

# LINK21

CONNECT NORTHERN CALIFORNIA

## STRATEGIC PROGRAM PLAN

### CHAPTER 5: PROGRAM CONTROLS

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April 2022

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## ISSUE AND REVISION RECORD

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## SHAREPOINT PATH

Records Center/PRGM Record Center/WPA.04/SPP/  
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## ACRONYMS AND ABBREVIATIONS

ACRONYM/ABBREVIATION	DEFINITION
<b>BART</b>	San Francisco Bay Area Rapid Transit
<b>CCJPA</b>	Capitol Corridor Joint Powers Authority
<b>BIM</b>	Building Information Modeling
<b>GIS</b>	geographic information system
<b>PMC</b>	Program Management Consultants
<b>PMIS</b>	Program Management Information System
<b>PMT</b>	Program Management Team
<b>PQP</b>	Program Quality Plan
<b>WBS</b>	work breakdown structure

## LINK21 PROGRAM TEAM NAMES

TEAM NAME	TEAM MEMBERS
<b>PMC</b>	The HNTB Team
<b>PMT</b>	BART/CCJPA + PMC
<b>Consultants</b>	Consultants supporting program identification/project selection
<b>Link21 Team</b>	PMT + Consultants

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## 5. PROGRAM CONTROLS

### 5.1. Purpose

The Link21 Program (Link21) requires clearly defined program controls protocols to support the efficiency and accuracy of program operations for its entire life cycle. Program controls are processes, procedures, reports, checks, audits, and systems that are established, implemented, and consistently applied to accelerate the success of the program. An effective program controls plan is critical to successful delivery.

The program controls strategy will integrate budgets, expenditures, commitments, trends, forecasts, and schedules that will allow the Program Management Consultants (PMC) and the San Francisco Bay Area Rapid Transit (BART)/Capitol Corridor Joint Powers Authority (CCJPA), which comprises the Program Management Team (PMT), to effectively manage Link21.

The PMC Program Controls Team (herein referred to as the Program Controls Team) covers key functions, such as cost estimating and schedule management, risk management, cost management, scope management, consultant management, information system management, document control and records management, and quality management.

#### 5.1.1. Goals and Objectives

The program controls goals and objectives are to provide:

- The framework and guidance for how BART/CCJPA and the PMC will develop the program controls strategy for Link21.
- An overview of key program controls functions and duties.
- Adequate reporting to achieve the goal of transparency and accountability.
- A foundational Program Management Information System (PMIS) that will expand as Link21 evolves.

### 5.2. Strategy

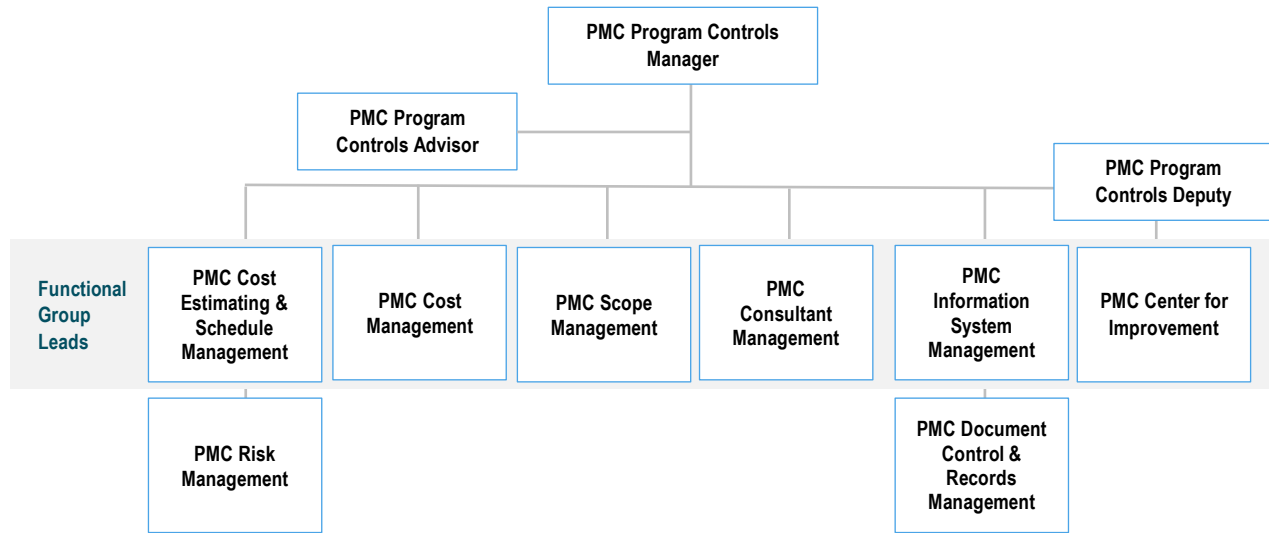
#### 5.2.1. Program Controls Team

##### ORGANIZATIONAL STRUCTURE

The PMC Program Controls Team organizational structure is arranged by functional groups as shown in the organization chart (**Figure 5-1**). The structure is scalable and streamlined to meet the growing needs of Link21. The PMC program controls manager is directly supported by the Program Controls Team that also provides support to the PMC delivery managers.



Figure 5-1. Key Roles Organization Chart



### PRIMARY ROLES AND RESPONSIBILITIES

The primary responsibilities of the Program Controls Team’s key roles include oversight and management of the following activities.

#### PMC Program Controls Manager

- Reports to the PMC program manager and directly interfaces with the BART program director.
- Manages the overall Program Controls Team.
- Enforces and monitors standards, policies, and procedures implemented by the Program Controls Team.
- Coordinates across disciplines to align the scope, schedule, and budget and to memorialize interface requirements and dependencies.

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**PMC Cost Estimating and Schedule Manager***Cost Estimating*

- Estimates labor requirements, required project equipment, supplies, contracted services, costs, prepares cost estimates, and monitors expenditures.
- Builds systems to enhance organizational estimating capability.
- Maintains estimating databases and integrates with other program control tools.
- Integrates, in coordination with Cost Management Team estimates, with project schedules to achieve phased timing of costs and resources.
- Prepares independent estimates of change orders.
- Verifies that all estimates (including consultant/contractor/third party developed) are in conformance with estimating procedures.
- Review and sign-off on all estimates submitted.
- Review and sign-off on all major change orders.

*Schedule*

- Oversees the development, generation, analysis, updates, and maintenance of baseline and progress schedules.
  - Supports quantitative risk assessments as required; adjusts schedules based on approved risk assessment recommendations.
  - Regularly communicates schedule status at task, work plan, and program levels via customized reports.
  - Provides technical expertise for schedule development and analysis, including assistance, support, and oversight of those performing scheduling functions to support the delivery of the program.
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- Prepares or oversees the preparation of schedule forecasts and performance and resource analyses.
  - Evaluates status and identifies issues on an as-needed basis, including time delays, design or construction changes against baselines and consultant and contractor schedule performance; revises and forecasts project schedules, presenting recommendations and alternatives, if necessary.
  - Verifies that scheduling data is collected, analyzed, and maintained.
  - Develops policies and procedures to improve the adequacy and efficiency of the scheduling processes.
  - Trains PMT and related staff on scheduling concepts, procedures for schedule development, monitoring/control and reporting, and use of relevant software applications.

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**PMC Risk Manager**

- Facilitates risk workshops to identify and assess risks against program objectives and maintains the program-level risk register.
  - Collaborates with risk subject matter experts on the development of response plans, as well as on the tracking and monitoring of risk response actions.
  - Provides guidance to consultant, contractors, and third parties to enable consistency in risk management, reporting, and monitoring.
  - Verifies that all risk registers (including consultant/contractor/third party developed) are in conformance with the processes laid out in the *Risk Management Plan*.
  - Coordinates and perform evaluations (qualitative and/or quantitative) of risk exposure to Link21 to support decision-making at stage gate milestones.
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**PMC Cost Manager**

- Verifies that budgets (authorizations and expenses) are tracked and monitored.
- Prepares and distributes summaries, detail reports, progress, and variances to the PMT on a monthly basis as well as ad hoc reporting requests or inception to date as needed.
- Develops budgets and cash flow projections for the program/project portfolio.
- Provides support to Cost Estimating and Schedule Management Team for bid analyses and evaluation, as required.

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**PMC Scope Manager**

- Documents how scope will be defined, validated, and controlled.
- Collects requirements to meet project objectives.
- Defines and validates project scope.
- Establishes work breakdown structure (WBS).
- Approves and maintains the WBS.
- Provides processes to effectively manage the scope and scope change.

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**PMC Change Manager  
(part of Scope Management)**

- Analyzes and manages scope, schedule, and budget change order requests.
  - Provides processes and protocols to effectively manage the change process.
  - Conducts impact analyses, assesses change readiness, and identifies key stakeholders.
  - Evaluates and verifies user readiness on change automation.
  - Identifies, analyzes, and prepares risk mitigation tactics with the Risk Management Team.
  - Tracks and reports issues that may result in change or that are created by program change.
  - Defines, tracks, and monitors change metrics.
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**PMC Consultant Manager**

- Provides management oversight of the Consultants.
- Interfaces (primary) and coordination with Consultant and Program Controls teams.
- Coordinates the contract change process.
- Develops appropriate processes and standards around Consultant work and interfaces with PMT members in conjunction with the delivery managers and other managers.

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**PMC Information System Manager**

- Works with key stakeholders to design, develop, deliver, and support the technology resources used for the collaboration, development, review, and delivery of Link21.
  - Oversees document control and records management, collaboration systems, and electronic document systems (EDS), such as geographic information system (GIS) and Building Information Modeling (BIM).
  - Establishes a technology roadmap and architecture, and oversees efforts to design, develop, test, train, and support technology tools within that architecture, including SharePoint Online, Nintex, ArcGIS Online, BIM 360, and future tools (as needed).
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**PMC Document Control and Records Manager**

- Executes policies and protocols for document management, including auditing and reporting functions and organizational process assets (templates) for incoming and outgoing documentation.
  - Performs audits of the system to monitor users' adherence to procedures and conventions.
  - Provides maintenance of program record documents so they are readily available for and easily retrievable by persons with access approval.
  - Supports Link21 and its management processes as they pertain to document control and management.
  - Provides leadership and expertise in implementing standardized document control processes and best practices.
  - Enables efficient, auditable, and trackable processing of documentation for review and comment.
  - Uses effective training to communicate document control processes and the responsibilities associated with the protection of records.
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**PMC Center for Improvement Manager**

- Oversees the delivery and the coordination of the *Strategic Program Plan* (SPP).
  - Provides leadership and best practices to help guide the Program Controls Team.
  - Supports process development and improvement to the Link21 Team.<sup>1</sup>
  - Supports functional group leads in the preparation and updating of the program management plans.
  - Develops, coordinates, and maintains onboarding materials.
  - Coordinates the development and availability of forms and templates to facilitate consistency across Link21.
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<sup>1</sup> PMT and the Consultants





## 5.2.2. Functional Groups

### **COST ESTIMATING AND SCHEDULE MANAGEMENT**

Cost estimating and schedule management provides the best prediction of costs and durations for the level of program/project development available at various stages in the program/project life cycle. This, in turn, supports the successful delivery of the Link21 by providing timely, accurate, and meaningful cost estimate and schedule information to support decision-making. The *Cost Estimating and Schedule Management Plan* provides guidance on how to develop, manage, and control cost estimates and schedules throughout the program's life cycle.

### **RISK MANAGEMENT**

Risk management is a fundamental component of program management, and it is most effective when deployed programmatically and throughout each project's life cycle — from early project definition until project closeout. The associated activities provide Link21 with the input and feedback needed to actively identify, understand, analyze, anticipate, and mitigate risks. The *Risk Management Plan* establishes processes and identifies responsibilities for risk management to support Link21's key strategies, policies, and protocols.

### **COST MANAGEMENT**

The budget and cost management process is comprised of planning, estimating, monitoring, managing, and reporting on the overall Link21 budget and actuals. The goal is to establish a time-phased baseline budget and to track and maintain budget targets for each work plan, and to report actuals against plan. The *Cost Management Plan* outlines the processes and activities used to develop, implement, and maintain the program budget and to track and report on actual costs.

### **SCOPE MANAGEMENT**

Scope management is the process used to manage, track, and control scope over the life of the program/project. It is an integral component of the change and risk management processes. Scope management helps identify changes to the previously defined project scope, identifies risks, and provides an assessment of the impacts to cost, schedule, etc. for BART/CCJPA to consider. The *Scope Management Plan* provides guidance on how scope will be defined, validated, and controlled throughout the program's life cycle.

### **CONSULTANT MANAGEMENT**

To be defined in a future revision.



## INFORMATION SYSTEM MANAGEMENT

Information system management integrates a broad range of program management and controls functionalities, including cost management, schedule management, contract administration, submittal management, document control, change management, and core project management functions, such as action tracking, issue resolution, and meeting management. It provides a unified platform to centralize core interactions between the Link21 Team entities (BART/CCJPA, PMC, and Consultants). The *Information System Management Plan* provides a high-level overview of the information system used for the efficient and timely execution of Link21 activities and processes. It describes the application architectures, components, and implementation designed to manage Link21 from start to finish.

## DOCUMENT CONTROL AND RECORDS MANAGEMENT

Document control and records management provides for the protection, control, and accessibility of documents and records in order to support the efficiency and accuracy of Link21's operations. Documents handled on behalf of Link21 are the property of BART/CCJPA.

The PMT provides, supports, and maintains a document control and records program to comply with applicable state and federal laws, rules, and standards. The *Document Control and Records Management Plan* identifies the document control processes and portrays the document control life cycle for Link21 documents and correspondence. The document control program supports delivery managers with the proper processing of documents and the retention of records in a manner that safeguards each document and records authenticity, reliability, integrity, and usability. The *Document Control and Records Management Plan* is designed to systematically control and monitor program documents and records throughout their entire life cycle from creation through close-out or receipt to disposal. It provides an overview of the protection, control, and accessibility of documents and records to support the efficiency and accuracy of Link21 operations.

## CENTER FOR IMPROVEMENT

The purpose of the Center for Improvement is to improve the program management capabilities of Link21, verify all standards are defined and adhered to, and provide a consistent approach to delivering Link21. The Center for Improvement provides leadership, best practices, research, process development support and improvement, training and on/offboarding, as well as overseeing the SPP, which serves as a bedrock document that memorializes program components, management strategies, and key decisions that support Link21's goals and objectives.