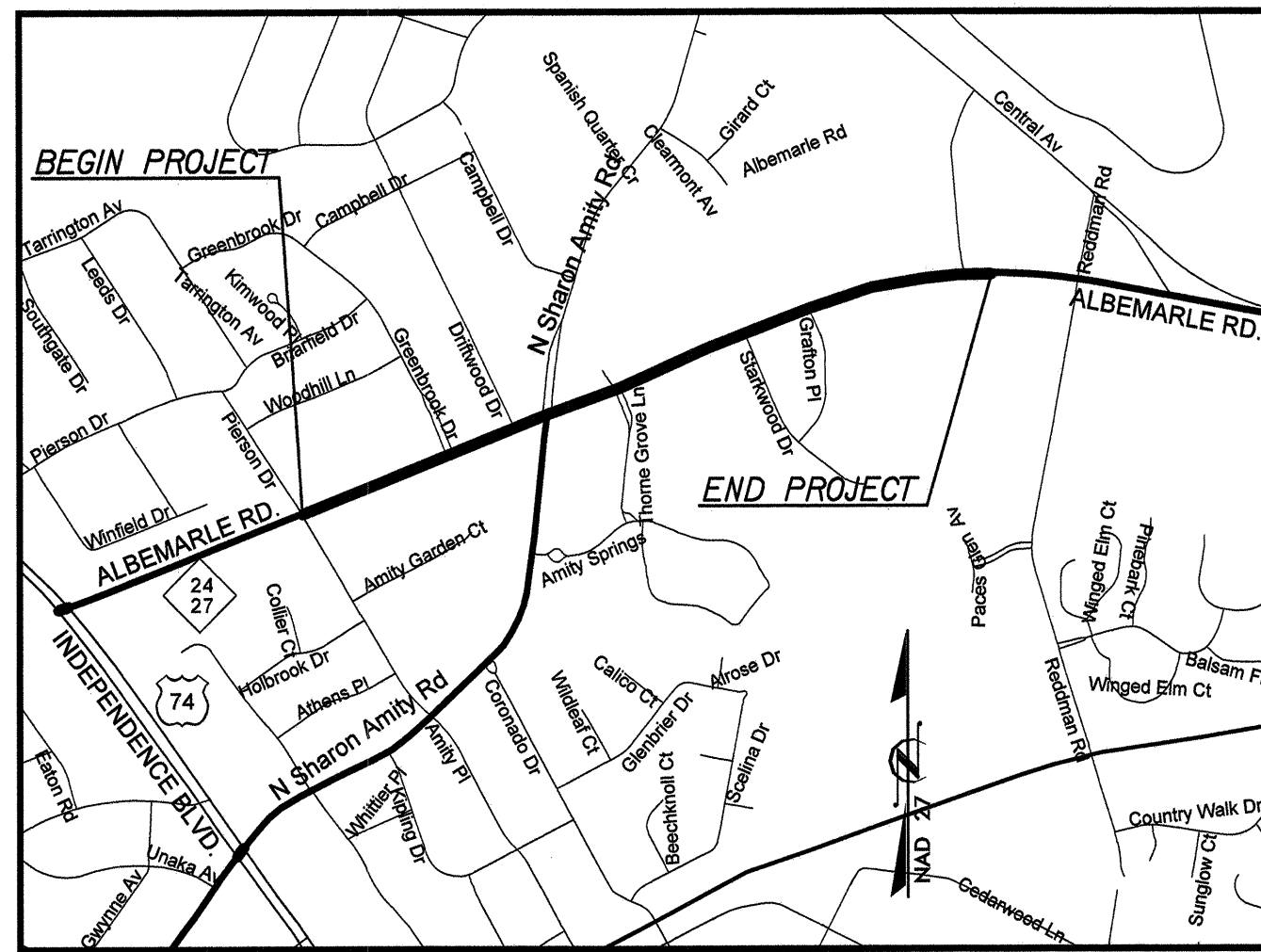


STATE	T.I.P. NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3603	UC-1	

TIP: U-3603



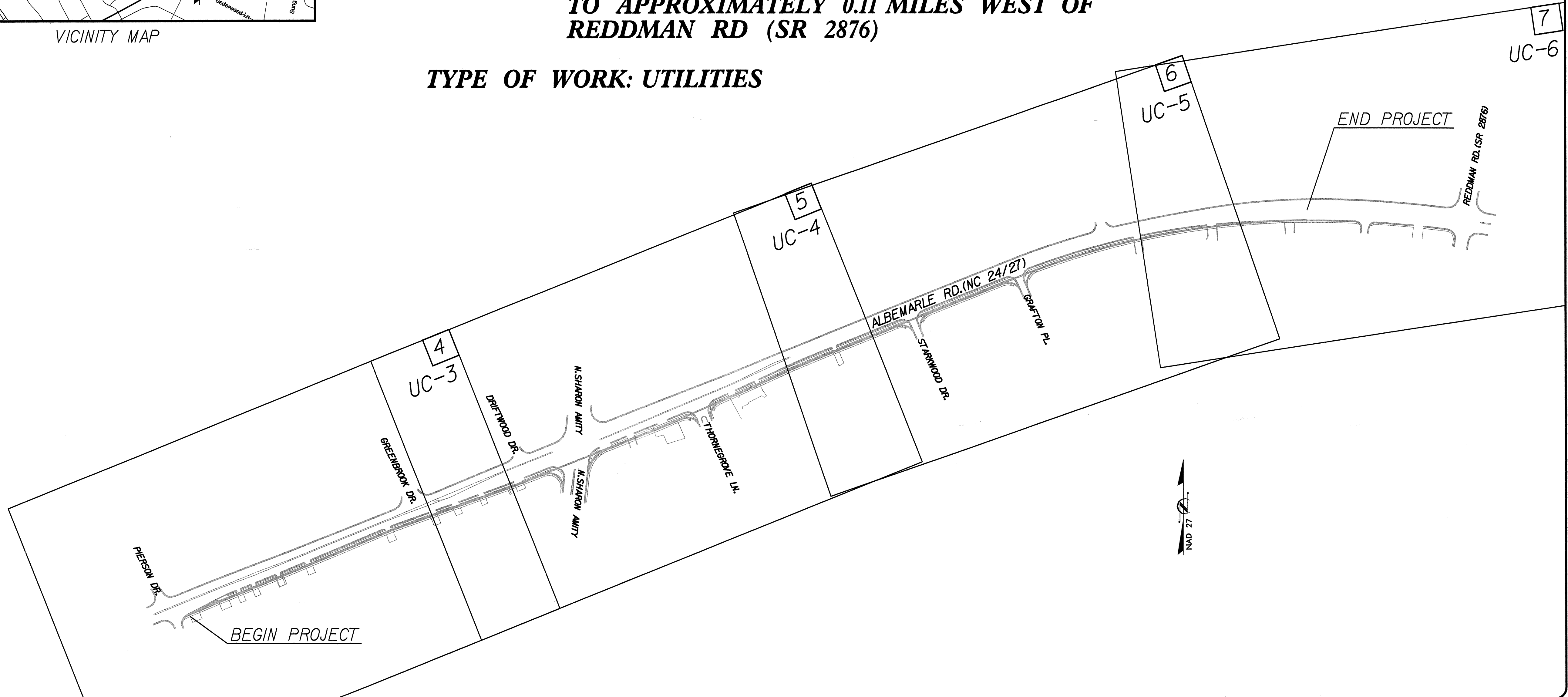
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS
MECKLENBURG COUNTY**

**LOCATION: NC 24-27 (ALBEMARLE RD.) FROM PIERSON DR
TO APPROXIMATELY 0.11 MILES WEST OF
REDDMAN RD (SR 2876)**

TYPE OF WORK: UTILITIES



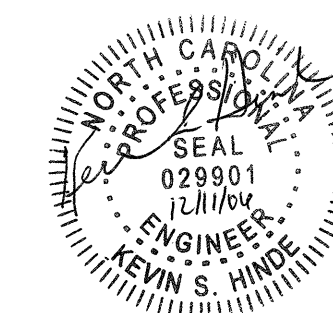
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	SYMBOLGY SHEET
UC-3 THRU UC-6	UTILITY CONSTRUCTION PLAN SHEETS
UC-7	DETAILS SHEET

WATER AND SEWER OWNERS ON PROJECT

- (1) WATER - CMU
- (2) SANITARY SEWER - CMU

SEAL:

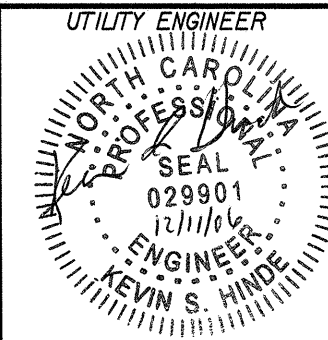


KEVIN S. HINDE, P.E.
PROJECT ENGINEER

Prepared in the office of:

Hinde Engineering, Inc.

9303 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-814-4407 (office)
704-814-9042 (fax)













PROJECT REFERENCE NO. U-3603	SHEET NO. UC-2
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CONST. REV.	
R/W REV.	

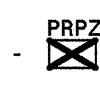











UTILITY CONSTRUCTION

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS





UTILITIES PLAN SHEET SYMBOLS







Water

Proposed Back Flow Preventor	
Relocate Back Flow Preventor	
Existing Water Valve	
Proposed Valve	
Proposed Tapping Valve	
Existing Water Meter	
Proposed Water Meter	
Proposed Water Meter/Vault	
Relocate Water Meter	
Remove Water Meter	REM WM
Existing Hydrant	
Prop Hydrant	
Relocate Hydrant	
Remove Hydrant	REM FH

Proposed RPZ Back Flow Preventor	
Relocate RPZ Back Flow Preventor	
Water Cross	
Water Plug	
Water Reducer	
Water Tee	
Water Pump Station	
Water Thrust Block	
Blow Off Valve	
Air Release Valve	
Water Line Stop	
Water Line Stop w Bypass	

Sewer

Existing Manhole	
Proposed UT Manhole	
Remove UT Manhole	REM UT MH
Abandon Utility Manhole	ABAND MH
Sewer Line Stop	
Sewer Line Stop w Bypass	

Sewer Cross	
Sewer Plug	
Sewer Reducer	
Sewer Tee	
Sewer Pump Station	
Sewer Thrust Block	

NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

NC 24-27 (ALBEMARLE RD.) FROM PIERSON DR
TO APPROXIMATELY 0.11 MILES WEST OF
REDDMAN RD. (SR 2876)

Designed By: CLS	Checked By: KSH	Date: 12-11-06	Sheet: UC-2	Of: UC-7
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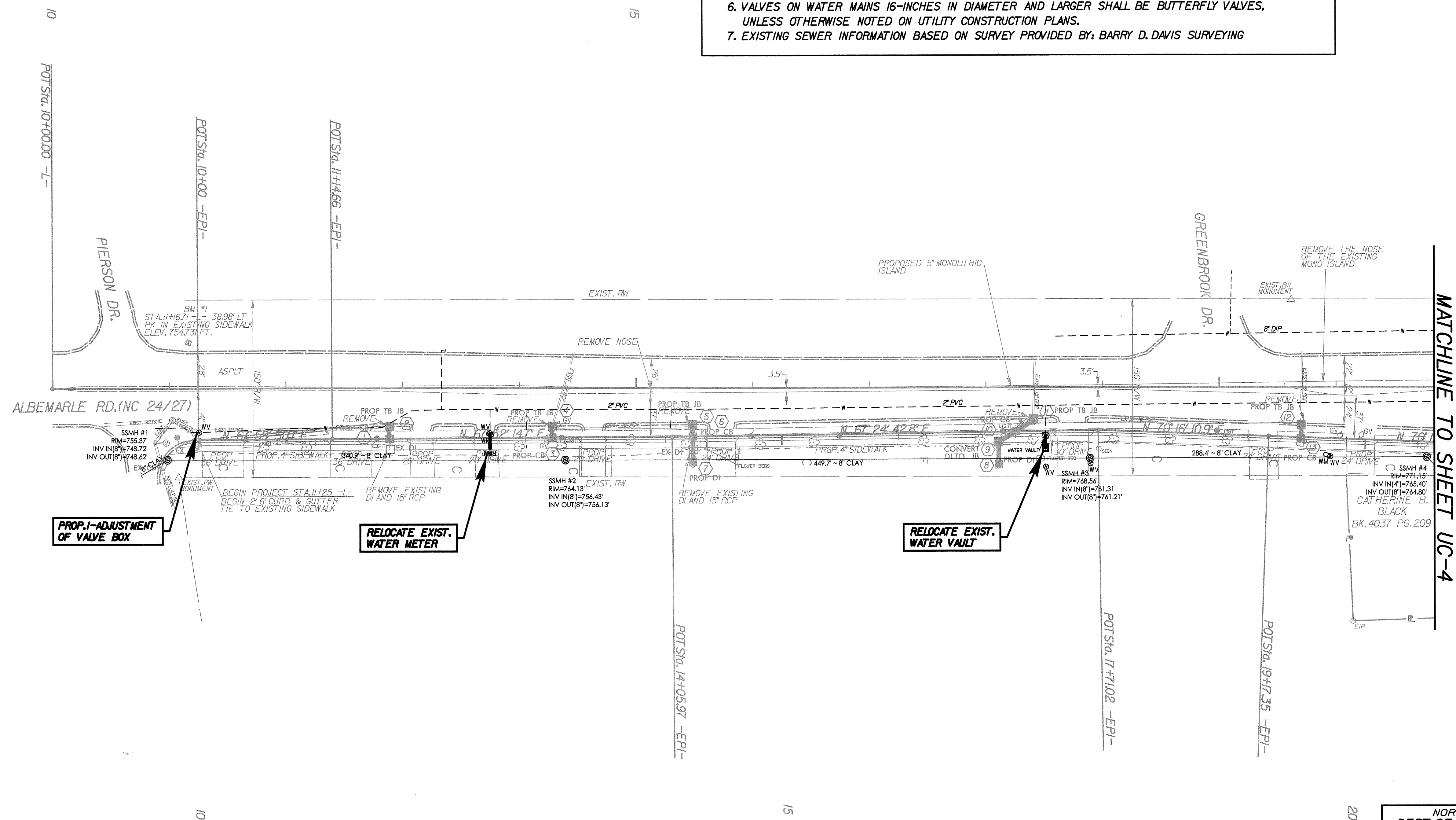
Hinde Engineering, Inc.

9363 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-514-4407 (office)
704-514-9042 (fax)

PROJECT REFERENCE NO. U-3603	SHEET NO. UC-3
SCALE: 0 50 100	UTILITY ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 028901 12/11/06 ENGINEER KEVIN S. HINDS
CONST. REV.	
R/W REV.	

UTILITY CONSTRUCTION

- GENERAL NOTES:**
1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JULY 2006, THE STANDARDS DETAILS AS SHOWN ON PLANS, AND THE PROJECT SPECIAL PROVISIONS FOR UTILITY CONSTRUCTION.
 2. ALL WATER AND SEWER LINES ON THIS PROJECT ARE OWNED BY CHARLOTTE-MECKLENBURG UTILITIES.
 3. ALL 12-INCH AND SMALLER DIAMETER PIPE SHALL BE DUCTILE IRON PRESSURE CLASS 350, UNLESS OTHERWISE NOTED ON UTILITY CONSTRUCTION PLANS.
 4. ALL 16-INCH AND LARGER DIAMETER PIPE SHALL BE DUCTILE IRON PRESSURE CLASS 250, UNLESS OTHERWISE NOTED ON UTILITY CONSTRUCTION PLANS.
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 6. VALVES ON WATER MAINS 16-INCHES IN DIAMETER AND LARGER SHALL BE BUTTERFLY VALVES, UNLESS OTHERWISE NOTED ON UTILITY CONSTRUCTION PLANS.
 7. EXISTING SEWER INFORMATION BASED ON SURVEY PROVIDED BY: BARRY D. DAVIS SURVEYING



NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

NC 24-27 (ALBEMARLE RD.) FROM PIERSON DR
TO APPROXIMATELY 0.11 MILES WEST OF
REDDMAN RD. (SR 2876)

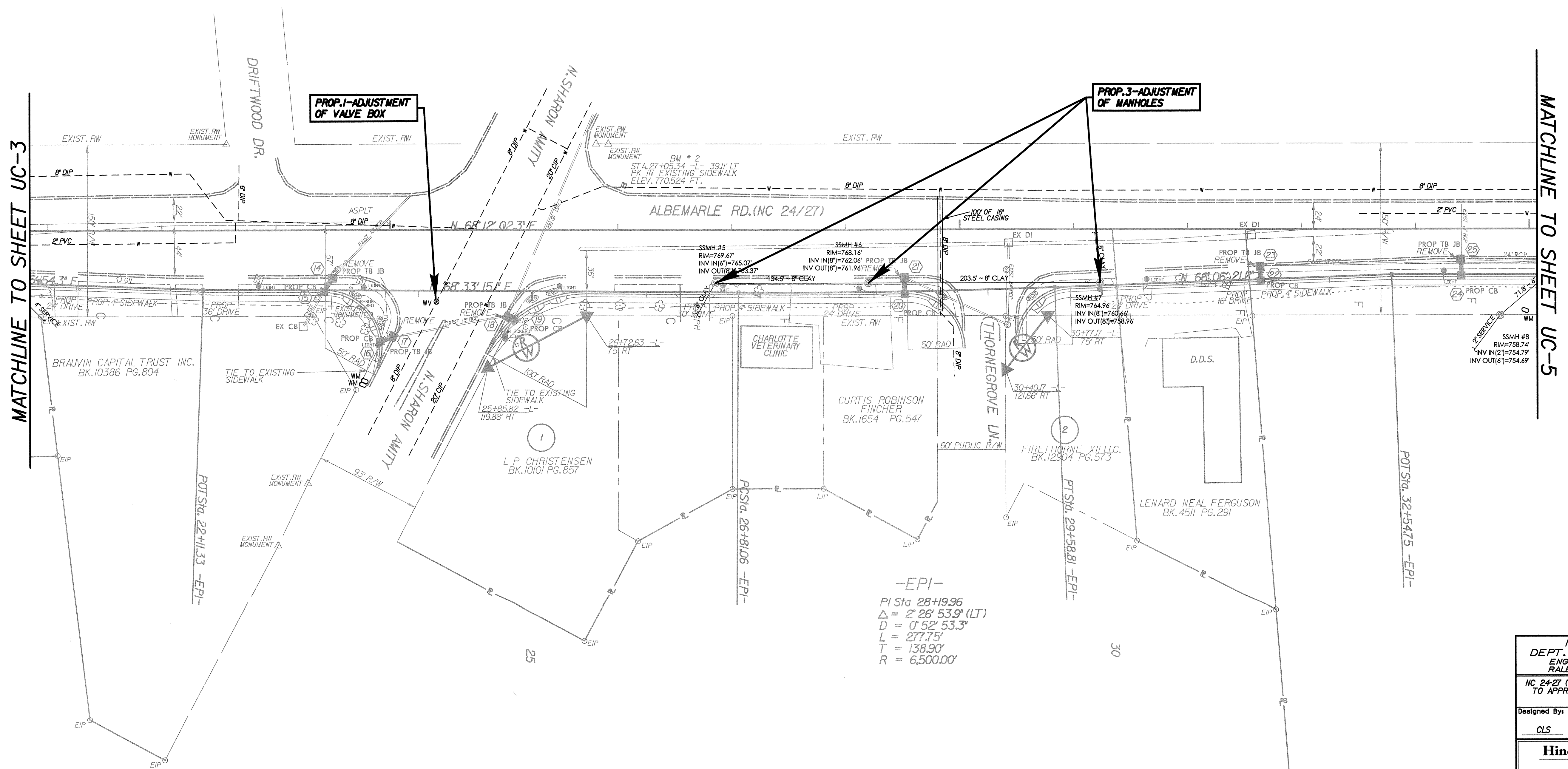
Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	12-11-06	UC-3	UC-7

Hinde Engineering, Inc.
9363 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-814-4407 (office)
704-814-9042 (fax)

PROJECT REFERENCE NO.	SHEET NO.
U-3603	UC-4
SCALE:	UTILITY ENGINEER
0 50 100	
CONST. REV.	
R/W REV.	

UTILITY CONSTRUCTION

- GENERAL NOTES:**
1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JULY 2006, THE STANDARDS DETAILS AS SHOWN ON PLANS, AND THE PROJECT SPECIAL PROVISIONS FOR UTILITY CONSTRUCTION.
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 7. EXISTING SEWER INFORMATION BASED ON SURVEY PROVIDED BY: BARRY D. DAVIS SURVEYING



NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

NC 24-27 (ALBEMARLE RD.) FROM PIERSON DR
TO APPROXIMATELY 0.11 MILES WEST OF
REDDMAN RD. (SR 2876)

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	12-11-06	UC-4	UC-7

Hinde Engineering, Inc.

9003 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-814-4407 (office)
704-814-9042 (fax)

PROJECT REFERENCE NO. U-3603	SHEET NO. UC-5
SCALE: 0 50 100	UTILITY ENGINEER KEVIN S. HINDE PROFESSIONAL SEAL 029901 12/11/06
CONST. REV.	
R/W REV.	

UTILITY CONSTRUCTION

- GENERAL NOTES:**
1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES' DATED JULY 2006, THE STANDARDS DETAILS AS SHOWN ON PLANS, AND THE PROJECT SPECIAL PROVISIONS FOR UTILITY CONSTRUCTION.
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 7. EXISTING SEWER INFORMATION BASED ON SURVEY PROVIDED BY: BARRY D. DAVIS SURVEYING

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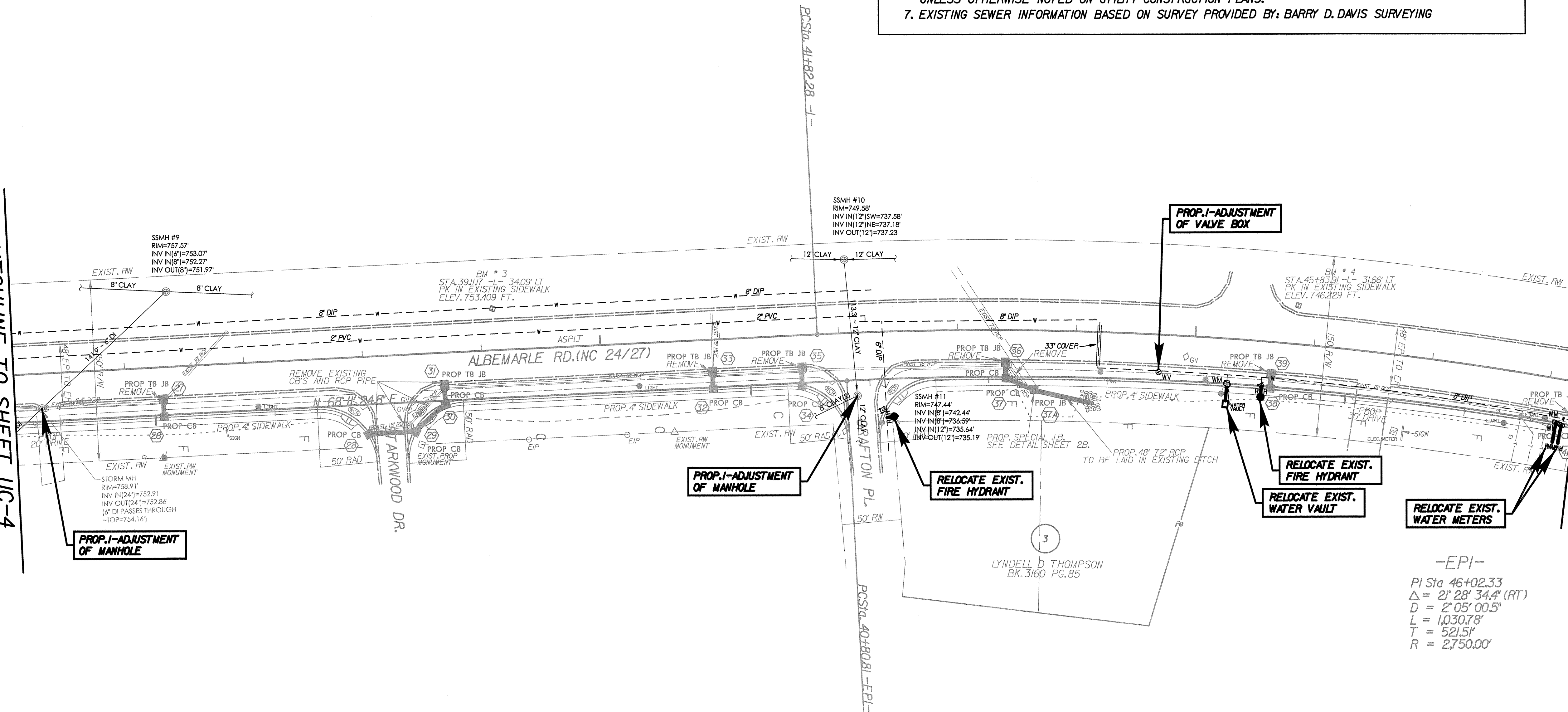
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MATCHLINE TO SHEET UC-4

MATCHLINE TO SHEET UC-6



PROP. I-ADJUSTMENT OF MANHOLE

PROP. I-ADJUSTMENT OF MANHOLE

RELOCATE EXIST. FIRE HYDRANT

PROP. I-ADJUSTMENT OF VALVE BOX

RELOCATE EXIST. FIRE HYDRANT

RELOCATE EXIST. WATER VAULT

RELOCATE EXIST. WATER METERS

-EPI-
PI Sta 46+02.33
Δ = 2' 28' 34.4" (RT)
D = 2' 05' 00.5"
L = 1,030.78'
T = 521.51'
R = 2,750.00'

NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

NC 24/27 (ALBEMARLE RD.) FROM PIERSON DR TO APPROXIMATELY 0.11 MILES WEST OF REDDMAN RD. (SR 2876)

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	12-11-06	UC-5	UC-7

Hinde Engineering, Inc.
9363 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-814-4407 (office)
704-814-9942 (fax)

PROJECT REFERENCE NO. U-3603	SHEET NO. UC-6
SCALE: 0 50 100	
CONST. REV.	
R/W REV.	

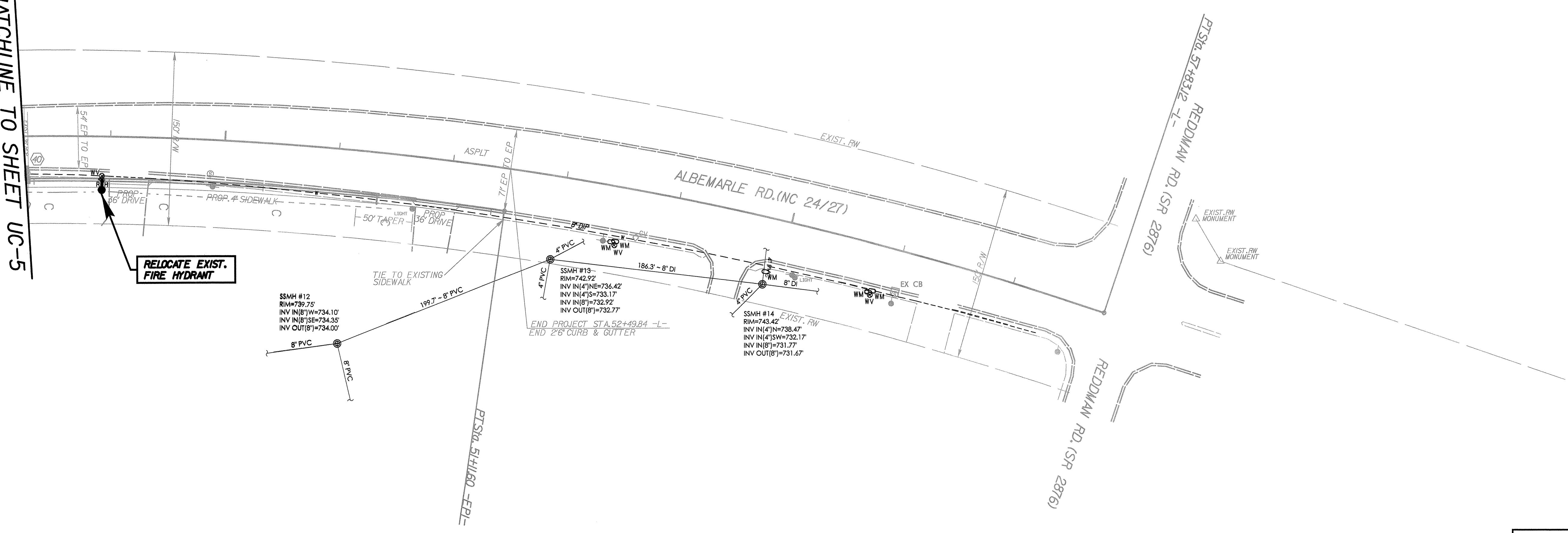
UTILITY CONSTRUCTION

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7. EXISTING SEWER INFORMATION BASED ON SURVEY PROVIDED BY: BARRY D. DAVIS SURVEYING

-L-
 PI Sta 50+04.20
 $\Delta = 32^{\circ} 01' 00.0''$ (RT)
 $D = 2' 00' 00.0''$
 $L = 1,600.83'$
 $T = 821.92'$
 $R = 2,864.79'$

MATCHLINE TO SHEET UC-5

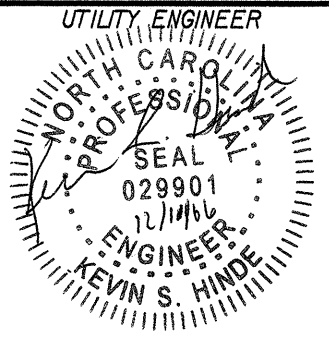


NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 ENGINEERING DIVISION
 RALEIGH, NORTH CAROLINA

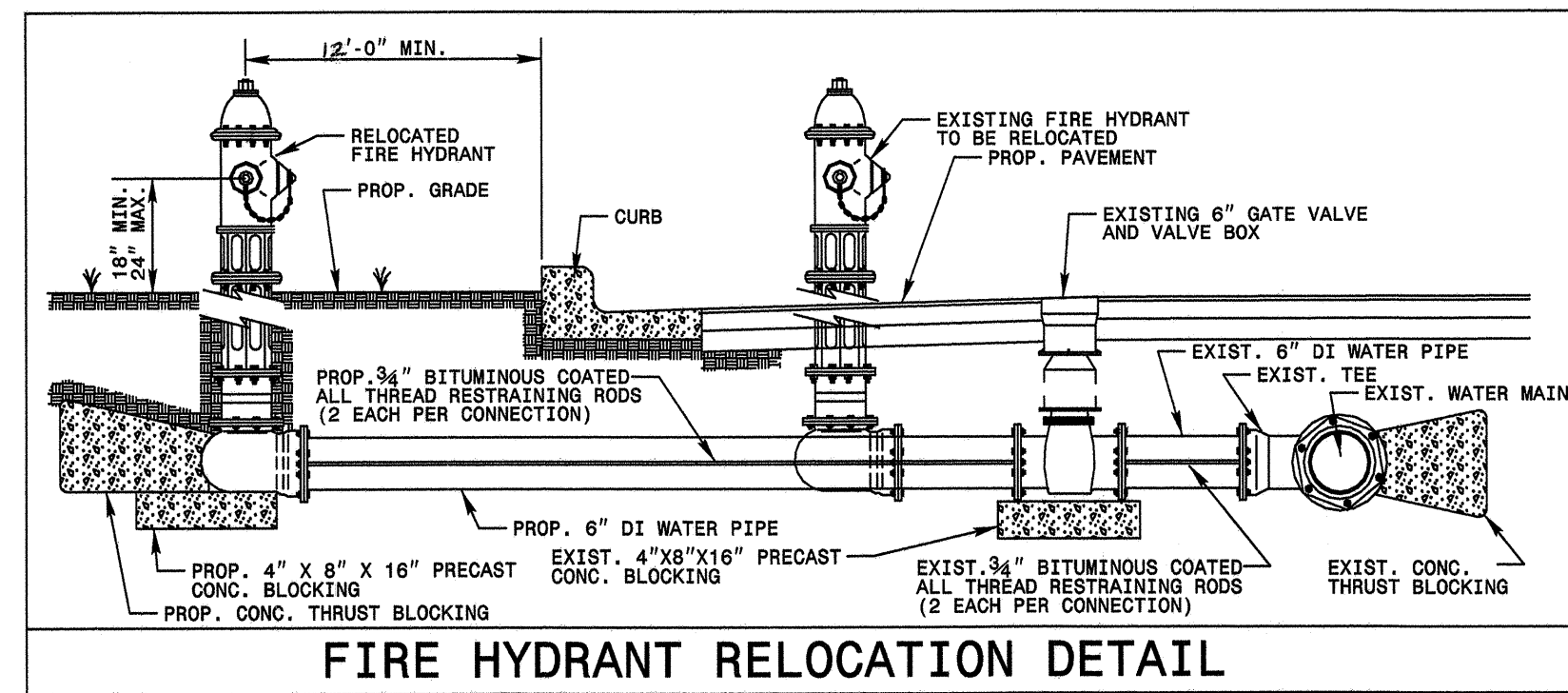
NC 24-27 (ALBEMARLE RD) FROM PIERSON DR TO APPROXIMATELY 0.11 MILES WEST OF REDDMAN RD. (SR 2876)

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	12-11-06	UC-6	UC-7

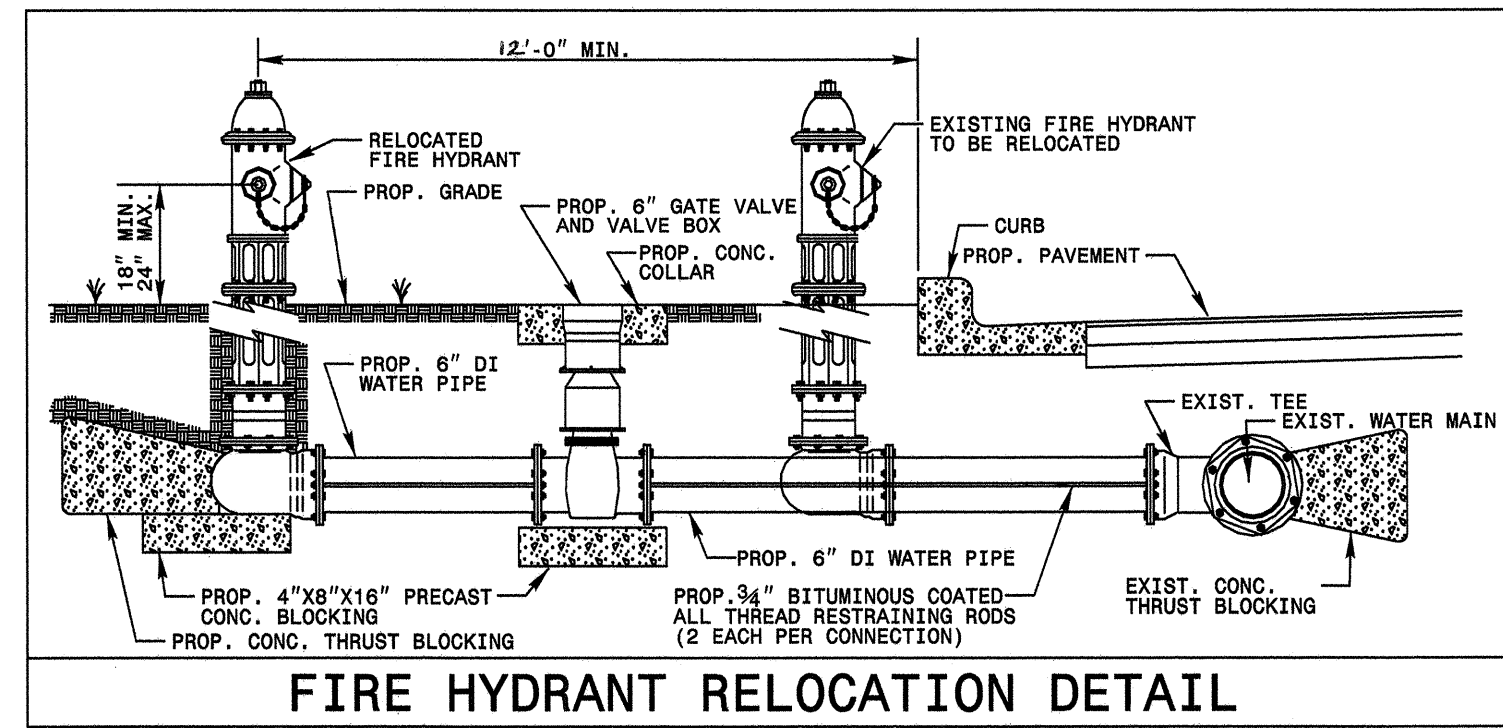
Hinde Engineering, Inc.
 9303 MONROE ROAD, SUITE E
 CHARLOTTE, NC 28270
 704-814-4407 (office)
 704-814-9042 (fax)

PROJECT REFERENCE NO.	SHEET NO.
U-3603	UC-7
SCALE:	
NOT TO SCALE	
CONST. REV.	
R/W REV.	

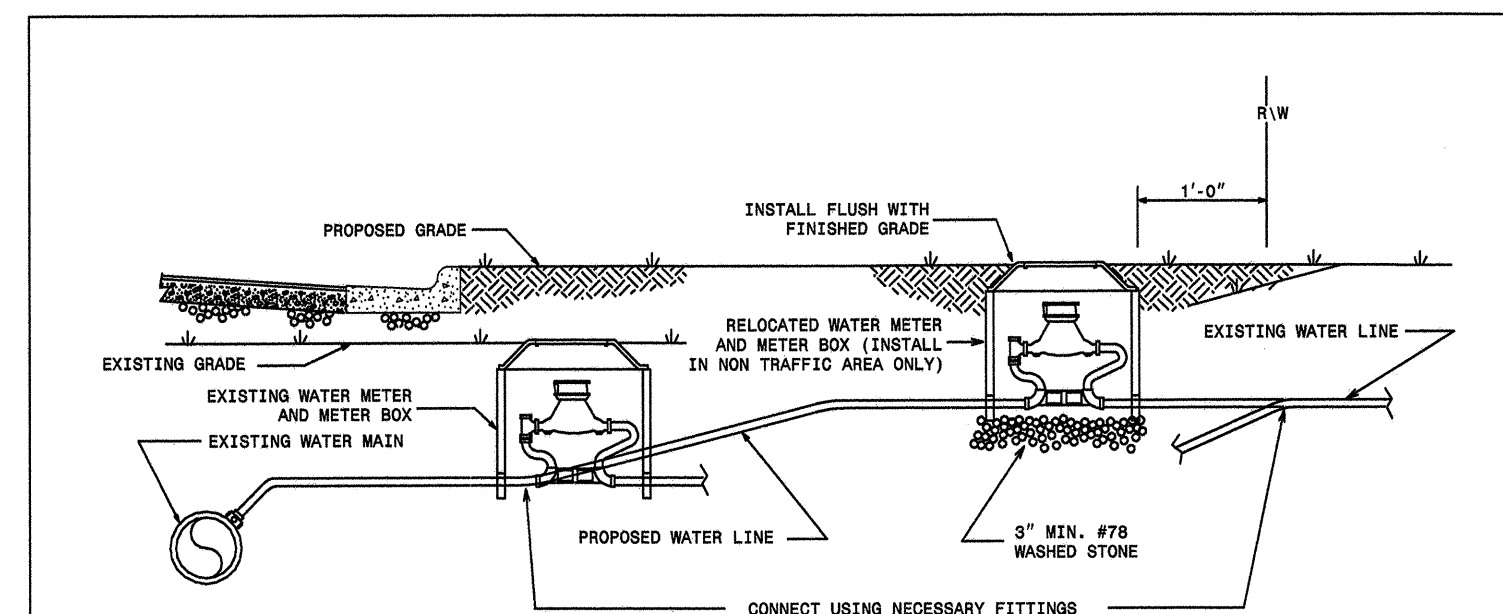
UTILITY CONSTRUCTION



FIRE HYDRANT RELOCATION DETAIL

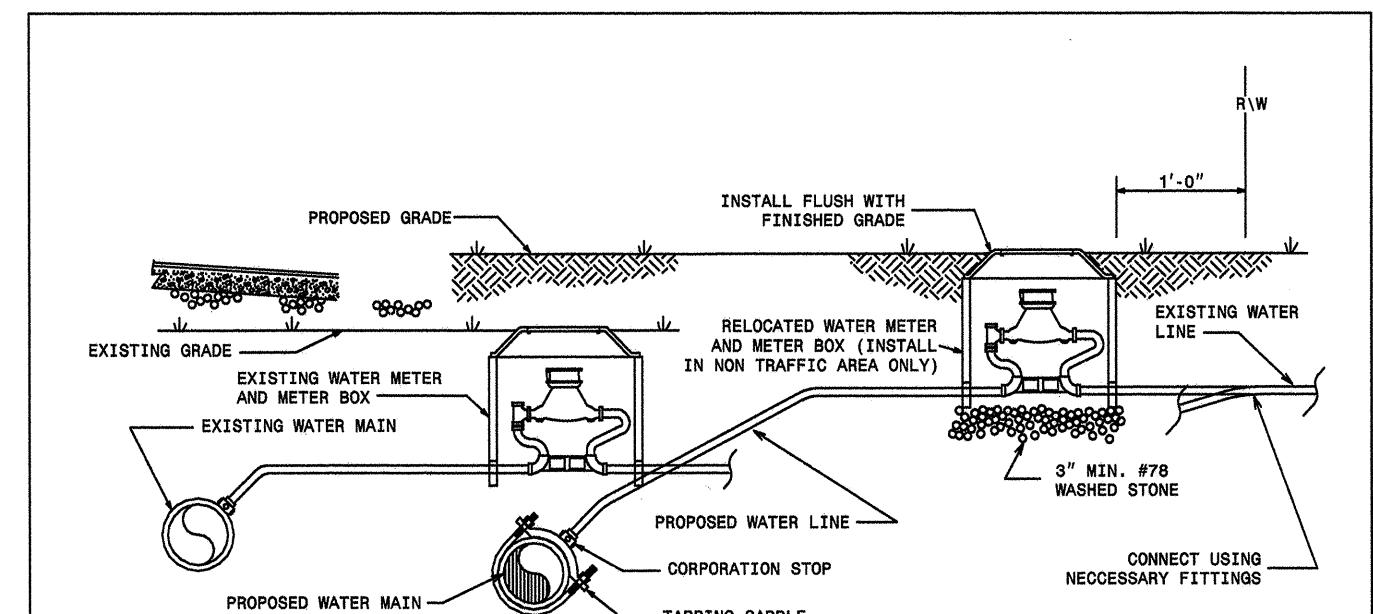


FIRE HYDRANT RELOCATION DETAIL



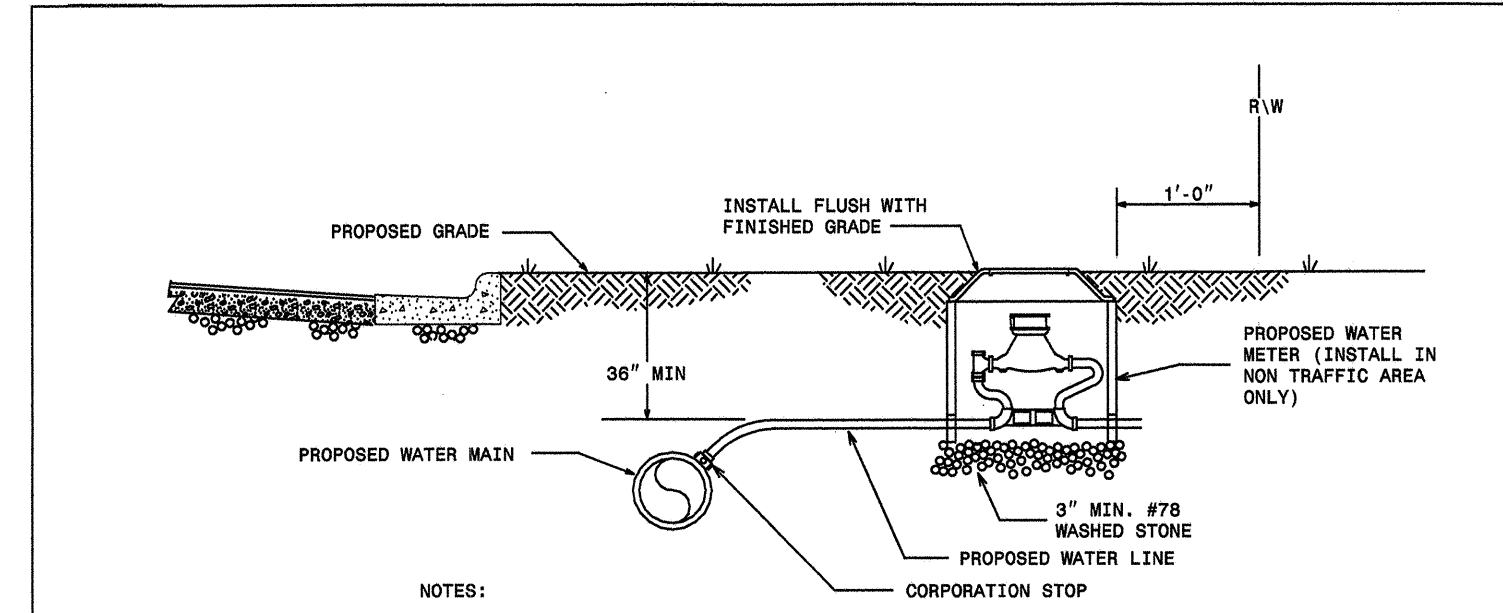
- NOTES:
1. RELOCATION SHALL INCLUDE THE REMOVAL AND INSTALLATION AT THE APPROPRIATE LOCATION OF THE WATER METER, METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.
 2. THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
 3. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.

WATER METER RELOCATION DETAIL



- NOTES:
1. RELOCATION SHALL INCLUDE THE REMOVAL AND INSTALLATION AT THE APPROPRIATE LOCATION OF THE WATER METER, METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.
 2. THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
 3. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.

WATER METER RELOCATION DETAIL



- NOTES:
1. INSTALLATION SHALL INCLUDE THE APPROPRIATE LOCATION OF THE WATER METER, METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.
 2. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.

WATER METER INSTALLATION DETAIL

NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

NC 24-27 (ALBEMARLE RD) FROM PIERSON DR
TO APPROXIMATELY 0.11 MILES WEST OF
REDDMAN RD. (SR 2876)

Designed By:	Checked By:	Date:	Sheet:	Of:
CLS	KSH	12-11-06	UC-7	UC-7

Hinde Engineering, Inc.
9305 MONROE ROAD, SUITE E
CHARLOTTE, NC 28270
704-514-4407 (office)
704-514-9942 (fax)

See Sheet 1-A For Index of Sheets

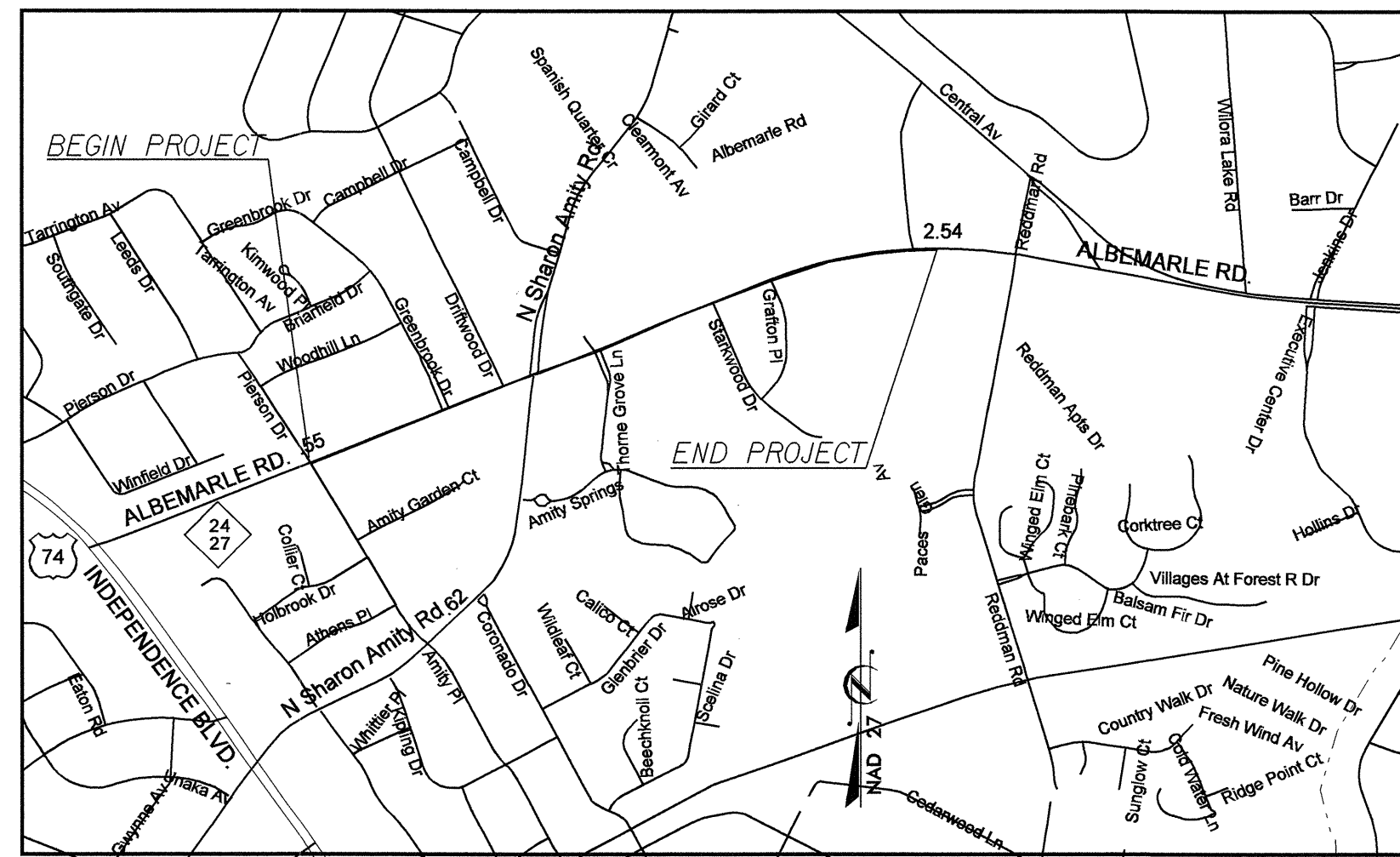
T.I.P. NO.	SHEET NO.
U-3603	UO-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

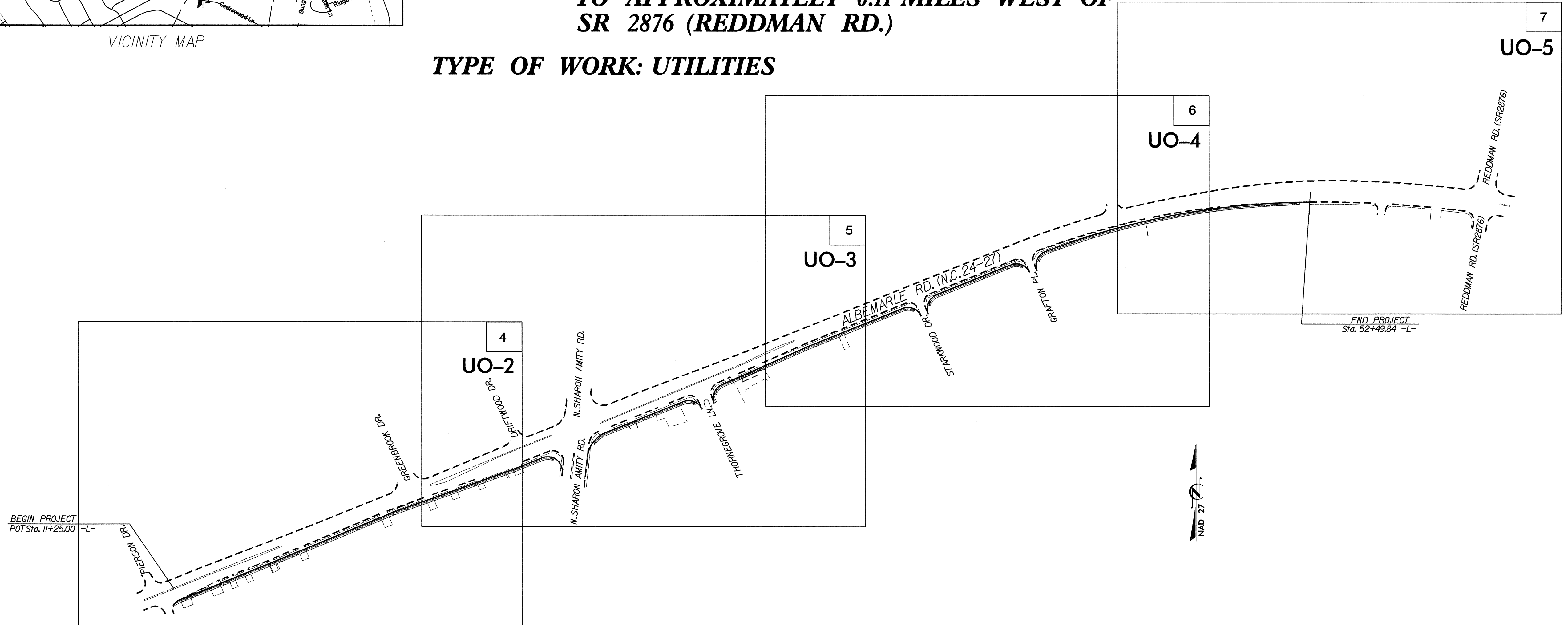
**UTILITIES BY OTHERS PLANS
MECKLENBURG COUNTY**

**LOCATION: NC 24-27 (ALBEMARLE RD.) FROM PIERSON DR.
TO APPROXIMATELY 0.11 MILES WEST OF
SR 2876 (REDDMAN RD.)**

TYPE OF WORK: UTILITIES



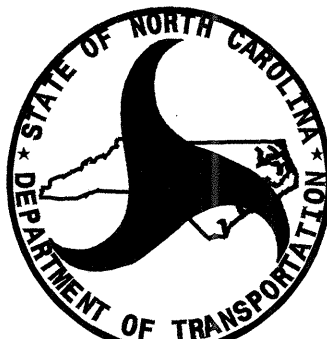
VICINITY MAP



TIP: U-3603

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-5	UTILITIES BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT
(1) DUKE
(2) BELL SOUTH
(3) PIEDMONT NATURAL GAS COMPANY
(4) TIME WARNER



PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
DESIGN SERVICES
UTILITY SECTION**

1591 MAIL SERVICES CENTER
RALEIGH, NC 27699-1591
PHONE (919) 256-4128
FAX (919) 256-4119

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Steve Mckee, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Alonza Yancey UTILITIES PROJECT DESIGNER

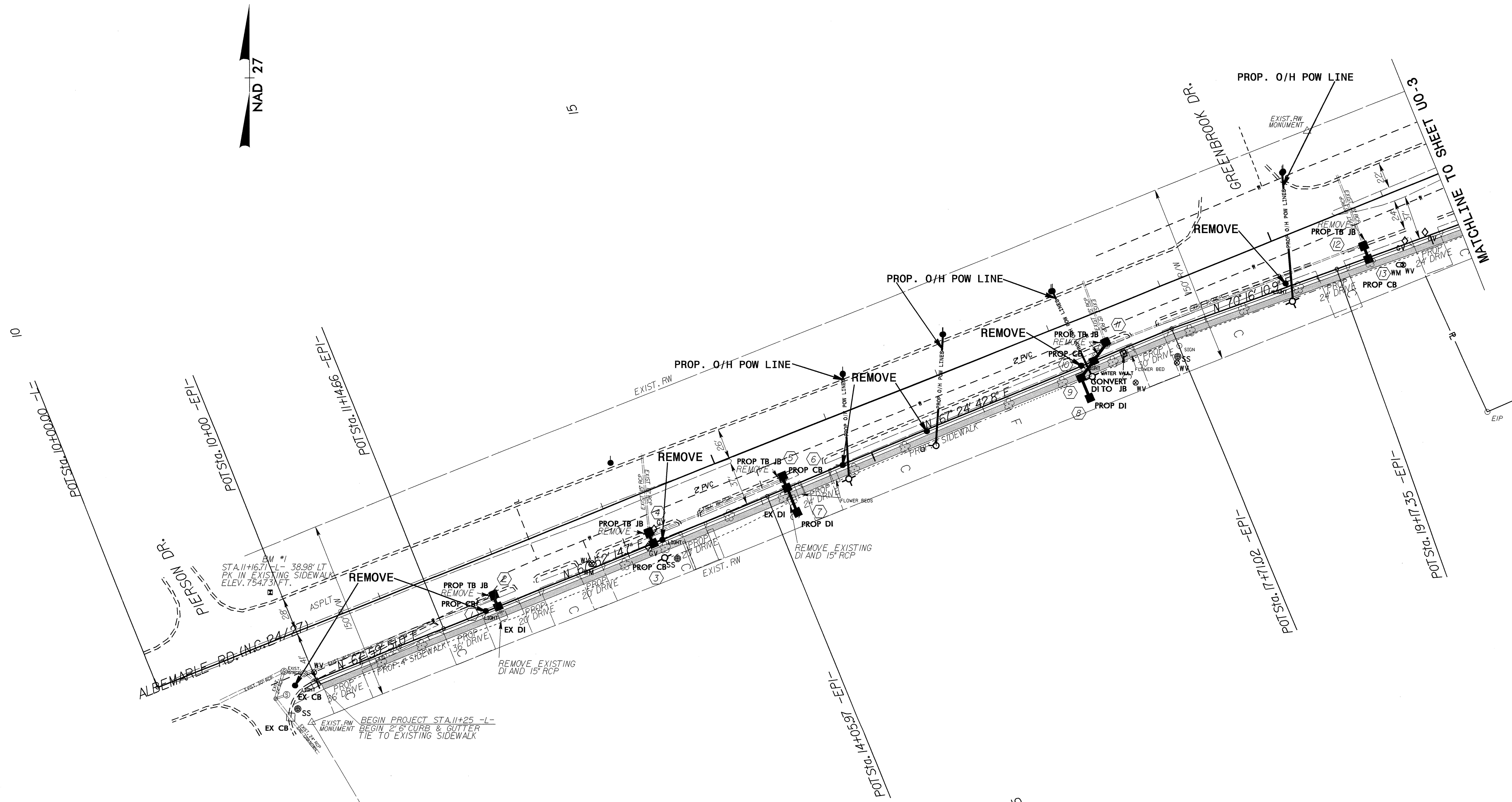
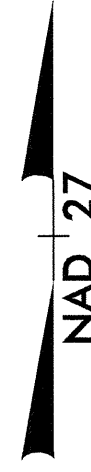
UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "SEIGLE" WITH NAD 27 STATE PLANE GRID COORDINATES OF NORTHING: 542458.382 (FT) EASTING: 1455338.048 (FT) THE GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "SEIGLE" TO STATION 10+00 -L- IS S 59° 33' 25.56" E 19,959.7914 FT ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

NOTE: THERE IS AN EXISTING GAS MAIN LOCATED RIGHT OF LINE -L- NEAR THE EDGE OF EXISTING PAVEMENT. ACCORDING TO THE GAS COMPANY, THE GAS MAIN IS BENEATH EXISTING AND PROPOSED DRAINAGE.

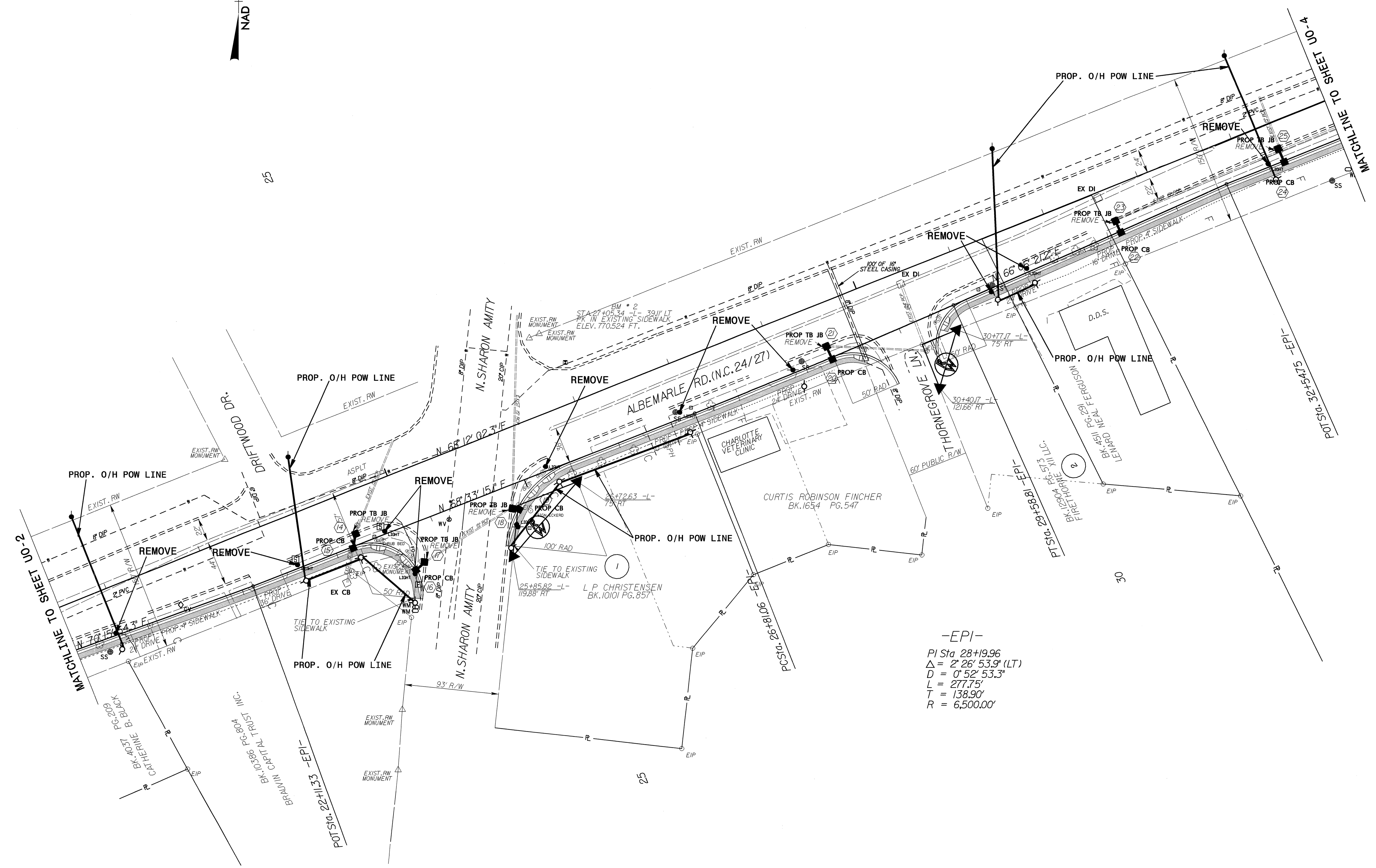


5/14/99
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 \$\$\$\$USERNAME\$\$\$\$

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

5/14/99



12-DEC-2006 09:27
\\jsh\temp\albemar-1e\psh\U-3603.u03 of albemar-1e.ma7psh5.psh

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

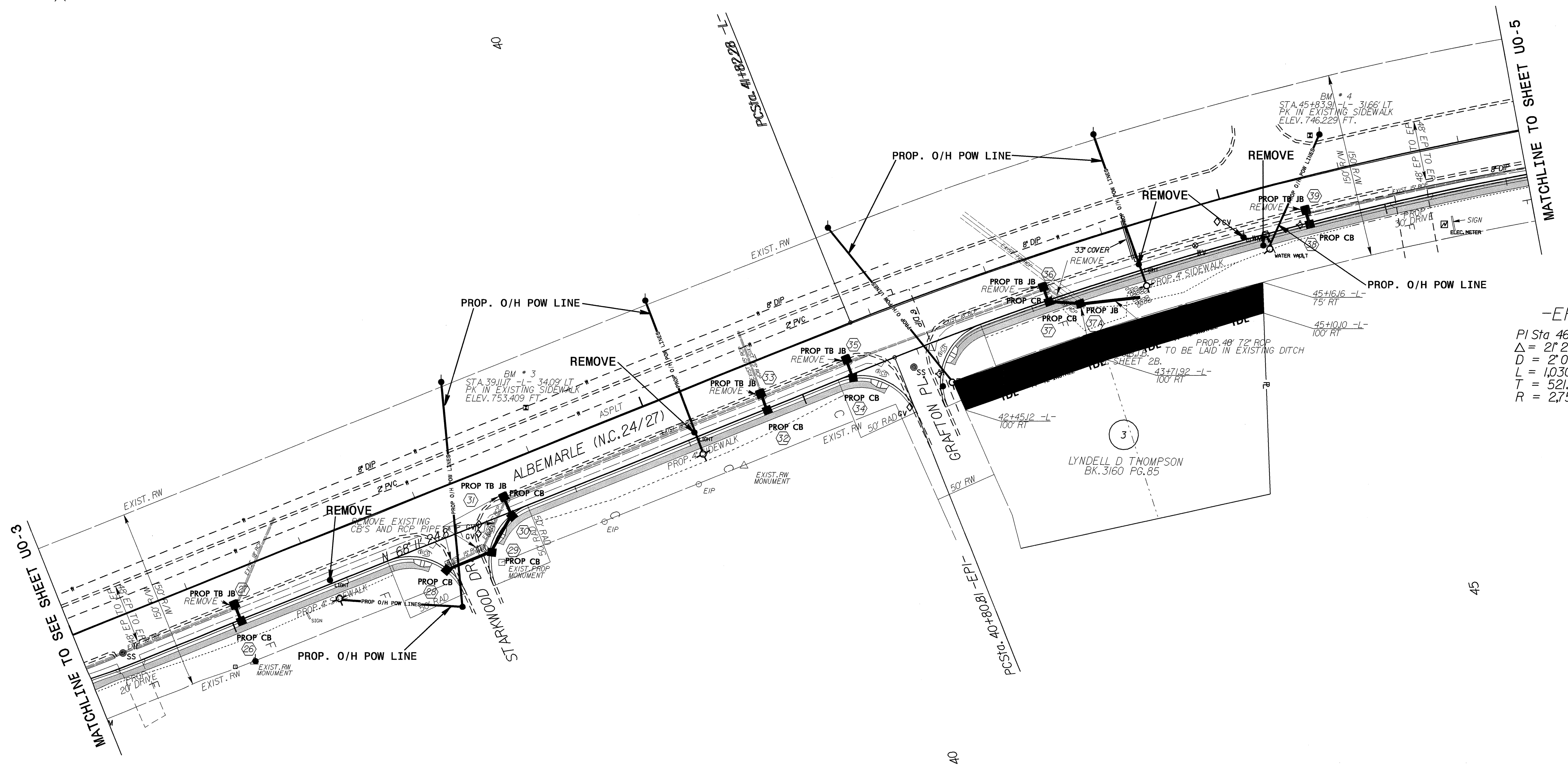
5/14/99



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45



-EPI-
 PI Sta 46+02.33
 $\Delta = 2^\circ 28' 34.4" (RT)$
 $D = 2^\circ 05' 00.5"$
 $L = 1,030.78'$
 $T = 521.51'$
 $R = 2,750.00'$

45

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

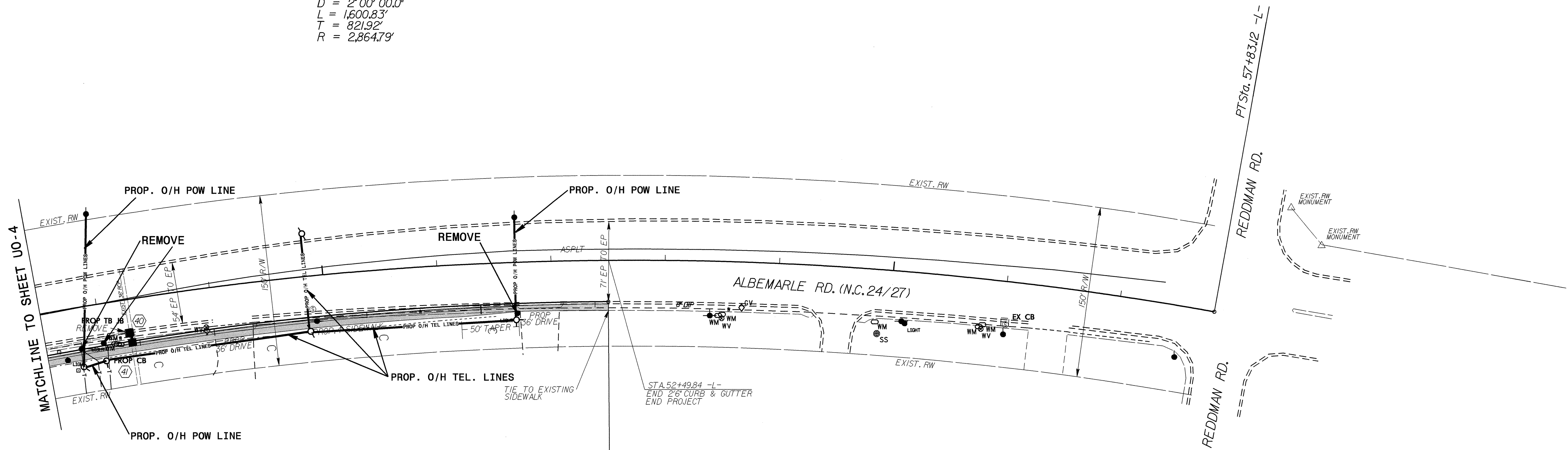
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50

55

-L-
PI Sta 50+04.20
Δ = 32° 01' 00.1" (RT)
D = 2' 00' 00.0"
L = 1,600.83'
T = 821.92'
R = 2,864.79'



-EPI-
PI Sta 46+02.33
Δ = 21° 28' 34.4" (RT)
D = 2' 05' 00.5"
L = 1,030.78'
T = 521.51'
R = 2,750.00'

PT Sta. 51+11.60 -EPI-

50

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