



IF THESE STREETS COULD TALK

A community organisation in Freedmen's Town, Houston, is campaigning for the use of Trenchless Technology to save the historic red brick streets from unnecessary damage.

Freedmen's Town, the 4th Ward of the City of Houston, is a neighbourhood of cultural significance. It was established in the 1860s as a settlement for previously enslaved peoples and quickly became what many historians believe to be the largest African urban settlement of the post-emancipation era.

By 1984 the area was named in the National Register of Historic Places (NRHP), with its red brick streets noted as one of the neighbourhood's most important 'defining elements of character'.

However, on 11 June 2014 these streets came under threat when the City of Houston awarded a US\$5.6 million contract for the open trench installation and rehabilitation of underground water and sewage mains directly beneath the paved roadways. This open trench method meant that the bricks would have to be excavated ahead of construction.

The contract was immediately opposed by the Freedmen's Town Preservation Coalition (FTPC), an organisation that was established by local resident Dorris Ellis to educate the City of Houston on the historical significance of and the need to protect various sites in the Freedmen's Town district.

Despite this opposition, work on the project was started, only to be halted by a

protest from active members of the FTPC, who laid across the bricks at the construction site to prevent any further work by the city's contractors.

Since that time, the FTPC has been continuously campaigning for the City of Houston and its contractors to use trenchless methods, including horizontal directional drilling (HDD) and microtunnelling, for the rehabilitation and installation of new utilities in 4th Ward.

By mid-2015 the FTPC's cause was taken up by several organisations, including representatives from Hatch Mott MacDonald and Trenchless Engineering Corp, who have since been providing the community organisation with engineering advice. Legal advice has come from Thomas King and Michael Nixon, experts on Historic Preservation Laws. A Temporary Restraining Order was put in place in January 2015 and the rehabilitation contract is still on hold after a protracted legal battle in the Houston courts.

PAVING THE WAY TO FREEDOM

The story behind these red bricks streets starts with the persistent flooding and frequent outbreaks of malaria that plagued Freedmen's Town in the early 20th Century. In an effort to improve living conditions the

community launched a six-year campaign to receive permission from the Houston government to line the roads with bricks.

In 1913, when the community did receive permission to pave the roadways, work was completed by local residents (many of whom were former slaves), using money raised by the community. A number of the families living in the area contributed between US\$125 and US\$625 for the bricks to be laid in front of their homes – somewhere between US\$3,000 and US\$15,000 today. All construction was overseen by a white contractor, a work condition imposed by the City of Houston.

Once established, the robust roadways became crucial to improving liveability and allowing the Freedmen's Town community to flourish. Notably, some sections of the red brick streets were paved in particular patterns that have been identified as having religious significance to the Yoruba traditions of West Africa – adding to the historic value of the road infrastructure.

HISTORY AT RISK

Freedmen's Town's listing in the NRHP should provide some protection for the red brick streets – the listing states that the relevant city and state governments must be



A: City of Houston workers removing red bricks on Andrews Street.

B: Members of the FTPC stage a protest to stop the removal works.

C: One of the last remaining red brick intersections in the historic district of Freedmen's Town.

D: Dorris Ellis, President and Founder of the FTPC, protesting the removal of bricks by the city's contractors.

Images courtesy of Priscilla Graham.

good stewards of listed cultural resources, and prevents those governments from destroying resources using public funds.

In response to this, the City of Houston has claimed that any removal of red bricks required for the rehabilitation project would be temporary. In a statement to the press, former City of Houston Mayor Annise Parker said "We are going to exactly pull up the bricks, clean them off and put them down. And we are going to make every effort to keep the same pattern to the bricks."

This is not good enough for residents of Freedmen's Town, who have seen hundreds of historic buildings bought, demolished, and redeveloped to make way for the growing urban densification. When the neighbourhood was originally named on the NRHP its listing protected 568 historic structures, including 13 churches, across 40 city blocks. Today only 30-45 houses and 6 churches remain.

Confident that any removal of the bricks was not a satisfactory option, the FTPC turned to Trenchless Technology as a possible method that would allow for the successful completion of the city's project without the destruction of the integrity of the historical roadways.

A TRENCHLESS SOLUTION

The FTPC became aware of Trenchless Technology through one of its active members and the co-founder of the Rutherford B H Yates Museum, Catherine Roberts. While Ms Roberts did not work in

the trenchless sector, she had heard about trenchless projects from friends and family working in the oil and pipeline industries.

She was also aware of trenchless projects in Europe and within Houston itself, providing some precedent for the FTPC's no-dig campaign.

"In the last few years we have seen the City of Houston install new water lines in Avondale, the past Mayor's neighbourhood, using trenchless. The installation was done under sidewalk easements and was very fast with no disruption of traffic.

"Even in Freedmen's Town the new gas lines were installed with trenchless methods. This project was quick, non-destructive and efficient," said Ms Roberts.

While Trenchless Technology has been used for other projects in Houston, city authorities maintain that in this case the prohibitive costs of a trenchless installation and the need to repair and replace significantly damaged sections of the road makes open trench a preferable method.

In an effort to learn more about trenchless, members of the FTPC hosted a seminar on Trenchless Technology and historic preservation at the Texas Southern University. Here, the organisation learned from an event sponsor, Hatch Mott MacDonald's Craig Camp, a nationally recognised expert who has contributed to the design of a number of other significant trenchless projects in urban settings.

Mr Camp and others have been advising the FTPC on a number of solutions that

allow for all sewer and water main installation and road repair work to be completed without the removal of the historic bricks. Some of these solutions include:

- The use of HDD and microtunnelling to install lines: This technique has been successfully applied in previous City of Houston projects and would prevent any disturbance to the above ground environment.
- The re-routing of sewer and water lines to pass beneath alleyways and other easements.
- The removal of retrospectively laid asphalt using Polar Blasting: This technique, which uses dry ice for blast cleaning, would allow large sections of the brick streets to be cleaned in place, without harmful chemicals.
- The placement of engraved metal plates in sections of missing or damaged bricks: These plates would be an effective solution to repair badly damaged sections of road, while providing for the installation of a walking tour running through the historic district.
- The injection of polymers to level out unstable street sections: This injection technique was developed by URETEK and has been successfully used by companies in the Houston area.

The FTPC says that each of these solutions has been presented to and subsequently ignored by both city and state authorities. With the case still in court, and a final decision expected to be handed down in early- to mid-2016, the FTPC is determined to continue the fight for Trenchless Technology and the preservation of this historically significant infrastructure.

In the words of Ms Roberts, "It is not just about the bricks. It is about the people and how and why they designed and installed those bricks. If the bricks are removed it will destroy the integrity of the streets. These streets need to be preserved and repaired in place." 🌐

The final ruling on the Freedmen's Town red brick streets case is expected to be handed down in early- to mid-2016. For more updates on this story visit www.fb.com/FreedmensTownPreservationCoalition or www.trenchlessinternational.com