



# Alternatives Development and Evaluation Process

## Video 1 of 2

Gulf Freeway Planning and Environmental Linkages (PEL) Study:  
I-45 South from I-69 / U.S.59 (Downtown) to Beltway 8 South

Harris County  
CSJ: 0500-03-633

### Script:

The Texas Department of Transportation, Houston District is conducting a Planning and Environmental Linkages Study, also known as a PEL Study, along Interstate 45 South from Interstate 69 / US 59 in Downtown Houston to Beltway 8 South. This video will discuss the alternatives development and evaluation process for the Gulf Freeway PEL Study.

## Study Videos

*You're watching video 1*

**Video 1** Alternatives Development and Evaluation Process

**Video 2** Public, Agency, & Stakeholder Engagement Summary

This is the last round of outreach for this phase of the study. To learn more about the PEL study visit [www.txdot.gov](http://www.txdot.gov) and use keyword search: *Gulf Freeway PEL Study*

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Script:

You are watching the first video out of two that will provide information about the Gulf Freeway PEL Study. This video, video one, summarizes the alternatives development and evaluation process. Video two focuses on the public, agency, and stakeholder engagement.

This is the last round of outreach for this phase of the study. To learn more about the PEL study please visit [www.TxDOT.gov](http://www.TxDOT.gov) and use keyword search Gulf Freeway PEL Study.

## Overview

- 1 Alternatives Screening Process
- 2 Reasonable Alternatives Overview
- 3 Recommended Alternatives
- 4 Recommended Supplemental Improvements
- 5 What happens next?

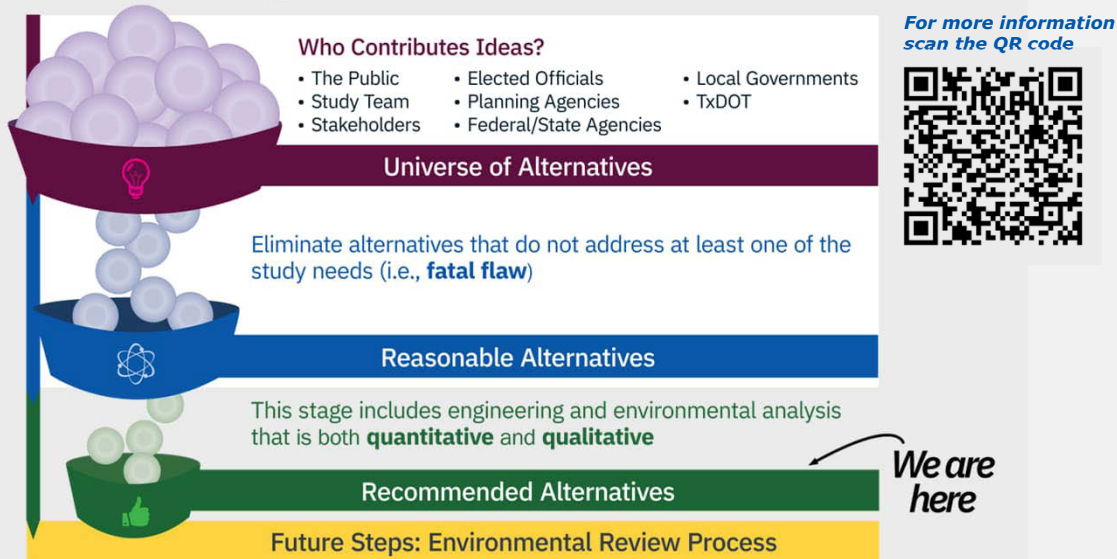
**3**

Script:

In this video we will provide project information related to:

- Alternatives screening process
- Reasonable alternatives description and evaluation results
- Recommended alternatives
- Recommended supplemental improvements
- And will conclude with an overview of future next steps for the study

## Alternatives Screening Process



### Script:

We used a multi-level screening process to move from the Universe of Alternatives to the Recommended Alternatives. The Universe of Alternatives was developed based on input from the public, study team, agencies, local governments, and elected officials. The fatal flaw analysis was used to screen and eliminate the alternatives that do not address at least one of the study needs. The remaining alternatives were identified as the reasonable alternatives.

The reasonable alternatives were then evaluated using engineering and environmental analysis that is both quantitative and qualitative. The reasonable alternatives evaluation is based on the established needs and goals, with input from the public and stakeholders.

At this public meeting we are presenting the recommended alternatives based on the reasonable alternative evaluation results. We are requesting input on the recommended alternatives to finalize the PEL study recommendations. Following completion of the PEL study, the recommended alternatives will be used in a future environmental review process.

You can find more information about the previous steps of the alternatives screening process by visiting [www.TxDOT.gov](http://www.TxDOT.gov) and use keyword search Gulf Freeway PEL Study, or by scanning the QR code on the screen.

### Reasonable Alternatives Overview

An overview of the reasonable alternatives was provided at the June 2024 public meeting to highlight differences between the alternatives.

Please scan the QR code to access Public Meeting 3 (June 2024) meeting materials.



		BASELINE						
		Future No-Build	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F
Reconstruction	No Reconstruction	■	■					
	Reconstruction			■	■	■	■	■
Bike/ Pedestrian Options	No change	■	■					
	Add continuous sidewalks					■		
	Add shared use paths			■	■		■	■
General Purpose (GP) Lane Options	No change	■		■	■			
	Convert one GP lane to HOV lane in non-peak direction		■					
	Remove one GP lane in each direction					■		
	Add one GP lane in each direction						■	■
Managed Lanes (MLs) Options	Maintain existing reversible HOV/HOT lane	■						
	Provide one at-grade managed lane in each direction		■					
	Provide one elevated managed lane in each direction			■			■	
	Provide two elevated managed lanes in each direction				■	■		■
Frontage Roads	Maintain existing number of lanes	■	■	■	■	■	■	■

Script:

The Reasonable Alternatives Overview summarizes how each alternative, presented in June 2024 at the third public meeting, addresses various infrastructure elements, compared against the no-build baseline. Only the no-build alternative and Alternative A require no reconstruction, all other alternatives require full reconstruction of the corridor. The reconstruction of this 60-year-old freeway would satisfy TxDOT’s latest design and safety standards.

For bike/pedestrian options, Alternatives B, C, E and F add shared use paths and Alternative D adds continuous sidewalks. The no-build alternative and Alternative A maintain existing facilities.

For general purpose lane options, no-build alternative, Alternative B and Alternative C all maintain the existing number of lanes. Alternative A would convert one general purpose lane to an HOV lane in the non-peak direction. Alternative D would remove one general purpose lane in each direction and Alternatives E and F would add one general purpose lane in each direction.

For managed lanes options, the no-build alternative would maintain the existing reversible HOV/HOT lane, Alternative A would provide one at-grade managed lane in each direction, Alternatives B and E would provide one elevated managed lane in each direction and Alternatives C, D and F would provide two elevated managed lanes in each direction.

All Alternatives would maintain the existing number of lanes on the frontage roads. Detailed information about the reasonable alternatives can be found on the public meeting 3 materials, which can be accessed by scanning the QR code on the top right of the screen.

### Reasonable Alternatives Evaluation

The reasonable alternatives evaluation is based on the established needs and goals, with input from the public.

Please scan the QR code to access Public Meeting 3 (June 2024) meeting materials.



		BASELINE						
		Future No-Build	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F
<b>Needs</b> 	Improve safety	○	○	●	●	●	●	●
	Improve mobility and reduces congestion	○	○	●	●	●	●	●
	Improve multimodal connectivity	○	○	●	●	●	●	●
	Improve deficient infrastructure	○	○	●	●	●	●	●
<b>Goals</b> 	Improve system-to-system interchanges including roadway network	○	○	●	●	●	●	●
	Minimize impacts to built and natural environment	○	○	○	○	○	○	○
	Minimize right-of-way impacts	●	●	○	○	○	○	○
	Develop cost-effective solutions	●	●	○	○	○	○	○
	Support resiliency along the corridor	○	○	●	●	●	●	●
	Promote economic development	○	○	●	●	●	●	●
	Adapt to future technologies	○	○	●	●	●	●	●
	Stakeholder input	○	○	○	●	○	○	●
	Public input	●	○	○	○	○	○	○

● Most Favorable
◐ Favorable
○ Least Favorable
■ Recommended Alternatives

Recommended alternatives will be further evaluated in the Environmental Review Process

**Script:**

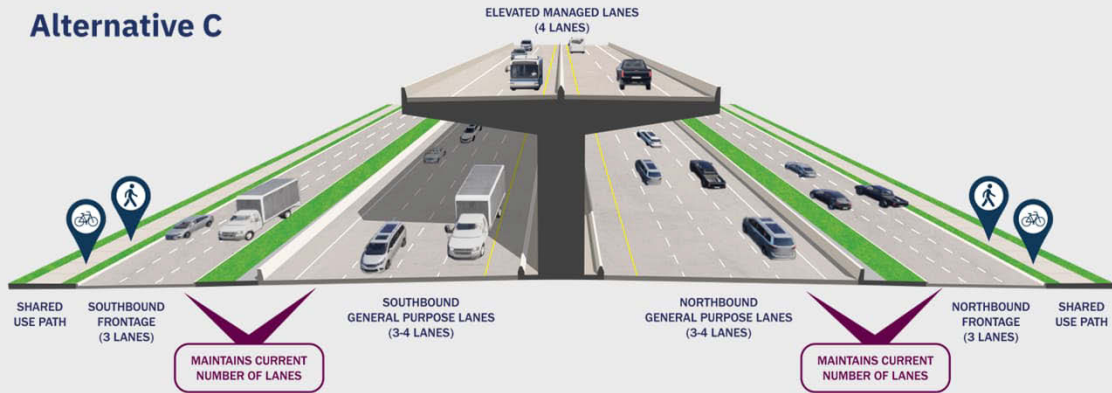
The Reasonable Alternatives Evaluation summarizes how each alternative addresses the study Needs and Goals, compared against the no-build baseline.

Each alternative was assessed using a set of Needs and Goals that were identified at the beginning of the study. Survey results collected from the stakeholders and public during public meeting 3’s outreach in June 2024 was used to complete the evaluation matrix. Alternatives C and F were the highest rated by the stakeholders. Alternatives A and D were the highest rated by the public.

To summarize each evaluation, a three-level rating scale was applied to the overall results for each of the reasonable alternatives: Most Favorable, Favorable, and Least Favorable. These are shown as circles in the table. A solid circle represents the most favorable outcome, indicating that a need or goal is completely fulfilled by the alternative. A half-filled circle represents a favorable outcome, indicating that a need or goal is partially fulfilled by the alternative. An empty circle represents the least favorable outcome, indicating that a need or goal is not fulfilled by the alternative.

Alternatives C and F received the highest number of “Most Favorable” ratings across the criteria. This indicates they are the most effective at meeting both the technical requirements and community priorities. These two alternatives have been identified as the recommended alternatives and are recommended for further evaluation during the environmental review process.

### Alternative C



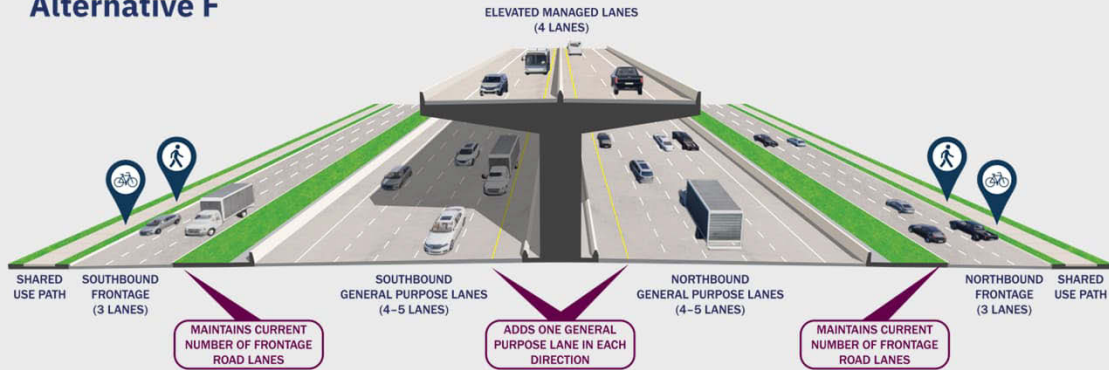
- Convert existing reversible HOV/HOT lane to four elevated managed lanes (two lanes in each direction).
- Maintain the existing number of general purpose lanes and frontage road lanes.
- Convert non-continuous existing sidewalk to continuous shared use path along frontage roads.
- Requires additional right-of-way. The amount of additional right-of-way needed will be explored during the Environmental Review Process.
- Upgrade the corridor to current design standards - enhancing corridor's safety.

*Alternatives recommended at the PEL study's conclusion may become future projects and would be subject to modification during the project development process.*

#### Script:

Proposed improvements for Alternative C would include reconstruction of the entire facility, provide four elevated managed lanes, maintain the same number of general purpose lanes and frontage road lanes, and provide a new continuous shared use path for pedestrians and bicycle users on both sides of the corridor. This alternative would upgrade the facility to current design and safety standards and would require some additional right-of-way.

## Alternative F



- Convert existing reversible HOV/HOT lane to four elevated managed lanes (two lanes in each direction).
- Provide two additional general purpose lanes (one lane in each direction).
- Convert non-continuous existing sidewalk to continuous shared use path along frontage roads.
- Requires additional right-of-way. The amount of additional right-of-way needed will be explored during the Environmental Review Process.
- Upgrade the corridor to current design standards - enhancing corridor's safety.

*Alternatives recommended at the PEL study's conclusion may become future projects and would be subject to modification during the project development process.*

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### Script:

Proposed improvements for Alternative F would include reconstruction of the entire facility, provide four elevated managed lanes, add one general purpose lane in each direction, maintain the same number of frontage road lanes, and provide a new continuous shared use path for pedestrians and bicycle users. This alternative would upgrade the facility to current design and safety standards and would require additional right-of-way.

The difference between Alternatives C and F is Alternative C maintains the existing number of general purpose lanes and Alternative F adds one general purpose lane in each direction. Alternative F is anticipated to require more right-of-way than Alternative C.

## Implementation Timeline for Recommended Alternatives

Estimated schedule and duration of each project depends on the complexity and cost



End of PEL Study

**Note:**  
Timeline reflects the estimated duration from project start date - short term (5 to 10 years), mid term (10 to 20 years) and long term (20+ years).

### Short Term Projects (5-10 years)

Low complexity, low cost treatments that are easily implemented



### Mid Term Projects (10-20 years)

Varying complexity, varying cost treatments that require more coordination or small amounts of right-of-way



### Long Term Projects (20+ years)

High complexity, high cost treatments that require significant coordination and may require higher amounts of right-of-way



Year 1                      +5 years                      +10 years                      +15 years                      +20 years

Approximate Timeline



### Script:

The timeline reflects that recommended alternatives may advance in the project development process as individual, potential future projects proposing to improve the Gulf Freeway. Each project would undergo schematic design, environmental review and final design before construction would occur. The schedule and duration of each future project would depend on the complexity and cost of the improvements. There would likely be three types of projects:

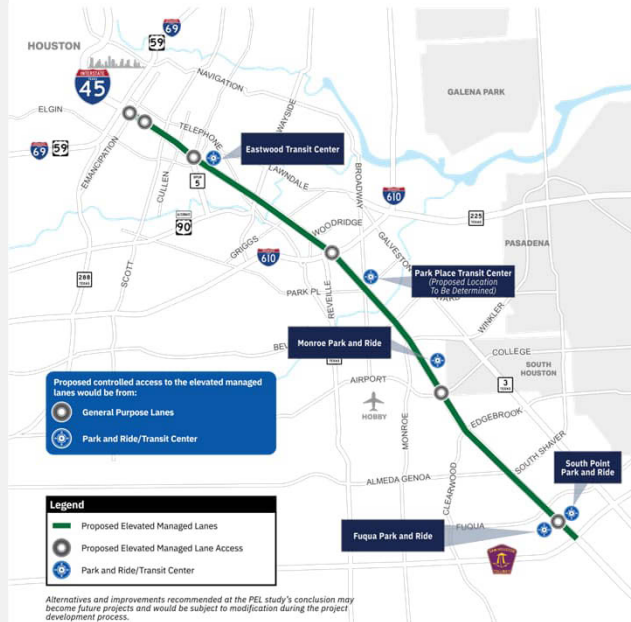
Short term projects would be low cost and low complexity spot improvements with potentially minor impacts and construction completed in a short duration.

Mid term projects take more time due to increased potential for impacts and design complexity.

Long term projects typically have a higher cost, potentially more impacts, and longer-term construction that would extend over multiple years.

Elements of each of the recommended alternatives have been classified into short-, mid-, or long-term projects based on the anticipated complexity and cost. The timeline for each improvement reflects the estimated duration from the environmental review start date through construction.

## Supplemental Long-Term Improvements (20+ years)



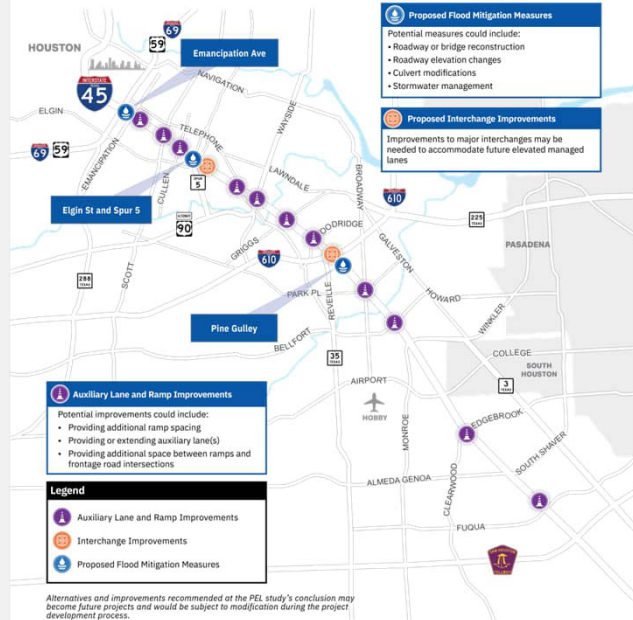
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In addition to the long-term improvements included in Alternative C and F, there are supplemental spot location long-term improvements.

Long-term supplemental improvements include proposed controlled access to the elevated managed lanes from the general-purpose lanes and park and ride/transit centers at the locations displayed on the map with the light blue icons.

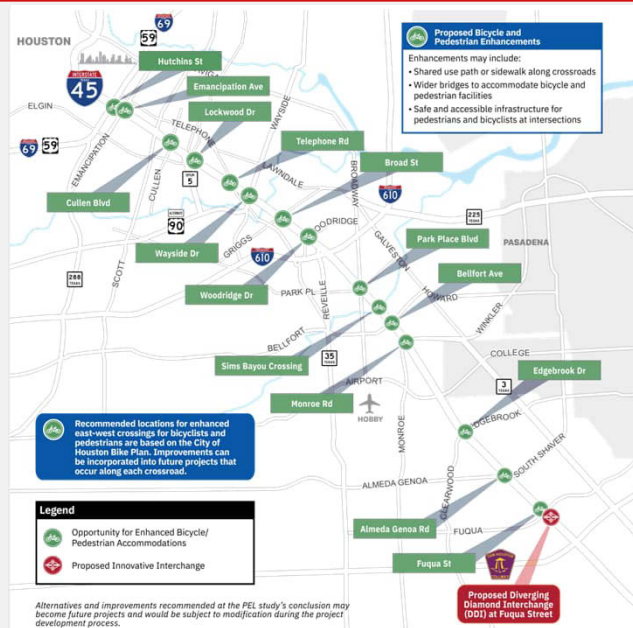
# Supplemental Long-Term Improvements (20+ years)



Script:

In addition, long-term supplemental improvements include flood mitigation measures, displayed on the map in blue, proposed interchange improvements, displayed on the map in orange, and auxiliary lane and ramp improvements, displayed on the map in purple.

# Supplemental Mid-Term Improvements (10-20 years)

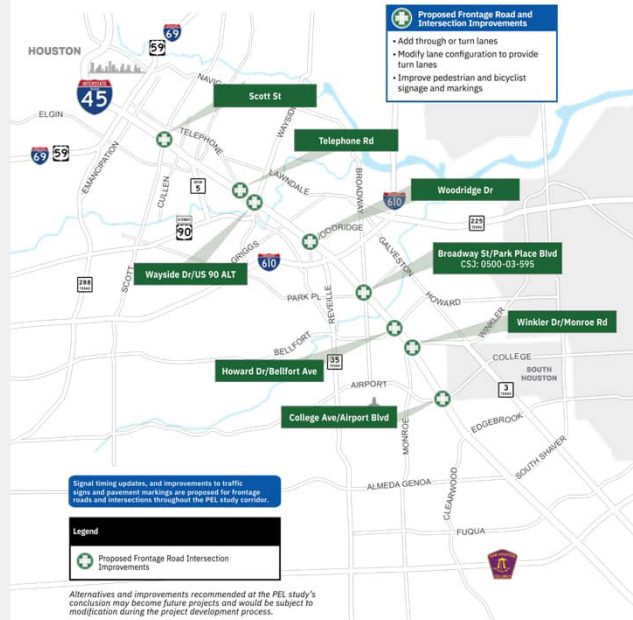


Script:

Mid-term supplemental improvements include: proposed enhanced bicycle and pedestrian accommodations at the locations displayed on the map in green and a proposed innovative interchange at Fuqua Street shown in red on the map.

Proposed bicycle and pedestrian enhancements may include: shared use path or sidewalk along crossroads, wider bridges to accommodate bicycle and pedestrian facilities and safe and accessible infrastructure for pedestrians and bicyclists at intersections.

# Supplemental Short-Term Improvements (5-10 years)



Script:

Short-term supplemental improvements include proposed frontage road and intersection improvements at the locations displayed in green on the map.

## What Happens Next?

The recommended alternatives and improvements may fall into different future project implementation time frames based on the proposed improvement complexity and cost.

### Potential future projects may be sponsored by TxDOT or another agency/jurisdiction

These projects may be subject to the National Environmental Policy Act (NEPA) and the project development process, which include:

#### Environmental Review (NEPA) Resource Areas

- Air quality
- Historic and cultural resources
- Community impacts
- Hazardous materials
- Natural resources
- Traffic noise
- Parks
- Wetlands and waters of the United States
- Visual impact assessment
- Indirect and cumulative resources (if required)

#### Project Development

- Preliminary engineering
- Final alignment determined
- Right-of-way needs evaluated
- Funding sources identified
- Drainage needs evaluated



Continued Public Involvement and Stakeholder Engagement

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Script:

Following the public meeting engagement period, the study team will use the input received from stakeholders and the public to finalize the Study's recommendations. The results of the PEL study will be documented in a final PEL Study report. After the conclusion of the PEL study, the proposed recommended alternatives and improvements may become future projects. Each recommended alternative and improvement would be evaluated in greater detail during the project development process. The recommended alternatives and improvements could be standalone projects, a combination of several into one project, or added to another planned project. These projects could be funded and sponsored by TxDOT or another agency or jurisdiction. Each of these projects would go through the project development process, consisting of preliminary engineering, environmental review, and final design, before construction would occur. Public involvement and stakeholder engagement would continue through each stage of the project development process.

# Thank you!

Visit [www.txdot.gov](http://www.txdot.gov)  
Keyword Search: **Gulf Freeway PEL Study**

Please complete submit comments postmarked  
on or before **Friday, October 3, 2025.**



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Script:

Thank you for watching this video on the Gulf Freeway PEL study alternatives development and evaluation process.

To learn more about the Gulf Freeway PEL study or to provide feedback on the recommended alternatives, please visit the TxDOT webpage and use the keyword search "Gulf Freeway PEL Study", or scan the QR on the screen. Please submit comments postmarked on or before Friday, October 3, 2025.

As a reminder, don't forget to view the other short video on the study webpage to learn more about the public, agency and stakeholder engagement.

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