



RAIL

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Overview: FRA Guidance on Development and Implementation of Railroad Capital Projects

Office of Railroad Development



U.S. Department of Transportation
Federal Railroad Administration

Disclaimer

This presentation is not guidance, as it is limited to describing and summarizing already established FRA guidance. The contents of the FRA Guidance on Development and Implementation of Railroad Capital Projects (hereinafter referred to as “the Guidance”) do not have the force and effect of law and are not meant to bind the public in any way. The Guidance is intended only to provide information to the public regarding existing requirements under the law or agency policies. While conformity with the Guidance is generally voluntary, a recipient of Federal funding can be required to comply, in whole or in part, with the Guidance when it is incorporated into the terms and conditions of an FRA grant agreement. (See 2 CFR § 200.105(b).) When FRA requires compliance with the Guidance in a grant agreement, the grant agreement will specify how FRA will review and act on the documentation identified in the Guidance.

Learning Objectives

1. Share the **purpose and intended outcomes** of the FRA Guidance on Development and Implementation of Railroad Capital Projects—“the Guidance”
2. Recognize and define **key terms** used in the Guidance
3. Articulate the six **Project Lifecycle Stages**
4. Characterize four **key project management tools**
5. Identify the context in which **compliance with the Railroad Capital Guidance** is required through Notice of Funding Opportunities (NOFO) and grant agreements




[FRA Guidance on
Development and
Implementation of Railroad
Capital Projects](#)

Overview of the Guidance

 *Reference: Section I, Introduction, pp. 2 - 3*

- **Purpose:** To provide guidance on the development and implementation of railroad capital projects that may be funded, *in whole or in part*, by FRA
- **Audience:** Project Sponsors and partners, and professionals who contribute to the planning, development, and implementation of railroad capital projects
- **Goal:** To assist Project Sponsors in developing effective and complete capital projects to meet schedule and budget
- Benefits of Project Oversight:
 - **Cost** and schedule risk reduction
 - **Compliance** with applicable laws and policy objectives
 - Building **capacity** for project sponsors to succeed
 - Giving the public **confidence** that public funds are used efficiently and effectively

	
U.S. Department of Transportation Federal Railroad Administration	
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 [FRA Guidance on Development and Implementation of Railroad Capital Projects](#)

Key Definitions

Key Definitions*

 *Reference: Section II, Definitions, p. 3*

Capital Project

- Generally, a project to improve railroad safety, efficiency, or reliability; improve capacity and mitigate passenger or freight rail congestion; enhance multi-modal connections; or improve or establish intercity passenger or freight rail transportation

Major Project

- A Capital Project with cost estimate equal to or greater than \$500 million and at least \$100 million in Federal assistance; or
- A capital project that FRA determines to be a Major Project

Major Projects:

FRA considers complexity of the project and how additional procedures for project development/ management will benefit the agency or the Project Sponsor.

Non-Major Project

- Any capital project that is not a Major Project

Project Sponsor

- The entity responsible for implementing a capital project that may also be an applicant seeking funding and/or a current recipient of Federal financial assistance

Project Management Plan

- Document that describes how the capital project will be implemented, monitored, and controlled

Schedule

- A logical sequencing and duration of activities needed to accomplish the project

Capital Cost Estimate

- Estimate of the cost to implement the capital project, inclusive of the project development stage through completion of the construction stage that accounts for risk to the cost elements and the schedule to complete the project

Financial Plan

- A comprehensive document that demonstrates that sufficient financial resources are available and describes how those resources will be managed through the completion of the project

- FRA **strongly encourages** Project Sponsors to use the Guidance when developing railroad capital projects
- FRA may require a Project Sponsor to complete activities and associated documentation as described in the Guidance:
 - To submit as part of a grant application pursuant to a Notice of Funding Opportunity (NOFO); and/or
 - As required activities or deliverable submission completed under a Grant Agreement (*see* 2 CFR § 200.105(b))

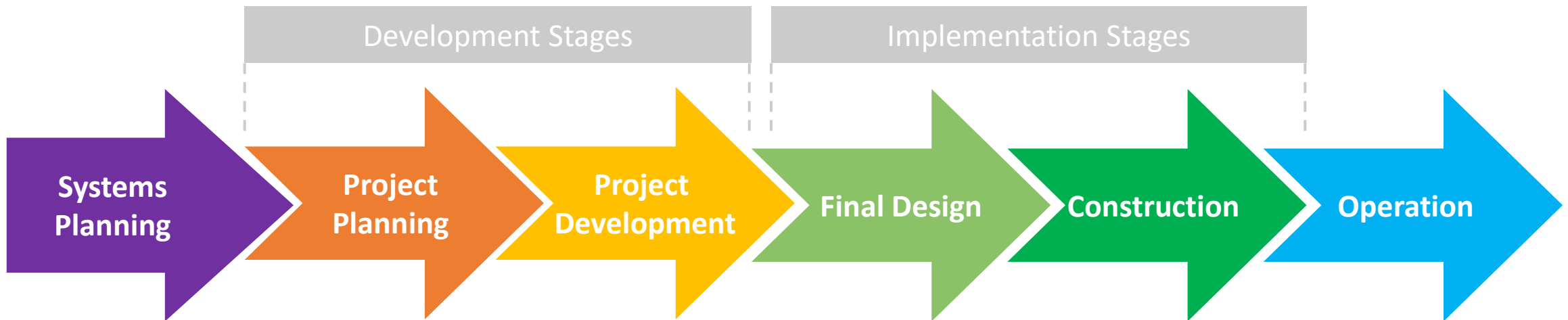


Project Lifecycle Stages

Project Lifecycle Stages

 *Reference: Section III, Proj. Lifecycle Overview, p. 4*

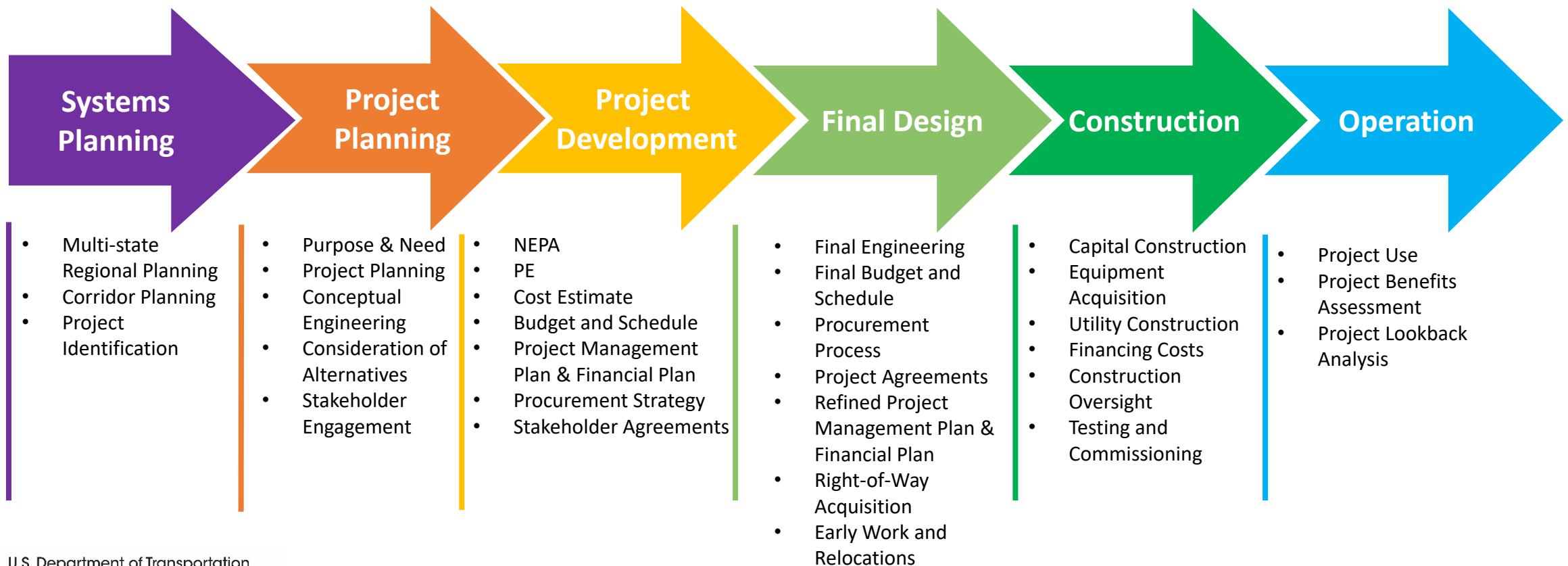
- The capital project lifecycle has **six stages**, beginning with systems planning and ending with project completion and operation
- Even if no FRA funds are used for a proposed project, **FRA encourages Project Sponsors to follow the Project Lifecycle** and seek technical assistance from FRA early in the development of a project
- The Project Lifecycle stages ensure development of the appropriate studies and documents and enhance eligibility for future FRA funding



Project Lifecycle Stage Activities

 *Reference: Section III, Proj. Lifecycle Overview, pp. 4-11*

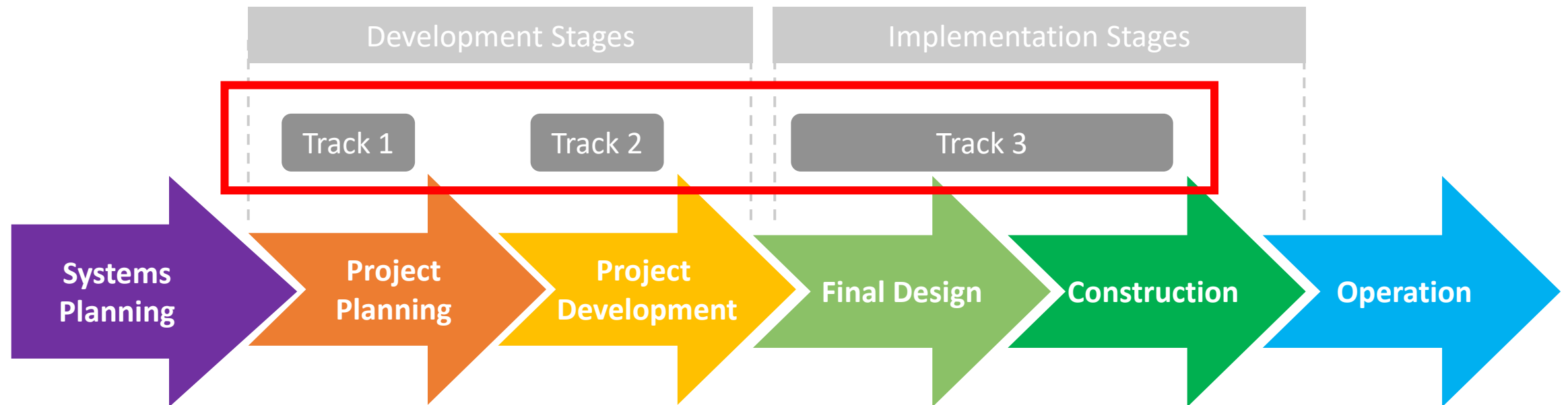
- The Guidance provides a detailed description of each lifecycle stage and its activities
- A Project Sponsor should complete all applicable activities in a stage prior to moving ahead to the next stage



Role of the Project Lifecycle in Grant Funding Opportunities

🔍 *Reference: FY22 CRISI NOFO, p. 6*

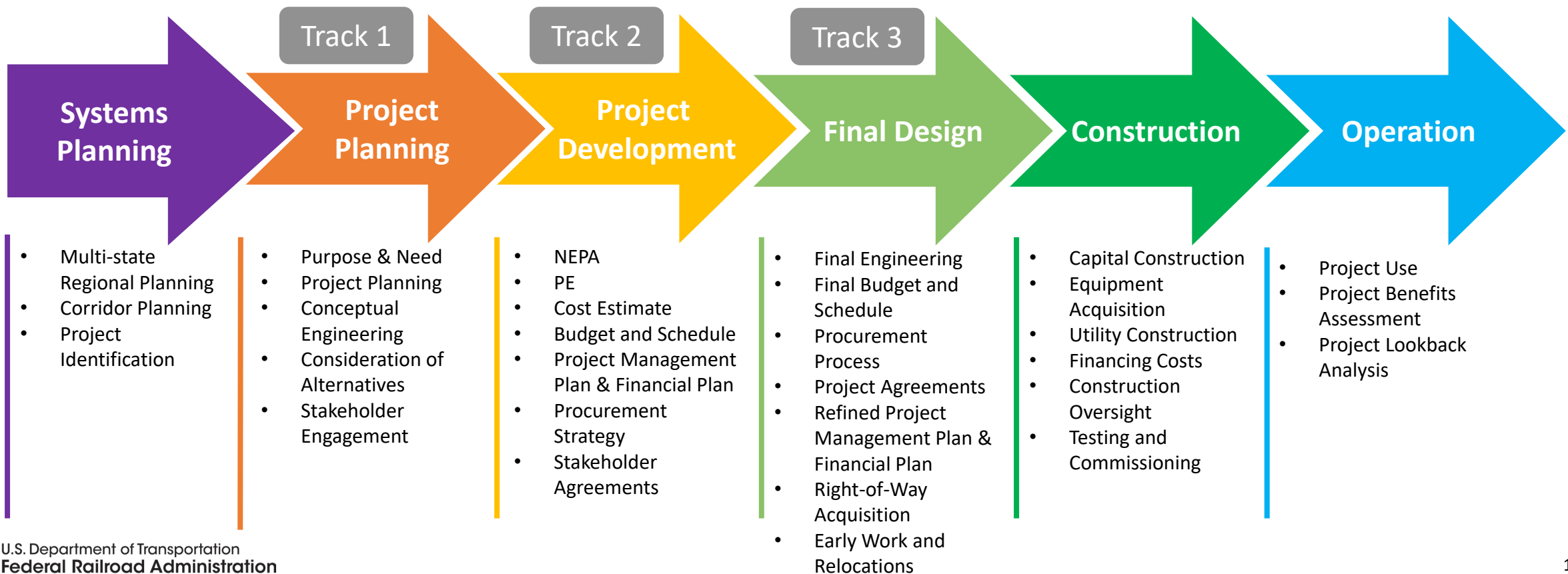
- The NOFO describes **application tracks** that align with the Project Lifecycle
- The Project Sponsor should consult the NOFO for further descriptions of the application tracks



Role of the Project Lifecycle in Grant Funding Opportunities

🔍 *Reference: Section III, Proj. Lifecycle Overview, p. 4*

- Consider the status of activities identified in each lifecycle stage when selecting a track
- FRA may consider the **readiness** of a project when evaluating a project for grant funding



Project Lifecycle Stage Activities



Systems Planning

Systems Planning is a high-level planning process that considers creating new transportation services as well as enhancing and maintaining existing transportation systems.

Systems Planning encompasses multi-state regional planning, corridor planning, and project identification.

The *Systems Planning* process should:

- Examine broad needs, challenges, and opportunities that can be addressed with a transportation-related solution
- Analyze data to identify rail transportation needs
- Identify specific projects to address documented needs, challenges, and opportunities
- Consider links with other transportation modes



Project Planning

Project Planning identifies capital project concepts to address existing transportation needs and opportunities.

Project Sponsors should complete the following activities and associated documentation to prepare to move to the Project Development stage:

- Development of a draft **purpose and need statement**;
- Development of **conceptual engineering** and other relevant design, including scale design drawings;
- Documentation showing that **project alternatives** were considered.
- **Environmental resource inventory** and potential environmental concerns analysis
- Public, tribal, and agency involvement;
- Support of **Participant Stakeholders** (e.g., host railroads and funding partners)
- An order-of-magnitude project **cost estimate**; and
- **For Major Projects:** An **initial Project Management** Plan that identifies a project delivery method



Project Development

The **Project Development** stage includes design and engineering, environmental analysis, and other studies to ensure the project is ready for implementation.

Project Sponsors should complete the following activities and associated documentation to prepare to move to the Final Design stage:

- Complete at least **30% design and engineering**
- For track reconfigurations, FRA will seek **concurrence documentation** from the host railroad, railroad with operating rights, and Project Sponsor on the design
- Complete environmental review process and issue a **NEPA decision**
- Develop the **Project Management Plan, Schedule, Cost Estimate, and Initial Financial Plan** (Major Projects only) for the project



Final Design

In the **Final Design** stage, the Project is advanced to be ready for construction.

Project Sponsors should complete the following activities and associated documentation to prepare to move to the Construction stage:

- Secure **agreements and funding commitments** to construct and operate the project
- Complete **Right of Way acquisition**
- Produce **final engineering plans** and specifications for the construction project
- Update the **Project Management Plan, Schedule, Cost Estimate, and Financial Plan** (Major Projects only), as appropriate, prior to construction start



Construction

During the **Construction** stage, the capital project is completely built, installed, and placed into service.

Project Sponsors should complete the following activities and associated documentation for the construction stage:

- Physical construction and installation of the capital project
- Procurement, manufacturing, and testing of vehicles and equipment
- Updates to the Project Management Plan and Financial Plan (Major Projects only), as appropriate
- Verification that the project meets the contractual specifications by performing system, performance, and integration testing, and validates performance to commission new systems.

Construction is considered complete when the Project Sponsor turns the project over for operational use.



Operation

The **Operation** stage is included in the lifecycle to recognize that the final stage of a project is its operational use.

Project Sponsors **operate and maintain** the assets created and improved by the Capital Project.

FRA may seek **reporting on the performance of projects**, particularly Major Projects, to further evaluate the benefits of investments through sponsor reporting on performance measures and outcomes

Key Project Management Tools

Four key **project management tools** are described in the Guidance:

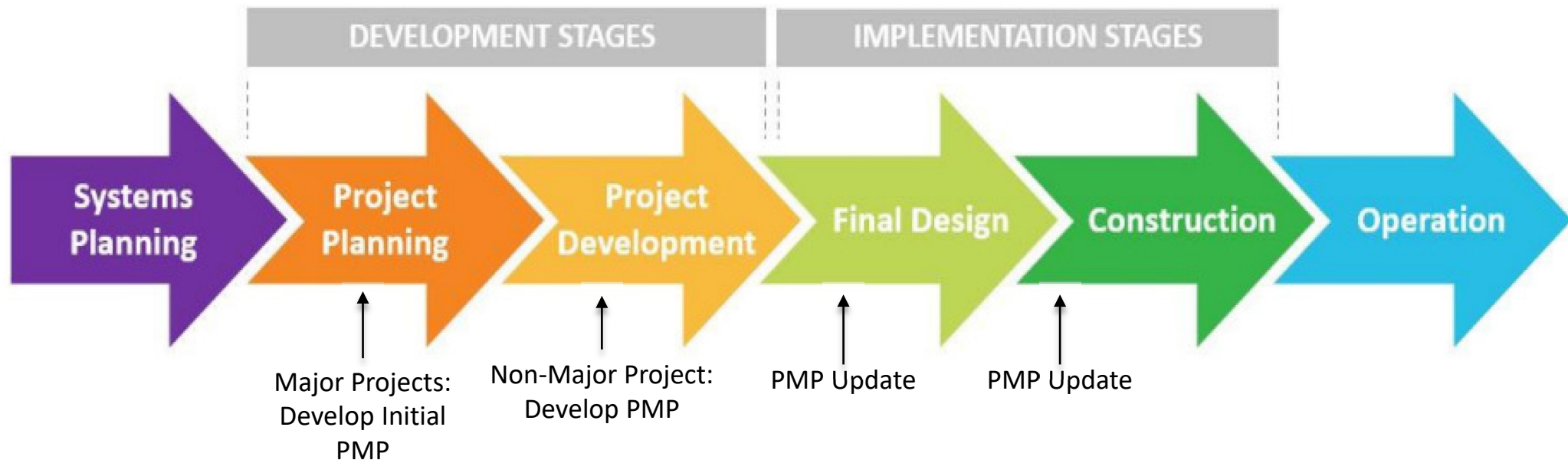
1. Project Management Plan (PMP)
2. Schedule
3. Capital Cost Estimate
4. Financial Plan (for Major Projects only)

- *Refer to the Guidance for additional information on the Financial Plan*

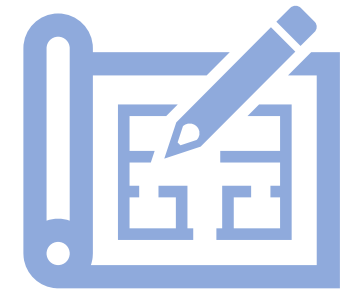


FRA may require Project Sponsors to **develop, update, and use these project management tools as a condition of Federal financial assistance**, during the application phase pursuant to a NOFO or after a Project Sponsor has been selected to receive Federal funding pursuant to a grant agreement (see 2 CFR § 200.105(b)).

- The Project Management Plan (PMP) serves as a **guide** for implementing a project from Project Planning through Construction
- PMPs are prepared for **all capital projects** and should be updated throughout the project lifecycle



- All PMPs should include the following content:
 - **Basis of Design:** Purpose, Goals, Objectives, Scope, Performance Metrics, History
 - **Organizational Management:** Project Leadership, Team Organization, Capacity, and Capability
- The Guidance provides additional elements that should be included for both Non-Major and Major Projects.
 - A **sample Table of Contents** is provided in the Guidance (*Appendix X*)
- Major Project PMPs must be developed and executed in accordance with **49 U.S.C. § 22903(a)**, and should follow the contents described in the Guidance



The PMP includes a **Schedule** that identifies:

- Activities needed to accomplish the project work and the duration of each activity
- Logical sequence of the activities and major milestones, including the project completion date
- Relationships between the activities
- Narrative description of schedule basis and assumptions in the schedule; along with a summary of schedule risk



The Schedule should be used in the preparation of the Capital Cost Estimate.

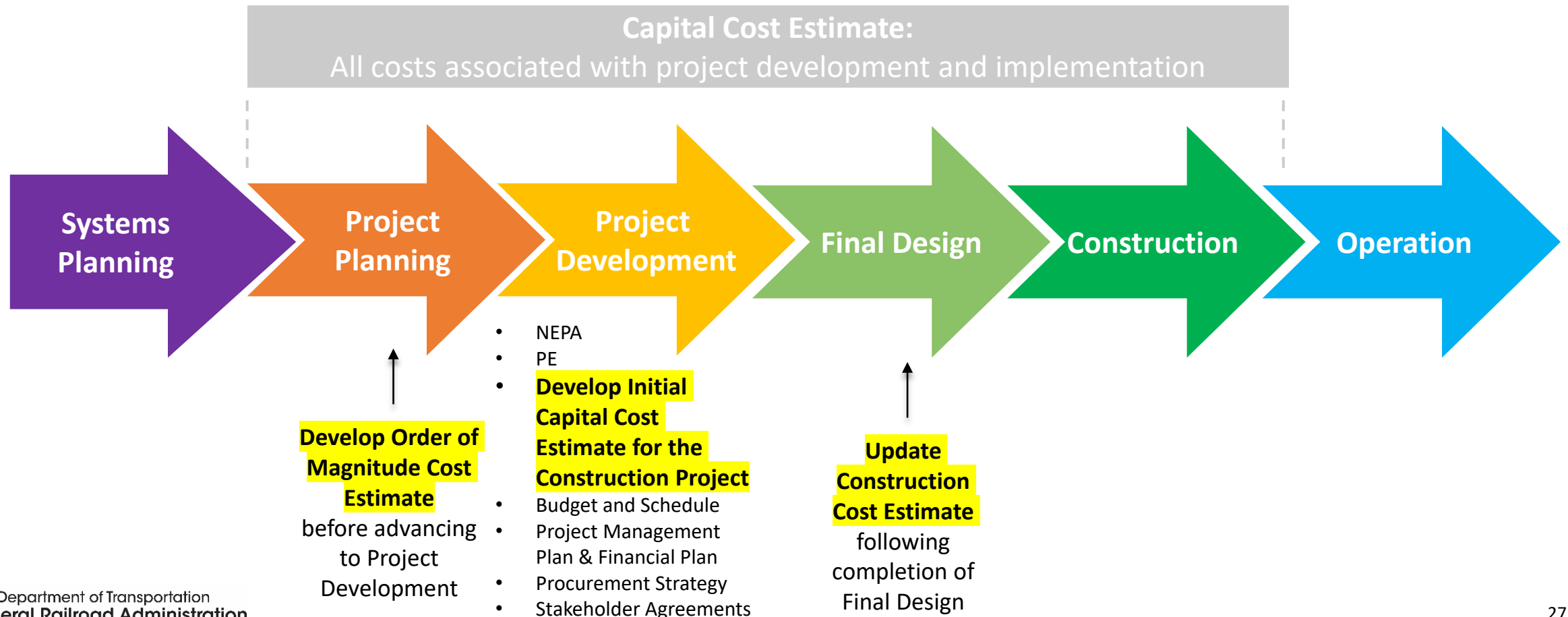
- Project Sponsors should develop a Capital Cost Estimate for **Major and Non-Major Projects**
- A Capital Cost Estimate includes **all costs** associated with developing and implementing the capital project, except financing costs. The Capital Cost Estimate should:
 - Identify and quantify potential risks and identify appropriate contingencies
 - Consider the schedule and possible cost escalations resulting from inflation and consider using a midpoint of construction or annual escalation to year-of-expenditure as a way to account for this escalation
- The level of effort for preparing a Capital Cost Estimate varies based on Project scope and complexity. Project Sponsors are encouraged to use FRA's Capital Cost Estimating Guidance:



[Capital Cost Estimating Guidance](#)

- **For Major Projects:** an independent risk review informs the cost estimate

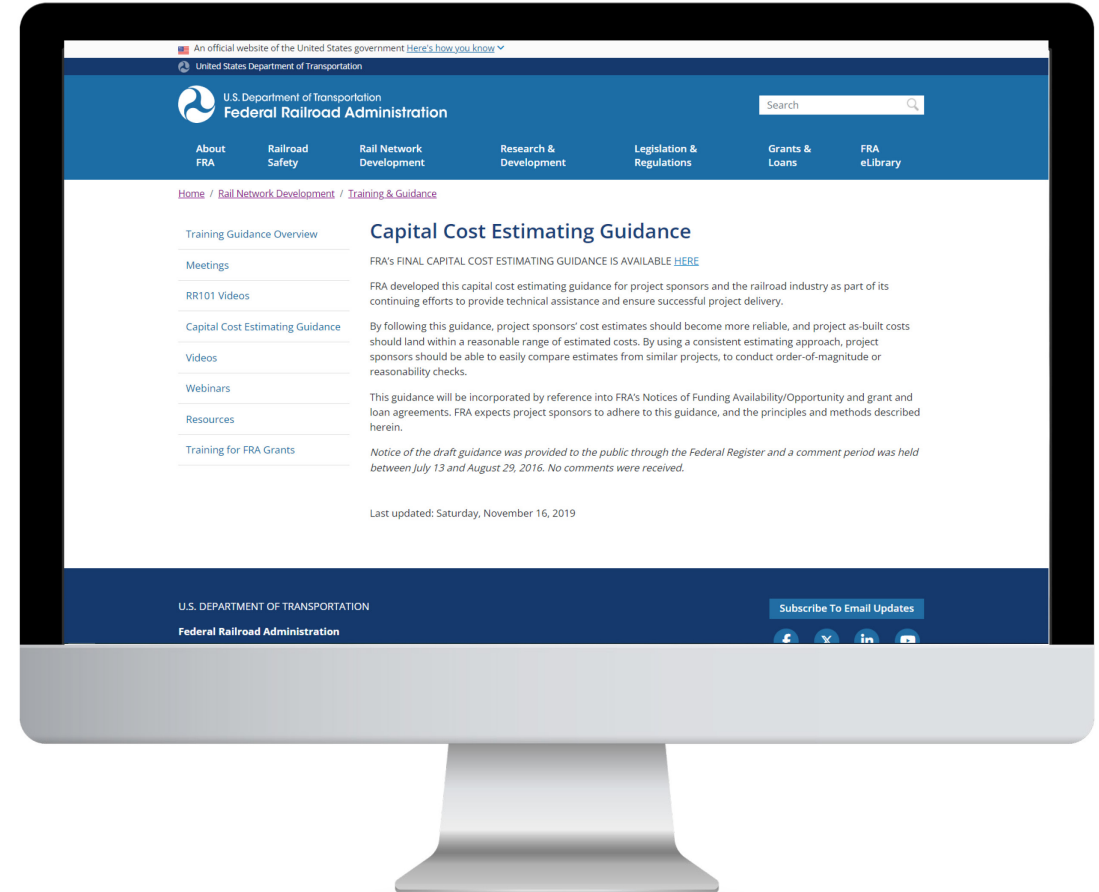
- The Capital Cost Estimate is initially developed at the end of the Project Development stage using the completed preliminary design and updated during Final Design



Resources

Resources

- [FRA Guidance on Development and Implementation of Railroad Capital Project](#)
- [Capital Cost Estimating Guidance for Project Sponsors](#)
- [FRA Grants and Loans](#)
- [49 USC §22903 Project management oversight](#)



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