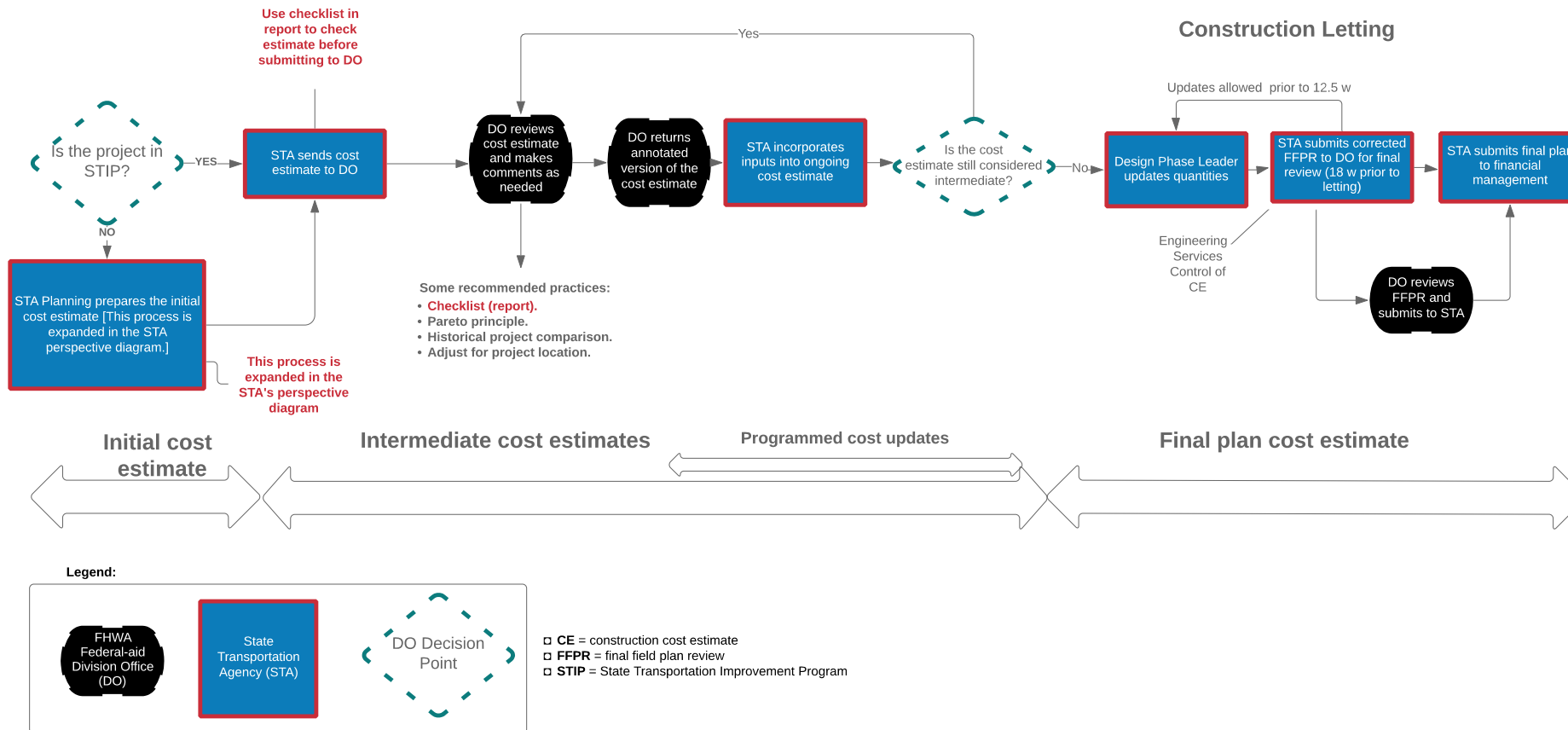
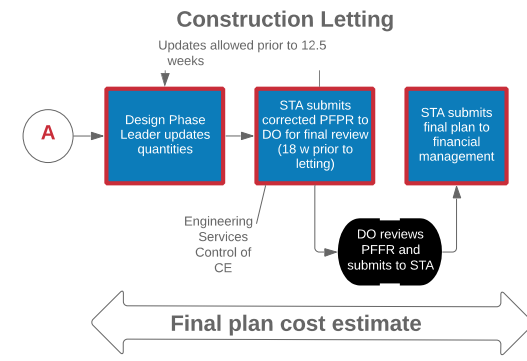
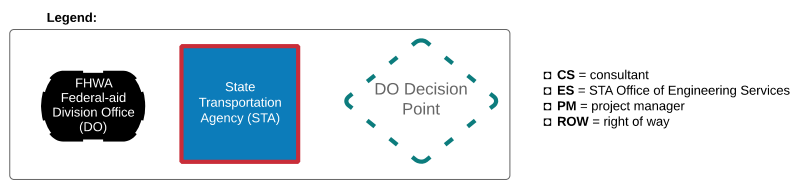
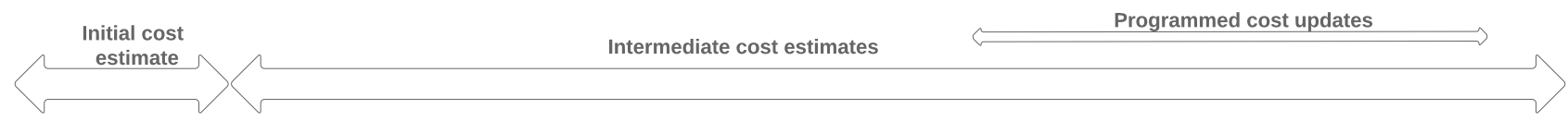
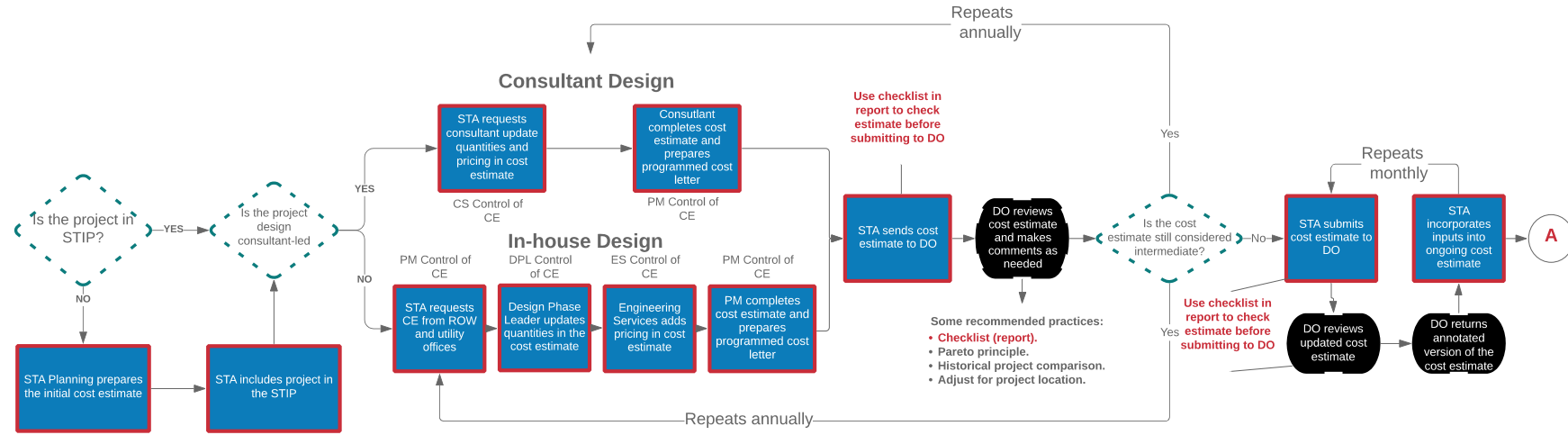


Project Level—DO Perspective



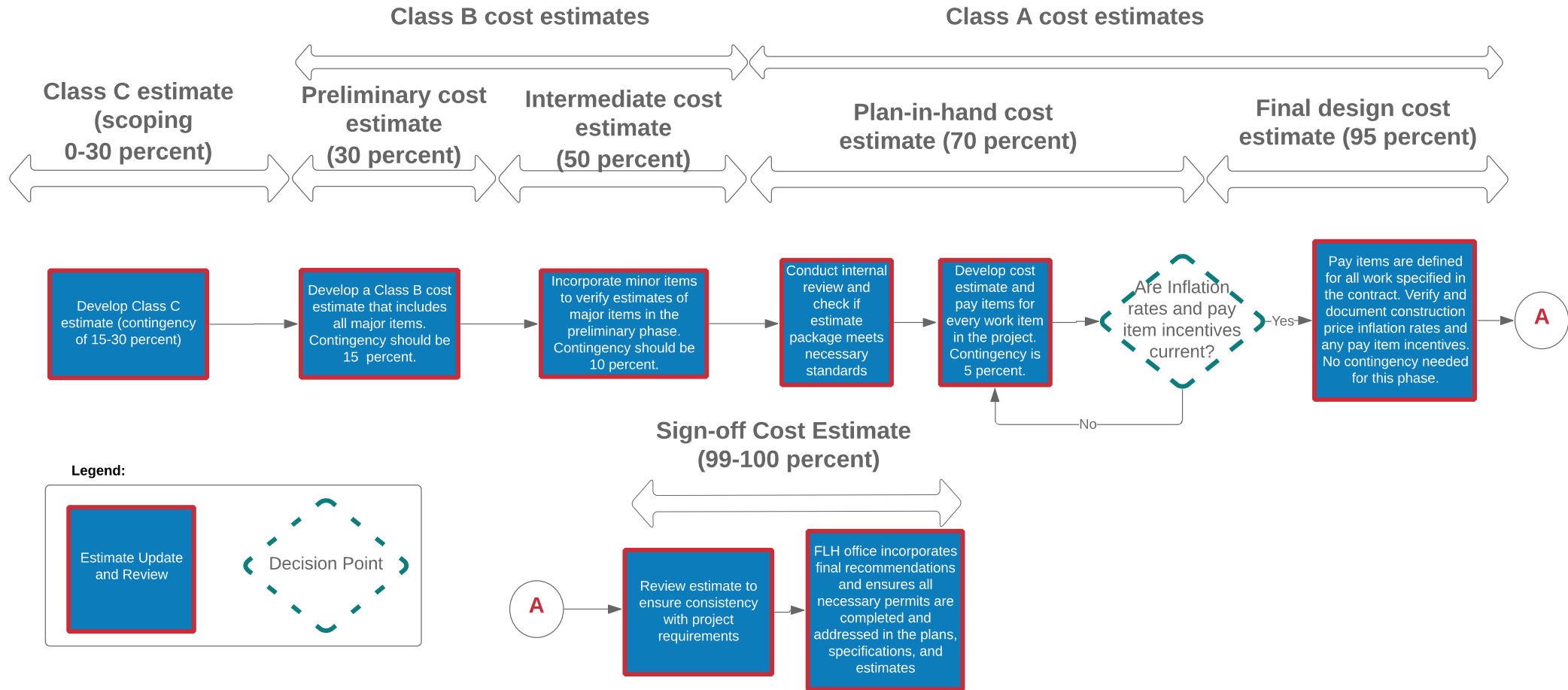
Source: FHWA.

Project Level—STA Perspective



Source: FHWA.

Project Level—FLH Perspective



Source: FHWA.

Oversight Checklists—Guidance Items

Guidance Items. These items are used to inquire about general aspects of a cost estimate. They are related to the general purpose of the estimate and not to specific items of an estimate.	Yes	No	N/A
Has the purpose of the estimate been defined?	-	-	-
Estimating method is identified.	-	-	-
Estimating method is available for review.	-	-	-
Estimate is written down and available.	-	-	-
Allowances and factors were validated and are appropriate for the level of estimate.	-	-	-
Oversight team is knowledgeable about the estimating method used.	-	-	-
Estimate was prepared using a typical cost model (e.g., bid item codes).	-	-	-
Has the basis of estimate been completed/updated with explanation of changes?	-	-	-
Is a basis of estimate document available?	-	-	-
Estimate was independently validated.	-	-	-

-No data.



Oversight Checklists—Uncertainty Items

Uncertainty Items. These items refer to the unknowns (known unknowns and unknown unknowns) of the estimate and their respective assessments.	Yes	No	N/A
Risk assessment was conducted to identify, analyze, and evaluate risks.	-	-	-
Estimate is adjusted for inflation to year of expenditure dollars for each element of the project.	-	-	-
Project complexity is considered in the estimate.	-	-	-
Process includes risk-based assessments of unknown and all uncertain costs.	-	-	-
Risk contingencies are sufficiently removed from unit bid-item prices in the base-cost estimate.	-	-	-

-No data.

Oversight Checklists—Construction Items

Construction Items. These items are associated with the quantities and elements related to the physical execution of the projects.	Yes	No	N/A
Estimate of unit prices are reasonable for the areas, times, and characteristics of the work to be done.	-	-	-
Incentive/disincentive or escalation clauses have been considered in determining the estimated unit costs.	-	-	-
All costs and durations were checked for conformity between amounts of work (item quantities) and the schedule durations to determine correctness.	-	-	-
Estimate is consistent with project scope.	-	-	-

-No data.

Oversight Checklists—Finance Items

Finance Items	Yes	No	N/A
Force account work is adequately justified.	-	-	-
Salvage credit shown (if applicable).	-	-	-
Market conditions are being taken into consideration.	-	-	-

-No data.

Oversight Checklists—Nonconstruction Items

Nonconstruction Items. These items refer to items that are not part of the physical execution of the project but should be considered part of the estimates.	Yes	No	N/A
Utility and railroad force account work covered.	-	-	-
Estimate includes all right-of-way and administrative costs.	-	-	-
Estimate includes all transportation system management/transportation demand management costs.	-	-	-
Nonparticipating work shown.	-	-	-

-No data.

Oversight Checklists—Regulation Items

Regulation Items—Analyzing Bids. These items refer to the general quality and adherence to regulations of the estimate (letting).	Yes	No	N/A
Estimate is materially balanced.	-	-	-
Estimate is mathematically balanced.	-	-	-
Noncollusion statement included.	-	-	-

-No data.

Oversight Checklists—Risk Items

Risk-Based Estimates. These items are relevant for projects not developed using conventional estimating methods and involving high risks.	Yes	No	N/A
Is the risk assessment process documented and available?	-	-	-
If a consultant produced the risk assessment, what process is the consultant following, and are they willing to share the model they used to produce the final results?	-	-	-
Did the state hold a risk workshop to provide input to the final results? If so, is a risk workshop final report available?	-	-	-
What is the date on the risk workshop report compared to the date the estimate was last updated?	-	-	-
Did the staff responsible for developing the risk registry have the right level of subject matter experts attending to develop a robust risk register? If so, were subject matter experts in attendance representing design, ROW, roadway, structure, environment, permitting, utilities, lighting, etc.?	-	-	-

-No data.

Oversight Checklists—Risk Items (Continued)

Risk-Based Estimates. These items are relevant for projects not developed using conventional estimating methods and involving high risks.	Yes	No	N/A
Did the group identify minor risks or significant risks to the project cost and schedule?	-	-	-
What risks were identified as most significant in terms of driving cost and schedule completion?	-	-	-
Is a project risk tornado diagram available?	-	-	-
Were the risks in the risk register ranked?	-	-	-
Did the staff responsible for developing the risk registry use the risk expected value, by cost impact, by schedule impact, etc.?	-	-	-

-No data.

Oversight Checklists—Risk Items (Continued)

Risk-Based Estimates. These items are relevant for projects not developed using conventional estimating methods and involving high risks.	Yes	No	N/A
If risks are ranked by expected value, how are low-probability, high-impact risk events addressed?	-	-	-
How was the project budget and completion date determined from the probability cost and schedule forecast curves?	-	-	-
Does the State have a reliability level to establish budget and schedule completion? How was this level determined?	-	-	-
For the risk workshop forecast curves, are the curves wide or narrow?	-	-	-
How does the State account for market conditions in the risk assessment model?	-	-	-

-No data.



© 2015 USchools / iStock.

Summary



U.S. Department of Transportation
Federal Highway Administration

Turner-Fairbank
Highway Research Center

Summary

To improve alignment and consistency, the research team:

- ▶ Identified and ranked practices for cost estimate oversight.
- ▶ Created diagrams to follow for the oversight process:
 - ▷ At a program level.
 - ▷ At a project level:
 - For DOs.
 - For STAs.
 - For FLH.
- ▶ Created checklists to provide guidance on cost estimate oversight.





Matthew Corrigan

Matthew.Corrigan@dot.gov

(202) 493-3365



U.S. Department of Transportation
Federal Highway Administration

Turner-Fairbank
Highway Research Center