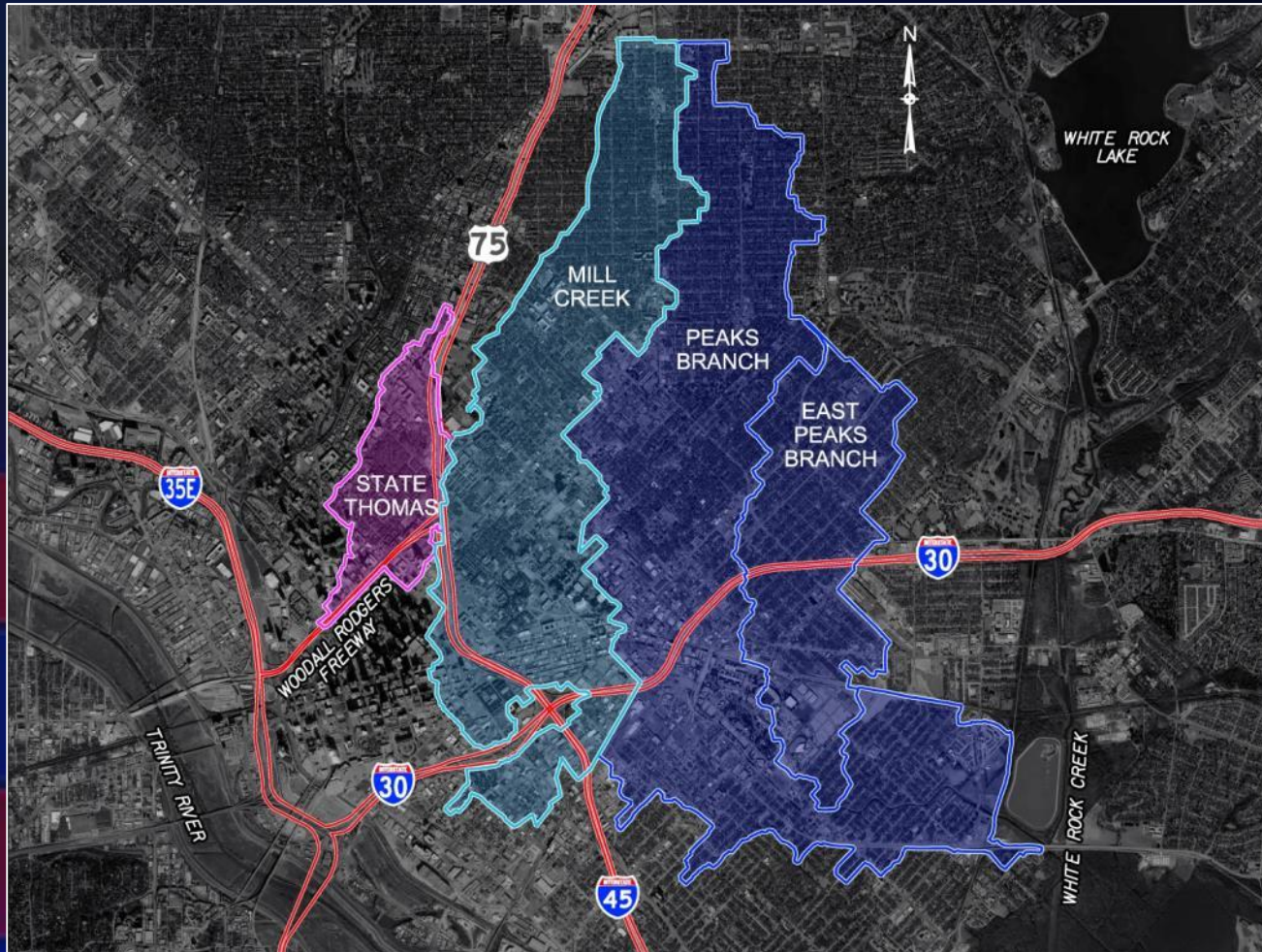
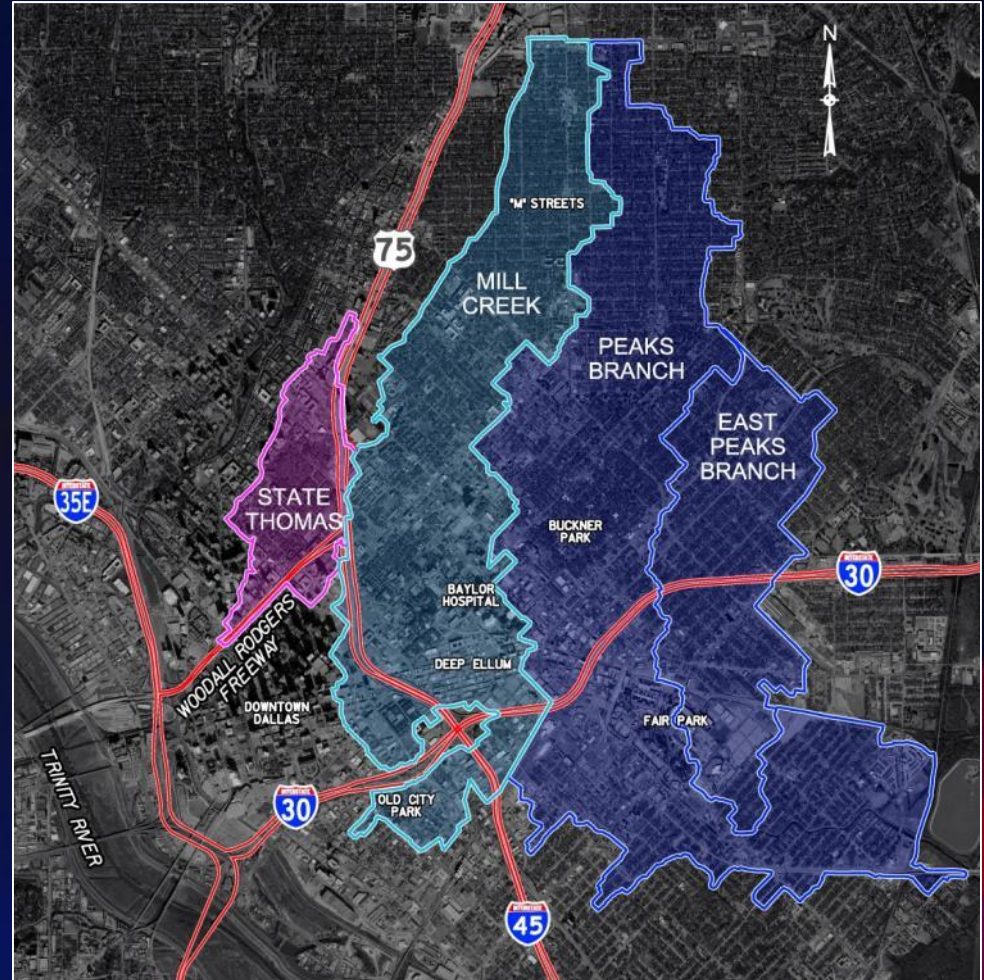


# Mill Creek, Peaks Branch and State Thomas Watersheds



# Basin Characteristics

- Basin Area
  - Mill Creek – 2200 acres
  - Peaks Branch – 3100 acres
  - State-Thomas – 400 acres
- Land Uses
  - Upper Basin – Residential
  - Lower Basin – Commercial
- What's in these basins?
  - Baylor Hospital
  - Old City Park
  - Deep Ellum
  - IH-30
  - Fair Park
  - "M" Streets





# Mill Creek and Peaks Branch

## History

- Underground Storm Sewer Construction - 1930s
- May 1995 Flood
- March 2006 Flood
- September 2007 Flood




# May 1995 Flood

## Dallas Morning News Front Page May 7, 1995

- Flooding businesses and homes
- Baylor Emergency Room closed - flood damage \$5M
- Old City Park
- Fair Park
- IH 30 closed due to high water

### 16 deaths blamed on storm



#### 4 missing after floods; 100 hurt

By Randy Lee Loftis and Nora López  
*Staff Writers of The Dallas Morning News*

The stunning violence of the latest spring storm to slam through the Dallas area became clear Saturday. At least 16 people were dead and as much as \$600 million worth of property damaged after Friday night's rampage.

Among the victims of one of the area's deadliest, most destructive storms in history were five members of an Oak Cliff family who drowned when floodwaters washed away their car.

At least seven people drowned in other flooded areas. A lightning-caused fire killed a Dallas woman, and a lightning strike killed an Irving boy. Late Saturday, at least four people were missing and feared dead. Late Saturday, searches continued going through a

Please see 16 DEATHS on Page 28A.

#### 911 response times criticized

By Nora López and Jason Sickle  
*Staff Writers of The Dallas Morning News*

During Friday's devastating rains and hail, hundreds of motorists were stranded in city streets submerged under several feet of water. Roads collapsed under the strain of heavy rain. Families watched in horror as loved ones were swept away in storm drains. Nearly all turned to 911 for help. Many times, all they got was a busy signal.

City officials said the demand for city services was so great late Friday that the calls simply overloaded the 911 system, resulting in busy signals and delayed response times of up to an hour.

"We practice. We train. We study. And we prepare. Please see CALLERS on Page 28A.

Paul Griffin on Saturday examines some of the damage inflicted on cars at Fair Park during Friday's storm.

#### Lives lost, families torn

Storm victims from all walks of life, neighborhoods

By Bill Minutaglio and Eric Garcia  
*Staff Writers of The Dallas Morning News*

The mauling storm knew no boundaries when it claimed its victims.

One woman was saved from the flooding — only to be engulfed by the storm. There was the elderly woman who quietly cared for the animals in her neighborhood. The teacher who had proudly posed for a recent photo with her young students. The family of five swept away as they headed for a restaurant.

Please see VICTIMS on Page 28A.

NORTH TEXAS STORMS			
■ Storm makeup.	28A	■ Closings.	32A
■ Worst storms.	28A	■ TV coverage.	32A
■ The damage.	28A	■ Effect on voting.	32A
■ How to help.	28A	■ Drainage woes.	32A
■ Vignettes.	30A	■ Fair Park.	32A
■ FW's damage.	30A	■ Driving tips.	32A
■ Business impact.	32A	■ Weather.	24B

# March 2006 Flood



- Widespread flooding throughout Dallas
- March 19th rainfall totals as high as 9.8” in Old East Dallas
- Extensive street, structure and vehicle flooding in East Dallas



# Mill Creek Flooding – Baylor Hospital Area Flooding

## March 19, 2006



## Mill Creek Flooding – March 2006



Monticello Avenue – West of Greenville Avenue



## Peaks Branch Flooding – March 2006



Zaragoza Elementary Flooding



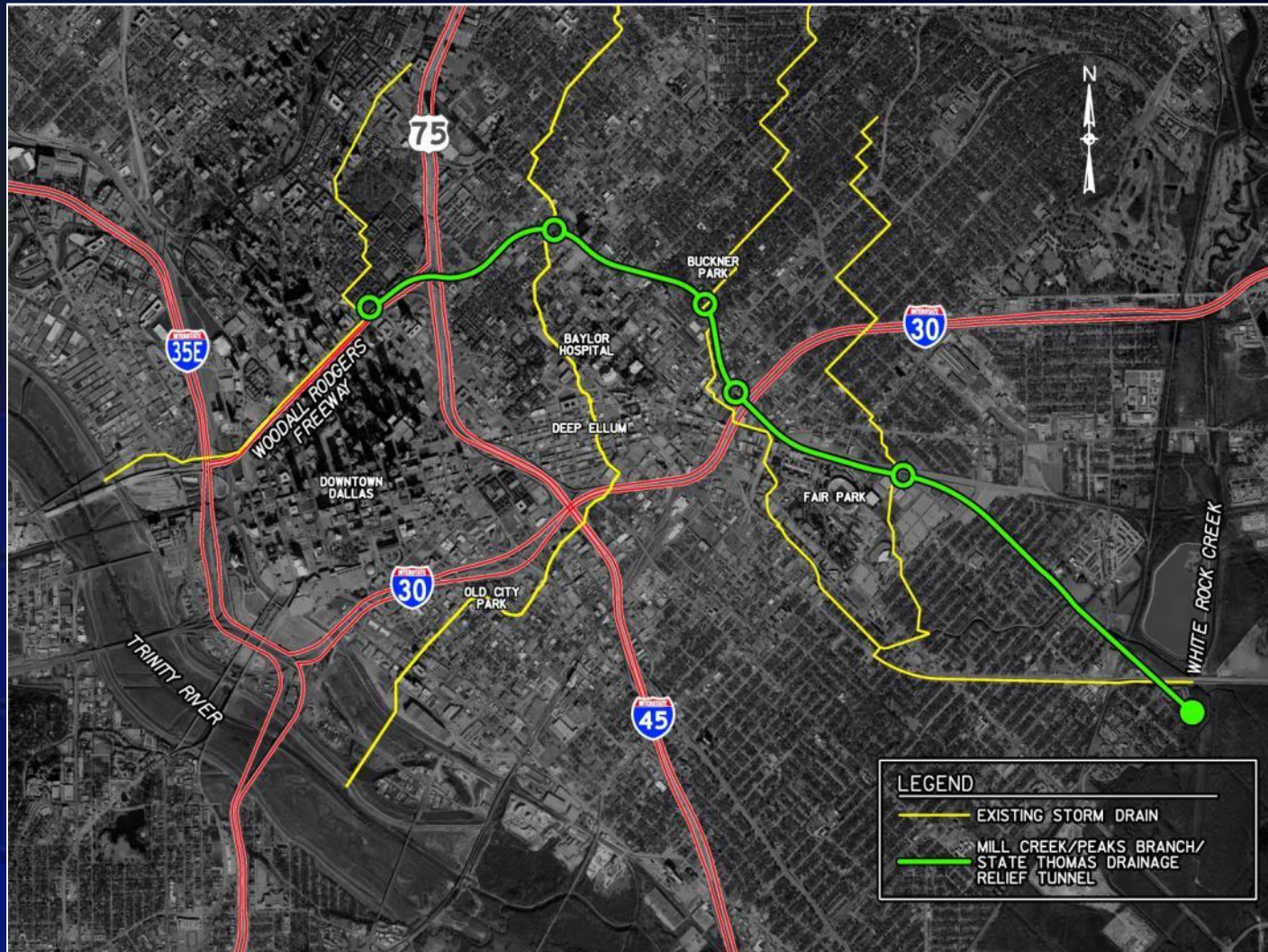
## Peaks Branch Flooding – March 2006



Worth Street Flooding



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

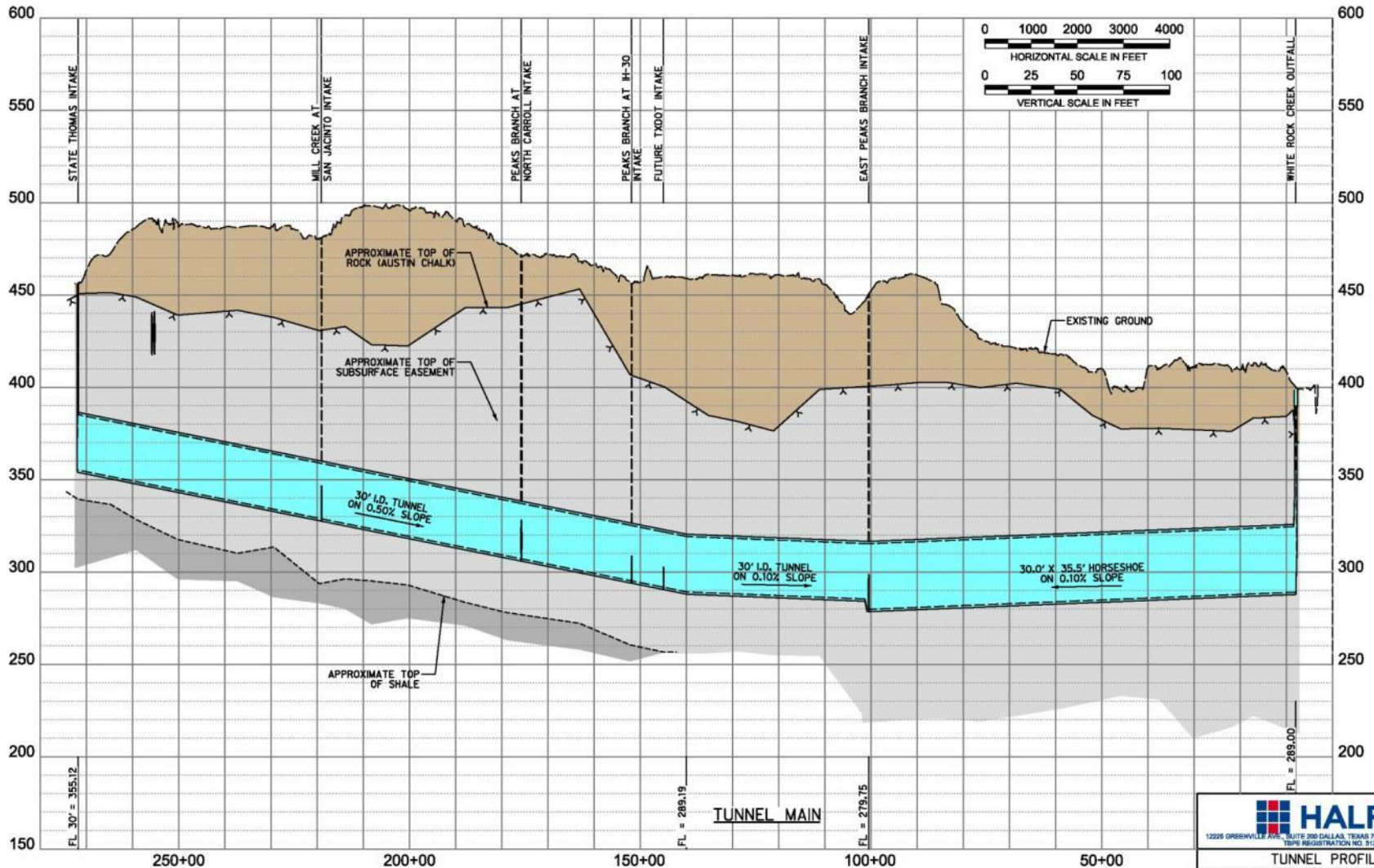





# Project Components

- Deep Tunnel
  - Length – 5 miles
  - Diameter – 30 feet
  - Depth – 70 to 150 feet
- Drop Structures / Tangential Inlet
  - Five Intake Sites
  - Surface Collection Systems
- Tunnel Outfall
- Dewatering Station

# Tunnel Profile

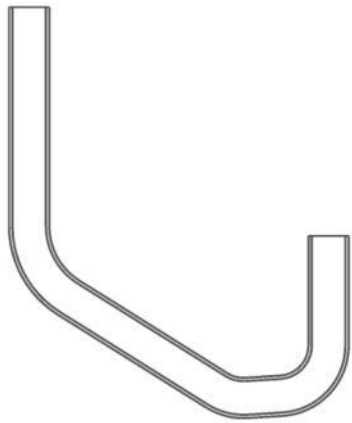


MAIN TUNNEL PROFILE

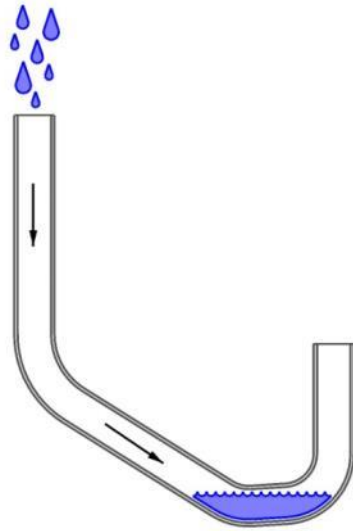
	
<small>12226 GREENVILLE AVE., SUITE 200 DALLAS, TEXAS 75243 (214) 348-6300 (TEL) TXDOT REGISTRATION NO. 512</small>	
<b>TUNNEL PROFILE</b>	
MILL CREEK/PEAKS BRANCH/STATE THOMAS DRAINAGE RELIEF	
TRINITY WATERSHED MANAGEMENT	
CITY OF DALLAS, TEXAS	
3/30/15	FIGURE 2



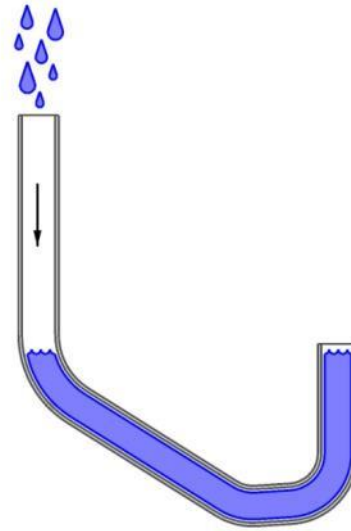
# Function of an Inverted Siphon



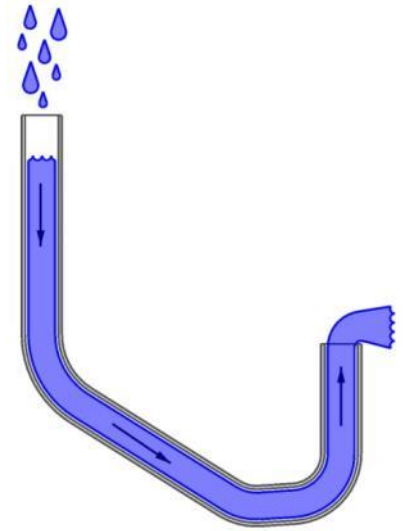
1. EMPTY



2. STARTING TO FILL



3. CONTINUING TO FILL



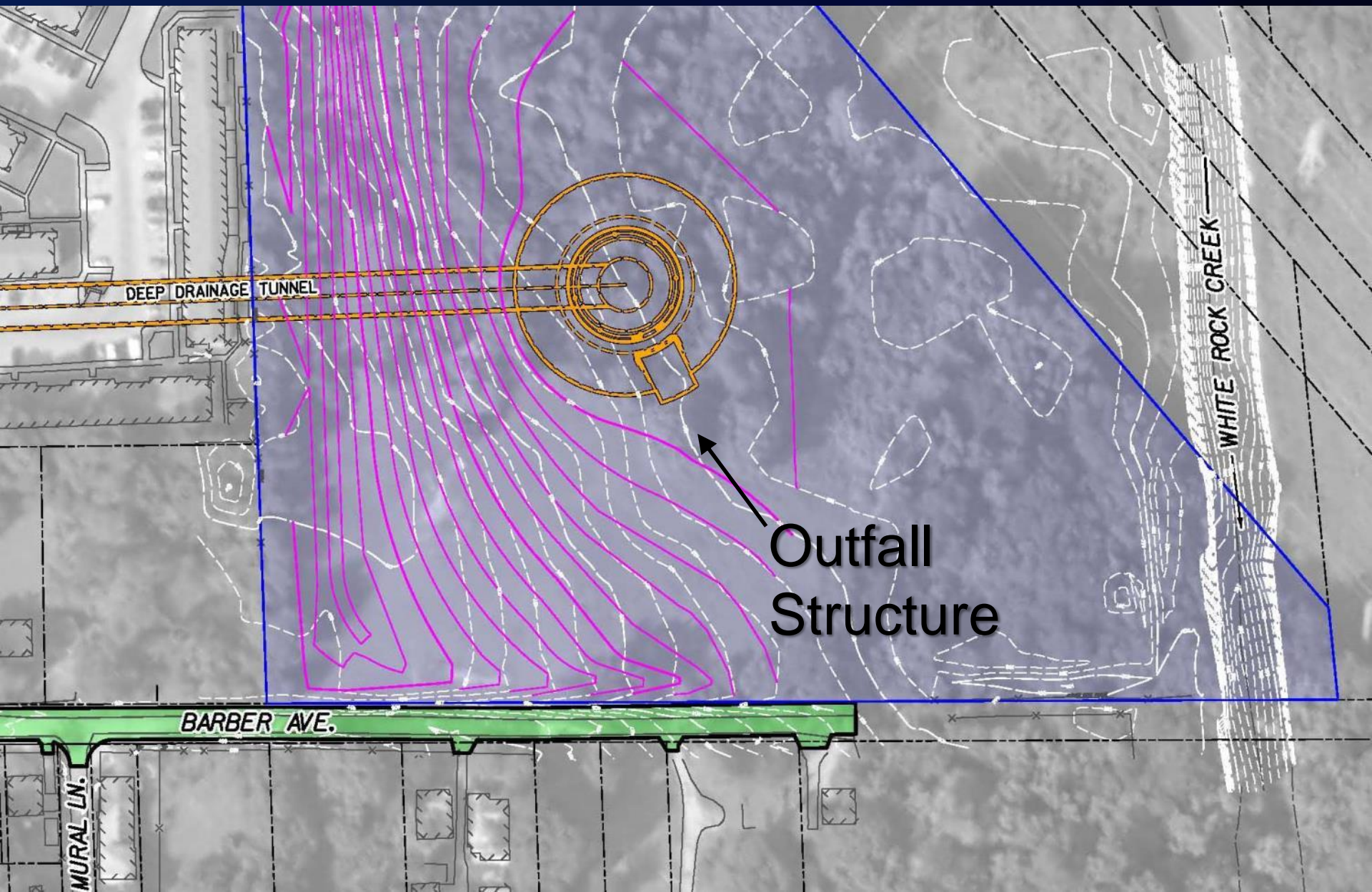
4. FLOWING OUT OF THE LOWER END

# Drainage Relief Tunnel





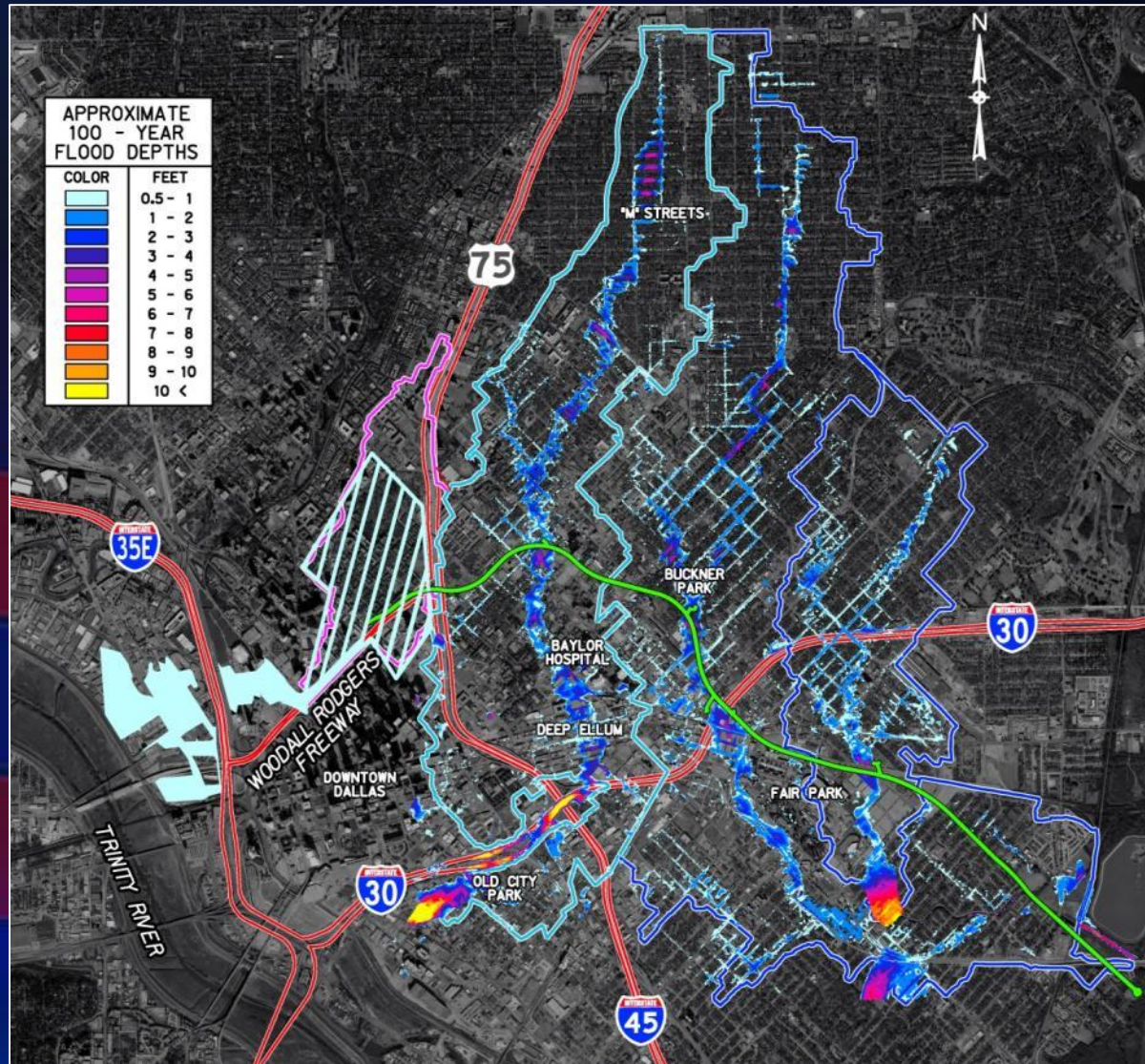
# Tunnel Outfall





# Areas Currently Subject to 100-Year Flooding in Mill Creek, Peaks Branch and State Thomas Watersheds

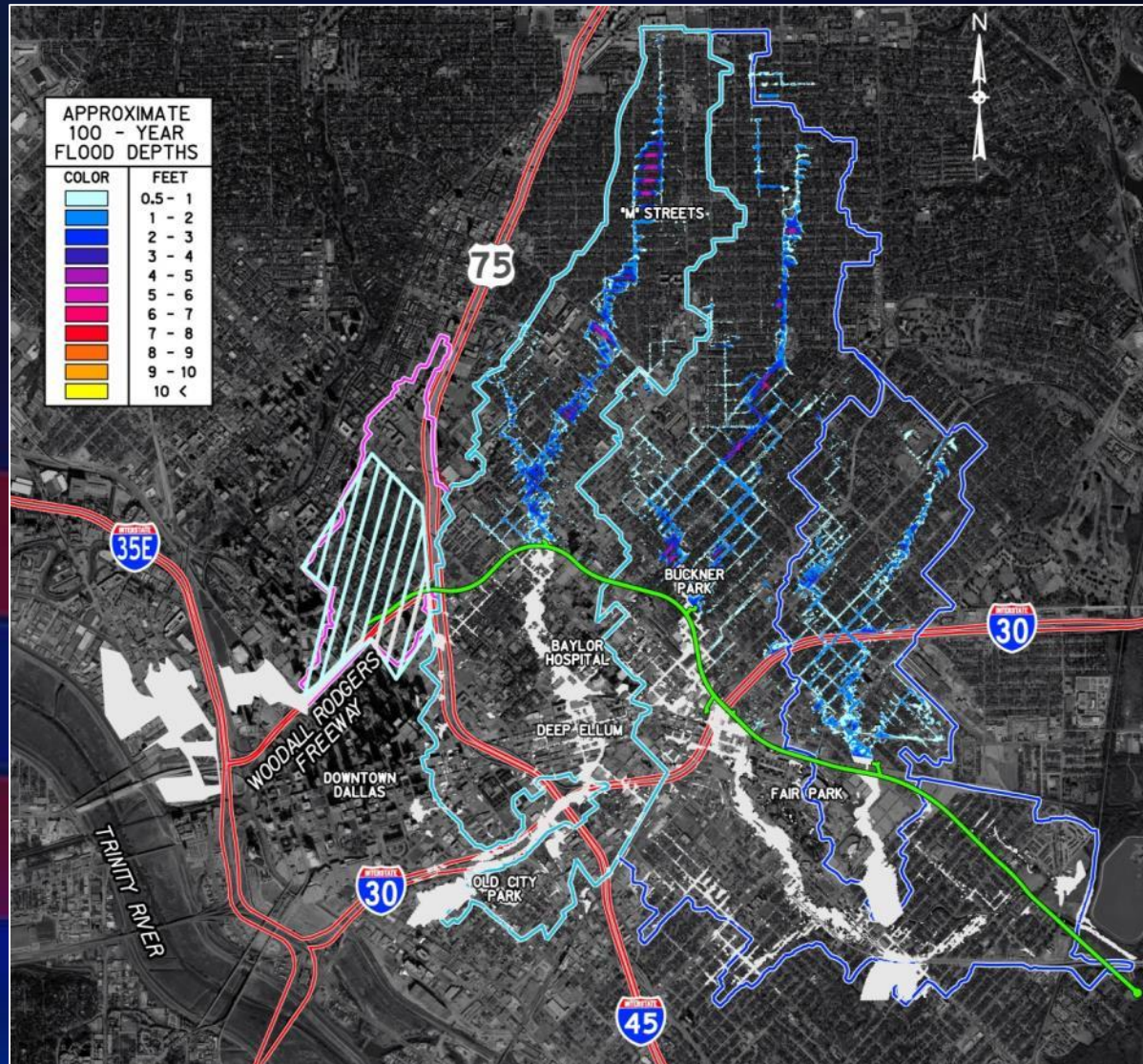
**Note:**  
Hatched  
area denotes  
known street  
flooding in  
the State  
Thomas area





# After Mill Creek, Peaks Branch and State-Thomas Tunnel is Constructed – Areas Removed from 100-Year Flooding

**Note:**  
Areas in blue are  
to be addressed  
in future bond  
projects  
-Mill Creek Ph. III  
-Upper Peaks  
Branch



**Note:** The new  
tunnel provides  
100-year trunk  
storm drain  
capacity.  
Additional  
inlets/laterals are  
required to  
capture and  
convey the 100-  
year surface  
runoff to the trunk  
drain systems.