

**Metro**

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000
metro.net

**FINANCE, BUDGET AND AUDIT COMMITTEE
SEPTEMBER 19, 2012
CONSTRUCTION COMMITTEE
SEPTEMBER 20, 2012**

SUBJECT: TRANSIT PROJECT CONTINGENCY POLICY

**ACTION: APPROVE REVISIONS TO TRANSIT PROJECT CONTINGENCY
POLICY**

RECOMMENDATION

Approve revisions to the Metro Transit Project Contingency Policy.

ISSUE

In response to a motion approved by the Construction Committee on June 21, 2012 (Attachment A), Metro staff are proposing revisions to the Transit Project Contingency Policy to establish a 3% Project Reserve within the Life of Project Budget for each major transit construction project.

DISCUSSION

Project contingency is an allowance to mitigate risks to a project. The application, management and control of project contingency are implemented throughout the entire life cycle of a project. Assessing contingency, whether in cost or time, is an integral part of the total estimated budget and schedule of a project. Contingency for each major project is determined through a risk assessment process.

In order to have a uniform process for management of contingency, Metro instituted a policy on Transit Project Contingency a number of years ago. This policy has been

revised on several occasions since then to reflect Federal requirements and Metro objectives.

At the June 21, 2012 Construction Committee meeting, a motion was approved to establish a goal of retaining a 3% contingency fund associated with each project's Life of Project Budget. The contingency level for projects will vary significantly depending on the stage of project development and associated risks. As we are expediting several mega projects using the design/build delivery method, a higher contingency is prudent to allow for unknowns addressed during final design by the design builder. In addition, the Federal Transit Administration recommends contingency levels for projects that they fund. As a result, the recommended contingency levels for a project can vary from 5% to 30%.

To comply with the Board motion, Metro staff recommend that within the total amount of contingency set at the time of Life of Project Budget approval, that a 3% Project Reserve be established for each transit major construction project (over \$100 million). For example, if 10% total contingency is included in the Project Budget, it will be separated into 7% "regular" contingency and 3% Project Reserve. To provide the visibility into the use of the Project Reserve, the Board would be notified if it becomes necessary to utilize the Project Reserve to cover project costs and Metro staff would be required to prepare a forecast to complete the project. The Transit Project Contingency Policy will be revised accordingly (Attachment B).

DETERMINATION OF SAFETY IMPACT

The recommended action has no impact on safety.

FINANCIAL IMPACT

There is no financial impact as a result of the recommended revisions to the Transit Project Contingency Policy as Project Reserve funds would be contained within the approved Life of Project Budget.

ALTERNATIVES CONSIDERED

Metro staff also examined the possibility of establishing a separate contingency fund outside of each project's Life of Project Budget. However there is not sufficient funding available to have an adequate contingency within each project budget as well as for a separate 3% contingency outside of the project budget.

NEXT STEPS

Staff will make noted revisions to the Transit Project Contingency Policy and notify the Board of Project Reserve usage as required.

ATTACHMENTS

- A. Motion from June 21, 2012 Construction Committee Meeting
- B. Revised Transit Project Contingency Policy

Prepared by: Brian Boudreau
Executive Director Program Management
(213) 922-2474



Brian Boudreau
Executive Director, Program Management



Arthur Y. Leahy
Chief Executive Officer

MOTION BY DIRECTORS WILSON AND MOLINA

**CONSTRUCTION COMMITTEE
JUNE 21, 2012**

Currently, MTA is working to construct many highway and transit capital projects. Due to the challenges associated to each of these projects, some have either exceeded or are close to expending all of its respective contingency funds and schedules.

WE, THEREFORE MOVE, to direct the CEO to analyze and report back to the Finance, Budget and Audit Committee and Construction Committee in September 2012, on establishing a goal of retaining 3% of contingency fund associated to each of the project's life of budget.



ATTACHMENT B

DEPARTMENTAL PROCEDURES	Procedure #: PRCL12
TRANSIT PROJECT DELIVERY DEPARTMENT	Revision: 1
PROJECT CONTROL	Date: 09/20/12
TRANSIT PROJECT CONTINGENCY	Page: 1 of 4
Approved:	Date:

1.0 GENERAL

The application, management and control of project contingency will be implemented throughout the entire life cycle of a project beginning with feasibility studies and continuing through environmental clearance, design, construction and final closeout. Assessing contingency, whether in cost or time, is an integral part of the total estimated budget and schedule of a project. Contingency for each project is determined through a risk assessment process.
Reference: PRCL7 – Risk Management

2.0 DEFINITION OF TERMS

Project contingency is an allowance to mitigate risk to a project. The amount of project contingency is dependent on the complexity and uncertainties (risks) at each given phase of the project. Project contingency is measurable in cost and time.

3.0 RESPONSIBILITIES

LACMTA Board: approves the total capital life-of-project (LOP) budget which includes the contingency cost element.

The Executive Director, Transit Project Delivery, has delegated to the Project Manager (PM) of each capital project the responsibility of managing the adopted LOP budget, including the project contingency cost element during the design, construction, and final closeout phases. In addition, the PM has responsibility for achieving the adopted revenue operation date and managing the schedule contingency through the life cycle of the project.

Director, Project Control (DPC): responsible for maintaining and monitoring the project budget and project schedule during the design, construction and project closeout and maintains the contingency drawdown log, cost trending program and schedule contingency log.

4.0 PROCEDURES

Project contingency, both in cost and time, will be determined during the risk assessment process. Risks to the project will be determined by evaluating the project definition and scope, current cost estimate and schedule, project conditions, and the effectiveness and efficiency in project delivery.

4.1 Establishing Project Contingency

The risk assessment process will yield an identification of risks to the project. Risks to the project are best mitigated if identified early within the life of the project, thereby limiting the amount of required contingency.

Risks are characterized in the following categories:



DEPARTMENTAL PROCEDURES	Procedure #: PRCL12
TRANSIT PROJECT DELIVERY DEPARTMENT	Revision: 1
PROJECT CONTROL	Date: 09/20/12
TRANSIT PROJECT CONTINGENCY	Page: 2 of 4

- **Requirements Risk** is associated with project goals and requirements during project development and is influenced by project stakeholders.
- **Design Risk** is associated with project definition and the performance of design-related activities.
- **Market Risk** is associated with the procurement of construction-related services, such as labor, materials and equipment.
- **Construction Risk** is associated with unusual weather, unforeseen site conditions, uncertainty in contractor planned production rates, equipment mechanical failures, etc.

Each project risk will be presented as high, medium or low, with an estimated cost and time impact, as applicable. The qualitative and quantitative analysis of risks determines the project contingency, both allocated and unallocated. Allocation of cost contingency will be summarized to the following reporting cost elements: construction, right-of-way, vehicles, and professional services, including design services. Unallocated cost contingency will be within the project contingency element.

Prior to the award of each construction contract, allocated cost contingencies will be reexamined and set at the necessary construction line items to cover anticipated contract modifications as may be requested by the contractor and for owner-related changes.

4.2 Cost Contingency Targets

The amount of cost contingency for each project will be determined by the complexity and uncertainties surrounding the project. Target contingencies are to provide a guideline or minimum recommended value for each project phase or project milestone. The following are recommended target ranges to be considered for total project cost contingency, the aggregate of allocated and unallocated:

- Entry into Preliminary Engineering - 25% to 35%
- Entry into Final Design - 15% to 25%
- Project Adoption or Award of an FFGA - 15% to 20%
- At construction contract(s) award - 10% to 15%
- 50% construction has been completed - 5% to 10%
- Construction is substantially completed - 1% to 3%



Metro

DEPARTMENTAL PROCEDURES	Procedure #: PRCL12
TRANSIT PROJECT DELIVERY DEPARTMENT	Revision: 1
PROJECT CONTROL	Date: 09/20/12
TRANSIT PROJECT CONTINGENCY	Page: 3 of 4

~~At the time of the approval of the Life-of-Project Budget for major construction projects (over \$10 million), a 2% Percent Project Reserve will be established within the total project contingencies. As such, there is no Project Reserve required to cover project risks. The CAB/TA Board shall be notified annually forecast to complete the project shall be prepared.~~

**4.3
Schedule
Contingency Targets**

The project schedule should be designed to withstand any delays that may occur over the life cycle of the project. As a general rule, the project should have sufficient schedule contingency available to absorb schedule delays equal to 20% of the duration from entry into final design through to the commencement of revenue service. This rule is applicable to each project delivery method, whether it is Design-Bid-Build, Design-Build or Construction Management At-Risk.

The DPC shall forecast and trend the project schedule contingency and shall identify potential recovery plans if required.

**4.4
Risk Assessments
Workshops**

Formal risk assessment workshops, in conjunction with project contingency reviews, may occur at the following project milestones: Reference: PRCL7 – Risk Management

- Entry into Preliminary Engineering
- Entry into Final Design
- FFGA Award (Federal New Starts Projects)
- 40% of construction contracts have been awarded
- 20% construction has been completed
- 50% construction has been completed
- 80% construction has been completed

Although, project contingency is set at the adoption of the life-of-project budget, it is still necessary to perform periodic project contingency reviews during the life cycle of the project. The project contingency review outcome is to assess if there is sufficient contingency available at the above milestones. In addition, this protects the project from an unnecessary early drawdown of contingency.



DEPARTMENTAL PROCEDURES	Procedure #: PRCL12
TRANSIT PROJECT DELIVERY DEPARTMENT	Revision: 1
PROJECT CONTROL	Date: 09/20/12
TRANSIT PROJECT CONTINGENCY	Page: 4 of 4

4.5 Monitor and Status Contingency

Besides the formal workshops that are established to review the status of project contingency, project management staff is responsible to review cost forecast trends each quarter and adjust project contingency line items, allocated and unallocated, as necessary.

The DPC shall maintain and document all changes to cost contingency line items (both allocated and unallocated). This is accomplished through updating of the cost forecast and contingency drawdown log.

The DPC shall also status the schedule contingency which is accomplished through updating the schedule contingency log.

Each quarter the DPC will review with the PM, recommended changes within the contingency line items along with an assessment of risk associated with the project and the adequacy of remaining contingency for the individual cost items. The amounts within the contingency line items may be transferred to a corresponding work package by the PM.

5.0 FLOWCHART Not Applicable

6.0 REFERENCES PRCL7 Risk Management

7.0 ATTACHMENTS None

8.0 PROCEDURE HISTORY

Revision Level	Revision Date	Summary of Revision	Approved
0	05/18/11	Split off of project contingency from risk management procedure into new stand alone procedure.	5/24/11
1	9/20/12	Add requirement for Project Reserve	9/20/12