

# Texarkana MPO

## Integrating Resilience into MTP Development



June 26<sup>th</sup>, 2019

# What is Resilience?

- *Reducing vulnerability to chronic and acute stressors by ensuring redundancy and reliability to meet essential travel needs*
- *Implementing a resilient transportation system that can quickly respond to unexpected conditions and return to a sustainable state of performance*



# Resilience in the Texarkana MPO 2045 MTP



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# Performance Based Planning Process

## Goals



## Measures



## Targets



## PERFORMANCE-BASED PLANNING PROCESS

### MAP 21 / FAST ACT METROPOLITAN PLANNING FACTORS

1. Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness.
2. Increase the **safety** of the transportation system for motorized and nonmotorized users.
3. Increase the **security** of the transportation system for motorized and nonmotorized users.
4. Increase **accessibility and mobility** of people and freight.
5. Protect and enhance the **environment**, promote **energy conservation**, improve the **quality of life**, and promote **consistency** between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
7. Promote **efficient** system management and operation.
8. Emphasize the **preservation** of the existing transportation system.
9. Improve **resiliency and reliability** of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance **travel and tourism**.

### PUBLIC VISIONING PROCESS



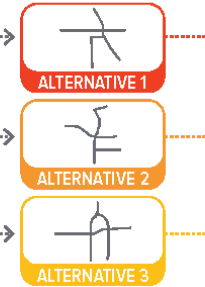
### COMMUNITY VALUES & CRITERIA RANKING

### PRIORITIZED LIST OF PROJECTS

1. PROJECT A
2. PROJECT B
3. PROJECT C
4. PROJECT D

### FISCAL CONSTRAINTS

### ALTERNATIVES DEVELOPMENT



### NATIONAL GOALS

1. Safety
2. Infrastructure Condition
3. Congestion Reduction
4. System Reliability
5. Freight Movement and Economic Vitality
6. Environmental Sustainability

### NATIONAL PERFORMANCE MEASURES

### PLANNING-LEVEL PERFORMANCE MEASURES

### ALTERNATIVE COMPARISON



### PREFERRED ALTERNATIVE

### Victoria MPO MTP Final Project List

### TRACKING & TIP

### PERFORMANCE MANAGEMENT



# Plan Review and Needs Assessment

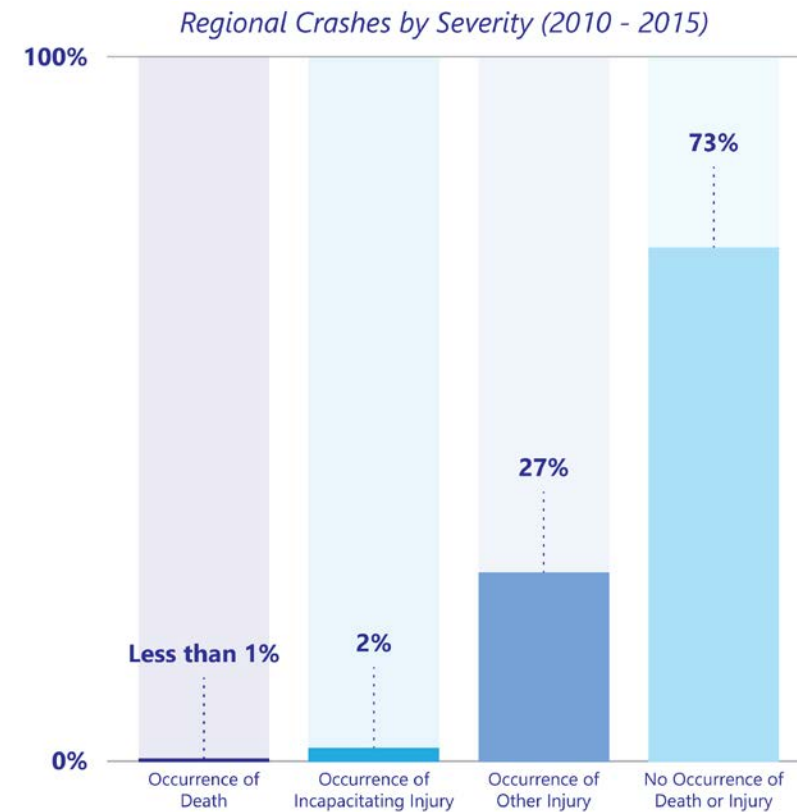
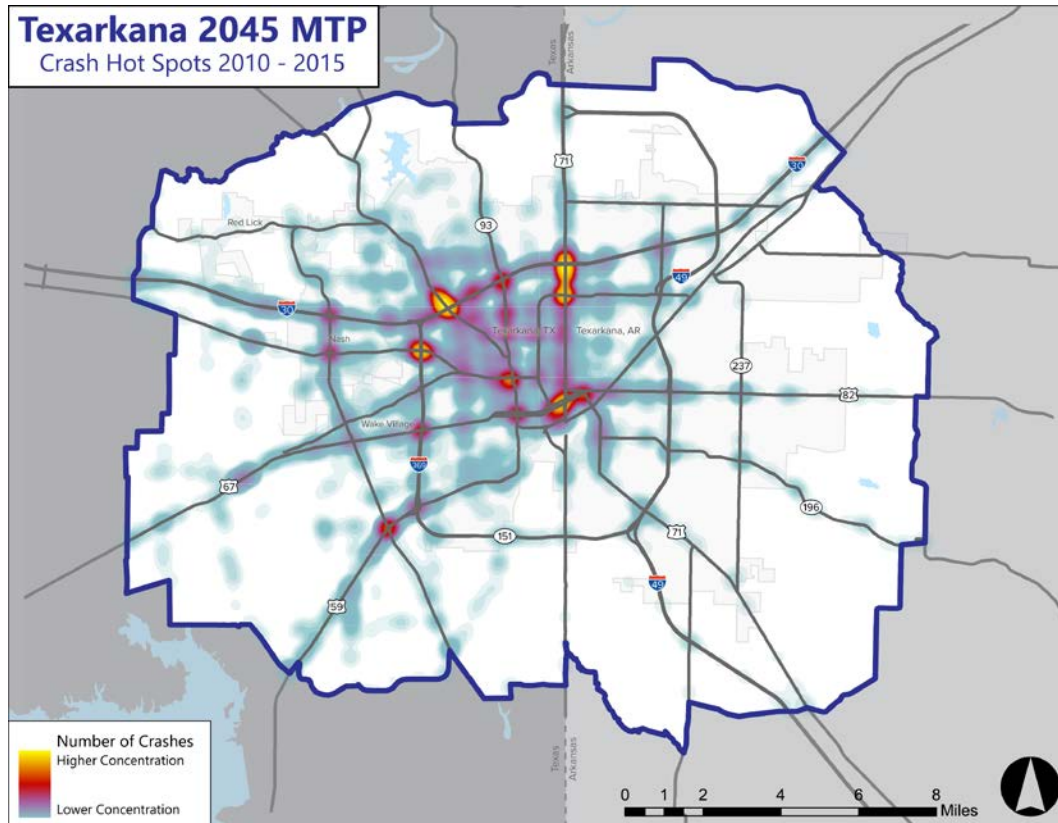
Identify known acute stressors from historical events:

- Floods
- Tornadoes
- Earthquakes
- Fires
- Major transportation incidents, e.g., crashes and spills
- Other transportation related events

Consider predicted acute stressor changes in the future environment based on published research, e.g. climate change



# Plan Review and Needs Assessment



# Plan Review and Needs Assessment

Identify Chronic Stressors discovered through the components of the multimodal needs analysis:

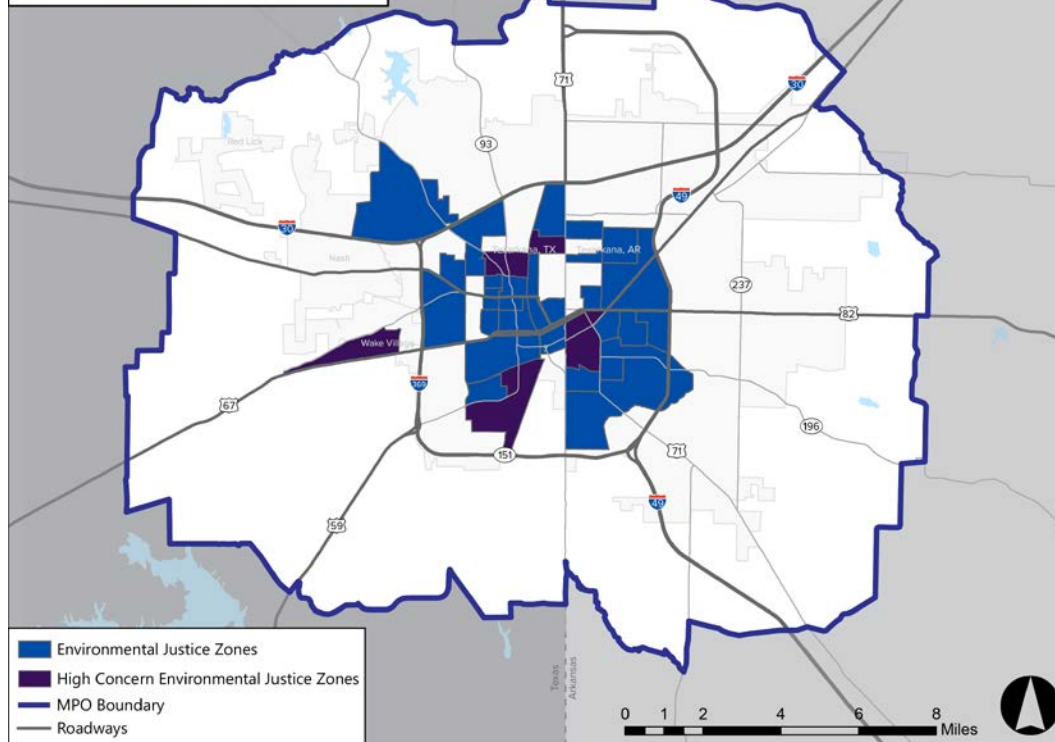
- Growth Pattern and Population Changes
- Challenges faced by Environmental Justice Communities
- Housing and Transportation Costs
- Chronic and Incident Related Congestion
- Poor Level of Travel Time Reliability
- Environmental Factors (soil conditions, heat, rain/drought cycle)
- Increasing Maintenance Needs
- Funding (or the lack thereof)



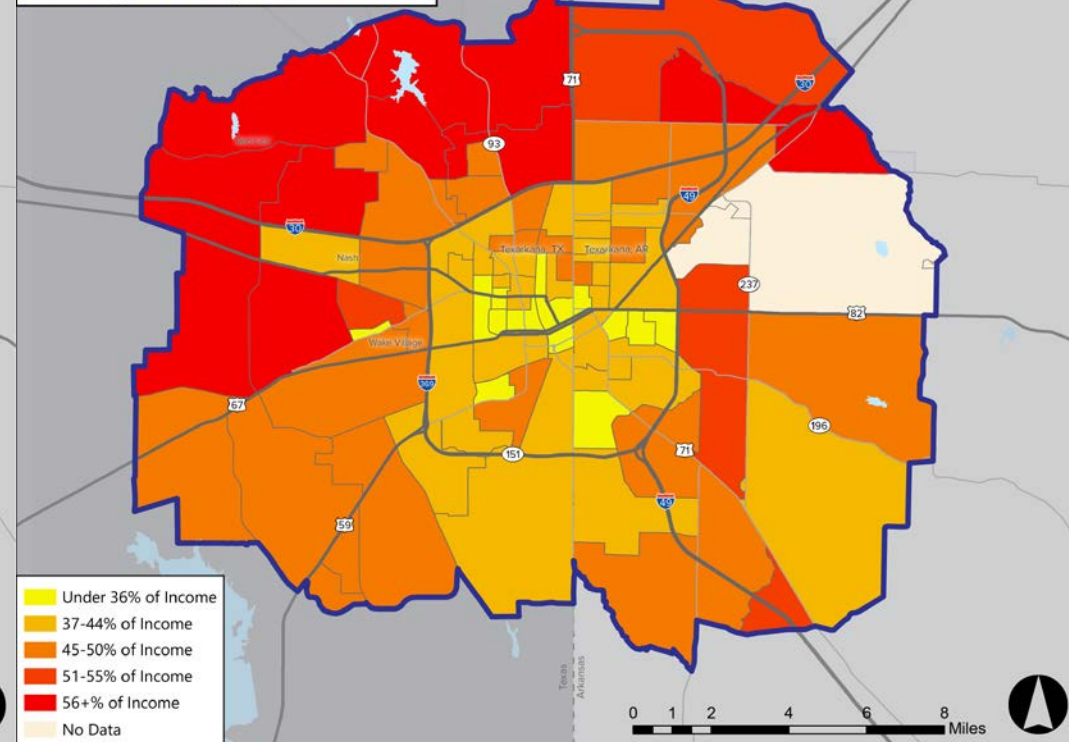


# Plan Review and Needs Assessment

**Texarkana 2045 MTP**  
Environmental Justice Zones

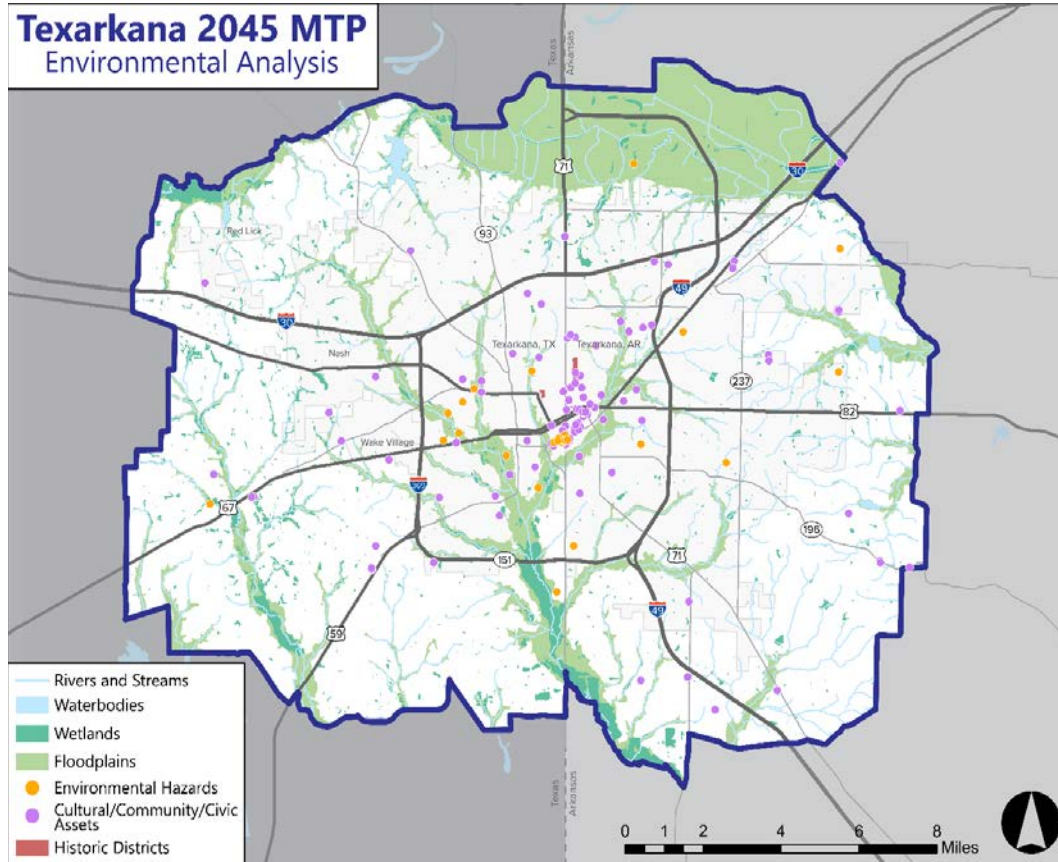


**Texarkana 2045 MTP**  
Housing + Transportation Costs

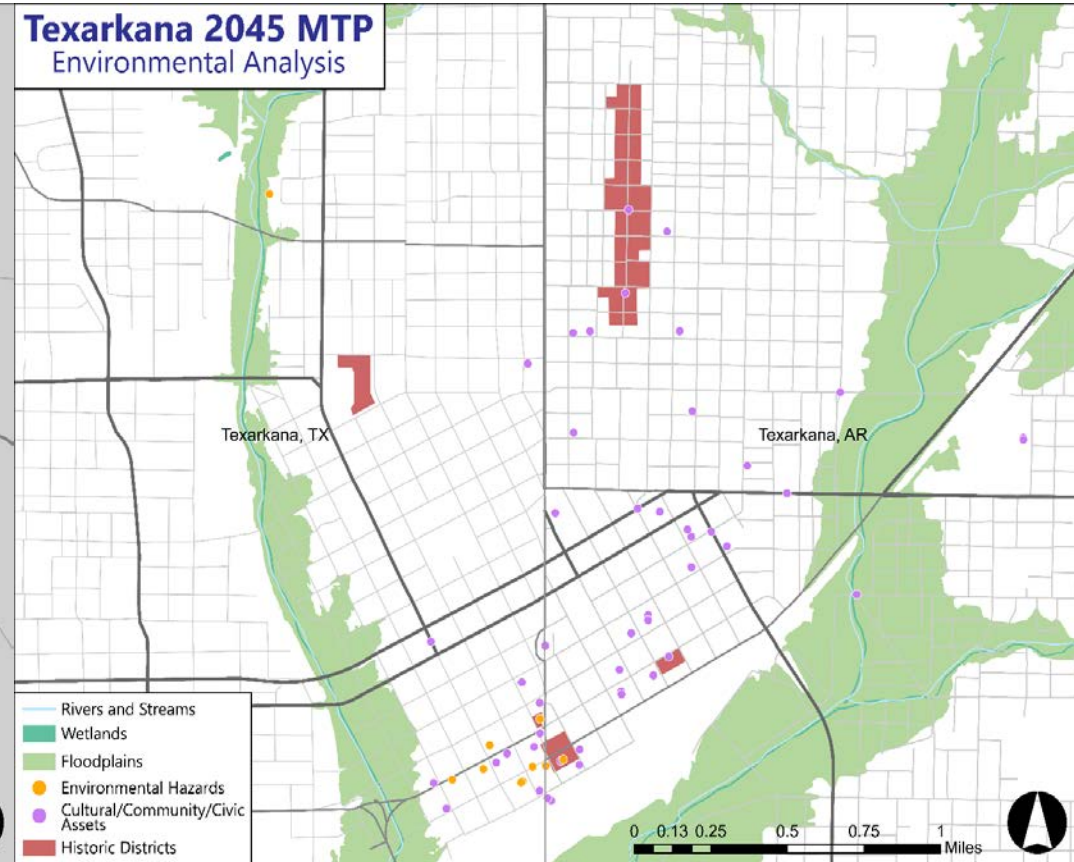


# Identify Vulnerabilities

**Texarkana 2045 MTP**  
Environmental Analysis

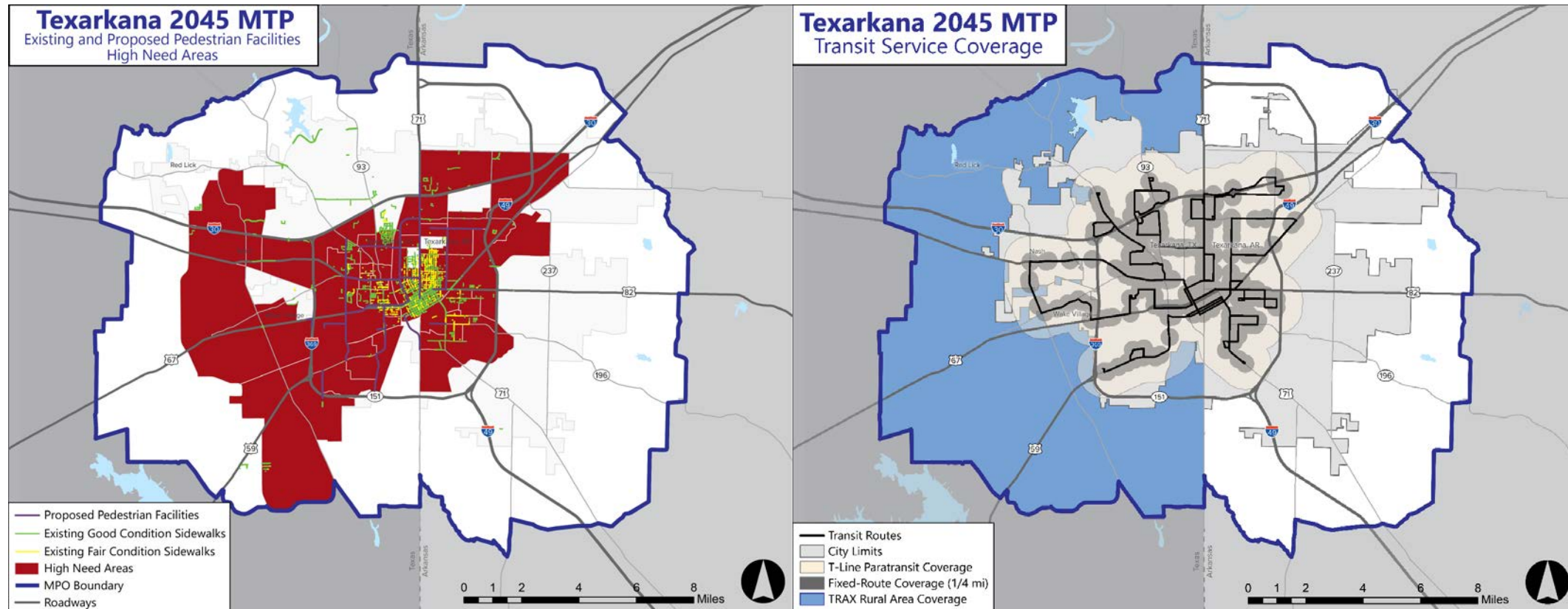


**Texarkana 2045 MTP**  
Environmental Analysis





# Identify Gaps in Accessibility



# Assets that Support Resilience

Identify existing assets that support resistance to chronic and acute stressors, such as:

- Diversified Economic Portfolio
- Diverse Existing Multimodal Options
- Implemented TSM&O Strategies
- Existing Maintenance Plans Addressing Road and Transit State-of-Good-Repair
- Comprehensive and Coordinated Planning Efforts
- Coordination and Planning for Both Short- and Long-term Recovery (e.g., Continuity of Operations Plans and Emergency Operations Plans) with the Regional Office of Emergency Preparedness



# Apply Resilience Assessment to Project Prioritization

- Texarkana Project Prioritization includes 12 Evaluation Criteria following the FAST Act Planning Factors
- The Texarkana process provides flexibility on scoring to account for local values (i.e., criteria weighting)

**Project Call**

**Project  
Submission**

**Project Review  
and Evaluation**

**TC Prioritization  
Workshop**

**PB Review and  
Approval**





# Texarkana Project Prioritization – Evaluation Criteria

- Improve Safety and Security
- Improve Quality of Life
- Reduce Congestion
- Improve Multimodal Access
- Increase Multimodal Connections



# Project Prioritization – Evaluation Criteria

- Support Land Use and Economic Development Goals
- Promote Efficient System Management and Operation
- Preserve Rights-of-Way
- Protect the Environment
- Increase Multi-Modal Options and Energy Conservation
- Improve resilience and Reliability
- Enhance Travel and Tourism



# Texarkana Project Prioritization Workshop


To develop the Final List of Projects, Texarkana TC Members will participate in a Prioritization Workshop.

At the workshop, the members will receive Workbooks with:

- Project Maps
- Project Details
- Project Scoring Sheets
- Current Conditions Maps and Data



## Score Card and Evaluation Criteria

TEXARKANA 2045 MTP PROJECT SCORING SHEET			
Project Name:			
Project Category:			
Project Sponsor:			
Amount STBG < 200K			
Funds Requested:			
Reviewer's Printed Name			
Reviewer's Initials:			
Evaluation Criteria		Score Range	Your Score (whole numbers only)
<b>Improve Safety (0-10 Points)</b>			
Does this project address a high crash location, or a system wide safety condition?		(0-5)	
Does this project address any of the SHSP's Emphasis areas?		(0-5)	
<b>Improve Security (0-5 Points)</b>			
Does this project address or promote the reduction of the risk of individual acts of criminal behavior on a transit line, improvement in the emergency response capacity after an act of terrorism?		(0-5)	
<b>Improve Quality of Life (0-10 Points)</b>			
Does this project improve quality of life?		(0-5)	
Does this project enhance Travel and Tourism?		(0-5)	
<b>Reduce Congestion (0-15 Points)</b>			
Does this project improve V/C of roadway or LOS of Intersections?		(0-5)	
Can the project be expected to reduce congestion on the applicable corridors/region-wide?		(0-5)	
Does this project include any TDM type strategies that reduce congestion?		(0-5)	
<b>Improve Access and Connections (0-10 Points)</b>			
Will the project Improve mobility and accessibility without increasing VMT and ADT?		(0-5)	
Does this project increase system connectivity and reduce travel times?		(0-5)	
<b>Support Economic Development and Land Use Goals (0-10)</b>			
Does this project have positive impact on economic land use goals?		(0-5)	
Is this project part of a regional program or economic development strategy?		(0-5)	
<b>Promote Efficient System Management and Operation (0-5)</b>			
Does this project promote improved system management and reduction in costs?		(0-5)	
<b>Preserve Right-of-Way (0-5)</b>			
Does this project include any Right-of-Way preservation?		(0-5)	
<b>Protect the Environment (0-5)</b>			
Does this project significantly impact any wetlands, flood protection areas, or any culturally significant sites? (0 for direct impact, 5 for none)		(0-5)	
<b>Increase Multi-Modal Options (0-15 Points)</b>			
Does this project facilitate the transfer of passengers and goods between different modes?		(0-5)	
Does this project improve options for different modes of travel (i.e. single occupancy vehicle usage)?		(0-5)	
Does this project improve access to existing/proposed transportation terminal facility?		(0-5)	
<b>Conserve Energy (0-5 Points)</b>			
Will the project impact fuel consumption or reduce single occupancy vehicle usage?		(0-5)	
<b>Cost Sharing (0-5)</b>			
Is the local match more than 30% of total project cost? (Yes = 5, No = 0)		(0-5)	
<b>Project Readiness and Feasibility (0-10)</b>			
Does the project require Right-of-Way acquisition or Environmental Clearance?		(0-5)	
Is the project ready to implement, or implementable within a reasonable timeframe?		(0-5)	

### 11. Improve Resilience and Reliability of the Transportation System and Reduce or Mitigate Storm Water Impacts of Surface Transportation. Examples of improvements to system resilience and reliability, as well as ways to reduce storm water impacts include the following:

- Increasing connections, especially for evacuation and recovery;
- Improvements in system condition (state of good repair).
- Projects with drainage design extending and incorporating outfall beyond the immediate right-of-way;
- Leveraging existing drainage infrastructure and discouraging growth into areas necessitating intensive drainage design.





# Texarkana MPO 2045 MTP



**Resilience is not just a condition it's a state of mind**





# Texarkana MPO

## Integrating Resilience into the 2045 MTP

*Thank You!*

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