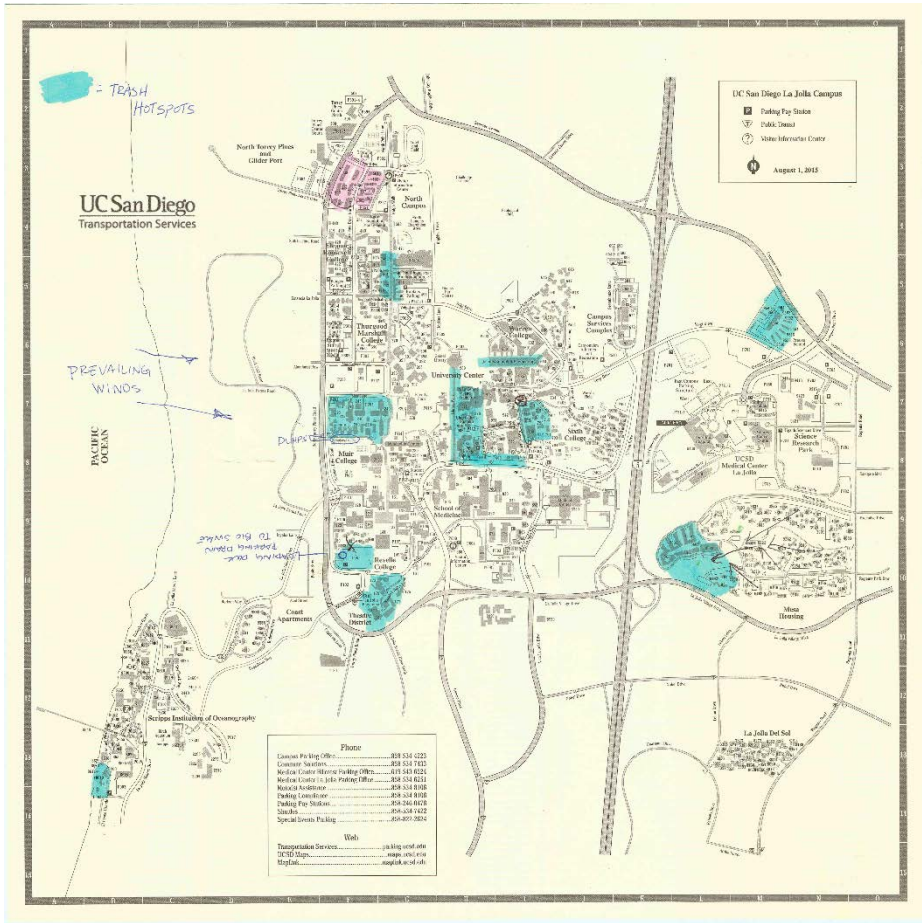
- **High Density Residential** - ≥ 10 developed dwellings per acre (e.g., multi-story campus dorms and apartments)
- **Commercial** – sale/transfer of goods/services to consumers (e.g., University Center)
- **Public Transportation Stations** – facilities/sites where public transit agencies' vehicles load/unload passengers or goods (e.g., Gilman Transit Center, Light Rail station in the future)

…. OR EQUIVALENT ALTERNATE LAND USES

- Universities may substitute Priority Land Use areas as previously defined with alternate land areas that generate trash at an equivalent or greater level
- Areas generating equivalent levels of trash may be established using existing or new trash assessment information/data
- Subject to approval of the San Diego Regional Water Quality Control Board

What is UC San Diego doing to comply with the trash control requirements?

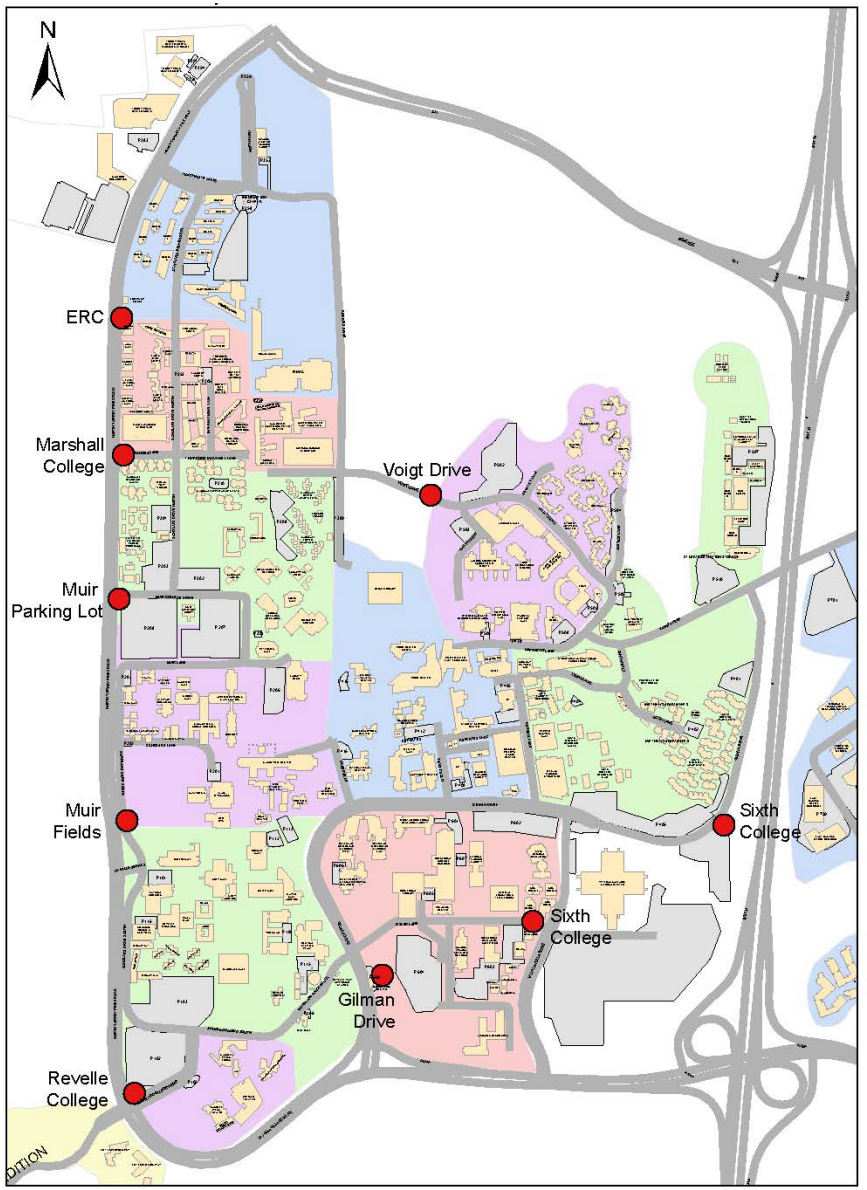
Step 1: Identify priority land use areas and high Trash generation areas on campus



Develop a map that identifies priority land use areas and high trash generation areas on campus for submittal to the State Water Resources Control Board

Step 2: Evaluate storm drain catch basins

- Identify strategic locations downstream of high trash generation areas where trash capture devices can be installed that are accessible for maintenance (e.g., may require vactor truck access to the area)



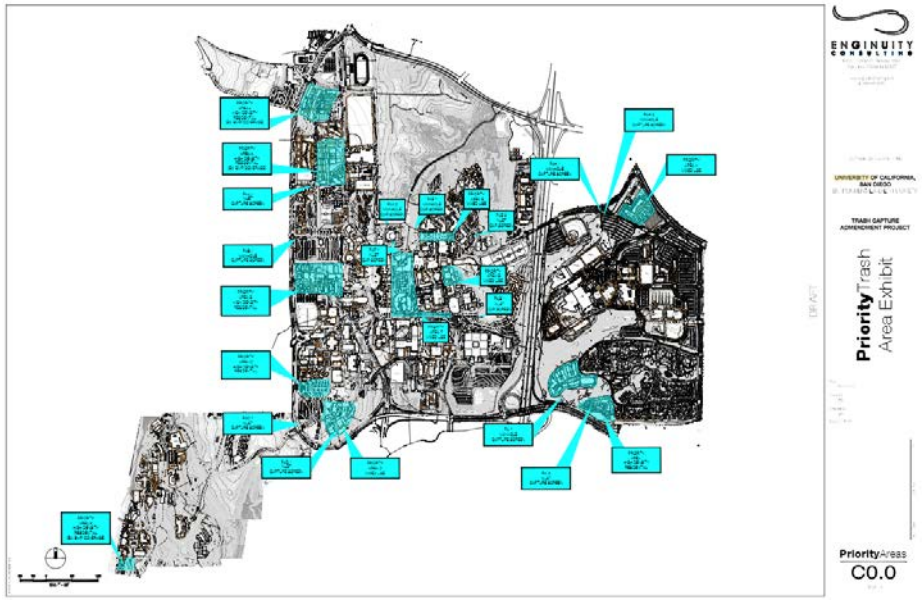
Step 3: Evaluate full trash capture devices that have been approved by the State Water Resources Control Board for use on campus

Step 4: Estimate costs for the purchase, installation, and ongoing maintenance of these capture devices

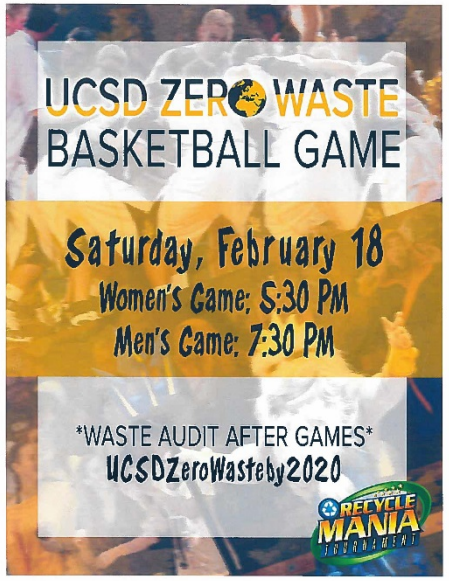
Step 5: Evaluate benefits and challenges associated with the Track 1 and Track 2 implementation options

STEP 6: By September 1, 2017, select which track UC San Diego will implement (Track 1 or Track 2) and submit a map that shows high priority land uses and/or high trash generation areas on campus and the storm water conveyance system


Figure 1 - Priority Trash Areas



The campus will continue to implement source control Trash management practices




NO DUMPING ★ DRAINS TO OCEAN
NO TIRE DESECHO ★ CORRE AL MAR
Report Spills and Dumping to UCSD EH&S (858) 534-3660

Outreach to Campus Community

Campus Watershed Clean-ups with Community Volunteers

http://stormwater.ucsd.edu

FACULTY & STAFF — UC San Diego

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Blink | Blink Topics | Personal Tools | Business Tools | Instruction Tools | Research Tools

Blink Home > Safety > Environment > Environmental Protection > Storm Water Management Program

Blink Topics
Safety

Environmental Protection
- Air Pollution Control Permits
- Asbestos Control
- Formerly Used Defense Site at UCSD
- Lead-Based Paint
- Oil Spill Prevention, Control, & Countermeasures
- Refrigerant Compliance Program
- Sewer System Management Plan
- Storage Tanks
- **Storm Water Management Program**
  - Treatment Control Best Management Practices
  - Source Control Best Management Practices

Search Blink

Departments
Environment, Health & Safety

See Also
- Hazardous Materials Emergency Response Team
- Oil Spill Prevention, Control, and Countermeasures
- Sewer Disposal: What Can Go Down the Drain?
- Wash and Rinse Water Disposal

Storm Water Management Program

Last updated May 14, 2012 8:34:11 AM PDT — Give more feedback

Learn how UC San Diego's Storm Water Management Program helps prevent water pollution.

All outdoor drains are storm drains and are meant **only for rain.** Everything that flows into a UCSD storm drain goes untreated directly into nearby waterways such as the Pacific Ocean, Rose Canyon Creek, and Los Peñasquitos Lagoon. Pollutants picked up by storm water can prevent recreational use of waterways and harm the habitat for fish, other aquatic organisms, and wildlife.

Anything that discharges into a storm drain that is not composed entirely of storm water is a non-storm water discharge (e.g., irrigation water runoff, clean tap water).

- **Report non-storm water discharges** into UCSD storm drains:
  - During business hours:
    - Environment, Health & Safety, (858) 534-3660
  - After business hours:
    - UCSD Police: (858) 534-HELP (4357)

UCSD Storm Water Management Plan

UC San Diego's Storm Water Management Plan (PDF) aims to prevent or reduce the potential discharge of pollutants into UCSD storm drains.

The plan describes:

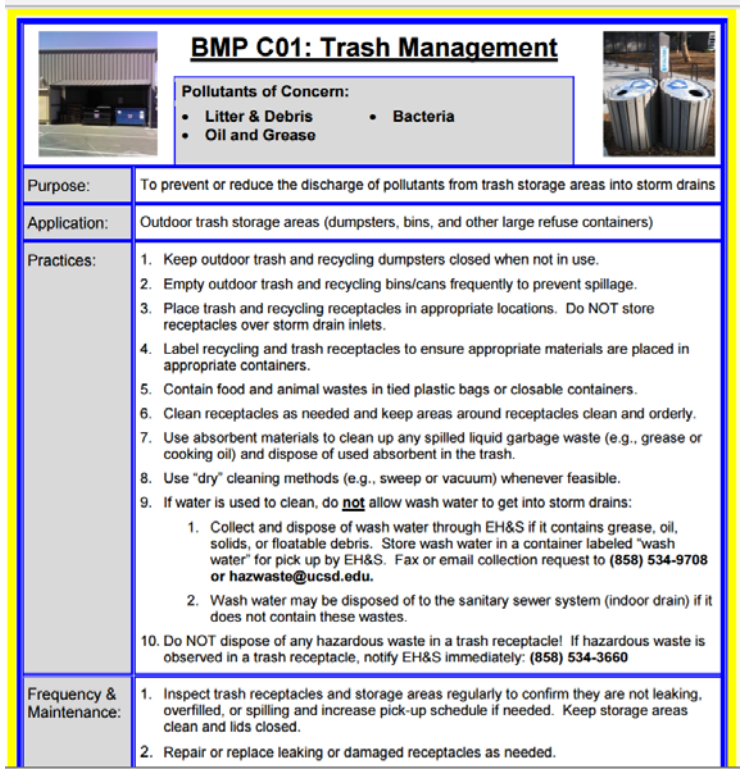
- Pollution prevention requirements (see below)
- Best management practices (BMPs)
  - Source controls for outdoor activities that may release pollutants into storm drains
  - Treatment controls measures implemented to prevent coastal water pollution
- Monitoring locations and constituents analyzed (PDF)
- Emergency spill response procedures

Pollution prevention requirements

- Do not discharge anything into a storm drain, including clean tap water. Only rain is permitted in a storm drain.
- Keep outdoor work and storage areas clean and orderly.
- Cover or protect storm drain inlets from outdoor work activities as needed.
- Maintain spill control and cleanup materials and clean up outdoor spills immediately.
- Do not store machinery, equipment, or vehicles over storm drains.
- Keep outdoor trash cans and bins closed.
- If water is used to clean, do not allow wash water to get into a storm drain.
- Fueling activities must be overseen by the equipment operator at all times.
- Use drip pans under leaking equipment.

Contractor and visitor responsibilities

Contractors, service providers, and non-employee visitors at UCSD are responsible for reviewing the UCSD Storm Water Pollution Prevention Best Management Practices Handbook (PDF) to ensure outdoor work



BMP C01: Trash Management

Pollutants of Concern:
- **Litter & Debris**
- **Oil and Grease**
- **Bacteria**

Purpose:	To prevent or reduce the discharge of pollutants from trash storage areas into storm drains
Application:	Outdoor trash storage areas (dumpsters, bins, and other large refuse containers)
Practices:	1. Keep outdoor trash and recycling dumpsters closed when not in use. 2. Empty outdoor trash and recycling bins/cans frequently to prevent spillage. 3. Place trash and recycling receptacles in appropriate locations. Do NOT store receptacles over storm drain inlets. 4. Label recycling and trash receptacles to ensure appropriate materials are placed in appropriate containers. 5. Contain food and animal wastes in tied plastic bags or closable containers. 6. Clean receptacles as needed and keep areas around receptacles clean and orderly. 7. Use absorbent materials to clean up any spilled liquid garbage waste (e.g., grease or cooking oil) and dispose of used absorbent in the trash. 8. Use "dry" cleaning methods (e.g., sweep or vacuum) whenever feasible. 9. If water is used to clean, do **not** allow wash water to get into storm drains: 1. Collect and dispose of wash water through EH&S if it contains grease, oil, solids, or floatable debris. Store wash water in a container labeled "wash water" for pick up by EH&S. Fax or email collection request to **(858) 534-9708 or hazwaste@ucsd.edu.** 2. Wash water may be disposed of to the sanitary sewer system (indoor drain) if it does not contain these wastes. 10. Do NOT dispose of any hazardous waste in a trash receptacle! If hazardous waste is observed in a trash receptacle, notify EH&S immediately: **(858) 534-3660**
Frequency & Maintenance:	1. Inspect trash receptacles and storage areas regularly to confirm they are not leaking, overfilled, or spilling and increase pick-up schedule if needed. Keep storage areas clean and lids closed. 2. Repair or replace leaking or damaged receptacles as needed.

PROJECT CHARTER OVERVIEW

UC San Diego
Facilities Design & Construction

Presented by Paul Wraa, Pre-Design Manager
Facilities Design and Construction

2017.06.27

PROJECT CHARTER OVERVIEW

UC San Diego
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UC San Diego Facilities Design & Construction

Project Initiation Charter
For UC San Diego Capital Improvement Projects

DRAFT

Project Information	Project Name (Job/WO#):	Lab Renovation Example		Project to be Managed By:	FD&C
				GSF:	Appx. 5,700
	Project Location:	Other		CCCI#:	7052
	VC Area:	(HS/SOM) Health Sciences or School of Medicine/David A. Brenner		Complexity Level:	3, Moderate Remodel
	Project User Needs and Objectives:	This project will provide additional research laboratory space to meet anticipated needs, relocate existing research cores and centralize programs to provide better efficiency, and provide administrative spaces such as a break room, lounge area and kitchenette. Project improvements will be located within the basement level.			
	Project Description:	Buildout approximately 2,500 GSF of shell space for six laboratory modules, renovate approx. 1,500GSF of existing research laboratory space into repurposed research laboratories, and renovate up to approx. 1,700 GSF of existing vivarium lab space into administrative programs.			
	Project Driver:	Schedule ☐	Budget ☐	Safety☐	Other ☐
	Charter Participants:				
	Requesting Party:				Date: 05.30.2017
Facilities Design & Construction		**1st Business Decision Point**			
	Rough Order of Magnitude Cost and Time Assumptions:	Concept Estimated Total Project Time Range:	June 2017 – Jan 2019	Projected *Time* to 2nd Decision Point:	4 months
		Concept Estimated Total Project Cost Range:	$4.6M – $5.4M	Projected *Costs* to 2nd Decision Point:	$90,000
	Key Issues:	See attached program and scope sketches.			
	Design Approvals:	DRB☐	EH&S☒		
	FD&C Representative:				
Capital Planning		**Budget Approvals**			
	Key Issues:				
	Classification:	Minor ☐	Mini-Major ☒	Delegated Major☐	Regental Major ☐
	Funding Source(s):	State Funds ☐	Gift ☐	Debt/Financing ☐	Other☐
	CP Representative:				
Physical Planning		**Planning Entitlements**			
	Key Issues:				
	CEQA Process:	Exempt ☐	Neg. Dec. ☐	Mit. Neg. Dec. ☐	EIR ☐
	Planning Reviews:	OSC☐	MSPPC ☐	MSPC ☐	Coastal Permit☐
	PCP Representative:				

INTENT OF THE PROJECT CHARTER:

- Is to provide an early study for clients with important decision making information.
- Describes the project objective, complexity and scope of work.
- Approximates a preliminary project budget and schedule.
- Identifies a path to a second decision point.
- Identifies the funding and approval level process.
- Identifies the planning entitlement process and environmental review requirements.
- Consolidates important decision making information onto one page.

PROJECT CHARTER OVERVIEW

UC San Diego
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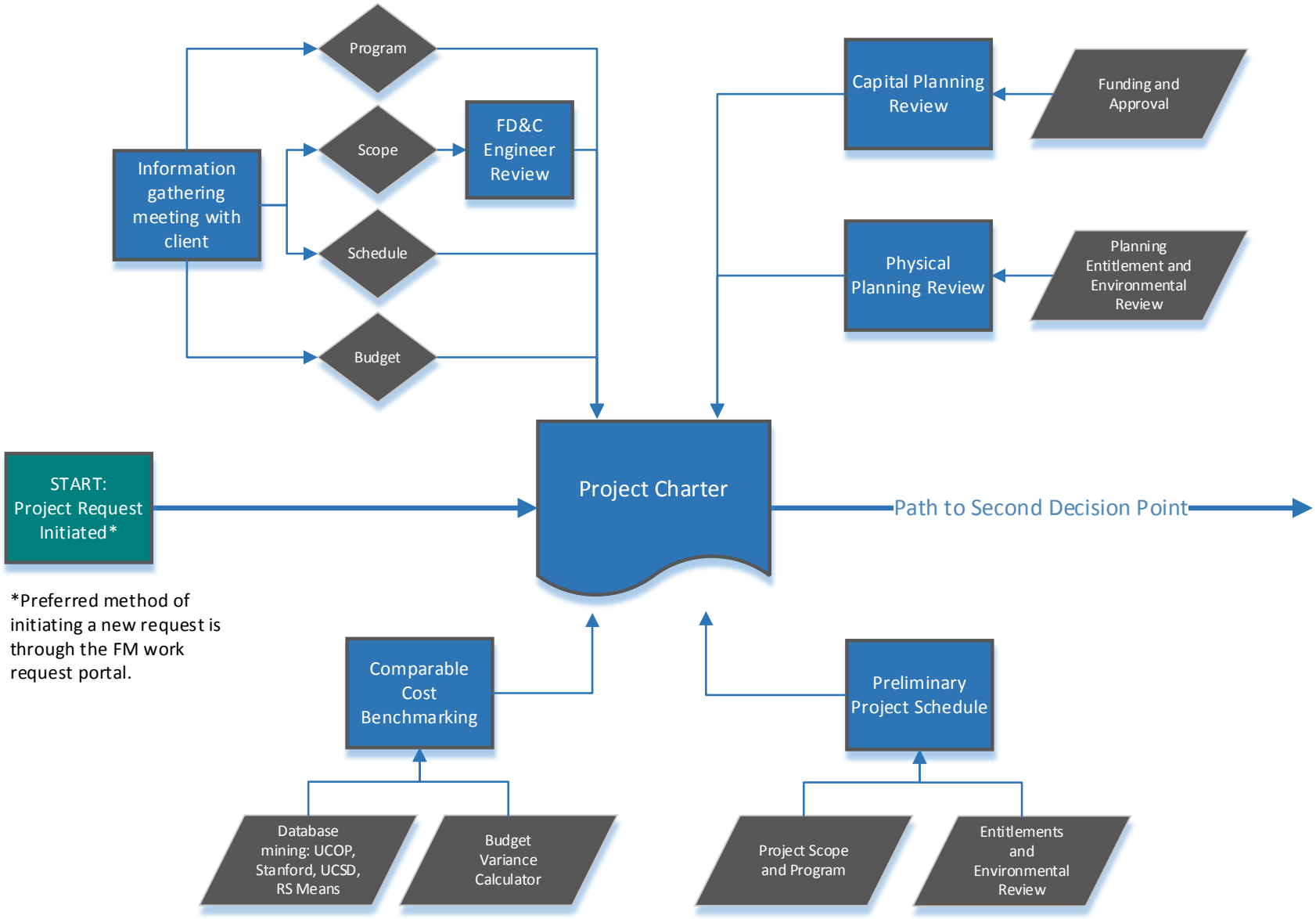

PROJECT CHARTER OVERVIEW

UC San Diego
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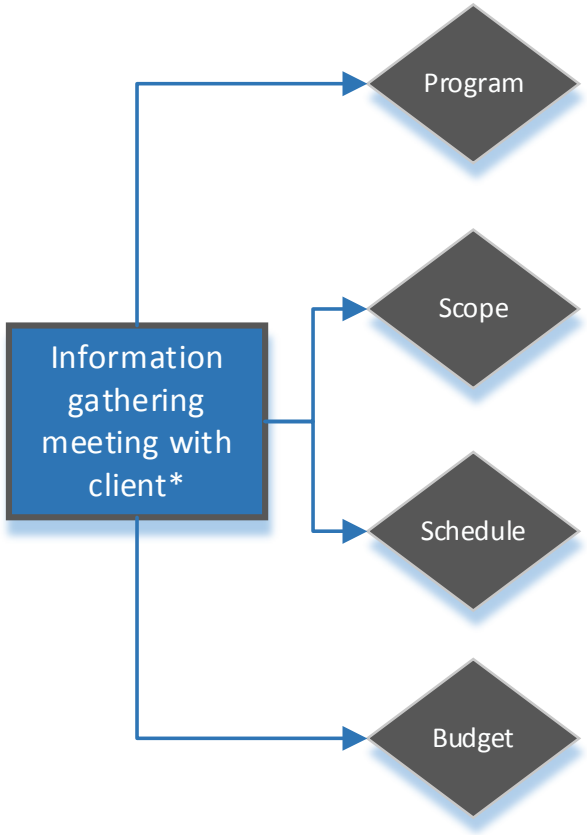

Program defines the project objective. Classification, requirements and usage of space is investigated. Program includes identifying equipment and furnishings that may be part of the project. Accessibility requirements must be addressed. Program influences project schedule and budget.

Project scope defines the extent and complexity of work required to achieve the project objective. Complexity can range from cosmetic remodel to new construction. Selection of space, condition of building and available existing infrastructure is reviewed. Scope impacts project schedule and budget.

Providing a realistic schedule is critical. Opportunity to discuss anticipated project schedule and expectation.

Opportunity to discuss project budget resources and available funding.

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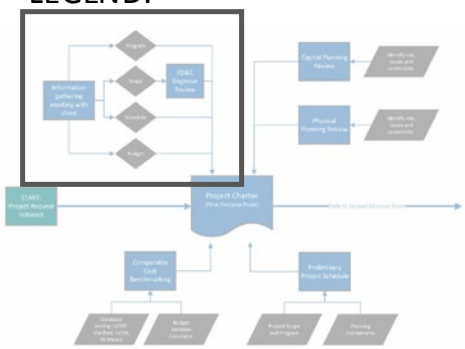


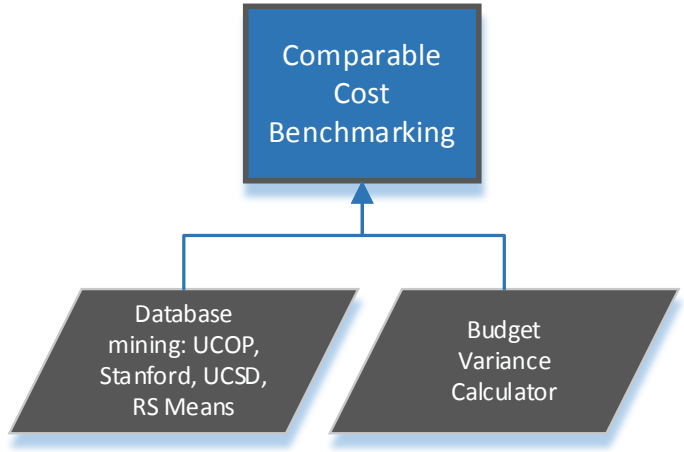
*Attendees include client, FD&C or FM project management, capital planner and physical planner. Others as appropriate.

PROJECT CHARTER OVERVIEW

UC San Diego
Facilities Design & Construction

Comparable Costs Analysis - Laboratory

	Project:		4963 Urey Hall, UCSD			4708 Muir Level 3, UCSD			AVERAGES:		
Project Description	Project Type:		Wet Laboratory			Wet Laboratory			-		
	Database:		UCSD			UCSD			-		
	Level of Complexity:		Level 3, Moderate Remodel			Level 4, Major Remodel			-		
	GSF:		2,000			9,053			10,944		
	ASF:		2,000			9,053			10,224		
	Building Efficiency Ratio:		100.0%			100.0%			93.42%		
Cost Modifiers	Historical CCCI:		5981			5768			-		
	CCCI (May, 2019 @4.5%):		7052			7052			-		
	Escalation:		17.91%			22.26%			-		
	City Index Adjustment:		-8.18%			-8.18%			-		
Normalized Costs			Category Total:	Cost/GSF:	Cost/ASF:	Category Total:	Cost/GSF:	Cost/ASF:	Category Total:	Cost/GSF:	Cost/ASF:
	Project Costs (CIB 1-2, 4-9)(No FF&E):		$ 701,576	$ 351	$ 351	$ 6,344,630	$ 701	$ 701	$ 5,699,300	$ 521	$ 557
	Program:		Quantitative Biology Lab. Interior Renovation of rooms 6120 and 6124. Renovation of walls, door, lab casework. Modifications of mechanical, plumbing and electrical systems.			Renovation includes demolition of all partition walls, door, flooring, casework and utilities. Lab spaces reconfigured into an open lab divided into 5 lab units by partition walls and transom windows. Upgrade includes new fume hoods, casework, plumbing fixtures, electrical panel replacement, lighting, general power/data upgrades and accessibility compliance.					



Providing a project budget is an important component of the project charter. Once scope and program are understood, comparable projects can be identified and normalized to provide a budget range. Costs are escalated to mid-point of construction. This rough order of magnitude can be used for budgetary decisions prior to moving forward.

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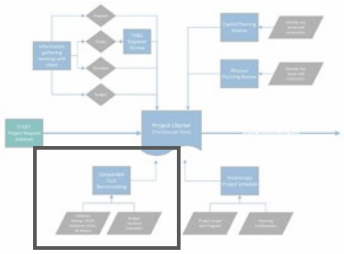

PROJECT CHARTER OVERVIEW

UC San Diego
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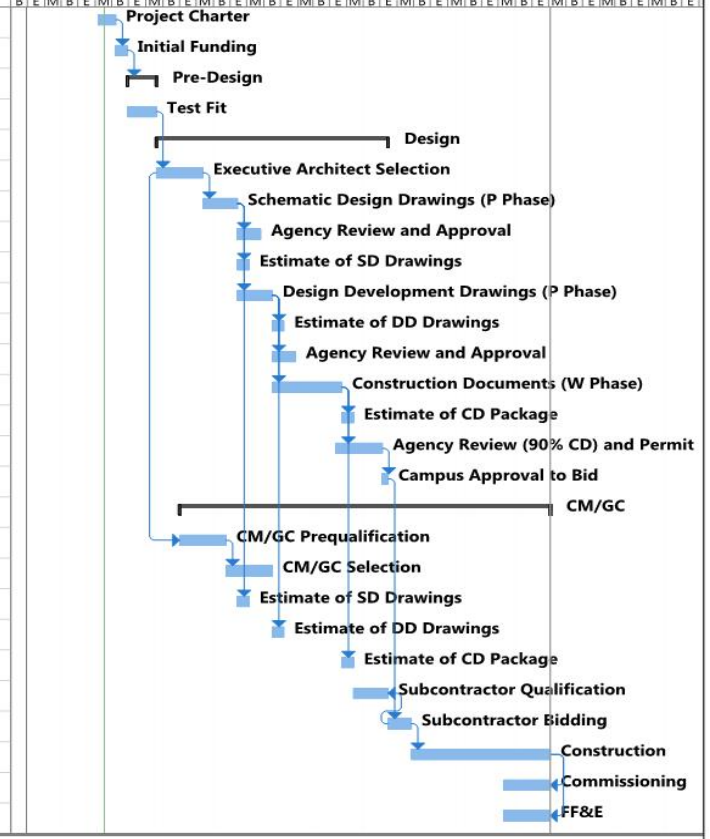
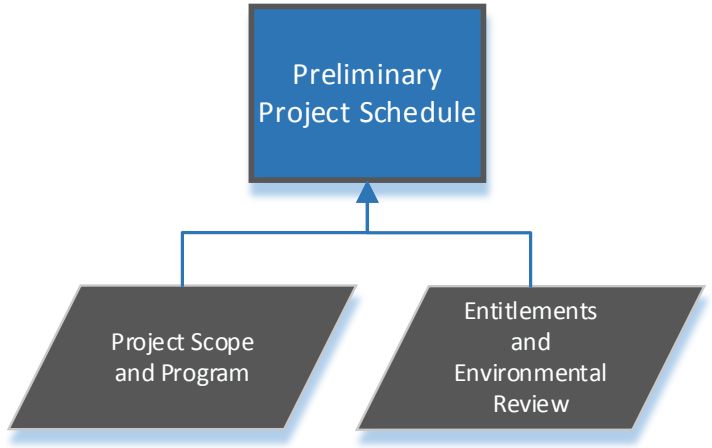
Preliminary Project Schedule - Example — Thu 6/22/17

ID	Task Name	Duration	Start	Finish
1	Project Charter	3 wks	Thu 6/15/17	Wed 7/5/17
2	Initial Funding	2 wks	Thu 7/6/17	Wed 7/19/17
3	**Pre-Design**	**25 days**	**Thu 7/20/17**	**Wed 8/23/17**
4	Test Fit	5 wks	Thu 7/20/17	Wed 8/23/17
5	**Design**	**200 days**	**Thu 8/24/17**	**Wed 5/30/18**
6	Executive Architect Selection	8 wks	Thu 8/24/17	Wed 10/18/17
7	Schematic Design Drawings (P Phase)	6 wks	Thu 10/19/17	Wed 11/29/17
8	Agency Review and Approval	4 wks	Thu 11/30/17	Wed 12/27/17
9	Estimate of SD Drawings	2 wks	Thu 11/30/17	Wed 12/13/17
10	Design Development Drawings (P Phase)	6 wks	Thu 11/30/17	Wed 1/10/18
11	Estimate of DD Drawings	2 wks	Thu 1/11/18	Wed 1/24/18
12	Agency Review and Approval	4 wks	Thu 1/11/18	Wed 2/7/18
13	Construction Documents (W Phase)	12 wks	Thu 1/11/18	Wed 4/4/18
14	Estimate of CD Package	2 wks	Thu 4/5/18	Wed 4/18/18
15	Agency Review (90% CD) and Permit	8 wks	Thu 3/29/18	Wed 5/23/18
16	Campus Approval to Bid	1 wk	Thu 5/24/18	Wed 5/30/18
17	**CM/GC**	**320 days**	**Thu 9/21/17**	**Wed 12/12/18**
18	CM/GC Prequalification	8 wks	Thu 9/21/17	Wed 11/15/17
19	CM/GC Selection	8 wks	Thu 11/16/17	Wed 1/10/18
20	Estimate of SD Drawings	2 wks	Thu 11/30/17	Wed 12/13/17
21	Estimate of DD Drawings	2 wks	Thu 1/11/18	Wed 1/24/18
22	Estimate of CD Package	2 wks	Thu 4/5/18	Wed 4/18/18
23	Subcontractor Qualification	6 wks	Thu 4/19/18	Thu 5/31/18
24	Subcontractor Bidding	4 wks	Thu 5/31/18	Wed 6/27/18
25	Construction	6 mons	Thu 6/28/18	Wed 12/12/18
26	**Commissioning**	8 wks	Thu 10/18/18	Wed 12/12/18
27	**FF&E**	8 wks	Thu 10/18/18	Wed 12/12/18



Page 1



A Preliminary Project schedule is prepared to approximate durations for pre-design, design, review and approval, bidding, construction and closeout. Scope, program, and entitlements inform durations. Schedule is also used for escalating project costs.

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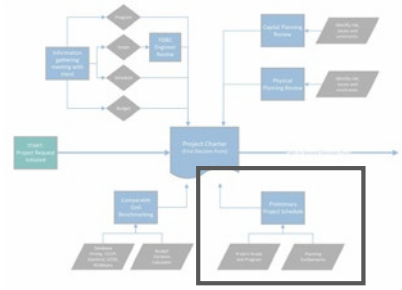

PROJECT CHARTER OVERVIEW

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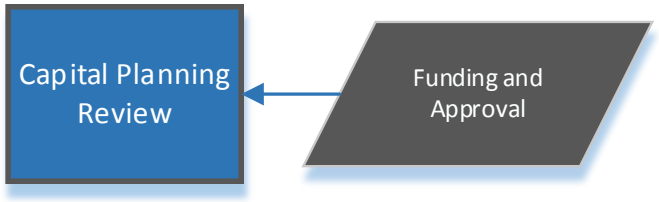
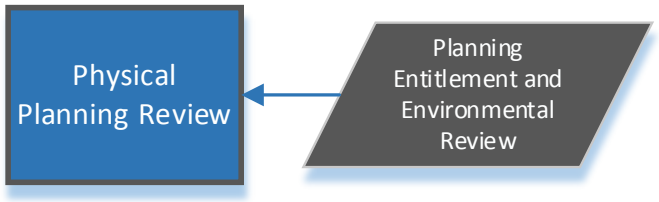


Capital Planning identifies the funding and approval level process.

Project budget determines approval level:

- Minor, $50K - $750K, Campus Architect
- Mini Major, $750K - $10M, Chancellor
- Delegated Major, $10M - $70M, Chancellor with UCOP endorsement
- Regental, $70M +, Regents

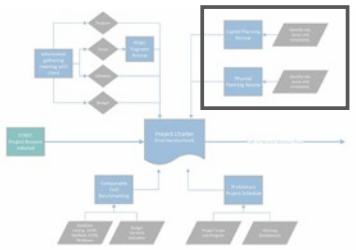


Physical Planning identifies the planning entitlement process and environmental review requirements.

Project scope and location determine the review and approval requirements:

- California Environmental Quality Act (CEQA)
- Planning review groups
- Consistency with the Long Range Development Plan (LRDP)

LEGEND:



PROJECT CHARTER OVERVIEW

UC San Diego
Facilities Design & Construction

Project Initiation Charter
For UC San Diego Capital Improvement Projects
DRAFT

Project Information	Project Name (Job/WO#):	Lab Renovation Example		Project to be Managed By:	FD&C
				GSF:	Appx. 5,700
	Project Location:	Other		CCCI#:	7052
	VC Area:	(HS/SOM) Health Sciences or School of Medicine/David A. Brenner		Complexity Level:	3, Moderate Remodel
	Project User Needs and Objectives:	This project will provide additional research laboratory space to meet anticipated needs, relocate existing research cores and centralize programs to provide better efficiency, and provide administrative spaces such as a break room, lounge area and kitchenette. Project improvements will be located within the basement level.			
	Project Description:	Buildout approximately 2,500 GSF of shell space for six laboratory modules, renovate approx. 1,500GSF of existing research laboratory space into repurposed research laboratories, and renovate up to approx. 1,700 GSF of existing vivarium lab space into administrative programs.			
	Project Driver:	Schedule ☐	Budget ☐	Safety☐	Other ☐
	Charter Participants:				
	Requesting Party:				Date: 05.30.2017
Facilities Design & Construction		**1st Business Decision Point**			
	Rough Order of Magnitude Cost and Time Assumptions:	Concept Estimated Total Project Time Range:	June 2017 – Jan 2019	Projected *Time* to 2nd Decision Point:	4 months
		Concept Estimated Total Project Cost Range:	$4.6M – $5.4M	Projected *Costs* to 2nd Decision Point:	$90,000
	Key Issues:	See attached program and scope sketches.			
	Design Approvals:	DRB☐	EH&S☒		
	FD&C Representative:				
Capital Planning		**Budget Approvals**			
	Key Issues:				
	Classification:	Minor ☐	Mini-Major ☒	Delegated Major☐	Regental Major ☐
	Funding Source(s):	State Funds ☐	Gift ☐	Debt/Financing ☐	Other☐
	CP Representative:				
Physical Planning		**Planning Entitlements**			
	Key Issues:				
	CEQA Process:	Exempt ☐	Neg. Dec. ☐	Mit. Neg. Dec. ☐	EIR ☐
	Planning Reviews:	OSC☐	MSPPC ☐	MSPC ☐	Coastal Permit☐
	PCP Representative:				

PROJECT INFORMATION

PROJECT BUDGET AND SCHEDULE

CAPITAL AND PHYSICAL PLANNING

LEGEND: