

Memorandum



DATE January 16, 2018

CITY OF DALLAS

The Honorable Members of the Mobility Solutions, Infrastructure and Sustainability

TO Committee: Lee M. Kleinman (Chair), Rickey D. Callahan (Vice-Chair), Sandy Greyson, Adam Medrano, Casey Thomas, II and Tennell Atkins

SUBJECT **Mill Creek/Peaks Branch/State-Thomas Drainage Relief Tunnel**

On Monday, January 22, 2018, you will be briefed on Mill Creek/Peaks Branch/State-Thomas Drainage Relief Tunnel. The briefing materials are attached for your review.

Please feel free to contact me if you have any questions or concerns.

A handwritten signature in black ink, appearing to read 'Jo M. (Jody) Puckett', with a long horizontal line extending to the right.

Jo M. (Jody) Puckett
Assistant City Manager (Interim)

[Attachment]

c: Honorable Mayor and Members of the City Council
T.C. Broadnax, City Manager
Larry Casto, City Attorney
Craig D. Kinton, City Auditor
Biliera Johnson, City Secretary (Interim)
Daniel F. Solis, Administrative Judge
Kimberly Bizzor Tolbert, Chief of Staff to the City Manager
Majed A. Al-Ghafry, Assistant City Manager

Jon Fortune, Assistant City Manager
Joey Zapata, Assistant City Manager
M. Elizabeth Reich, Chief Financial Officer
Nadia Chandler Hardy, Chief of Community Services
Raquel Favela, Chief of Economic Development & Neighborhood Services
Theresa O'Donnell, Chief of Resilience
Directors and Assistant Directors

Mill Creek/Peaks Branch/State-Thomas Drainage Relief Tunnel

Mobility Solutions,
Infrastructure &
Sustainability Committee

January 22, 2018

Sarah Standifer, Director
Trinity Watershed Management



City of Dallas



Overview

- Project Summary
- Project Benefits
- Project Background/Concerns
- Project Timeline
- Project Bid Information
- Staff Recommendation

Mill Creek/Peaks Branch/State-Thomas Drainage Relief Tunnel

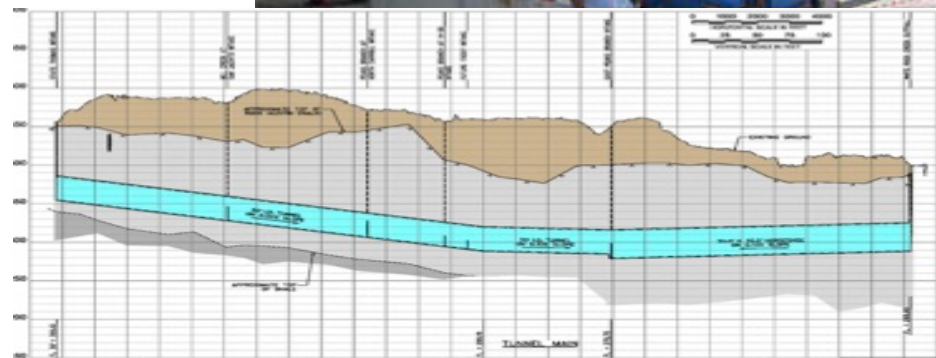


Project Summary

- Consists of five-mile, 30-foot diameter tunnel
- Constructed 70-100 feet below ground
- Minimum disturbance to surface properties
- Construction costs approximately \$200 million
- Construction will last around five years
- Approved by voters in two bond elections (2006 and 2012)

Deep Tunnel Construction

- Utilizes Tunnel Boring Machine to mine deep tunnel
- Advantages to tunneling
 - Minimizes street and traffic impacts
 - Minimizes utility relocations



Benefits of the Drainage Tunnel

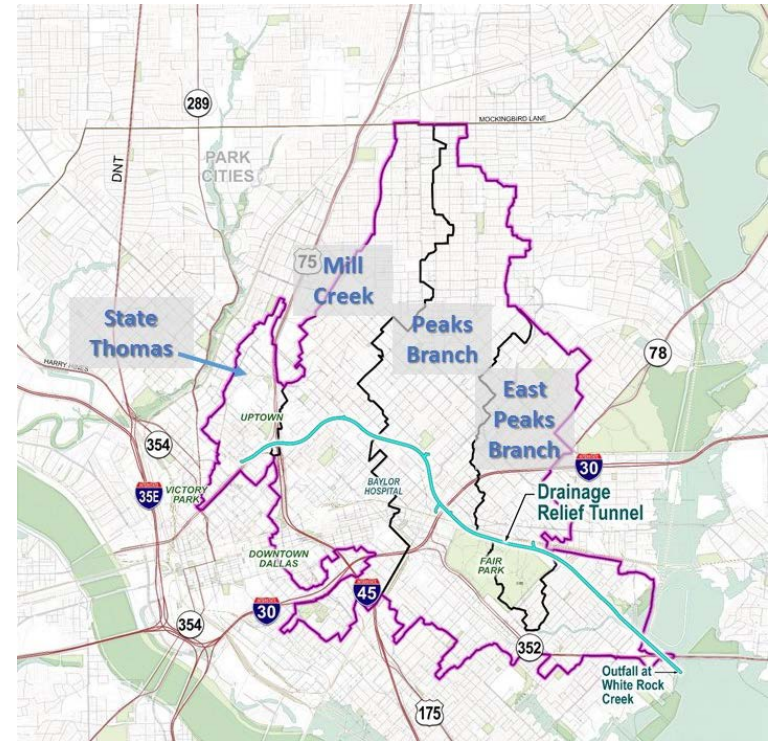
- Increases public safety
- Relieves repeated flooding
- Protects residential and commercial properties
- Reduces impacts to mobility networks
- Upgrades drainage system



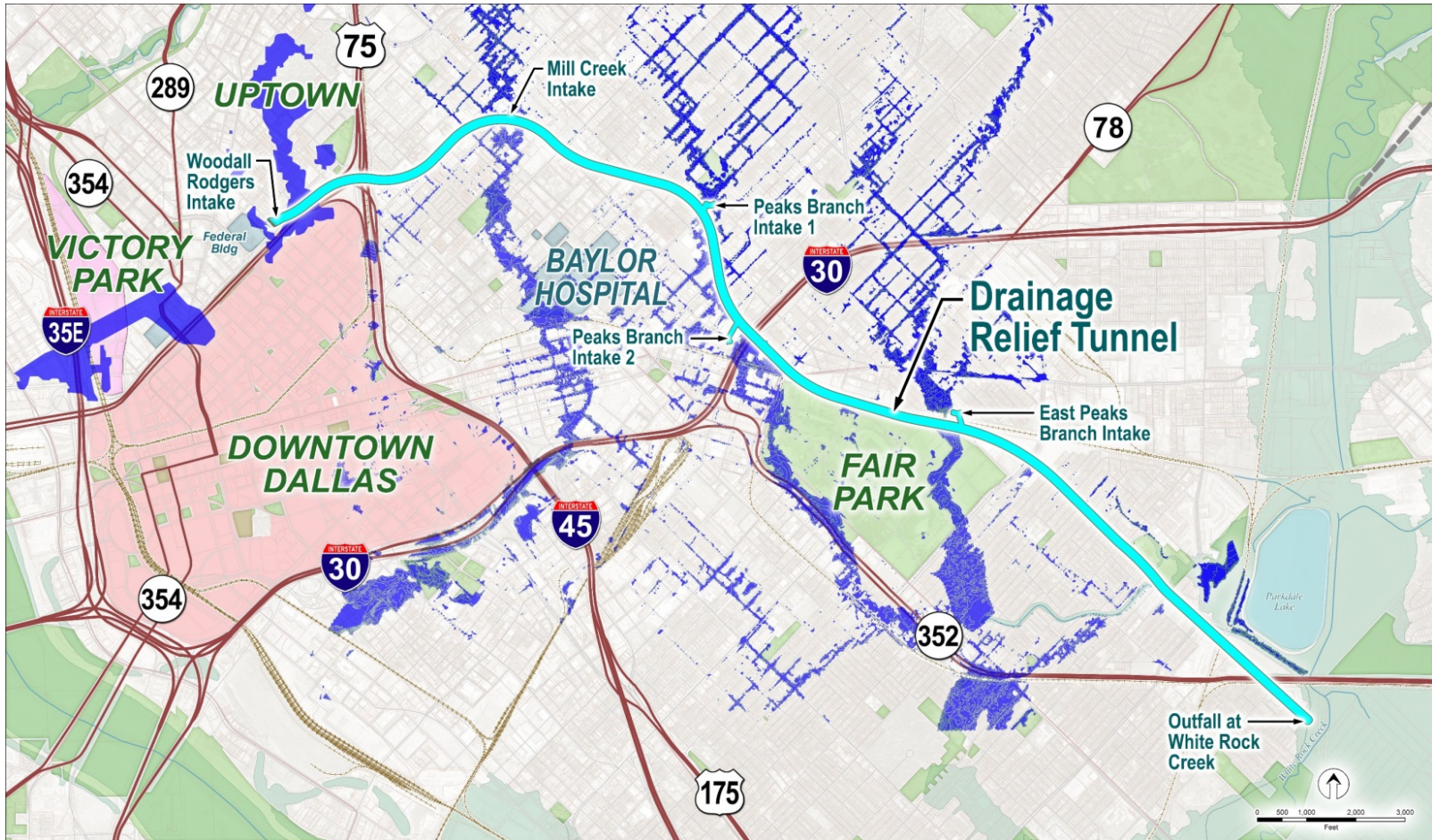
Drainage Basin Information

Basin Areas

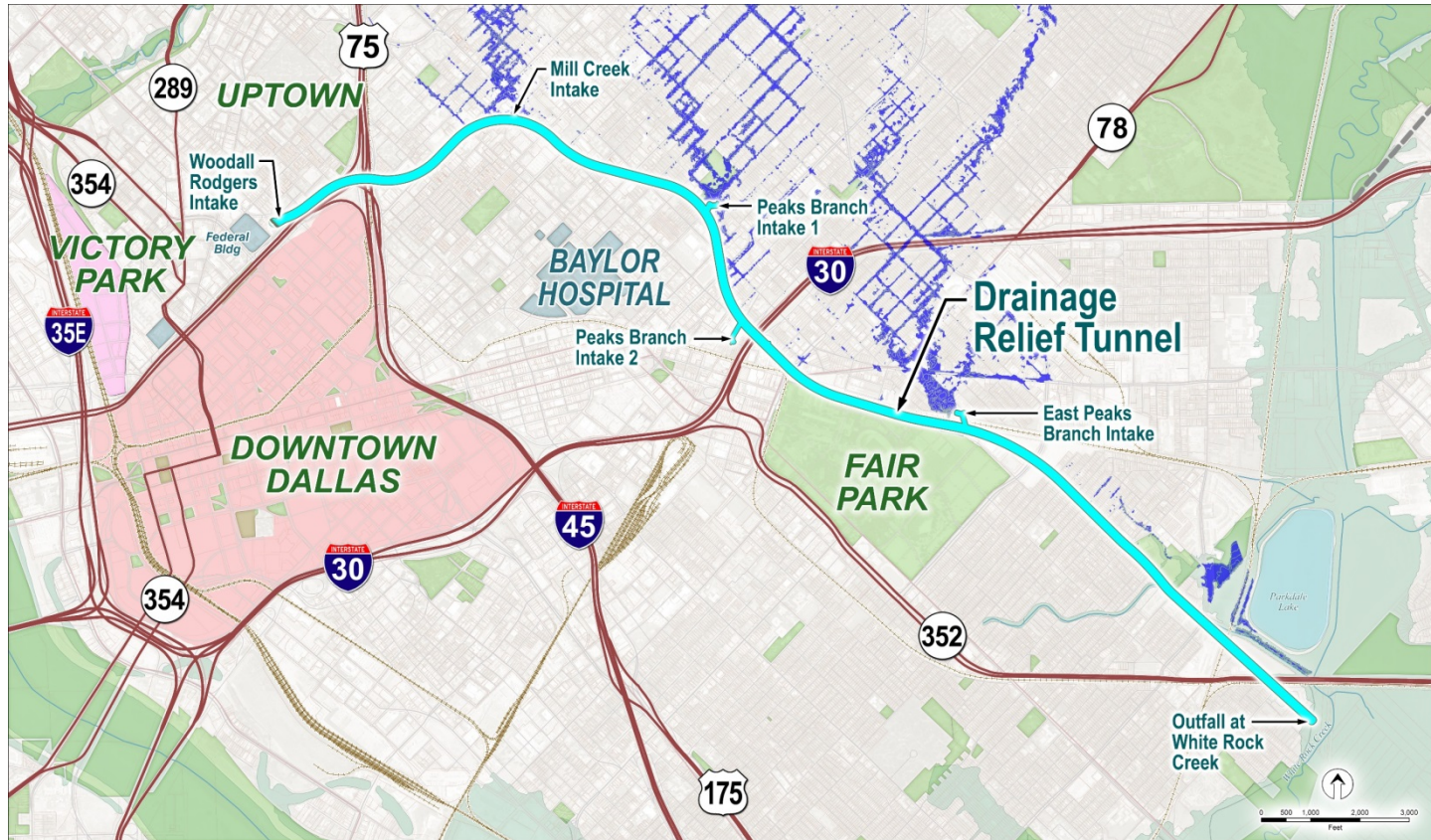
- Mill Creek (2,200 ac.)
- Peaks Branch (3,100 ac.)
- East Peaks (1,100 ac.)
- State-Thomas (450 ac.)



Areas Currently Subject to 100-Year Flood

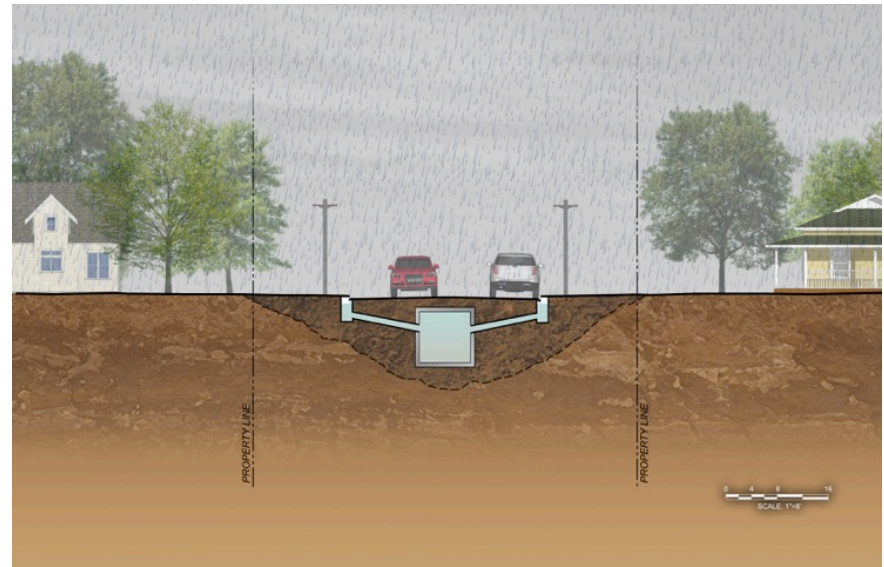


Areas Subject to 100-Year Flood after Tunnel Construction



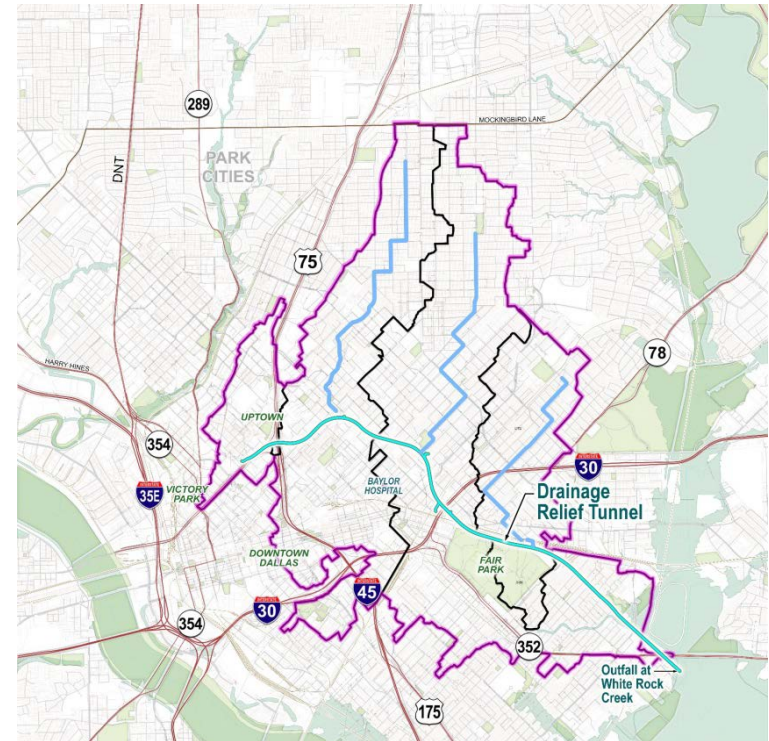
Project Drivers

- Drainage studies in these areas conducted in 1970s, 1980s, and 1990s
- Initial phase of larger drainage master plans for Mill Creek and Peaks Branch
 - Existing storm sewers from the 1930s are inadequate for large storms
 - Many areas flooded in 1995, 2006, 2007, 2009, 2012, and 2015



Project Drivers, cont'd

- Tunnel provides outfall for future improvements
 - M Streets
 - Upper Peaks Branch
- Tunnel reduces flooding in areas including:
 - 2,200 properties
 - \$4B property value (2015)
- Project approved by voters in two bond elections (2006 and 2012)



Project Timeline

- 2006 – Mill Creek, Peaks Branch and State-Thomas drainage improvements approved as separate projects in Bond Program
- 2009 – Mill Creek and Peaks Branch tunnel plans approved
- 2012 – State-Thomas tunnel extension approved
- 2012 – Construction funding approved in Bond Program
- 2015 – Construction advertised and bids received
- 2016 – Construction bids rejected and re-advertisement approved
- 2017 – Construction re-advertised and bids received

Project Specifications Revisions

From First Advertisement to Second

- Included deductive alternatives
 - State-Thomas tunnel extension
 - Dewatering pump station
 - Dewatering pump station shaft
 - Inlet shaft “C”
- Expanded bidder experience qualifications to possibly attract more bidders
 - Revised number of completed projects from three within a five-year period to two within a 10-year period
 - Added minimum tunnel length of 5,000 feet
 - Revised diameter of tunnel from 20 feet to 18 feet

Project Safety Requirements

- Contractor requirements
 - Provide written, sealed Health and Safety Plan
 - Established safety training program
 - Emergence response procedures
 - Provide certified safety professional dedicated to implementation and supervision of work safety
 - Provide safety representative at shaft and tunnel sites
- Construction Manager oversight
- Review contractor's Health and Safety Plan
 - Inspect contractor work areas for safety compliance
 - Provide on-site safety reviews by Safety Manager

Project Bid Information

- Received three bids on September 8, 2017
 - Southland Mole JV – \$206,700,000
 - Michels Tunneling – \$224,870,637
 - C.M.C. di Ravenna – \$237,072,871
- Received bid protest from a bidder
 - Unbalanced bid protest evaluated by staff and consultants
 - Found bid protest to be without merit

Project Bid Review

- City Auditor's Attestation Report on Agreed-Upon Procedures for Construction Bid Evaluation
 - Project was bid as a low-bid construction project
 - Found exceptions that were remedied by departments during the bid review
 - Found exception in experience requirement of low bidder
 - As documented for project #2, tunnel construction was completed in 2005
 - Other work, including shaft, was ongoing in 2007, within the experience timeframe

Staff Recommendation

- Proceed with award of construction to low bidder
 - Southland Mole JV – \$206,700,000
 - Funding from General Obligation bonds
- Project is ready to award for construction
 - Funding is available
 - Right-of-way and subsurface easements are acquired
 - One subsurface easement pending
- City Council consideration of construction award on February 14, 2018

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