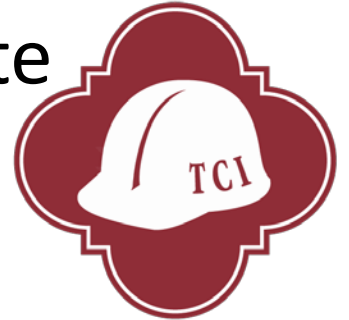


City of San Antonio

Fiber Deployment Management Update

City Council B Session

January 18, 2017



Presented by: Mike Frisbie, P.E.
Director

Benefits of High Speed Fiber

- Faster internet connections capable of handling higher bandwidths
- Decreased downloading/uploading times
- Increased business and institutional opportunities
- Reduced pricing from increased competition



Background

2014

- Google announced San Antonio as potential fiber city
- City Council authorized Google and AT&T to lease City property for network huts

2015

- Google and AT&T announced San Antonio will receive gigabit fiber service
- AT&T begins expanding their fiber network

2016

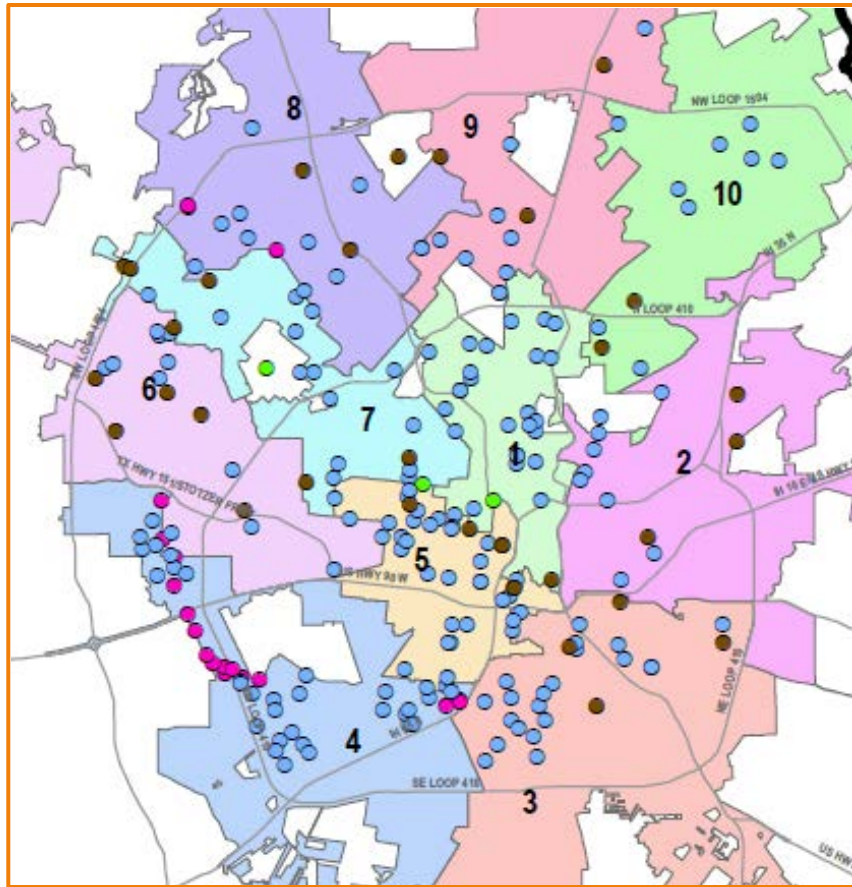
- Google starts constructing their fiber network build out
- Additional companies begin developing fiber deployment plans

2017

- Construction activities to increase from existing and new fiber companies



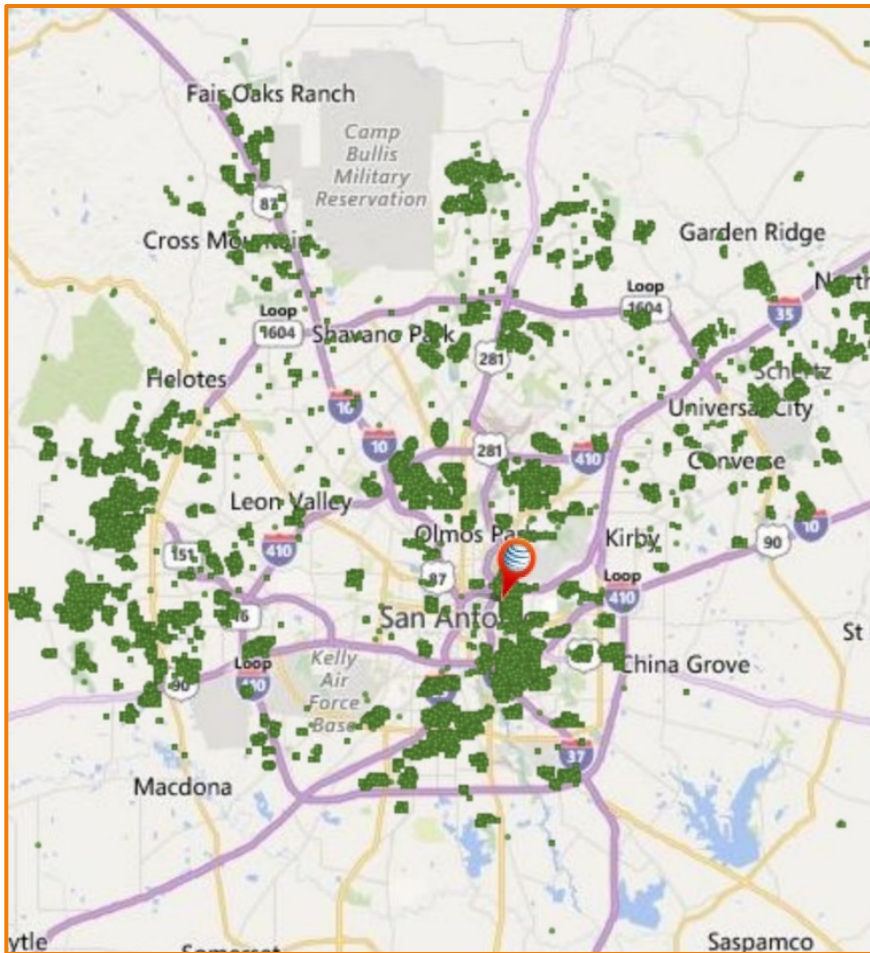
Active Fiber Permits



Fiber Group	Crews (2016/Today)	Permits (2016/Today)	Deployment Duration
AT&T Fiber	103/120	117/176	2-3 years
Zayo	29/45	14/46	2-3 years
Conterra	10/6	37/20	2-3 years
Google Fiber	30/3	10/3	4-5 years
TOTAL	172/174	178/245	

AT&T Fiber Update

- Fiber construction build out
 - 1,000 miles completed since June 2015
 - 1,500 additional miles anticipated for 2017
- High speed fiber service currently available to select locations (noted in green on map)



* Map courtesy AT&T

AT&T Network Build out

Utility Locates



Pothole Truck



Boring & Vault Excavation



AT&T Network Build out

Vault Excavation

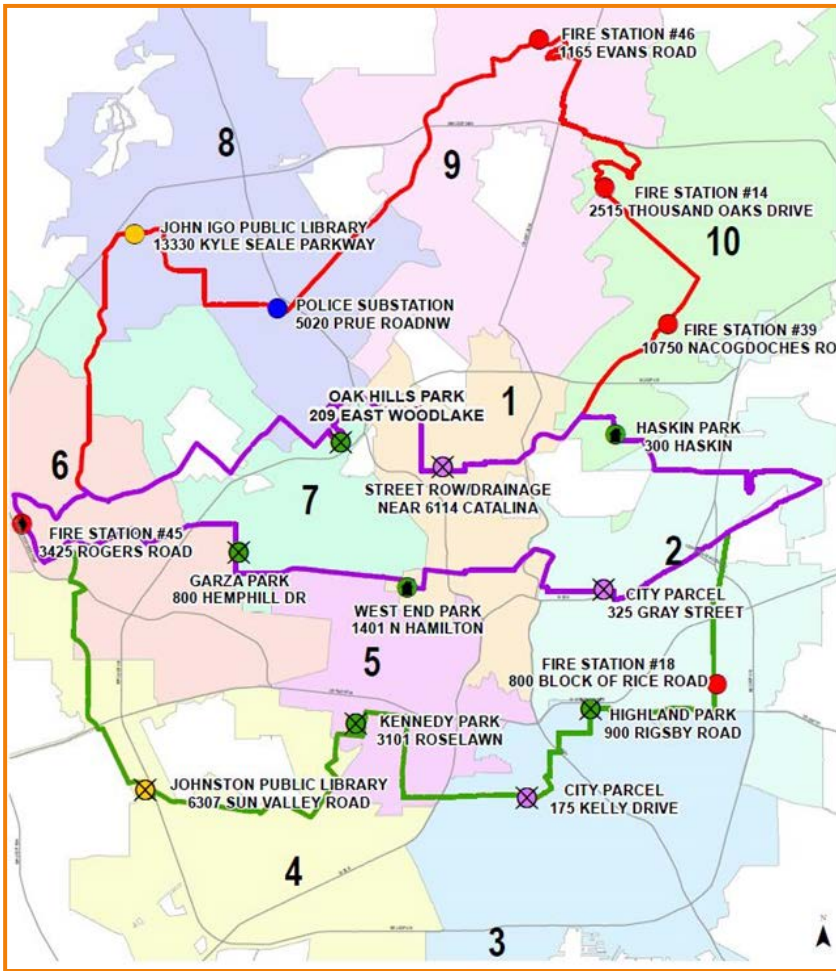


Pulling Fiber



Google Fiber Update

- Fiber network build out
 - 4,000 miles total network build out
 - 400 miles backbone build out
 - Central ring substantially complete, except for splicing and restoration
 - Construction on hold for network redesign
 - 17 network huts proposed
 - 2 network huts substantially complete
 - Remaining 15 locations under review



Haskin Park



- Located in District 10
- Construction began July 2016
- Installation of standard hut
- Substantially complete
- Upgraded to commercial fencing and incorporated landscaping
- HDRC anticipated in February to obtain input on fencing and landscaping

West End Park



- Located in District 1
- Work began September 2016
- Installation of “cottage” hut and substantially completed
- Fence to include artwork

West End Park Fence Art Design Examples



- Permanent system of colorful steel tabs for chain link mesh
- Councilman Trevino and Public Art San Antonio (PASA) to host community meeting to collect input for tab design
- Arts Commission to review design in February 2017
- Art component proposed installation in May/June 2017

Google Hut Locations Under Review

8 Alternate Locations Required

4 Parks

- Highland Park (D3)
- Kennedy Park (D5)
- Oak Hills Park (D7)
- Garza Park (D7)

3 Vacant Residential Lots

- 6114 Catalina (D1)
- 325 Gray St (D2)
- 175 Kelly (D3)

1 Library

- Johnston Branch Library (D4)

7 Sites Remain as Planned

5 Fire Stations

- Fire Station #18 (D2)
- Fire Station #45 (D6)
- Fire Station #46 (D9)
- Fire Station #14 (D10)
- Fire Station # 39 (D10)

1 Police Substation

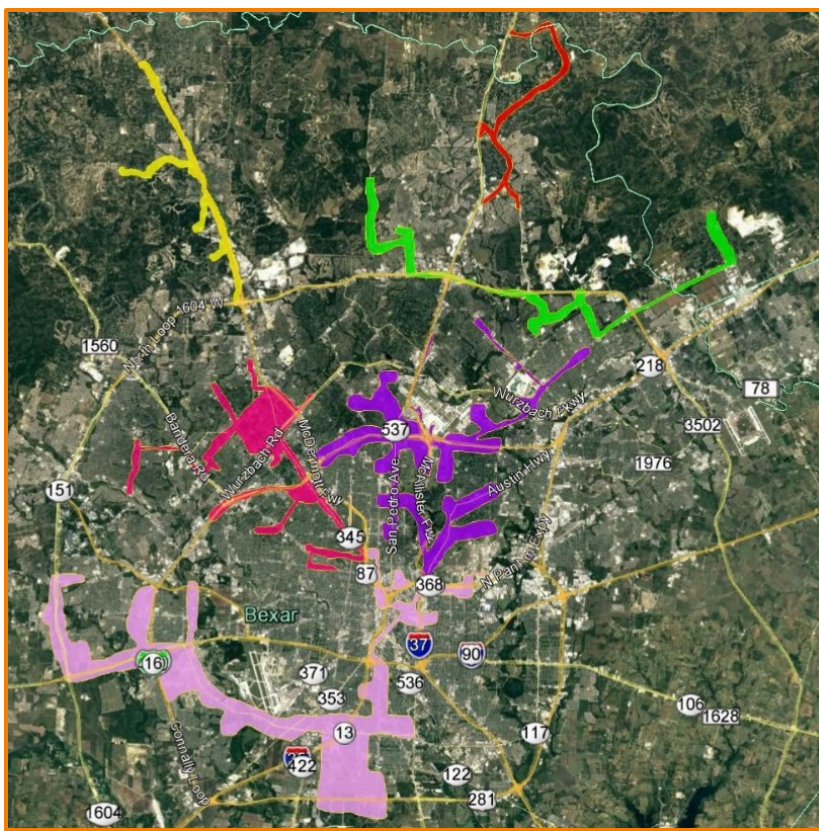
- Prue Rd Substation (D8)

1 Library

- John Igo Library (D8)

Zayo Fiber Update

- Zayo is an independent communication provider constructing a Dark Fiber backbone and Dark Fiber connections throughout the City of San Antonio
- Projected construction build out
 - 155 miles completed since May of 2016 across the City
 - 300 additional miles anticipated for 2017
 - Small micro-trench demo anticipated for mid February



2017 Projected Schedule

Jan-Feb	Mar-April	April - May	June	July-Aug	Sept

* Map courtesy Zayo

Zayo Build out

Pot hole



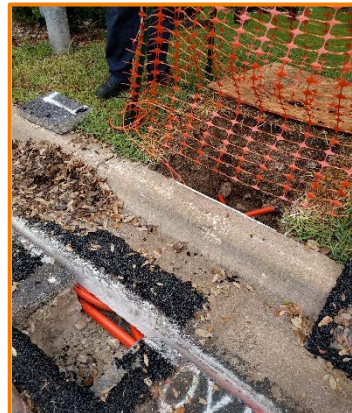
Boring set up



Google Fiber Micro-Trench Pilot Program



- Pilot will be located in Council District 6
- Approved by City Council on September 29, 2016
- Anticipated start initially in early 2017; no timeline from Google on actual start



Community Outreach Enhancements

Construction notifications

- 30 day notification to City Council and affected NA's prior to construction
- 7 days prior, electronic message boards on impacted collector or arterial streets
- 3 days prior, door hangers to impacted residents and businesses

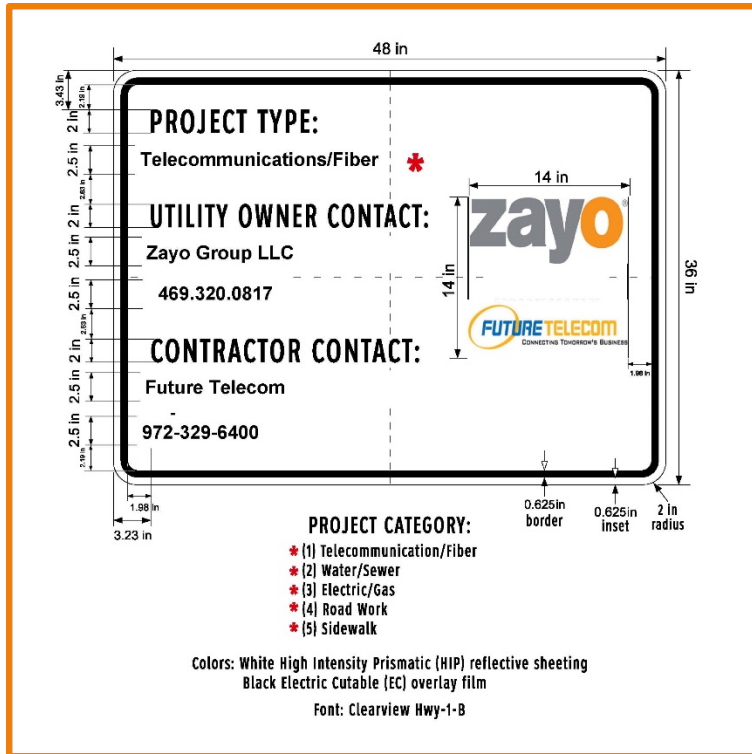
Signage

- Construction signage to include Project Type, Utility and Contractor contact information

Identification

- Construction crew to wear Utility Owner identifier visible to the public, i.e., vests, hard hats, etc.

Signage and Identification Examples



Summary of High Speed Fiber

- More companies providing gigabit service
- Overall increased construction across City
- Enhanced City capabilities to manage deployment
- Many residents and businesses already receiving benefits

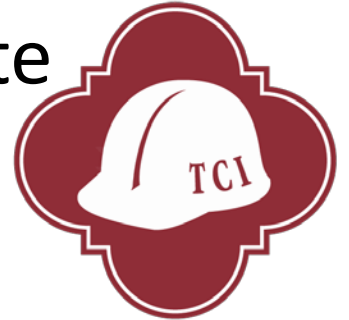


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