



# City of San Antonio

## Agenda Memorandum

**File Number:**16-4982

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**Agenda Item Number:** 41.

**Agenda Date:** 9/29/2016

**In Control:** City Council A Session

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**DEPARTMENT:** Transportation & Capital Improvements

**DEPARTMENT HEAD:** Mike Frisbie, P.E.

**COUNCIL DISTRICTS IMPACTED:** District 6

### **SUBJECT:**

Micro-trench Pilot Program

### **SUMMARY:**

An ordinance authorizing Google Fiber Texas LLC to pilot the use of an alternate cable boring or trenching methodology, micro-trenching, within a defined geographic area, located in Council District 6, as part of their installation of a high-speed fiber network citywide

### **BACKGROUND INFORMATION:**

On August 5, 2015 Google Fiber Texas LLC (Google) announced that it would be bringing its one gigabit internet access to San Antonio. This announcement enhanced competition among the telecommunication providers and significantly increased the amount of construction being performed within the City of San Antonio right of way.

For years, San Antonio based telecommunication companies have built out their networks utilizing multiple construction methods (boring, trenching and/or aerial pole attachments) to provide their services to the San Antonio region. More recently, other cities such as Austin have permitted the use of an alternate construction method called "micro trenching" to reduce the impact on the easements located on resident's property and existing underground utilities.

In August 2016, Google submitted a formal request to the City which would allow them to implement a micro trench pilot program in a define geographic area within Council District 6. This pilot program would provide Google with the ability to convert approximately 190 linear miles of underground boring into the proposed

micro trenching construction method.

Implementing the proposed micro trenching pilot program would enable the deployment of underground fiber in trenches that are narrower, shallower, and completed faster than typical open trenches or boring. Generally, the width of the trench is between .75 and 1.25 inches wide and 8 to 16 inches deep. Trenches can be cut directly into the road surface, in the joint between asphalt and gutter pans, or in the joint between curbs and sidewalks. Micro trenches are cut with circular saw blades (micro trencher) that accommodate a range of trench widths, depths, and surface types. The debris from the trenches is contained by a vacuumed blade cover that whisks away dust and reduces cleanup time. Debris is collected in a vacuum tank that precedes the micro trencher. After the fiber conduit has been placed and successfully routed through all necessary transitions, crews can begin to backfill the trench to meet or exceed local standards and specifications.

Micro trenching typically requires closing down part of a lane for a day, compared to several weeks for a 30 by 30 inch open trench. Typically, the micro trenches are backfilled the same day they are cut. After the backfill has settled in the micro trench, the last few inches of the trench are filled with a sealer, which bonds to the surrounding material and creates a highly durable, long lasting, watertight seal above the micro trench. The sealer is tamped level to the road surface and color treated to blend in with its surroundings.

## **ISSUE:**

This Ordinance authorizes Google Fiber Texas LLC with the right to execute a micro trench pilot program located in Council District 6. Current City policy does not authorize trenching at depths less than thirty inches in city streets and thirty six inches in the parkway. The micro trenching pilot program would enable the deployment of underground fiber in trenches that are narrower, shallower, and completed faster than typical open trenches. Generally, the width of the trench is between .75 and 1.25 inches wide and 8 to 16 inches deep. Trenches can be cut directly into the road surface, in the joint between asphalt and gutter pans, or in the joint between curbs and sidewalks.

Micro trenching is a construction method which reduces conflicts with existing underground utilities thereby avoiding disruptions to water, gas, and other essential series and preserving the community's quality of life. Micro trenching also enables contractors with the ability to complete large section of the network in days instead of weeks, reducing the construction impact on neighborhoods.

The City will monitor this program and evaluate the success for this pilot based on the following criteria:

- Number of utility impacts (water or sewer breaks)
- Pace of work and disruption to the right of way
- Community support for the program

After the pilot program is complete, staff will provide a report to City Council and potentially brief the Transportation, Technology, and Utilities Committee. If this construction method is considered acceptable, no ordinance changes would be required and the City Manager or her designee may revise the Utility Excavation Criteria Manual providing all right of way users or other telecommunication companies with the opportunity to utilize this alternate construction method.

This pilot program is for a period of nine months to begin in 2017.

## **ALTERNATIVES:**

City Council may choose not to approve this ordinance authorizing the execution of the pilot program. However, that will require the current City standards, boring and open trenching, for approximately an additional 190 liner miles throughout pilot program area.

**FISCAL IMPACT:**

The FY 2017 Budget included a team of 14 positions, of which 12 positions are new, at a cost of \$1.1M to better manage the right of way. This team will evaluate the pilot program.

**RECOMMENDATION:**

Staff recommends approval of this Ordinance authorizing Google Fiber Texas LLC with the right to execute a micro trench pilot program located in Council District 6. After the pilot program is complete, staff will provide a report to City Council and potentially brief the Transportation, Technology, and Utilities Committee and would have the authority to expand the use of this construction methodology citywide and to all telecommunications companies.