

SCHEDULE DEVELOPMENT

The project schedule identifies and organizes project tasks into a sequence of events that form a project management plan. The process of building the schedule enables the project manager to identify risk points and understand the proper linkage of events; it also assists in resource planning and allows the project manager to establish milestones for the team and project.

The schedule is a tool that assists the PM in achieving a desired outcome, and it provides a means to measure team performance. A quality schedule includes control points that help to ensure project success. Specific control points that must be inserted and honored include, but are not limited to:

- Budget development and cost checks. This includes time to redesign in order to realign the scope with the budget (see the Heartbeat diagram on page 31)
- Stanford approvals (user group, Dean, Provost, Board of Trustees)
- Jurisdictional approval process

The overall project schedule should be the starting point for all projects at Stanford. The schedule is structured according to the process phases, but does not detail specific design and construction tasks for each phase; instead, it highlights the overall organization, logic, and control points.

Typical project durations from the start of programming through move-in are as follows. Actual duration are dependent on numerous variables unique to each project.

Sample Project Type	Typical Project Duration	Typical Construction Duration
Large science/medical project (> 25k gsf)	3–5 years	2–3 years
Large office/classroom project (> 25k gsf)	3–4 years	1–2 years
Large housing project (> 25k gsf)	2–3 years	1–2 years
Large renovation (> 25k gsf)	2–4 years	1–2 years
Small new buildings	2–3 years	1–1 1/2 years
Small renovations	varies	varies

The project manager oversees the management schedule, which should be monitored and updated as the project moves through the design, agency approval, construction, and activation processes. The project manager can determine on a project-by-project basis which member of the project team is responsible for maintaining the project schedule.

The model schedule on the following page can be used as a template for Stanford projects. It outlines the DPM process and lists many project milestones, including BoT phases and Santa Clara County submittals.

The general contractor is responsible for developing and maintaining the detailed construction schedule.

SAMPLE SCHEDULE

ID	Task Name	Duration	Start	Finish	Year																									
					2010	2011	2012	2013	2014	2015	Q-1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	Scoping Phase	55 days	3/8/10	5/21/10																										
2	Form 1 Submittal by School/Department	10 days	3/8/10	3/19/10																										
3	Form 1 Approved	5 days	3/22/10	3/26/10																										
4	Scoping Meeting and follow-up tasks	40 days	3/29/10	5/21/10																										
5	Feasibility Phase	150 days	5/24/10	12/17/10																										
6	Select Design Team	70 days	5/24/10	8/27/10																										
7	Develop multiple options as appropriate	40 days	8/30/10	10/22/10																										
8	Budget Development level: Benchmark	15 days	10/25/10	11/12/10																										
9	Complete Feasibility Study; Select one Option	20 days	11/15/10	12/10/10																										
10	Revised Form 1	5 days	12/13/10	12/17/10																										
11	Programming Phase	180 days	12/20/10	8/26/11																										
12	Develop Program for approved Option	40 days	12/20/10	2/11/11																										
13	Identify/Implement applicable GUP special studies	180 days	12/20/10	8/26/11																										
14	Budget Development level: Updated Benchmark	15 days	2/14/11	3/4/11																										
15	Write-Up for Cabinet+ BoT Concept and Site Approval	10 days	2/14/11	2/25/11																										
16	Complete Funding Plan	10 days	3/7/11	3/18/11																										
17	University Cabinet meeting	0 days	5/12/11	5/12/11																										
18	BoT Concept and Site Approval	0 days	6/8/11	6/8/11																										
19	Schematic Design Phase	177 days	6/9/11	2/10/12																										
20	Develop design to Stanford SD level	60 days	6/9/11	8/31/11																										
21	Select General Contractor	20 days	6/9/11	7/6/11																										
22	Conduct Structural Peer Review	10 days	9/1/11	9/14/11																										
23	Budget Development level: Budget	15 days	9/1/11	9/21/11																										
24	Budget/Scope alignment (if necessary, allow 1-3 months)	35 days	9/22/11	11/9/11																										
25	User and Tech Team review (allow 2-4 weeks)	15 days	11/10/11	11/30/11																										
26	Write-Up for Cabinet+ BoT Design Approval	10 days	11/10/11	11/23/11																										
27	University Cabinet meeting	0 days	1/16/12	1/16/12																										
28	BoT Design Approval	0 days	2/10/12	2/10/12																										
29	County ASA	75 days	9/22/11	1/4/12																										
30	Submittal/determine complete/issue conditions of approval	40 days	9/22/11	11/16/11																										
31	County 20 day public notice and ASA Hearing	20 days	11/17/11	12/14/11																										
32	3 day rebuttal period	3 days	12/15/11	12/19/11																										
33	ASA Approval (15 days after hearing)	0 days	1/4/12	1/4/12																										
34	Design Development Phase	130 days	2/13/12	8/10/12																										
35	Develop design through Stanford DD level	55 days	2/13/12	4/27/12																										
36	Select Design/Build MEP Subcontractors	20 days	2/13/12	3/9/12																										
37	Budget Development level: DD Estimate	15 days	4/30/12	5/18/12																										
38	Budget/Scope alignment (if necessary, allow 1-3 months)	40 days	5/21/12	7/13/12																										
39	User and Tech Team review (allow 2-4 weeks)	15 days	7/16/12	8/3/12																										
40	Conduct Structural Peer Review	15 days	7/16/12	8/3/12																										
41	Incorporate ASA conditions in design (may add 1-3 months)	30 days	2/13/12	3/23/12																										
42	Write-Up for BoT Project Approval	10 days	7/16/12	7/27/12																										
43	BoT Project Approval	0 days	8/10/12	8/10/12																										
44	Construction Documents	218 days	8/13/12	6/13/13																										
45	Develop design to Stanford CD level	70 days	8/13/12	11/16/12																										
46	Permits for Demolition, Utilities, Haz Mat, Grading	70 days	8/13/12	11/16/12																										
47	BoT approval for partial construction (demo, utilities, grading)	0 days	12/14/12	12/14/12																										
48	Complete Structural Peer Review	15 days	10/8/12	10/26/12																										
49	Budget Development level: CD Estimate	15 days	11/19/12	12/7/12																										
50	Budget/Scope alignment (if necessary, allow 1-3 months)	20 days	12/10/12	1/4/13																										
51	User and Tech Team review (allow 2-4 weeks)	20 days	1/7/13	2/1/13																										
52	Construction Permit Phase	70 days	2/4/13	5/10/13																										
53	Submit drawings to appropriate jurisdictions	5 days	2/4/13	2/8/13																										
54	Submit required ASA conditions of approval	15 days	2/4/13	2/22/13																										
55	Receive comments and submit revised set	60 days	2/11/13	5/3/13																										
56	Building Permit received	5 days	5/6/13	5/10/13																										
57	GC bids remaining trades	70 days	2/4/13	5/10/13																										
58	Complete Funding Agreement	10 days	1/7/13	1/18/13																										
59	Write-Up for BoT Construction Approval	10 days	5/6/13	5/17/13																										
60	BoT Construction Approval Approval	0 days	6/13/13	6/13/13																										
61	Construction Phase	420 days	5/13/13	12/19/14																										
62	Demo, sitework, utility work (if not completed during permit)	80 days	5/13/13	8/30/13																										
63	Building construction	240 days	9/2/13	8/1/14																										
64	Fit-up	60 days	8/4/14	10/24/14																										
65	Commissioning	20 days	10/27/14	11/21/14																										
66	Complete punch list	40 days	10/27/14	12/19/14																										
67	Closeout Phase	270 days	10/27/14	11/6/15																										
68	Building activation and move-in	20 days	10/27/14	11/21/14																										
69	Final commissioning/training/turnover	20 days	10/27/14	11/21/14																										
70	Post Occupancy Evaluation/ 11 month walkthrough	10 days	10/26/15	11/6/15																										
71	Financial closeout	10 days	3/16/15	3/27/15																										

