Resilience Improvement Plans

Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program

NOAA Eastern Region Climate Services Webinar
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• This webinar is about the Resilience Improvement Plan development process. Questions about the Discretionary Grant Program or Notice of Funding Opportunity can be sent to: PROTECTdiscretionary@dot.gov
• **Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program** (established under the Bipartisan Infrastructure Law, Section 11405; 23 U.S.C. 176)

• **Program purpose:** To plan for and strengthen surface transportation to be more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters.

Enacted as the *Infrastructure Investment and Jobs Act*, Pub. L. 117-58 (Nov. 15, 2021)
## Project Types

<table>
<thead>
<tr>
<th>Project Types</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Resilience Planning</strong></td>
<td>Development of Resilience Improvement Plans, resilience planning activities, capacity building, and evacuation planning and preparation. [23 U.S.C. 176(d)(3)]</td>
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<td><strong>Resilience Improvements</strong></td>
<td>Projects to make existing surface transportation assets more resilient, such as improving drainage, upgrades to meet or exceed design standards, relocating roadways, or elevating bridges. [23 U.S.C. 176(d)(4)(A)]</td>
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<tr>
<td><strong>Community Resilience and Evacuation Routes</strong></td>
<td>Improvements to make evacuation routes more resilient or add capacity and redundant evacuation routes. [23 U.S.C. 176(d)(4)(B)]</td>
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<td><strong>At-Risk Coastal Infrastructure</strong></td>
<td>Protecting, strengthening, or relocating coastal highway and non-rail infrastructure. [23 U.S.C. 176(d)(4)(C)]</td>
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What is a Resilience Improvement Plan?

- Voluntary plan developed by a State Department of Transportation (DOT) or Metropolitan Planning Organization (MPO) for short and long-range planning activities and investments with respect to the resilience of surface transportation within the boundaries of the State or MPO.

- Demonstrates a systemic approach to transportation system resilience and includes a risk-based assessment of vulnerabilities of transportation assets and systems to current and future weather events and natural disasters.

(23 U.S.C. 176(e))
Non-Federal Match Reductions

- A 7% reduction in the non-Federal share can be applied if the eligible entity has developed a Resilience Improvement Plan in accordance with 23 U.S.C. 176(e) and prioritized the project on that Resilience Improvement Plan.

- A 3% reduction in non-Federal share can be applied if the State incorporates the Resilience Improvement Plan into the long-range statewide transportation plan (LRSTP) under 23 U.S.C 135, or an MPO incorporates the Resilience Improvement Plan into its metropolitan transportation plan (MTP) under 23 U.S.C. 134.

(23 U.S.C. 176(e)(1)(B)(i-iii))
Benefits of Developing a Resilience Improvement Plan

- Improved system reliability
- Incorporation of resilience into transportation planning and programming activities
- Support for the resilience planning factor
- 7% and 3% potential reductions in non-Federal share match available for PROTECT Formula* and PROTECT Discretionary (Grant) Program projects

*State DOTs are the only eligible entities under the PROTECT Formula Program.
# Resilience Improvement Plans - Requirements

## Shall..
- Encompass immediate and long-range planning activities and investments
- Demonstrate a systemic approach to surface transportation system resilience
- Be consistent with State and local hazard mitigation plans
- Include risk-based assessment of vulnerabilities to current and future weather events and natural disasters

## Shall as appropriate..
- Describe improved ability to respond promptly to natural disasters, extreme weather preparedness
- Describe codes, standards and regulatory framework
- Consider natural infrastructure
- Assess community infrastructure
- Use a long-term planning method
- Include other information

## May include..
- Evacuation routes
- Emergency Response plans
- Resilience-related policies
- Investment plan and prioritized projects

23 U.S.C. 176(e)(2)
Plan Horizon – Draft Plan Examples

- **North Carolina DOT** = Using horizon of 50-75 years to account for desired life of assets; also incorporating asset management plan information (e.g., Transportation Asset Management Plans (TAMP)), Metropolitan Transportation Plans (MTPs), and State Transportation Improvement Programs (STIP)
Resilience Improvement Plan shall “…include a risk-based assessment of vulnerabilities of transportation assets and systems to current and future weather events and natural disasters…” (23 U.S.C. 176(e)(2)(A-C)).

✓ **Should analyze likelihood and consequences of potential impacts**
  - *FHWA Vulnerability Assessment and Adaptation Framework, Third Edition*
  - *Vulnerability Assessment Scoring Tool (VAST), 2015*
Several SDOTs are expanding upon risks already identified in an existing statewide vulnerability assessment.

Rhode Island DOT’s assessment will assess facility vulnerability to flooding and inundation, including vulnerability of adjacent stormwater facilities.

Kentucky Transportation Cabinet is partnering with the Kentucky Transportation Center to incorporate future climate projections.

Source: NOAA NCDC / CICS-NC
Additional Resources

- FHWA’s Resilience [website](#): additional tools on resilience-based vulnerability assessments and best practices for resilience planning
- PROTECT [website](#)
- PROTECT Discretionary Grant [website](#)
- PROTECT Formula Program [website](#)

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