



# Exhibit 1: Northlake Water Service Areas

## Impact Fee Update - Water & Sanitary Sewer Systems

Town of Northlake, TX

### Legend

- Incorporated and ETJ Limits
- Water CCN Boundary
- North Service Area
- South Service Area
- SFHA Zone AE
- Existing Point of Connection
- Future Point of Connection



**Total Acres: 12,913**

**Total Acres: 3,437**

Fort Worth #2

Fort Worth #1

UTRWD #1

UTRWD #2





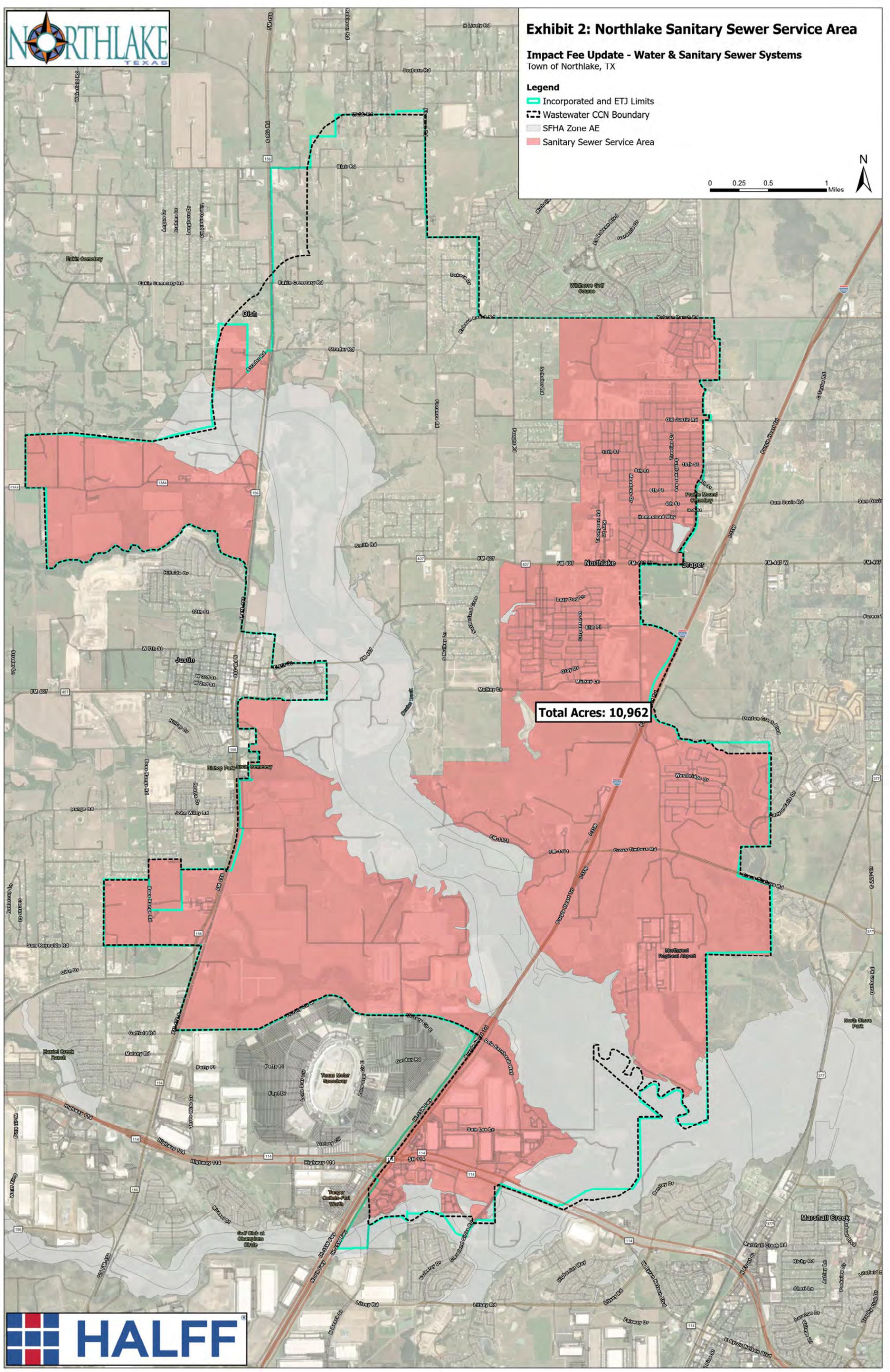
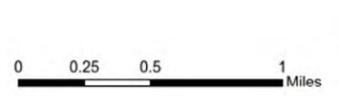
# Exhibit 2: Northlake Sanitary Sewer Service Area

## Impact Fee Update - Water & Sanitary Sewer Systems

Town of Northlake, TX

### Legend

- Incorporated and ETJ Limits
- Wastewater CCN Boundary
- SFHA Zone AE
- Sanitary Sewer Service Area



**Total Acres: 10,962**





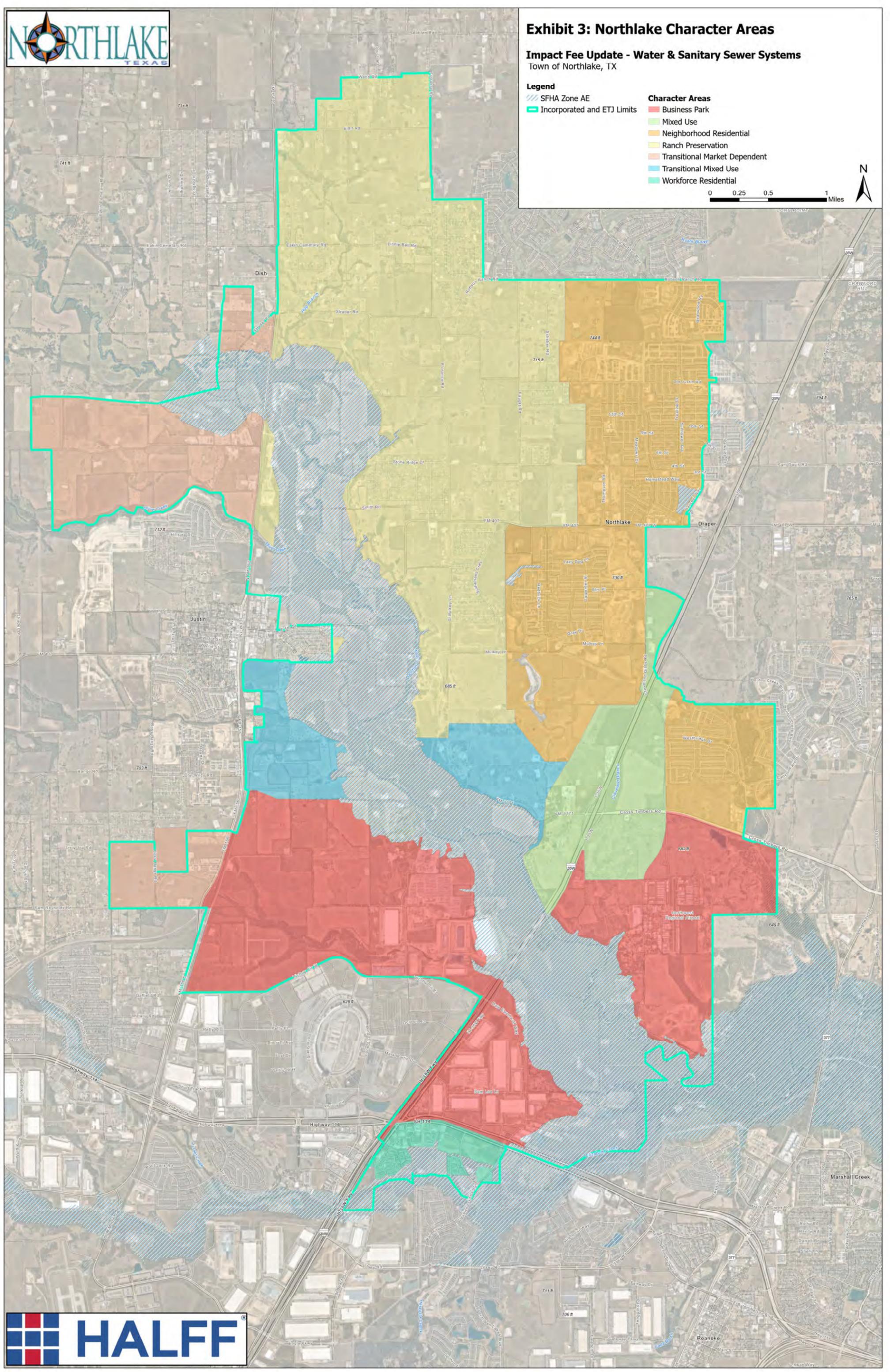
### Exhibit 3: Northlake Character Areas

Impact Fee Update - Water & Sanitary Sewer Systems  
Town of Northlake, TX

#### Legend

	SFHA Zone AE		<b>Character Areas</b>
	Incorporated and ETJ Limits		Business Park
			Mixed Use
			Neighborhood Residential
			Ranch Preservation
			Transitional Market Dependent
			Workforce Mixed Use
			Workforce Residential

0 0.25 0.5 1 Miles



# Exhibit 4: Existing and Planned Land Development

Impact Fee Update - Water & Sanitary Sewer Systems  
Town of Northlake, TX

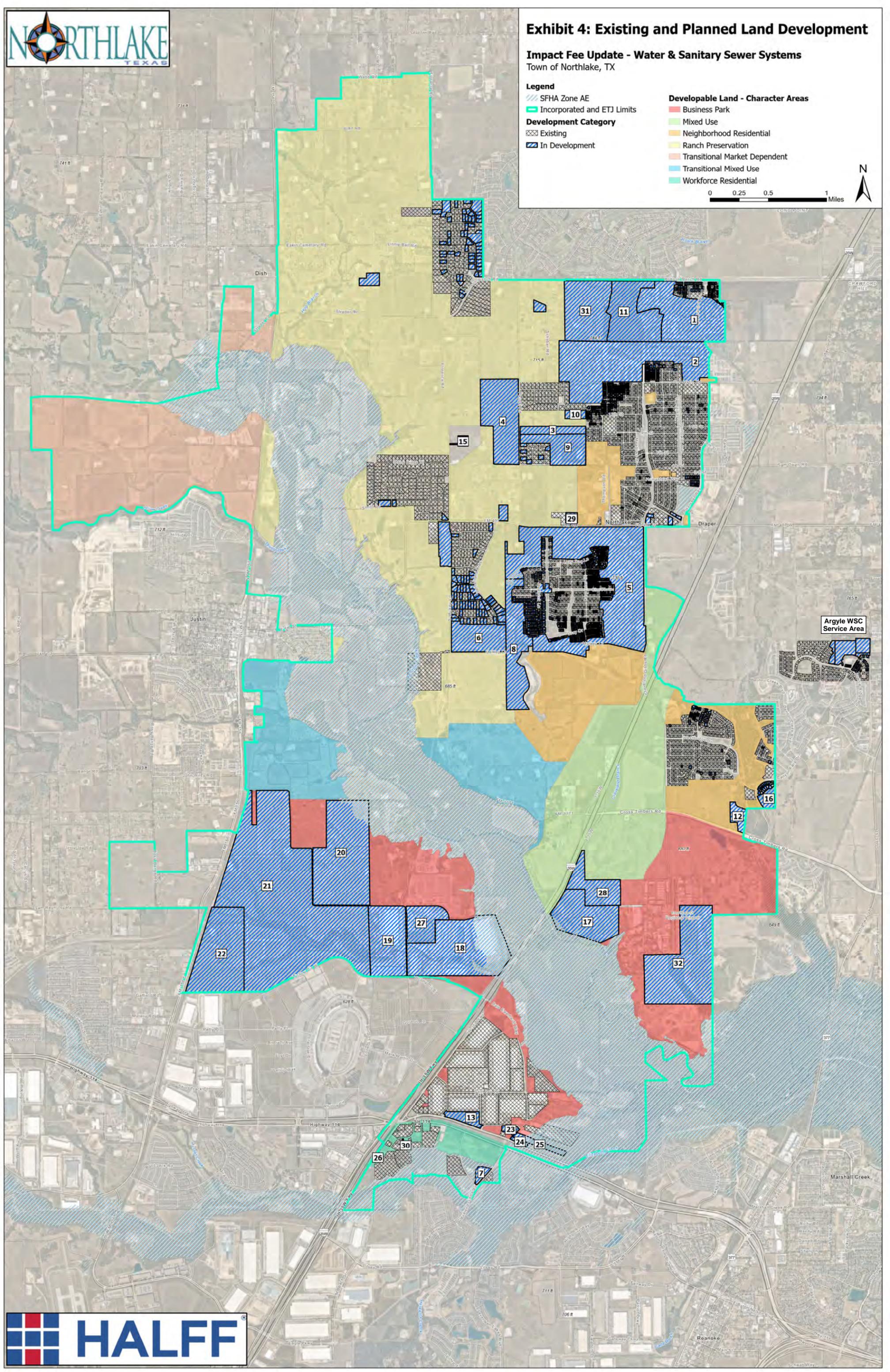
**Legend**

 SFHA Zone AE  
 Incorporated and ETJ Limits  
**Development Category**  
 Existing  
 In Development

**Developable Land - Character Areas**

-  Business Park
-  Mixed Use
-  Neighborhood Residential
-  Ranch Preservation
-  Transitional Market Dependent
-  Workforce Residential

 0 0.25 0.5 1 Miles  
 N



Argyle WSC Service Area



# Exhibit 5: 10-Year Water Capital Improvement Plan

## Impact Fee Update - Water & Sanitary Sewer Systems Town of Northlake, TX

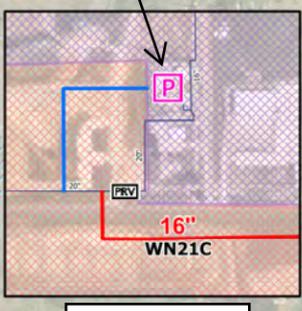
**Legend**

- Incorporated and ETJ Limits
- Water CCN Boundary
- SFHA Zone AE
- 2032 CIP
- Buildout CIP
- Current Construction
- Existing Waterlines
- Pressure Planes
  - Northside High
  - Northside Low
  - Argyle High
  - North Denton Creek
  - South Denton Creek
  - Southside
- Closed Valve (or Check)
- Pressure Reducing Valve
- Pump Station
- Elevated Storage Tank

0 0.25 0.5 1 Miles

Project WN28A waterlines sized for potential future customer, as identified by the Town of Northlake. If this future customer ultimately does not require service, Project WN28A lines should be downsized to minimize water age in this area of the system.

	Total Ground Storage (MG)	Firm Pump Capacity (MG)
<b>Harvest PS - High</b>		
Existing:	0.6	6.0
2032:	1.2	7.7 (WN27C)
<i>(operate Pump 1 at full speed and replace jockey pump)</i>		
Buildout:	1.0	4.0
<i>(Pump station reconfiguration described in Section 3.3 of Report)</i>		
<b>Harvest PS - Low</b>		
Existing:	-	-
2032:	-	-
Buildout:	1.5	6.0
<i>(Pump station reconfiguration described in Section 3.3 of Report)</i>		



	Total Ground Storage (MG)	Firm Pump Capacity (MG)
<b>Canyon Falls PS</b>		
Existing:	0.75	4.3
2032:	0.75	4.3
Buildout:	1.5	8.6
<i>(PS reconfiguration to establish Argyle High pressure plane)</i>		

**UTRWD Supply (Max Day)**  
2032: 9.6 MGD  
Buildout: 15.0 MGD

**FWWD Supply (Max Day)**  
2032: 5.8 MGD  
Buildout: 8.2 MGD

This area can connect to Northside-Low or North Denton Creek pressure planes, dependent upon timing of the development in this area.

	Total Ground Storage (MG)	Firm Pump Capacity (MG)
<b>Proposed FM 156 PS</b>		
Existing:	-	-
2032 (WS26A-C):	2.0	5.0
Buildout:	2.0	5.0

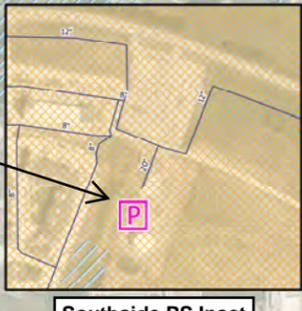
**WS26E: South Denton Creek EST**  
2032: 0.5 MG

**North Denton Creek EST**  
Buildout: 1.4 MG

**Alternate South Denton Creek EST Location**

**Sam Lee Lane EST: 0.75 MG**

	Total Ground Storage (MG)	Firm Pump Capacity (MG)
<b>Southside PS</b>		
Existing:	1.0	3.1
2032:	1.0	3.1
Buildout:	1.0	3.1





# Exhibit 6: Northlake Interim South Service Area Pressure Planes

## Impact Fee Update - Water & Sanitary Sewer Systems Town of Northlake, TX

**Legend**

- SFHA Zone AE
- Pump Station
- Elevated Storage Tank
- Temporary Pump Station
- Temporary Pressure Reducing Valve

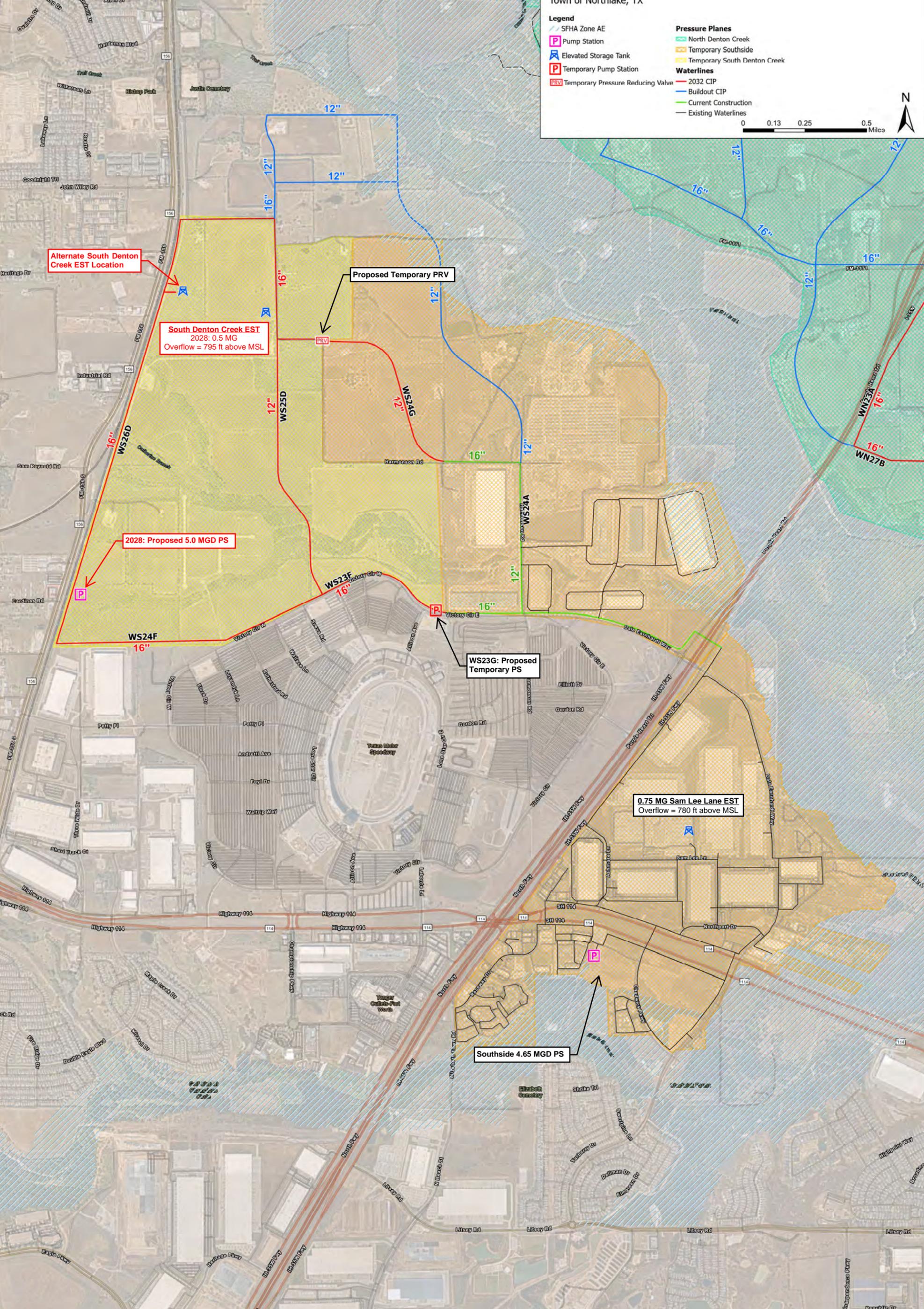
**Pressure Planes**

- North Denton Creek
- Temporary Southside
- Temporary South Denton Creek

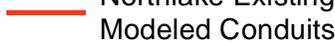
**Waterlines**

- 2032 CIP
- Buildout CIP
- Current Construction
- Existing Waterlines

0 0.13 0.25 0.5 Miles

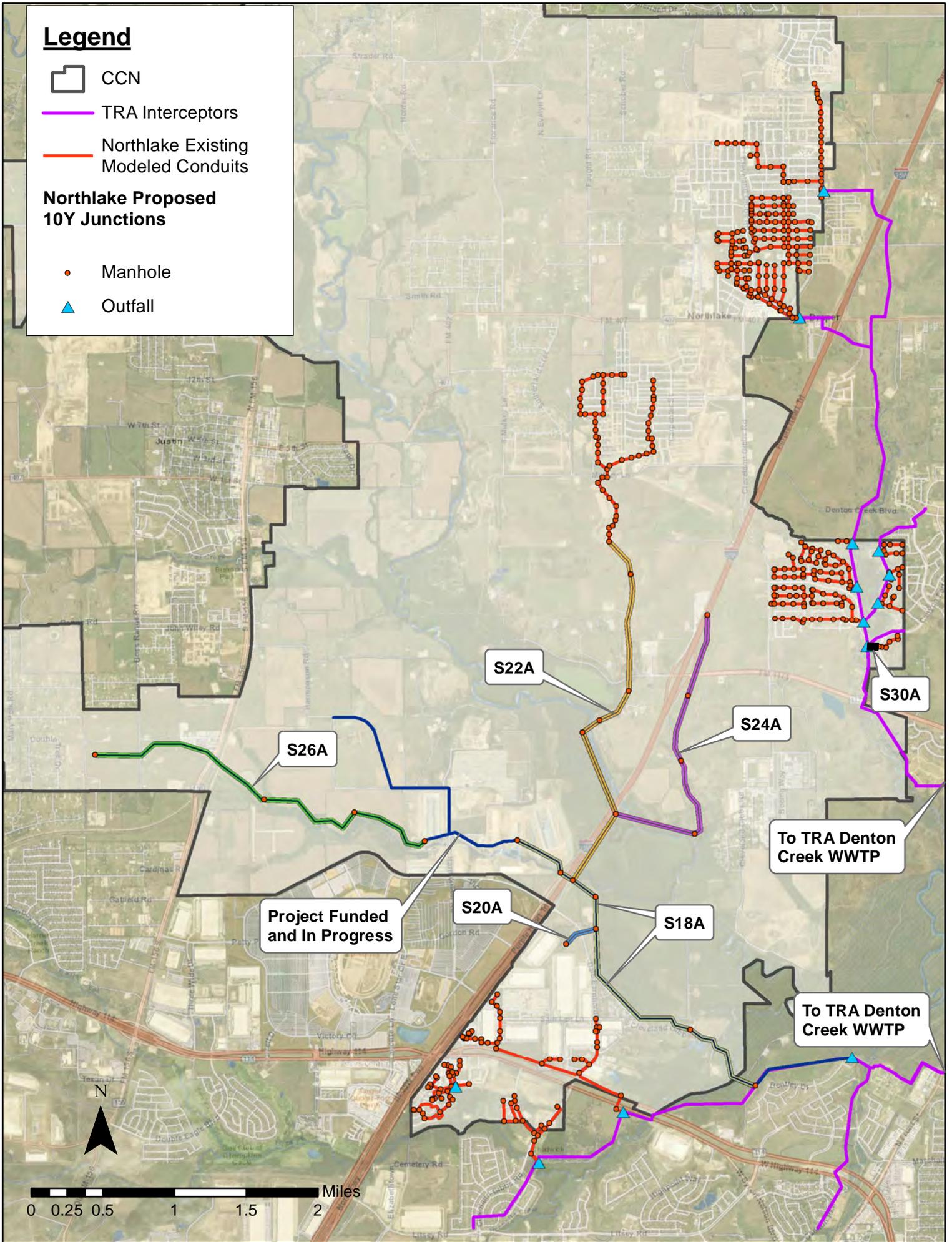


# Legend

-  CCN
-  TRA Interceptors
-  Northlake Existing Modeled Conduits

## Northlake Proposed 10Y Junctions

-  Manhole
-  Outfall





# Exhibit D.1: Calibration Results

## Impact Fee Update - Water & Sanitary Sewer Systems

Town of Northlake, TX

### Legend

- |  |              |
|--|--------------|
| <b>2022 Calibration Hydrants Reservoir</b> | <b>Valve</b> |
| ● Flow Hydrant                             | ★ Active     |
| ● Pressure Hydrant                         | ★ Domain     |
| <b>Tank</b>                                | <b>Pump</b>  |
| ■ Active                                   | ■ Active     |
| ■ Domain                                   | ■ Domain     |
|  | <b>Pipe</b>  |
|  | — Active     |
|  | — Domain     |



TEST STATIC PRESSURE: 72 PSI  
 MODEL STATIC PRESSURE: 71.5 PSI  
 TEST RESIDUAL PRESSURE: 48 PSI  
 MODEL RESIDUAL PRESSURE: 67.5 PSI

TEST STATIC PRESSURE: 79 PSI  
 MODEL STATIC PRESSURE: 73.4 PSI  
 TEST RESIDUAL PRESSURE: 56 PSI  
 MODEL RESIDUAL PRESSURE: 70.3 PSI

TEST STATIC PRESSURE: 63 PSI  
 MODEL STATIC PRESSURE: 66.9 PSI  
 TEST RESIDUAL PRESSURE: 30 PSI  
 MODEL RESIDUAL PRESSURE: 52.0 PSI

TEST STATIC PRESSURE: 61 PSI  
 MODEL STATIC PRESSURE: 62.6 PSI  
 TEST RESIDUAL PRESSURE: 55 PSI  
 MODEL RESIDUAL PRESSURE: 58.1 PSI

TEST STATIC PRESSURE: 84 PSI  
 MODEL STATIC PRESSURE: 84.4 PSI  
 TEST RESIDUAL PRESSURE: 72 PSI  
 MODEL RESIDUAL PRESSURE: 82.1 PSI

TEST STATIC PRESSURE: 72 PSI  
 MODEL STATIC PRESSURE: 73.8 PSI  
 TEST RESIDUAL PRESSURE: 63 PSI  
 MODEL RESIDUAL PRESSURE: 69.1 PSI

TEST STATIC PRESSURE: 92 PSI  
 MODEL STATIC PRESSURE: 89.2 PSI  
 TEST RESIDUAL PRESSURE: 72 PSI  
 MODEL RESIDUAL PRESSURE: 88.5 PSI

TEST STATIC PRESSURE: 85 PSI  
 MODEL STATIC PRESSURE: 86.0 PSI  
 TEST RESIDUAL PRESSURE: 77 PSI  
 MODEL RESIDUAL PRESSURE: 83.4 PSI

TEST STATIC PRESSURE: 75 PSI  
 MODEL STATIC PRESSURE: 69.7 PSI  
 TEST RESIDUAL PRESSURE: 55 PSI  
 MODEL RESIDUAL PRESSURE: 68.5 PSI

TEST STATIC PRESSURE: 85 PSI  
 MODEL STATIC PRESSURE: 87.1 PSI  
 TEST RESIDUAL PRESSURE: 79 PSI  
 MODEL RESIDUAL PRESSURE: 83.8 PSI

TEST STATIC PRESSURE: 98 PSI  
 MODEL STATIC PRESSURE: 100.8 PSI  
 TEST RESIDUAL PRESSURE: 82 PSI  
 MODEL RESIDUAL PRESSURE: 96.4 PSI

