

PANOLA COUNTY, TEXAS

# Broadband Study & Action Plan

Executive Summary



In Conjunction with the  
East Texas Regional  
Broadband Initiative

# Executive Summary

**A broadband study of Panola County has been developed and managed by the East Texas Council of Governments (ETCOG). County officials, stakeholders, and interested parties in Panola County have provided input, comments, and information to support the work.**

ETCOG is developing a regional broadband strategic plan for unserved and underserved rural areas of East Texas. The fourteen counties that are part of this effort include: Anderson, Camp, Cherokee, Gregg, Harrison, Henderson, Marion, Panola, Rains, Rusk, Smith, Upshur, Van Zandt, and Wood.

This initiative is addressing the broadband infrastructure needs of East Texas businesses by designing a systematic and innovative methodology that will serve as a "test case" demonstration project for other rural areas throughout Texas, specifically projects that will help businesses grow, expand, and locate in East Texas.

Essential broadband initiative partners include elected officials, Chambers of Commerce, Economic Development Corporations, and existing broadband service providers. Once complete, the strategic plan will comprise detailed project plans that interlink with other projects, area regional in their design, build capacity, and provide economies of scale.

Upon completing each county-level plan, ETCOG will support the consortium and/or individual project sponsors to implement and administer these broadband development projects by pursuing multiple funding sources such as grants, foundations, and private capital.

Because the plan is comprised of individual broadband projects, each project will begin construction as funding is secured. By using this strategy, the progress and eventual success of the initiative become manageable and measurable.



# Broadband Study Team Members

## East Texas Council of Governments

ETCOG serves as the bridge between federal, state, and local governments, helping cities and counties solve challenges and impact the future regionally. Established in 1970, ETCOG, either directly or through its contractors, provides programs and services for East Texas seniors, employers, and job seekers. ETCOG and its contractors also build the 9-1-1 emergency call delivery system, provide peace officer training and homeland security planning services, and deliver rural transportation services, business finance programs, and environmental grant funding for the region.

## TDC2

TDC2 is a consulting, engineering, and telecom construction firm located in Wylie, Texas. The company provides a wide range of Outside Plant Fiber Optic Telecommunications services, including: Field Survey, CADD, Feasibility Studies, Long-Haul Design, Local & Last Mile Fiber Route Design, Right-of-Way/Permitting, Site Acquisition, Project Management, Inspection, and Professional Engineering Review & Certification. TDC2 also provides Aerial, Buried, and Underground telecom infrastructure construction services.

## Design Nine

Design Nine is working with TCD2 on this effort. Design Nine brings an experienced team of broadband analysts and network engineers to support ETCOG's broadband study. Design Nine has worked with more than 300 county, town, and city governments over the past twenty years to help improve local broadband services.

## Local Project Identification Team

The Panola County project identification team has been led by **former County Judge David Anderson**. The team also includes Commissioner Craig Lawless, Commissioner Dale LaGrone, and Kari Perot-Vance, Executive Director of the Panola County Chamber of Commerce.

Each county's project identification team differs slightly. Teams typically include county and city officials, Economic Development Corporation representatives, and Internet Service Providers from the respective county and/or the ETCOG region if needed.

These local project teams met as many times as needed to complete the identification of three to five most important broadband development projects for each county. One of the identified projects can address residential broadband as long as telework is enhanced.



# Panola County Demographics Overview

The 2020 Census estimates Panola County's total population is 22,675. The median age is 40.

## Labor Force

Panola County has a labor force of 9,136 people, with an unemployment rate of 6.3%. The work distribution of total employees is 47% blue collar and 52% white collar. Panola County has a total of 7,194 employees.

## Educational Attainment

24.47% of the population in Panola County have an Associate Degree or higher. 83.81% have a high school degree or higher.

## Housing and Income

77.07% of households own their own home, while 22.93% rent. There are 54% more households who own their homes than there are renters. The median household income is \$57,598, which is 13% less than the state, and 17% less than the national median income.

## Businesses and Jobs

Panola County has a total of 778 businesses in 2021. The leading industries in Panola County were Manufacturing, Retail, Construction, and Health Care and Social Services.

What are the top industries by job?

778

Total Businesses

11.4K

Total Housing Units

\$57.6K

Median Household Income



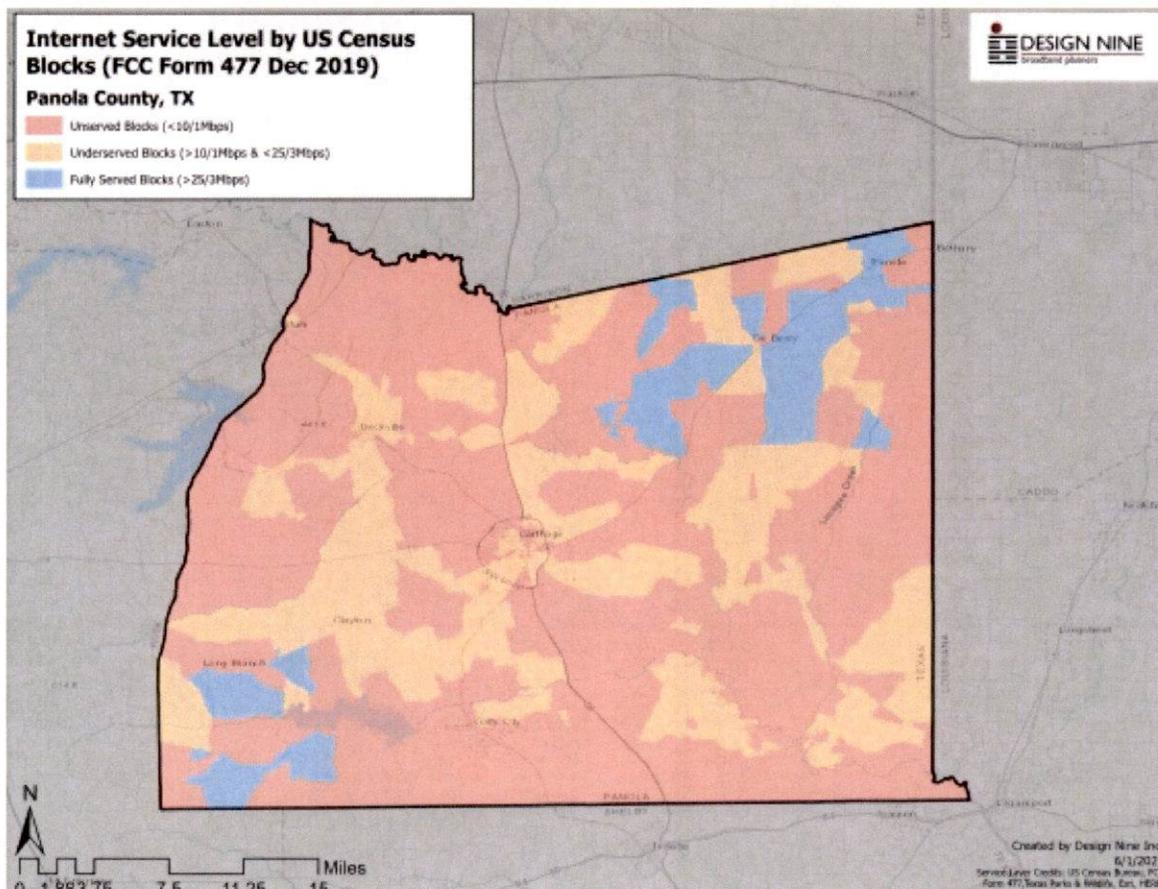
# Served, Unserved, and Underserved Areas

The areas on the map below have been identified using FCC (Federal Communications Commission) 477 data. Service providers, including incumbent telephone and cable companies, file a 477 report with the FCC to identify where their service is available and at what speed, using the FCC designations:

- **Unserved** – Less than 10 Megabits down/1 Megabit up
- **Underserved** – At least 10 Megabits down/1 Megabit up and less than 25 Megabits down/3 Megabits up
- **Served** – Equal or better than 25 Megabits down/3 Megabits up

There are **two problems** with the 477 data:

- The data is self-reported by the providers, who typically report their most optimistic Internet speeds. In practice, customers may not always get the reported speeds.
- A single customer receiving service in a census block means that the provider can indicate that the entire census block is counted. So if one household receives 25/3 service, all households in that census block are counted as receiving that level of service.



# Panola County Broadband Projects

1

## Carthage Infrastructure Update

**Estimated Budget: \$3,760,344**

Length: 18.5 Miles

Route: Beginning at the intersection of FM1794 & US 59, this project travels south through Carthage on US 59, turning west in Carthage on Panola, south onto Bird, then west again onto Sabine/SH 315, ending at the intersection of FM 1970.

Purpose: To upgrade existing Fidelity fiber, providing high-speed internet service to unserved and underserved **businesses** along US59 and TX315. Will provide Middle Mile infrastructure support and increase strands to support more customers. Will also service Clayton water well and water storage facilities, Clayton VFD, and new **businesses** along this route. (Middle Mile)

3

## East Panola County & Business Park Expansion

**Estimated Budget: \$4,635,615**

Length: 26.8 Miles

Route: This project begins at the north loop at US 59 and follows the NE loop south to Forsythe/FM 699 outside the city limits of Carthage and turns east onto FM 2517. This segment ends at FM 31. There is another segment that follows FM 31 N to CR 445 and south, ending at the County line.

Purpose: To provide high-speed internet to existing businesses & attract new **businesses** to developing business park. Also, provide service to businesses and residences along FM 31 to the County line. This project also serves existing Deadwood and Flatwood fire districts. (Last Mile)

5 *RESIDENTIAL*

## Murvaul Broadband Extension

**Estimated Budget: \$4,065,699**

Length: 21.3 Miles

Route: Beginning at the community of Clayton on FM 1970, travels south and veers SE down FM 999. This project turns north onto CR 175, then CR 174 to end at FM 1971. Another segment travels the length of CR 183 from FM 1970. Final segment of this project follows the entirety of CR 176 from FM 999.

Purpose: To provide high-speed internet service to unserved and underserved, new and existing **home-based businesses, and full-time/part-time telecommuters.** (Last Mile)

2

## Gary Expansion

**Estimated Budget: \$4,808,738**

Length: 24.8 Miles

Route: Beginning in Carthage, travels south down Shelby/US 59, turning east onto CR 430, and ending at Woods VFD at the intersection of CR 430 and CR 425. This project also makes a loop starting at the intersection of US 59 and turns west following FM 10 until it turns back east onto FM 999, ending back onto US 59.

Purpose: To provide high-speed fiber internet for new and underserved **businesses and residences** along this route toward Gary. This project also serves the Woods Fire District. (Last Mile)

4

## Fairplay Extension

**Estimated Budget: \$1,864,315**

Length: 10.4 Miles

Route: Begins and follows Panola/US 79 at the intersection of Bird/FM 315 inside Carthage City Limits. Follows US 79 west to end at FM 124.

Purpose: To provide high-speed fiber internet for new and underserved **businesses and residences** along this route toward the Fairplay community. (Last Mile)

6

## Shady Grove / DeBerry Expansion

**Estimated Budget: \$3,187,201**

Length: 15.6 Miles

Route: Begins in Carthage on Sabine/US 79, traveling over MLK Blvd and Spring St. to return, traveling east on US 79, ending approximately 1 mile NE of the CR 3150 intersection. This project also travels NW on FM 1186, ending in DeBerry, at the intersection of FM 1186 and FM 1794.

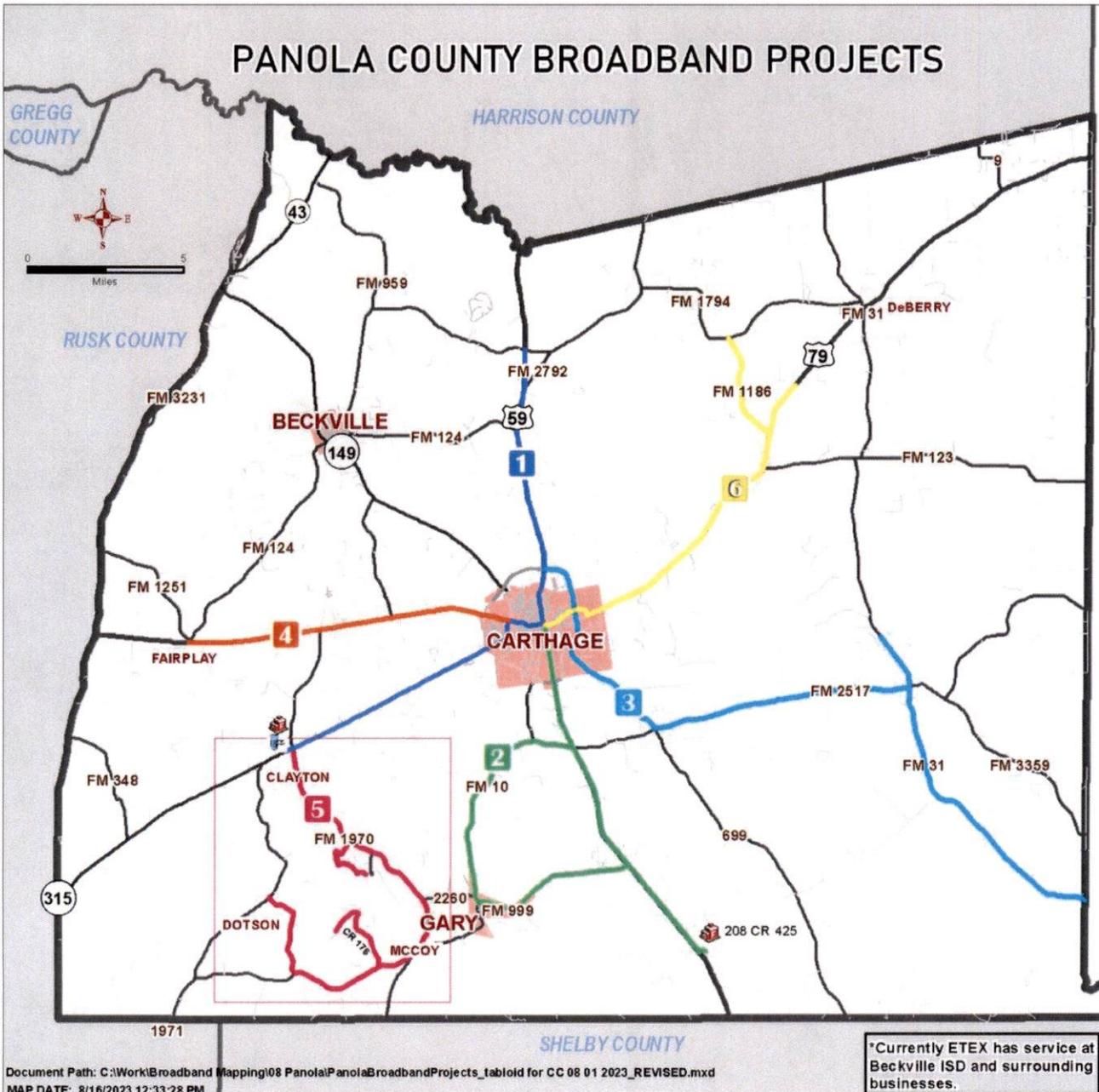
Purpose: To provide high-speed fiber internet for new and underserved **businesses and residences** along this route towards DeBerry. This project also supports the Intercommunity Fire District, which serves as an internet hub for the community. (Last Mile)

# 6

Locally identified  
shovel ready  
broadband projects

# \$22,321,912

Estimated to be needed for project  
implementation



Thank you for your attention to this important economic development initiative in our region.

## Acknowledgements

This plan has been made possible by a \$375,000 grant from the **U.S. Economic Development Administration** and \$161,000 in matching funds invested by **ETCOG member communities and EDCs**

Our specialized consulting firms **TDC2 and Design 9**

The leadership of the **ETCOG Executive Committee and East Texas Economic Development District Boards**

Local Project Team Lead **former Panola County Judge David Anderson**

The regional **Internet Service Providers**



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**1** CARTHAGE INFRASTRUCTURE UPDATE 18.5 Miles

**ROUTE**

Beginning at the intersection of FM1794 & US 59, this project travels south through Carthage on US 59, turning west in Carthage on Panola, south onto Bird, then west again onto Sabine/SH 315, ending at the intersection of FM 1970.

**PURPOSE**

To upgrade existing Fidelity fiber, providing high speed internet service to unserved and underserved businesses along US59 and TX315. Will provide Middle Mile infrastructure support and increase strands to support more customers. Will also service Clayton water well and water storage facilities, Clayton VFD, and new businesses along this route.

Startpoint: 32° 5' 50.564"N, 94° 28' 42.478"W Endpoint: 32° 16' 56.302"N, 94° 21' 0.709"W

**2** GARY EXPANSION 24.8 Miles

**ROUTE**

Beginning in Carthage, travels south down Shelby/US 59, turning east onto CR 430 and ending at Woods VFD, at the intersection of CR 430 and CR 425. This project also makes a loop starting at the intersection of US 59 and turns west following FM 10 until it turns back east onto FM 999, ending back onto US 59.

**PURPOSE**

To provide high speed fiber internet for new and underserved businesses and residences along this route towards Gary. This project also serves the Woods Fire District.

Startpoint: 32° 9' 24.247"N, 94° 20' 15.402"W Endpoint: 32° 0' 30.002"N, 94° 14' 53.135"W

**3** E PANOLA COUNTY & BUSINESS PARK EXPANSION 26.8 Miles

**ROUTE**

This project begins at the north loop at US 59 and follows the NE loop south to Forsythe/FM 699 outside the city limits of Carthage and turns east onto FM 2517. This segment ends at FM 31. There is another segment that follows FM 31 N to CR 445 and south ending at the County line.

**PURPOSE**

To provide high speed internet to existing businesses & attract new business to developing business park. Also provide service to businesses and residences along FM 31 to the County line. This project also serves existing Deadwood and Flatwood fire districts.

Startpoint: 32° 10' 55.795"N, 94° 20' 18.211"W Endpoint: 32° 6' 36.240"N, 94° 16' 38.122"W

**4** FAIRPLAY EXTENSION 10.4 Miles

**ROUTE**

Begins and follows Panola/US 79 at the intersection Bird/FM 315 inside Carthage City Limits. Follows US 79 west to end at FM 124.

**PURPOSE**

To provide high speed fiber internet for new and underserved businesses and residences along this route towards the Fairplay community.

Startpoint: 32° 9' 31.101"N, 94° 21' 27.066"W Endpoint: 32° 8' 47.354"N, 94° 31' 49.422"W

**5** MURVAUL BROADBAND EXTENSION 21.3 Miles

RESIDENTIAL

**ROUTE**

Beginning at the community of Clayton on FM 1970, travels south and veers SE down FM 999. This project turns north onto CR 175, then CR 174 to end at FM 1971. Another segment travels the length of CR 183 from FM 1970. Final segment of this project follows the entirety of CR 176 from FM 999.

**PURPOSE**

To provide high speed internet service to unserved and underserved, new and existing home-based businesses and full-time/part-time telecommuters.

Startpoint: 32° 5' 55.372"N, 94° 28' 28.831"W Endpoint: 32° 1' 48.928"N, 94° 29' 9.470"W

**6** SHADY GROVE/DeBERRY EXPANSION 15.6 Miles

**ROUTE**

Begins in Carthage on Sabine/US 79, traveling over MLK Blvd and Spring St. to return traveling east on US 79, ending approximately 1 mile NE of the CR 3150 intersection. This project also travels NW on FM 1186, ending in DeBerry at the intersection of FM 1186 and FM 1794

**PURPOSE**

To provide high speed fiber internet for new and underserved businesses and residences along this route towards DeBerry. This project also supports the Intercommunity Fire District, which serves as an internet hub for the community.

Startpoint: 32° 18' 13.307"N, 94° 10' 0.254"W Endpoint: 32° 9' 24.247"N, 94° 20' 15.402"W

