

# Council Update Reconstruction of Downtown Alleys CIP Project: 415

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# CIP Scope

- Reconstruct Alleys between LBJ and Guadalupe from Hopkins to University Dr
- Alley from Hopkins to University will be constructed first; including Kissing Alley
- Remaining Alleys will be constructed later

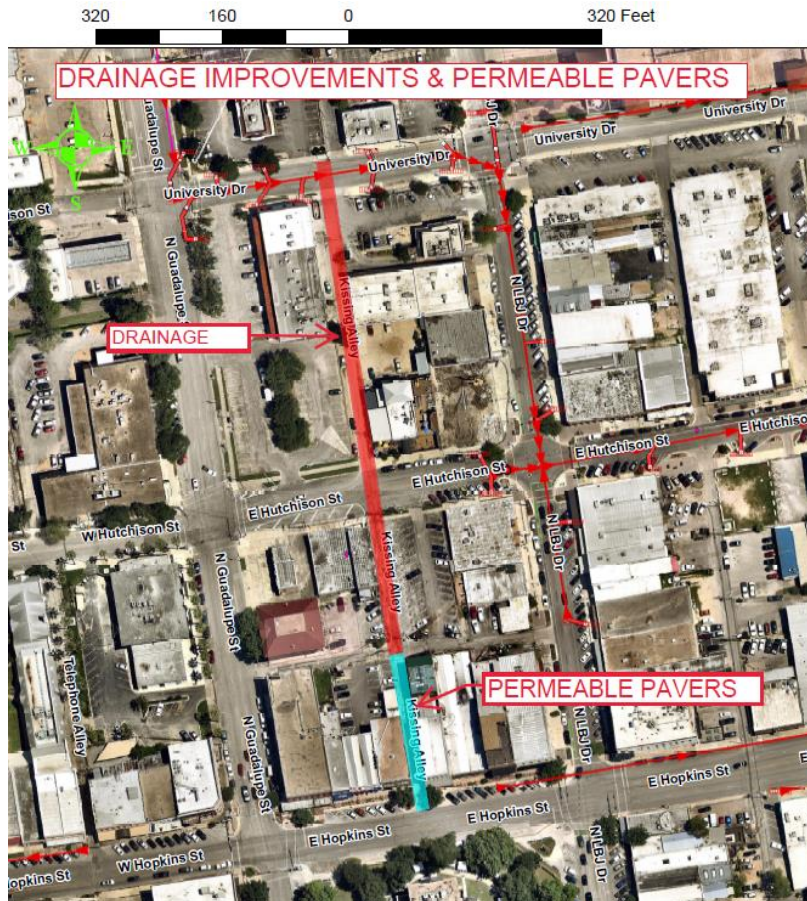


# Project Scope

- Reconstruct Alley from Hopkins to University Dr; including Kissing Alley
- Drainage improvements
- Permeable pavers
- Utilities replacement
- Electric & Telecommunication conversion from Overhead to Underground
- Property acquisition for Electric Transformer
- Kissing Alley Concept



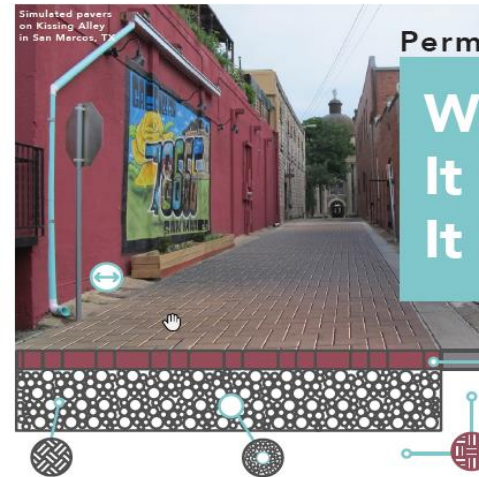
# Drainage & Pavers



Simulated pavers on Kissing Alley in San Marcos, TX

## Permeable Pavement

When It Rains It Drains



### Background

Permeable pavement is a type of outdoor hard surfacing that allows rain and runoff to seep into the ground and to be treated naturally rather than flow untreated to our creeks and rivers.

A wide variety of permeable pavement types are available that offer a range of utility, strength, and permeability and can be used on street parking, sidewalks, parking lots, and driveways.

Permeable pavement is an alternative to conventional concrete and asphalt paving and can help enhance design aesthetics, reduce heat, promote tree growth, clean stormwater, and reduce run-off.



#### Existing Structure

Permeable pavement must be isolated from building foundations by using impermeable liners or concrete ribbon on the sides.



#### Media Layer

Permeable interlocking concrete pavers consist of a paver layer with small stone fill between the joints, an underlying stone aggregate reservoir layer and an underdrain system if over clay soils. In general, the open graded sub-base is designed to have a 35-40% void space and depth of at least 6 inches.



#### Underdrain System

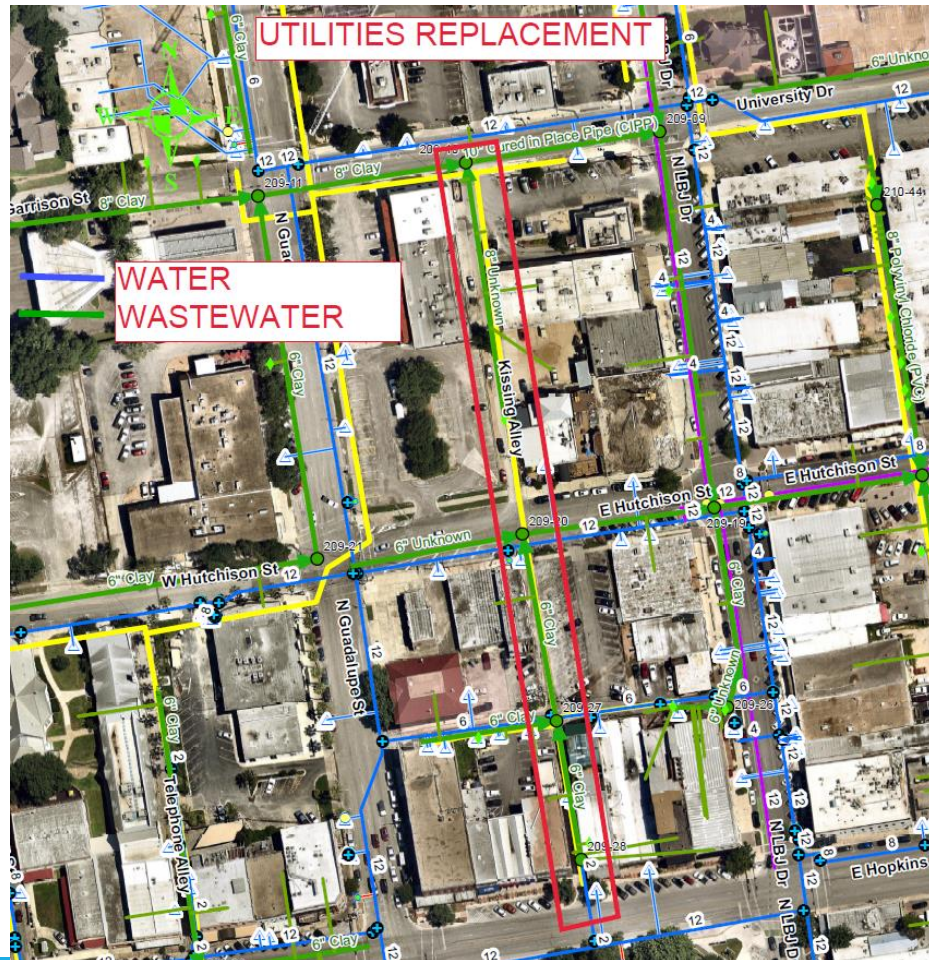
Below the media (aggregate stone) layers, an underdrain system routes infiltrated stormwater to either storage for irrigation and reuse, or to the storm drain system, surface conveyance or another storm water treatment practice. Infiltration is preferred with no underdrain.



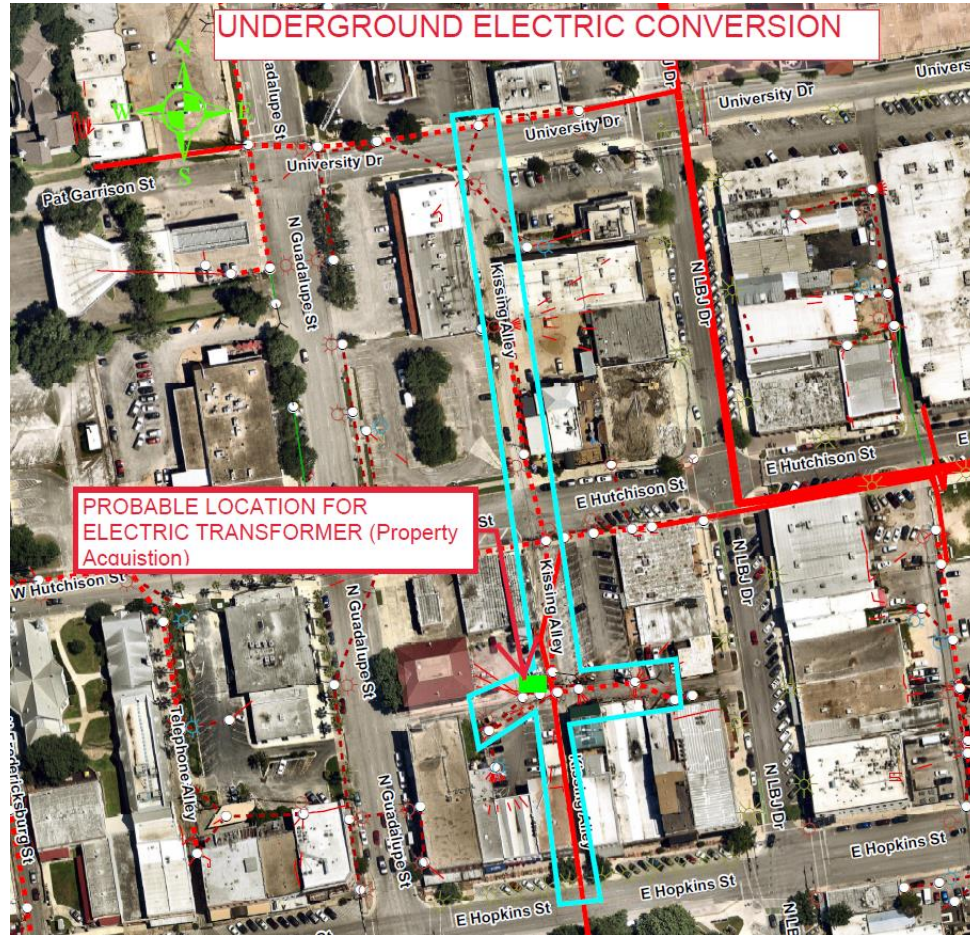
#### Soil Type

Minimize compaction during construction. Determine site-specific permeability; it is ideal to have well-drained soils. Clay soils usually require underdrain piping.

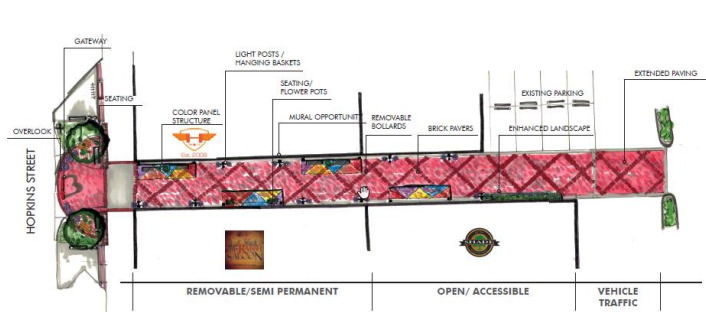
# Utilities Replacement



# Electric Conversion



# Kissing Alley Enhancements



CONCEPT A

Graphic Scale: 1" = 10' 0"



ART INSPIRATION IMAGES



SITE INSPIRATION IMAGES



CONCEPTUAL SKETCH



# Project Constraints

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- Limited ROW and built up area
- Drainage
- Permeable Pavers
- Utilities
- Electric Conversion from O/H to U/G
- Urban Design

A preliminary engineering phase was initiated to resolve these constraints so that a more defined scope can be established before moving forward with design and construction phase

# Preliminary Engineering Scope

- Project Management & Meetings
- Survey
- Geotechnical Engineering
- Subsurface Utility Engineering
- Drainage Engineering & Water Quality
- Kissing Alley Cross Section
- Illumination Design
- Electric Design
- Easement & Land Acquisition Requirements
- Kissing Alley Concept
- Stakeholder Coordination
- Construction Phasing Plan



# Preliminary Engineering Fee

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Task	Fee
Preliminary Engineering	\$50,090.00
Survey	\$34,265.00
Geotechnical	\$8,495.00
SUE	\$24,877.00
Electric Design	\$5,340.00
Illumination Design	\$6,741.00
Final Kissing Alley Concept	\$18,490.00
<b>TOTAL</b>	<b>\$148,298.00</b>

While reviewing scope, the City looks at the proposed tasks and associated fee

# Construction Cost Estimate

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Task	Fee
Electric O/H to U/G Conversion	\$750,000
Permeable Pavers	\$100,000
Utilities (W & WW)	\$250,000
Drainage & WQ	\$250,000
Kissing Alley Enhancement	\$300,000
Alley & Roadway Construction	\$250,000
<b>TOTAL</b>	<b>\$1,900,000</b>

Construction cost is based on an estimate provided by SMEU, Burditt (Kissing Alley) and assumptions for W, WW, Drainage & Pavement Construction.

# Questions

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