



Brownsville Broadband Update  
July 10, 2023

# Why Fiber?



Faster Internet



Community Development



Sustainable



Fiber Network Help Local Economies



Increased Home Values

## Brownsville Texas the worst-connected U.S City



### Top 25 Worst Connected U.S. Cities

2014 American  
Community Survey

U.S. places with more than 50,000 households	All Households	No Internet Access		
		Number	Percent	Rank
Brownsville, Texas	50,340	22,574	44.8%	1
Detroit, Michigan	253,490	95,825	37.8%	2
Jackson city, Mississippi	62,679	22,791	36.4%	3
Laredo, Texas	66,985	24,300	36.3%	4
Hialeah, Florida	68,027	24,476	36.0%	5
New Orleans, Louisiana	152,788	52,693	34.5%	6
Miami, Florida	158,039	54,196	34.3%	7
Kansas City, Kansas	55,680	18,971	34.1%	8
Cleveland, Ohio	165,984	55,619	33.5%	9
Mobile, Alabama	75,594	24,455	32.4%	10
Memphis, Tennessee	250,553	80,313	32.1%	11
Springfield, Massachusetts	55,816	17,733	31.8%	12
Rochester, New York	83,944	26,487	31.6%	13
Augusta-Richmond County, Georgia	69,436	21,678	31.2%	14
Birmingham, Alabama	88,556	27,498	31.1%	15
Macon-Bibb County, Georgia	56,052	17,332	30.9%	16
Buffalo, New York	110,070	33,848	30.8%	17



Source: 2017 American Community Survey 1-Year Estimates, Table B28002

Contact: Angela Siefer, [angela@digitalinclusion.org](mailto:angela@digitalinclusion.org)

Using data from the 2017 American Community Survey (ACS), released in September 2018 by the U.S. Census Bureau, NDIA ranked all 191 U.S. cities with more than 50,000 households by the percentage of each city's households that lack home Internet connections of any kind.

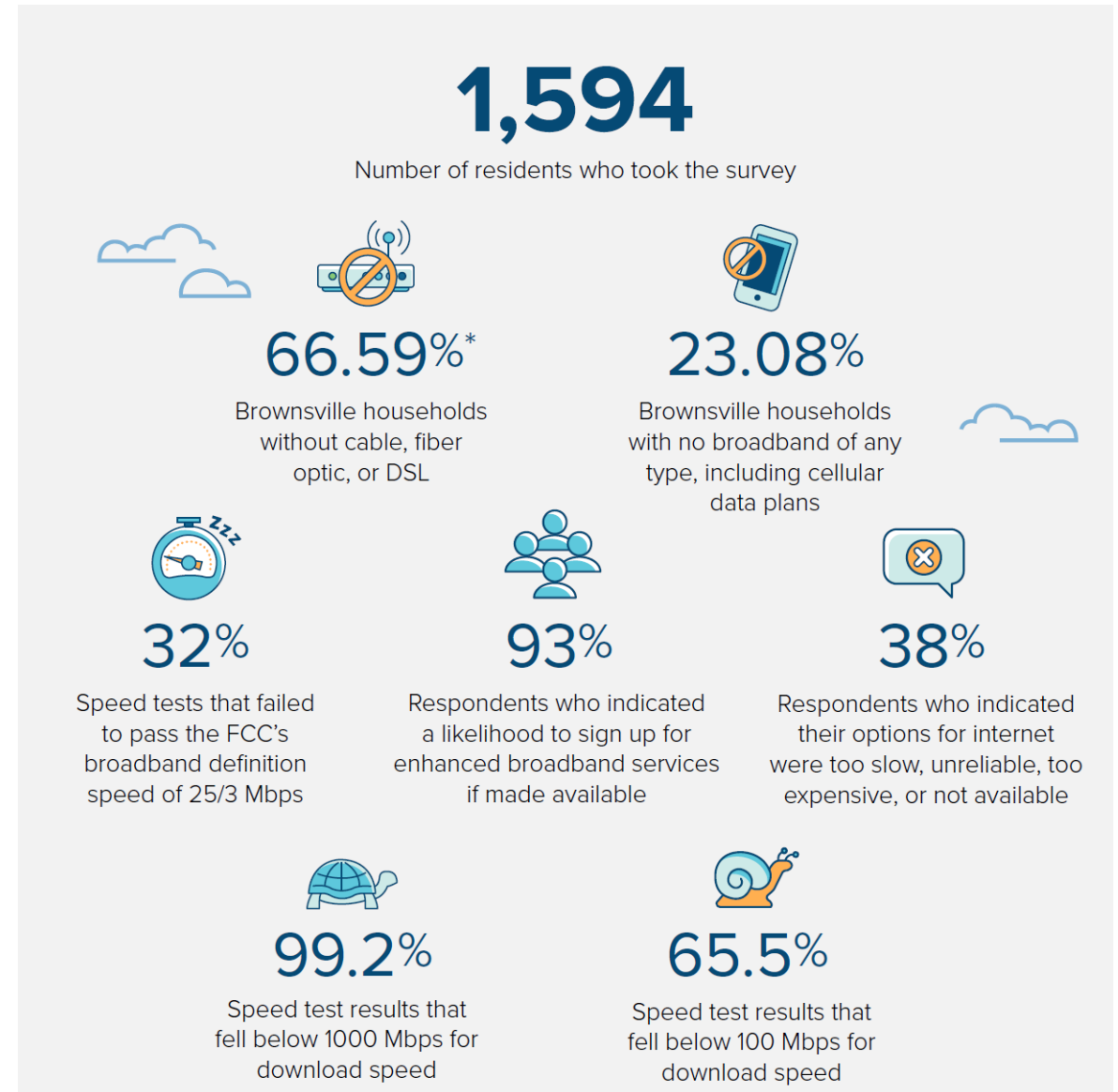
Note that this data is not an indication of the availability of home broadband service, but rather of the extent to which households are actually connected to it.

The Census category "households with no Internet access" excludes all types of home Internet subscription – not only wireline (cable, fiber optic, DSL) but also satellite, 3G and 4G wireless services, and even dial-up modems. It also excludes "Internet access without a subscription".

Worst-Connected Rank	City, State	Total households	Number of Households with No Internet Access	Percentage of Households with No Internet Access
1	Laredo, TX	70,522	22,767	32.3%
2	Brownsville, TX	52,138	16,105	30.9%
3	Hialeah, FL	77,399	23,208	30.0%
4	Detroit, MI	264,360	71,372	27.0%
5	Cleveland, OH	171,717	45,652	26.6%
6	Memphis, TN	246,518	61,608	25.0%
7	Miami, FL	170,005	42,208	24.8%
8	Philadelphia, PA	606,142	147,627	24.4%
9	Newark, NJ	98,678	24,024	24.3%
10	Syracuse, NY	54,062	13,031	24.1%
11	Chattanooga, TN	75,965	17,887	23.5%
12	Springfield, MA	57,158	13,455	23.5%
13	Milwaukee, WI	228,054	52,860	23.2%
14	New Orleans, LA	154,560	34,896	22.6%
15	Shreveport, LA	74,614	16,807	22.5%
16	Birmingham, AL	90,186	19,314	21.4%

## • Why the Need: In Our Own Words

- Seven anchor Institutions, including PUB, met in December 2019 and commissioned a feasibility study with a community survey, each contributing \$20,000 towards the cost of this professional service.
- Community survey, later reiterated in the state-wide broadband plan, made clear the digital divide is a consequence of both access and affordability.





# What We Did

## Middle Mile

- City is investing **\$19.5 Million in American Rescue Plan Act funding**
- The City will be the owner of Middle Mile infrastructure to serve essential locations by redundant ring architecture that is 100% underground.
- With open architecture, the Middle Mile will be available through a lottery system to other potential Internet Service Providers, enabling market competition (no obligation to subscribe or to switch).

## Last Mile

- Lit Texas/BTX Fiber will be investing **\$70mm in private equity funding** to build the Last Mile network.
- BTX Fiber will build the Last Mile network progressively as the Middle Mile network is built.
- BTX Fiber understands the importance of affordability when offering broadband access and will be implementing a 100 Mbps download / 100 Mbps upload service tier that is 100% subsidized through the Affordable Connectivity Program (for eligible households; affordable for those who aren't eligible).



## Introducing BTX Fiber

BTX Fiber is a new fiber internet project to serve residents and businesses in Brownsville, Texas. The project is a public-private partnership between Lit Communities and the City of Brownsville.



# Fiber Network – Scope and Scale

## Network Architecture

- Priority A, B, C Sites
- COB Sites - 59 total
- BPUB Sites - 206 total
- BPUB AMI - 39 Towers
- Fiber Last Mile Network (FLMN)
- Smart City (COB): Streetlights, Traffic Control Boxes (best effort)
- Other Stakeholders: BISD, CC, SoT, USG, etc (best effort)
- Boca Chica Spur (priced separately)

## Contractual Relationship Options

- Build, Transfer, (Operate, BT(O))
- Build, Operate, Transfer (BOT)
- Build, Own, Operate (BOO)
- Public-Private Partnership (PPP)
- Hybrids of above

## Respondent Qualifications

- Technical experience
- Financial capacity



# We Inked the Deal

Three Parties to the Public-Private Partnership in July 2022

[Brownsville Fiber Signing Ceremony](#)

FIBER NETWORK COORDINATION AGREEMENT SIGNING

CITY HALL  
BROWNSVILLE TEXAS



# WHERE WE ARE: FIBER COORDINATION AGREEMENT

## ELEMENTS:

RIGHT OF WAY AND ENCROACHMENT AGREEMENT

ENGINEER, PROCUREMENT AND CONSTRUCTION CONTRACT (EPC)

PRIORITY LIST AND PRICE SHEET

INDEFEASIBLE RIGHTS OF USE (IRU)

## Terms:

Guaranteed Maximum Price

Right of First Offer (ROFO)

ARPA Compliance

Affordable Services

Dark Fiber to Community Anchor Institutions

Open Access through Lottery to two additional ISPs

Port Connection Fees + Operations and Maintenance Services

**WHEREAS**, in lieu of certain Right of Way Agreement and IRU fees, Lit/BTX (direct or through a subcontractor) shall provide: (i) operations and maintenance services to the FMMN, (ii) a project plan and design for the FTTP Network that includes capacity for at least three (3) Service providers, (iii) in-kind services to certain City buildings that will be specified and mutually agreed by the City and Lit/BTX, (iv) affordable services to FTTP customers as defined in ARPA, and (v) FTTP connection to priority locations identified in the Middle Mile Network Priority List; and

# The Fine Print: Texas Statutory Constraints on the FMMN

**WHEREAS**, neither the City nor BPUB will provide telecommunications services, pursuant to the Texas Utilities Code; and

**WHEREAS**, in accordance with Texas Utilities Code, Section 54.202, BPUB is not offering, nor shall it offer, for sale to the public, pursuant to this or any other agreement, either directly or indirectly through a telecommunications provider: (1) a service for which a certificate of convenience and necessity, a certificate of operating authority, or a service provider certificate of operating authority is required; or (2) a nonswitched telecommunications service used to connect a customer's premises with: (A) another customer's premises within the exchange; or (B) a long distance provider that serves the exchange; and

**WHEREAS**, any conflict between a provision of this or any related agreement and the prior two recitals shall yield to, and be harmonized to the greatest extent possible with, such prior two recitals; and

**WHEREAS**, in accordance with Texas Utilities Code, Section 54.2025, a municipality is not prevented from leasing any of the excess capacity of its fiber optic cable facilities (dark fiber), so long as the rental of the fiber facilities is done on a nondiscriminatory, non-preferential basis; an



# We Broke Ground

---

October 2022

THE  
DER





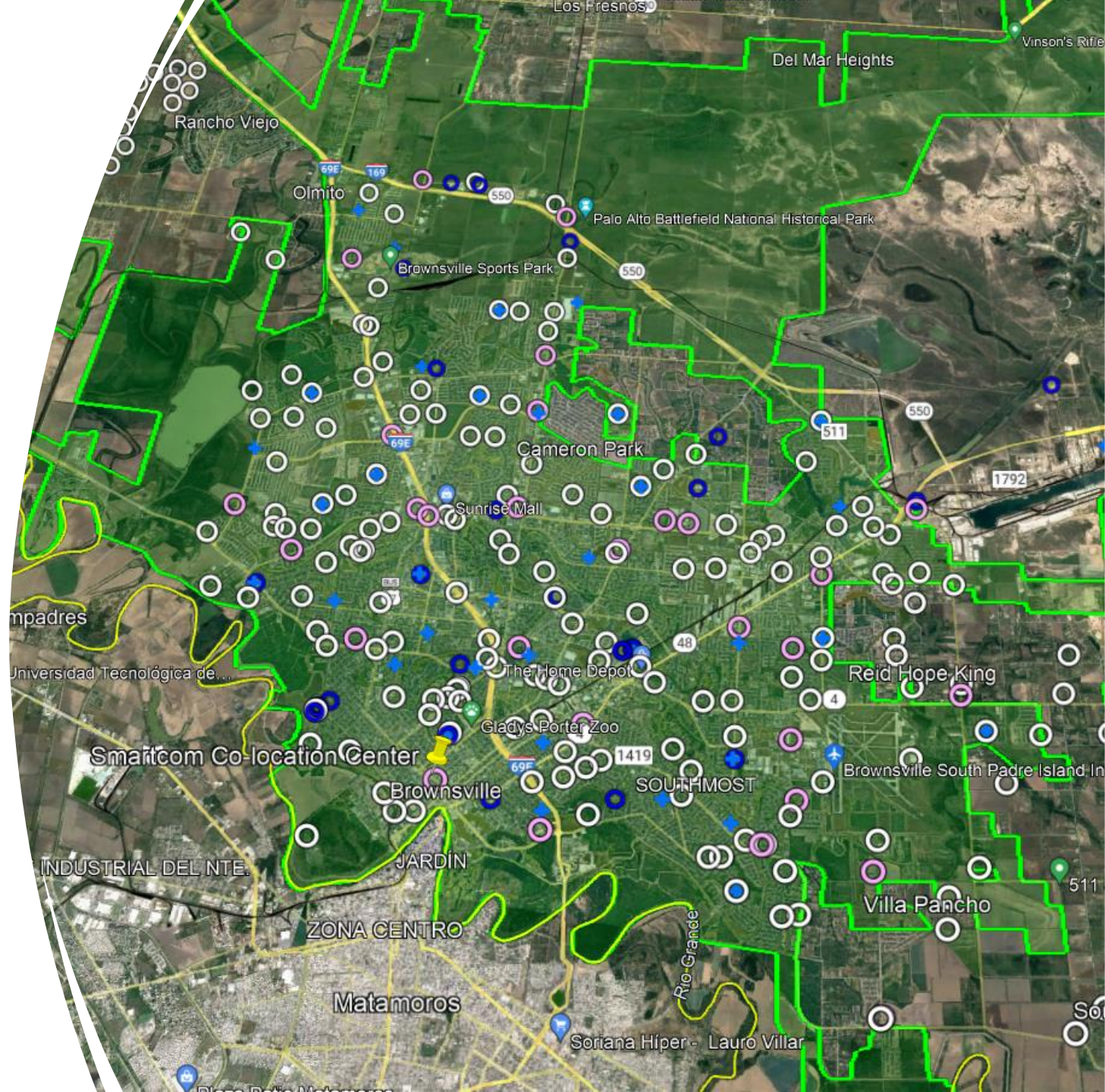
- BPUB represented in Procurement Evaluation towards a P3 and is a named partner in the Fiber Network Coordination Agreement, executed July 2022
- No construction cost to BPUB
- Agreement identifies participation through public use easements, right-of-way, and pole attachments
- It defends PUB against statutory constraints of Texas Utility Code against telecommunications market participation
- 100 miles of Middle Mile which includes 281 BPUB sites not including AMI radio telemetry and 61 COB sites
- BPUB requested 288 fiber strands including 26 Dark Fiber and City utilizes another 144 fiber strands
- Total ARPA Allocation: \$19.5M; Value of BPUB Fiber Infrastructure: \$9.75M
- Operations and Maintenance in negotiations, with fiber termination costs included for all Priority A locations
- Permit review is the ACCELA pilot initiative, with 14 PUB employees enrolled in software demonstration
- Design built on BPUB maps



# BPUB Priority Sites

---

- Key:
- Blue: A sites
- Pink: B sites
- White: C sites





# Line Breaks

Started where hardest – most dense, most fragile infrastructure and maps – but also most connections (26% on Ring One/Downtown);

Best practices – locates, exploratory potholing, pressure washer, field knowledge;

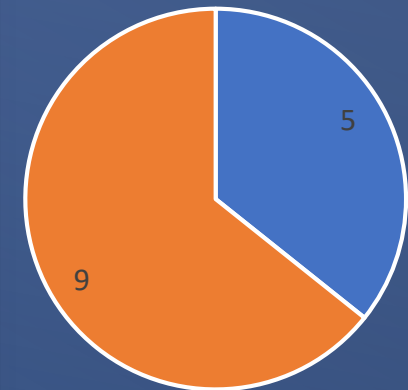
Digging deep, laying conduit under existing BPUB infrastructure, to mitigate future risk;

Active field with other contractors: Brownsville on the Grow!

Restoration costs borne by contractor.

Strike #	Date	Utility	PUB Contact	Located	At Fault	Comments
1	03/28/23	Water	N	Not Located	N	The private water line was not located. Resulting in unmarked utility strike
2	03/31/23	Water	N	Located	Y	While utilizing a pressure washer and vac truck to locate a marked utility, the pipe cracked. This resulted in a utility strike
3	04/19/23	Gas	N	Located	Y	While utilizing a pressure washer and vac truck to locate a marked utility, the pipe cracked. This resulted in a utility strike
4	04/04/23	Water	N	Not Located	N	While preparing to set a vault, the mini excavator struck an unmarked water line
5	04/20/23	Water	N	Located	Y	While utilizing a pressure washer and vac truck to locate a marked utility, the pipe cracked. This resulted in a utility strike
6	04/24/23	Water	N	Not Located	N	While pulling back with the reamer, an unmarked water line was struck.
7	05/03/23	Water	N	Not Located	N	While pulling back with the reamer, an unmarked water line was struck.
8	05/04/23	Water	N	Located	Y	While pulling back with the reamer, an unmarked water line was struck.
9	05/20/23	Water	N	Not Located	N	While pre-reaming to widen the path to place conduit an un marked water line was struck
10	05/31/23	Sewer	N	Not Located	N	While pulling back with the reamer, an unmarked sewer line was struck.
11	06/06/23	Water	N	Not Located	N	While pulling back with the reamer, an unmarked water line was struck.
12	06/12/23	Water	N	Not Located	N	While pulling back with the reamer, an unmarked water line was struck.
13	06/12/23	Fiber/Phone	N	Located	Y	While pulling back with the reamer, a marked fiber/phone line was struck.
14	06/13/23	Power	N	Not Located	N	While deploying the anchor drill to stabilize the machine, it struck an un marked power line
						June 12 COB Meeting requested to contact PUB if a line is not found once potholing is done for 2nd Opinion
						Reamer size 10"
						Entry Bore bit 4"

## Line Breaks



■ Located ■ Not Located



# Signage Action Plan

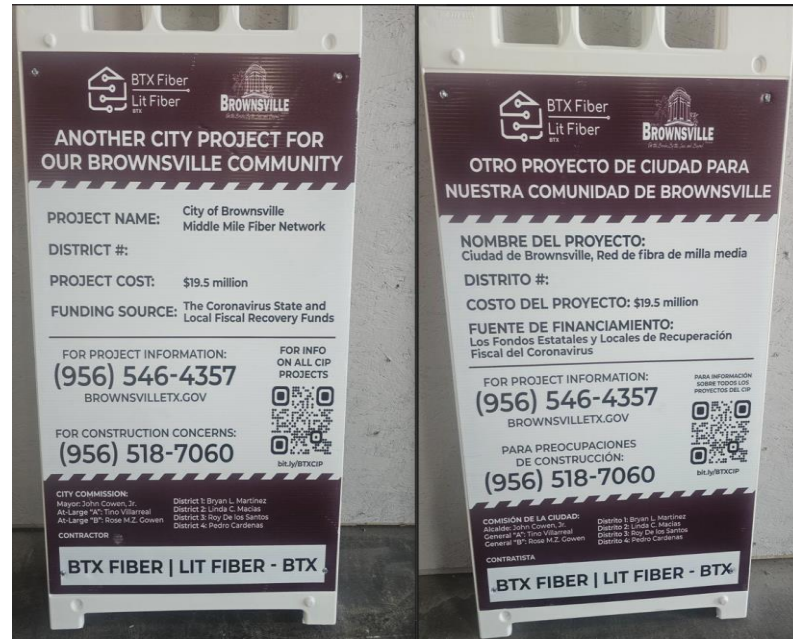
July 10, 2023



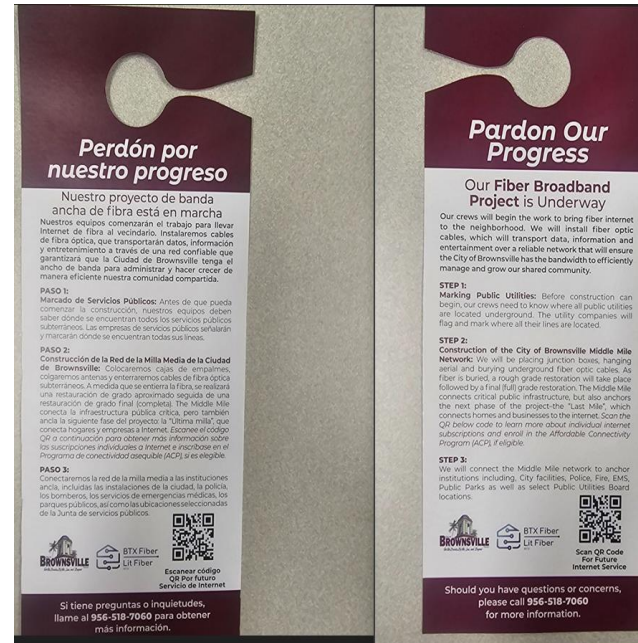


## Action Plan

- Signs will be placed 3 days ahead of schedule.
- (20) 24"x36" Have been deployed to the so each crew has at least (2).
- Crews will provide location data each day of where signs are deployed. This information will be shared with COB daily with the crew tracker.
- (10) 24"x18" "Sidewalk Closed" signs have been ordered and ETA is 6-29-23. Once received, they will be deployed to assist in diverting foot traffic for sidewalk mitigation.
- (1000) 6"x6" yard signs and ETA 7-29 have been ordered. When received, they will be deployed 3-5 days in advance of construction as well.
- (2) 5'X3' CIP signs have been ordered and ETA is 7-1. Once received, they will be placed on a main corridor and moved as the project progresses.
- Door hangers are being deployed 2-3 days before any construction occurs



24" x 36" Frame Sign



Door Hangers



23\_YardSign\_BTX.pdf



**ANOTHER CITY PROJECT FOR  
OUR BROWNSVILLE COMMUNITY**

---

**PROJECT NAME:**  
City of Brownsville  
Middle Mile Fiber Network

**DISTRICT #:**

**PROJECT COST:** \$19.5 million

**FUNDING SOURCE:**  
The Coronavirus State and Local Fiscal Recovery Funds

FOR PROJECT INFORMATION:  
**(956) 546-4357**  
BROWNSVILLETX.GOV

FOR CONSTRUCTION CONCERNS:  
**(956) 518-7060**

FOR INFO  
ON ALL CIP  
PROJECTS  
  
bit.ly/BTXCIP

---

**CITY COMMISSION:**  
Mayor: John Cowen, Jr.  
At-Large "A": Tino Villarreal  
At-Large "B": Rose M.Z. Cowen

District 1: Bryan L. Martinez  
District 2: Linda C. Macias  
District 3: Roy De los Santos  
District 4: Pedro Cardenas

**CONTRACTOR**

**BTX FIBER  
LIT FIBER - BTX**

60" x 36" CIP Sign





## Example Day 1

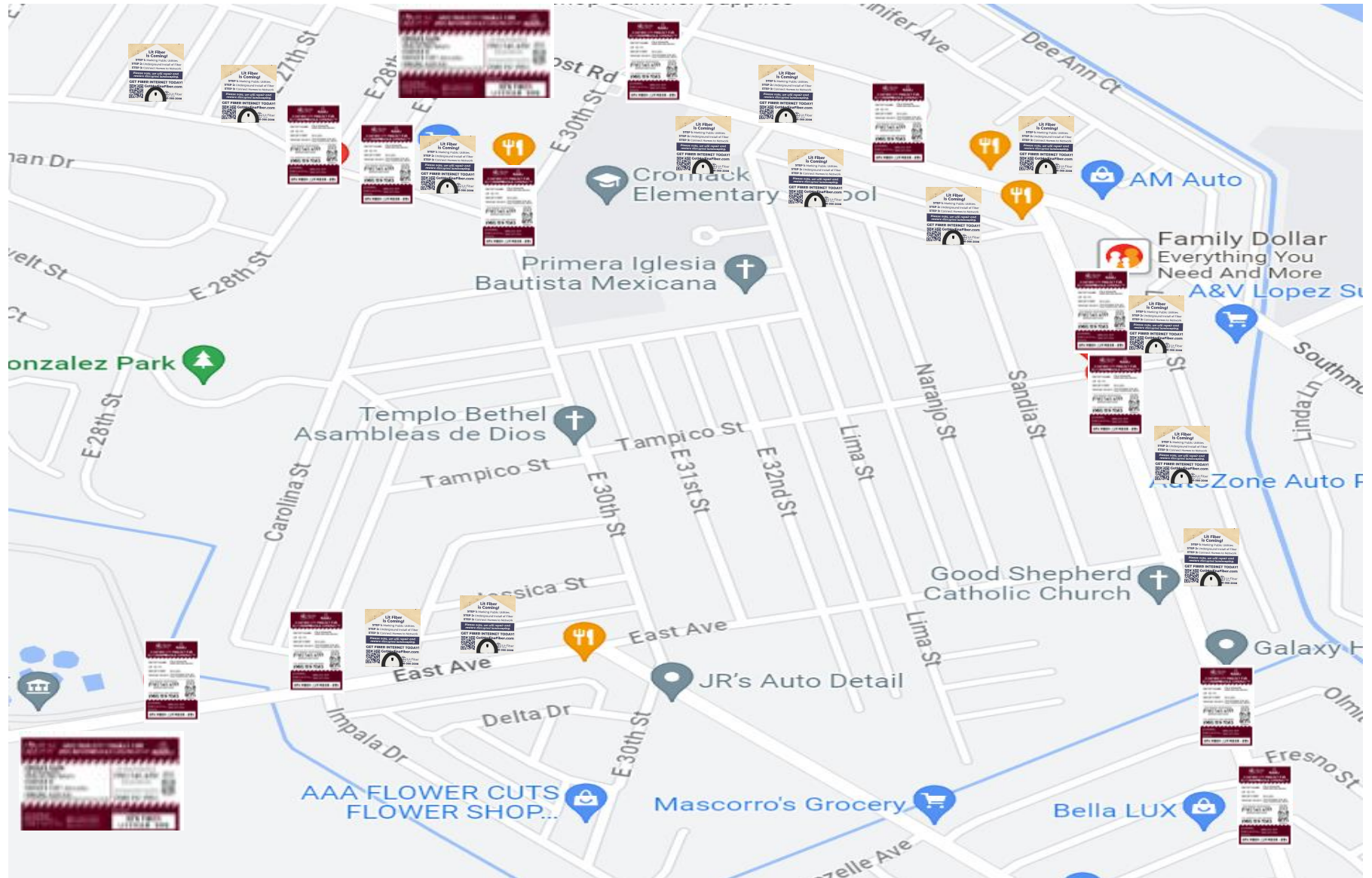
24"x36" A-Frame Signs



-60"x36" CIP Signs



-6"x6" Yard Signs





## Example Day 2



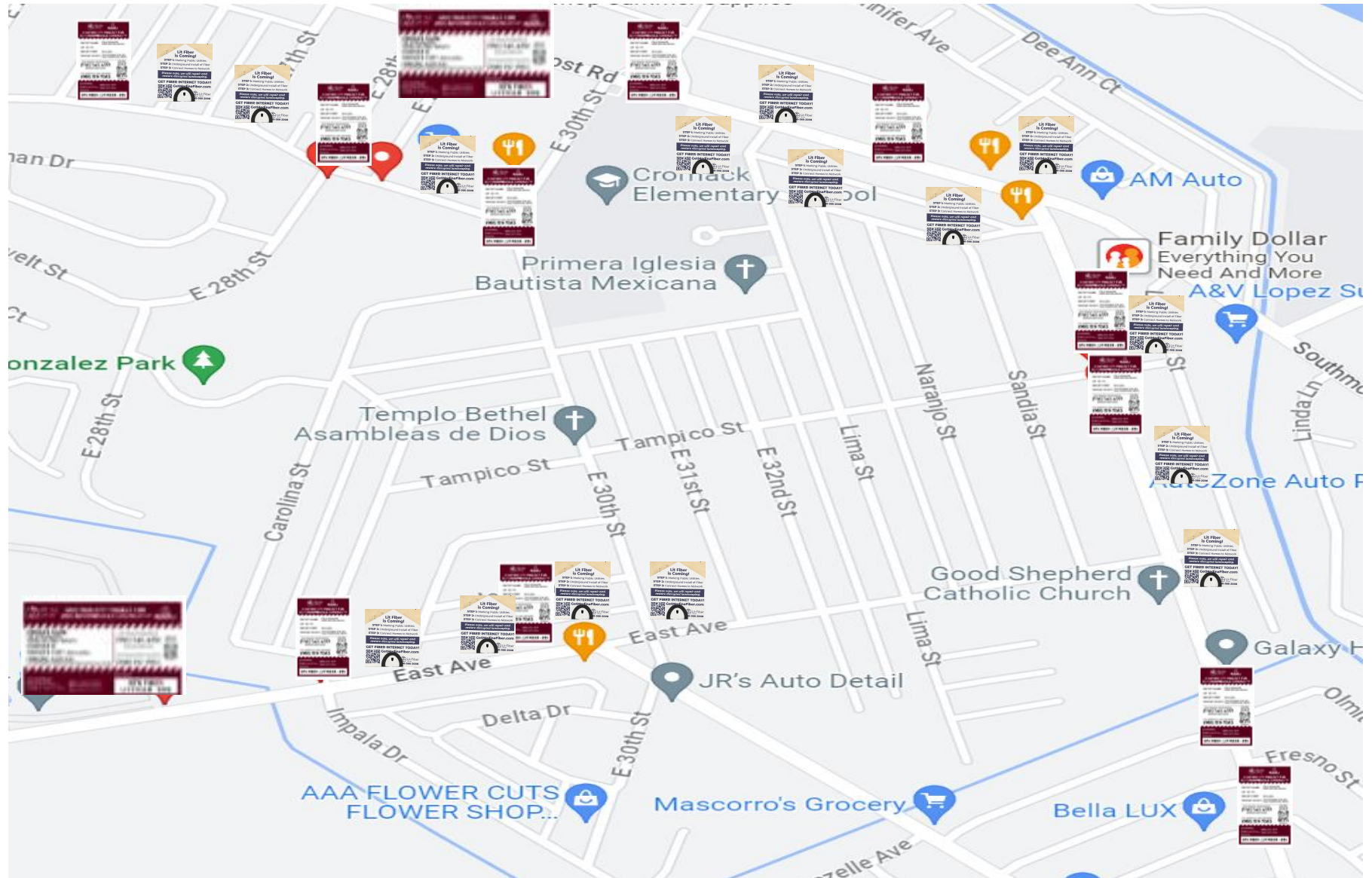
-24"x36" A-Frame Signs



-60"x36" CIP Signs



-6"x6" Yard Signs







## Example Day 3



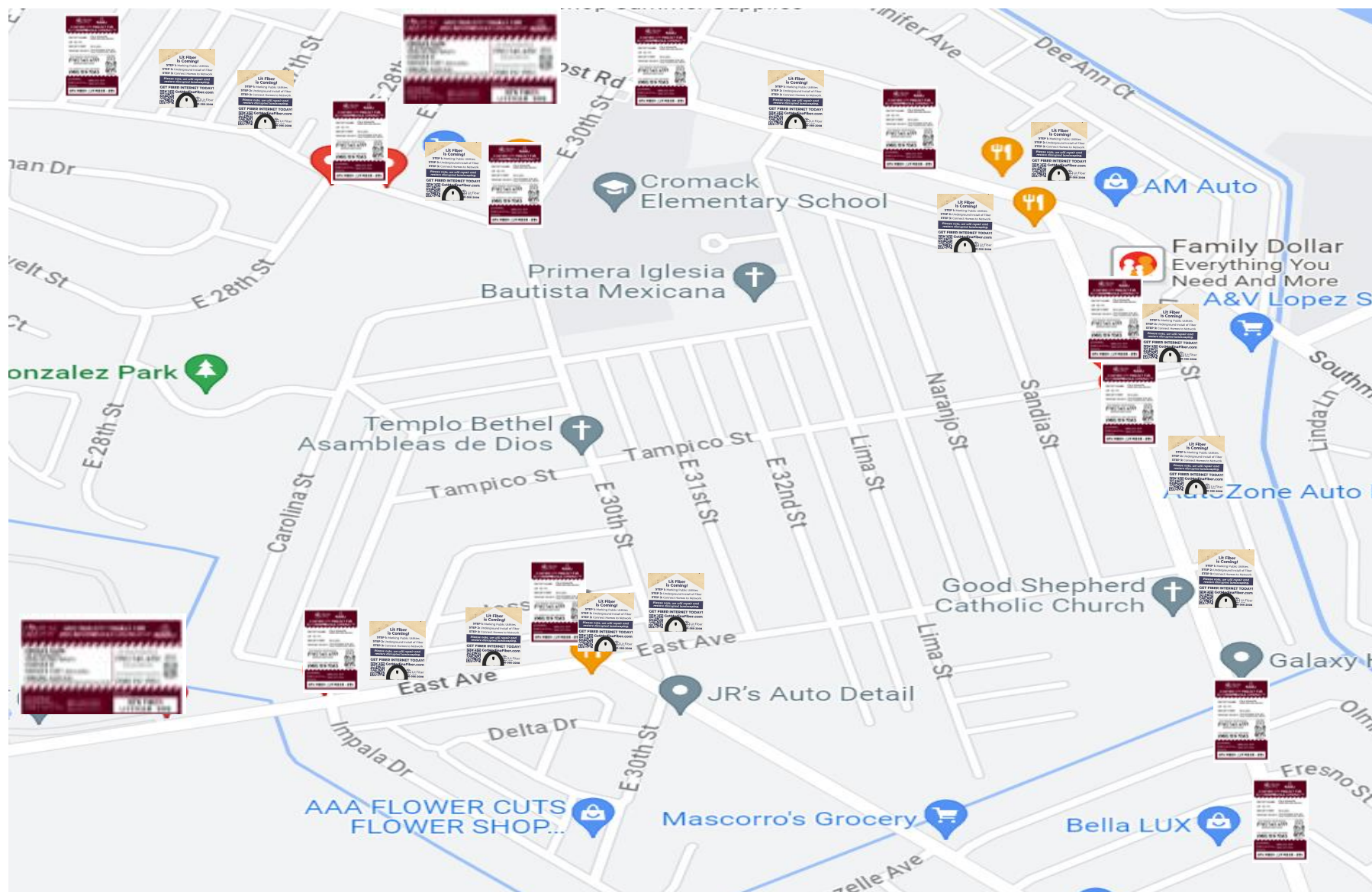
-24"x36" A-Frame Signs



-60"x36" CIP Signs



-6"x6" Yard Signs





Scan to visit  
[BTXfiber.com](http://BTXfiber.com)

