



CDBG-MIT

Harvey Competition Application

Public Comment Package

Project: Fiber Optic Loop - Joint Venture

10/1/2020

Disaster Conditions

On August 25, 2017, Hurricane Harvey slammed into the Texas Gulf Coast in Aransas County. The storm packed winds up to 135mph and was a full category IV Hurricane. Harvey has become the second most costly storm to hit the United States in terms of property damage; second only to Hurricane Katrina in 2005. During this event, every piece of communications capability along the Aransas County as well as neighboring San Patricio County coastline was destroyed and rendered un-useable for many months. This placed first responders (local, state and Federal) in harm's way as well as citizens seeking to recover.

According to a study conducted by the Texas A&M (South Texas Economic Development Center) Aransas County was the most impacted County, yet, has the least capacity to recover. To quote the study "As the smallest of these 22 counties by area, Aransas County is not only most affected by Harvey, but it has the least financial capacity to rebuild without external assistance." Aransas County is one of three counties where 80 percent of residents applied for Federal Emergency Management Agency-Individual Assistance (FEMA-IA), yet scored almost zero for its institutional and governmental capacity to recover from disasters." The proposed Fiber Optic Loop is one of the most critical steps needed in Aransas County's Long-Term Recovery Plan.

Project Description

The proposed Fiber Optic Loop project will establish a protected and reliable emergency management communications system for Aransas County and the four other partnering governments participating in this CDBG-MIT application as joint applicants: the counties of San Patricio, Refugio and Victoria; and City of Rockport. This project is being conducted in coordination with Nueces County whose residents also will benefit from an interconnected system. The path of the proposed loop will terminate at the Nueces County border with connection to an existing fiber network in Corpus Christi that benefits the entire county's response and recovery efforts in times of disaster. Future plans (anticipated to include round 2 CDBG-MIT funding request) are to expand that network in Nueces County in a "southern loop" extension of this application's proposed Fiber Optic Loop project.

Hardening and protecting critical regional communications infrastructure that will provide a vital emergency communications system capability will protect life and property during the next catastrophic event. The project will build a protected fiber optic connected communications system that will link all elements of the County, Cities, Independent School District, Navigation District and County Airport on one continuous fiber optic loop. Hardening the system ensures connectivity and redundancy exists between all critical infrastructure.



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Local Plan Inclusion

This project is a recommended project in the list of coastal strategies for Region 3 (Aransas, Kleberg, Nueces, Refugio, and San Patricio counties) in the "Texas Coastal Resiliency Master Plan" developed by the Texas General Land Office.

Project Construction

Phase I of the system involves 150 miles of fiber optic cable (over a 113 mile area) and associated equipment to create a resilient fiber optic loop communication system among the joint partnering governments' critical facilities, and creates a connection at the border of Nueces County. The fiber optic cable and conduit will be contained as subterranean, but the redundant portion of the route will be installed under existing bridges several of which have existing spare conduits that can be used. Installation will be conducted by boring under existing roadways and under any wetland areas to minimize any environmental impact. The project includes equipment required for fiber connections, underground electrical pullboxes, hardware, panels, and network (IT) equipment. (A more detailed list is provided below.) Benefitting jurisdictions include the counties of: Nueces, San Patricio, Aransas, Refugio, and Victoria. Municipalities include: North Beach, Portland, Gregory, Ingleside, Aransas Pass, Rockport, Fulton, Lamar, Tivoli, and Victoria. Future phases of the project will be planned by Aransas County, technical consultants procured under GLO/federal procurements standards and its intergovernmental partners.

Materials	Unit	QTY
Splicing Hardware	ea	55
Fiber Panel	ea	10
12 Port Adapter Panel	ea	54
Fiber Connectors SM	ea	590
Fan Out Kit	ea	54
Pull Box 24x36x18	ea	534
Cisco Switch 9500	ea	10
Cisco DNA 9500	ea	10
ZR SFP 10 Gig	ea	4
ER SFP 10 Gig	ea	6
RS1215-RA power supply	ea	10
Network Cabinet - designed (Interior)	ea	10



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National Objective & Mitigation Risk

National Objective - Urgent Need Mitigation

This project meets the Urgent Need Mitigation National Objective as it will result in measurable and verifiable reductions in the risk of loss of life and property from future disasters and yield community development benefits. These measures will include quicker prioritization of needed response measures, shortened response times, and quicker removal of debris and clearing of roadways. While the Low to Moderate Income (LMI) population throughout the entire benefitting area is lower than the required 51% and the project does not qualify under an LMI National Objective, there are still significant concentrations of LMI populations throughout the benefitting territory. All four counties of Aransas, Refugio, San Patricio and Victoria contain LMI census tracts with significant concentration of LMI populations. During times of disaster, these communities are more vulnerable to flooding, damage and loss of life. This was particularly evident with Hurricane Harvey where lack of emergency communications stymied response and recovery to these areas.

Mitigation Risk - This project addresses all three Mitigation Risks under the Hurricane Harvey Competition: hurricanes/tropical/storms/tropical depressions; severe coastal flooding; and riverine flooding.

Budget

The anticipated cost of the project is **\$47,840,441** with **1% match of \$478,404.41** to be provided from the sources listed below. **CDBG-MIT funding in the amount of \$47,362,036.59** is being requested. Nueces County is not a joint applicant, but is pledging leverage to support this regional mitigation investment. A detailed Cost Estimate is attached.

Match (1%): \$478,404.41

- Aransas County - \$288,404.41
- City of Rockport - \$100,000
- Victoria County - \$25,000
- Refugio County - \$15,000
- San Patricio County - \$25,000
- Nueces County - \$25,000

Project Administration

This project will be managed by Aransas County personnel and the County's procured grant administrator. The County Attorney will review and approve all legal documents. The County Auditor will maintain a project financial account, process all vendor payments and prepare timely reimbursement requests for submittal to the Texas General Land Office (GLO). The County Commissioners Court will approve all legal documents. The County will conduct Federally-



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compliant procurement processes to administer all professional and construction services contracts associated with the design and construction of the project. The grant administrator has already been procured according to Federal requirements. The County Commissioners Court will approve all selection of project contractors.

Under the direction of the County's project manager, the County's grant administrator will oversee all aspects of the project on behalf of the County. The County's grant administrator will provide technical assistance to the project, assist with preparation of bid documents, qualifications review, and selection of contractors to design, manage construction, build and place into operation the drainage improvements.

The County plans to procure according to Federal standards a qualified engineering firm to prepare design, estimate costs, create construction-ready drawings/specifications and assist the County with construction bidding and construction management. The grant administrator will advise on these procurements to ensure that all Federal standards are adhered to.

The grant administrator will work closely with the project engineer to ensure that the project stays on time and budget. The grant administrator will monitor the design and construction of the project to ensure that all procurement, Davis Bacon labor, Section 3, environmental, Fair Housing, Equal Opportunity, and other Federal requirements are met, and that measures are taken to prevent waste, fraud and abuse.

The grant administrator will review all invoices for payment, change orders if needed, and work through GLO's system of record to request reimbursement. The grants manager will visit the project site periodically to verify invoices for work certified as complete by the construction manager. The grant manager will prepare for submittal to GLO all required performance and financial reports, excluding preparation audited financial statements. If needed, the grant administrator will assist with procurement of auditing services and will support Federally-compliant preparation of audited financial statements. The grant manager will close out the sub-award as required.



CDBG-MIT: Budget Justification of Retail Costs (Former Table 2)

Cost Verification Controls must be in place to assure that construction costs are reasonable and consistent with market costs at the time and place of construction.

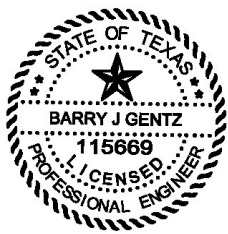
Applicant/Subrecipient:		Aransas County				
Site/Activity Title:		Fiber Optic Loop				
Eligible Activity:		Communications Infrastructure				
Materials/Facilities/Services	\$/Unit	Unit	Quantity	Construction	Acquisition	Total
Equipment	\$ 900,994.00	LS	1	\$ 900,994.00	\$ 135,149.10	\$ 1,036,143.10
Equipment Design / Engineering	\$ 270,283.20	LS	1	\$ 270,283.20	\$ -	\$ 270,283.20
Provisions for 2 Take-offs for Tivoli School and Refugio Courthouse	\$ 944,567.00	LS	1	\$ 944,567.00	\$ 17,287.00	\$ 961,854.00
Boring under roadways / obstructions	\$ 40.00	LF	42240	\$ 1,689,600.00	\$ -	\$ 1,689,600.00
Boring under water	\$ 250.00	LF	52969	\$ 13,242,250.00	\$ -	\$ 13,242,250.00
Backbone Fiber and Conduit Installation (Trenching)	\$ 23.00	LF	559705	\$ 12,873,215.00	\$ -	\$ 12,873,215.00
Backbone Fiber and Conduit Installation (Bridges)	\$ 118.00	LF	37835	\$ 4,464,530.00	\$ -	\$ 4,464,530.00
Backbone Fiber Engineering and Survey (Construction)	\$ 4,840,439.25	LS	1	\$ 4,840,439.25	\$ -	\$ 4,840,439.25
Secondary Fiber and Conduit Installation (Trenching)	\$ 23.00	LF	233800	\$ 5,377,400.00	\$ -	\$ 5,377,400.00
Secondary Fiber and Conduit Engineering and Survey (Construction)	\$ 806,610.00	LS	1	\$ 806,610.00	\$ -	\$ 806,610.00
Environmental	\$ 500,000.00	LS	1	\$ 500,000.00	\$ -	\$ 500,000.00
Grant Management (5%)	\$ 2,228,116.23	LS	1	\$ 2,228,116.23	\$ -	\$ 2,228,116.45
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TOTAL	\$ 10,491,463.68			\$ 48,138,004.68	\$ 152,436.10	\$ 47,840,441.00

1. Identify and explain the annual projected operation and maintenance costs associated with the proposed activities.

Due to this being a purely fiber network installation, the anticipated maintenance costs would be low. Minor costs would be required for preventative maintenance of networking equipment. Anticipated 1 County IT Department employee for 2 weeks per year based on the current project size.

2. Identify and explain any special engineering activities.

Due to the soil conditions within the proposed route, special considerations in engineering and boring challenges must be considered when performing this task and evaluating the pricing.



Seal

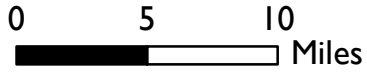
Date:	9/29/2020
Phone Number:	(469) 206-8361

Signature of Registered Engineer/Architect Responsible For Budget Justification:

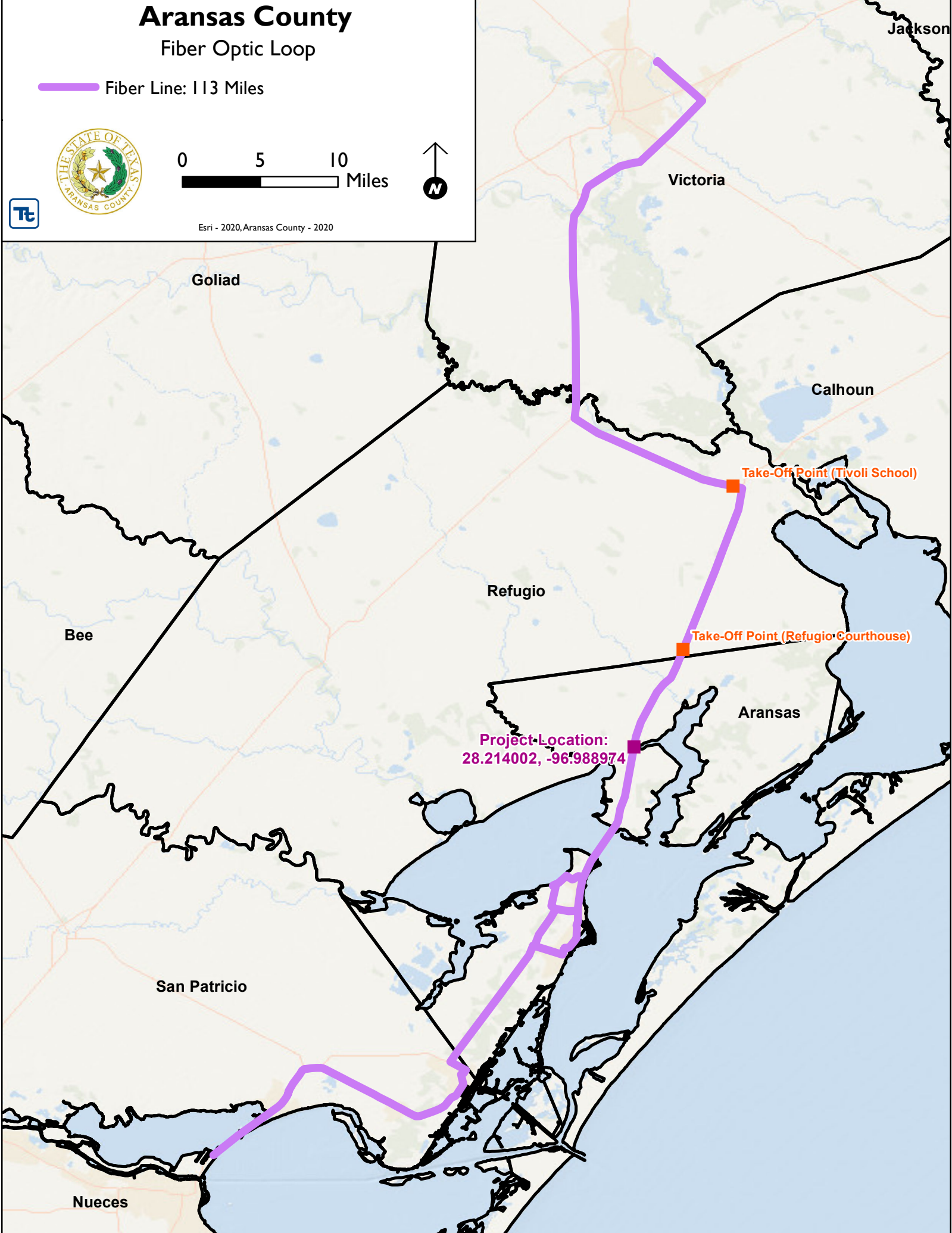
Aransas County

Fiber Optic Loop

Fiber Line: 113 Miles





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Aransas County

Fiber Optic Loop

-  Fiber Line
-  Beneficiary Counties



0 10 20 Miles



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