

**Testimony of Ginger Goodin  
Submitted to the Texas House of Representatives  
Transportation Committee  
September 18, 2020**

Chairman Canales and members—thank you for the opportunity to provide information on Interim Inquiry 1, which addresses impacts caused by COVID-19 pandemic conditions on the traveling public and on business operations. I am submitting this testimony in my capacity as a senior research engineer at the Texas A&M Transportation Institute (TTI).

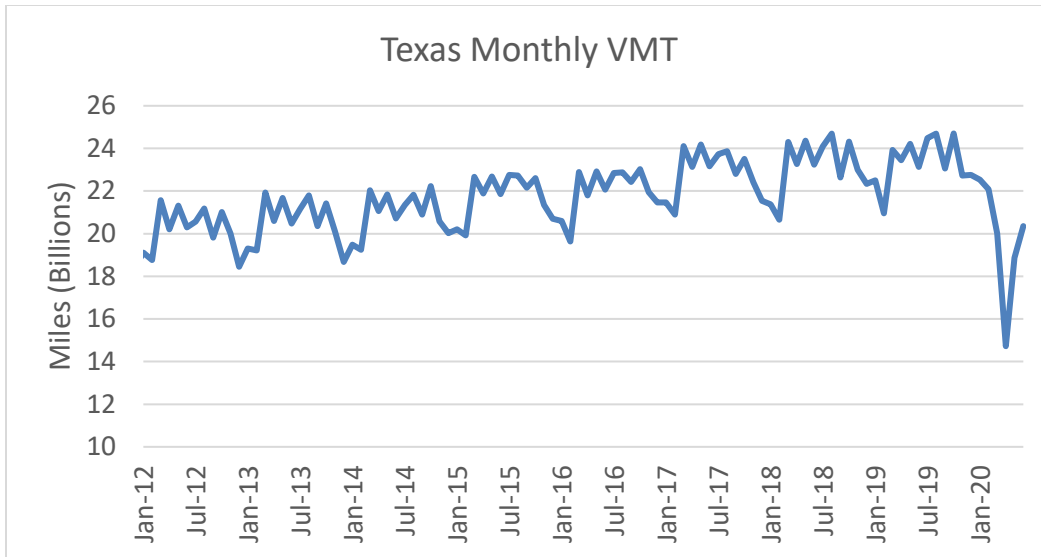
This testimony aims to provide insight on how the COVID-19 pandemic has impacted transportation-sector industries, particularly in Texas. The pandemic has caused changes in travel demand across multiple modes and is reshaping how people live and work, which affects the ways in which people and goods move across our transportation system. Since March 2020, TTI has been monitoring indicators that help our understanding of the impacts to Texans and the state economy. Several of our key metrics and recent research are highlighted in this testimony.

As the virus experience evolves into 2021, this document points out some of the trends to monitor. While, simply put, six months is not a long enough time frame for understanding long-term implications, it is clear that there will be changes in some behaviors and circumstances, which may influence transportation policy moving forward. My testimony under Interim Inquiry 2 (submitted separately) lays out some of the potential longer-term impacts.

#### Travel Demand Indicators

TTI has extensive expertise in transportation economics and finance research, working closely with public agencies and private-sector companies to evaluate the economic benefits and costs of the transportation network, as well as to answer critical financial questions. We are monitoring key transportation economic indicators, with a particular emphasis on revenue sources impacting transportation funding in Texas. Some of these indicators include vehicle miles traveled in Texas, national flight information, and other behavior changes, which are intended to provide a reference for the potential impact of the COVID-19 pandemic.

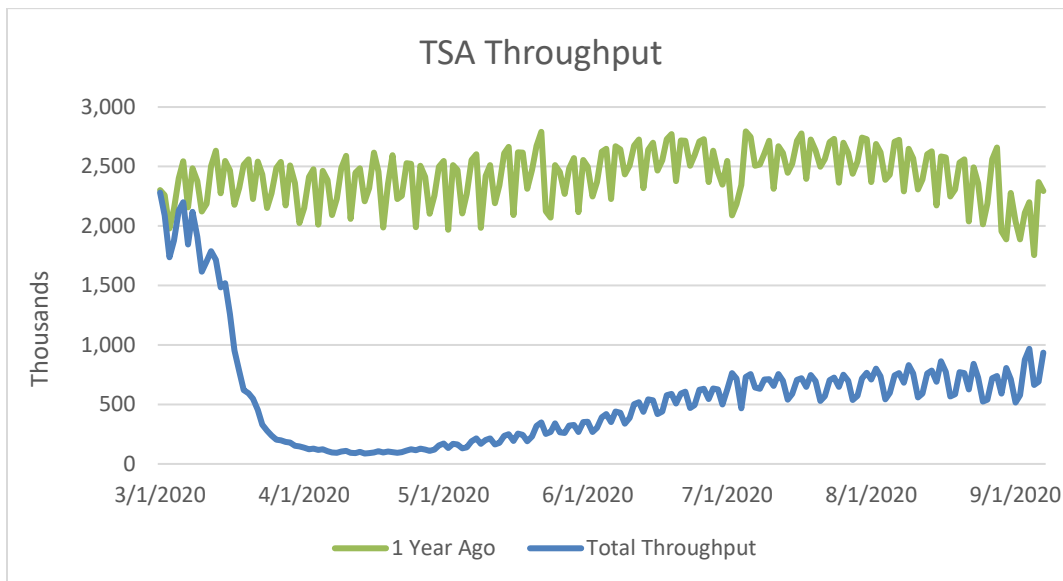
Figure 1 shows a steady increase in the total estimated vehicle miles traveled (VMT) each month on Texas roads over the past seven years. The data are based on the Highway Performance Monitoring System and monthly traffic counts from automatic traffic recorders. However, when the pandemic hit in late March, VMT abruptly plummeted and decreased to a low of 14.7 billion miles in the month of April before beginning to climb. To put this into perspective, in 2019, April VMT was 23.4 billion miles. Because change in VMT affects gallons of gasoline purchased in the state, TTI is monitoring the VMT rate and the potential impact on fuel tax revenue.



Source: Federal Highway Administration

**Figure 1. Texas Monthly VMT.**

Airport travel also dropped precipitously beginning in March and has not recovered in volume. Figure 2 shows the daily number of people passing through Transportation Security Administration (TSA) checkpoints nationwide, from March 2020 to September 2020, compared to those same months in 2019. The lowest day of passenger throughput for TSA was April 14, 2020, with 87,534 travelers, compared to 2,208,688 travelers the year prior.

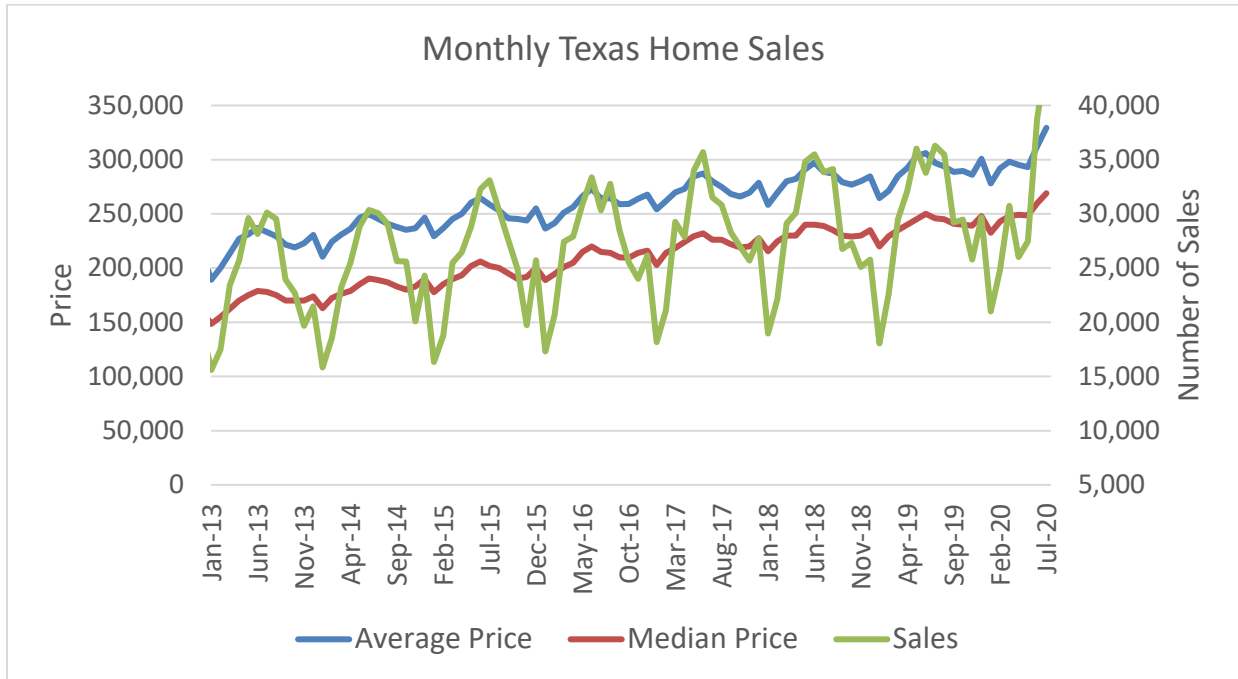


Source: Transportation Security Administration

**Figure 2. TSA Throughput.**

While the TSA numbers do not show specific impact to the Texas economy, they do provide a high-level understanding of how drastic the halt was in the movement of people from state to state. This can impact the economy of states in a variety of ways, including specific impacts to industries such as airlines, tourism, hospitality, and even vehicle rentals.

TTI also monitors Texas economic indicators that could affect land use and transportation planning efforts. Figure 3 shows the number of home sales per month in Texas, as well as the average and median price of those sales. Data were collected and published by the Texas A&M University Real Estate Center, which uses over 50 multiple listing services in Texas to aggregate the data. While these data require many assumptions, a sharp increase in home ownership could be an indicator of long-term adoption of behaviors like telecommuting or changing patterns of land use in downtown spaces as individuals move to suburban or other areas.



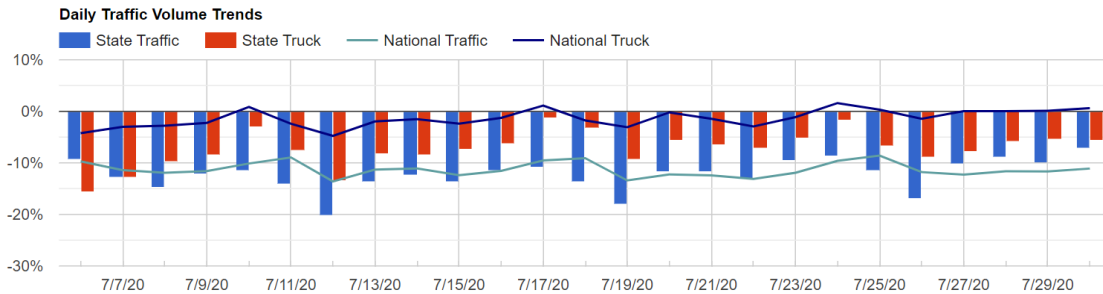
Source: Texas A&M University Real Estate Center

**Figure 3. Monthly Texas Home Sales.**

### Texans Working Remotely—Telecommuting

The U.S. workplace has undergone profound changes since March 2020 because many employers have shifted the location of work away from an office setting and to a remote or home location. This has greatly affected traffic patterns and volumes in all areas of the state. In 2020, and likely 2021, those trends should be monitored to understand the range of traffic responses that might survive after the virus recedes.

Nationally, all-vehicle traffic in July was down by about 10 percent, while truck traffic essentially recovered to 2019 levels. At the state level, daily vehicle traffic volumes were down by 8 to 12 percent compared to 2019 volumes. This seems like a small amount, but given typical recent traffic volume growth rates, this represents five to seven years of traffic volume growth. Truck traffic in Texas was down by less than overall Texas traffic but has not consistently reached 2019 levels (Figure 4).



Source: MS2 Traffic Dashboard (<https://www.ms2soft.com/traffic-dashboard/>)

**Figure 4. Texas Traffic Volumes in July 2020 Compared to Same Day of Week in 2019.**

With the economy still recovering and more customers avoiding in-person shopping, the supply chains for getting goods to homes have shifted. For example, the retail grocery industry has experienced a surge of e-commerce grocery transactions. This spike in online grocery consumption is expected to change transportation modes with a potential switch from privately owned vehicles to freight delivery vehicles for doorstep delivery. A survey performed by the meal planning service eMeals in March showed 34 percent of respondents used grocery pickup or delivery services, with 97 percent of those ordering groceries online saying they would continue to do so in the future.<sup>1</sup> Manufacturing and outdoor production economies—like the oilfield—have also contributed to sustaining truck traffic volumes.

There is greater appreciation for the possible roles of telework among employers and workers after the experience of the last six months. In the future, changes in travel brought on by this virus could result in fewer office commuters—a congestion reduction strategy long advocated by transportation professionals. However, even at the biggest drop in pandemic traffic, volume was still more than 50 percent of January–February 2020 workplace traffic. During July, there were many days when workplace traffic volume was within 20 percent of the January–February baseline, even with schools and many daycare facilities being out of session. A significant portion of travelers were essential workers, and some jobs can only be accomplished by in-place workers. Manual labor, service industries, and manufacturing jobs (including oil/gas production) are less amenable or in many cases prohibitive to remote or electronic work adaptations.

### Texas Transit Agencies

The COVID-19 pandemic has had significant impact on the daily operations and financial sustainability of Texas transit agencies of all types and sizes, in every region. Transit agencies responded to health advisories by applying social distancing policies, reducing service, adjusting operation schedules, and implementing enhanced cleaning of vehicles and facilities. These changes were particularly difficult for those agencies because some of their actions, such as reducing service and limiting passengers—for social distancing purposes—may have resulted in losses of remaining ridership that was not already lost due to pandemic concerns. Additionally, in the face of already declining ridership, agencies were faced with new expenses by increased cleaning requirements and other difficulties due to staffing shortages.

TTI, collaborating with the Texas Transit Association and the South West Transit Association, surveyed 49 agencies on the transit experience of responding to COVID-19 conditions. Some clear trends emerged from the survey responses:

- About 65 percent of respondents did not have a prior plan for dealing with a pandemic.

- Just over 85 percent had issues getting supplies to clean vehicles and facilities.
- Childcare was a challenging workforce issue, associated with staff shortages.
- Respondents experienced an average ridership and revenue loss of over 50 percent.
- On average, 51 percent of respondents reduced service.
- About 50 percent have developed plans to ensure service continuity for vulnerable groups.

Transit agencies indicated significant losses, as shown in Table 1 (provided as a percent compared to the expected service in March 2020).

**Table 1. Transit Agency Losses.**

Agency Type	Average Lost Ridership (%)	Average Lost Revenue (%)
Large urban or metropolitan	62.5	57.5
Small urban	60.0	64.5
Rural	53.7	53.8
Other	54.0	37.5
Average	57.5	56.0

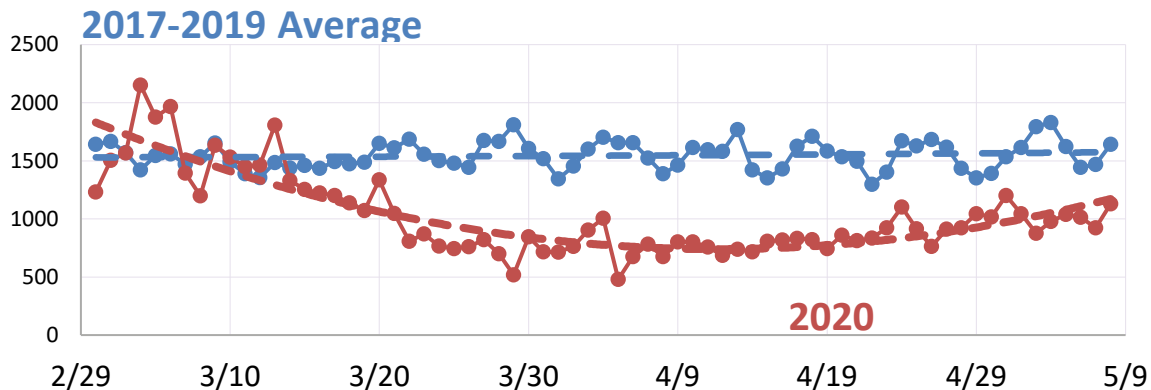
Some specific policy and funding implications for transit service in Texas are directly related to the COVID-19 pandemic:

- *Revenue levels*—Moving forward, funding for transit may be diminished. Transit agencies in Texas rely on diverse sources of funding to support operations, and each may not return to pre-pandemic levels without strategic actions. Of specific concern are:
  - Formula-driven transit revenues that are allocated according to the previous year’s performance.
  - Tax and fee-based revenue from local governments that are diminished due to depressed economic activities.
  - Fare revenue reduced from ridership decreases and suspensions of fare collection.
- *Equitable transit access*—Federal rules require transit agencies to ensure their service decisions do not result in disparate impacts or disproportionate burdens for Title VI protected populations. Some actions associated with the COVID-19 response may introduce challenges, such as:
  - Requirements for face coverings may limit transit access for some riders or necessitate that transit agencies supply appropriate face coverings.
  - Transit agencies may elect to make pandemic-related service reductions permanent. Major service changes must be analyzed to identify and mitigate any resulting disparate impacts and disproportionate burdens.
  - Transit agencies may prioritize the introduction of contactless fare payment options, which require one or more user-supplied elements that may be unavailable to all riders, such as debit/credit cards or smartphones.

Transit service is essential to Texas communities. Seventeen survey respondents indicated they did not reduce their level of transit service in response to COVID-19, and those that did strove to ensure that some service remained to support people without other transportation options. Furthermore, 70 percent of survey respondents made special plans to protect transit service for vulnerable groups of riders or to ensure that people had access to essential services. More information about the transit survey is available at <https://groups.tti.tamu.edu/transit-mobility/files/2020/09/COVID-19-survey-analysis-and-case-studies-final-report-080320.pdf>.

## Crash Experience during COVID-19 Stay-at-Home Orders

Recently, TTI conducted its first virtual Traffic Safety Conference, during which our experts shared information about the crash incidents on Texas roadways during the March–April stay-at-home order due to COVID-19. The data show a downward trend in vehicle crashes (Figure 5). However, there was not a significant decrease in roadway fatalities. For example, the total number of crashes during April 2020 compared to the average number of crashes in April 1988–2020 indicates a decrease of 47 percent although fatal crashes decreased by only 20 percent overall. The proportion of multi-vehicle crashes that were fatal actually doubled in urban areas.



Source: Compiled by TTI from Texas Department of Transportation Crash Record Information System

**Figure 5. Texas Statewide Crashes from March 1 to May 8.**

When examining urban area crashes exclusively, fatal crashes decreased only 15 percent, while all urban crashes were down 50 percent. The data indicate miles traveled went down during March–April 2020, but roadway safety risks, such as speeding, went up. For example, freeway speeds in April 2020 were consistently high at all times of the day. There was no traffic congestion during normal peak periods to slow down motorists, and speed affects crash severity. A 10 percent increase in speed translates into a 50 percent or more chance of a roadway fatality.

What we learned through the research is that the roadway fatality problem will not be solved simply by less traffic being on the road. In addition to studying traditional risks, such as speeding and distracted driving, we must introduce the use of new vehicle technologies and associated safety infrastructure into our traffic safety research and analyses.

Thank you for the opportunity to provide this committee with information from TTI. Please contact me if you require any further information.

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<sup>1</sup> Redman, R., "How the coronavirus crisis is changing grocery shopping," *Supermarket News*, April 3, 2020, <https://www.supermarketnews.com/center-store/how-coronavirus-crisis-changing-grocery-shopping>.