CENTRAL TEXAS

CAMPO

CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION

FREIGHT PLAN

EXECUTIVE SUMMARY

JUNE 2024

Background/ Introduction

The Capital Area region, a six-county metropolitan area in Central Texas, has experienced rapid growth and economic development in recent years. A key aspect of this growth is an increase in freight and the movement of goods by truck, rail, pipeline, and air. Efficient freight movement is crucial to the competitiveness of the region's businesses and industries and the overall way of life for its residents. Recognizing this importance, the Capital Area Metropolitan Planning Organization (CAMPO) developed this Freight Plan that highlights the importance of freight to the region and informs the Regional Transportation Plan (RTP) by identifying policies, strategies, and investments to enhance the performance and safety of the multimodal freight network.

CAMPO's six-county region is comprised of Bastrop, Burnet, Caldwell, Hays, Travis, and Williamson counties. The total land area for the region is 5,215 square miles or roughly the size of Connecticut. The region is traversed by IH 35, a national corridor for trade, commerce, and passenger travel that connects major cities in Texas, spanning 21 counties from the border with Mexico to Oklahoma. The CAMPO region itself is diverse geographically, with the population concentrated in the urban metropolitan core in Travis County and a variety of established and emerging suburbs, historic towns, and rural areas in the surrounding counties. These areas generate and attract freight, each with a unique set of industries and challenges.

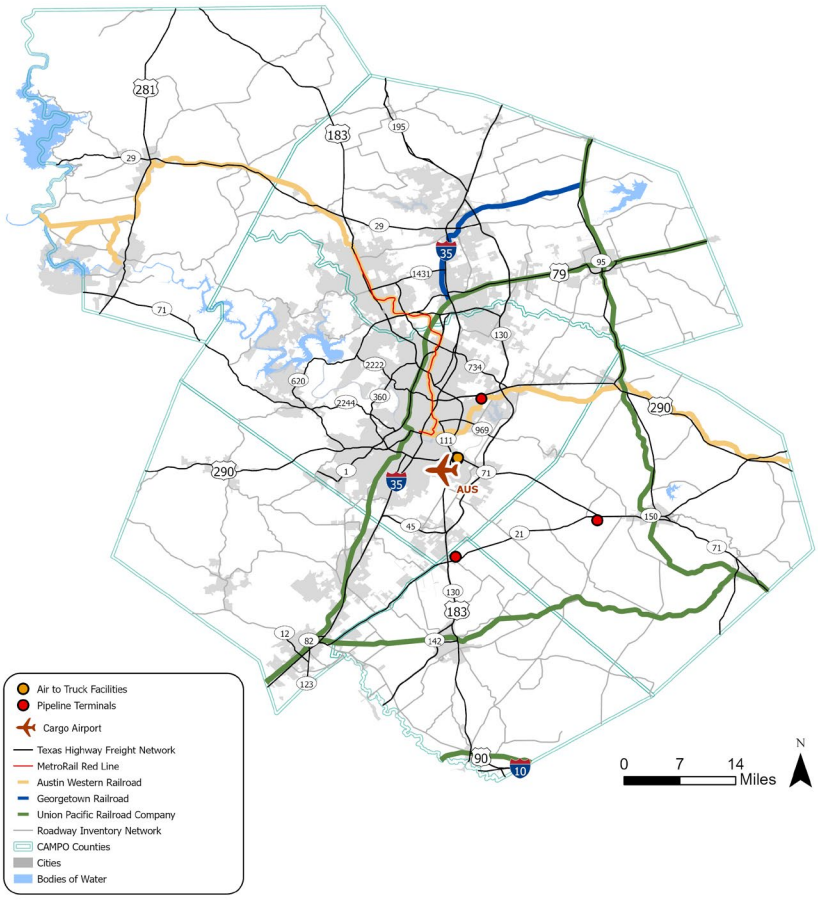
The figure below shows CAMPO's multimodal freight network, including regional highway, rail, air infrastructure, and pipelines.

There are about 15,000 miles of roadways in the CAMPO region, with 856 miles (5.7%) located on the designated Texas Highway Freight Network (THFN). IH 35 is the primary corridor for freight, as well as the most utilized and congested in the region.

There are 475 miles of railroads within the CAMPO region. Union Pacific Railroad is the largest operator, with 260 miles of track.

Austin Bergstrom International Airport (AUS) is the region's cargo airport, serving as the hub for air logistics.

The region is traversed by over 2,700 miles of natural gas and petroleum product pipelines.



Freight Plan Goals and Approach

The CAMPO Freight Plan aligns with the goals of the 2045 Regional Transportation Plan.

Safety – Improve the safety of the region's multimodal transportation system and reduce freight-related crashes.

Economy – Increase the economic competitiveness of the region by improving the efficiency of freight movement.

Mobility – Reduce congestion and increase freight connectivity and reliability.

Equity – Consider the impact of freight activity in historically marginalized communities within the CAMPO region.

Stewardship – Examine planned investments that benefit regional freight and include recommendations to preserve and increase system efficiency.

Innovation – Examine future trends and forecasts with the potential to impact the region, and provide recommendations that include innovative technology to improve freight operations.

The CAMPO Freight Plan's approach consisted of the following tasks:

- Assessment of the existing conditions of the CAMPO multimodal freight network, including safety, mobility, and reliability.
- Engagement with CAMPO, agency partners, and representatives from the private sector to understand various perspectives and needs related to freight.
- Analysis of regional forecasts and trends related to key commodities, trading partners, locations with freight-intensive land use, and other trends in the freight industry.
- Development of policy and program recommendations to guide future investments in the CAMPO regional freight network.
- Consolidation of findings into an Executive Summary document.

Stakeholder Engagement

To inform the development of the Freight Plan, the project team conducted interviews with regional stakeholders, and representatives from private industry. These discussions underscored the importance of fostering a collaborative approach between public and private sectors. By working together, these entities can devise solutions that greatly benefit freight transportation in Central Texas. This cooperation is vital to ensuring that infrastructure requirements of the multimodal network are addressed. Additionally, by maintaining an efficient and highly connected freight transportation system, Central Texas reinforces its position as a leading destination for industries and businesses, attracting further investments and spurring economic development in the region.

The following stakeholders were interviewed as part of the Freight Plan:

- Texas Department of Transportation (TxDOT) Transportation Planning and Programming (TPP) Division
- TxDOT Austin District
- Texas Trucking Association (TXTA)
- Alamo Area Metropolitan Planning Organization (AAMPO)
- Killeen-Temple Metropolitan Planning Organization (KTMPO)
- Union Pacific (UP)
- Kodiak Robotics
- Texas Association of Businesses
- Austin Regional Manufacturers Association (ARMA)
- Greater San Marcos Manufacturers Association (GSMMA)
- Austin-Bergstrom International Airport (AUS)

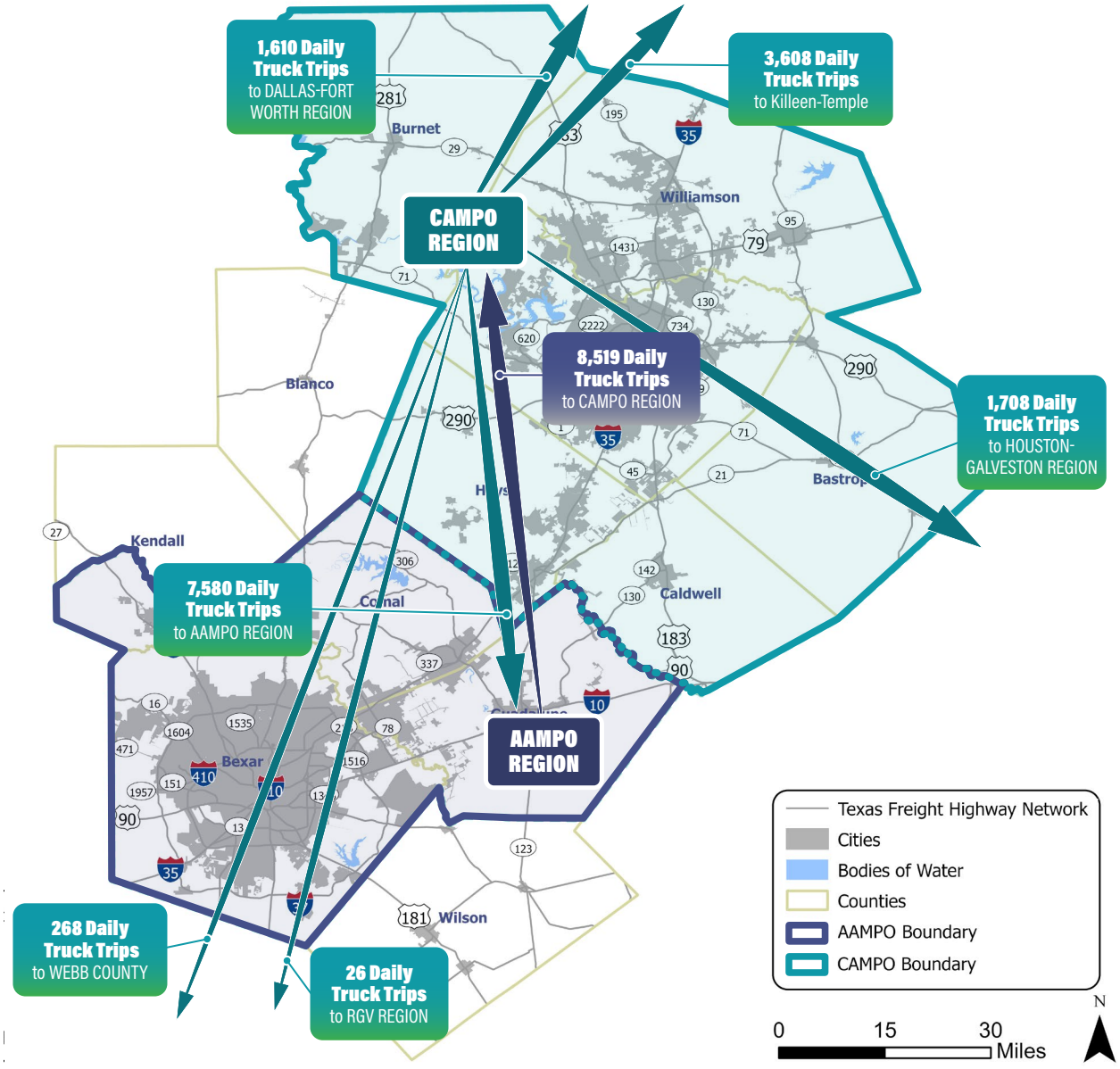
Key Takeaways From Interviews with Stakeholders:

- **There is a need to recognize the CAMPO region as a major freight producer and consumer, exemplified by the region's increasing manufacturing footprint and the large influx of investments.**
- **The region's transformation into a freight and distribution hub requires robust infrastructure investment and forward-thinking strategies, including technological innovations emerging in the future.**
- **Rail faces challenges like labor shortages and capacity constraints, but promising opportunities like the growth of manufacturing provide a positive outlook.**
- **For rail freight operations to thrive, a blend of infrastructural enhancements, early planning involvement, and interagency coordination are crucial.**
- **The airport's strategic focus on expanding air cargo services to East Asia is important to the region's advanced manufacturing sectors, particularly semiconductors.**
- **Collaboration between the public and private sectors could promote the development of truck parking staging areas and provide supportive infrastructure to accommodate automated vehicle operations.**
- **The region's rapid industrial development, alongside its potential role in the future of additive manufacturing, solidify its position as a burgeoning logistics and manufacturing hub.**
- **Central Texas is emerging as an industrial hub that faces challenges in air cargo and rail logistics due to the reliance on major hubs in Dallas and Houston.**

Existing Conditions – Freight Trip Origins and Destinations

Developed for Texas Delivers 2050, the statewide freight and goods movement strategic plan, the Texas Truck Analysis Tool uses INRIX commercial vehicle GPS data from 2022 to report the origin and destination flows for truck movements in the state. On average, 43,000 truck trips enter and leave the CAMPO region each day. Approximately one-third of these trips originate or end in Travis County, followed by Williamson and Hays counties.

Population and freight activity are growing in the CAMPO and Alamo Area MPO regions. Each day, about 16,000 trucks travel between the two regions, highlighting the importance of interregional freight and trade. Additionally, trucks traveling from the CAMPO region reaches other key parts of the state. Trips travel south to Webb County and the Rio Grande Valley (RGV) along the border with Mexico, north to Killeen-Temple and Dallas-Fort Worth, and east towards the Houston-Galveston region .



Existing Conditions – Supply Chains and Commodities

The CAMPO Freight Plan examined the region's role in state's critical supply chains. These supply chains and subsectors below have major clusters located in Central Texas and generate significant freight activity.

AGRICULTURE

Crop production includes corn, hay, and wheat, mostly within Travis and Williamson counties and east of the IH 35 corridor.

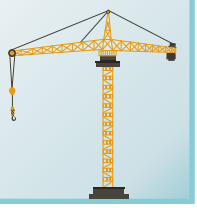
Animal livestock production mostly located within Travis, Hays, and Williamson counties, especially west of the IH 35 corridor where many ranches are located.

Food manufacturing located in Austin's north and central areas along roadways such as US 183, FM 734, and IH 35.

CONSTRUCTION

Construction commodities include nonmetallic mineral products, with Central Texas being both a producer and consumer of these products.

Nonmetallic mineral production is largely located near metropolitan areas within the region, concentrated along the west side of IH 35.



TRANSPORTATION EQUIPMENT

In the **vehicle parts sector**, manufacturers are located in Williamson, Travis, and Hays counties along the IH 35 corridor, which connects with **vehicle assembly plants** in San Antonio and Dallas-Fort Worth.

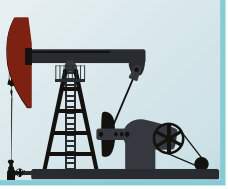
Within the CAMPO region, Travis County has the highest level of originating tonnage for **vehicle manufacturing**, while Williamson and Travis counties have the highest level of destination tonnage.

PETROLEUM

Texas is the **leading domestic producer of crude oil and natural gas**, with Central Texas having several transmission pipelines traversing the region.

The **petroleum product distribution sector** utilizes pipelines and bulk storage terminals to deliver motor gasoline, diesel, jet fuel, propane, and other refined products to serve the region's demand for energy.

The **plastics and rubber manufacturing sector** is a key downstream consumer of petroleum commodities. The larger manufacturing establishments are near SH 71 in southwest Travis County and near Georgetown along IH 35.



WAREHOUSING AND DISTRIBUTION

General warehousing is ideal for storing bulk quantities of consumer products following manufacturing and processing, with large establishments clustered in Travis County near the IH 35 corridor.

General retail includes establishments that sell various consumer goods. The highest originating volumes of these commodities come from Travis, Hays, Williamson, and Bastrop counties in the CAMPO region, with Williamson and Hays counties also being major destinations for retail commodities.

E-commerce fulfillment centers are largely located within Travis County and those with higher levels of activity are located near IH 35 and SH 130.

ELECTRONICS

Top **electronics commodities** include consumer products such as televisions, wireless receivers, phones and equipment used in industrial and commercial settings, as well as components such as batteries and semiconductors.

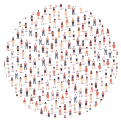
In the CAMPO region, Williamson County has the **highest levels of originating tonnage for electronics commodities.**

CAMPO's **semiconductor industry** is concentrated within Travis County and expanding into Williamson County with major investments in research and development centers and fabrication plants planned in that part of the region.

Regional Trends and Forecasts

Population and Employment

The CAMPO region has experienced tremendous population and employment growth just in the past decade alone. This growth is expected to continue as the regional economy continues to expand, which will increase demand for freight.



Population

In 2020, the CAMPO region had a population of 2.3 million. By 2050, regional population is expected to reach 4.8 million, a 104% increase.

Employment

Employment in the region is expected to add 1.2 million jobs by 2050, reaching over 2.2 million. Both sets of projections show Williamson County capturing most of the region's total population and employment growth.

Commodity Flow and Forecasts

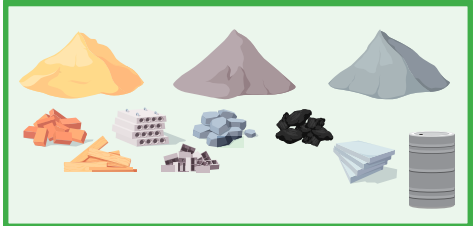
More than 113 million tons of commodities valued at $86 billion were transported to, from, or within the CAMPO region in 2019. By 2050, the commodity flow in the CAMPO region is estimated to increase sharply to 218 million tons valued at $205 billion, representing an overall 92% increase in tonnage and 138% increase in value. Commodity flow related to the CAMPO region is described below by direction, commodity, and mode.

DIRECTION

In 2019 and 2050, *69% of freight flow tonnage* consists of **intrastate freight** - commodities transported to or from the CAMPO region to other Texas destinations.

Intrastate freight movements account for around *40% of total commodity flow value* in 2019 and 2050.

COMMODITY



The **leading commodities by value** in 2019 include *chemicals or allied products* ($14 billion); *secondary traffic related to warehouses and distribution centers* ($10 billion); *electrical equipment* ($10 billion); *transportation equipment* ($9 billion); and *machinery* ($8 billion).

For **future trends**, *the top four commodities* remain the same as in 2019. **Food products** is expected to join this list as *the 5th leading commodity by value.*

MODE

Trucks accounted for *96% of the total 2019 weight* (109 million tons) and *2050 projected weight* (210 million tons).

Rail movement ranks as the *second leading mode,* representing 4% of both the total freight tonnage in 2019 (5 million tons) and the projected figure for 2050 (8 million tons).

Air and other modes contribute *less than 1%* of the overall freight tonnage within the CAMPO region.

Freight Trends Influencing Future Freight Movement in the Region

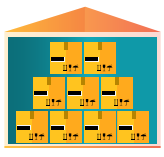
As the CAMPO region continues to grow and evolve, understanding and adapting to emerging freight trends is critical for ensuring a robust and efficient transportation network. This strategic awareness allows CAMPO to proactively adapt its policies and initiatives to foster a resilient and dynamic freight system.

Freight Trend	Impact on Freight Movement in the Region
Post-pandemic consumer preferences and e-commerce growth	The enduring shifts in consumer preferences since the pandemic have led to a significant growth in e-commerce and the adoption of new delivery methods. These changes have driven the demand for more dispersed distribution models, increasing the movement of goods across urbanized areas rather than concentrated industrial zones. This change requires enhancements in last-mile delivery infrastructure and may also necessitate different traffic management strategies to handle the increased distribution activity.
Increased demand on airports and changes in railroad commodity mixes	Increased consumer demands and trade with East Asia have led to a higher need for cargo space at airports, necessitating expansions and enhancements in cargo handling capacities. Simultaneously, railroads are adjusting their commodity mixes to focus on more high-value shipments, which could lead to shifts in rail operations and infrastructure investments.
Advancements in freight vehicle technology	The adoption of connected and autonomous vehicle technologies is expected to increase the efficiency and safety of freight transport. This trend could lead to new requirements for technological integration across the transportation system, including updates to traffic systems and potentially new regulations governing autonomous freight movement.
Public investment in connected infrastructure	Increased public investment in infrastructure that connects with smart vehicle technologies promises enhanced real-time traffic management capabilities. This investment can improve freight mobility and safety through better data utilization, leading to more informed decision-making and potentially less congestion and faster response times to incidents.
Texas National Electric Vehicle Infrastructure (NEVI) grant	The NEVI grant provides an opportunity for the region to invest in electric vehicle charging infrastructure, potentially extending to commercial vehicles in future rounds. This trend not only supports the shift towards alternative fuels but also promotes environmental sustainability and could lead to long-term changes in fleet composition and fueling strategies.
Freight Intensive Development and Land Use	Freight growth areas are expected to align with major interstate, U.S., and state highway corridors, necessitating improved access from local roadways to support safe and efficient travel to these higher capacity routes. Municipal land use policies are crucial for directing development and ensuring infrastructure supports the intense truck traffic and loads. This includes upgrading local roadways and enhancing connectivity with the Texas Highway Freight Network (THFN), improving mobility and reducing congestion in residential areas.

Freight Plan Recommendations

The Freight Plan synthesizes comprehensive analyses, stakeholder insights, and trend forecasts into strategic recommendations aimed at enhancing the region's freight capabilities. The plan organizes its policy and program recommendations across four key categories: **Highway Infrastructure, Technology, Safety,** and **Land Use and Economic Development.** In total, the plan articulates 66 policy recommendations and 17 program recommendations. The full list of policies and programs is provided in the Recommendations Report

This strategic framework not only addresses immediate needs but also lays the groundwork for the CAMPO region to adapt to future freight demands, ensuring a resilient and robust freight transportation network.

Category	Time Frame	Summary of Recommendations
Highway Infrastructure 	**Near-term** *(1-3 years)*	Continue partnership with TxDOT to advance major capital improvements on IH 35; address freight needs on highways and arterial corridors; increase regional truck parking; plan alternative fuel corridors; promote off-peak system usage; evaluate air quality impacts.
	Mid-term *(3-5 years)*	Initiate project planning on regionally significant freight corridors; address freight infrastructure needs in fast-growing rural areas; enhance interregional freight collaboration with neighboring MPOs; increase airport-highway connectivity; establish roadways for oversize/overweight vehicles.
	Long-term *(5-10 years)*	Collaborate with TxDOT and local agencies to implement corridor improvements and freight-centric design standards.
Technology 	**Near-term** *(1-3 years)*	Evaluate freight network technology strategies; leverage existing ITS infrastructure; continue SMARTTrack collaborations with partners.
	Mid-term *(3-5 years)*	Expand overheight detection systems at key bridges, implement systems for truck parking information; encourage local agencies and private sector participation in technology pilots and demonstrations.
	Long-term *(5-10 years)*	Expand safety warning detection capabilities across the regional highway network to address hazards for trucks and oversized loads.
Safety 	**Near-term** *(1-3 years)*	Develop a regional safety action plan with freight considerations; explore technology options for safer at-grade highway-rail crossings.
	Mid-term *(3-5 years)*	Study freight access standards across the region; work with TxDOT and local agencies to evaluate safety impacts of truck operations in rural and exurban areas.
	Long-term *(5-10 years)*	Support the deployment of ITS and emerging technologies to minimize hazards; coordinate with TxDOT on addressing low clearance bridges and high-risk crossings.
Land Use and Economic Development 	**Near-term** *(1-3 years)*	Work with industry partners to expand freight rail and air access; study freight-supportive land uses; share freight planning data with partners; support incentives attracting freight-intensive industries.
	Mid-term *(3-5 years)*	Support local economic development efforts promoting job growth in warehousing and freight transportation; study industrial space demand near airports and in key counties like Caldwell and Hays.
	Long-term *(5-10 years)*	Encourage development of areas that can accommodate truck traffic and connect to the regional highway network; prioritize areas supporting a major multimodal hub with rail or air facilities.

Funding Opportunities for Freight Plan Implementation

To effectively implement the ambitious recommendations of the CAMPO Regional Freight Plan, securing robust funding is paramount. CAMPO can leverage a mix of local, state, and Federal funding sources to enhance the region's freight infrastructure.

CAMPO has access to substantial funding from the Texas Department of Transportation (TxDOT) and the Texas Transportation Commission. In addition, recent Federal legislation such as the Infrastructure Investment and Jobs Act (IIJA) has significantly expanded the availability of discretionary grants. These grants support a wide range of initiatives from highway and rail improvements to aviation and multimodal projects that advance national strategic priorities – providing funding opportunities for projects that enhance safety, economic competitiveness, equity, and sustainability in freight movement.

The CAMPO Regional Freight Plan sets a comprehensive roadmap for enhancing freight mobility, safety, and connectivity within the region. By strategically pursuing diverse funding sources and carefully planning the implementation of its recommendations, CAMPO can ensure the successful realization of its goals, thereby fostering sustainable economic growth and enhancing the efficiency of the regional freight network.

CENTRAL TEXAS

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