



**Massachusetts Bay
Transportation Authority**

Project Controls Group

Project Controls for Designers

Presented by: Ken Johnson, Deputy Chief – Project Controls

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Agenda

- Current Project Controls Requirements for Designers
- Recommended Updates to Project Controls for Designers
 - Tiers with scalable requirements
 - Project Controls
 - During Design
 - Construction Time Duration Schedule
 - Construction Phase Services

Current Project Controls Requirements for Designers

- One Size Fits All
 - All Project Design Schedules are P6 cost and resource loaded
 - Extensive Earned Value Analysis during the design phase
 - Success rate?
- Construction Time Determination Schedule
- Construction Phase Services (for Project Controls)
 - Contractor schedule reviews

Recommended Updates to Project Controls for Designers

| Tier | Construction Value | Scope and Compensation Matrix by Task | Design schedule | Earned Value Management | Sworn Statement of Account |
|------|--------------------|---------------------------------------|-----------------|-------------------------|----------------------------|
| 1 | < \$1M | Yes | N/A | Limited | Required Monthly |
| 2 | \$1m to \$5M | Yes | N/A | Limited | Required Monthly |
| 3 | \$5M to \$15M | Yes | Excel Histogram | Limited | Required Monthly |
| 4 | \$15 to \$50M | Yes | Excel Histogram | Limited | Required Monthly |
| 5 | \$50 to \$100M | Yes | P6 EPPM | Yes | Required Monthly |
| 6 | >\$100M | Yes | P6 EPPM | Yes | Required Monthly |

Design Phase Schedule

- Tiers 1 & 2
 - Dates are included in Scope and Compensation matrix
 - Project Controls prepares schedule as part of Master Schedule
 - Updated monthly in meetings with PM and Designer
- Tiers 3 & 4
 - Dates are included in Histogram
 - Project Controls prepares schedule as part of Master Schedule
 - Updated Monthly in meetings with PM and Designer
- Tiers 5 & 6
 - Primavera P6 Cost and Resource Loaded Schedule prepared by Designer
 - Designer submits monthly updates

Earned Value Analysis During Design

- Tiers 1 & 2
 - Project Controls cost loads the Master Schedule
 - Project Controls compares planned value with actual invoiced value
- Tiers 3 & 4
 - Project Controls cost loads the Master Schedule
 - Designer prepares labor hour and cost curves based on Histogram and compares as-planned to actual
- Tiers 5 & 6
 - Primavera P6 Cost and Resource Loaded Schedule prepared by Designer
 - Designer submits monthly P6 updates and prepares labor hour and cost curves and compares as-planned to actual

CTD and Construction Phase Services

- Construction Time Determination Schedule
 - No change from current requirements
 - Designer prepares a CTD schedule with each design submission
- Construction Phase Services
 - Designer reviews all construction contractors schedule submissions
 - Baseline
 - Monthly Updates
 - Proposed Revised Baseline
 - Time Impact Analysis

Implementation Schedule

- Included in updated Project Controls Manual – Late July, 2021
- Brief ACEC – July, 2021