

**AMENDMENTS TO THE 2021-2024 TRANSPORTATION IMPROVEMENT PROGRAM  
(TIP) AND 2045 REGIONAL TRANSPORTATION PLAN (RTP)**

**Summary**

- Remove federal Congestion Mitigation/Air Quality (CMAQ) funding, as well as the state matching funds, and replace them with local funding for the SH 99 (Grand Parkway) overpass construction project at Peek Road (MPO ID 18032/CSJ 0912-72-381) at the request of the project sponsor, Fort Bend County.
- Modify the scope of work of the City of Houston Fondren Road six-lane widening project (MPO ID 17093/CSJ 3510-04-049) to a reconstruction of the existing four lanes with intersection, safety, multimodal, and drainage improvements at the City's request.
- Update to Appendix J (Texas Department of Transportation Statewide Program of Projects) of the 2021-2024 Transportation Improvement Program to comply with the recently released table of eligible projects.

**Action Requested**

TAC recommendation of the TPC approval of Resolution 2021-16.

**H-GAC 2021-2024 TIP and 2045 RTP**

**May 2021 TPC Amendments**

MPOID/CSJ	Sponsor/County	Project	Proj Type	Proposed Modifications					
				STIP?	Funding (M)		Scope	Schedule	
					Fed/State	Local			
17093/ 0912-72-381	CITY OF HOUSTON (HAR)	FONDREN RD (BRAESWOOD BL..., AIRPORT BLVD...) RECONSTRUCT TO 4 LANE ROADWAY WITH INTER...	R	Yes	<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input type="checkbox"/>
18032/ 3510-04-049	FORT BEND COUNTY (FOR)	SH 99 (AT PEEK RD, NULL) RECONSTRUCTION OF OVERPASS. INSTALL TRAF...	R	Yes	<input checked="" type="checkbox"/>	(\$17.3)	+ \$17.3	<input type="checkbox"/>	<input type="checkbox"/>



# Resolution

## NO. 2021-16

AUTHORIZING AMENDMENTS OF THE 2045 REGIONAL TRANSPORTATION PLAN (RTP) AND THE 2021-2024 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) FOR THE HOUSTON-GALVESTON TRANSPORTATION MANAGEMENT AREA

**WHEREAS**, the 2045 Regional Transportation Plan was adopted by the Transportation Policy Council on April 5, 2019; and

**WHEREAS**, the 2021-2024 Transportation Improvement Program for the Houston-Galveston Transportation Management Area was adopted by the Transportation Policy Council on June 26, 2020; and

**WHEREAS**, the proposed revisions to the 2021-2024 Transportation Improvement Program are consistent with the 2045 Regional Transportation Plan and its finding of conformance with the State Implementation Plan for air quality; and

**WHEREAS**, the proposed revisions to the 2021-2024 Transportation Improvement Program are consistent with the federal fiscal constraint requirements established for the Transportation Improvement Program and are consistent with the financially constrained 2045 Regional Transportation Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE TRANSPORTATION POLICY COUNCIL (TPC) FOR THE HOUSTON-GALVESTON TRANSPORTATION MANAGEMENT AREA THAT THE 2045 REGIONAL TRANSPORTATION PLAN AND THE 2021-2024 TRANSPORTATION IMPROVEMENT PROGRAM BE AMENDED TO REFLECT THE REVISIONS IDENTIFIED IN THE TABLE OF **MAY 2021 TPC AMENDMENTS**.

BE IT FURTHER RESOLVED THAT FEDERAL FUNDS AUTHORIZED BY THE TPC FROM THE CONGESTION MITIGATION AND AIR QUALITY (CMAQ) AND SURFACE TRANSPORTATION BLOCK GRANT (STBG) PROGRAMS REPRESENT A LIMITING AMOUNT. ANY COST OVERRUNS ON PHASES OF WORK AUTHORIZED BY THE TPC OR COSTS INCURRED ON PHASES OF WORK NOT AUTHORIZED BY THE TPC SHALL BE THE RESPONSIBILITY OF THE PROJECT SPONSOR. IN NO CASE, SHALL FEDERAL PARTICIPATION UNDER THE CMAQ AND STBG PROGRAMS BE INCREASED WITHOUT CONSULTATION AND THE EXPRESS APPROVAL OF THE TPC.

**PASSED AND APPROVED** this 21st day of May 2021, at a regularly called meeting of the Transportation Policy Council.

APPROVED:

ATTEST:

---

Hon. Kenneth Clark, Chairman  
Transportation Policy Council

---

Hon. Grady Prestage, Secretary  
Transportation Policy Council

May 2021  
TPC Amendments  
Detail Pages

Blank page

HOUSTON-GALVESTON MPO  
**2021-2024 TRANSPORTATION IMPROVEMENT PROGRAM**  
**2045 REGIONAL TRANSPORTATION PLAN**  
**May 2021 TPC AMENDMENTS**

**PROPOSED VERSION**

**MPOID/CSJ: 17093/0912-72-381**

**FY 2022**

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
HOUSTON	HARRIS	0912-72-381	CS	C	HOUSTON	CITY OF HOUSTON	\$25,465,000
STREET:	FONDREN RD				REV DATE:		
LIMITS FROM:	BRAESWOOD BLVD S				MPO PROJECT ID:		17093
LIMITS TO:	AIRPORT BLVD W				FUNDING CATEGORY:		7
TIP					MTP REFERENCE:		
DESCRIPTION:	<b>RECONSTRUCT TO 4 LANE ROADWAY WITH INTERSECTION, SAFETY, MULTIMODAL AND DRAINAGE IMPROVEMENTS</b>						

REMARKS: **Project History:** Amendment # May-2021-05/21/21- Change scope of work from widening to 6 lanes to reconstruction of 4 lanes.

<b>Total Project Cost Information:</b>		<b>Cost of Approved Phases:</b>	<b>Authorized Funding by Category/Share:</b>					<b>Funding By Category</b>	
			Federal	State	Regional	Local	Local Contribution		
Preliminary Engineering:	\$1,247,785	<b>\$25,465,000</b>	7-STBG:	\$20,372,000	---	---	\$5,093,000	---	\$25,465,000
Right Of Way:	---		<b>Funding by Share:</b>	\$20,372,000	---	---	\$5,093,000	---	\$25,465,000
Construction:	\$25,465,000								
Construction Engineering:	\$1,018,600								
Contingencies:	\$2,546,500								
Indirects:	\$1,293,622								
Bond Financing:	---								
<b>Total Project Cost:</b>	<b>\$31,571,507</b>								

**OLD VERSION**

**MPOID/CSJ: 17093/0912-72-381**

**FY 2022**

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
HOUSTON	HARRIS	0912-72-381	CS	C	HOUSTON	CITY OF HOUSTON	\$25,465,000
STREET:	FONDREN RD				REV DATE:		
LIMITS FROM:	BRAESWOOD BLVD S				MPO PROJECT ID:		17093
LIMITS TO:	AIRPORT BLVD W				FUNDING CATEGORY:		7
TIP					MTP REFERENCE:		
DESCRIPTION:	WIDEN TO 6 LANES WITH TRAFFIC SIGNAL AND DRAINAGE IMPROVEMENTS						

REMARKS: **Project History:**

<b>Total Project Cost Information:</b>		<b>Cost of Approved Phases:</b>	<b>Authorized Funding by Category/Share:</b>					<b>Funding By Category</b>	
			Federal	State	Regional	Local	Local Contribution		
Preliminary Engineering:	\$1,247,785	<b>\$25,465,000</b>	7-STBG:	\$20,372,000	---	---	\$5,093,000	---	\$25,465,000
Right Of Way:	---		<b>Funding by Share:</b>	\$20,372,000	---	---	\$5,093,000	---	\$25,465,000
Construction:	\$25,465,000								
Construction Engineering:	\$1,018,600								
Contingencies:	\$2,546,500								
Indirects:	\$1,293,622								
Bond Financing:	---								
<b>Total Project Cost:</b>	<b>\$31,571,507</b>								

HOUSTON-GALVESTON MPO  
**2021-2024 TRANSPORTATION IMPROVEMENT PROGRAM**  
**2045 REGIONAL TRANSPORTATION PLAN**  
**May 2021 TPC AMENDMENTS**

**PROPOSED VERSION**

**MPOID/CSJ: 18032/3510-04-049** **FY 2022**

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
HOUSTON	FORT BEND	3510-04-049	SH 99	C	NONE	FORT BEND COUNTY	\$17,343,154
STREET:	SH 99					REV DATE:	
LIMITS FROM:	AT PEEK RD					MPO PROJECT ID:	18032
LIMITS TO:						FUNDING CATEGORY:	3
TIP						MTP REFERENCE:	
DESCRIPTION:	RECONSTRUCTION OF OVERPASS. INSTALL TRAFFIC SIGNALS FOR AT-GRADE PORTION OF INTERSECTION AND RECONFIGURE EXISTING ENTRANCE AND EXIT RAMPs FOR SH 99						

REMARKS: **Project History:** Amendment # May-2021- 05/21/21-Replace all federal CMAQ funds and state matching funds with local funds at the sponsor's request.

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share:					Local Contribution	Funding By Category
Item	Amount		3-LOCAL CONT.	Federal	State	Regional	Local		
Preliminary Engineering:	\$849,815		---	---	---	---	\$17,343,154	\$17,343,154	
Right Of Way:	---	\$17,343,154							
Construction:	\$17,343,154	\$17,343,154							
Construction Engineering:	\$867,158								
Contingencies:	\$1,734,315								
Indirects:	\$881,032								
Bond Financing:	---								
<b>Total Project Cost:</b>	<b>\$21,675,474</b>								

**MPOID/CSJ: 18032/3510-04-049** **FY 2022**

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
HOUSTON	FORT BEND		SH 99	C		FORT BEND COUNTY	\$17,343,154
STREET:	SH 99					REV DATE:	
LIMITS FROM:	AT PEEK RD					MPO PROJECT ID:	18032
LIMITS TO:						FUNDING CATEGORY:	5
TIP						MTP REFERENCE:	
DESCRIPTION:	RECONSTRUCTION OF OVERPASS. INSTALL TRAFFIC SIGNALS FOR AT-GRADE PORTION OF INTERSECTION AND RECONFIGURE EXISTING ENTRANCE AND EXIT RAMPs FOR SH 99.						

REMARKS: **Project History:**

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share:					Local Contribution	Funding By Category
Item	Amount		5-CMAQ:	Federal	State	Regional	Local		
Preliminary Engineering:	\$849,815		\$13,874,523	\$3,468,631	---	---	---	\$17,343,154	
Right Of Way:	---	\$17,343,154							
Construction:	\$17,343,154	\$17,343,154							
Construction Engineering:	\$867,158								
Contingencies:	\$1,734,315								
Indirects:	\$881,032								
Bond Financing:	---								
<b>Total Project Cost:</b>	<b>\$21,675,474</b>								



# Fondren Road Re-evaluation

Recommendations to Address FHWA Road Safety Audit and Vision Zero

## Executive Summary

The City of Houston Fondren Road Improvement Project ((MPO ID 17093, CSJ No 0912-72-38) is currently under design. Houston Public Works (HPW) is proposing modifications to the design consistent with specific recommendations from the Federal Highway Administration (FHWA) Road Safety Audit dated May 20, 2019. The proposed modifications are also consistent with the recently approved safety goals of the project sponsor and regional transportation planning partners as outlined in the City of Houston Vision Zero, TxDOT Road to Zero, and H-GAC Vision Zero policies approved by each entity in 2020.

## Project Development Timeline

- **January 12, 2015:** TIP Application was submitted under Mobility-Non Major Category with specific language – “Fondren Road from Braeswood to W. Airport will widen existing four lanes to six lanes, install modern traffic signalization at intersections, improve major drainage systems and replace sanitary sewer.”
- **May 27, 2016:** 2017-2021 TIP approved by TPC with FY22 funding for Fondren Road Improvement Project in 10-year plan.
- **May 20, 2019:** FHWA submitted the second of two Road Safety Audit (RSA) reports to Houston Public Works. The RSAs were conducted at 12 locations, including Fondren at Bellfort within the TIP project limits.
- **May 19, 2019:** Texas Transportation Commission adopted the Road to Zero policy and instructed the Texas Department of Transportation to devise strategies for eliminating all traffic fatalities in Texas by 2050.
- **May 28, 2019:** Advance Funding Agreement (AFA) between TxDOT and City of Houston was executed.
- **August 13, 2019:** Vision Zero Executive Order adopted by the City of Houston.
- **June 23, 2020:** City submitted 60% designs to TxDOT.
- **October 23, 2020:** The H-GAC Transportation Policy Council by resolution commits to support transportation projects and programs to eliminate traffic fatalities in the region by the year 2050.
- **November 7, 2020:** Mayor Turner and TxDOT Commissioner Ryan joint press conference to “End the Streak” including an update on how Houston and Texas are addressing roadway fatalities.”
- **November 19, 2020:** City submitted 90% designs to TxDOT.

## FHWA Road Safety Audit

In 2018, a Federal Highway Administration Road Safety Audit (RSA) was conducted at the intersection of Fondren at Bellfort. FHWA recommendations from page 20 of the Road Safety Audit that address Fondren at Bellfort are listed below.

### Short Term (up to 12 months)

- Recommendation: Assess pedestrian phase timing to ensure adequate clearance.
- Recommendation: Modify median noses and straighten crosswalks.
- Recommendation: Use high visibility crosswalk markings based on crash history at this location.

### Medium to Long Term (1+ years)

- ***Recommendation: Reconfigure Bellfort and Fondren to widen median (See Figure 15), provide bicycle facilities, and encourage slower speeds by reducing the cross section from six lanes to four.***
- Recommendation: Evaluate and adjust bus stop placements, possibly in conjunction with
- driveway closure/consolidations.

# Fondren Road Re-evaluation

## Recommendations to Address FHWA Road Safety Audit and Vision Zero

The City of Houston Fondren Road Improvement Project ((MPO ID 17093, CSJ No 0912-72-38) is currently under design. Houston Public Works (HPW) is proposing modifications to the design consistent with specific recommendations from the Federal Highway Administration (FHWA) Road Safety Audit dated May 20, 2019. The proposed modifications are also consistent with the recently approved safety goals of the project sponsor and regional transportation planning partners as outlined in the City of Houston Vision Zero, TxDOT Road to Zero, and H-GAC Vision Zero policies approved by each entity in 2020.

### [Urban Roadway Added Capacity in the Context of Vision Zero](#)

The May 2019 FHWA Road Safety Audit (RSA) made several recommendations that are not aligned with the Fondren Road design developed following the 2015 TIP application. The modifications proposed in this report intend to reconcile these recommendations while maintaining the goals of the 2015 TIP Mobility-Non Major project consistent with the RTP.

An analysis of demographics and land use changes as well as historical and updated projected traffic volumes indicates that capacity improvements to the corridor may best be accomplished by improving access to and movement of high-capacity transit. This will result in an improvement of “people-carrying capacity” – the total of all people moving in a corridor, regardless of their mode of transportation, including people driving, using transit, using a wheelchair, walking, or biking.

This report describes demographic and land use trends; summarizes existing traffic counts and historical traffic growth trends; provides projections for future traffic volumes; proposes recommended modifications to the Fondren Road Paving and Drainage Project; and provides capacity analyses that justify the recommendations.

The proposed recommendations include:

- A typical cross section of 4 lanes with an expanded physical median along Fondren Road between S. Braeswood and W. Airport as recommended by FHWA and the safety audit team that included TxDOT personnel.
- Bus queue jump/right turn-lanes at major signalized intersections to enhance transit service and increase overall person-carrying capacity of the corridor.
- Sidewalk and median designs that exceed TxDOT standards and are compliant with City of Houston design standards and best practices for urban roadways.
- Specific intersection and transit signal priority modifications as detailed in the report.

The proposed recommendations reflect current data, and multimodal safety standards while maintaining the goal of the grant application to improve multimodal roadway capacity and operations for all users while managing congestion.

## FHWA Road Safety Audit

In August 2018, at the request of Mayor Turner, HPW partnered with FHWA to conduct Road Safety Audits (RSAs) at 12 Houston intersections. FHWA recommends RSAs as a “proven safety countermeasure” that employ a multidisciplinary team of transportation professionals including, in this case, members from: FHWA, TxDOT, Houston Public Works (HPW)-Traffic, HPW-Street and Bridge Maintenance, Houston Police Department, and Metro. The intersections were selected by community partners at LINK Houston and BikeHouston based on a combination of community feedback and documented crash problems. Representatives from those groups also joined the RSA team. FHWA submitted the final report on May 20, 2019.

The intersection of Fondren at W. Bellfort was included in the RSA because of an elevated number of crashes involving people walking and bicycling. One specific RSA recommendation was to “reconfigure Bellfort and Fondren to **widen the median**. . .and encourage slower speed by **reducing the cross section from six lanes to four**.”

This recommendation directly contradicts the current design of the TIP-funded Fondren project, which proposes to remove bottlenecks by constructing a consistent 6-lane roadway where some sections between S. Braeswood and W Airport are currently 4-lanes.

Design revisions based on FHWA safety recommendations will remove bottlenecks by constructing a 4-lane roadway for the entirety of the proposed limits with transit enhancements including far side stops and transit signal prioritization. For MetroNext BOOST corridors, Metro forecast 15% increases in ridership with similar improvements in mature transit corridors. The Fondren route is currently a mature high frequency route with service every 15 minutes. January 2020 average ridership averaged 4,214 boardings per day and, consistent with Metro forecasting, can be assumed to increase to nearly 5,000 per day with these transit improvements and safer pedestrian realm.

The revised design will improve throughput and person-carrying capacity. Safety, the region’s highest priority, will also be significantly enhanced with incorporation of the FHWA recommendations.

The revised project meets all of the RTP and TIP goals.

- Improve Safety – Performance Measure: Reduce crash rates of fatalities and serious injuries
- Achieve/Maintain State of Good Repair – Performance Measure: Pavement Conditions
- Move People and Goods Efficiently – Performance Measure: Increase reliability; Expand multimodal network
- Strengthen Regional Economic Competitiveness – Performance Measure: Increase multi-occupant vehicle use
- Conserve and Protect Cultural and Natural Resources – Performance Measure: Reduce impacts requiring mitigation

## Demographic and Land Use Analysis

The long timeline of the Fondren project, from the original pre-engineering report in 2011 and grant application in 2015 to the present, provides all parties involved a unique opportunity to assess the project to ensure that it maximizes benefits, including safety benefits.

### Population and Job Growth

The section provides an analysis of demographic and land use background and trends. Overall, the area is undergoing a transition from a low-density, car-based, suburban community to a higher-density, mixed-use community that will benefit from improved multimodal transportation options .

Considerations of “added capacity” in communities like this must include the contributions of all transportation modes to that capacity – in other words, “people-carrying capacity.”

The Fondren corridor, with over 13 persons per acre is currently more than twice as dense as the City of Houston overall (5.6 persons per acre). This trend is expected to further increase, with the corridor expected to add more than 5,000 more residents in the next 10 years, leading to a density of almost 15 persons per acre. See **Table 1** for population growth projections.

**Table 1: Population Growth along Fondren**

Year	Population	Density (Persons/Acre)	% Change
2010	30,502	13.2	
2015	31,117	13.5	2.0%
2020	28,988	12.5	-6.8%
2025	31,253	13.5	7.8%
2030	34,293	14.8	9.7%

*Population and Population Density, H-GAC Regional Growth Forecast*

Jobs are coming to the area as well. In the last five years, jobs in the Fondren corridor increased over 40%. This gain is expected to be maintained and possibly increased somewhat over the next decade. See **Table 2** for job growth projections.

**Table 2: Job Growth along Fondren**

Year	Jobs	Job Density (Jobs/Acre)	%Change
2015	5,998	2.6	
2020	8,463	3.7	41.1%
2025	8,587	3.7	1.5%
2030	8,698	3.8	1.3%

*Job Density, H-GAC Regional Growth Forecast*

### Vehicle Ownership

Vehicle ownership in the corridor is significantly lower than across the City overall. While citywide, 8.4% of households have no access to a vehicle, within the corridor 15% of households have no access to a vehicle. These households need other safe mobility options, including transit, walking, and biking.

## Land Use along Fondren

The Fondren corridor is characterized by variations of low- to mid-rise multi-family housing with large commercial shopping centers at major intersections (S Braeswood Blvd, W Belfort Ave, Airport Rd). See **Figure 1** for a land use map for existing conditions around Fondren.

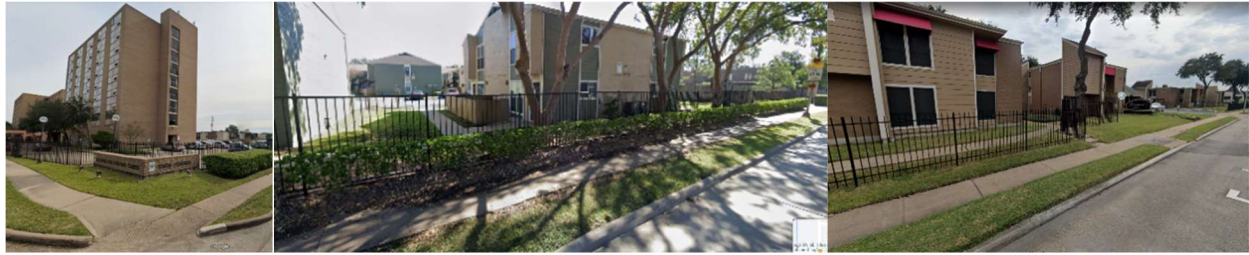
- Density is highest near the S. Braeswood and W. Belfort intersections, each with shopping centers at the corners and apartment buildings on the periphery.
- Parcels designated as “other” include religious centers along the corridor.

**Figure 1: Land Use Along Fondren**



*(Land use map of Fondren Rd, H-GAC regional Land Use Information System)*

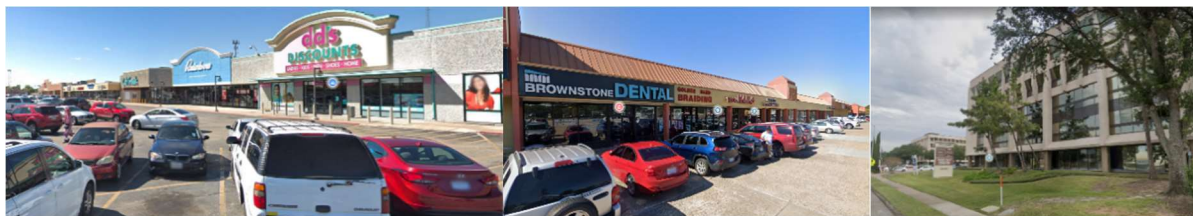
The images below demonstrate the increasing density of residences, workplaces, and destinations in the corridor.



*Example of multi-family housing on Fondren corridor*



*Multi-family housing (right) next to shopping center near intersection of Fondren & S Braeswood*



*Commercial and office centers along Fondren*

This particular mix of land uses is very well suited to short trips by walking and biking with the density to support longer trips by transit.

- This mixed-use corridor has sidewalks but no bicycle facilities.
- Multimodal access is limited while demand for short trips is high.
- A Vision Zero analysis of traffic deaths and serious injuries from 2014-2018 indicates that roughly one mile of this corridor is part of the High Injury Network.

## Corridor Analysis – Vehicle Capacity

This section summarizes traffic projections and traffic counts used in this analysis. As described previously, the long timeline of the Fondren project provides all parties involved a unique opportunity to assess the project to ensure that it maximizes benefits based on changing traffic patterns and other characteristics. Updates to traffic patterns and projections are contained in this section.

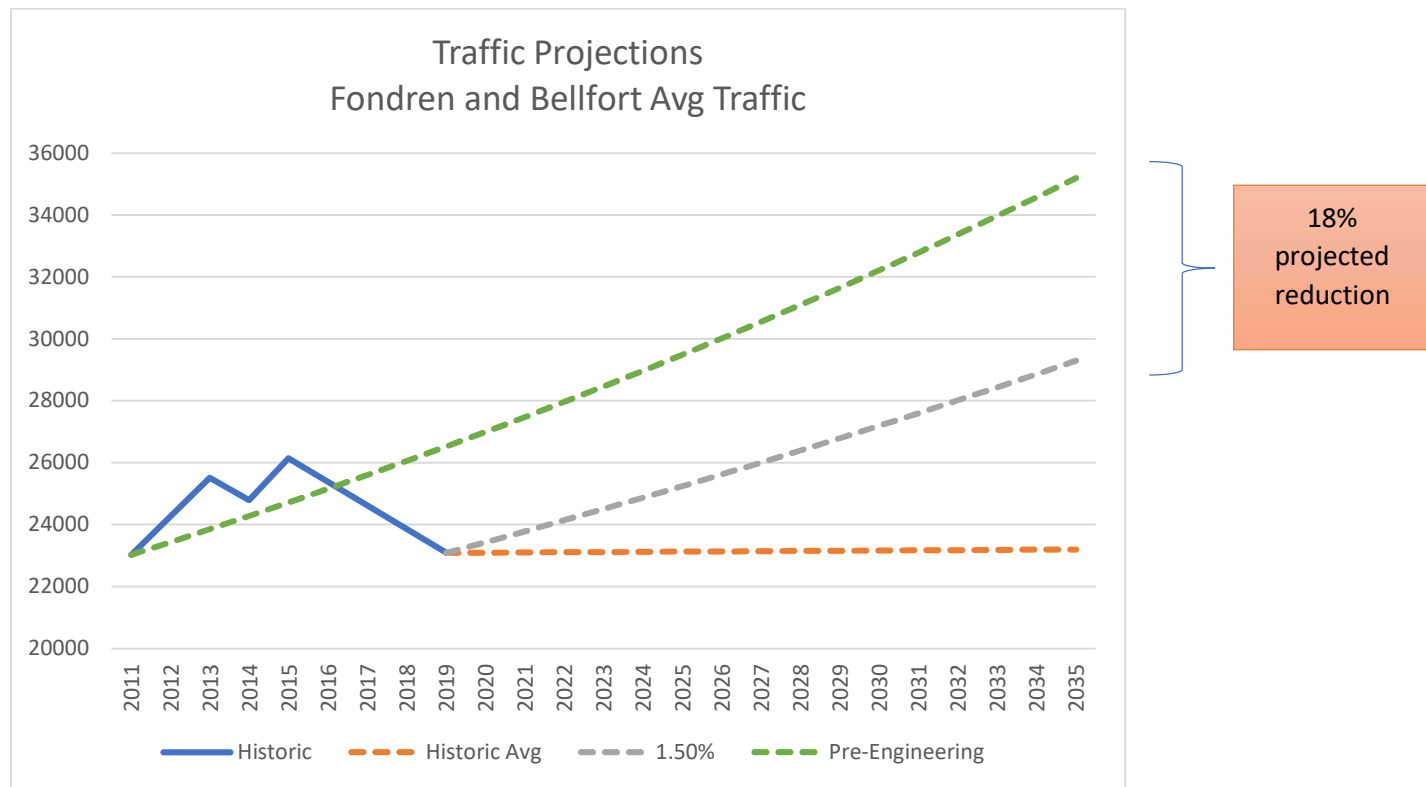
## Traffic Projections

Vehicle Capacity **Figure 2** shows historic counts and various projections. The counts shown in the figure are an average for various segments along Fondren and Bellfort to provide a regional assessment of growth.

The Pre-Engineering data in **Figure 2** shows the original projection from the City of Houston Pre-Engineering Report from 2011. However, between 2011 and 2019, the actual growth rate (0.03%) was much lower than the pre-engineering projection; the “historic average” trend carries this growth rate to 2035.

Typically, for built-out areas like this, a growth rate of 1-2% is appropriate. A 1.5% growth rate was used for this analysis, as shown in **Figure 2**. As indicated on the figure, the 2035 traffic volumes using a 1.5% growth rate are approximately 18% less than the Pre-Engineering forecast.

**Figure 2: Traffic Projections**



When determining lane configurations for a roadway, it is helpful to look at the operation at intersections and along corridors between intersections separately.

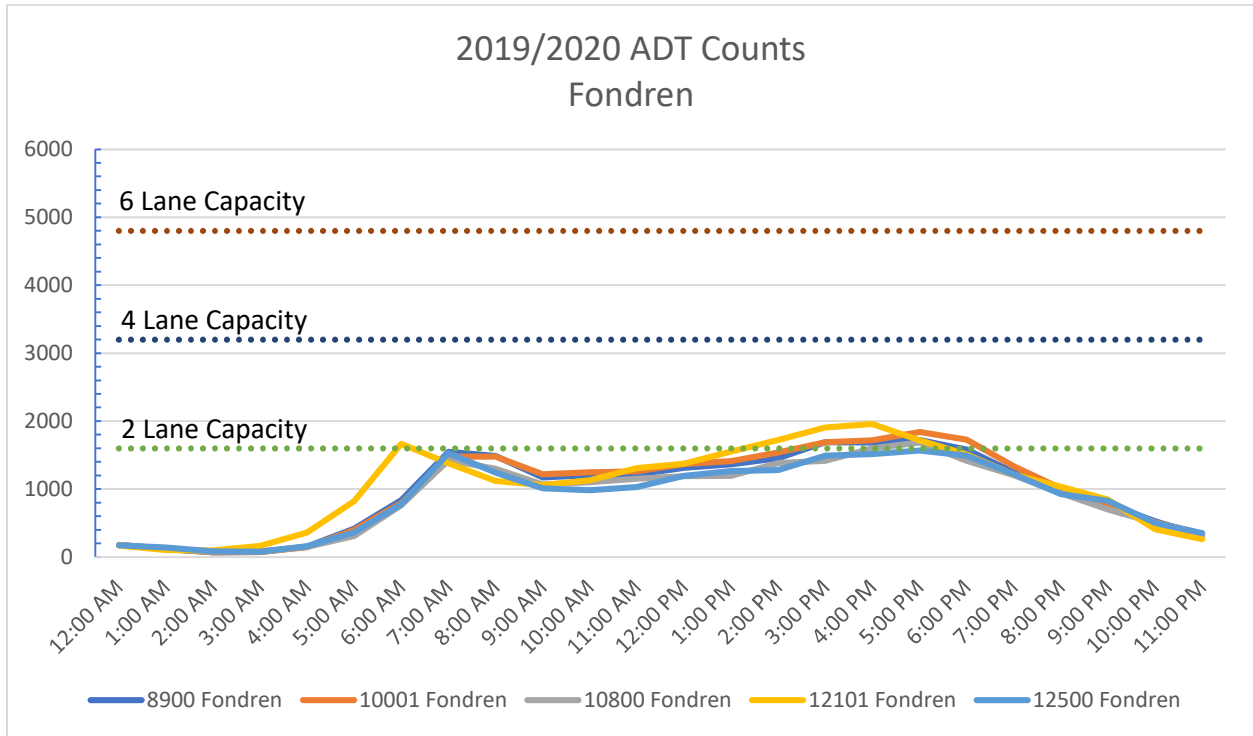
The City of Houston typically utilizes a lane capacity of 800 vehicles per hour (vph) for corridor analyses. Generally, the lane capacity for a free-flow lane without any cross conflicts (e.g., freeway conditions) is over 2000 vph. The COH lane capacity of 800 vph assumes an approximately 50% split at signalized intersections as well as signal start-up/lost time. This is typically considered a conservative estimate. Lanes operating at or even somewhat above capacity do not necessarily or automatically experience



gridlock. Instead, drivers are more likely to have to slow a bit when a driver in front slows or turns. To a certain extent, this slowing of traffic can theoretically result in a slower and safer road.

**Figure 3** shows counts at various locations along Fondren during the 2019/2020-time frame and compares those counts to the corridor lane capacity. All counts were collected before the commencement of COVID-19-related traffic impacts.

**Figure 3: Existing 24-Hour Traffic Volumes**



**Figure 3** exhibits the following crucial points.

- For most hours of the day for all segments, a two-lane cross section (i.e., one lane in either direction) would be suitable to handle traffic for most hours of the day.
  - The Fondren Road TIP application proposed 6 lanes based on unrealized growth forecasts.
- Traffic volumes on Fondren are relatively stable throughout the day and do not exhibit significant peaking during the morning and afternoon.
  - The peak-hour factor, K, ranges for these segments between 7.4 and 7.9. K values for urban roadways typically range between 9 and 10.
  - This indicates a more efficient utilization of roadway capacity through that day and suggests that the peak-hour conditions require less capacity than might be expected for the overall roadway ADT on Fondren.

**Figure 4** shows the future 2035 traffic volumes assuming the 1.5% growth rate shown in **Figure 2**. The 1.5% growth rate is used in the capacity analyses presented in this report.

**Figure 4: Future 24-Hour Traffic Volumes (1.5% Growth)**

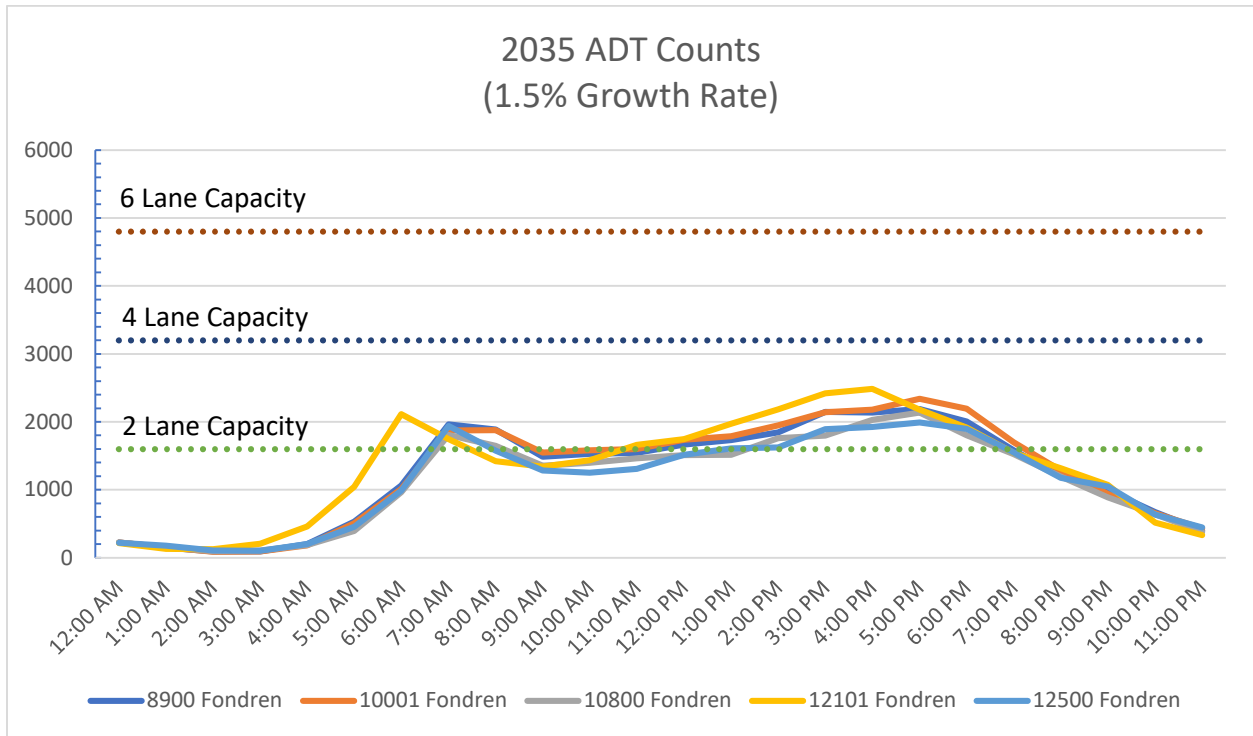
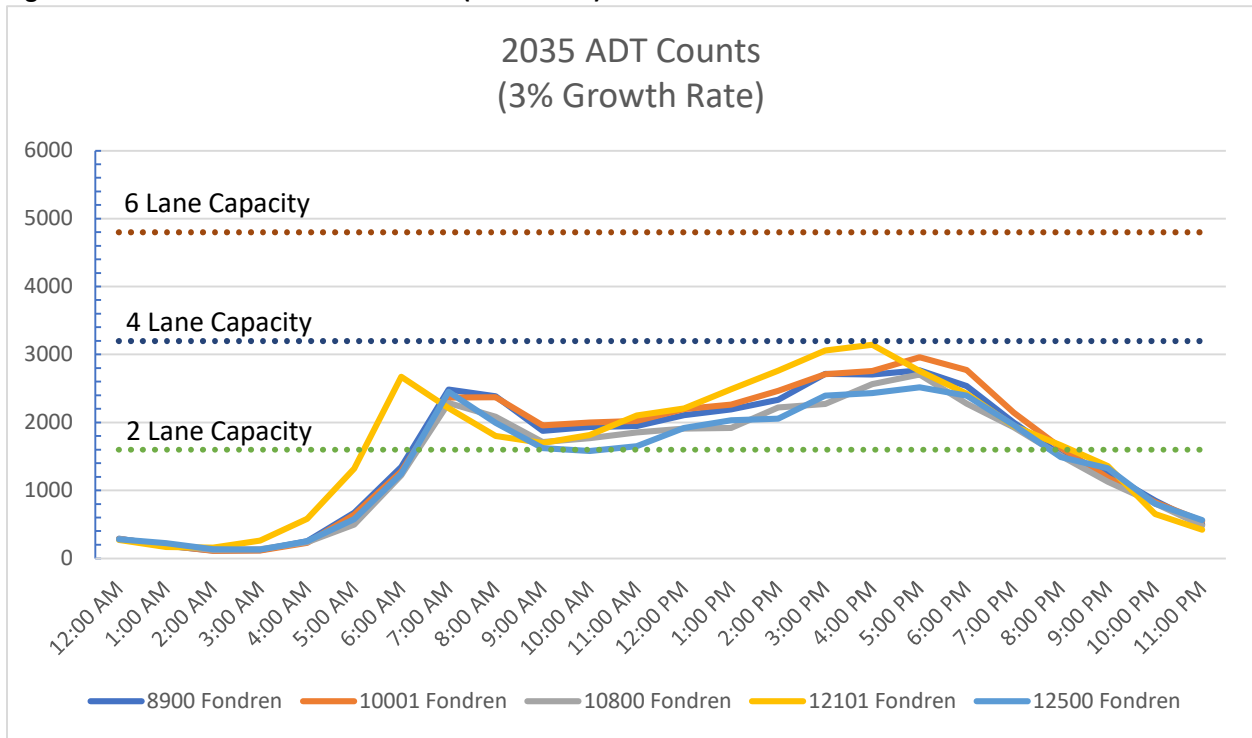


Figure 5 shows 2035 ADT volumes assuming a 3.0% growth rate.

A 3.0% growth would not be considered reasonable for a built-out area like Fondren. However, for both growth assumptions, no segments are expected to need more than 4 lanes (2 in each direction) for any hour of the day.

**Figure 5: Future 24-Hour Traffic Volumes (3% Growth)**



## Project Comparison – TIP Application and FHWA Recommended Improvements

### TIP Project – Previous Proposal

As outlined above, the original TIP application for the Fondren Project Fondren Road recommended widening the road from four lanes to six lanes; installing modern traffic signalization at intersections; improving major drainage systems; and replacing sanitary sewer and water lines, as necessary.

**Figure 6** shows the typical midblock cross section as proposed in the TIP application, and **Figure 7** shows the typical intersection cross section.

**Figure 6: TIP Proposed Cross Section (Midblock)**



**Figure 7: TIP Proposed Cross Section (Intersection)**

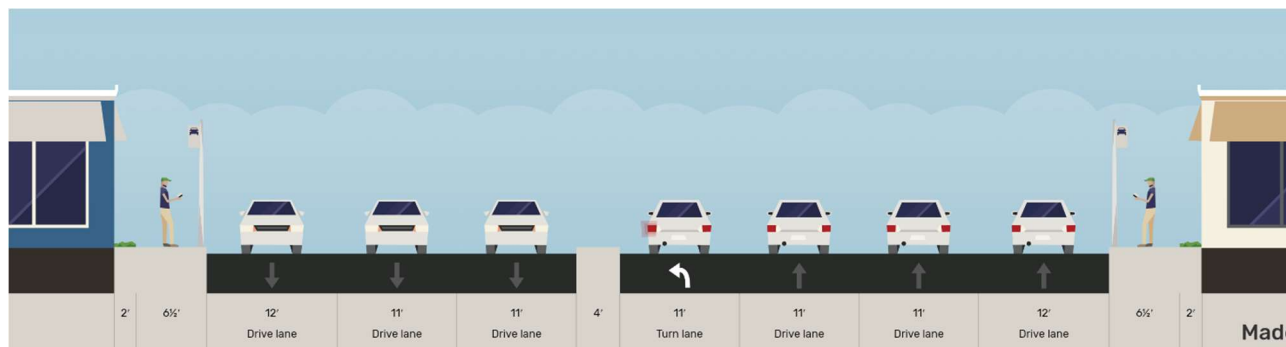


Table 3 summarizes the design characteristics used in the TIP design and compares the characteristics to the 2020 City of Houston design standards. Table 3 illustrates that the design based on the original TIP Application is not compliant with City of Houston Design Standards, which have been developed consistent with current best practice in urban roadway safety.

**Table 3: TIP Design Characteristics**

	Proposed	2020 City Standard	Compliant with City standards?
<b>Number of Lanes</b>	6*	n/a	n/a
<b>Lane Width</b>	11-12 ft*	10-11 ft	<b>NO</b>
<b>Sidewalk Buffer</b>	0 ft*	2-4 ft	<b>NO</b>
<b>Sidewalk Width</b>	6.5 ft*	6 ft	YES
<b>Pedestrian Realm</b>	8.5 ft*	10-15 ft	<b>NO</b>
<b>Median Width</b>	15 ft*	15-17 ft	YES

\*Proposed per TxDOT Roadway Design Manual

### TIP Project – Alternative Design

An alternative design is proposed based on FHWA Safety Audit recommendations for Fondren at Bellfort. This design concept fits entirely within the existing 100-ft right-of-way along Fondren and will likely reduce the need for additional ROW takings at intersections. All previously proposed recommendations for stormwater and utility improvements are unchanged.

The goals of the new design are:

- **Enhance overall corridor capacity** by including transit enhancements and buffered pedestrian realm that will foster growth in existing above average pedestrian and transit activity.
- **Provide transit-specific enhancements at major intersections to improve transit operations and user access.**

- Encourage walking, transit, and bicycle usage for local trips (consistent with the region’s Congestion Management Plan) in this high-density area which will reduce vehicle lane demands and emissions.
- Provide sufficient vehicle capacity during all hours, including peak hours.
- Minimize excess vehicle capacity which data indicates fosters increased speeds.
- Maximize safety for all road users for all hours.

### Corridor Considerations

Figure 8 shows the alternative proposed cross section for midblock locations. Table 4 summarizes the design characteristics of this cross section.

Figure 8: Alternative Cross Section (Midblock)

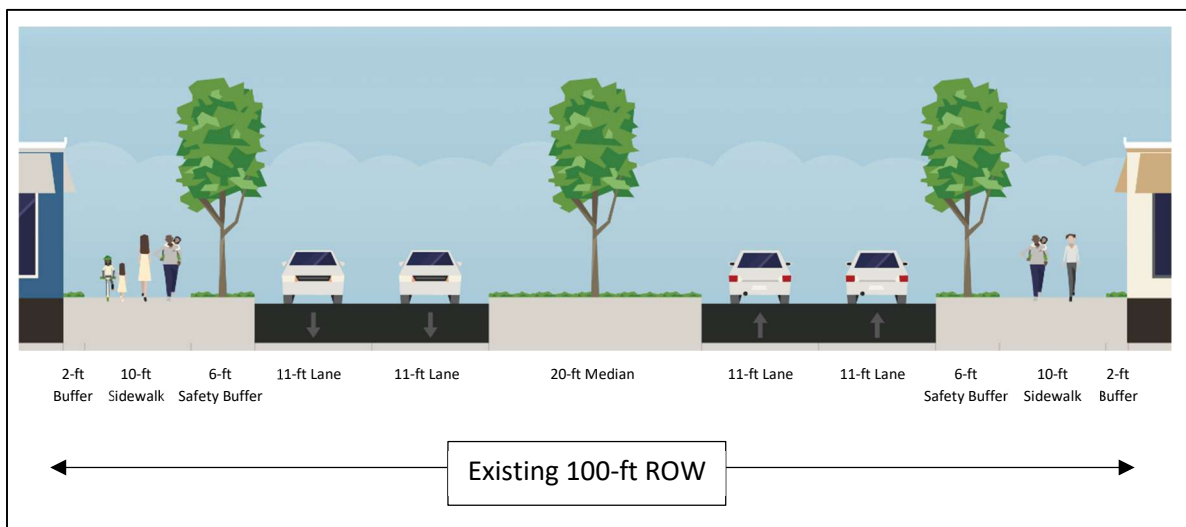


Table 4: Alternative Design Characteristics

	Proposed	City Standard	Compliant with City standards?
<b>Number of Lanes</b>	4	n/a	n/a
<b>Lane Width</b>	11 ft	10-11 ft	YES
<b>Sidewalk Safety Buffer</b>	6 ft	2-4 ft	YES
<b>Sidewalk Width</b>	10 ft	6 ft	YES
<b>Pedestrian Realm</b>	18 ft	10-15 ft	YES
<b>Median Width</b>	20 ft	15-17 ft	YES

As indicated in Table 4, the re-evaluation cross section is fully compliant with City of Houston design standards and with the FHWA Road Safety Audit (RSA) dated 5/20/2019. The features of this cross section and how they align with the RSA recommendations, include:

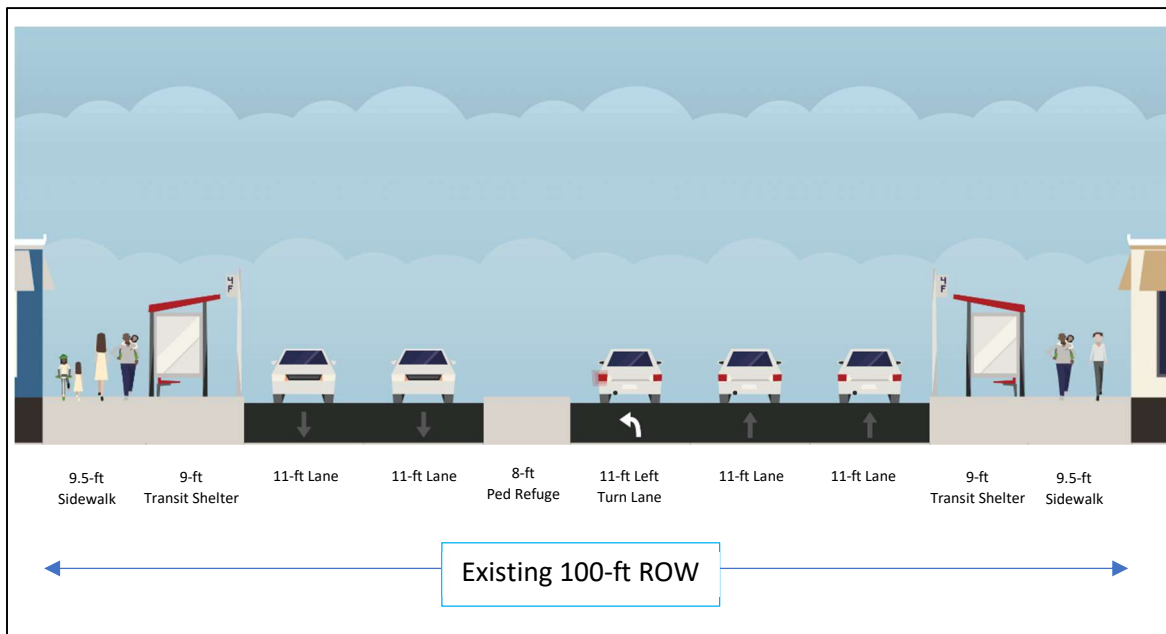
- Four-lane typical cross section

- Addresses FHWA RSA recommendation (Page 20): “Reconfigure Belfort and Fondren to...encourage slower speeds by reducing the cross section from six lanes to four.”
- As shown in **Figure 4**, this cross section provides sufficient roadway capacity for 2035 traffic projections.
- A median of sufficient width to accommodate existing/future landscaping, left-turn lanes, and median refuges for pedestrians at crossing locations.
  - Addresses original TIP application goal to provide a “raised median” and “access management.”
  - Addresses FHWA RSA recommendation (Page 20): “Reconfigure Belfort and Fondren to widen median...”
- Wide sidewalks on both sides of the road to accommodate pedestrians and other road users.
  - Addresses original TIP application justification to “improve the safety of multi-modal mobility.”
- Buffers between the sidewalks and the roadway to provide safety for pedestrians and to provide sufficient space for traffic signs, street lighting, and landscaping.
- The proposed back-of-curb/pedestrian area negates the need for additional right-of-way for corner clips to provide sufficient visibility at intersections. This will reduce the impact to private property owners.

### Minor Intersection Proposal

**Figure 9** shows a proposed general configuration for minor intersections along Fondren. Depending on the specific location, the intersection may need to safely accommodate bus stops, pedestrian crossings, and left-turn lanes. All these features fit within the existing 100-ft right-of-way.

**Figure 9: Proposed Cross Section (Minor Intersection)**



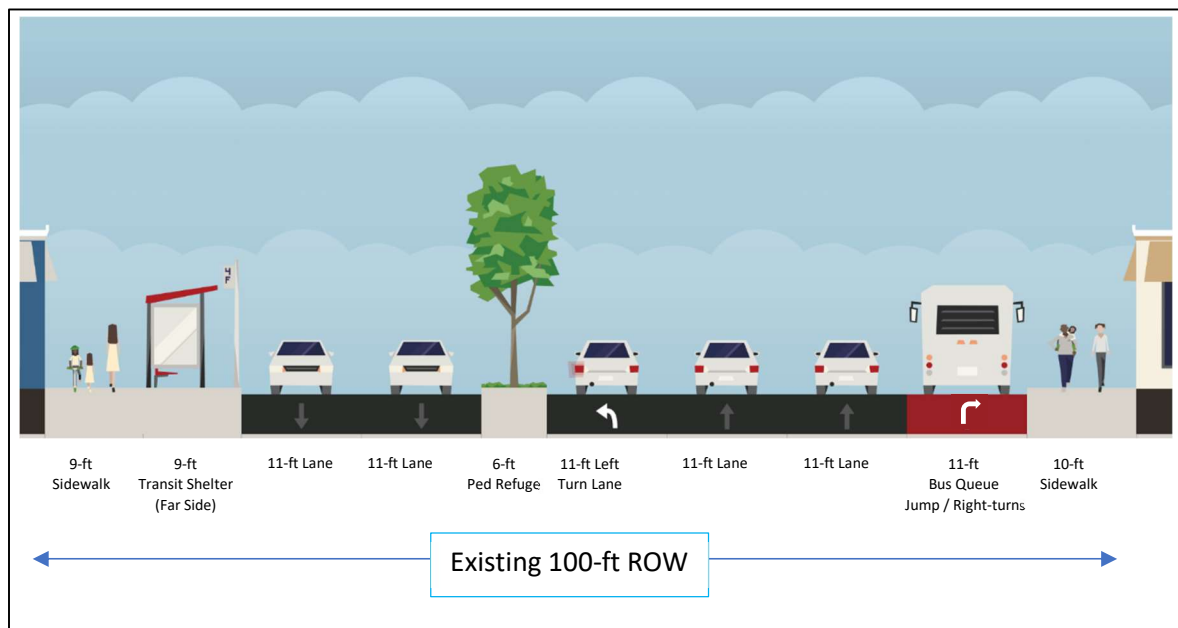
The features of the proposed cross section at minor intersections include:

- Dedicated left-turn lanes
- 8-ft median refuge to create safe pedestrian crossing locations.
- Space for ADA- and TDLR-compliant transit shelters
- 9.5-ft sidewalks

### Major Intersection Proposal

**Figure 10** shows a proposed general configuration for major intersections along Fondren.

**Figure 10: Proposed Cross Section (Major Intersection)**

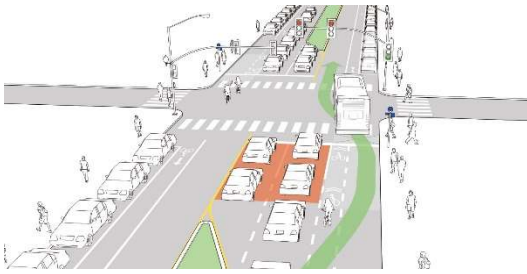


This configuration provides these features:

- Sufficient space for sidewalks and wheelchair ramps that meet/exceed all ADA and TDLR requirements and TxDOT and City of Houston design standards. The requirements and standards in this case are minimums; higher standards are preferable.
- Space so that signal hardware, equipment, and utilities can be installed without blocking sidewalks or other transportation infrastructure.
- Dedicated lane for bus queue jumps and right-turns to increase person-moving capacity of transit and increase capacity for right-turning vehicles.

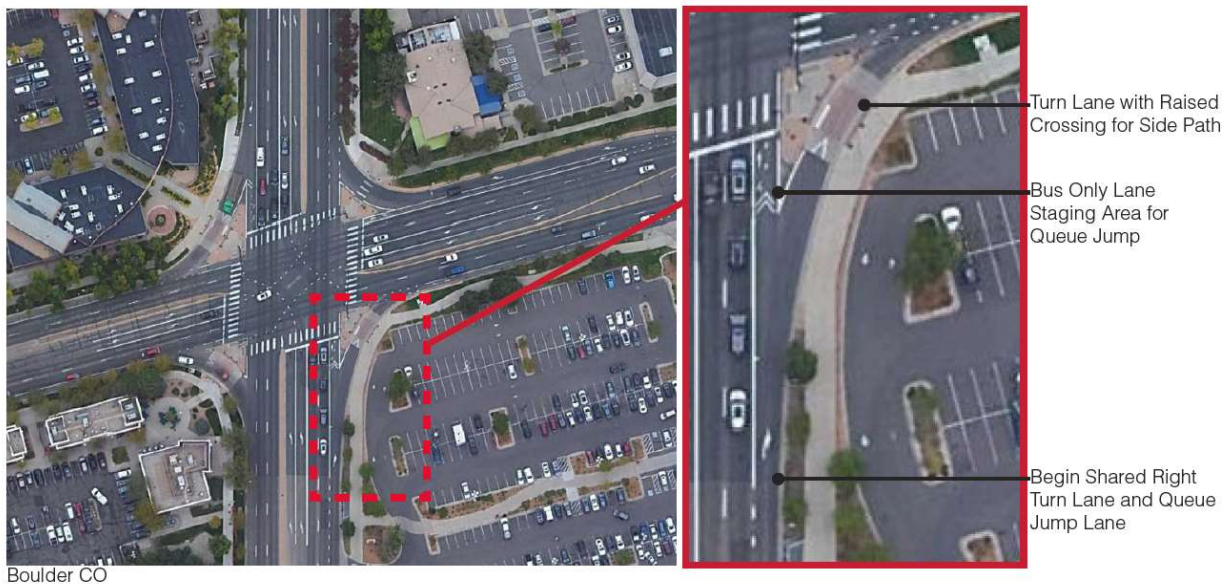
Bus queue jumps provide a separate bus phase that is actuated once a bus is waiting in the bus/right-turn lane. **Figure 11** shows the basic concept of a bus queue jump. Queue jumps can significantly increase corridor person-moving capacity by minimizing the impact of traffic congestion on high-capacity transit lines.

**Figure 11: Bus Queue Jumps**



The proposed bus queue jump lanes for the Fondren project would be designed to safely and efficiently accommodate buses, right-turns, and pedestrians. **Figure 12** shows an example of a queue jump design from Boulder, CO, that may serve as a template for queue jumps along Fondren.

**Figure 12: Right Turn Lane and Queue Jump Design**



## Capacity Analysis and Recommendations

A detailed intersection analysis was conducted to determine the impacts of various lane configurations the major intersections along the corridor. The major intersections analyzed are:

- Fondren at S. Braeswood
- Fondren at W. Belfort
- Fondren at W. Airport

Three scenarios were modeled:

- Existing intersection geometry
- 90% intersection geometry
- Alternative design concept geometry

The specific conditions at the major intersections for each scenario are defined in **Table 5**. Differences from existing geometry are shown in bold.



**Table 5: Intersection Geometry for Existing, 90% Design, and Alternative Designs**

	<b>NB</b>	<b>SB</b>	<b>EB</b>	<b>WB</b>
<b>Fondren at Braeswood</b>				
Existing Geometry	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>
90% Design	<ul style="list-style-type: none"> <li>• <b>2 Left Turn Lanes</b></li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>
Alt Future Geometry	<ul style="list-style-type: none"> <li>• 1 Left Turn Lanes</li> <li>• 2 Through Lane</li> <li>• <b>1 Right-turn/Bus queue jump Lane</b></li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>
<b>Fondren at Belfort</b>				
Existing Geometry	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>
90% Design	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>
Alt Future Geometry	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• <b>1 Right-turn/Bus queue jump Lane</b></li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• <b>1 Right-turn/Bus queue jump Lane</b></li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• <b>1 Right-turn/Bus queue jump Lane</b></li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• <b>1 Right-turn/Bus queue jump Lane</b></li> </ul>
<b>Fondren at Airport</b>				
Existing Geometry	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>
90% Design	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>
Alt Future Geometry	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lane</li> <li>• <b>1 Right-turn/Bus queue jump Lane</b></li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 2 Through Lanes</li> <li>• <b>1 Right-turn/Bus queue jump Lane</b></li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Left Turn Lane</li> <li>• 1 Through Lane</li> <li>• 1 Shared Through/Right-turn Lane</li> </ul>

## Capacity Analysis

Highway Capacity Software Version 7.7 was utilized for the analysis. This software is fully compatible with the procedures of the Highway Capacity Manual (HCM). Protected left-turn phasing was utilized at all intersections; no permitted left-turns were modeled. The signals were optimized to minimize overall corridor vehicle delays. Optimization included the cycle length, which was permitted to vary between 90 second and 150 seconds in 15 second intervals, signal coordination offset, and lead-lag phasing for left-turns. This optimization presents the best-case capacity for each modeled scenario.

Historic traffic volumes were first standardized to 2019 volumes utilizing historic growth rates. All intersections were then projected to 2035 volumes using an assumed 1.5% growth rate.

The HCM provides a methodology for determining level-of-service (LOS) at intersections. LOS is based on vehicular delay and is assigned a letter grade (A-F) to provide a qualitative assessment of the delay.

The LOS for the scenarios (Existing, 90% Design, and Alternative Design) are provided in **Table 5**.

**Table 5: Capacity Analysis**

	<b>2035 - 1.5% Growth LOS / Delay (s)</b>	
	<b>AM</b>	<b>PM</b>
<b>Fondren at Braeswood</b>		
Existing Geometry	D / 47.4	D / 41.5
90% Design	D / 46.1	D / 36.4
Alt Future Geometry	D / 40.5	D / 39.5
<b>Fondren at Bellfort</b>		
Existing Geometry	C / 29.5	D / 37.4
90% Design	C / 29.8	D / 35.7
Alt Future Geometry	C / 31.1	D / 51.8
<b>Fondren at Airport</b>		
Existing Geometry	C / 25.7	C / 30.3
90% Design	C / 25.6	C / 29.5
Alt Future Geometry	C / 30.6	D / 39.0

## Observations

- All scenarios provide LOS D or better for the AM and PM peak.
  - The City of Houston Infrastructure Design Manual (IDM) considers LOS D to be acceptable at signalized intersections and does not require mitigation to further improve the LOS.
  - According to the TxDOT Roadway Design Manual (2020): “Heavily developed urban areas may necessitate the use of level of service D.”
- The alternative geometry at Fondren/Braeswood provides the best LOS of all scenarios during the AM peak and provides comparable LOS during the PM peak.

- The alternative geometry at Fondren/W Bellfort provides a 2035 LOS that is comparable to the existing and 90% design scenarios during the AM peak, provides an acceptable LOS D during the PM peak, **and fully addresses FHWA Road Safety Audit recommendations.**
- The alternative geometry at Fondren/W Airport provides the highest delay during both peak hours; however, the AM Peak operates at LOS C and the PM Peak operates at LOS D – both of which are acceptable under both TxDOT and City of Houston standards.

## Conclusion

HPW is proposing modifications to the Fondren Paving and Drainage Project scope. These modifications align the project with specific safety recommendations from FHWA. Added capacity is addressed with transit enhancements that Metro indicates could increase ridership by 15 percent. The modifications would also deliver a project that is aligned with the overarching goal of the original TIP application to enhance person-carrying capacity of the roadway.

The proposed recommendations include:

- A typical cross section of 4 lanes with a physical median along Fondren Road between S. Braeswood and W. Airport.
- Sidewalk and median designs that are compliant with City of Houston design standards to provide safe, multimodal roadway operations.
- Bus queue jump/right turn lanes at signalized intersections to enhance transit service and increase overall person-carrying capacity of the corridor.
- Specific intersection modifications as detailed in the report.



**U.S. DEPARTMENT OF TRANSPORTATION**  
FEDERAL TRANSIT ADMINISTRATION      FEDERAL HIGHWAY ADMINISTRATION  
819 TAYLOR STREET, RM 14A02      300 EAST 8TH STREET, RM 826  
FORT WORTH, TEXAS 76102      AUSTIN, TEXAS 78701

February 23, 2021

REFER TO: HPP-TX

Grouped Project Definitions

Ms. Jessica Butler, Director,  
Transportation Planning and Program  
Development  
Texas Department of Transportation  
125 E. 11th Street  
Austin, TX 78701

Dear Ms. Butler:

In consultation with TPWD and TxDOT, the Federal Transit Agency and Federal Highway Administration have agreed to revise the group project definitions and notes as identified in the attached table. The revision is in accordance with 23 CFR 450.218 G) and applicable classifications under 23 CFR 771.117 (c) and (d) and/or 40 CFR part 93. This revision is effective immediately. For your reference, enclosed is a complete table of approved grouped project categories definitions and notes. If you have any questions, please contact me at 512-536-5940 or Jose Campos at 512 536 5932.

Sincerely yours,

*Michael T. Leary*

Michael T. Leary,  
Director, Planning and Program Development  
Federal Highway Administration

Enclosures

Cc:

Trey Cooksey, TPWD  
Peggy Thurin, TxDOT TPP  
Karen Burkhard, TxDOT-PTN  
Donald R. Koski, FTA-Region 6  
Marisabel Ramthun, TxDOT-Design  
Bonnie Sherman, TXDOT-PTN  
FHWA-HA-TX, HAM-TX

## Exempt Projects

### *Safety*

Railroad/highway crossing.  
Projects that correct, improve, or eliminate a hazardous location or feature.  
Safer non-Federal-aid system roads.  
Shoulder improvements.  
Increasing sight distance.  
Highway Safety Improvement Program implementation.  
Traffic control devices and operating assistance other than signalization projects.  
Railroad/highway crossing warning devices.  
Guardrails, median barriers, crash cushions .  
Pavement resurfacing and/or rehabilitation.  
Pavement marking.  
Emergency relief(23 U.S.C. 125).  
Fencing.  
Skid treatments .  
Safety roadside rest areas.  
Adding medi ans.  
Truck climbing lanes outside the urbanized area.  
Lighting improvements.  
Widening narrow pavements or reconstructing bridges (no additional travel lanes).  
Emergency truck pullovers.

### *Mass Transit*

Operating assistance to transit agencies.  
Purchase of support vehicles.  
Rehabilitation of transit vehicles<sup>1</sup> .  
Purchase of office, shop, and operating equipment for existing facilities.  
Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).  
Construction or renovation of power, signal, and communications systems.  
Construction of small passenger shelters and information kiosks.  
Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildin gs, storage and maintenance facilities, stations, terminals, and ancillary structures).  
Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way.  
Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet<sup>1</sup> .  
Construction of new bus or rail storage /maintenance facilities categorically excluded in 23 CFR part 771.

### *Air Quality*

Continuation of ride -sharing and van-pooling promotion activities at current levels.  
Bicycle and pedestrian facilities.

### *Other*

Specific activities which do not involve or lead directly to construction, such as:

- Planning and technical studies.
- Grants for training and research programs.
- Planning activities conducted pursuant to titles 23 and 49 U.S.C.
- Federal-aid systems revisions.

Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.  
Noise attenuation.

Emergency or hardship advance land acquisitions (23 CFR 710.503).

Acquisition of scenic easements.

Plantings, landscaping, etc.

Sign removal.

Directional and informational signs.

Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities).

Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes.

---

Note: <sup>1</sup> In PM<sub>10</sub> and PM<sub>2.5</sub> nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the applicable implementation plan.

# Grouped Project List Revisions

Category / Note	Language changed <u>added</u> <del>deleted</del>
Preventive Maintenance and Rehabilitation	Projects to include pavement repair to preserve existing pavement so that it may achieve its designed loading. Includes seal coats, overlays, resurfacing, restoration and rehabilitation done with existing ROW. Also includes modernization of a highway by reconstruction, adding shoulders or adding auxiliary lanes (e.g., parking, weaving, turning, climbing, <u>passing</u> , non-added capacity) or drainage improvements associated with rehabilitation <u>[See Note 3]</u> .
Bicycle and Pedestrian	<del>Construction or rehabilitation</del> <b><u>Projects including</u></b> bicycle and pedestrian lanes, paths and facilities <b><u>(e.g., sidewalks, shared usepaths, side paths, trails, bicycle boulevards, curb extensions, bicycle parking facilities, bikeshare facilities, etc.)</u></b> . <b><u>Safe Routes to School non-infrastructure related activities (e.g. enforcement, tools, and education programs)</u></b> .
Transit Improvements and Programs	Projects include the construction and improvement of small passenger shelters and information kiosks. Also includes the construction and improvement of rail storage/maintenance facilities bus transfer facilities where minor amounts of additional land are required and there is not a substantial increase in the number of users. Also includes transit operating assistance, <b><u>preventative maintenance of transit vehicles and facilities</u></b> , acquisition of third-party transit services, and transit marketing, and mobility management/coordination. Additionally, includes the purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet [See Note 4].
<b><u>Recreational Trails Program</u></b>	<b><u>Off-Highway Vehicle (OHV), Equestrian, Recreational Water/Paddling Trails and related facilities; Recreational Trails related education and safety programs.</u></b>
Note 1	<b><u>Projects eligible for grouping include associated project phases (Preliminary Engineering, Right-Of-Way and Construction)</u></b> .
Note 2	Projects funded with <del>Transportation Alternatives Program (TAP), Transportation Enhancement, and Congestion Mitigation Air Quality</del> funding require a Federal eligibility determination, and are not approved to be grouped.
Note 3	<b><u>Passing lanes include "SUPER 2" lanes consistent with TxDOT's Roadway Design Manual.</u></b>
Note 4	Note 4: In PM10 and PM2.5 nonattainment or maintenance areas, such projects may be grouped only if they are in compliance with control measures in the applicable implementation plan.
Note 5:	Projects funded as part of the Recreational Trails Program (RTP) and Transportation Alternatives (TA) Program consistent with the grouped project category definitions may be grouped. RTP or TA funded projects that are not consistent with the grouped project category definitions must be individually noted in the Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP). <b><u>Road diet projects may not be grouped.</u></b>

Table 1

# GROUPED PROJECT CSJs

Definition of Grouped Projects for use in the STIP  
Revised February 23, 2021

PROPOSED CSJ	GROUPED PROJECT CATEGORY	DEFINITION
5000-00-950	PE-Preliminary Engineering	Preliminary Engineering for any project except added capacity projects in a nonattainment area. Includes activities which do not involve or lead directly to construction, such as planning and research activities; grants for training; engineering to define the elements of a proposed action or alternatives so that social, economic, and environmental effects can be assessed.
5000-00-951	Right of Way	Right of Way acquisition for any project except added capacity projects in a nonattainment area. Includes relocation assistance, hardship acquisition and protective buying.
5000-00-952 5000-00-957 5000-00-958	Preventive Maintenance and Rehabilitation	Projects to include pavement repair to preserve existing pavement so that it may achieve its designed loading. Includes seal coats, overlays, resurfacing, restoration and rehabilitation done with existing ROW. Also includes modernization of a highway by reconstruction, adding shoulders or adding auxiliary lanes (e.g., parking, weaving, turning, climbing, passing, non-added capacity) or drainage improvements associated with rehabilitation [See Note 3].
5000-00-953	Bridge Replacement and Rehabilitation	Projects to replace and/or rehabilitate functionally obsolete or structurally deficient bridges.
5000-00-954	Railroad Grade Separations	Projects to construct or replace existing highway-railroad grade crossings and to rehabilitate and/or replace deficient railroad underpasses, resulting in no added capacity
5800-00-950	Safety	Projects to include the construction or replacement/rehabilitation of guard rails, median barriers, crash cushions, pavement markings, skid treatments, medians, lighting improvements, highway signs, curb ramps, railroad/highway crossing warning devices, fencing, intersection improvements (e.g., turn lanes), signalization projects and interchange modifications. Also includes projects funded via the Federal Hazard Elimination Program, Federal Railroad Signal Safety Program, or Access Managements projects, except those that result in added capacity.



Table 1

# GROUPED PROJECT CSJs

Definition of Grouped Projects for use in the STIP  
Revised February 23, 2021

PROPOSED CSJ	GROUPED PROJECT CATEGORY	DEFINITION
5000-00-956	Landscaping	Project consisting of typical right-of-way landscape development, establishment and aesthetic improvements to include any associated erosion control and environmental mitigation activities.
5800-00-915	Intelligent Transportation System Deployment	Highway traffic operation improvement projects including the installation of ramp metering control devices, variable message signs, traffic monitoring equipment and projects in the Federal ITS/IVHS programs.
5000-00-916	Bicycle and Pedestrian	Projects including bicycle and pedestrian lanes, paths and facilities (e.g., sidewalks, shared use paths, side paths, trails, bicycle boulevards, curb extensions, bicycle parking facilities, bikeshare facilities, etc.). Safe Routes to School non-infrastructure related activities (e.g. enforcement, tools, and education programs).
5000-00-917	Safety Rest Areas and Truck Weigh Stations	Construction and improvement of rest areas, and truck weigh stations.
5000-00-918	Transit Improvements and Programs	Projects include the construction and improvement of small passenger shelters and information kiosks. Also includes the construction and improvement of rail storage/maintenance facilities bus transfer facilities where minor amounts of additional land are required and there is not a substantial increase in the number of users. Also includes transit operating assistance, preventative maintenance of transit vehicles and facilities. acquisition of third-party transit services, and transit marketing, and mobility management/coordination. Additionally includes the purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet [See Note 4].
5000-00-919	Recreational Trails Program	Off-Highway Vehicle (OHV), Equestrian, Recreational Water/Paddling Trails and related facilities; Recreational Trails related education and safety programs.

Note 1: Projects eligible for grouping include associated project phases (Preliminary Engineering, Right-Of-Way and Construction).

Note 2: Projects funded with Congestion Mitigation Air Quality funding require a Federal eligibility determination, and are not approved to be grouped.

# GROUPED PROJECT CSJs

Definition of Grouped Projects for use in the STIP

Revised February 23, 2021

Note 3: Passing lanes include "SUPER 2" lanes consistent with TxDOT's Roadway Design Manual.

Note 4: In PM10 and PM2.5 nonattainment or maintenance areas, such projects may be grouped only if they are in compliance with control measures in the applicable implementation plan.

Note 5: Projects funded as part of the Recreational Trails Program (RTP) and Transportation Alternatives (TA) Program consistent with the grouped project category definitions may be grouped. RTP or TA funded projects that are not consistent with the grouped project category definitions must be individually noted in the Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP). Road diet projects may not be grouped.