



# TxDOT Resiliency Plan

Overview of Approach



Plans and Reports identify the need for Resiliency Planning:

- Statewide Long Range Transportation Plan
- MTPs
- Texas Freight Mobility Plan
- Texas – Mexico Border Transportation Master Plan
- Transportation Asset Management Plan (TAMP)
- TxDOT 2022-2026 Strategic Plan
- Texas Rail Plan
- Eye Of The Storm (*Hurricane Harvey*) – Report of the Governor’s Commission to Rebuild Texas

*Not a comprehensive list.*



- IIJA includes **provisions for resiliency planning and funding** (formula and grant)
- **Defines the term resilience**, with respect to a project, as the ability to **anticipate, prepare for, or adapt** to conditions or **withstand, respond to, or recover** rapidly from disruptions.
- Creates the Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (**PROTECT**) Program to support adaptation and resilience projects.
  - Formula and Grant Program
  - Resiliency Improvement Plan (prioritized projects)
  - Roll into Long Range Plan for higher match
- Pending further specifics via federal guidance on resiliency planning



- **PROTECT Program:**
  - Funding for resiliency planning, resilience improvements, community resilience, evacuation routes, and at-risk coastal infrastructure
- **Formula funding:**
  - Highway, transit, and certain port projects are eligible
  - Higher Federal share if the State develops a **Resilience Improvement Plan (RIP)**
- **Grant funding:**
  - Eligible uses:
    - Highway, transit, intercity passenger rail, and port facilities
    - Construction activities (oriented toward resilience)
    - Construction of (or improvement to) evacuation routes
  - Higher Federal share (up to 10% available)
    - **+7%** if the State develops a RIP (list of prioritized projects)
    - **+3%** if the State incorporates its RIP into its Long Range Plan



- **Define** – what **resiliency, vulnerability, and criticality** mean to and for TxDOT
- **Vision** – integrate resiliency into **TxDOT goals and vision**
- **Inventory**
  - key transportation network assets and their critical **function, dependencies, and vulnerabilities**
  - **major disruptors**, natural and man-made, that affect the transportation system
- **Integrate** – understand and engage **various resiliency planning efforts** within TxDOT and among partners
- **Understand costs** – delivering **short, medium, and long term** resiliency strategies
- **Implementation**
  - Strategies, to include **guidelines, standards, policies, projects, etc.** for improving the resiliency of the transportation system, enhancing resiliency planning, and incorporating resiliency into project planning and development / selection
  - **Resiliency Improvement Plan** – list of prioritized projects that address resilience
  - Roll findings into the **Statewide Long Range Transportation Plan**
  - **Resiliency Planning Tools** – maps, models, and other resources for TxDOT and transportation planning partners



## Resiliency Plan Steering Committee

Identify and prepare strategies to address resilience issues of TxDOT and transportation partners

Contribute to methodology of assessing vulnerability and criticality of transportation network

Contribute data for and feedback on key task deliverables during project

Be part of the process so framework and strategies can be readily leveraged and implemented moving forward

## Focused Engagement

Workshops and interviews

Targeted approach with transportation partners

Ensure awareness of project

Provide data inputs to Plan

Coordinate on related efforts

Coordinate / Collaborate on actions and implementation

## Seeking Input from Partner Groups

State agency partners

Federal Highway Administration

MPOs, Cities, Counties

Army Corp of Engineers

Trucking Association

Industry / Trade Associations

Transit partners

Freight modes

Emergency Response partners



## TxDOT efforts

- Statewide Long Range Transportation Plan
- Texas Freight Mobility Plan
- Asset Management Plan
- Carbon Reduction Strategy
- TX-MX Border Transportation Master Plan
- UTP
- Various TPP Corridor Studies
- Various DES Flooding Studies
- Various District Studies/Resources
- Various RTI Studies

## Other organizations/efforts

- General Land Office - Texas Coastal Resiliency Masterplan (2023)
- TTI - Resiliency Framework (and related Texas MPO Transportation Resiliency Forum events) (2020)
- Other TTI projects including H-GAC Regional Resilience Tool, specific flood studies on pavement (Houston) (ongoing)
- Houston Advanced Research Center (HARC) – Resiliency Science Information Network Tool (RESIN)
- MPOs - resiliency plan development by various Texas MPOs, per FHWA – complete or ongoing:
  - Permian Basin MPO
  - Rio Grande Valley MPO
  - Bryan-College Station MPO
  - San Angelo MPO
  - Beaumont-Port Arthur MPO
  - Sherman Denison MPO
  - Killeen-Temple MPO
  - San Antonio MPO

not an exhaustive list



## Resiliency Planning Map/Tool

- In-sourced/in-house, interactive map with *resiliency related* data and information:
  - 100 year / 500 year floodplain
  - Evacuation routes
  - Critical infrastructure, as defined by the Resiliency Plan, Freight Plan, Statewide Plan, etc.
  - Vulnerable geographies/assets, as defined by the Resiliency Plan, in coordination with the Freight Plan, Long Range Plan, etc.
  - Rural, Urban, Metro boundaries
  - ^ projects
- Could expand to equity, AQ, Justice40, etc. data, such as:
  - Emissions and air quality non-attainment area
  - Demographics, housing
  - Alternative transportation options
  - Limited English proficiency geographic areas
  - Educational attainment
  - ^ projects



- Related efforts
  - TxDOT Demographic Data Analysis Tool
  - Mobile Source Emissions Reduction Strategies (MOSERS)



# Resiliency Plan Contacts



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