

GRP PROGRAM CONSTRUCTION PROGRESS



**GRP Review
Committee
Meeting
July 21, 2014**



**SJRA Board
of Directors
Meeting
July 24, 2014**

SURFACE WATER FACILITY CONSTRUCTION ADMINISTRATION

Project Data Thru 6/30/2014

Contracted Amount:	\$190,704,740.00
Change Orders:	\$ 0.00
Estimate to Complete:	\$190,704,740.00
Amount Invoiced:	\$126,728,131.00
Percent Complete:	67%
Completion Date:	June 2015



SURFACE WATER FACILITY CONSTRUCTION ADMINISTRATION

Project Data Thru 6/30/2014

- Over 51 miles of underground conduit installed to date
- Over 300,000 concrete masonry units installed to date
- Over 800,000 safe work-hours to date



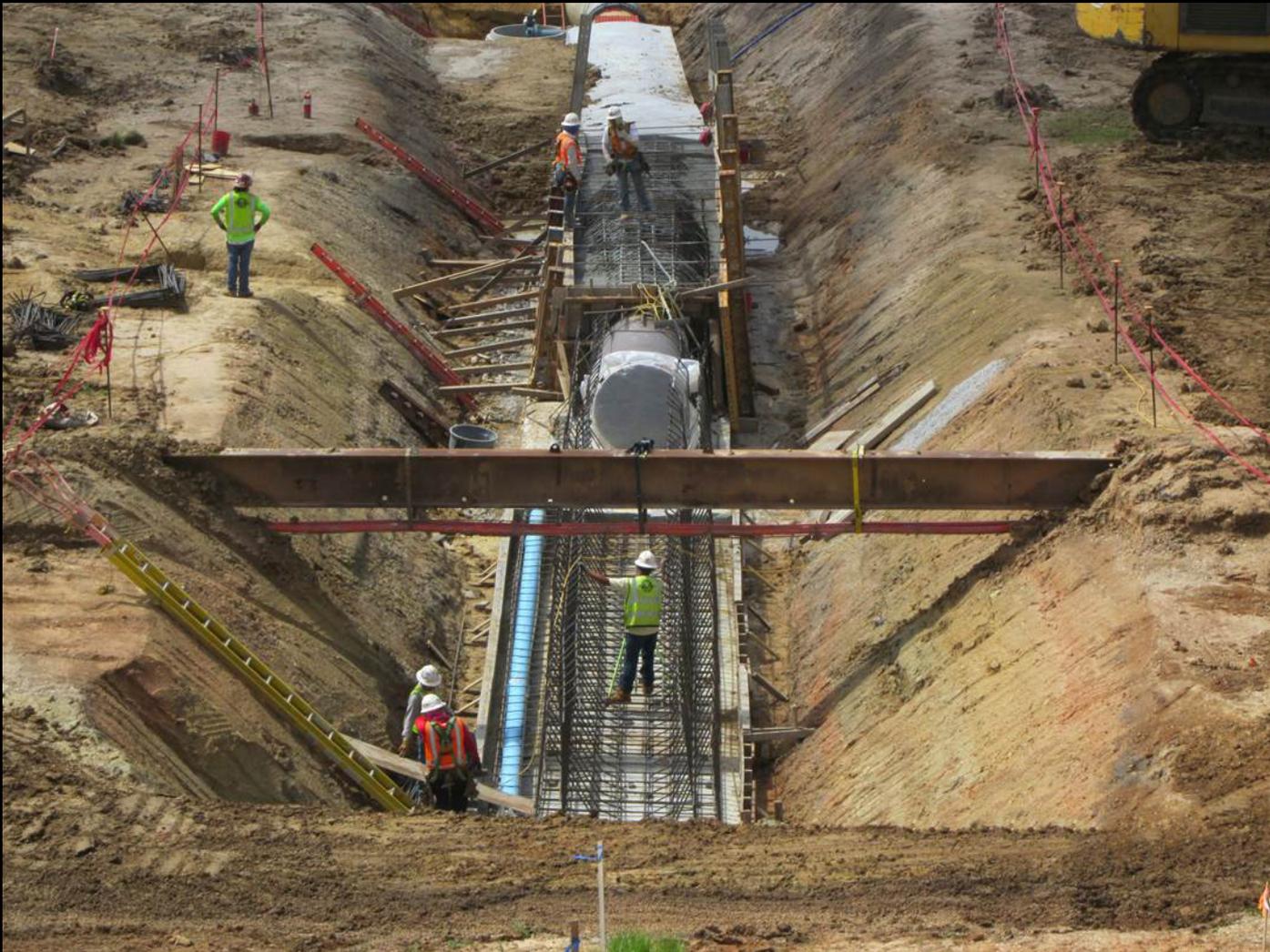


**Raw Water Intake
and Pump Station**





Raw Water Intake & Pump Station – 48-inch pipe installation



Raw Water Intake & Pump Station – 48-inch pipe installation at toe of dam



**GAC
Contactors**



**Membrane
Building**



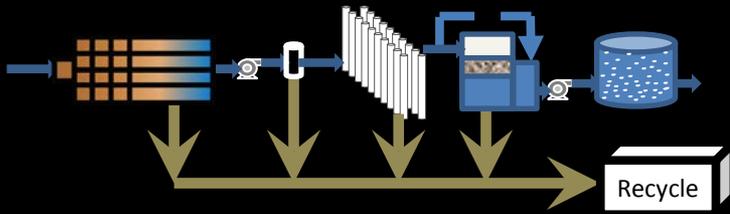
**Chemical
Facilities**



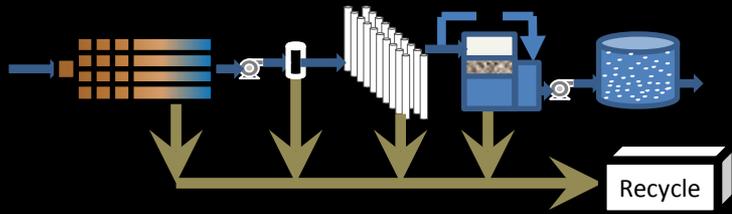
**Pretreatment
Facilities**



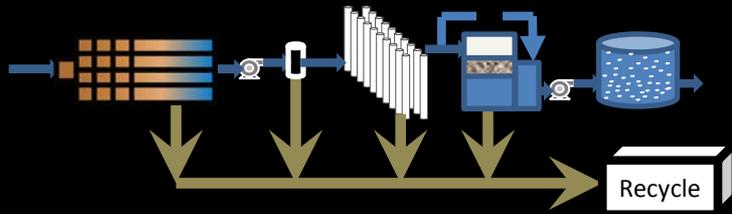
Water Treatment Process Structures



Pretreatment Building – Grating and sluice gate installation



Membrane Building – Feed pump and piping installation

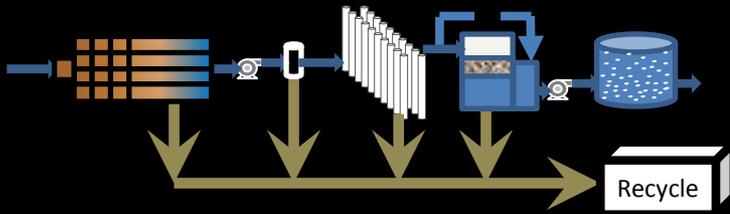


Chemical Building – Chemical tank and vent pipe installation



**High Service Pump Station,
GST's, and Blower Building**

Finished Water Process Structures



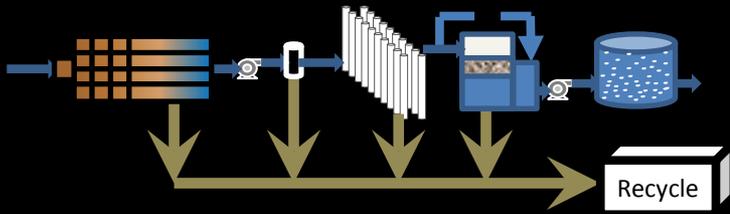
High Service Pump Station – Installation of finished water discharge piping



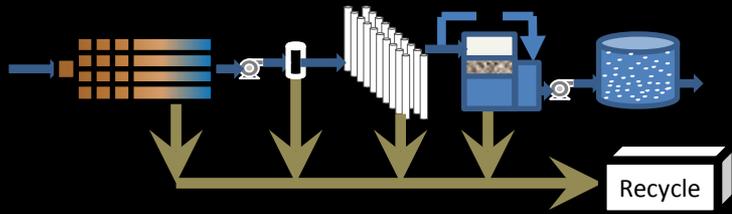
Solids-Waste Process Structures

Backwash Equalization Basin

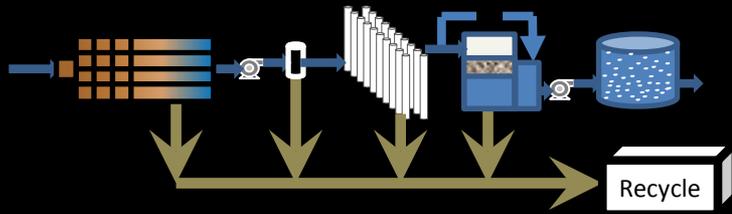
Process Residual Treatment and Disposal Structures



Dewatering Building – Preparation of concrete deck placement



Sludge Thickeners – Shoring for launder installation



Backwash Equalization Basin— Sluice gate installation



**Electrical
Facilities**

**Operations
Building**

Operational Structures



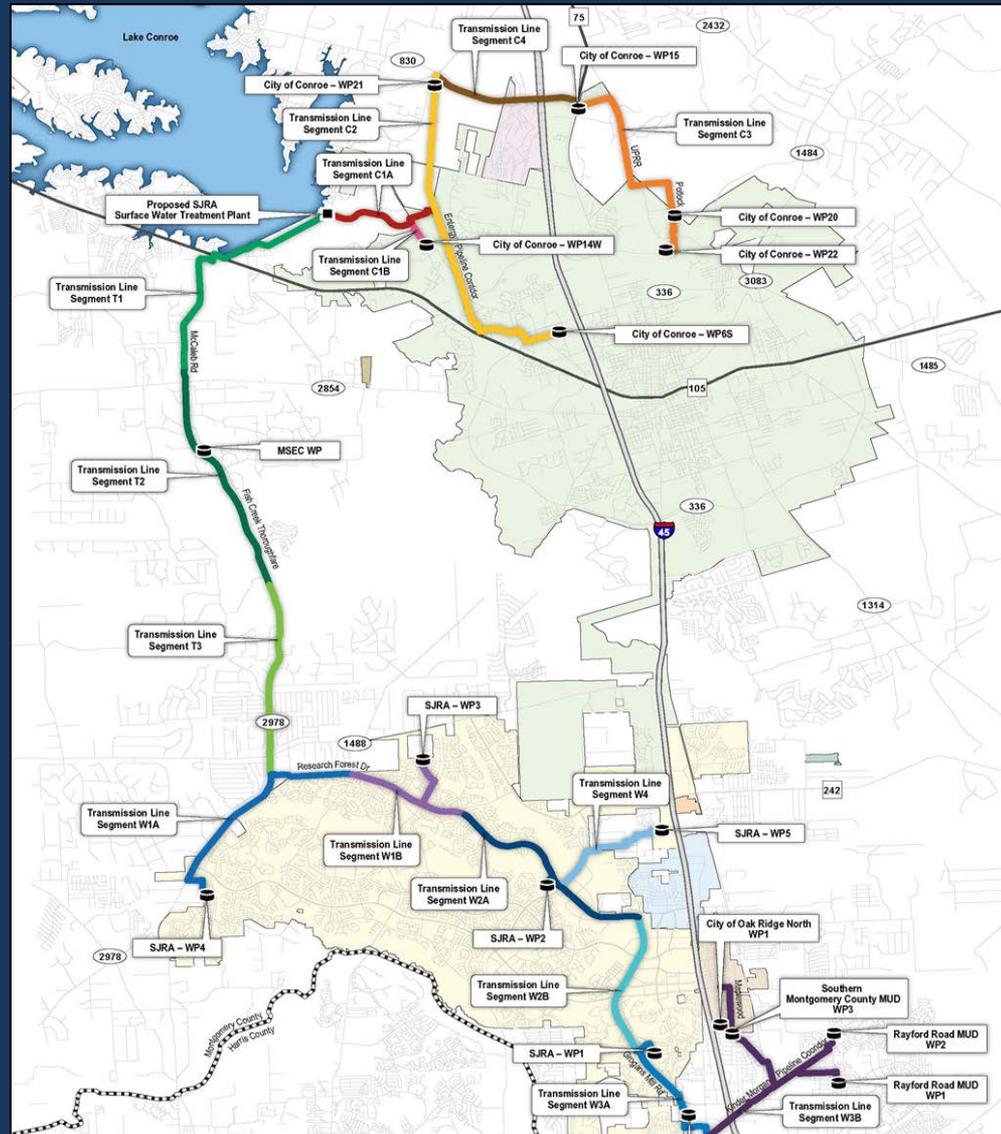
Operations Building – Wall framing installation

SURFACE WATER FACILITY CONSTRUCTION PROGRESS

Questions?



SURFACE WATER TRANSMISSION SYSTEM CONSTRUCTION PROGRESS



TRANSMISSION LINE SYSTEM CONSTRUCTION ADMINISTRATION

Project Data Thru 6/30/2014

Original Contract Amount: \$ 146,610,000.60

Change Orders: \$ 2,529,447.62

Total Contract Amount: \$149,140,448.22

Amount Invoiced: \$ 97,147,835.39

Percent Complete: 65%

Estimated Completion Date: May 2015



TRANSMISSION LINE SYSTEM CONSTRUCTION ADMINISTRATION

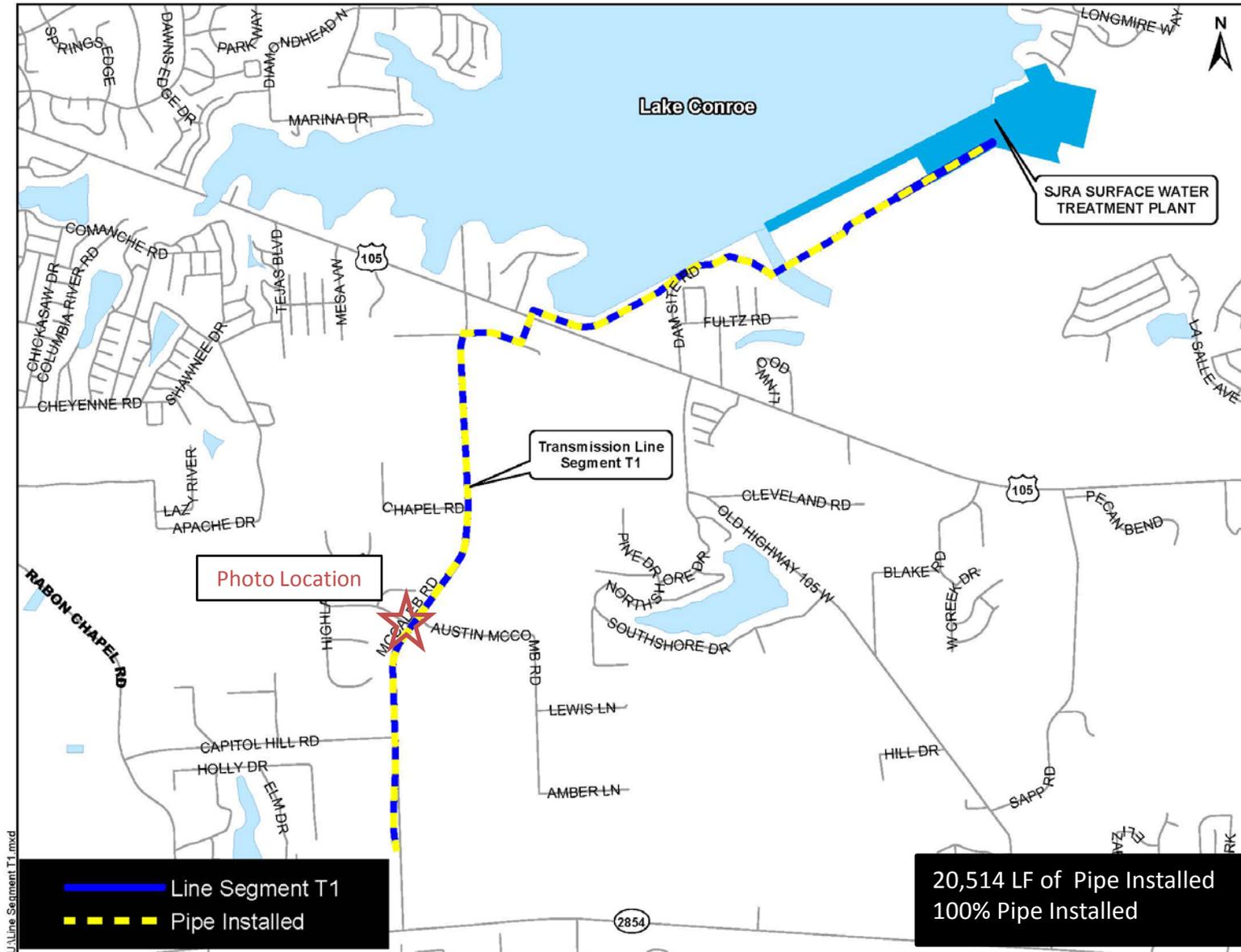
Project Data Thru 6/30/2014

Average Daily workforce:	267 workers
Piping installed to date:	35.0 miles
Average cost per day:	\$250,921
Percentage of pipe installed:	69%



SURFACE WATER TRANSMISSION SYSTEM "T" ROUTES - PROJECT DATA





SJRA SURFACE WATER TREATMENT PLANT

Transmission Line Segment T1

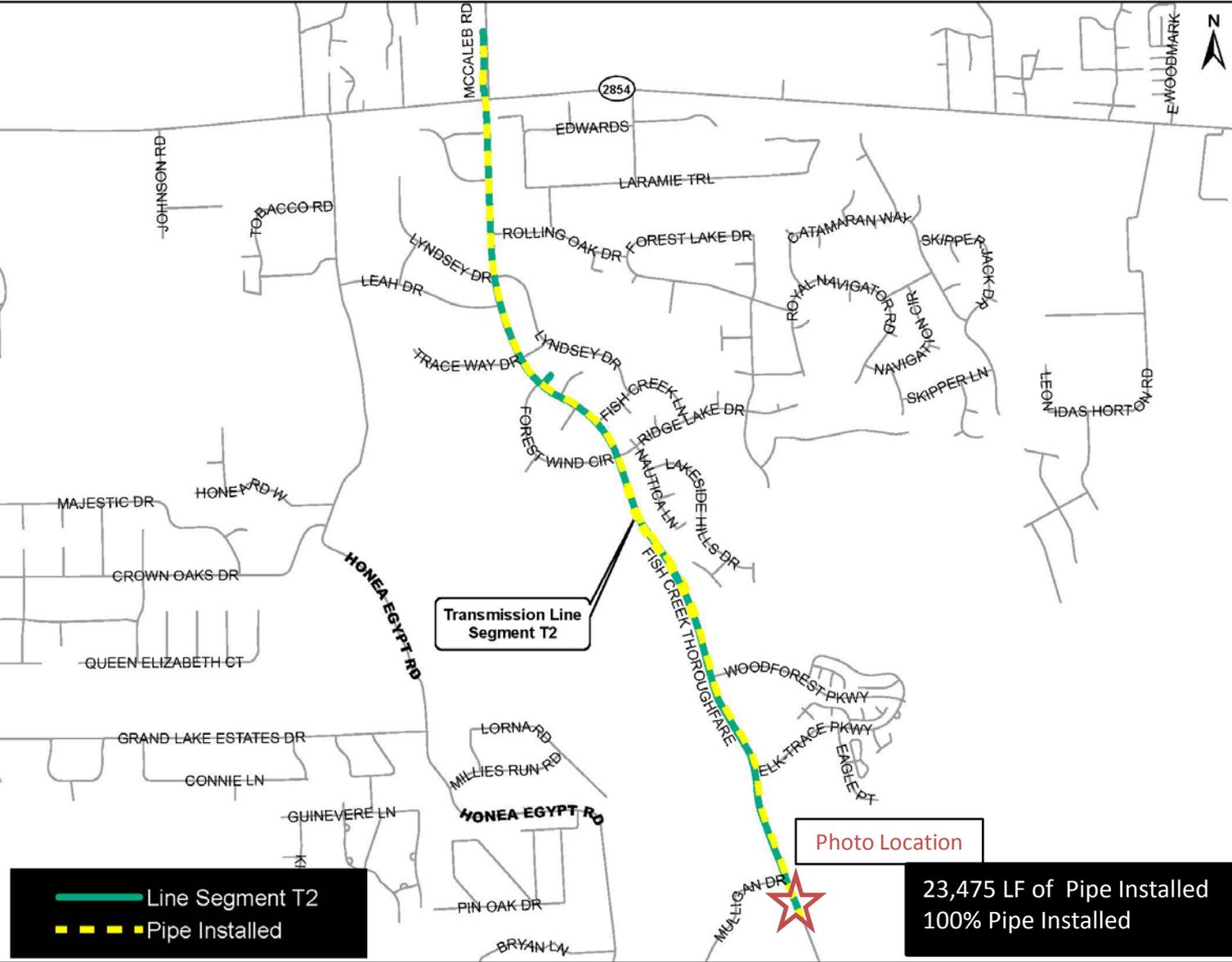
Photo Location

— Line Segment T1
- - - Pipe Installed

20,514 LF of Pipe Installed
100% Pipe Installed



Pavement restoration along McCaleb Road at Highland Ranch Drive



Transmission Line Segment T2

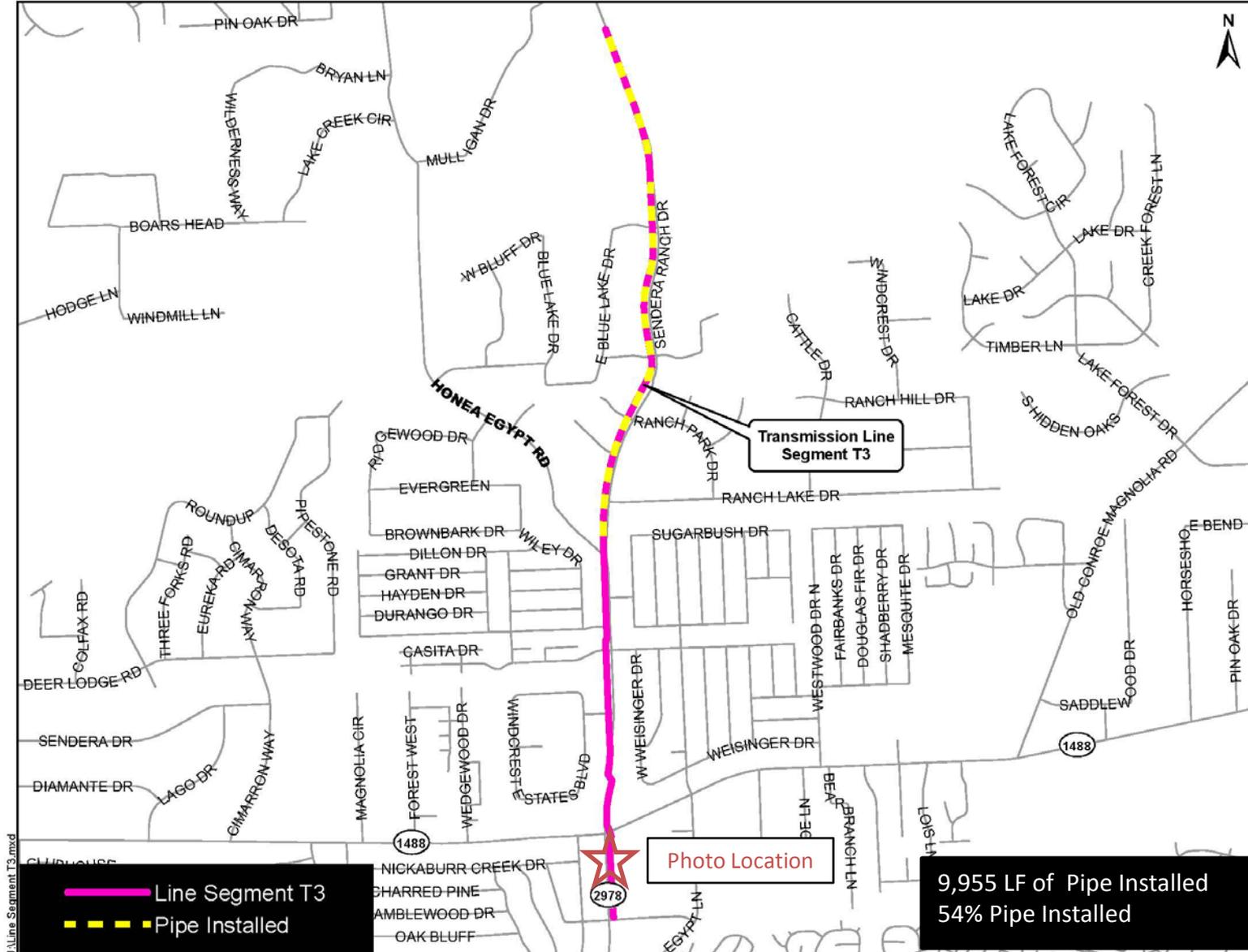
Photo Location

- Line Segment T2
- Pipe Installed

23,475 LF of Pipe Installed
100% Pipe Installed



Asphalt pavement restoration along Fish Creek Thoroughfare



U:\Line Segment T3.mxd

- Line Segment T3
- Pipe Installed

Transmission Line Segment T3

Photo Location

9,955 LF of Pipe Installed
54% Pipe Installed

1488

2978

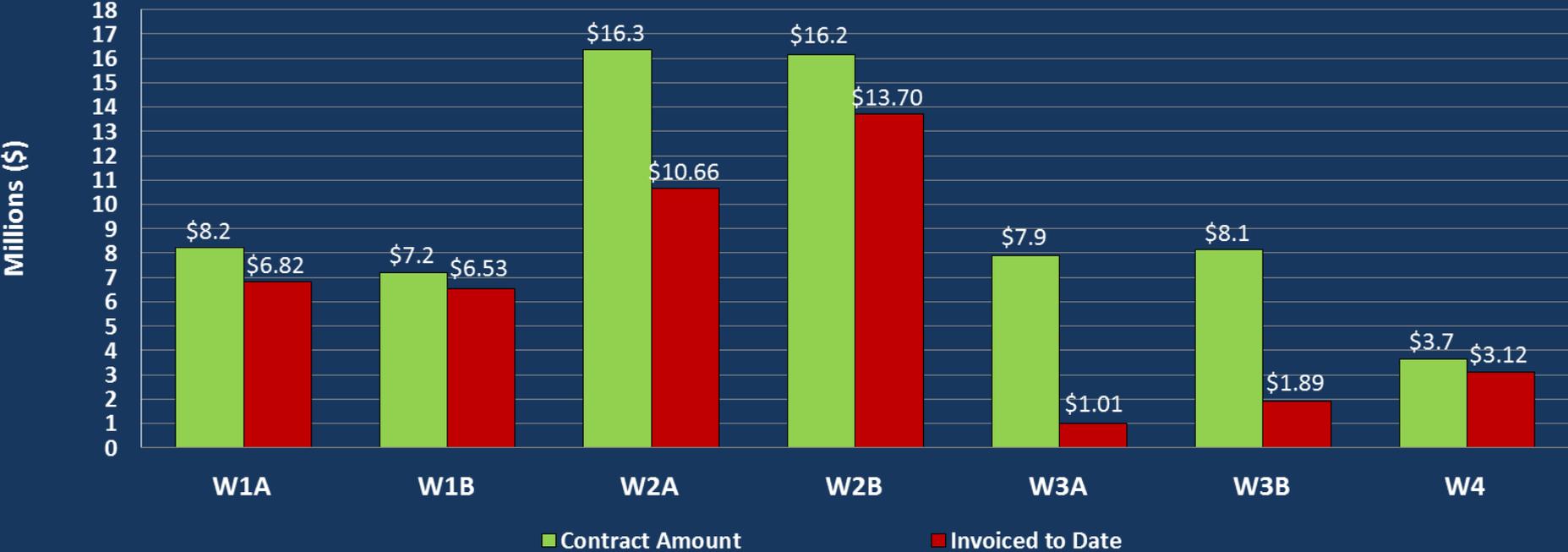
1488

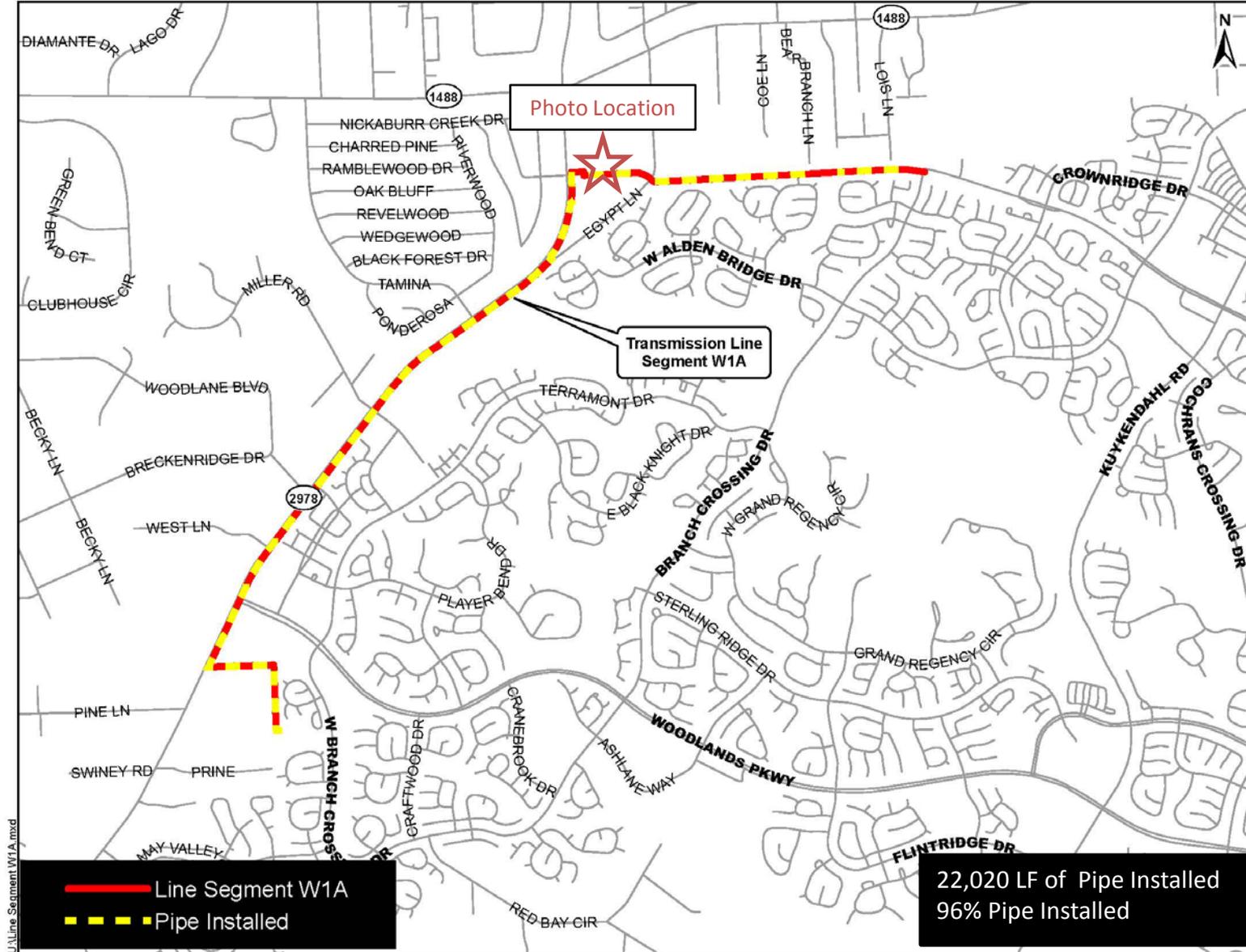




54-inch trenchless pipe installation along FM 2978

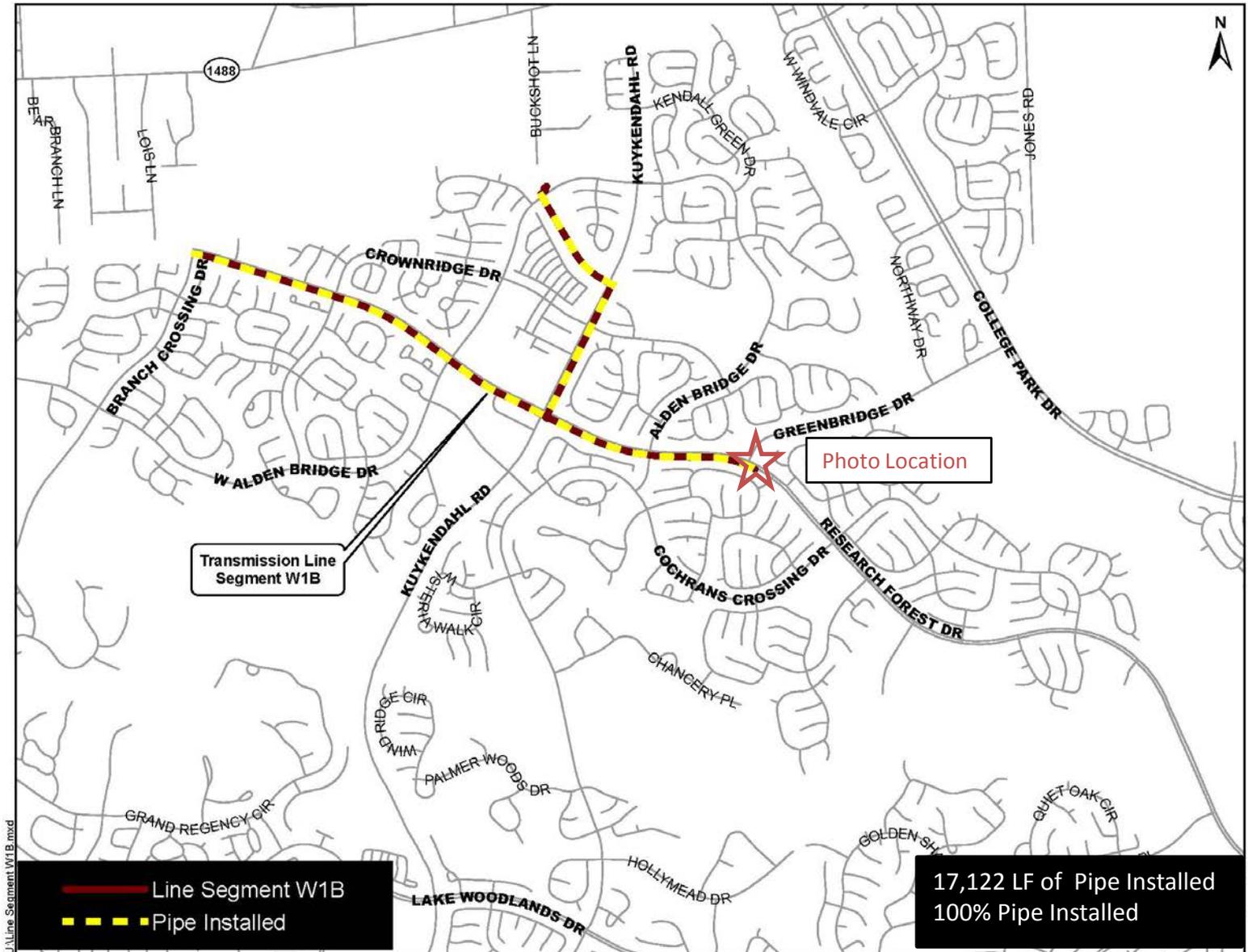
SURFACE WATER TRANSMISSION SYSTEM "W" ROUTES - PROJECT DATA







48-inch open cut pipe installation along Research Forest Drive



Transmission Line Segment W1B

Photo Location

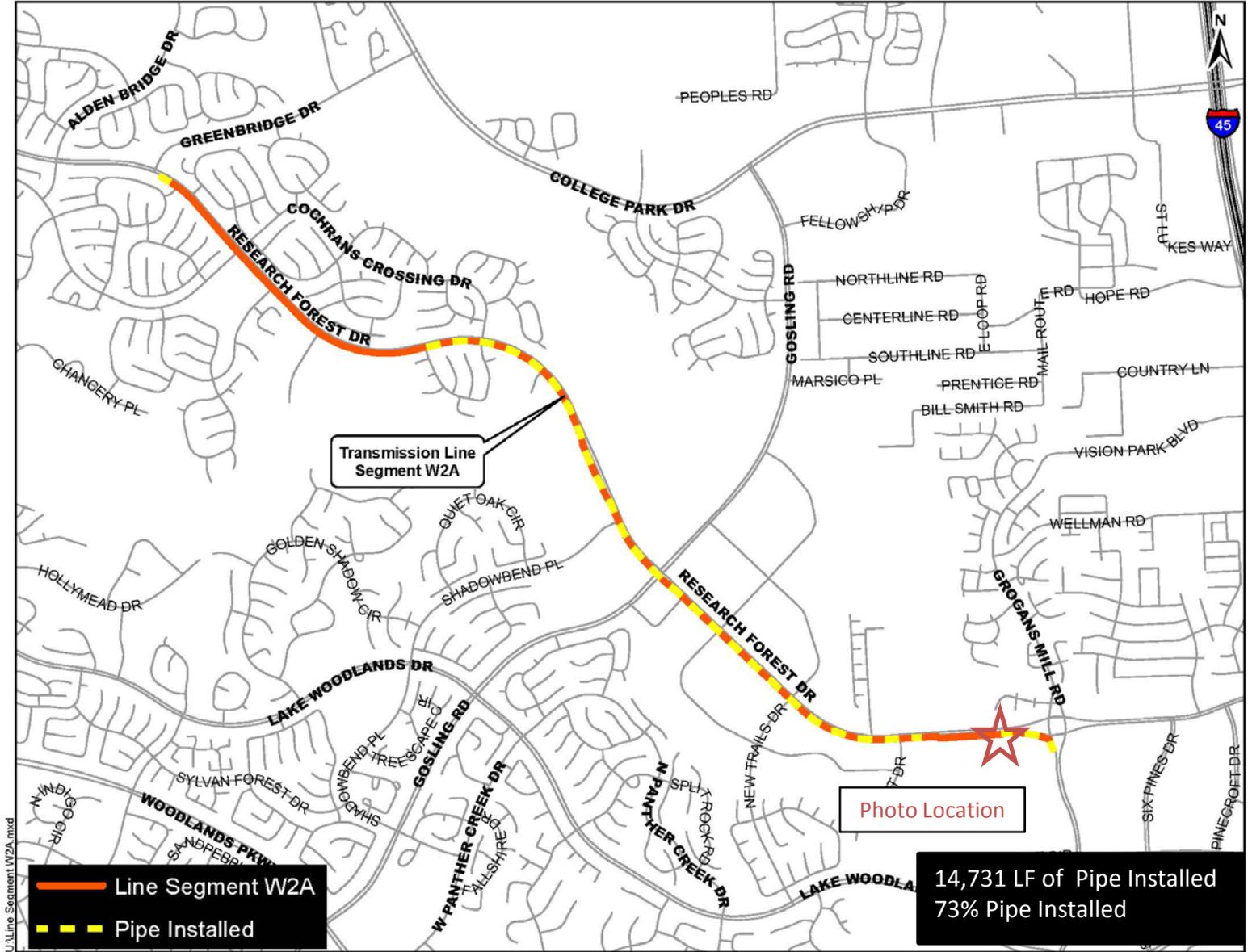
U:\Line Segment W1B.mxd

- Line Segment W1B
- Pipe Installed

17,122 LF of Pipe Installed
100% Pipe Installed



Completing manhole installation along Research Forest Drive



Transmission Line Segment W2A

Photo Location

- Line Segment W2A
- Pipe Installed

14,731 LF of Pipe Installed
73% Pipe Installed

U:\Line Segment W2A.mxd



Backfilling trench box for 42-inch pipe along Research Forest Drive

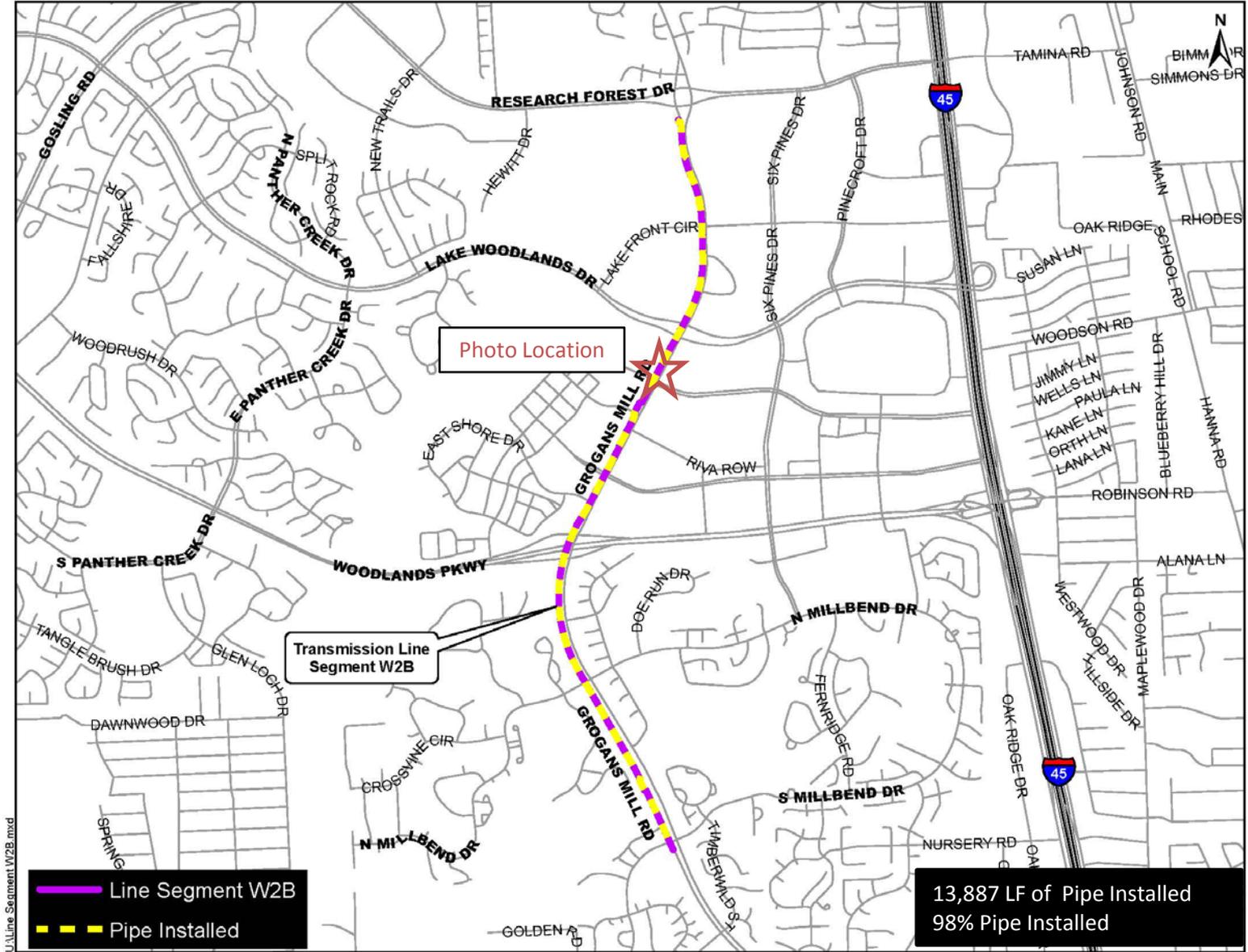
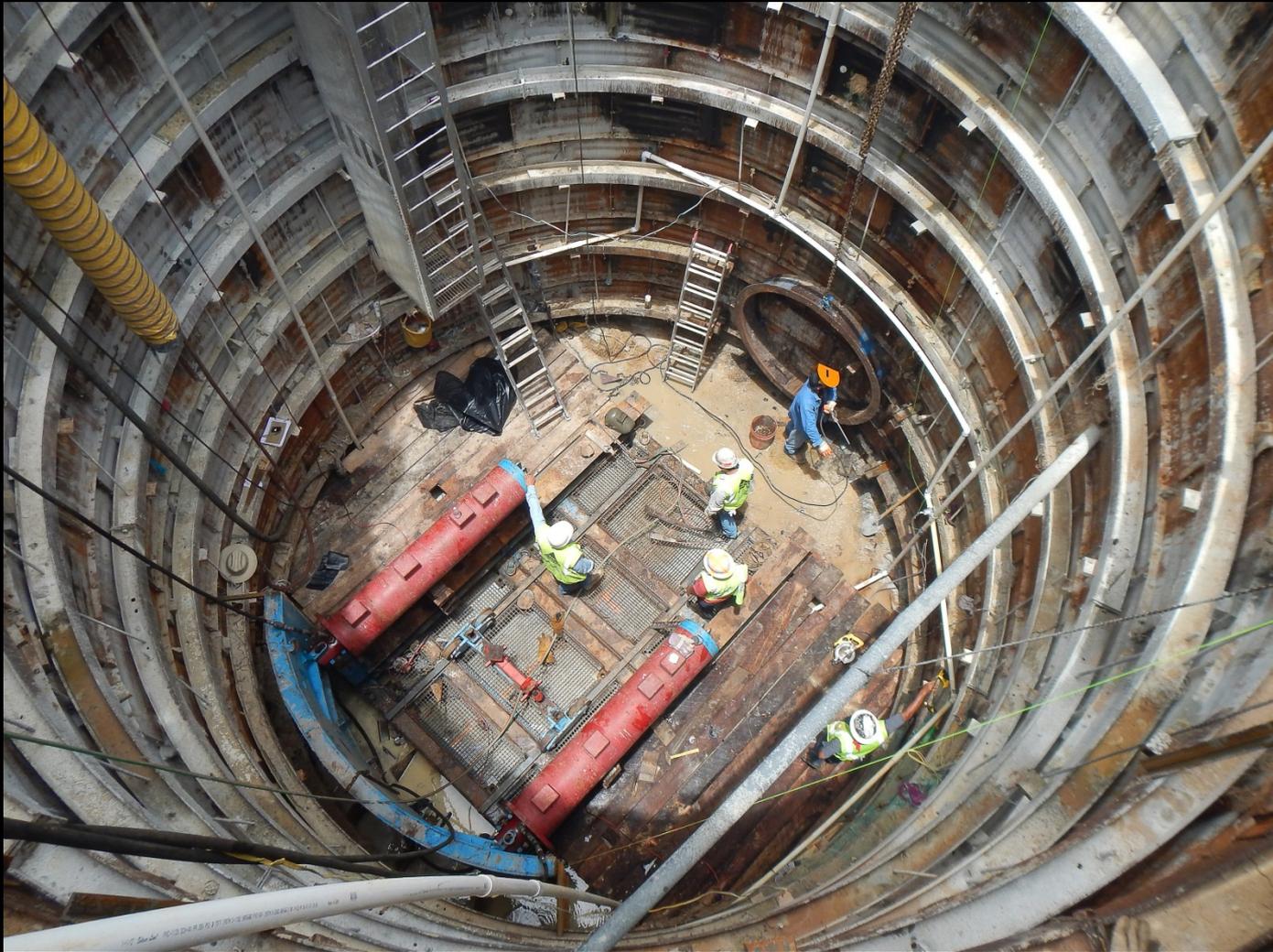


Photo Location

Transmission Line Segment W2B

- Line Segment W2B
- Pipe Installed

13,887 LF of Pipe Installed
98% Pipe Installed



Bore Pit and Tunneling Bore Machine installation for Woodlands Waterway crossing

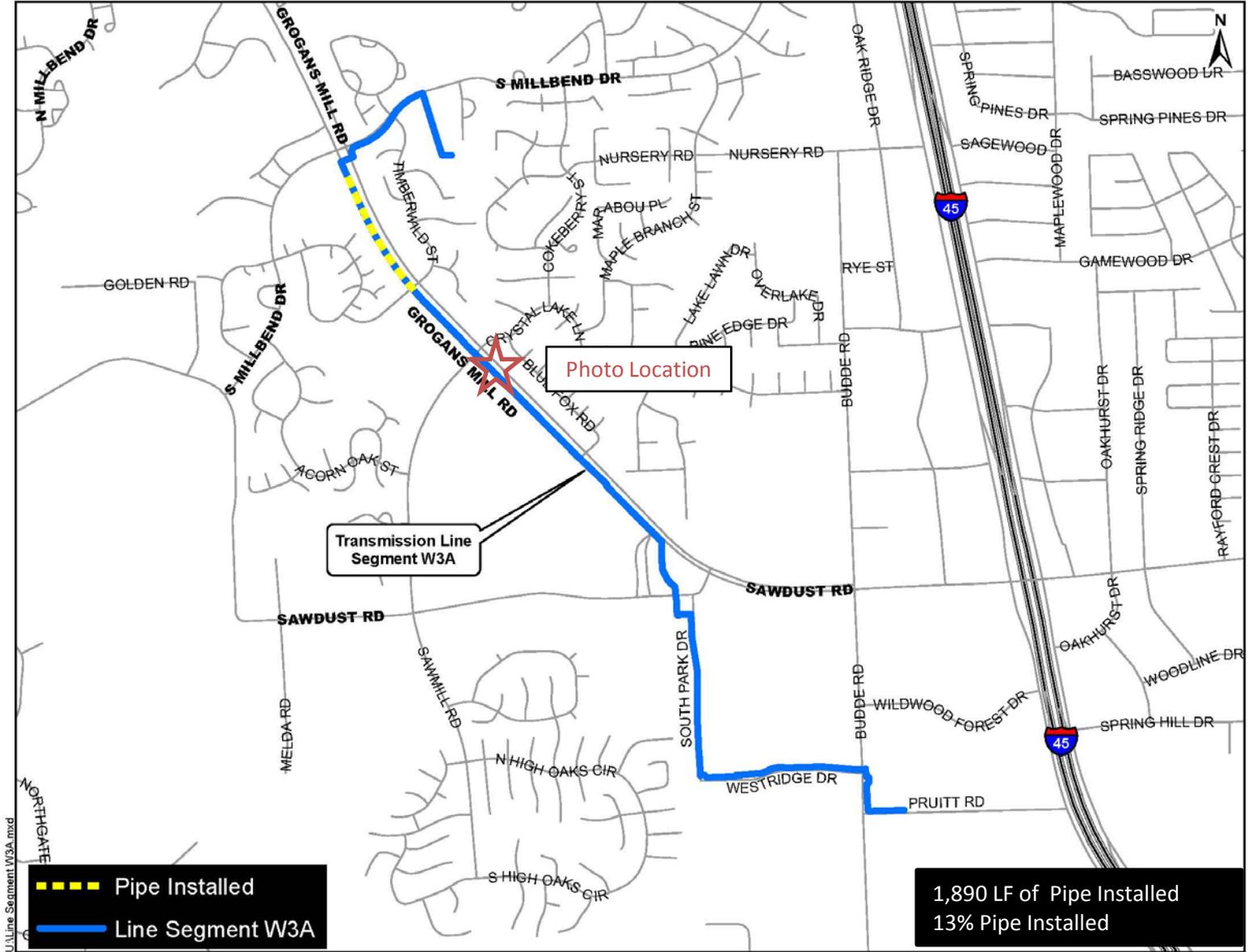


Photo Location

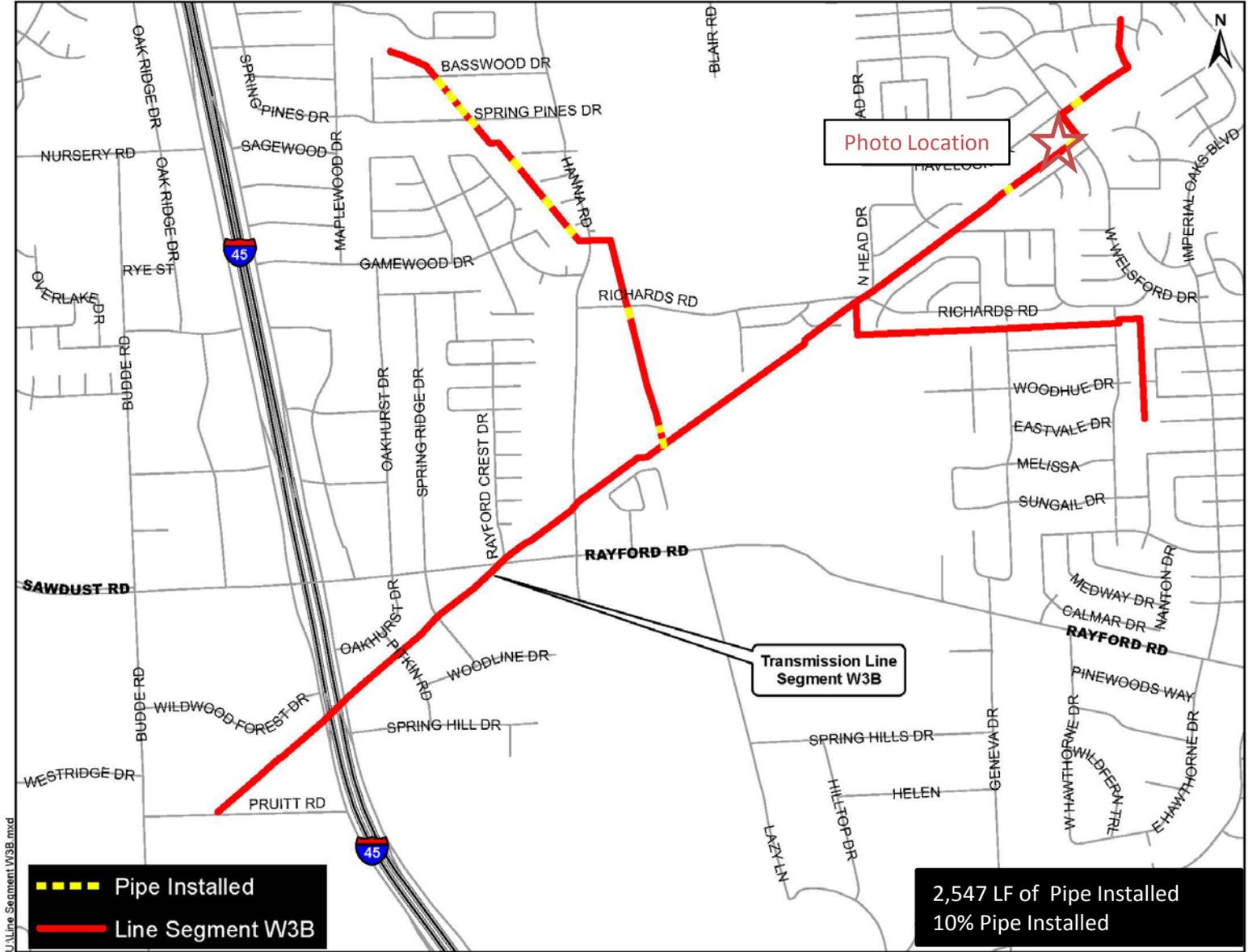
Transmission Line Segment W3A

- Pipe Installed
- Line Segment W3A

1,890 LF of Pipe Installed
13% Pipe Installed



Bore pit excavation for 24-inch trenchless pipe installation along Grogans Mill Road



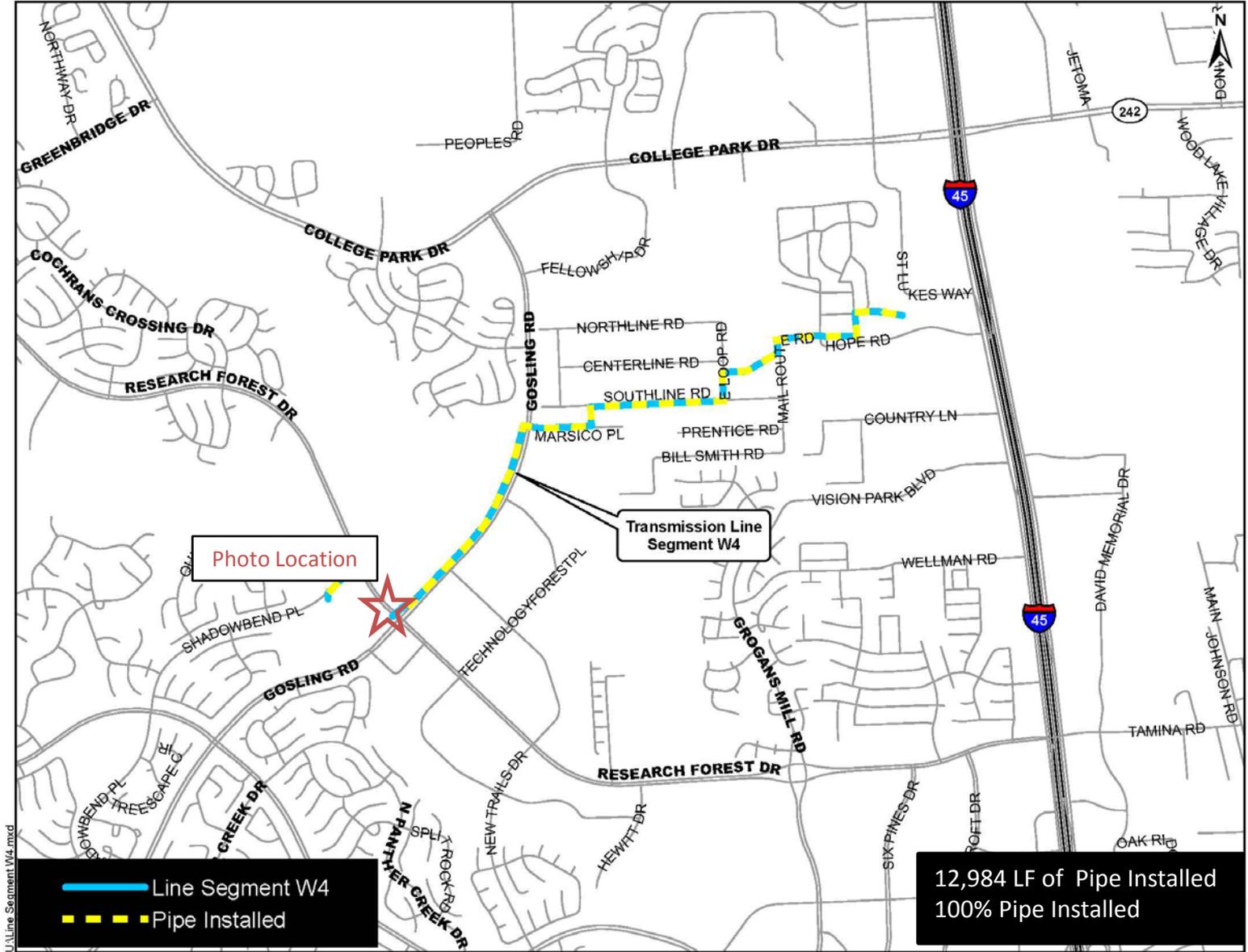
- - - Pipe Installed
— Line Segment W3B

2,547 LF of Pipe Installed
 10% Pipe Installed

U:\Line Segment W3B.mxd



12-inch trenchless pipe installation along Kinder Morgan corridor



U:\Line Segment W4.mxd

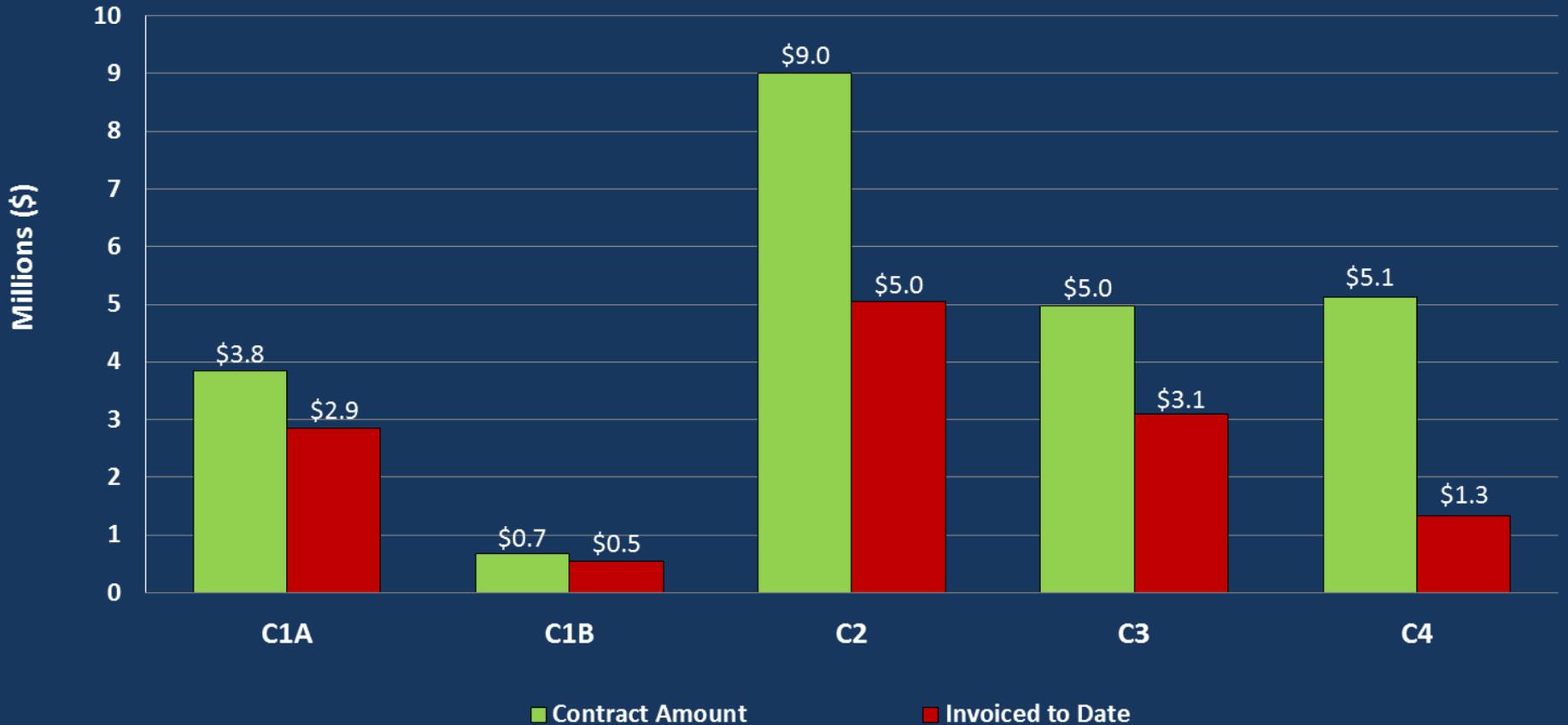
 Line Segment W4
 Pipe Installed

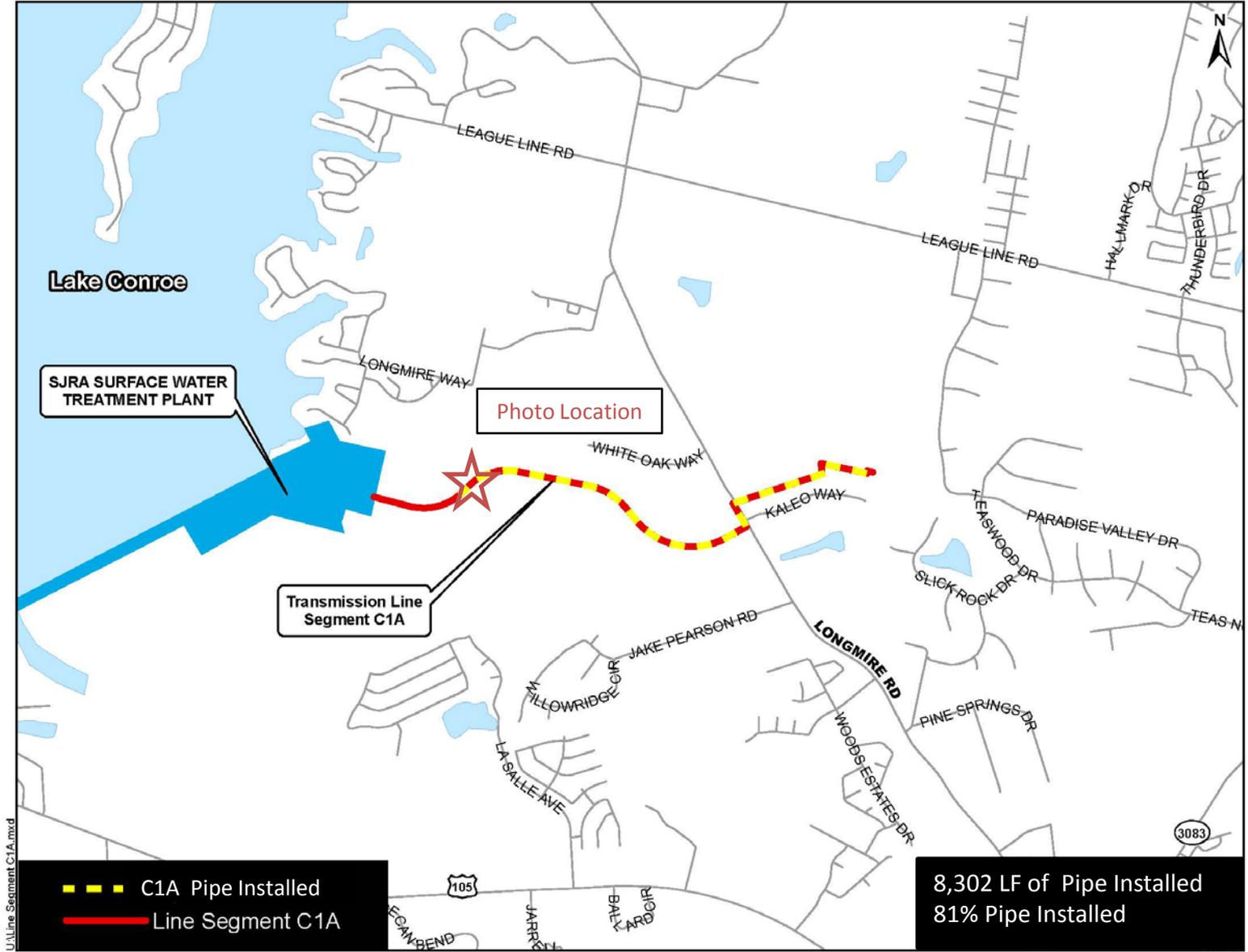
12,984 LF of Pipe Installed
 100% Pipe Installed



24-inch pipe connection at Gosling and Research Forest

SURFACE WATER TRANSMISSION SYSTEM "C" ROUTES - PROJECT DATA





LVLine Segment C1A.mxd

- C1A Pipe Installed
- Line Segment C1A

8,302 LF of Pipe Installed
81% Pipe Installed



Manhole installation along GRP access road

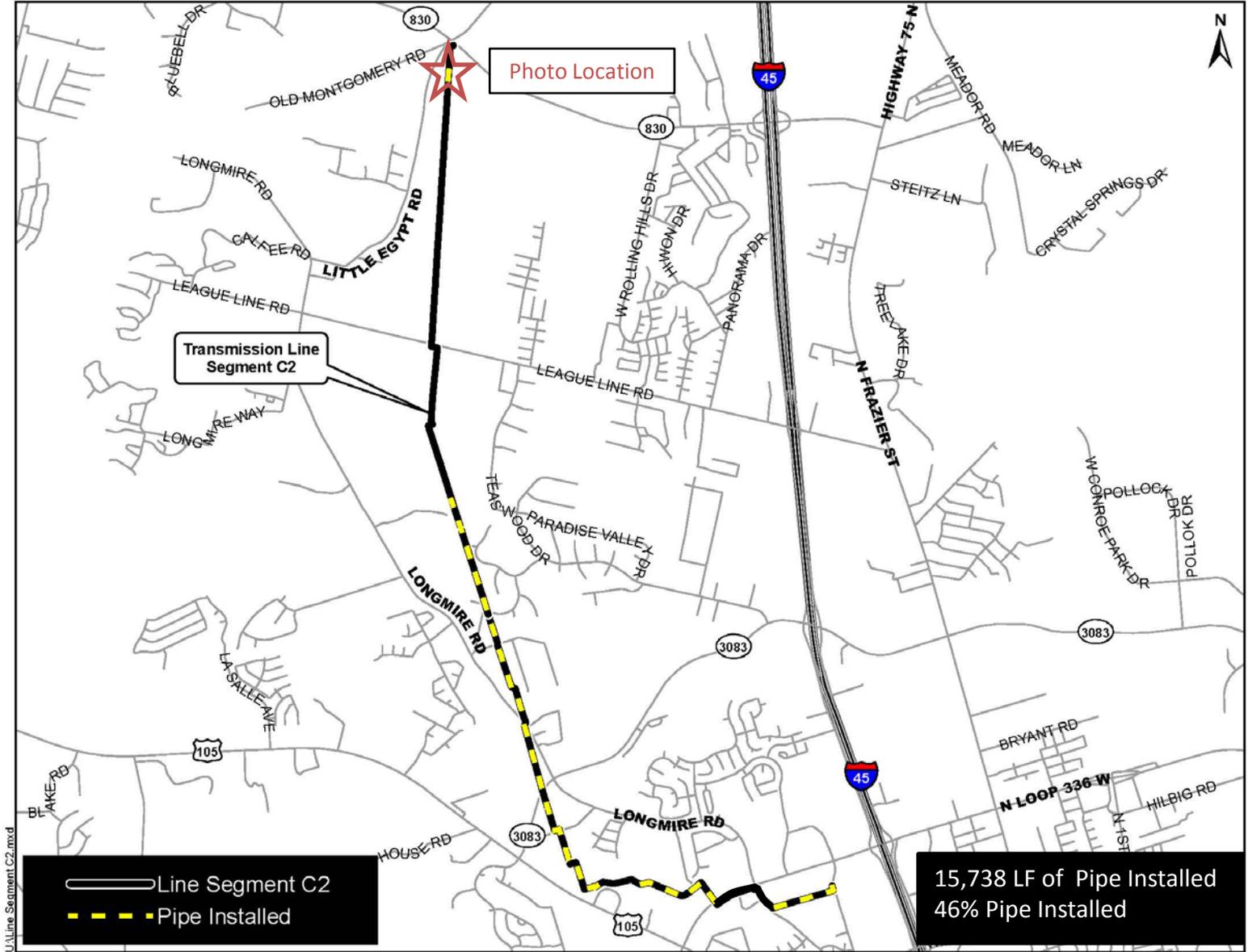


Photo Location

Transmission Line Segment C2

— Line Segment C2
- - - Pipe Installed

15,738 LF of Pipe Installed
46% Pipe Installed

U:\Line Segment C2.mxd



36-inch open cut pipe installation along Entergy corridor

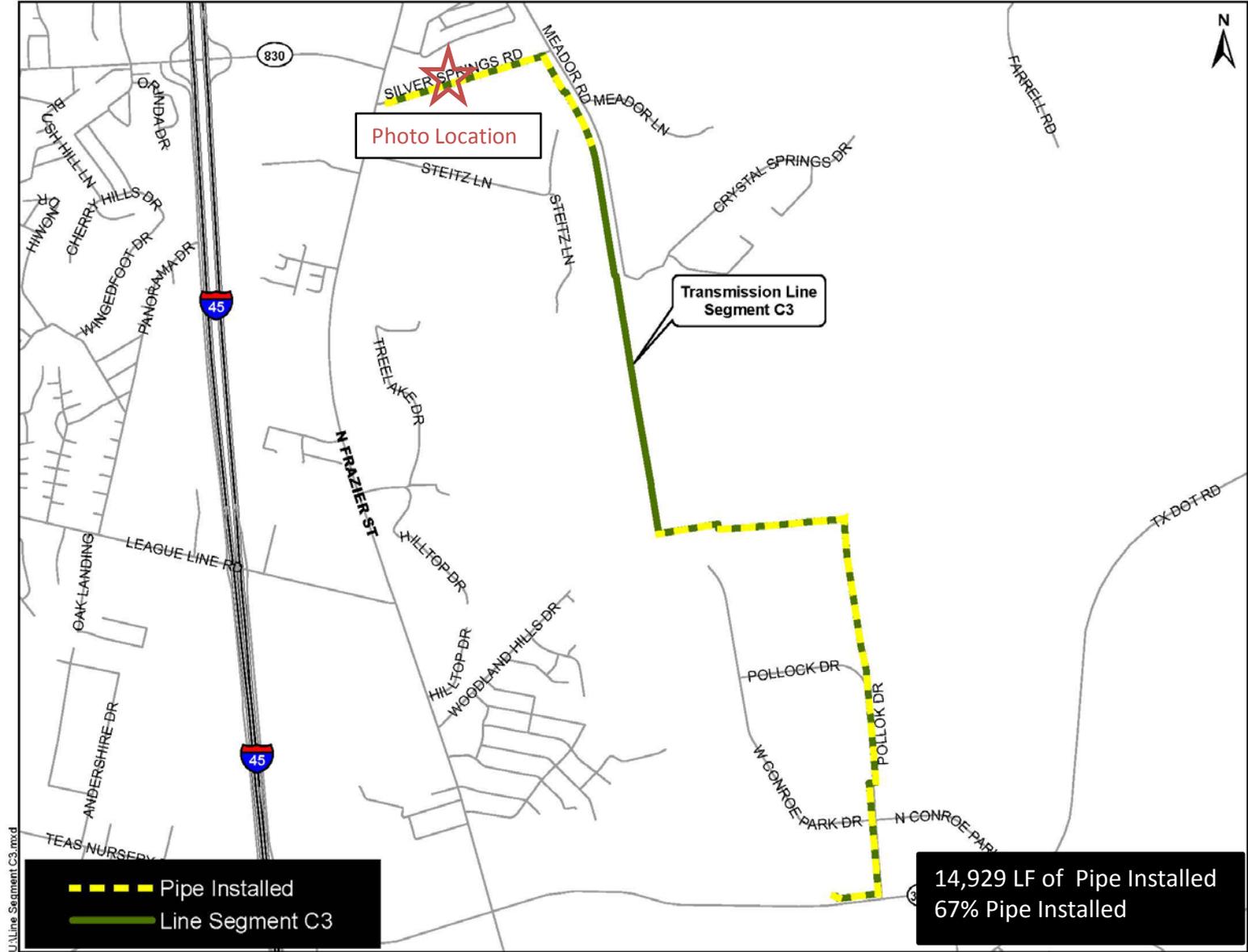


Photo Location

Transmission Line Segment C3

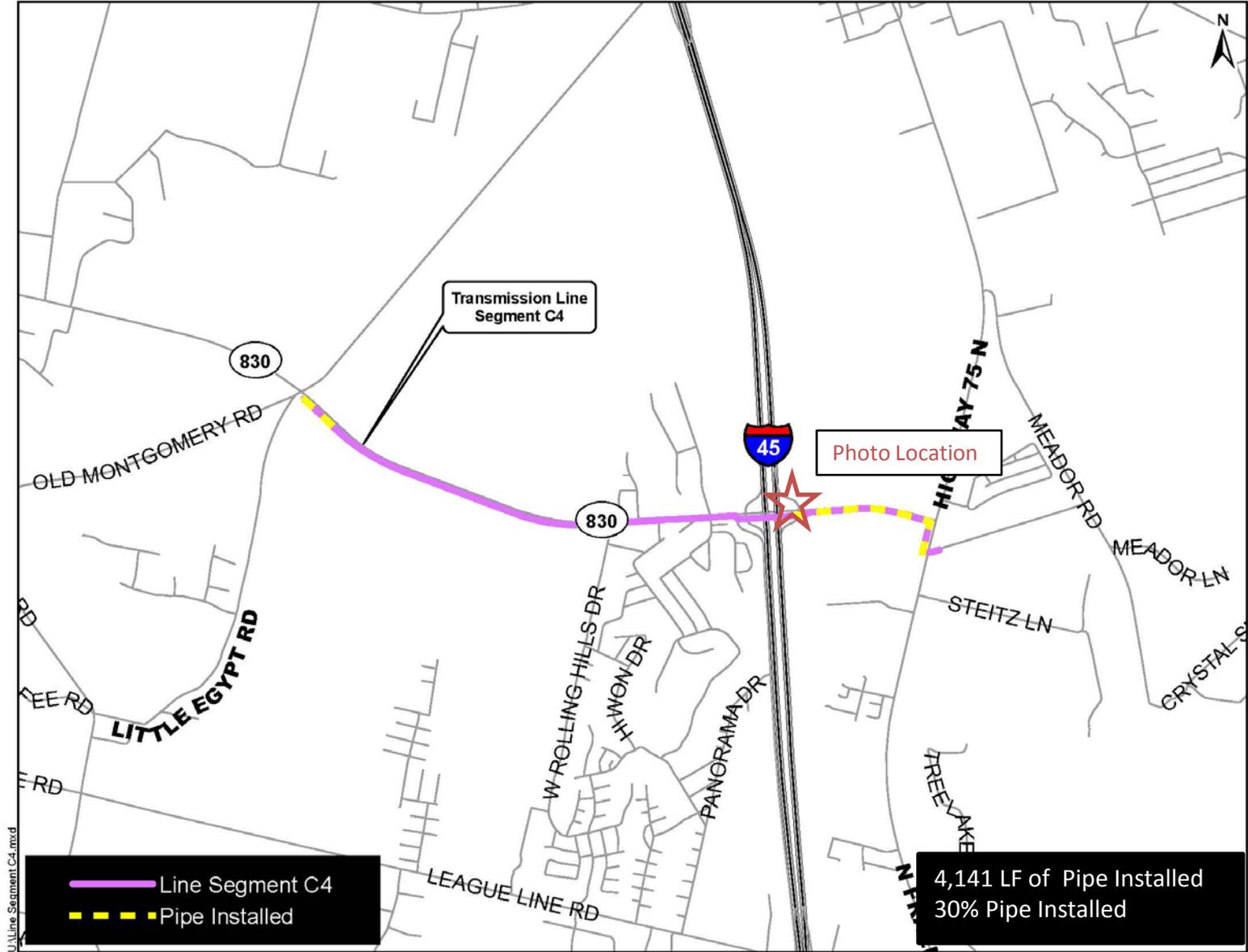
- - - Pipe Installed
— Line Segment C3

14,929 LF of Pipe Installed
 67% Pipe Installed

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20-inch open cut pipe installation along Silver Springs Road



Transmission Line Segment C4

Photo Location

— Line Segment C4
- - - Pipe Installed

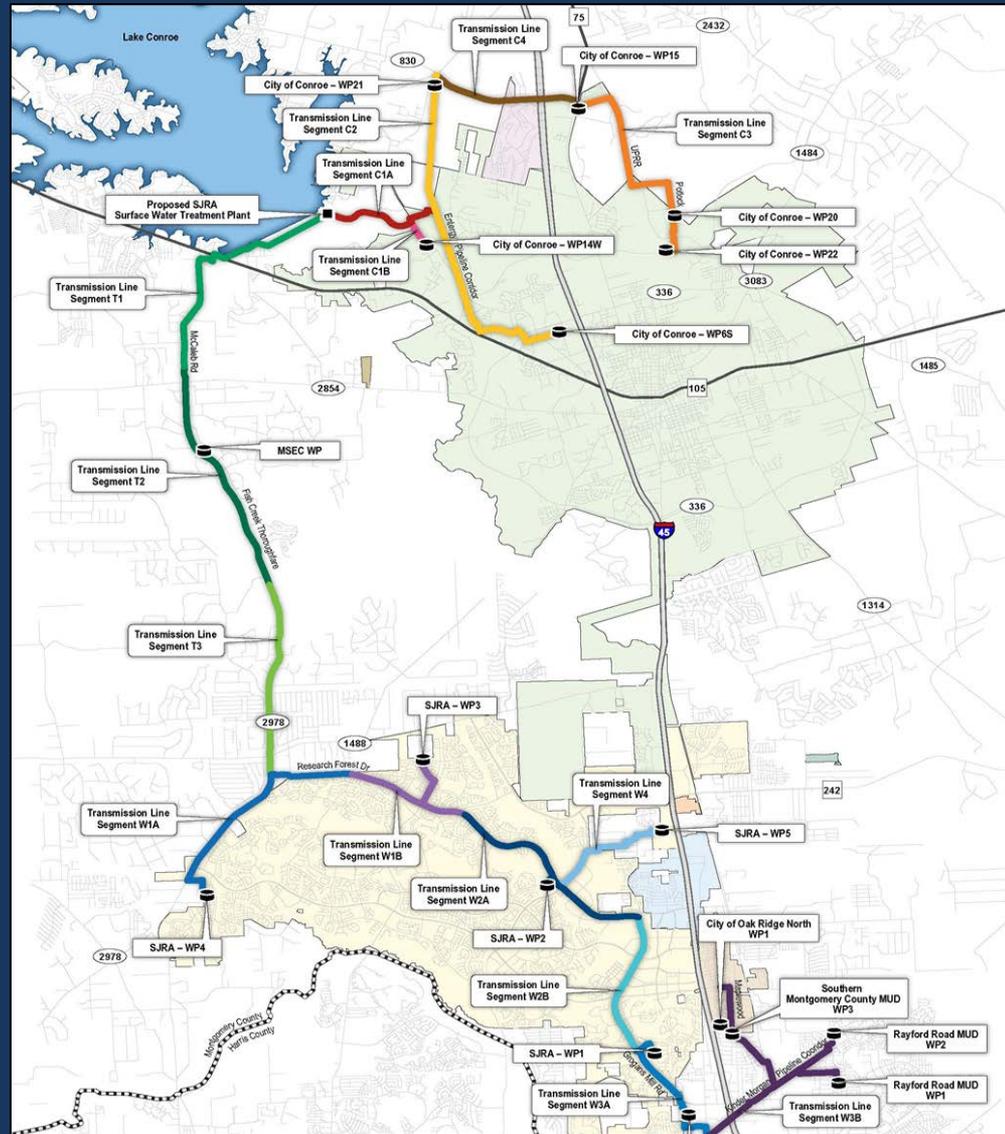
4,141 LF of Pipe Installed
30% Pipe Installed

U:\Line Segment C4.mxd

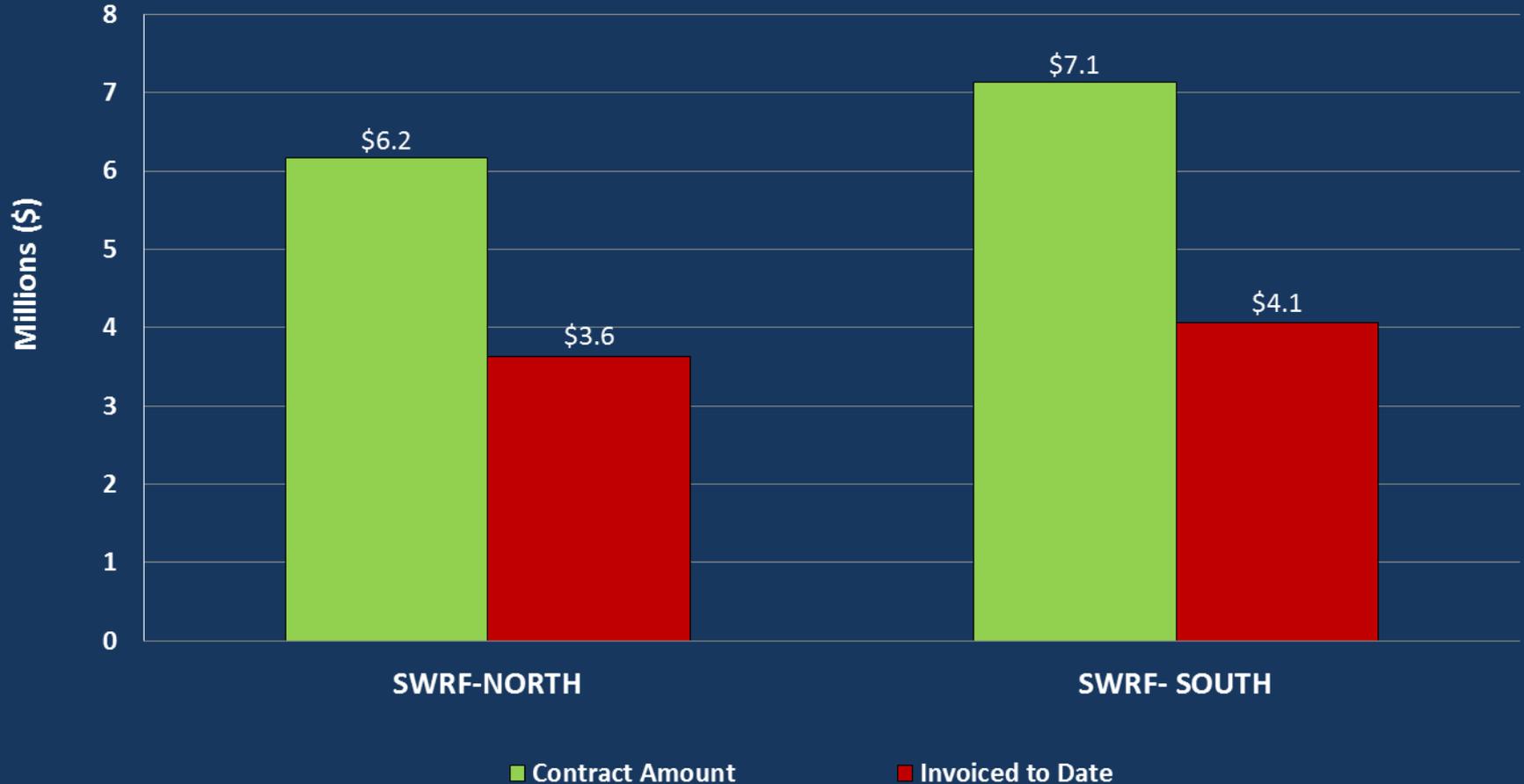


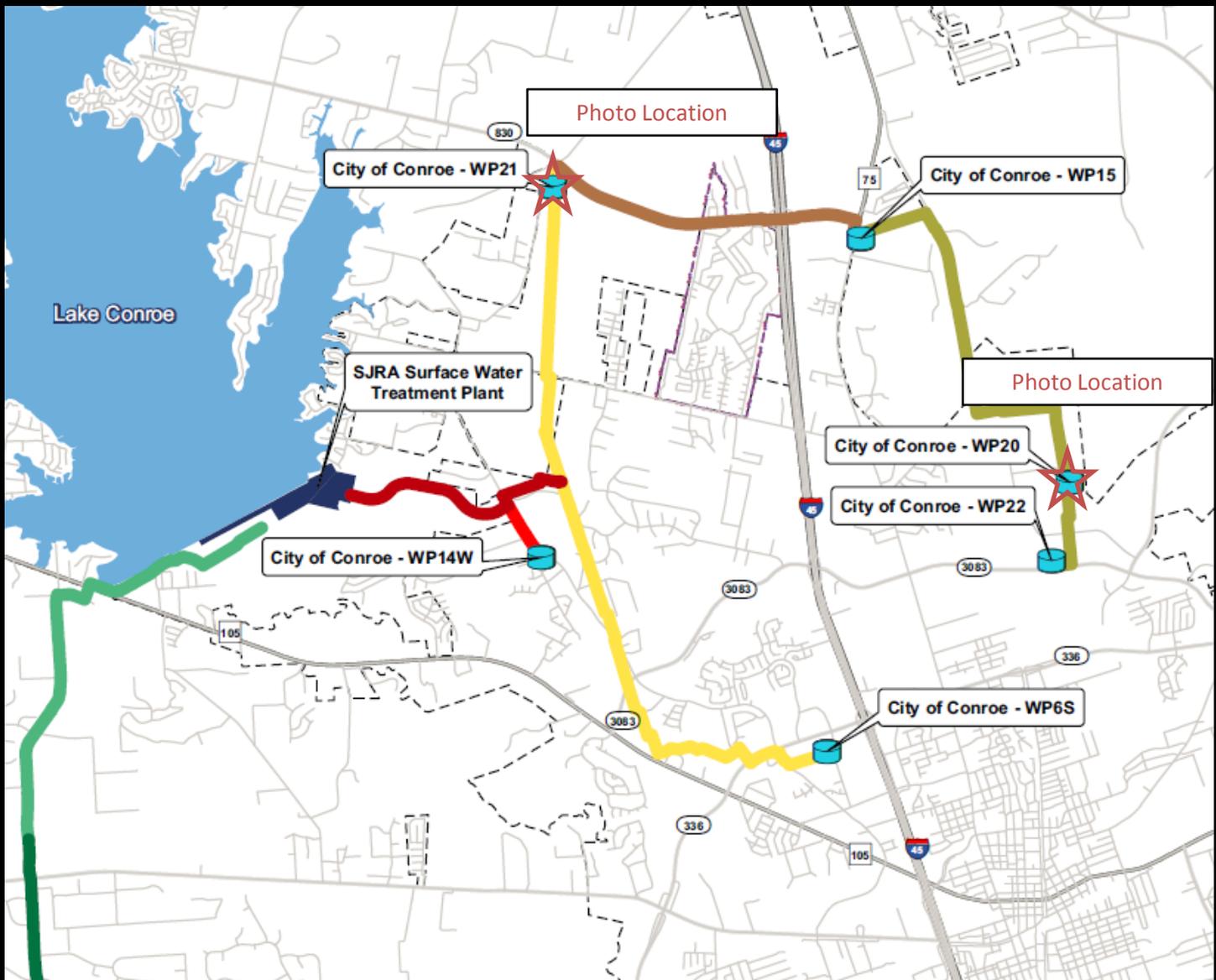
Bore pit and site grading along FM 830 at I-45 frontage road

SURFACE WATER RECEIVING FACILITIES CONSTRUCTION PROGRESS



SURFACE WATER TRANSMISSION SYSTEM RECEIVING FACILITIES - PROJECT DATA



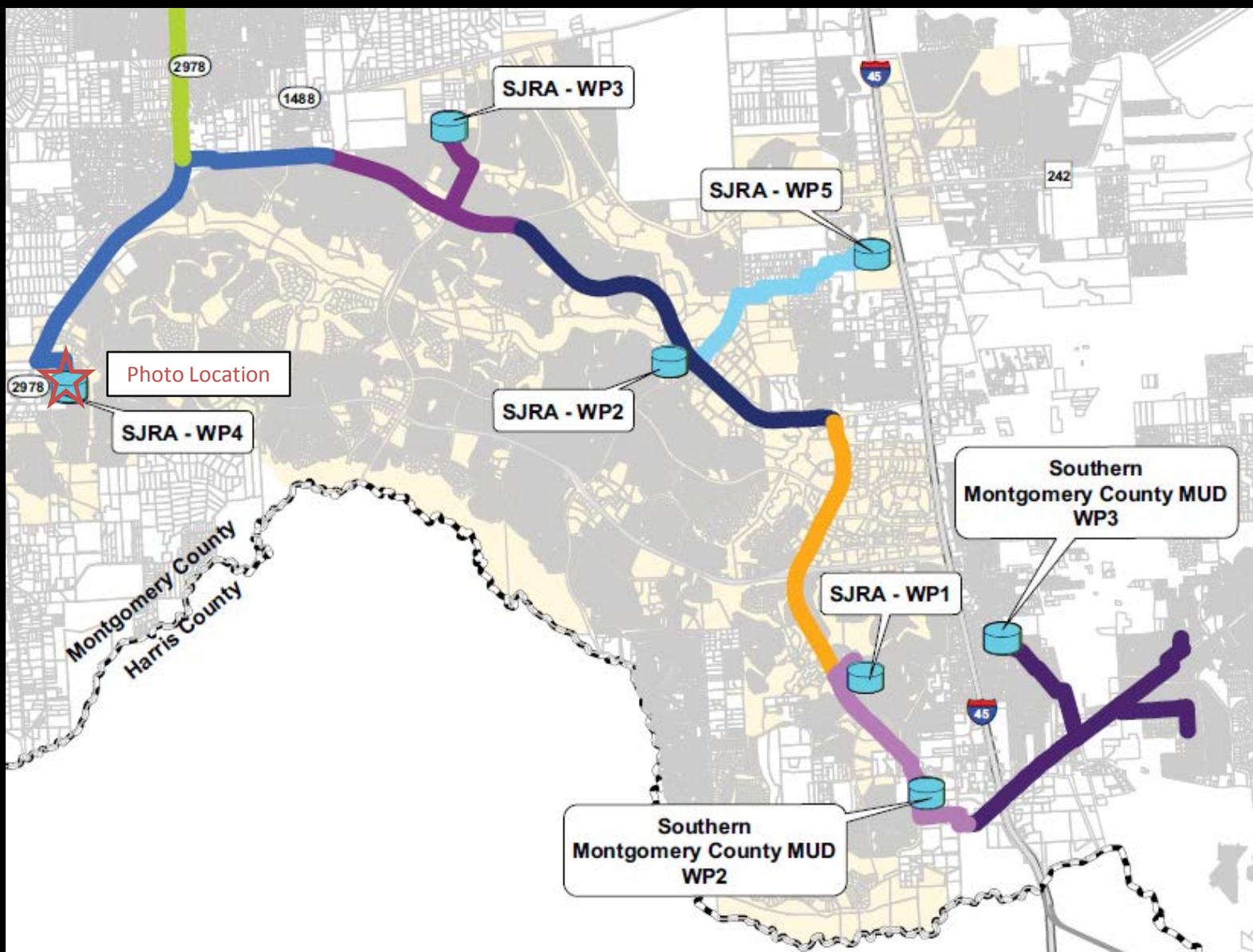




Interior view of metering station at Conroe Water Plant No. 20



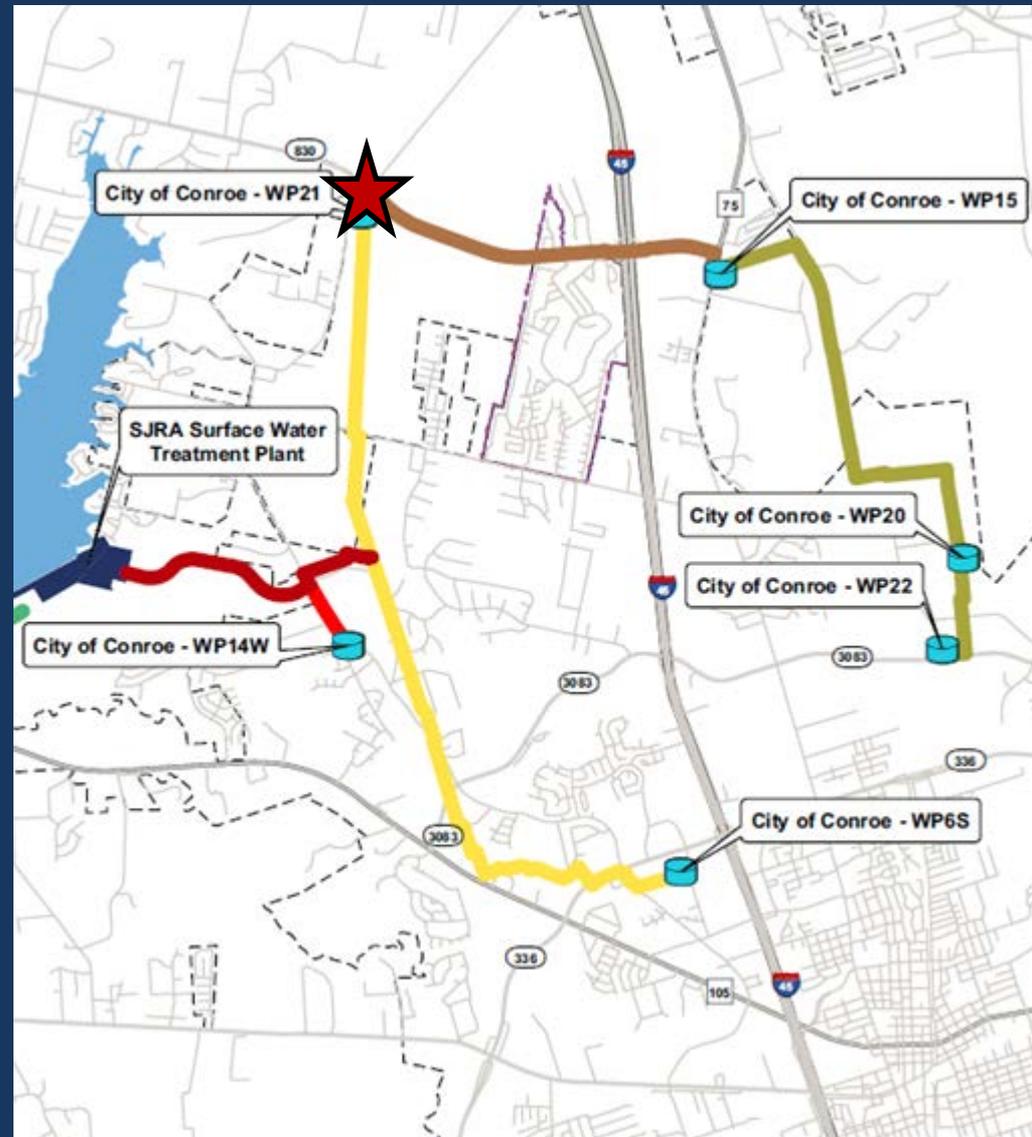
Piping for metering station at Conroe Water Plant No. 21



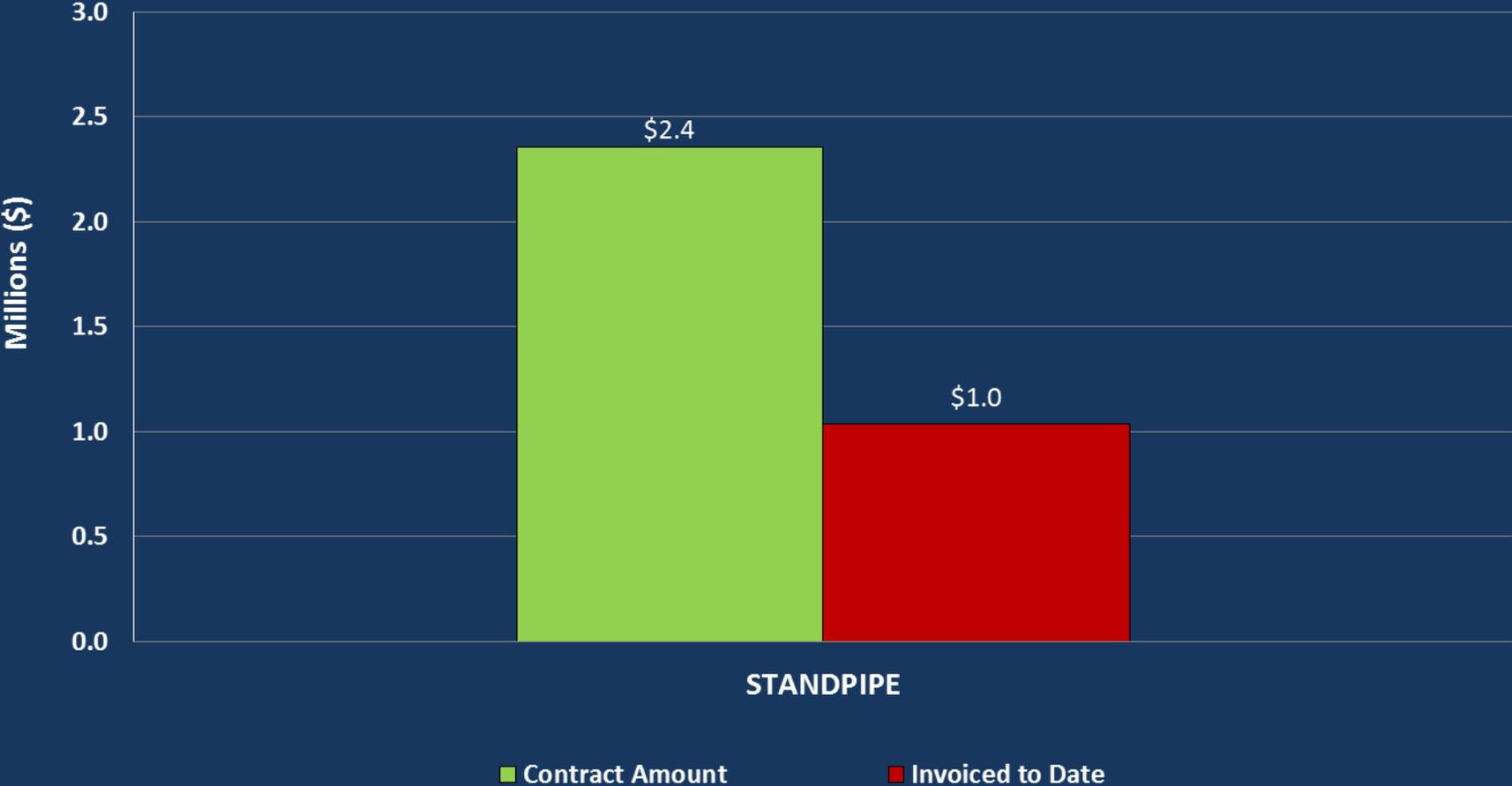


Metering station at Woodlands Water Plant No. 4

SURFACE WATER STANDPIPE CONSTRUCTION PROGRESS



SURFACE WATER TRANSMISSION SYSTEM STANDPIPE - PROJECT DATA



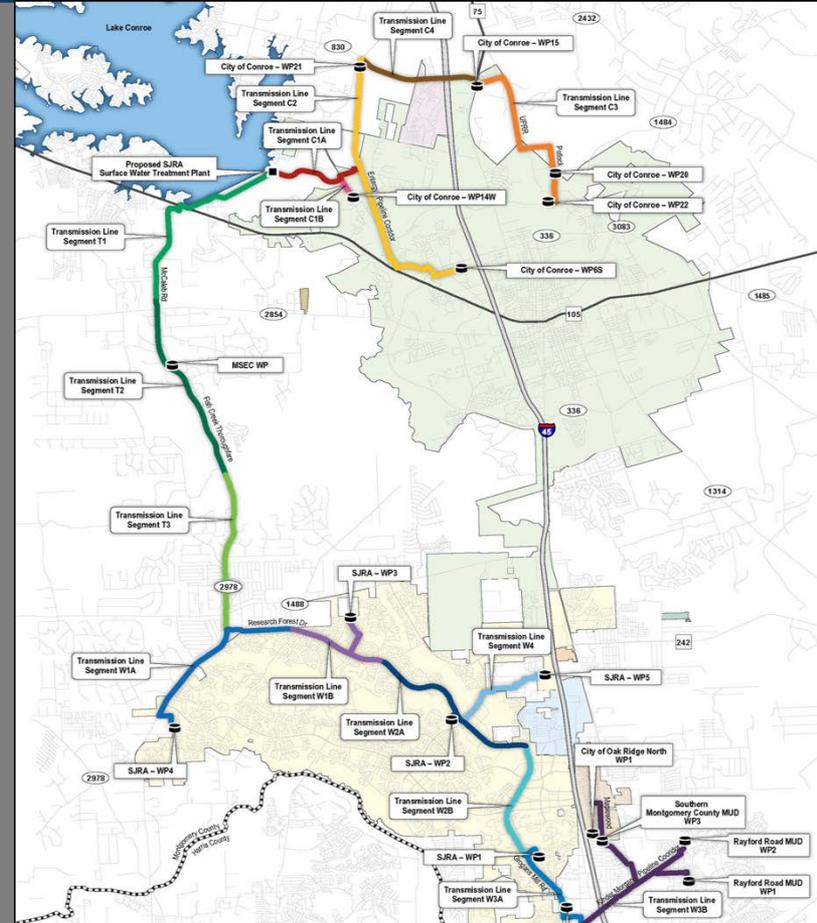


Standpipe foundation reinforcing steel and formwork installation

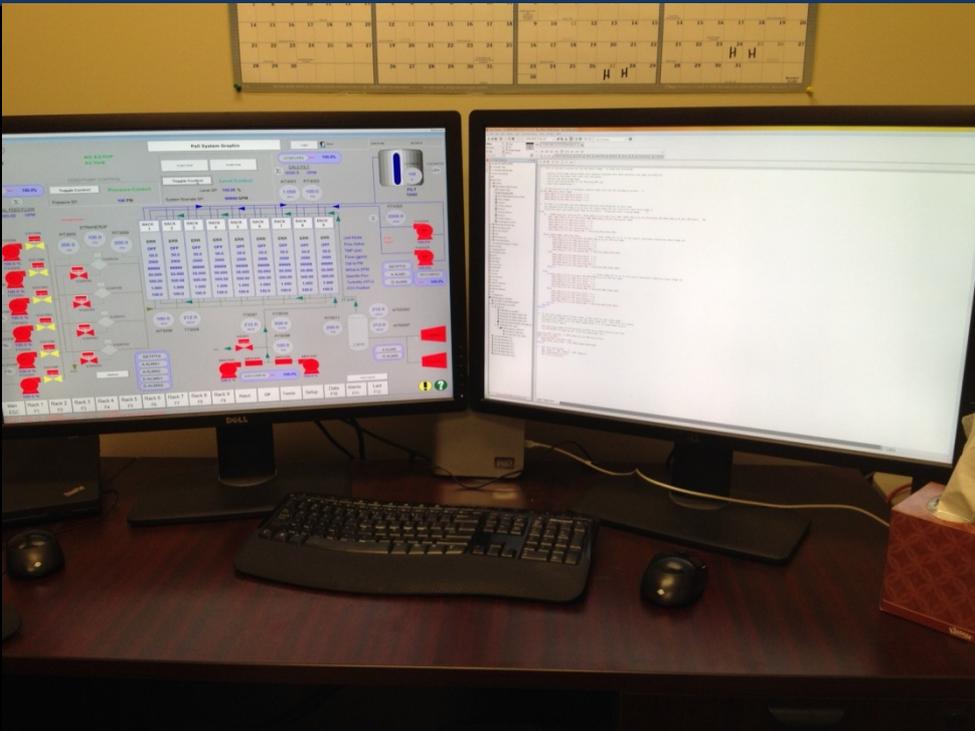
FIBER OPTIC COMMUNICATION CONSTRUCTION ADMINISTRATION

Project Data Thru 6/30/2014

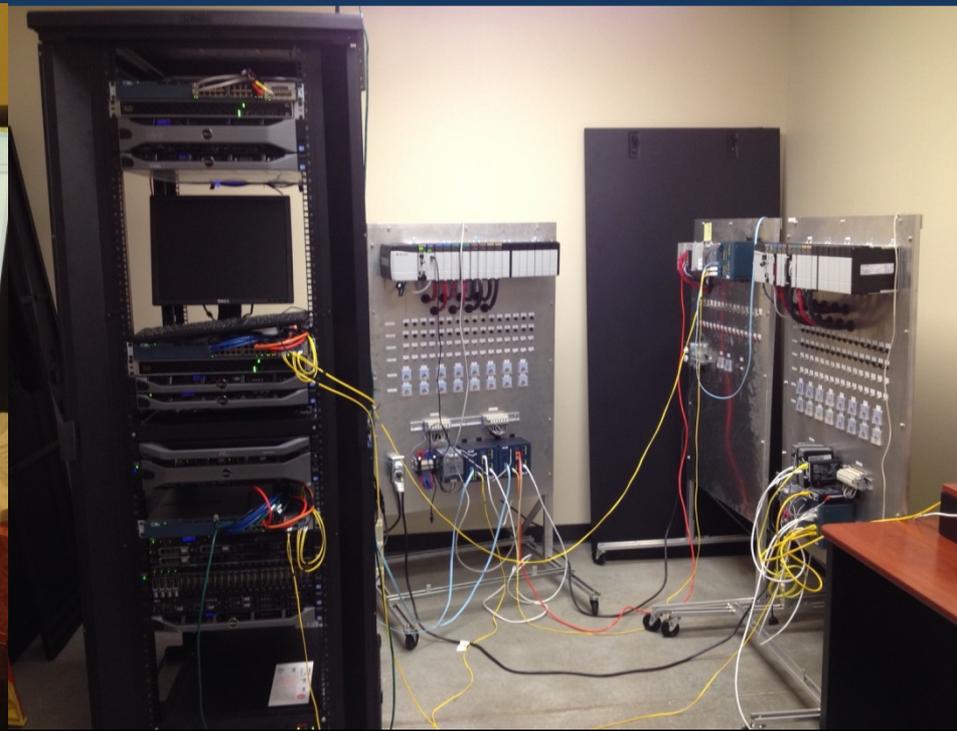
Contracted Amount:	\$	2,885,432.35
Change Orders:	\$	0.00
Estimate to Complete:	\$	2,885,432.35
Amount Invoiced:	\$	0.00
Percent Complete:		0%
Completion Date:		June 2015



SCADA SYSTEM PROGRAMMING AND CONFIGURATION PROGRESS



Dual Operator Monitors



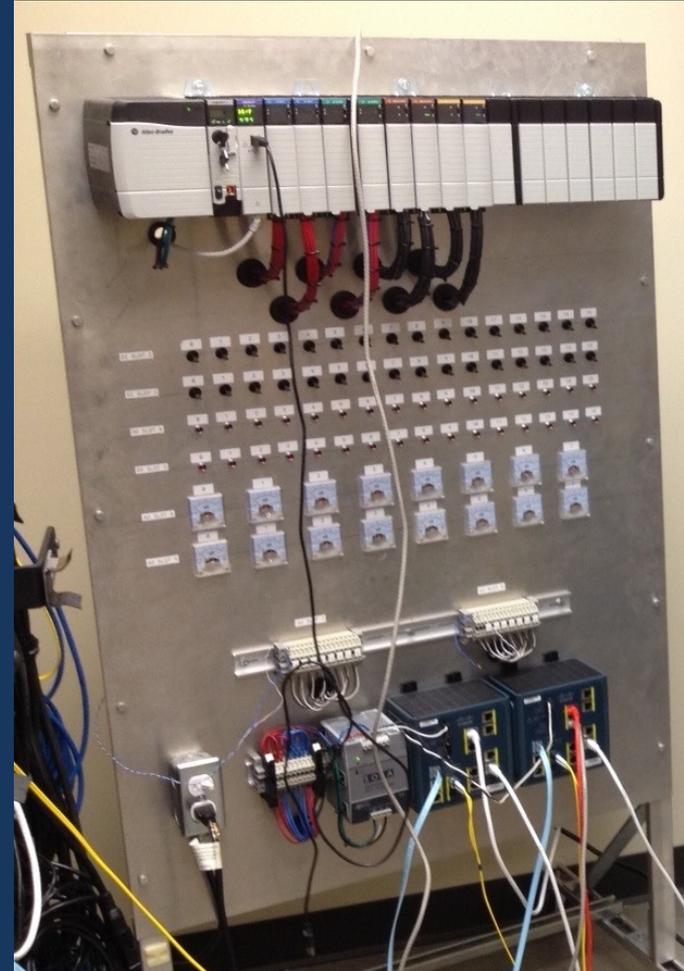
Development System Server Rack & PLCs

PLC Programming

- Control Strategies (90%)
- “Soft” I/O Configuration (67%)

Human-Machine Interface (HMI)

- Templates (100%)
- Graphic Screens (60%)
- I/O Database (85%)
- Alarm Database (85%)
- History Database (85%)
- Reporting (5%)



Programmable Logic Controller

SURFACE WATER TRANSMISSION SYSTEM CONSTRUCTION PROGRESS

QUESTIONS?

