



# RAIL

*MOVING AMERICA FORWARD*

## **FY 2024-2025 Partnership NOFO**

# Benefit Cost Analysis and NEPA

**Presented by:**

Nataka Neely • Amanda Murphy • Sergio Coronado



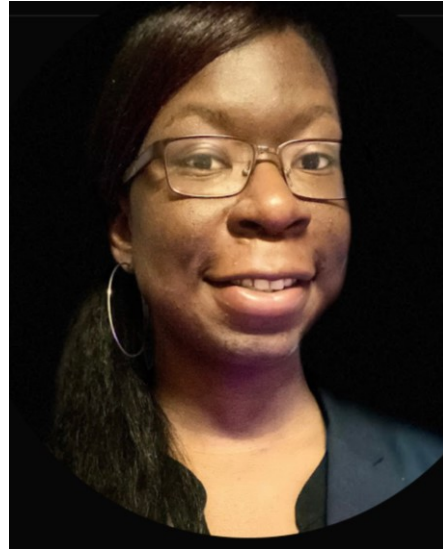
U.S. Department of Transportation  
Federal Railroad Administration

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# FRA Presenters



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# Agenda



1

**Benefit-Cost Analysis (BCA)**

2

**Environmental Readiness**

3

**Right-of-Way Acquisition**

# Benefit-Cost Analysis (BCA)

# BCA – Purpose

## Why Do a Benefit-Cost Analysis?

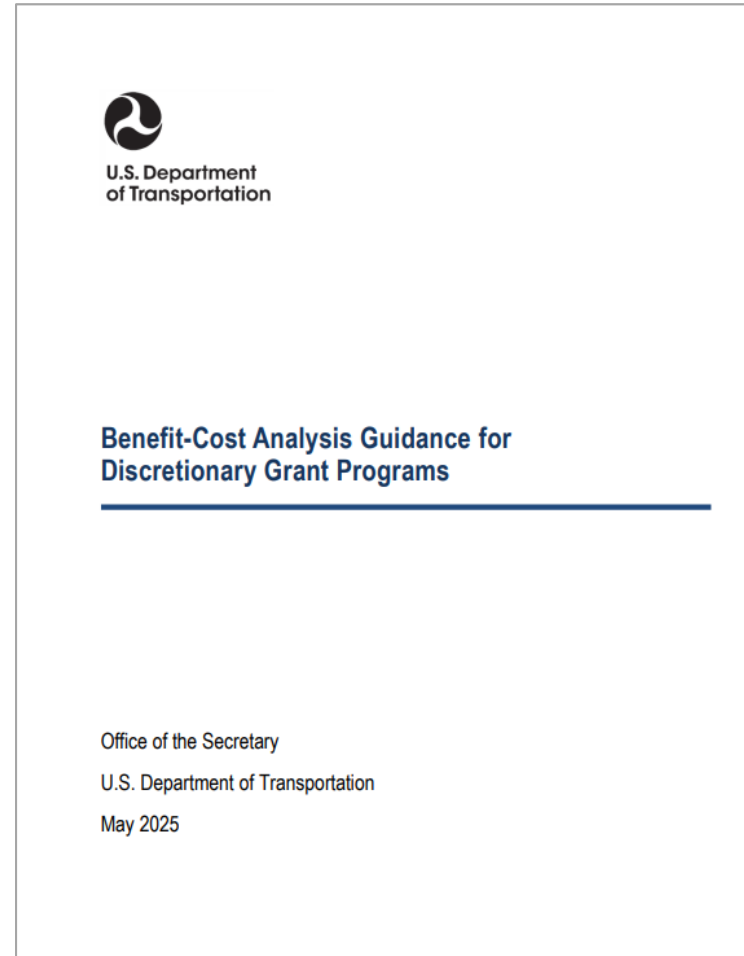
- BCA encourages applicants to focus and refine project scopes and outcomes
- BCA is a method to enable comparison across diverse project types and magnitudes
- Part of Fed-State Partnership selection criteria:
  - Secretary shall “take into account the cost-benefit analysis of the proposed project”
  - Other FRA programs (CRISI) and Departmental programs (RAISE and FASTLANE/INFRA) have similar provisions

## BCA – Overview of Steps

- 1 Specify your project's base case, alternate case, and timeline
- 2 SHOW how your alternate case will result in specific effects (i.e., project benefits)
- 3 Break down benefits and costs into the smallest sub-elements possible
- 4 Assign monetary values to sub-elements using USDOT's [\*BCA Guidance\*](#)
- 5 Calculate results and discount to base year

## The 2025 update to the DOT BCA Guidance includes:

- Revised discount rates in accordance with updates to OMB Circular A-94
- Removal of the Social Cost of Carbon (SCC) from Table A-6
- Updated monetization values in Appendix A



## BCA – Scope of Analysis

- The **base case** reflects the status quo—i.e., the world as it exists today
- The **alternate case** (i.e., “build scenario”) is the proposed project
  - An analysis for construction should present a *single* project
  - One *application* can contain multiple projects
  - Multiple projects need multiple analyses
  - Avoided costs of alternatives not taken are NOT benefits
- The **timeline** must be appropriate for the proposed project
  - Match the useful life of the project, but not more than 30 years of operation
  - Projects with useful life beyond 30 years will have residual value (stations in particular) → Use GAAP straight line depreciation

## BCA – Scope of Analysis

- Project scope included in estimated costs and benefits must match
  - Don't claim benefits from an entire project, but only count costs from the grant-funded or other, lesser portion
- Scope should cover a project that has independent utility
  - May need to incorporate costs for related investments necessary to achieve the projected benefits
- Project elements with independent utility should be individually evaluated in the BCA
  - BCA evaluation will cover both independent elements and the submitted project as a whole

# BCA – Scope of Analysis

- Examine *ONLY* the differences between the base case and alternate case (i.e., the marginal effects)
- Planned future projects are ***irrelevant***
- These differences should reflect realistic projections

## Examples

- Intercity passengers will likely change modes if their station is unavailable, while commuters are more likely to divert to another nearby station
- Host railroads will impose speed and weight restrictions before shutting down completely
- Growth rates will not suddenly double unless a fundamental change occurs



## BCA – Modal Diversion

- Modal diversion is a marginal choice; *ONLY* count marginal effects
- Lost revenue from passengers changing to other modes is a transfer, NOT a benefit (Follow USDOT'S [BCA Guidance](#))

### Example

Avoided rail-to-truck diversion could result in...

- Increased pavement damage
- Increased harmful emissions
- Increased congestion on highways
- Decreased safety



## BCA – Modal Diversion

- Projected magnitude
  - Should be based on careful analysis of local conditions and potential for shift from other modes that might attribute to the project
- Benefit estimates should not be based on comparing user costs of “old” and “new” mode
  - Would be reflected in benefits to additional users
- Reductions in external costs would be relevant
  - E.g., emissions costs, congestion reduction, noise reduction
  - Values for congestion, noise and safety costs included in BCA Guidance

# BCA – Benefits & Costs

## PROJECT BENEFITS

The *marginal* effects of the alternate case

- Marginal effects are sometimes undesirable consequences, which should be shown as negative dollar amounts
- **Reductions to existing O&M costs** are regarded as project benefits

❖ ***Residual value** for remaining useful life is a benefit, NOT subtracted from costs*

## PROJECT COSTS

The total cost of constructing the project *as well as operating and maintaining (O&M) it for the full timeline*

- O&M costs on new equipment and infrastructure are **costs**



# BCA – Development

- Break down marginal effects into the smallest possible sub-elements
- Provide documentation for inputs and growth rates

## Example

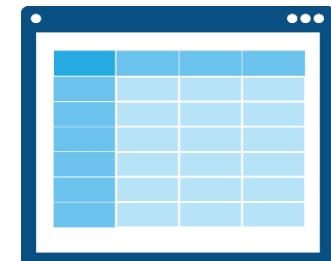
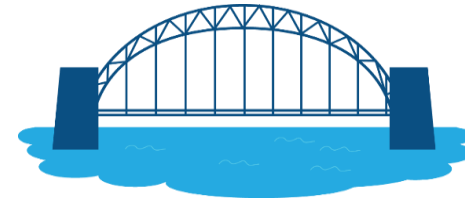
Replacing a bridge might result in...

- Removal of slow orders, improving through speed (travel time savings)
- Reduced wait time at the approaches (travel time savings and emissions)
- Decreased delays at nearby sidings along the corridor (travel time savings and emissions)
- Reduced O&M costs



# BCA – Final Advice

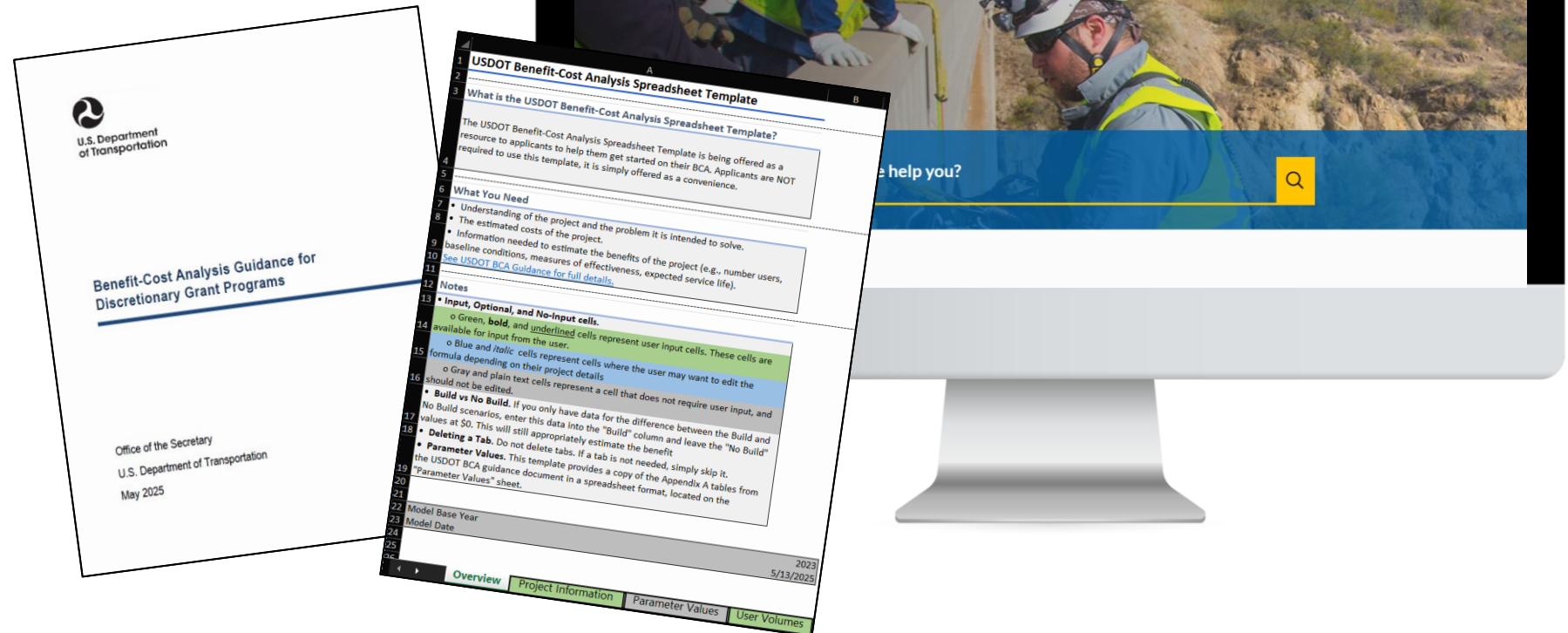
- ✓ **Document your assumptions in as much detail as possible.**
- ✓ If your application contains multiple projects, analyze benefits and costs of each project *separately*.
- ✓ If your BCA includes modal diversion, include YOUR freight and/or passenger traffic counts and Annual Average Daily Traffic (AADT).
- ✓ Include the specific AADT for each grade crossing project.
- ✓ Provide references and links to the resources used to aid in the development of your analysis.
- ✓ ***You must include an unlocked Excel spreadsheet that clearly shows your calculations and discounting and a BCA Narrative (technical memo/ discussion) that describes the analysis including any unquantified benefits.***



# BCA – Guidance/Online Resources

## DOT Resources

- [DOT BCA Guidance](#)
- [DOT BCA Template](#)
- [DOT BCA Template Webinar Recording \(Item #5\)](#)



# Environmental Readiness

# Environmental Readiness

## *Environmental review is required for all FRA grant-funded projects*

Requirements include:

- National Environmental Policy Act (NEPA)
  - "Umbrella law" governing environmental review process for federal actions
- National Historic Preservation Act (NHPA) Section 106
  - Historic buildings, structures, districts, sites, and archaeological resources
- Section 4(f) of the USDOT Act
  - Parks, recreational areas, wildlife refuges, and historic sites
- Endangered Species Act (ESA) Section 7
  - Species and habitat
- Clean Water Act
  - Wetlands and navigable waterways
- Others, as applicable

# Environmental Readiness – Fundamentals

## What to Know Before You Begin...

- The environmental information and documentation you're typically expected to provide as part of your grant application depends on the **lifecycle stage of your proposed project** (Project Planning, Project Development, Final Design or Construction).
- Environmental review must be completed and approved by FRA **prior to obligation of any grant**.
  - Project Planning and Project Development grants: An administrative CE documented by FRA as part of the grant agreement.
  - Final Design/Construction grants: FRA must approve or adopt a NEPA decision document (CE, EA/FONSI, or EIS/ROD) that covers the environmental impacts of construction and operation of the project.
- FRA may be able to **adopt environmental documents** prepared by/for other Federal agencies.
- If an approved NEPA document for your project exists but the **scope has changed** or several years have passed, a re-evaluation or supplemental NEPA document will be needed.

# Environmental Readiness – Project Planning and Project Development Applications

## Planning and Project Development

### Apply if...

Seeking grant funding to **develop a NEPA document** and conduct associated environmental analyses.

Post-selection, FRA coordinates with grantees to formally determine the NEPA Class of Action (CoA).

#### Three types of NEPA CoA:

- Categorical Exclusion (CE)
- Environmental Assessment (EA)
- Environmental Impact Statement (EIS)

### And then...

**With your application, provide as much project information/existing documentation as possible.**

- Detailed project description
- Location (include maps, photos)
  - Show construction footprint, construction access, and staging locations
- ROW acquisition
- Construction methodology
- Prior planning or environmental analyses
- Prior or anticipated stakeholder coordination
- Anticipated environmental impacts
- Anticipated local/State/Federal permits or other approvals (e.g., USACE, USCG)
- Anticipated coordination/consultation with resource and/or regulatory agencies (e.g., SHPO, USFWS, NMFS)

# Environmental Readiness – Final Design/Construction Applications

*Apply if...*

**Final Design/  
Construction**

**NEPA is complete or underway,**  
and you're seeking grant funding  
for FD/construction.

FRA will evaluate environmental  
readiness based on information  
included in your application

*And then...*

## **With your application:**

- Include a copy of approved NEPA document and/or weblink (or anticipated completion date). Identify:
  - Type of NEPA document (CE, EA, EIS)
  - Lead Federal agency
  - Date of Federal NEPA approval
- Include documentation that shows completion of Section 106 review (letters to/from SHPO, MOA, or PA)
- Identify if any permits or approvals may be required from other agencies
- Identify any substantive changes to the proposed project scope and/or environmental conditions since date of prior NEPA approval.

# Environmental Readiness - Application

## Also consider identifying in your application:

- Does your project qualify for any CEs? (see FRA's CEs: [23 CFR 771.116](#))
- Does your project qualify for any exemptions from Section 106 review under the Rail Right-of-Way Program Comment? (see: [Exempted Activities List](#))
- Is your agency is authorized by FRA to initiate Section 106 consultation or has NEPA Assignment?
- If applying for a planning and project development grant: will there be any ground disturbance to conduct planning investigations?
- Do you have in-house qualified environmental and cultural resource staff or do you plan to hire consultants?

*Need general technical assistance regarding our environmental review and documentation requirements?  
Interested in learning more about NEPA Assignment or Section 106 Authorization?  
Contact our experts at [FRAenvironment@dot.gov](mailto:FRAenvironment@dot.gov)*

## Environmental Readiness – NEPA Resources

- FRA Environmental Webpage

<https://railroads.dot.gov/rail-network-development/environment/environment>

- FRA NEPA Procedures

<https://railroads.dot.gov/rail-network-development/environment/fra-legislation-regulations>

- A Citizen's Guide to the NEPA

<https://ceq.doe.gov/docs/get-involved docs/get-involved /Citizens Guide Dec07.pdf>

- AASHTO Center for Environmental Excellence Practitioner's Handbook

<https://environment.transportation.org/resources/practitioners-handbooks/>

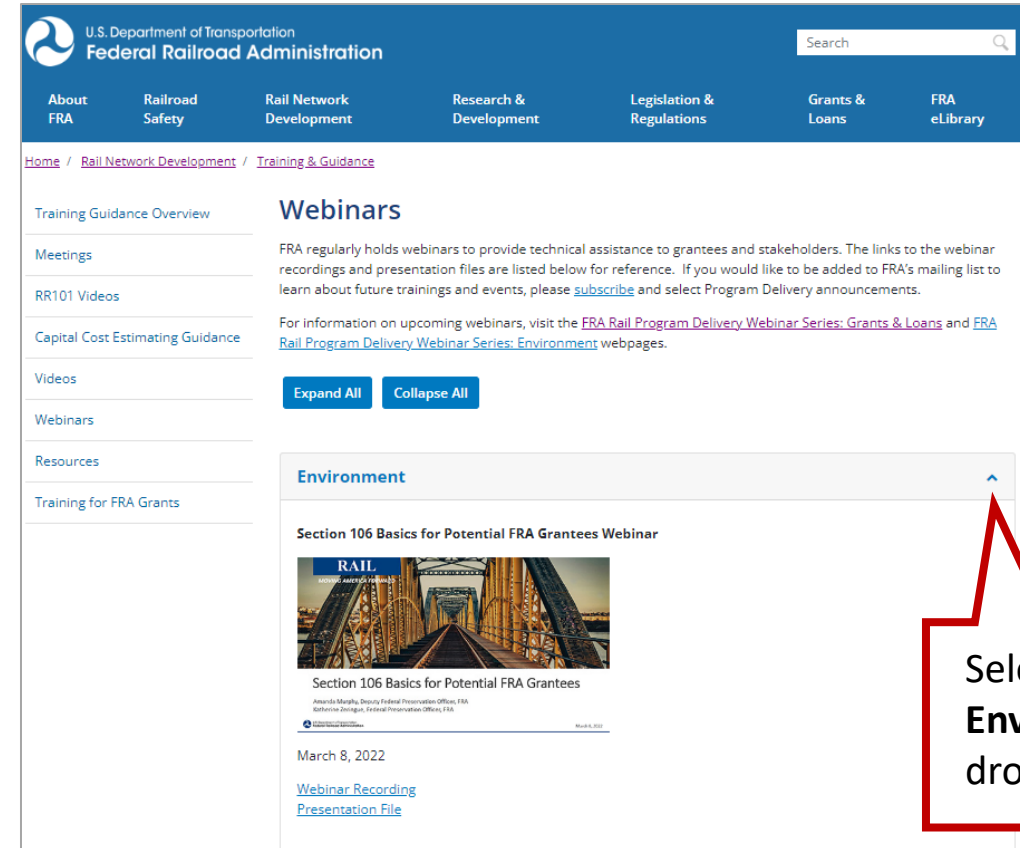
# Environmental Readiness – NHPA Section 106 Resources

- FRA Historic Preservation Webpage  
<https://railroads.dot.gov/rail-network-development/environment/historic-preservation/historic-preservation>
- Section 106 Program Comment for Rail ROW  
<https://railroads.dot.gov/rail-network-development/environment/final-section-106-program-comment-rail-rights-way>
- Section 106 Regulations (36 CFR Part 800)  
<https://www.govinfo.gov/content/pkg/CFR-2021-title36-vol3/pdf/CFR-2021-title36-vol3-part800.pdf>
- Section 106 Review Process  
<https://www.achp.gov/sites/default/files/2018-05/Section%20106%20Review%20Process.Handout.2017.jpg>
- A Citizen's Guide to Section 106 Review  
<https://www.achp.gov/sites/default/files/documents/2019-04/CitizenGuide2015v4-spreads%20layout.pdf>
- Section 106 and Infrastructure Projects  
<https://www.achp.gov/section-106-and-Infrastructure-Projects>

# FRA NEPA/Section 106 Webinars

There are several recorded webinars on FRA's website regarding our NEPA & Section 106 review requirements and processes

[Training & Guidance | Webinars | dot.gov](#)



The screenshot shows the Federal Railroad Administration (FRA) website. The header includes the FRA logo, the text "U.S. Department of Transportation Federal Railroad Administration", and a search bar. Below the header is a navigation menu with links: "About FRA", "Railroad Safety", "Rail Network Development", "Research & Development", "Legislation & Regulations", "Grants & Loans", and "FRA eLibrary". The main content area is titled "Webinars" and includes a "Training Guidance Overview" sidebar with links to "Meetings", "RR101 Videos", "Capital Cost Estimating Guidance", "Videos", "Webinars", "Resources", and "Training for FRA Grants". The main content area features a "Webinars" section with a description of FRA's webinar program and links to "Expand All" and "Collapse All". Below this is a "Section 106 Basics for Potential FRA Grantees Webinar" section, which includes a video player, a title, a date (March 8, 2022), and links to "Webinar Recording" and "Presentation File". A red callout box with a pointer indicates the "Environment" drop-down menu in the "Section 106 Basics for Potential FRA Grantees Webinar" section.

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Resources

Training for FRA Grants

## Webinars

FRA regularly holds webinars to provide technical assistance to grantees and stakeholders. The links to the webinar recordings and presentation files are listed below for reference. If you would like to be added to FRA's mailing list to learn about future trainings and events, please [subscribe](#) and select Program Delivery announcements.

For information on upcoming webinars, visit the [FRA Rail Program Delivery Webinar Series: Grants & Loans](#) and [FRA Rail Program Delivery Webinar Series: Environment](#) webpages.

[Expand All](#) [Collapse All](#)

### Environment

#### Section 106 Basics for Potential FRA Grantees Webinar



Section 106 Basics for Potential FRA Grantees

Amelia Murphy, Deputy Federal Preservation Officer, FRA  
Bridgette Ziegler, Federal Preservation Officer, FRA

March 8, 2022

[Webinar Recording](#)  
[Presentation File](#)

Select the Environment drop-down

# Right-of-Way Acquisition

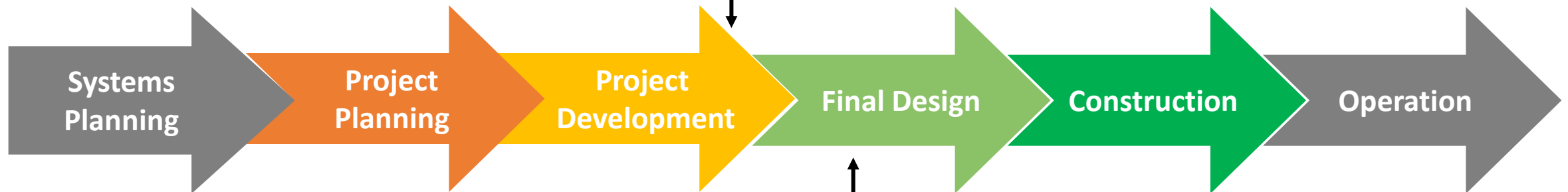
# Right-of-Way Acquisition

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended, and its implementing regulations, 49 CFR part 24, apply to projects funded in whole or in part through FRA's Federal financial assistance programs.

- Any project that receives Federal funding at any phase of project development or implementation is subject to the Uniform Act.
- Any property acquisition or relocation in **anticipation of Federal funding must comply with the Uniform Act even if there is no Federal funding or match used in the acquisition or relocation itself.** Violations of the Uniform Act may jeopardize eligibility for reimbursement or use of the property in the project.
- FRA considers a prospective recipient's submission of an application for Federal funding to demonstrate that the prospective recipient anticipates using Federal funding in the proposed project.

# Right-of-Way Acquisition

Consistent with 23 CFR 771.113- ROW acquisition may not be initiated until NEPA has been approved



ROW phase occurs during FD and not PE

Subject to the Uniform Act



*All right-of-way (ROW) acquired must be in accordance with the Uniform Act*



To avoid delays and other risks to the project, a prospective recipient should ensure that all property it plans to acquire for a proposed project described in an application is acquired consistent with the Uniform Act even prior to selection and award.



U.S. Department of Transportation  
**Federal Railroad Administration**

# Contact Us

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## FSP-National Program and Application Process

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