

Project Plan for the Project Name

PID FY Funding Source

at

Lawrence Berkeley National Laboratory

Photo/Image

Office of Operations Program Management

Office of Science

U.S. Department of Energy

Date Approved:

XX/XX/XXXX

Template Instructions:

Project Plans are to be submitted for Threshold 2 & 3 (TEC value \$1M-\$20M) projects as part of the PPG package at the Planning Complete Stage Gate and updated at the Design Complete and Closeout Complete Stage Gates.

Italicized suggested text should be reviewed and modified appropriately.

**Project Plan for the
Project Name at the
Lawrence Berkeley National Laboratory**

Submitted by:

xxx, Project Manager, PIMD, LBNL

Date:

xxx, Project Director, PIMD, LBNL

Date:

xxx, Department Head, PIMD, LBNL

Date:

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**Project Plan for the
Project Name Project at the
Lawrence Berkeley National Laboratory**

Change Log

Revision History			
Rev.	Date	Responsible Individual	Reason
0			Plan Submitted for Approval.
1			Plan Update

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**Project Plan for the
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Lawrence Berkeley National Laboratory**

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1 INTRODUCTION

This Project Plan sets forth the management and project processes that will be used in order to successfully execute the design and construction of the XXX Project. This plan describes the project background, stakeholder, scope, cost, schedule and change management plans, as well as addressing the acquisition approach, tailoring strategy, change control, outage planning, coordination of support, risk management, quality assurance and testing and close out planning specific to this project. The Project Plan is a living document that will be revised periodically until the Project is complete and reviewed at Planning, Design and Construction Completion.

See Abbreviations List in the [PIMD Procedure Manual](#).

1.1 Project Background

- Objective
- Mission need
- Timeline (fiscal year span)
- Funding source(s)

If applicable

- Predecessor or associated LBNL projects
 - *This project will build on the xxx Study with additional xxx.*

2 PROJECT PLAN

The technical scope as outlined in this document includes project performance parameters.

- Overview of technical performance parameters
- TEC
- Client deadline - explain why that deadline exists, what constraints, Science goals, funding constraints, or other projects rely on this project
- Status of development of resource loaded schedule by Project Controls
- Information used to create the current baseline

2.1 Stakeholder Management Plan

Project team:

- Client:
- Department Head:
- Project Director:
- Project Manager:
- Construction Manager:
- Design Manager:
- Facilities Engineering team:
- Project Coordinator:
- Project Controls Analyst:
- EHS Lead:
- Estimator:
- Procurement Lead:

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- Facilities Area Manager:
- Fire Engineer:

See Roles and Responsibilities in the [PIMD Governance Framework](#).

Describe the Stakeholder Management Plan.

2.2 Scope Management Plan

- Existing Conditions
- Scope Narrative
- Exclusions
- Link to OPR
- Figure - Key Plan or Site Map

Any potential scope change will be incorporated into the project in accordance with the Change Control defined in the [PIMD Governance Framework](#).

If applicable:

- Threshold and Objective Scope - Table and Figure
- Contingency Release Plan - plan to release risk contingency funding for objective scope as the project progresses

The Threshold scope comprises the minimum scope to be completed by the project. The Objective scope indicates desired scope, consistent with the project’s Work Authorization Statement, which could be executed if the Project experiences favorable cost and schedule performance. The Threshold and Objective scopes for this project are shown below in Table 1, Figures xxx.

■ Table xxx – Scope of Work

Description of Scope	Color Key (see site map next page)	Threshold Value	Objective Value
Priority 1 – Alignments B, C, D	Red		
Priority 2 – Alignments H (East), I, J, K	Orange		
Priority 3 – Alignments M, N	Yellow		
Priority 4 – Alignments E, F, G	Green		
Priority 5 – Alignment A	Light Blue		
Priority 6 – Alignment L, O	Dark Blue		
Priority 7 – Alignment H (West)	Purple		

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Please refer to the next page for a site plan of Project Name replacement priorities, color coded per key above.

■ Figure xxx – Site Map of Project Name Priorities

2.3 Cost Management Plan

- TEC
- Funding years (FY)
- Breakdown of costs - Table
- Contingency - % of TEC
- Quantify contingency based on preliminary risk matrix

If applicable:

- Escalation
 - *These project costs include escalation as forecasted from studies of construction of facilities of this type and projected market conditions at the planned time of bidding in the San Francisco Bay Area.*

■ Table xxx – Project Cost Summary

Example

WBS #	WBS Title	Total K\$
1.01	Other Project Costs (OPC)	\$ n/a
	Total Estimated Cost (TEC)	
1.02	Engineering & Design	\$ 835
1.02.01	Design Subcontract	\$ 400
1.02.02	Miscellaneous Consultants	\$ 34
1.02.03	Project Management Support	\$ 334
1.02.04	Project LBNL Support	\$ 67
1.03	Construction	\$ 6,394
1.03.01	Construction Subcontract	\$ 4,394
1.03.02	Project Integration	\$ 1,107
1.03.03	Project LBNL Support	\$ 234
1.03.04	Project Consultant/Blanket Contract Support	\$ 659
	Direct TEC	\$ 7,229
	TEC Contingency (30%)	\$ 2,171
	Total Estimated Cost	\$ 9,400
	Total Project Cost (TPC)	\$ 9,400

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2.4 Schedule Management Plan

- Project Baseline Completion Date
- Schedule contingency
- Quantify contingency based on preliminary risk matrix
- Project Early Completion Date
- Known schedule risks
- Milestones - table
- Project summary schedule - from P6

Cost variances may occur as a result of not achieving the forecasted early finish schedule and will be managed and reported through the earned value management updates.

■ Table xxx – Milestones

Example

Milestone Tier	Milestone Name	Baseline
1	Approve Project Management Plan	7/18
3	75% Design Complete	11/18
2	Final Design Complete	3/19
1	Start Construction	6/19
3	Priority 1 – B, C, D Segment Completion	11/19
3	Priority 2 – H (East Side), I, J, K Segment Completion	9/20
2	Construction Substantial Completion	9/20
1	Project Completion	9/20

■ Figure xxx - Project Summary Schedule

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CMLC Water Line Replacement				CMCL - WBS Summary												29-Jun-18																
#	Activity Name	Planned Duration	Start	Finish	2018				2019				2020																			
					S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	CMLC-1 CMLC Water Line Replacement	743d	28-Sep-17	30-Sep-20	[Gantt bar from 28-Sep-17 to 30-Sep-20]																											
2	Project Start	0d	28-Sep-17*		[Gantt bar from 28-Sep-17 to 28-Sep-17]																											
3	Approve Project Management Plan	0d	10-Jul-18		[Gantt bar from 10-Jul-18 to 10-Jul-18]																											
4	COMP: 75% Design Complete	0d		02-Nov-18	[Gantt bar from 02-Nov-18 to 02-Nov-18]																											
5	COMP: Final Design Complete	0d		22-Mar-19	[Gantt bar from 22-Mar-19 to 22-Mar-19]																											
6	START: Start Construction	0d	21-Jun-19		[Gantt bar from 21-Jun-19 to 21-Jun-19]																											
7	COMP: Priority 1 B, C, D Segment Completion	0d		25-Nov-19	[Gantt bar from 25-Nov-19 to 25-Nov-19]																											
8	COMP: Priority 2 H (East Side), I, J, K Segment Completion	0d		30-Sep-20	[Gantt bar from 30-Sep-20 to 30-Sep-20]																											
9	COMP: Construction Substantial Completion	0d		30-Sep-20	[Gantt bar from 30-Sep-20 to 30-Sep-20]																											
10	COMP:Project Completion Must Finish By	0d		30-Sep-20*	[Gantt bar from 30-Sep-20 to 30-Sep-20]																											
11	CMLC-1.01 OPC	213d	28-Sep-17	09-Aug-18	[Gantt bar from 28-Sep-17 to 09-Aug-18]																											
12	CMLC-1.01.01 Conceptual Design	213d	28-Sep-17	09-Aug-18	[Gantt bar from 28-Sep-17 to 09-Aug-18]																											
13	CMLC-1.01.01.01 Project Initiation	190d	28-Sep-17	09-Jul-18	[Gantt bar from 28-Sep-17 to 09-Jul-18]																											
14	CMLC-1.01.01.02 Design Subcontract	28d	02-Jul-18	09-Aug-18	[Gantt bar from 02-Jul-18 to 09-Aug-18]																											
15	CMLC-1.01.01.03 Conceptual Design Support	190d	28-Sep-17	09-Jul-18	[Gantt bar from 28-Sep-17 to 09-Jul-18]																											
16	CMLC-1.02 Engineering & Construction (TEC)	553d	09-Jul-18	30-Sep-20	[Gantt bar from 09-Jul-18 to 30-Sep-20]																											
17	CMLC-1.02.01 Engineering	198d	10-Jul-18	29-Apr-19	[Gantt bar from 10-Jul-18 to 29-Apr-19]																											
18	CMLC-1.02.01.01 Design Subcontract CMLC	129d	10-Aug-18	22-Feb-19	[Gantt bar from 10-Aug-18 to 22-Feb-19]																											
19	CMLC-1.02.01.01.01 Design 75% Complete	45d	10-Aug-18	12-Oct-18	[Gantt bar from 10-Aug-18 to 12-Oct-18]																											
20	CMLC-1.02.01.01.02 Design 95% Complete	43d	08-Oct-18	07-Dec-18	[Gantt bar from 08-Oct-18 to 07-Dec-18]																											
21	CMLC-1.02.01.01.03 Design Complete 100%	32d	05-Dec-18	29-Jan-19	[Gantt bar from 05-Dec-18 to 29-Jan-19]																											
22	CMLC-1.02.01.01.04 Final Design Complete	19d	28-Jan-19	22-Feb-19	[Gantt bar from 28-Jan-19 to 22-Feb-19]																											
23	CMLC-1.02.01.02 Miscellaneous Consultants & Pre-Construction S	48d	10-Jul-18	14-Sep-18	[Gantt bar from 10-Jul-18 to 14-Sep-18]																											
24	CMLC-1.02.01.03 Project Management Support	198d	10-Jul-18	29-Apr-19	[Gantt bar from 10-Jul-18 to 29-Apr-19]																											
25	CMLC-1.02.01.04 Project LBNL Support	198d	10-Jul-18	29-Apr-19	[Gantt bar from 10-Jul-18 to 29-Apr-19]																											
26	CMLC-1.02.02 Procurement	198d	09-Jul-18	29-Apr-19	[Gantt bar from 09-Jul-18 to 29-Apr-19]																											
27	CMLC-1.02.02.01 Long Lead Purchase Material	0d	08-Feb-19	08-Feb-19	[Gantt bar from 08-Feb-19 to 08-Feb-19]																											
28	CMLC-1.02.02.02 Construction Contract	198d	09-Jul-18	29-Apr-19	[Gantt bar from 09-Jul-18 to 29-Apr-19]																											
29	CMLC-1.02.03 Construction of CMLC	355d	30-Apr-19	30-Sep-20	[Gantt bar from 30-Apr-19 to 30-Sep-20]																											
30	CMLC-1.02.03.01 Site Contract for Installation of CMLC	291d	30-Apr-19	30-Jun-20	[Gantt bar from 30-Apr-19 to 30-Jun-20]																											
31	CMLC-1.02.03.01.01 Construction Priority 1 B, C & D (283 LF)	104d	30-Apr-19	25-Sep-19	[Gantt bar from 30-Apr-19 to 25-Sep-19]																											
32	CMLC-1.02.03.01.02 Construction Priority 2 H (east side), L, J, K (1,779 LF)	187d	26-Sep-19	30-Jun-20	[Gantt bar from 26-Sep-19 to 30-Jun-20]																											
33	CMLC-1.02.03.02 Project Integration	291d	30-Apr-19	30-Jun-20	[Gantt bar from 30-Apr-19 to 30-Jun-20]																											
34	CMLC-1.02.03.03 Project LBNL Support	291d	30-Apr-19	30-Jun-20	[Gantt bar from 30-Apr-19 to 30-Jun-20]																											
35	CMLC-1.02.03.04 Project Consultant/Blanket Contract Support	291d	30-Apr-19	30-Jun-20	[Gantt bar from 30-Apr-19 to 30-Jun-20]																											
36	CMLC-1.02.03.00 Contingency	64d	01-Jul-20	30-Sep-20	[Gantt bar from 01-Jul-20 to 30-Sep-20]																											

2.5 Change Management Plan

See Change Triggers in [PIMD Governance Framework](#).

Link to Project's Change Log

2.6 Communication Management Plan

- Describe Communication Management Plan
 - *The project manager will communicate to the project team using common office communications methods such as email, telephone, and face-to-face meeting to further the design and construction phases of the project. The project manager will prepare a monthly report using the Laboratory's available project reporting tool(s).*

2.7 Risk Management Plan

- Identify major areas of risk and management strategy.
 - *Figure xxx: Preliminary Risk Matrix*

2.8 Quality Management Plan

- Describe Quality Management Plan
 - *Implementation of quality assurance procedures during project development, design, and construction will ensure that all safety, operational, and subcontract requirements are met.*

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- Describe Commissioning Plan
 - *A Third Party Commissioning Agent (CxA) will not be required; however, LBNL in-house commissioning personnel will witness the 3rd party testing effort.*

3 ACQUISITION APPROACH

- Project delivery method, with exceptions
 - *The project delivery method will be design, bid, build [except for early investigation work prior to the design phase].*
- Work packages
 - *The work will be divided into several work packages to facilitate phasing of the work around the site and to expedite the schedule or flexibility to award work packages depending on budget availability and use of budget contingency.*
 - **Engineering Firm**

An Engineering (A/E) firm will be selected and will prepare preliminary and final design construction documents. This firm will also provide construction administration support including submittal reviews, RFI's, change order review, resolution of changed conditions and review of field installations.

- **Construction Subcontractors**

Construction subcontractors will be selected from a pre-qualified bid list based on criteria including their safety record, among other things. The construction contracts will be awarded as fixed price lump sum contracts to the successful contractors who will be responsible for managing and administering all construction subcontracts for their projects.

4 TAILORING STRATEGY

The project TEC is less than the threshold that requires compliance with [DOE Order 413.3B](#), however, the project will adopt many of the best practices from the order used in a tailored approach appropriate for a project of this size.

5 OUTAGE PLAN

- Outage requirements
- Status of the [Utilities Outage Request](#) form.

6 COORDINATION OF SUPPORT

- Describe support identified on the [Project Scoping Considerations](#) checklist

The work will be executed in a manner that is least disruptive to LBNL employees regarding [list considerations], while working safely and optimizing the budget and schedule. [E.G.] The soils characterization/offhaul component of the project will abide by the LBNL Soils Management Plan.

7 TRANSITION TO OPERATIONS

- Anticipated deliverables

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- Completed commissioning
 - *Lighting acceptance testing plan*
 - *Mechanical acceptance testing plan*
- Manuals
- Warranties
- Training for users and/or FA staff.

See Turn-over to Facilities Operations section in the [PIMD Procedure Manual](#).

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