

REV #1: 08/22/19 - ADDED UC POWER ACROSS PARCELS 28 & 29 AS SHOWN ON UO-6 & UO-6A

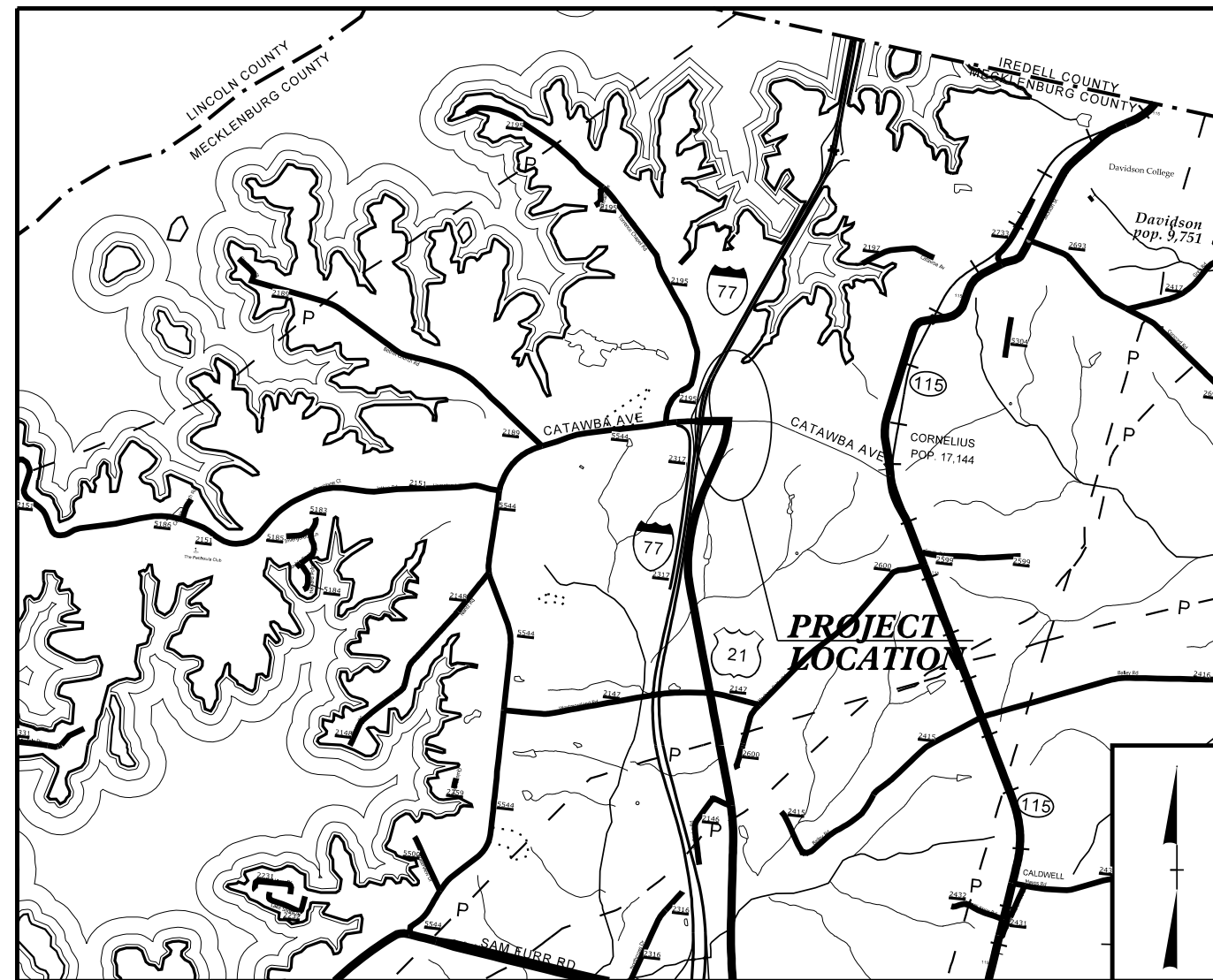
**TIP PROJECT: C-5621**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS  
MECKLENBURG COUNTY**

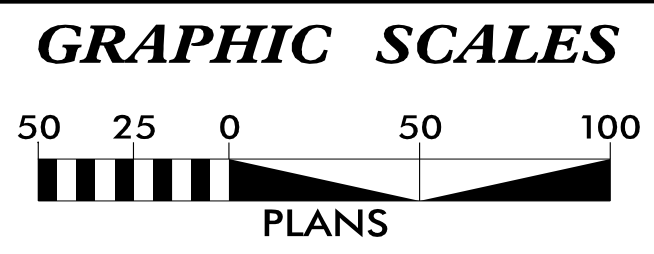
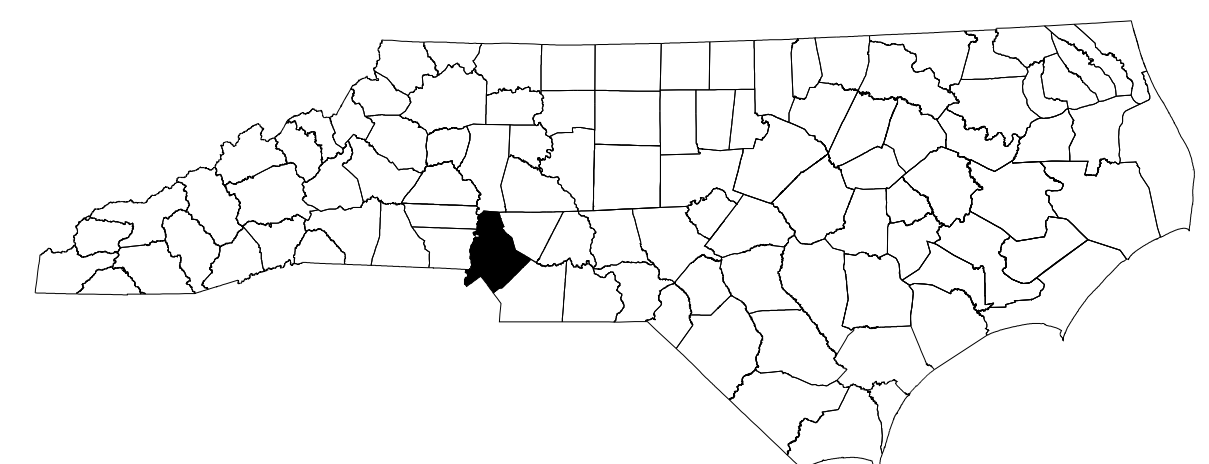
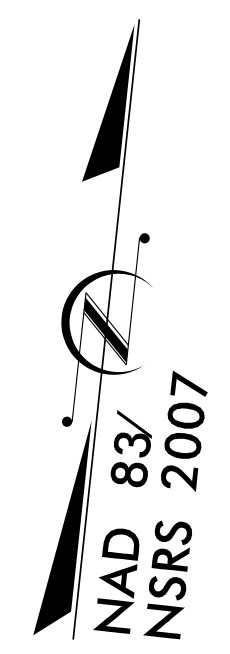
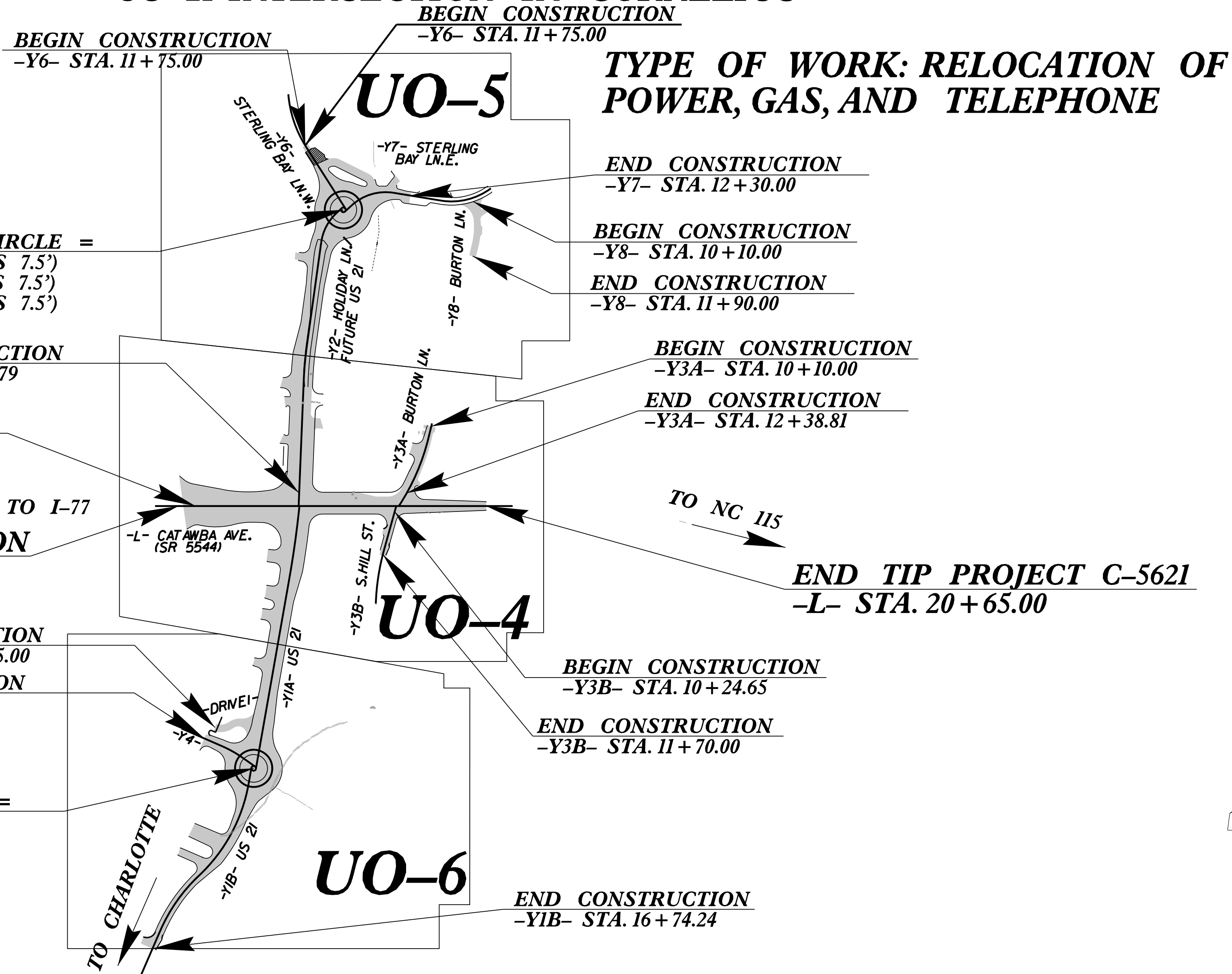
T.I.P. NO.	SHEET NO.
C-5621	UO-1

NOTE:  
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



**VICINITY MAP N.T.S**

**LOCATION: DUAL ROUNDABOUTS NORTH AND SOUTH OF  
SR 5544 (CATAWBA AVE.) AND  
US 21 INTERSECTION IN CORNELIUS**



**INDEX OF SHEETS**

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-2 THRU UO-3	UBO SYMBOLOGY SHEETS
UO-4 THRU UO-6	UBO PLAN SHEETS

- UTILITY OWNERS WITH CONFLICTS**
- (A) POWER - ELECTRICITIES OF NC
  - (B) GAS - DOMINION ENERGY
  - (C) TELEPHONE - AT&T
  - (D) FIBER - SPECTRUM (FORMALLY CHARTER)
  - (E) FIBER - SEGRA (FORMALLY SPIRIT)
  - (F) FIBER - TDS TELECOM (FORMALLY CONTINUUM)
  - (G) FIBER - VERIZON WIRELESS

**PROJECT LET: JUNE 2023**

PREPARED IN THE OFFICE OF:

**V&M**  
Vaughn & Melton  
Consulting Engineers  
LIC. NO. F-1088  
Charlotte,  
North Carolina  
704.357.0488

Nicholas V. Asaro, PLS UTILITY PROJECT MANAGER  
Shane R. Waidner PROJECT UTILITY COORDINATOR

**DIVISION OF HIGHWAYS  
DIVISION 10**

DIV ADDRESS  
716 W MAIN ST  
ALBEMARLE, NC 28001

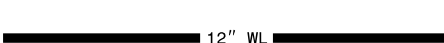























Randy Bowers DIVISION PROJECT MANAGER  
Lynn Basinger DIVISION UTILITY ENGINEER

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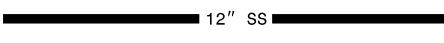


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# UTILITIES PLAN SHEET SYMBOLS





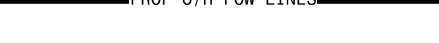



## PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

## PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

## PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

## EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

\*For Existing Utilities  
Utility Line Drawn from Record (Type as Shown)  W  
Designated Utility Line (Type as Shown)  W

# STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

## CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	--- WLB ---
Proposed Wetland Boundary	--- WLB ---
Existing Endangered Animal Boundary	--- EAB ---
Existing Endangered Plant Boundary	--- EPB ---
Existing Historic Property Boundary	--- HPB ---
Known Contamination Area: Soil	☠-s-☠
Potential Contamination Area: Soil	☠-s-☠
Known Contamination Area: Water	☠-w-☠
Potential Contamination Area: Water	☠-w-☠
Contaminated Site: Known or Potential	☠?

### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

### HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	--- JS ---
Buffer Zone 1	--- BZ 1 ---
Buffer Zone 2	--- BZ 2 ---
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	--- WLB ---
Proposed Lateral, Tail, Head Ditch	--- FLOW ---
False Sump	▽

### RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

### RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	◆
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	▲
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	-----
New Right of Way Line with Pin and Cap	-----
New Right of Way Line with Concrete or Granite R/W Marker	-----
New Control of Access Line with Concrete CA Marker	-----
Existing Control of Access	-----
New Control of Access	-----
Existing Easement Line	-----
New Temporary Construction Easement	-----
New Temporary Drainage Easement	-----
New Permanent Drainage Easement	-----
New Permanent Drainage / Utility Easement	-----
New Permanent Utility Easement	-----
New Temporary Utility Easement	-----
New Aerial Utility Easement	-----

### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	--- C ---
Proposed Slope Stakes Fill	--- F ---
Proposed Curb Ramp	--- CR ---
Existing Metal Guardrail	--- T ---
Proposed Guardrail	--- T ---
Existing Cable Guiderail	--- T ---
Proposed Cable Guiderail	--- T ---
Equality Symbol	⊕
Pavement Removal	⊗

### VEGETATION:

Single Tree	☼
Single Shrub	☼

*Note: Not to Scale*      \*S.U.E. = *Subsurface Utility Engineering*

Hedge	-----
Woods Line	-----
Orchard	☼ ☼ ☼ ☼
Vineyard	□ Vineyard

### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC. WW
MINOR:	
Head and End Wall	CONC. HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	--- S ---

### UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	--- P ---
U/G Power Line LOS C (S.U.E.*)	--- P ---
U/G Power Line LOS D (S.U.E.*)	--- P ---

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	○
U/G Telephone Cable LOS B (S.U.E.*)	--- T ---
U/G Telephone Cable LOS C (S.U.E.*)	--- T ---
U/G Telephone Cable LOS D (S.U.E.*)	--- T ---
U/G Telephone Conduit LOS B (S.U.E.*)	--- TC ---
U/G Telephone Conduit LOS C (S.U.E.*)	--- TC ---
U/G Telephone Conduit LOS D (S.U.E.*)	--- TC ---
U/G Fiber Optics Cable LOS B (S.U.E.*)	--- T FO ---
U/G Fiber Optics Cable LOS C (S.U.E.*)	--- T FO ---
U/G Fiber Optics Cable LOS D (S.U.E.*)	--- T FO ---

### WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	--- W ---
U/G Water Line LOS C (S.U.E.*)	--- W ---
U/G Water Line LOS D (S.U.E.*)	--- W ---
Above Ground Water Line	--- A/G Water ---

### TV:

TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	○
U/G TV Cable LOS B (S.U.E.*)	--- TV ---
U/G TV Cable LOS C (S.U.E.*)	--- TV ---
U/G TV Cable LOS D (S.U.E.*)	--- TV ---
U/G Fiber Optic Cable LOS B (S.U.E.*)	--- TV FO ---
U/G Fiber Optic Cable LOS C (S.U.E.*)	--- TV FO ---
U/G Fiber Optic Cable LOS D (S.U.E.*)	--- TV FO ---

### GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	--- G ---
U/G Gas Line LOS C (S.U.E.*)	--- G ---
U/G Gas Line LOS D (S.U.E.*)	--- G ---
Above Ground Gas Line	--- A/G Gas ---

### SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	--- SS ---
Above Ground Sanitary Sewer	--- A/G Sanitary Sewer ---
SS Forced Main Line LOS B (S.U.E.*)	--- FSS ---
SS Forced Main Line LOS C (S.U.E.*)	--- FSS ---
SS Forced Main Line LOS D (S.U.E.*)	--- FSS ---

### MISCELLANEOUS:

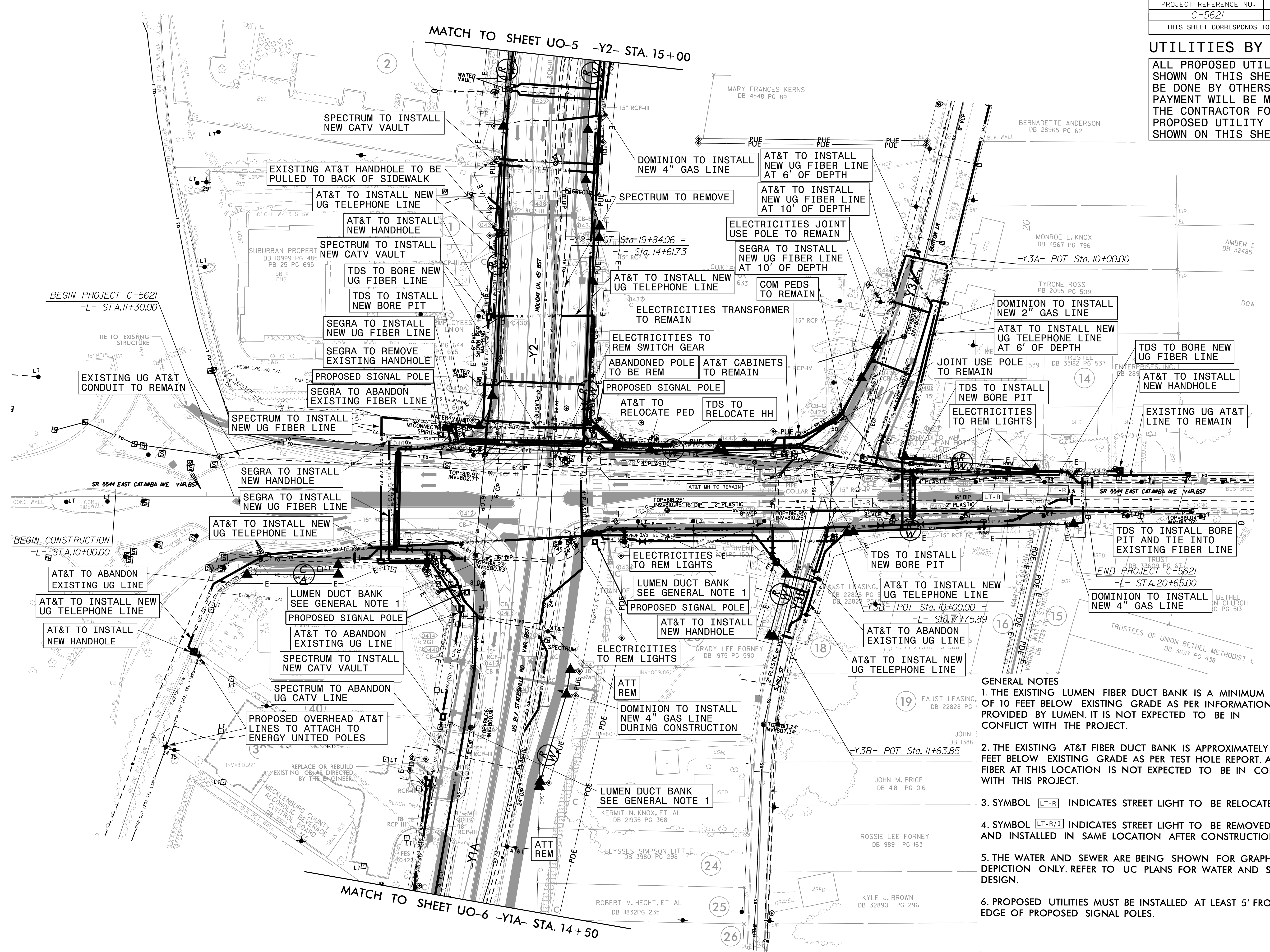
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line LOS B (S.U.E.*)	--- 2UTL ---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊗
U/G Test Hole LOS A (S.U.E.*)	⊗
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

V:\ASHEVILLE SURVEYS\2016\31610-01 C-5621 UTILITIES\290-010-C5621-UBO-PP-UO-3

### UTILITIES BY OTHERS

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NAD 83 NSRS 2007



BEGIN PROJECT C-5621  
-L- STA.11+30.00

BEGIN CONSTRUCTION  
-L- STA.10+00.00

END PROJECT C-5621  
-L- STA.20+65.00

MATCH TO SHEET UO-5 -Y2- STA. 15+00

MATCH TO SHEET UO-6 -Y1A- STA. 14+50

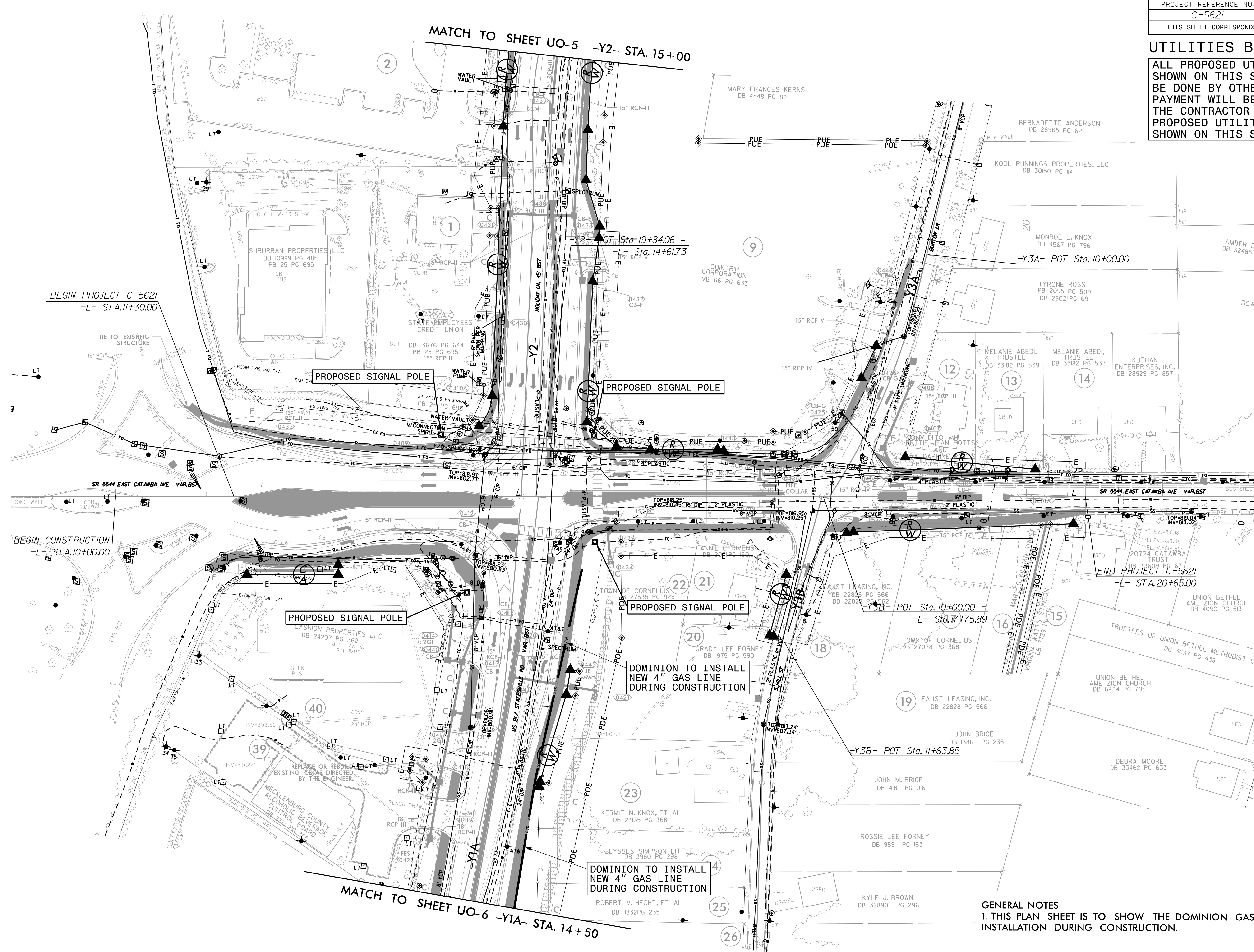
- GENERAL NOTES**
1. THE EXISTING LUMEN FIBER DUCT BANK IS A MINIMUM OF 10 FEET BELOW EXISTING GRADE AS PER INFORMATION PROVIDED BY LUMEN. IT IS NOT EXPECTED TO BE IN CONFLICT WITH THE PROJECT.
  2. THE EXISTING AT&T FIBER DUCT BANK IS APPROXIMATELY 4.5 FEET BELOW EXISTING GRADE AS PER TEST HOLE REPORT. AT&T FIBER AT THIS LOCATION IS NOT EXPECTED TO BE IN CONFLICT WITH THIS PROJECT.
  3. SYMBOL **[LT-R]** INDICATES STREET LIGHT TO BE RELOCATED
  4. SYMBOL **[LT-R/I]** INDICATES STREET LIGHT TO BE REMOVED AND INSTALLED IN SAME LOCATION AFTER CONSTRUCTION
  5. THE WATER AND SEWER ARE BEING SHOWN FOR GRAPHICAL DEPICTION ONLY. REFER TO UC PLANS FOR WATER AND SEWER DESIGN.
  6. PROPOSED UTILITIES MUST BE INSTALLED AT LEAST 5' FROM THE EDGE OF PROPOSED SIGNAL POLES.

SURVEYS: 2016\31610-01\_C-5621\UTILITIES\250\_015\_C5621\_LUBO\_FP\_U0-4

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NAD 83 NSRS 2007



BEGIN PROJECT C-5621  
-L- STA. 11+30.00

BEGIN CONSTRUCTION  
-L- STA. 10+00.00

END PROJECT C-5621  
-L- STA. 20+65.00

MATCH TO SHEET UO-6 -Y1A- STA. 14+50

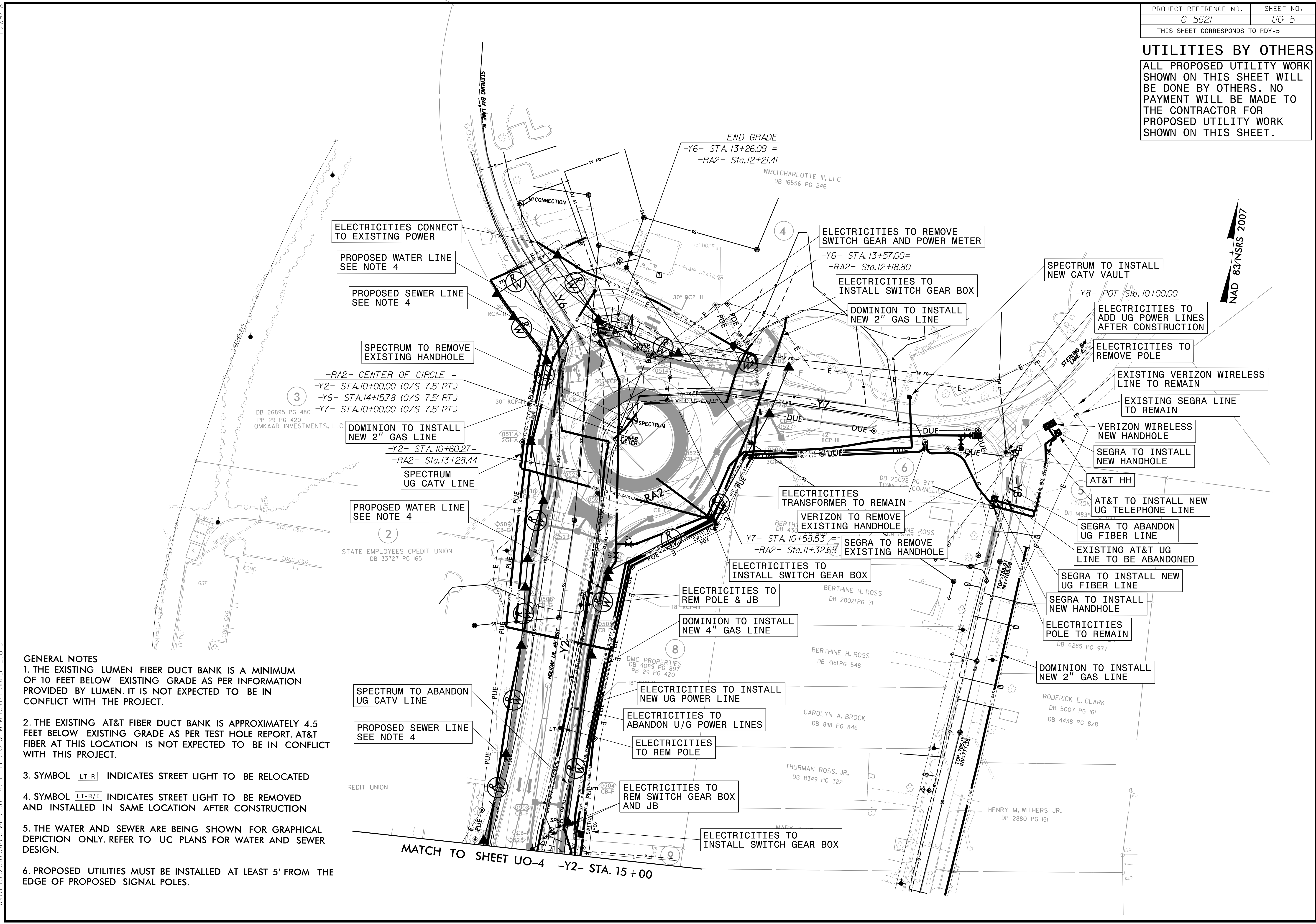
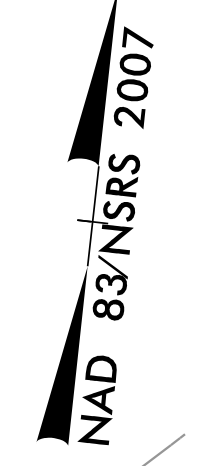
MATCH TO SHEET UO-5 -Y2- STA. 15+00

GENERAL NOTES  
1. THIS PLAN SHEET IS TO SHOW THE DOMINION GAS MAIN INSTALLATION DURING CONSTRUCTION.

SURVEYS: 2016\31610-01\_C-5621\UTILITIES\250\_015\_C5621\_LUBO\_FP\_UO-4

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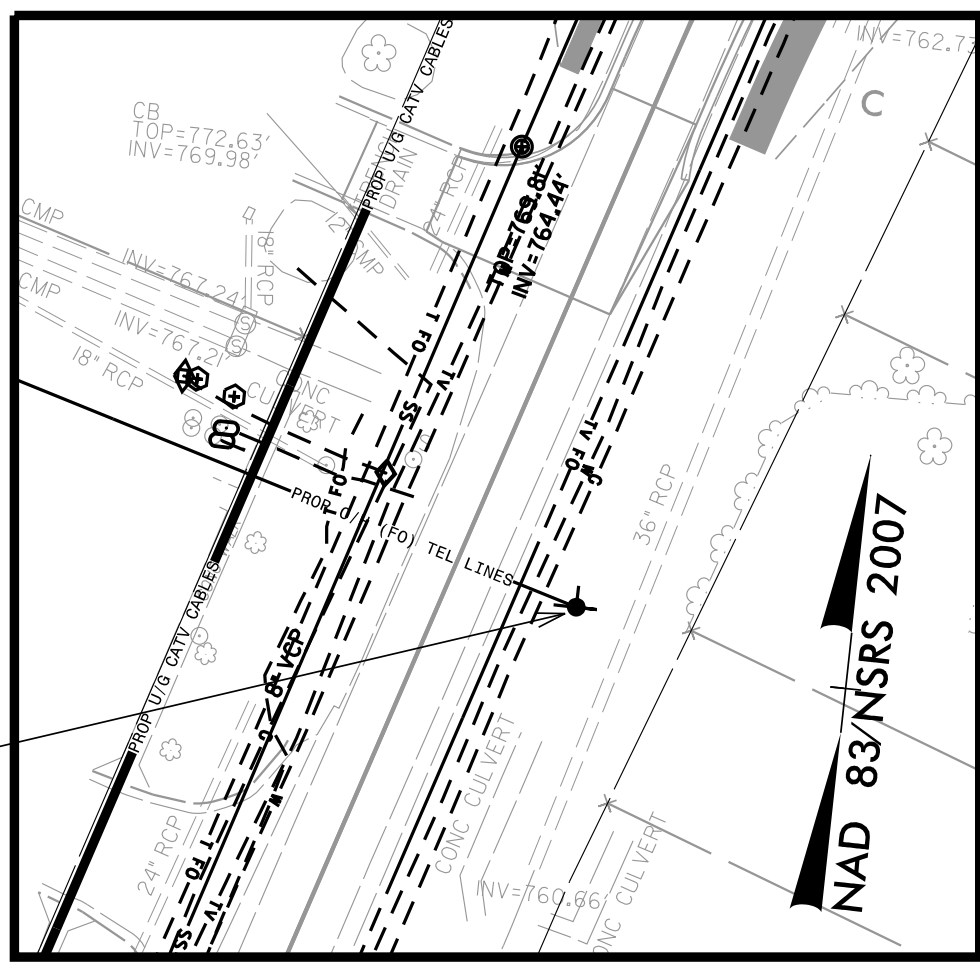
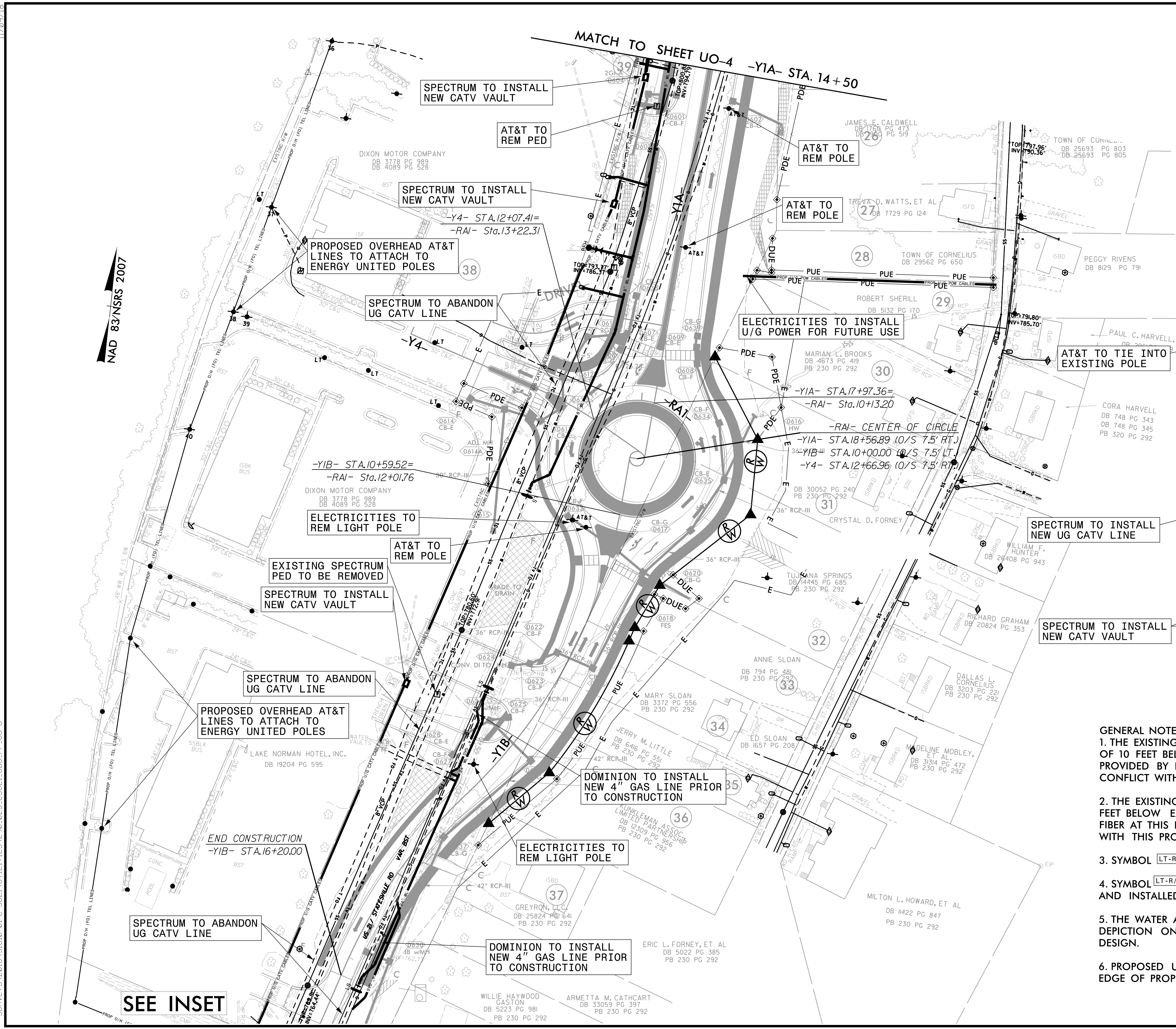
#### GENERAL NOTES

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2. THE EXISTING AT&T FIBER DUCT BANK IS APPROXIMATELY 4.5 FEET BELOW EXISTING GRADE AS PER TEST HOLE REPORT. AT&T FIBER AT THIS LOCATION IS NOT EXPECTED TO BE IN CONFLICT WITH THIS PROJECT.
3. SYMBOL **LT-R** INDICATES STREET LIGHT TO BE RELOCATED
4. SYMBOL **LT-R/I** INDICATES STREET LIGHT TO BE REMOVED AND INSTALLED IN SAME LOCATION AFTER CONSTRUCTION
5. THE WATER AND SEWER ARE BEING SHOWN FOR GRAPHICAL DEPICTION ONLY. REFER TO UC PLANS FOR WATER AND SEWER DESIGN.
6. PROPOSED UTILITIES MUST BE INSTALLED AT LEAST 5' FROM THE EDGE OF PROPOSED SIGNAL POLES.

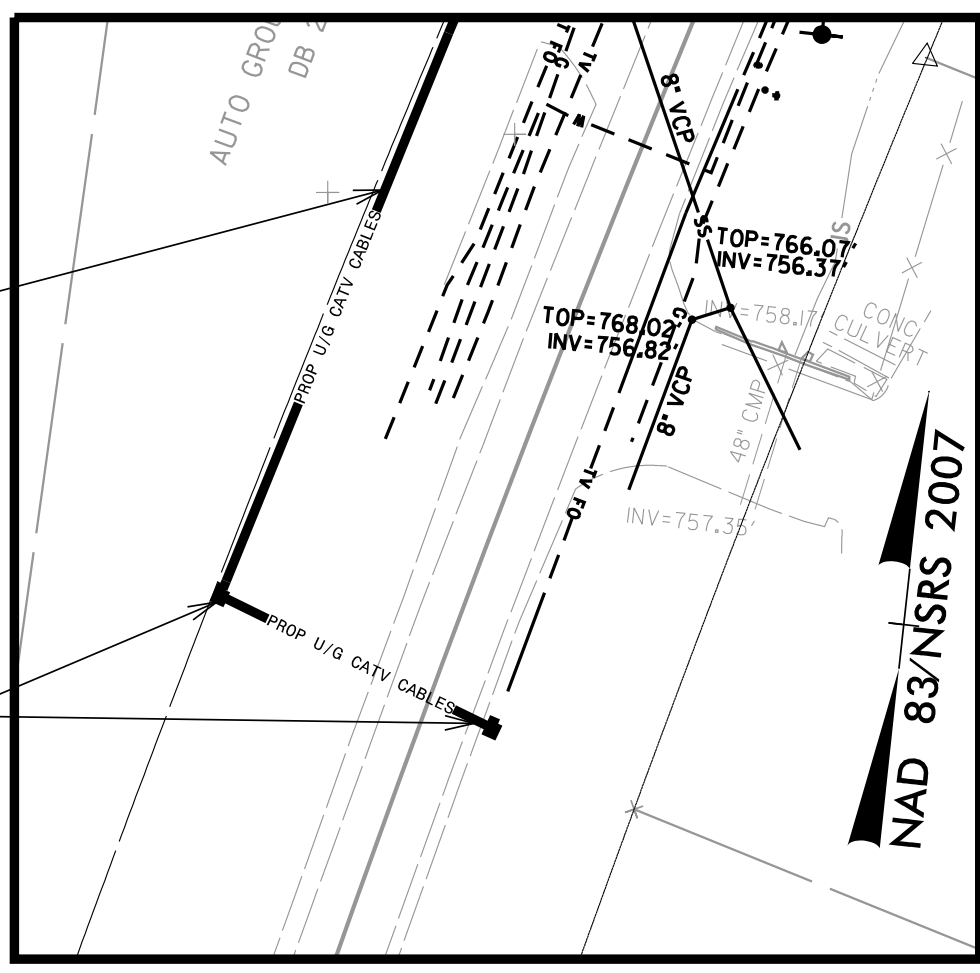
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INSET



INSET

- GENERAL NOTES**
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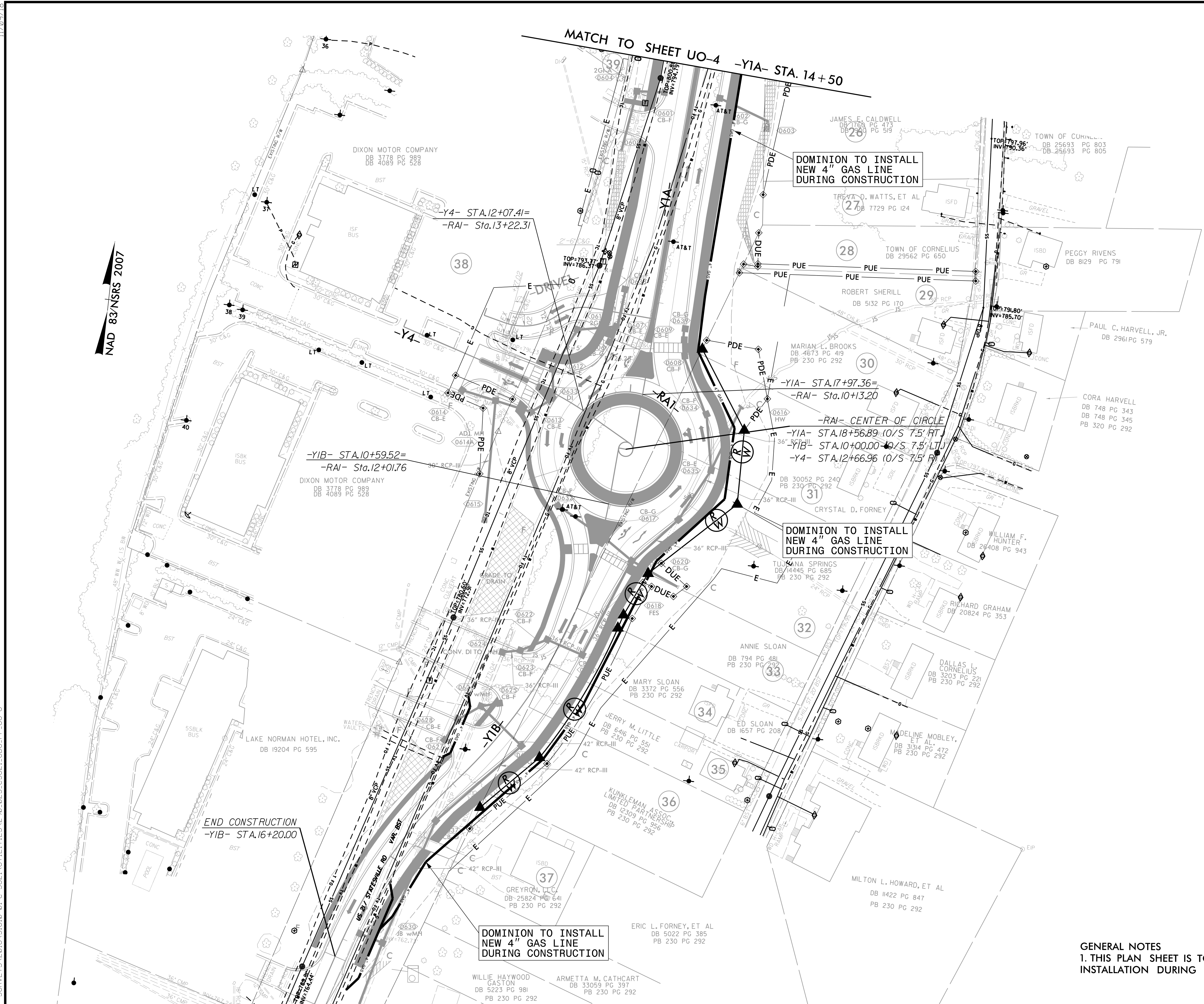
SEE INSET

SURVEYS\2016\31610-01 C-5621\UTILITIES\2-90-025-C5621-UBD-PP-U0-6

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**GENERAL NOTES**  
 1. THIS PLAN SHEET IS TO SHOW THE DOMINIO GAS MAIN INSTALLATION DURING CONSTRUCTION.