

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

September 30, 2019

**Addendum No. 1**

RE: Contract # C204368

WBS # 34542.3.6, 34542.3.7

STATE FUNDED

**Richmond County (R-3421A, R-3421B)**

I-73/74 FROM US-74 BYPASS WEST OF ROCKINGHAM AT SR-1109  
(ZION CHURCH RD) TO NORTH OF SR-1304 (HARRINGTON RD).

**October 15, 2019 Letting**

To Whom It May Concern:

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the Roadway plans.

Sheet No.	Revision
UC-3A	Revised to add detail
UC-7	Revised to add note for 36" Encasement
UC-19	Revised to add note for 36" Encasement
New Sheets R-3421A UO-1 thru R-3421B UO-21	Added Utilities by Others plans

Please void the above listed existing Sheets in your plans and staple the revised Sheets thereto.

Please staple New Sheets R-3421A UO-1 thru R-3421B UO-21 in your plan set.

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 9-30-2019".
UC-1 thru UC-2	Revised the Utility Construction special provision.
UbO-1 thru UbO-4	Revised the Project Special Provision entitled Utilities by Others

Please void the above listed Pages in your proposal and staple the revised Pages thereto.

On the item sheets the following pay item revisions were made:

Item	Description	Old Quantity	New Quantity
259-5836400000- E-1540	36" ENCASEMENT PIPE	939 LF	1,079 LF
313-8801000000- E-SP	MSE RETAINING WALL NO. (1, STA 88+35.81 -I73-)	7,430 SF	3,815 SF
314-8801000000- E-SP	MSE RETAINING WALL NO. (2, STA 88+35.81 -I73-)	5,345 SF	2,620 SF
347-8801000000- E-SP	MSE RETAINING WALL NO. (1, STA 140+97.00 -L-)	NEW ITEM	3,615 SF
348-8801000000- E-SP	MSE RETAINING WALL NO. (2, STA 140+97.00 -L-)	NEW ITEM	2,725 SF

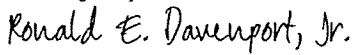
**\*NOTE\* The Descriptions for Items 313 and 314 have been revised for clarity.**

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:  
  
 F81B6038A47A442...

Ronald E. Davenport, Jr., PE  
 State Contract Officer

RED/jjr  
 Attachments

cc: Mr. Lamar Sylvester, PE  
 Mr. Brandon H. Jones, PE  
 Mr. Ron Hancock, PE  
 Mr. Chris Peoples, PE  
 Mr. Jon Weathersbee, PE  
 Mr. Ken Kennedy, PE  
 Project File (2)

Mr. Ray Arnold, PE  
 Ms. Jaci Kincaid  
 Ms. Lori Strickland  
 Mr. Mike Gwyn  
 Ms. Penny Higgins  
 Mr. Mitchell Dixon  
 Mr. Kyle Kempf

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No. 1 DATED 9-30-2019**

DATE AND TIME OF BID OPENING: **OCTOBER 15, 2019 AT 2:00 PM**

CONTRACT ID C204368  
WBS 34542.3.6, 34542.3.7

FEDERAL-AID NO. STATE FUNDED  
COUNTY RICHMOND  
T.I.P. NO. R-3421A, R-3421B  
MILES 7.197  
ROUTE NO.  
LOCATION I-73/74 FROM US-74 BYPASS WEST OF ROCKINGHAM AT SR-1109  
(ZION CHURCH RD) TO NORTH OF SR-1304 (HARRINGTON RD).  
TYPE OF WORK GRADING, DRAINAGE, PAVING, AND STRUCTURES.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY & STRUCTURE PROPOSAL**

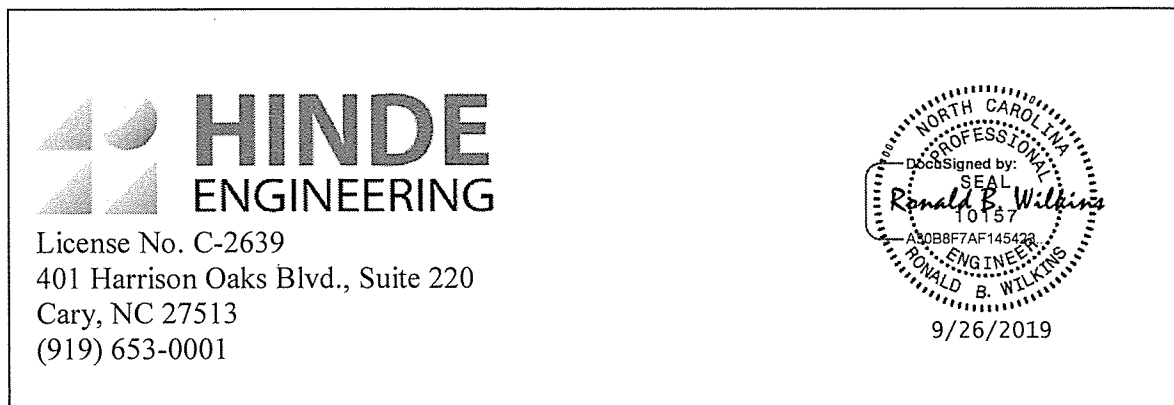
**5% BID BOND OR BID DEPOSIT REQUIRED**

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Project: R-3421A&B

UC-1

County: Richmond



**Revise the 2018 Standard Specifications as follows:**

**Page 15-1, Sub-Article 1500-2 COOPERATION WITH UTILITY OWNERS, paragraph 2:**  
add the following sentences:

The utility owner is the Richmond County. The contact for Richmond County is Mr. Jerry Austin, Public Works Director. Mr. Austin can be reached by phone at (910) 997-8338.

All proposed water line relocation work shall be performed at a time to be coordinated through the Engineer and with the respective utility owner. Water lines shall not be taken out of service without prior approval of the engineer and utility owner and service interruptions shall not exceed four hours.

The existing BPS (booster pump station) located on parcel 15 (Richmond County, DB 576, PG 131) is being replaced by a new BPS to be located on parcel 20 (Lena Coble Estate, DB 521-486) which will not be placed into service until June 30, 2020. Relocation, testing and sanitizing of affected portions of the water piping connected to the existing BPS shall be completed prior to placing the new BPS in service and decommissioning of the existing BPS.

This project also involves the relocation/replacement of two raw water lines along -Y4- serving one commercial customer of Richmond County. These raw water lines are 20" and 36" in diameter and can only be taken out of service individually and at times acceptable by the customer and approved by the Engineer and Richmond County Public Works Department. Accordingly, replacement of these lines must be planned well in advance with priority consideration given to the 20" line. Relocation and reconnection of the 20" diameter line must be completed and the line fully operational prior to taking the 36" diameter line out of service for relocation. Final tie-in operations will be of short duration as approved by the Engineer and Richmond County Public Works Department. Final connections for these water lines may require that work be performed at off-peak periods or at night.

Project: R-3421A&B

**UC-2**

County: Richmond

**Page 15-2, Sub-Article 1500-7 SUBMITTALS AND RECORDS, paragraph 3:** add the following sentences:

As-built plans shall be provided to the appropriate utility owner showing the size and type of material installed and the coordinates of all utility horizontal and vertical locations of all installed piping and appurtenances. As-built plans and associated documentation shall be provided to the Engineer prior to acceptance of the work.

**Page 15-4, Sub-Article 1505-3 (E), Thrust Restraint,** add the following sentence at the end of line 33:

The method of pipe restraint on this project shall be restrained retainer glands or factory restrained joint pipe as approved by the Engineer and the owner.

**Page 15-8, Sub-Article 1515-3 (D), Fire Hydrants,** add the following sentence at the end of line 24:

When relocating fire hydrants, a new replacement fire hydrant will be provided and installed by the Contractor and the existing fire hydrant shall be removed from the project. Fire hydrants shall be installed and operational prior to taking the fire hydrant to be relocated out of service. All new/relocated fire hydrants shall be provided with integral 5" Storz connection.

All water line installed on this project shall meet the requirements of the Rules Governing Public Water Systems. Vertical separation between proposed water mains and storm drainage shall be a minimum of 18-inches per the Recommended Standards of Water Works. All proposed water lines shall have a minimum cover of 36-inches. Proposed water mains shall have a minimum horizontal separation of 10-feet from sewer mains (ref. Rule .0904, Rule .0906). Utilities being relocated or installed as shown on the utility construction plans must be adjusted accordingly to meet these criteria.

**END OF SECTION**

PROJECT SPECIAL PROVISIONS  
Utilities by Others

 <p>License No. C-2639 401 Harrison Oaks Blvd. Suite 220 Cary, NC 27513 (919) 653-0001</p>
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**General:**

The following utility companies have facilities that will be in conflict with the construction of this project:

- A) Power – Duke Energy
- B) Power – Duke Energy (Transmission)
- C) Water – Richmond County (Pump Station)
- D) Gas – Piedmont Natural Gas – (Contact Information Only) No Conflicts
- E) Telecom – AT&T – (Contact Information Only) No Conflicts

The conflicting facilities of these concerns will be adjusted prior to the date of availability, unless otherwise noted and are therefore listed in these special provisions for the benefit of the Contractor. All utility work listed herein will be done by the utility owners. All utilities are shown on the plans from the best available information.

The Contractor’s attention is directed to Article 105-8 of the 2018 Standard Specifications.

**Utilities Requiring Adjustment:**

Utility relocations are shown on the Utilities by Others Plans.

- A) Power – Duke Energy
  - 1) See Utilities by Others plans for utility conflicts.
  - 2) Contact person for Duke Energy is JB Jones and he can be reached at [jb.jones@duke-energy.com](mailto:jb.jones@duke-energy.com) or 910-206-1966.
  - 3) All conflicts will be cleared by January 31, 2020.
  - 4) All conflicts to be cleared by above date excluding the service to Richmond County’s existing booster pump station on parcel 15. This service will be removed once Richmond County’s new BPS is in service and the existing BPS is decommissioned. (See UBO Plans for pole locations)

PROJECT SPECIAL PROVISIONS  
Utilities by Others

B) Power – Duke Energy (Transmission)

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for Duke Energy Transmission is Jamie Loy and he can be reached at [jamie.loy@duke-energy.com](mailto:jamie.loy@duke-energy.com) or 919-546-6034.
- 3) All conflicts will be cleared by December 31, 2021.

C) Water – Richmond County (Pump Station)

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for Richmond County is Jerry Austin and he can be reached at [jerry.austin@richmondnc.com](mailto:jerry.austin@richmondnc.com) or 910-997-8338.
- 3) All conflicts will be cleared by June 30, 2020.
- 4) Contractor will need to coordinate new BPS tie in with Richmond County. For details see UC Plans and Special Provisions.

D) Gas – Piedmont Natural Gas

- 1) No Conflicts – Contact information provided for contractor use if necessary.
- 2) Contact person for PNG is John Parsons and he can be reached at [john.parsons@duke-energy.com](mailto:john.parsons@duke-energy.com) or 980-722-5564.

E) Telecom – AT&T

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for AT&T is Austin Godwin and he can be reached at [austingodwin@telics.com](mailto:austingodwin@telics.com) or 910-612-5893.
- 3) All conflicts will be cleared by June 30, 2020.

PROJECT SPECIAL PROVISIONS  
Utilities by Others



License No. C-2639  
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Suite 220  
Cary, NC 27513  
(919) 653-0001

**General:**

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- A) Power – Duke Energy
- B) Power – Duke Energy (Transmission)
- C) Power – Pee Dee Electric
- D) Telecom – AT&T
- E) Telecom – MCNC
- F) Telecom – Charter/Spectrum

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- 3) All conflicts will be cleared by January 31, 2020.



PROJECT SPECIAL PROVISIONS  
Utilities by Others

B) Power – Duke Energy (Transmission)

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for Duke Energy Transmission is Jamie Loy and he can be reached at [jamie.loy@duke-energy.com](mailto:jamie.loy@duke-energy.com) or 919-546-6034.
- 3) All conflicts will be cleared by December 31, 2021.

C) Power – Pee Dee Electric

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for Pee Dee Electric is Jerry Shepard and he can be reached at [jsheward@pdemc.com](mailto:jsheward@pdemc.com) or 910-894-0113.
- 3) All conflicts will be cleared by March 31, 2020.

D) Telecom – AT&T

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for AT&T is Austin Godwin and he can be reached at [austingodwin@telics.com](mailto:austingodwin@telics.com) or 910-612-5893.
- 3) All conflicts will be cleared by June 30, 2020.

E) Telecom – MCNC

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for MCNC is Brett Boger and he can be reached at [brettboger@telics.com](mailto:brettboger@telics.com) or 336-778-0150.
- 3) All conflicts will be cleared by March 31, 2020.

F) Telecom – Charter/Spectrum

- 1) See Utilities by Others plans for utility conflicts.
- 2) Contact person for Charter/Spectrum is Aaron Lee and he can be reached at [louis.lee@charter.com](mailto:louis.lee@charter.com) or 704-378-2241.
- 3) All conflicts will be cleared by March 31, 2020.

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0001000000-E	200	CLEARING & GRUBBING .. ACRE(S)	Lump Sum	L.S.	
0004	0008000000-E	200	SUPPLEMENTARY CLEARING & GRUB- BING	10 ACR		
0005	0022000000-E	225	UNCLASSIFIED EXCAVATION	7,298,000 CY		
0006	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (101+31.22 -I-73- LT)	Lump Sum	L.S.	
0007	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (101+31.22 -I-73- RT)	Lump Sum	L.S.	
0008	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (301+83 -L- RT)	Lump Sum	L.S.	
0009	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (301+86 -L- LT)	Lump Sum	L.S.	
0010	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (11+37.00 -RPC-)	Lump Sum	L.S.	
0011	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (24+32 -Y3-)	Lump Sum	L.S.	
0012	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (88+35.81 -I-73- LT)	Lump Sum	L.S.	
0013	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (88+35.81 -I-73- RT)	Lump Sum	L.S.	
0014	0036000000-E	225	UNDERCUT EXCAVATION	53,900 CY		
0015	0127000000-N	235	EMBANKMENT SETTLEMENT GAUGES	8 EA		
0016	0134000000-E	240	DRAINAGE DITCH EXCAVATION	10,169 CY		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0017	0141000000-E	240	BERM DITCH CONSTRUCTION	5,850 LF		
0018	0156000000-E	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	24,830 SY		
0019	0177000000-E	250	BREAKING OF EXISTING ASPHALT PAVEMENT	5,870 SY		
0020	0192000000-N	260	PROOF ROLLING	40 HR		
0021	0195000000-E	265	SELECT GRANULAR MATERIAL	38,000 CY		
0022	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	140,700 SY		
0023	0199000000-E	SP	TEMPORARY SHORING	1,250 SF		
0024	0225000000-E	SP	REINFORCED SOIL SLOPES	115,000 SY		
0025	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	5,840 TON		
0026	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	18,360 SY		
0027	0335200000-E	305	15" DRAINAGE PIPE	2,268 LF		
0028	0335300000-E	305	18" DRAINAGE PIPE	1,532 LF		
0029	0335400000-E	305	24" DRAINAGE PIPE	720 LF		
0030	0335500000-E	305	30" DRAINAGE PIPE	360 LF		
0031	0335600000-E	305	36" DRAINAGE PIPE	40 LF		
0032	0335800000-E	305	48" DRAINAGE PIPE	100 LF		
0033	0335850000-E	305	*** DRAINAGE PIPE ELBOWS (15")	49 EA		
0034	0335850000-E	305	*** DRAINAGE PIPE ELBOWS (18")	26 EA		
0035	0335850000-E	305	*** DRAINAGE PIPE ELBOWS (24")	12 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0036	0335850000-E	305	*** DRAINAGE PIPE ELBOWS (30")	6 EA		
0037	0350000000-E	SP	**** RC PIPE CULVERTS, CON- TRACTOR DESIGN (30")	1,284 LF		
0038	0350000000-E	SP	**** RC PIPE CULVERTS, CON- TRACTOR DESIGN (42")	448 LF		
0039	0350000000-E	SP	**** RC PIPE CULVERTS, CON- TRACTOR DESIGN (48")	316 LF		
0040	0350000000-E	SP	**** RC PIPE CULVERTS, CON- TRACTOR DESIGN (54")	300 LF		
0041	0350000000-E	SP	**** RC PIPE CULVERTS, CON- TRACTOR DESIGN (60")	232 LF		
0042	0350000000-E	SP	**** RC PIPE CULVERTS, CON- TRACTOR DESIGN (72")	1,192 LF		
0043	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (18", V)	240 LF		
0044	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (24", V)	172 LF		
0045	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (48", V)	316 LF		
0046	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (60", V)	996 LF		
0047	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	3,816 LF		
0048	0372000000-E	310	18" RC PIPE CULVERTS, CLASS III	1,176 LF		
0049	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	2,696 LF		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0050	0384000000-E	310	30" RC PIPE CULVERTS, CLASS III	1,424	LF	
0051	0390000000-E	310	36" RC PIPE CULVERTS, CLASS III	288	LF	
0052	0396000000-E	310	42" RC PIPE CULVERTS, CLASS III	460	LF	
0053	0414000000-E	310	60" RC PIPE CULVERTS, CLASS III	468	LF	
0054	0420000000-E	310	66" RC PIPE CULVERTS, CLASS III	56	LF	
0055	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (48")	760	LF	
0056	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (54")	12	LF	
0057	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (60")	1,156	LF	
0058	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (66")	92	LF	
0059	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (78")	168	LF	
0060	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	13,584	LF	
0061	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	7,440	LF	
0062	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	6,168	LF	
0063	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	3,552	LF	
0064	0448600000-E	310	36" RC PIPE CULVERTS, CLASS IV	768	LF	
0065	0448700000-E	310	42" RC PIPE CULVERTS, CLASS IV	304	LF	
0066	0995000000-E	340	PIPE REMOVAL	934	LF	

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0067	0996000000-N	350	PIPE CLEAN OUT	10 EA		
0068	0999000000-E	462	4" SLOPE PROTECTION	1,560 SY		
0069	1011000000-N	500	FINE GRADING	Lump Sum	L.S.	
0070	1044000000-E	501	LIME TREATED SOIL (SLURRY METHOD)	280,090 SY		
0071	1066000000-E	501	LIME FOR LIME TREATED SOIL	2,510 TON		
0072	1077000000-E	SP	#57 STONE	1,440 TON		
0073	1099500000-E	505	SHALLOW UNDERCUT	54,250 CY		
0074	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	129,500 TON		
0075	1111000000-E	SP	CLASS IV AGGREGATE STABILIZATION	1,000 TON		
0076	1115000000-E	SP	GEOTEXTILE FOR PAVEMENT STABILIZATION	127,249 SY		
0077	1121000000-E	520	AGGREGATE BASE COURSE	11,045 TON		
0078	1176000000-E	542	SOIL CEMENT BASE	280,090 SY		
0079	1187000000-E	542	PORTLAND CEMENT FOR SOIL CEMENT BASE	5,839 TON		
0080	1209000000-E	543	ASPHALT CURING SEAL	84,040 GAL		
0081	1220000000-E	545	INCIDENTAL STONE BASE	400 TON		
0082	1231000000-E	560	SHOULDER BORROW	16,910 CY		
0083	1245000000-E	SP	SHOULDER RECONSTRUCTION	3.4 SMI		
0084	1260000000-E	SP	AGGREGATE SHOULDER BORROW	30 TON		
0085	1275000000-E	600	PRIME COAT	8,261 GAL		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0086	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (1-1/2")	79,270 SY		
0087	1330000000-E	607	INCIDENTAL MILLING	200 SY		
0088	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	115,130 TON		
0089	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	95,700 TON		
0090	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	5,660 TON		
0091	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	86,135 TON		
0092	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	15,330 TON		
0093	1577000000-E	620	POLYMER MODIFIED ASPHALT BIN- DER FOR PLANT MIX	705 TON		
0094	1662000000-E	650	OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-1 MODIFIED	10,870 TON		
0095	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	12 TON		
0096	1840000000-E	665	MILLED RUMBLE STRIPS (ASPHALT CONCRETE)	111,640 LF		
0097	2000000000-N	806	RIGHT-OF-WAY MARKERS	210 EA		
0098	2022000000-E	815	SUBDRAIN EXCAVATION	12,735 CY		
0099	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	29,200 SY		
0100	2033000000-E	815	SUBDRAIN FINE AGGREGATE	1,462 CY		
0101	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	4,906 CY		
0102	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	39,900 LF		
0103	2070000000-N	815	SUBDRAIN PIPE OUTLET	77 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0104	2077000000-E	815	6" OUTLET PIPE	462	LF	
0105	2099000000-E	816	SHOULDER DRAIN	25,950	LF	
0106	2110000000-E	816	4" SHOULDER DRAIN PIPE	25,950	LF	
0107	2121000000-E	816	4" OUTLET PIPE FOR SHOULDER DRAINS	1,900	LF	
0108	2132000000-N	816	CONCRETE PAD FOR SHOULDER DRAIN PIPE OUTLET	8	EA	
0109	2143000000-E	818	BLOTTING SAND	20	TON	
0110	2190000000-N	828	TEMPORARY STEEL PLATE COVERS FOR MASONRY DRAINAGE STRUCTURE	2	EA	
0111	2209000000-E	838	ENDWALLS	35	CY	
0112	2220000000-E	838	REINFORCED ENDWALLS	115	CY	
0113	2253000000-E	840	PIPE COLLARS	7	CY	
0114	2275000000-E	SP	FLOWABLE FILL	125	CY	
0115	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	369	EA	
0116	2297000000-E	840	MASONRY DRAINAGE STRUCTURES	79	CY	
0117	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	140	LF	
0118	2352000000-N	840	FRAME WITH GRATE, STD 840.**** (840.20)	1	EA	
0119	2354000000-N	840	FRAME WITH GRATE, STD 840.22	3	EA	
0120	2364200000-N	840	FRAME WITH TWO GRATES, STD 840.20	151	EA	
0121	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	191	EA	



County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0122	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	2 EA		
0123	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	2 EA		
0124	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	2 EA		
0125	2396000000-N	840	FRAME WITH COVER, STD 840.54	15 EA		
0126	2407000000-N	840	STEEL FRAME WITH TWO GRATES, STD 840.37	5 EA		
0127	2473000000-N	SP	GENERIC DRAINAGE ITEM HORIZONTAL SLOPE DRAIN	720 EA		
0128	2489000000-E	SP	GENERIC DRAINAGE ITEM 4" CELLULAR CONFINEMENT SYSTEM	5,970 SY		
0129	2489000000-E	SP	GENERIC DRAINAGE ITEM 6" CELLULAR CONFINEMENT SYSTEM	72,650 SY		
0130	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	2,350 LF		
0131	2556000000-E	846	SHOULDER BERM GUTTER	17,915 LF		
0132	2577000000-E	846	CONCRETE EXPRESSWAY GUTTER	4,435 LF		
0133	2619000000-E	850	4" CONCRETE PAVED DITCH	320 SY		
0134	2655000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	260 SY		
0135	2724000000-E	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	3,720 LF		
0136	2938000000-N	859	CONVERT EXISTING DROP INLET TO JUNCTION BOX WITH MANHOLE	1 EA		
0137	2995000000-N	SP	GENERIC DRAINAGE ITEM CONVERT EXISTING TRAFFIC BEAR- ING DI TO TRAFFIC BEARING JB W/LID	1 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0138	3001000000-N	SP	IMPACT ATTENUATOR UNITS, TYPE TL-3	4	EA	
0139	3038000000-E	862	STEEL BEAM GUARDRAIL	67,950	LF	
0140	3045000000-E	862	STEEL BEAM GUARDRAIL, SHOP CURVED	150	LF	
0141	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	20	EA	
0142	3210000000-N	862	GUARDRAIL END UNITS, TYPE CAT-1	51	EA	
0143	3215000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE III	7	EA	
0144	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	74	EA	
0145	3288000000-N	SP	GUARDRAIL END UNITS, TYPE TL-2	7	EA	
0146	3317000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B-77	28	EA	
0147	3319000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B-83	6	EA	
0148	3360000000-E	863	REMOVE EXISTING GUARDRAIL	27,140	LF	
0149	3389150000-N	SP	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-3)	1	EA	
0150	3389400000-E	865	DOUBLE FACED CABLE GUIDERAIL	33,560	LF	
0151	3389500000-N	865	ADDITIONAL GUIDERAIL POSTS	30	EA	
0152	3389600000-N	865	CABLE GUIDERAIL ANCHOR UNITS	45	EA	
0153	3503000000-E	866	WOVEN WIRE FENCE, 47" FABRIC	68,030	LF	
0154	3509000000-E	866	4" TIMBER FENCE POSTS, 7'-6" LONG	4,370	EA	
0155	3515000000-E	866	5" TIMBER FENCE POSTS, 8'-0" LONG	850	EA	

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0156	3557000000-E	866	ADDITIONAL BARBED WIRE	200 LF		
0157	3628000000-E	876	RIP RAP, CLASS I	2,520 TON		
0158	3635000000-E	876	RIP RAP, CLASS II	235 TON		
0159	3649000000-E	876	RIP RAP, CLASS B	3,742 TON		
0160	3651000000-E	SP	BOULDERS	210 TON		
0161	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	21,210 SY		
0162	4048000000-E	902	REINFORCED CONCRETE SIGN FOUNDATIONS	63 CY		
0163	4054000000-E	902	PLAIN CONCRETE SIGN FOUNDATIONS	5 CY		
0164	4057000000-E	SP	OVERHEAD FOOTING	426 CY		
0165	4060000000-E	903	SUPPORTS, BREAKAWAY STEEL BEAM	52,242 LB		
0166	4066000000-E	903	SUPPORTS, SIMPLE STEEL BEAM	18,963 LB		
0167	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	9,131 LF		
0168	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (114+00 -I-73-)	Lump Sum	L.S.	
0169	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (130+50 -US-74-)	Lump Sum	L.S.	
0170	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (141+50 -L- LT)	Lump Sum	L.S.	
0171	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (167+50 -L- LT)	Lump Sum	L.S.	
0172	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (23+50 -L2- RT)	Lump Sum	L.S.	

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0173	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (24+50 -L2-)	Lump Sum	L.S.	
0174	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (39+00 -L2 REV-)	Lump Sum	L.S.	
0175	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (39+00 -US-74-)	Lump Sum	L.S.	
0176	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (66+00 -US-74-)	Lump Sum	L.S.	
0177	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (75+00 -I-73-)	Lump Sum	L.S.	
0178	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (80+00 -I-73-)	Lump Sum	L.S.	
0179	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (97+00 -I-73-)	Lump Sum	L.S.	
0180	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (US-74, 1600' EAST OF HALF-MIL ESIGN)	Lump Sum	L.S.	
0181	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (US-74, 320' WEST OF EXIT SIGN)	Lump Sum	L.S.	
0182	4096000000-N	904	SIGN ERECTION, TYPE D	63 EA		
0183	4102000000-N	904	SIGN ERECTION, TYPE E	212 EA		
0184	4108000000-N	904	SIGN ERECTION, TYPE F	67 EA		
0185	4109000000-N	904	SIGN ERECTION, TYPE *** (OVERHEAD) (A)	8 EA		
0186	4109000000-N	904	SIGN ERECTION, TYPE *** (OVERHEAD) (B)	4 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0187	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (A)	93 EA		
0188	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (B)	48 EA		
0189	4114000000-N	904	SIGN ERECTION, MILEMARKERS	12 EA		
0190	4138000000-N	907	DISPOSAL OF SUPPORT, STEEL BEAM	20 EA		
0191	4149000000-N	907	DISPOSAL OF SIGN SYSTEM, OVER- HEAD	6 EA		
0192	4152000000-N	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	40 EA		
0193	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U- CHANNEL	141 EA		
0194	4158000000-N	907	DISPOSAL OF SIGN SYSTEM, WOOD	15 EA		
0195	4234000000-N	907	DISPOSAL OF SIGN, A OR B (OVERHEAD)	9 EA		
0196	4236000000-N	907	DISPOSAL OF SIGN, A & B (GROUND MOUNTED)	14 EA		
0197	4263000000-N	907	DISPOSAL OF WALKWAY	1 EA		
0198	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	1,205 SF		
0199	4402000000-E	SP	HIGH VISIBILITY STATIONARY SIGNS	504 SF		
0200	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	620 SF		
0201	4407000000-E	SP	HIGH VISIBILITY PORTABLE SIGNS	529 SF		
0202	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	213 SF		
0203	4415000000-N	1115	FLASHING ARROW BOARD	8 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0204	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	7 EA		
0205	4422000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	4 DAY		
0206	4430000000-N	1130	DRUMS	212 EA		
0207	4432000000-N	SP	HIGH VISIBILITY DRUMS	599 EA		
0208	4435000000-N	1135	CONES	212 EA		
0209	4445000000-E	1145	BARRICADES (TYPE III)	320 LF		
0210	4455000000-N	1150	FLAGGER	38 DAY		
0211	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	5 EA		
0212	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	3 EA		
0213	4480000000-N	1165	TMA	5 EA		
0214	4485000000-E	1170	PORTABLE CONCRETE BARRIER	5,345 LF		
0215	4500000000-E	1170	REMOVE & RESET PORTABLE CONCRETE BARRIER	690 LF		
0216	4516000000-N	1180	SKINNY DRUM	212 EA		
0217	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	291 EA		
0218	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	42,782 LF		
0219	4688000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)	277,291 LF		
0220	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	19,445 LF		
0221	4720000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)	20 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0222	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	67 EA		
0223	4770000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)	843 LF		
0224	4770000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (IV)	1,032 LF		
0225	4775000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (6") (II)	3,938 LF		
0226	4775000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (6") (IV)	2,807 LF		
0227	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	108,697 LF		
0228	4815000000-E	1205	PAINT PAVEMENT MARKING LINES (6")	211,932 LF		
0229	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	17,510 LF		
0230	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	438 LF		
0231	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	16 EA		
0232	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	49 EA		
0233	4848000000-E	SP	WORK ZONE TRAFFIC PATTERN MASKING	236,955 SF		
0234	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	3,000 LF		
0235	4855000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (6")	2,841 LF		
0236	4865000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (12")	590 LF		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0237	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	42	LF	
0238	4875000000-N	1205	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS	3	EA	
0239	4891000000-E	1205	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	207	LF	
0240	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	25	EA	
0241	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	3,175	EA	
0242	4915000000-E	1264	7' U-CHANNEL POSTS	18	EA	
0243	4955000000-N	1264	OBJECT MARKERS (END OF ROAD)	18	EA	
0244	5325000000-E	1510	*** WATER LINE (36")	507	LF	
0245	5325600000-E	1510	6" WATER LINE	1,586	LF	
0246	5327000000-E	1510	20" WATER LINE	10,749	LF	
0247	5329000000-E	1510	DUCTILE IRON WATER PIPE FITTINGS	49,485	LB	
0248	5534000000-E	1515	*** VALVE (36")	1	EA	
0249	5540000000-E	1515	6" VALVE	6	EA	
0250	5559000000-E	1515	20" VALVE	9	EA	
0251	5589200000-E	1515	2" AIR RELEASE VALVE	10	EA	
0252	5672000000-N	1515	RELOCATE FIRE HYDRANT	4	EA	
0253	5673000000-E	1515	FIRE HYDRANT LEG	46	LF	
0254	5798000000-E	1530	ABANDON *** UTILITY PIPE (36")	475	LF	



County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0255	5812000000-E	1530	ABANDON 20" UTILITY PIPE	7,607 LF		
0256	5815000000-N	1530	REMOVE WATER METER	6 EA		
0257	5835000000-E	1540	*** ENCASEMENT PIPE (54")	326 LF		
0258	5836200000-E	1540	30" ENCASEMENT PIPE	340 LF		
0259	5836400000-E	1540	36" ENCASEMENT PIPE	1,079 LF		
0260	5872500000-E	1550	BORE AND JACK OF *** (36")	719 LF		
0261	5872600000-E	1550	DIRECTIONAL DRILLING OF *** (6")	864 LF		
0262	6000000000-E	1605	TEMPORARY SILT FENCE	275,950 LF		
0263	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	5,190 TON		
0264	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	208,975 TON		
0265	6012000000-E	1610	SEDIMENT CONTROL STONE	106,375 TON		
0266	6015000000-E	1615	TEMPORARY MULCHING	875.5 ACR		
0267	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	31,700 LB		
0268	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEED- ING	160 TON		
0269	6024000000-E	1622	TEMPORARY SLOPE DRAINS	112,390 LF		
0270	6029000000-E	SP	SAFETY FENCE	400 LF		
0271	6030000000-E	1630	SILT EXCAVATION	366,100 CY		
0272	6036000000-E	1631	MATTING FOR EROSION CONTROL	513,055 SY		
0273	6037000000-E	SP	COIR FIBER MAT	116,810 SY		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0274	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	115,220	SY	
0275	6042000000-E	1632	1/4" HARDWARE CLOTH	8,550	LF	
0276	6045000000-E	SP	*** TEMPORARY PIPE (24")	1,860	LF	
0277	6045000000-E	SP	*** TEMPORARY PIPE (36")	45	LF	
0278	6046000000-E	1636	TEMPORARY PIPE FOR STREAM CROSSING	125	LF	
0279	6069000000-E	1638	STILLING BASINS	7,917	CY	
0280	6070000000-N	1639	SPECIAL STILLING BASINS	1	EA	
0281	6071012000-E	SP	COIR FIBER WATTLE	28,680	LF	
0282	6071013000-E	SP	WATTLE BARRIER	55,282	LF	
0283	6071020000-E	SP	POLYACRYLAMIDE (PAM)	32,495	LB	
0284	6071030000-E	1640	COIR FIBER BAFFLE	129,490	LF	
0285	6071050000-E	SP	*** SKIMMER (1-1/2")	61	EA	
0286	6071050000-E	SP	*** SKIMMER (2")	26	EA	
0287	6071050000-E	SP	*** SKIMMER (2-1/2")	17	EA	
0288	6071050000-E	SP	*** SKIMMER (3")	1	EA	
0289	6084000000-E	1660	SEEDING & MULCHING	1,041	ACR	
0290	6087000000-E	1660	MOWING	1,203	ACR	
0291	6090000000-E	1661	SEED FOR REPAIR SEEDING	8,350	LB	
0292	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	51.5	TON	

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0293	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	25,600	LB	
0294	6108000000-E	1665	FERTILIZER TOPDRESSING	767.25	TON	
0295	6111000000-E	SP	IMPERVIOUS DIKE	1,506	LF	
0296	6114500000-N	1667	SPECIALIZED HAND MOWING	20	MHR	
0297	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	300	EA	
0298	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	25	EA	
0299	6120000000-E	SP	CULVERT DIVERSION CHANNEL	2,800	CY	
0300	6123000000-E	1670	REFORESTATION	24	ACR	
0301	6126000000-E	SP	STREAMBANK REFORESTATION	1.25	ACR	
0302	6135000000-E	SP	GENERIC EROSION CONTROL ITEM COMPOST BLANKET	24	ACR	

**CULVERT ITEMS**

0303	8056000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (98+63.10 -I-73-)	Lump Sum	L.S.	
0304	8126000000-N	414	CULVERT EXCAVATION, STA ***** (13+11.60 -LPC-)	Lump Sum	L.S.	
0305	8126000000-N	414	CULVERT EXCAVATION, STA ***** (263+33.60 -L-)	Lump Sum	L.S.	
0306	8126000000-N	414	CULVERT EXCAVATION, STA ***** (32+75.27 -RPC-)	Lump Sum	L.S.	
0307	8126000000-N	414	CULVERT EXCAVATION, STA ***** (42+81.80 -L2 REV-)	Lump Sum	L.S.	
0308	8126000000-N	414	CULVERT EXCAVATION, STA ***** (8+68.70 -LPB-)	Lump Sum	L.S.	

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0309	8126000000-N	414	CULVERT EXCAVATION, STA ***** (98+63.10 -I-73-)	Lump Sum	L.S.	
0310	8133000000-E	414	FOUNDATION CONDITIONING MATERIAL, BOX CULVERT	4,240 TON		
0311	8196000000-E	420	CLASS A CONCRETE (CULVERT)	10,579.7 CY		
0312	8245000000-E	425	REINFORCING STEEL (CULVERT)	807,642 LB		

**WALL ITEMS**

0313	8801000000-E	SP	MSE RETAINING WALL NO ***** (1, STA 88+35.81 -I73-)	3,815 SF		
0314	8801000000-E	SP	MSE RETAINING WALL NO ***** (2, STA 88+35.81 -I73-)	2,620 SF		
0315	8801000000-E	SP	MSE RETAINING WALL NO ***** (3)	3,275 SF		
0316	8801000000-E	SP	MSE RETAINING WALL NO ***** (4)	2,200 SF		
0317	8801000000-E	SP	MSE RETAINING WALL NO ***** (5)	3,360 SF		
0318	8801000000-E	SP	MSE RETAINING WALL NO ***** (6)	2,450 SF		
0347	8801000000-E	SP	MSE RETAINING WALL NO ***** (1, STA 140+97.00 -L-)	3,615 SF		
0348	8801000000-E	SP	MSE RETAINING WALL NO ***** (2, STA 140+97.00 -L-)	2,725 SF		

**STRUCTURE ITEMS**

0319	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 101+31.22 -I-73- LT)	Lump Sum	L.S.	
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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0320	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 101+31.22 -I-73- RT)	Lump Sum	L.S.	
0321	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 24+31.67 -Y3-)	Lump Sum	L.S.	
0322	8096000000-E	450	PILE EXCAVATION IN SOIL	55 LF		
0323	8097000000-E	450	PILE EXCAVATION NOT IN SOIL	245 LF		
0324	8112730000-N	450	PDA TESTING	8 EA		
0325	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	57,965 SF		
0326	8161000000-E	420	GROOVING BRIDGE FLOORS	63,410 SF		
0327	8182000000-E	420	CLASS A CONCRETE (BRIDGE)	1,234.4 CY		
0328	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (101+31.22 -I-73- LT)	Lump Sum	L.S.	
0329	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (101+31.22 -I-73- RT)	Lump Sum	L.S.	
0330	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (11+47.77 -RPC-)	Lump Sum	L.S.	
0331	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (24+31.67 -Y3-)	Lump Sum	L.S.	
0332	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (301+83.52 -L- LT)	Lump Sum	L.S.	
0333	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (301+83.52 -L- RT)	Lump Sum	L.S.	
0334	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (88+35.81 -I-73- LT)	Lump Sum	L.S.	

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0335	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (88+35.81 -I-73- RT)	Lump Sum	L.S.	
0336	8217000000-E	425	REINFORCING STEEL (BRIDGE)	188,521 LB		
0337	8238000000-E	425	SPIRAL COLUMN REINFORCING STEEL (BRIDGE)	8,500 LB		
0338	8277000000-E	430	MODIFIED 72" PRESTRESSED CONC GIRDERS	6,678.92 LF		
0339	8328200000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP 14 X 73)	191 EA		
0340	8384000000-E	450	HP14X73 STEEL PILES	8,920 LF		
0341	8391000000-N	450	STEEL PILE POINTS	130 EA		
0342	8503000000-E	460	CONCRETE BARRIER RAIL	2,849.72 LF		
0343	8531000000-E	462	4" SLOPE PROTECTION	3,781.7 SY		
0344	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum	L.S.	
0345	8692000000-N	SP	FOAM JOINT SEALS	Lump Sum	L.S.	
0346	8706000000-N	SP	EXPANSION JOINT SEALS	Lump Sum	L.S.	

0924/Sep30/Q14230333.34/D1329504555000/E348

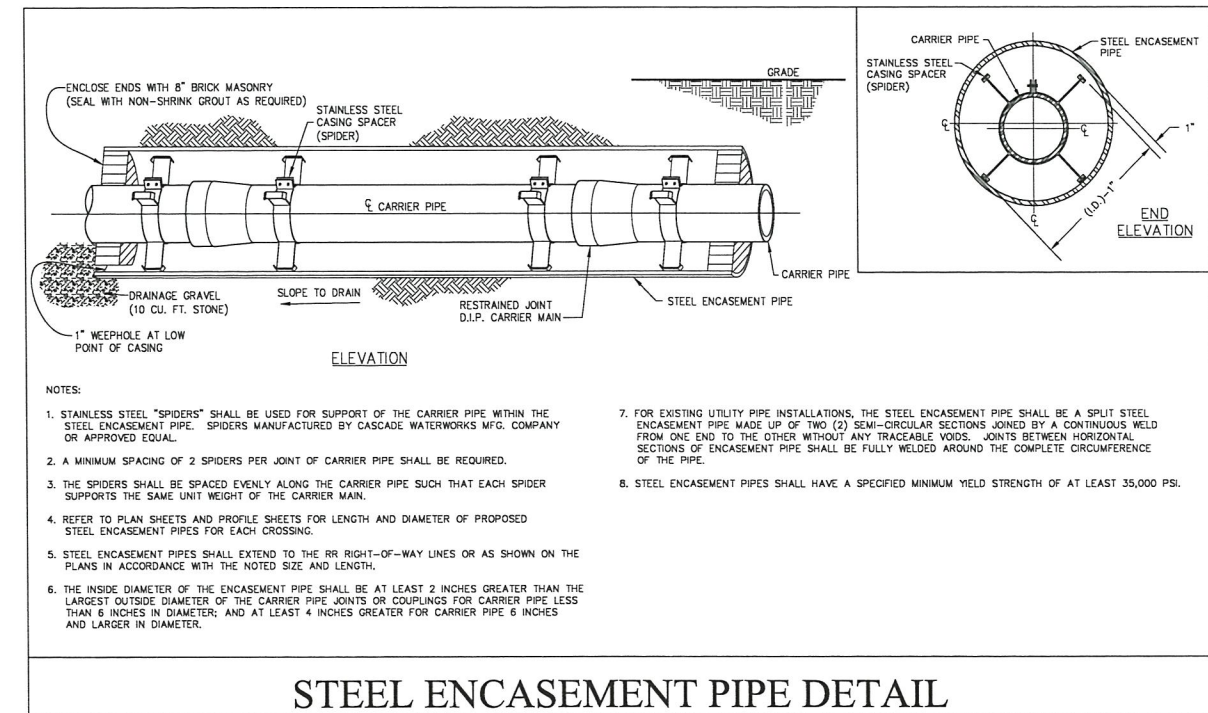
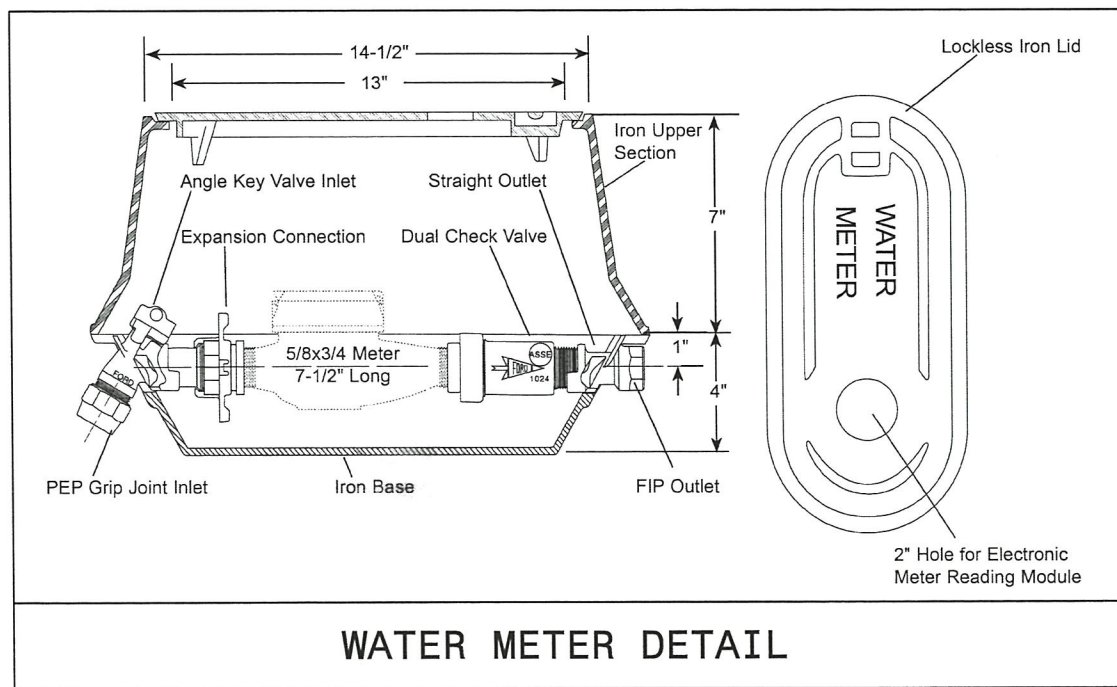
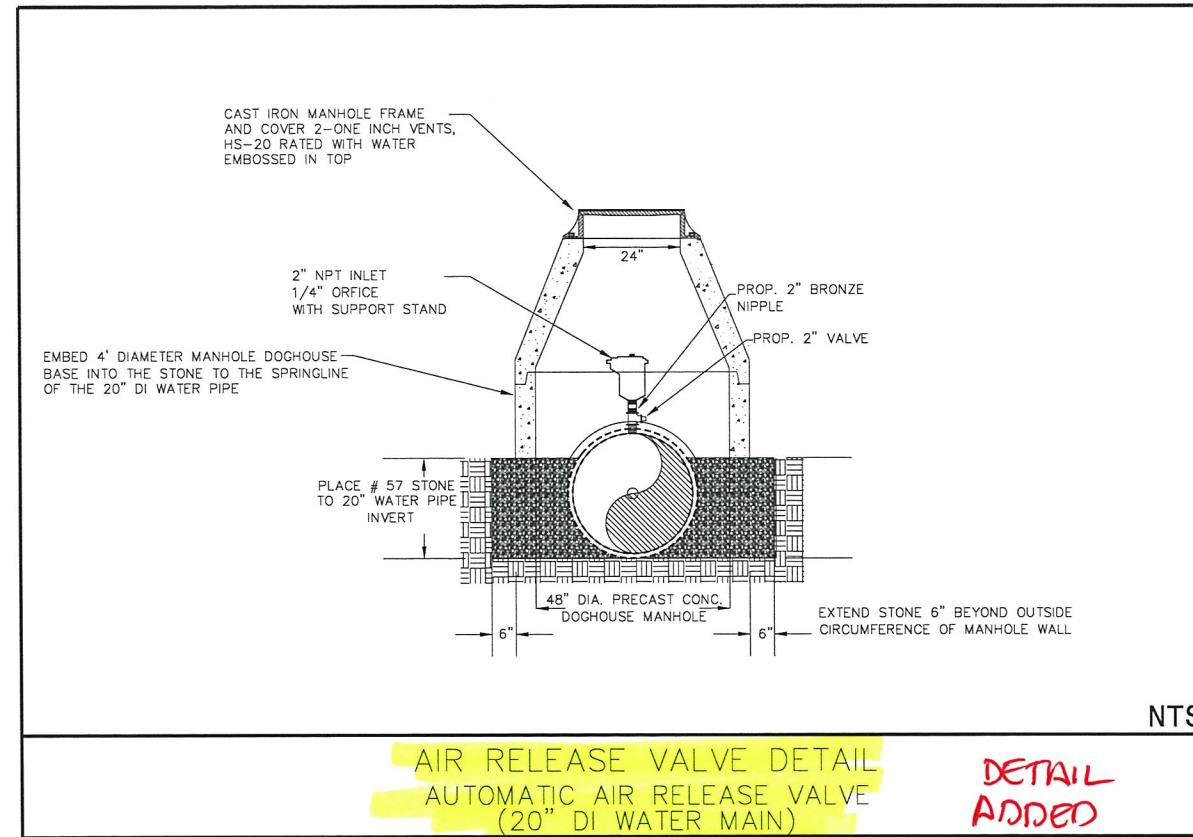
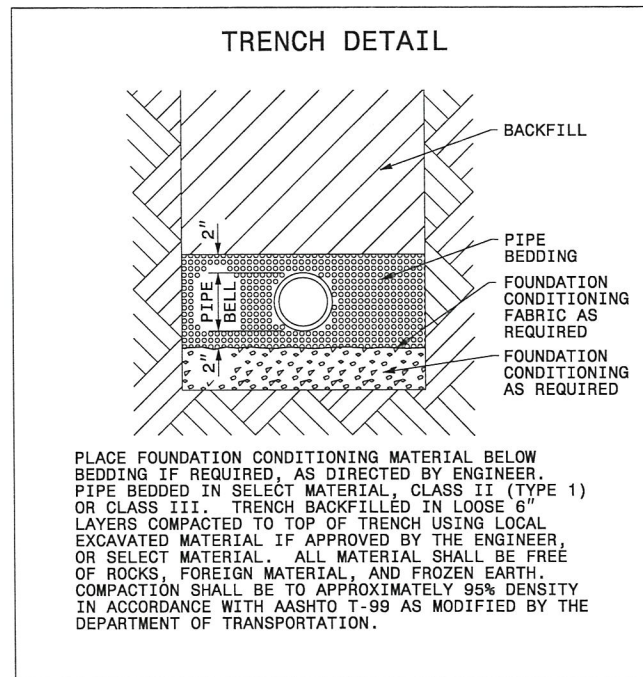
Total Amount Of Bid For Entire Project :



**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO.	R-3421A	SHEET NO.	UC-3A
DESIGNED BY:	RBW		
DRAWN BY:	JKC		
CHECKED BY:	CLS		
APPROVED BY:	RBW		
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
		UTILITY CONSTRUCTION PLANS ONLY	

NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		



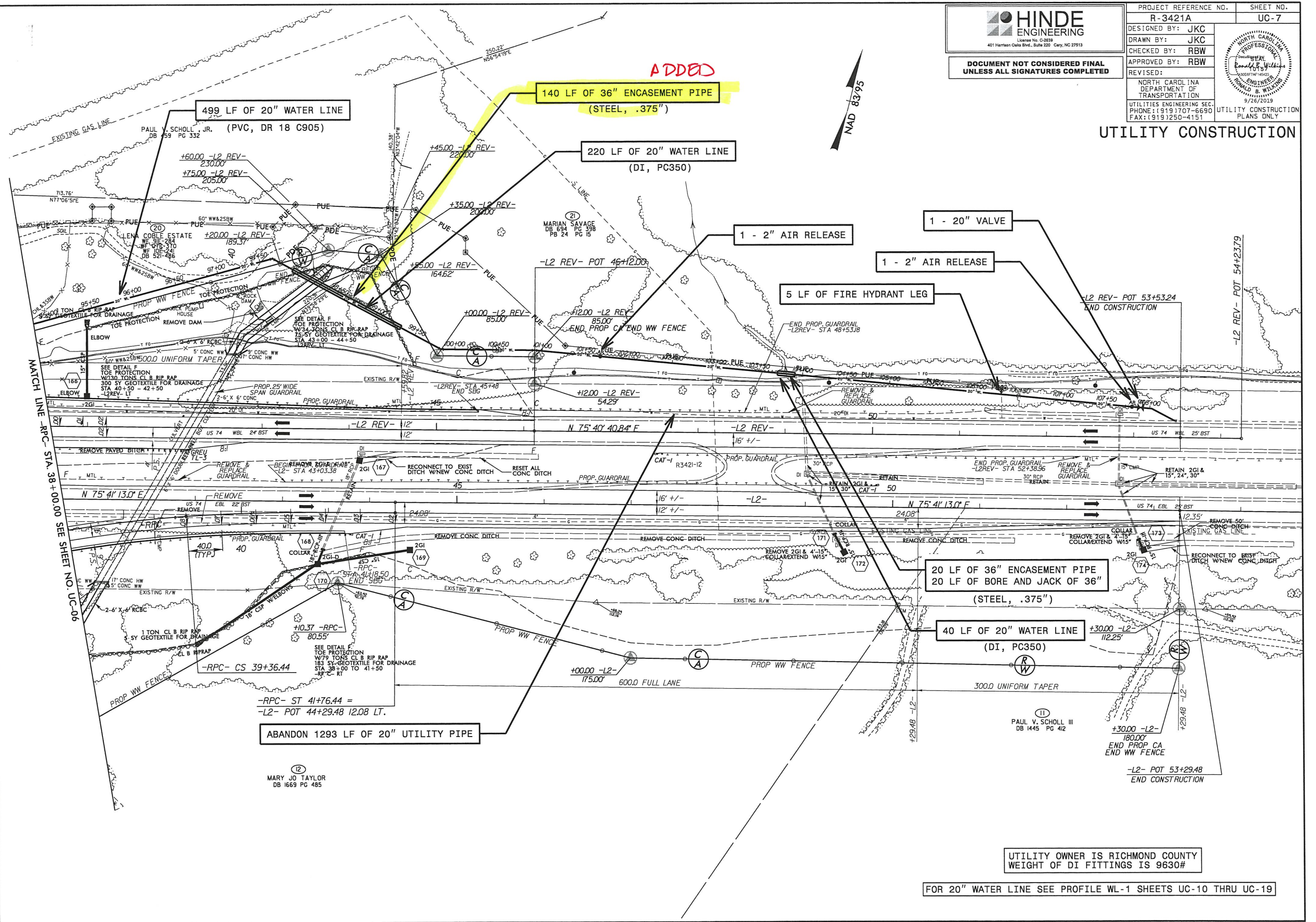
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 3:35:51 PM



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	R-3421A	SHEET NO.	UC-7
DESIGNED BY:	JKC		
DRAWN BY:	JKC		
CHECKED BY:	RBW		
APPROVED BY:	RBW		
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION			

25-SEP-2019 09:05:06 PROJECTS\2018\20181001.01\CAL\XX-RKK-R-3421A\Drawings\Utilities\UC\Proj\NR3421A\_Ut\_Redyl2\_UC07\_psh.dgn



UTILITY OWNER IS RICHMOND COUNTY  
WEIGHT OF DI FITTINGS IS 9630#

FOR 20" WATER LINE SEE PROFILE WL-1 SHEETS UC-10 THRU UC-19



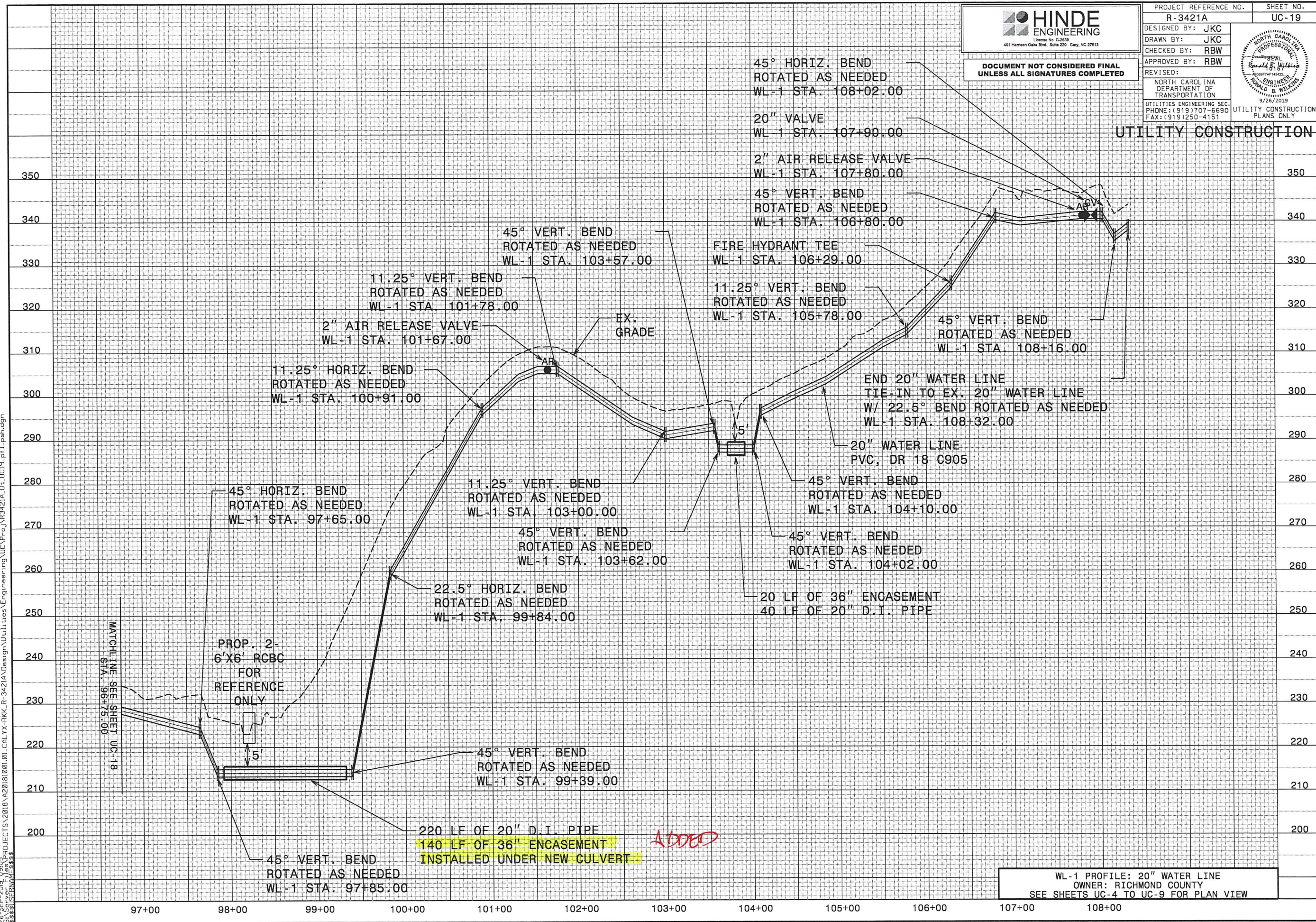


DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. R-3421A	SHEET NO. UC-19
DESIGNED BY: JKC	
DRAWN BY: JKC	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	9/26/2019
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

25 SEP 2019 09:05:30 PROJECTS\2018\02\01\001.01\_CAL\_YX-RKK-R-3421A\Design\Utilities\Engineering\UC-Proj\R3421A\_Ut\_UC19.pf1\_psh.dgn



WL-1 PROFILE: 20" WATER LINE  
OWNER: RICHMOND COUNTY  
SEE SHEETS UC-4 TO UC-9 FOR PLAN VIEW

**TIP PROJECT: R-3421A**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

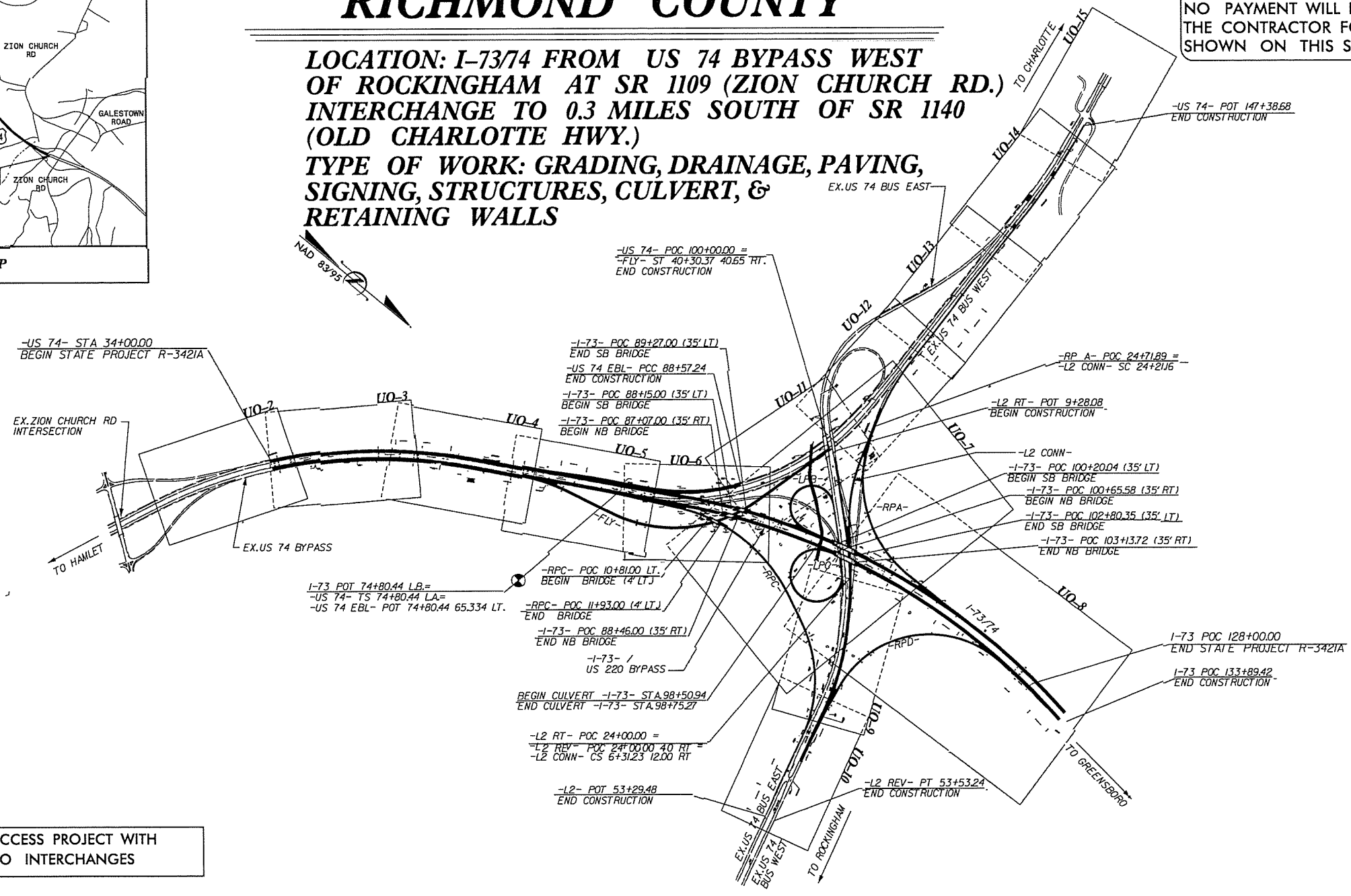
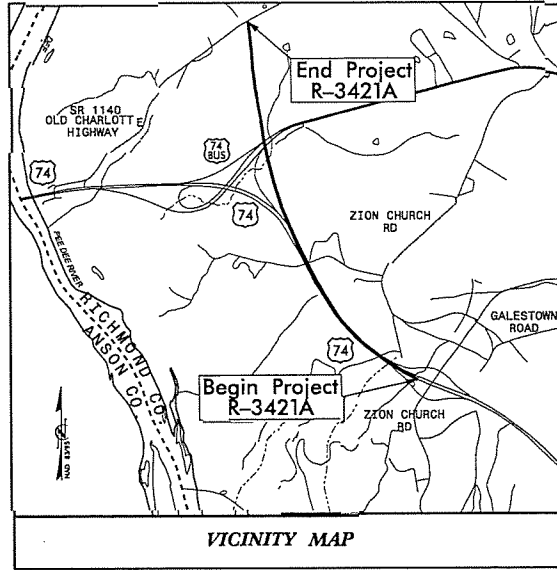
T.I.P. NO.	SHEET NO.
R-3421A	UO-1

**UTILITIES BY OTHERS PLANS  
RICHMOND COUNTY**

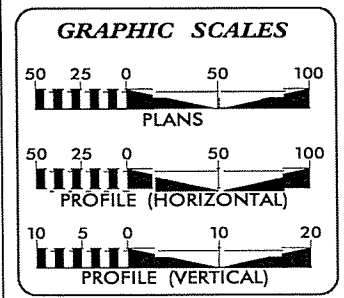
**LOCATION: I-73/74 FROM US 74 BYPASS WEST OF ROCKINGHAM AT SR 1109 (ZION CHURCH RD.) INTERCHANGE TO 0.3 MILES SOUTH OF SR 1140 (OLD CHARLOTTE HWY.)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, STRUCTURES, CULVERT, & RETAINING WALLS**

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



THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-15	UBO PLAN SHEETS

**UTILITY OWNERS WITH CONFLICTS**

(A) POWER - DUKE ENERGY  
(B) POWER - DUKE ENERGY (TRANSMISSION)  
(C) WATER - RICHMOND COUNTY

PREPARED IN THE OFFICE OF:

**HINDE ENGINEERING**  
License No. C-2639  
401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513  
(919)-683-0001

Michael E. Davis UTILITY COORDINATION PROJECT MANAGER  
Harris S. Winters PROJECT UTILITY COORDINATOR  
Jordan K. Chapman PROJECT UTILITY DESIGNER

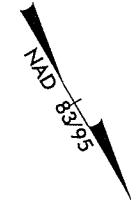
**DIVISION OF HIGHWAYS  
UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

Travis L. Morgan, PE DIVISION CONTACT #1  
James D. Yow DIVISION CONTACT #2

2-SEP-2009 14:31 C:\Users\PROJECTS\2008\A20800\01\CAL YX-RKK.R-3421A\Design\U\U11111\11es\Engineering\UBO\Proj\VR3421A\_U1-fsh\_U0\_psh.dgn

### UTILITIES BY OTHERS

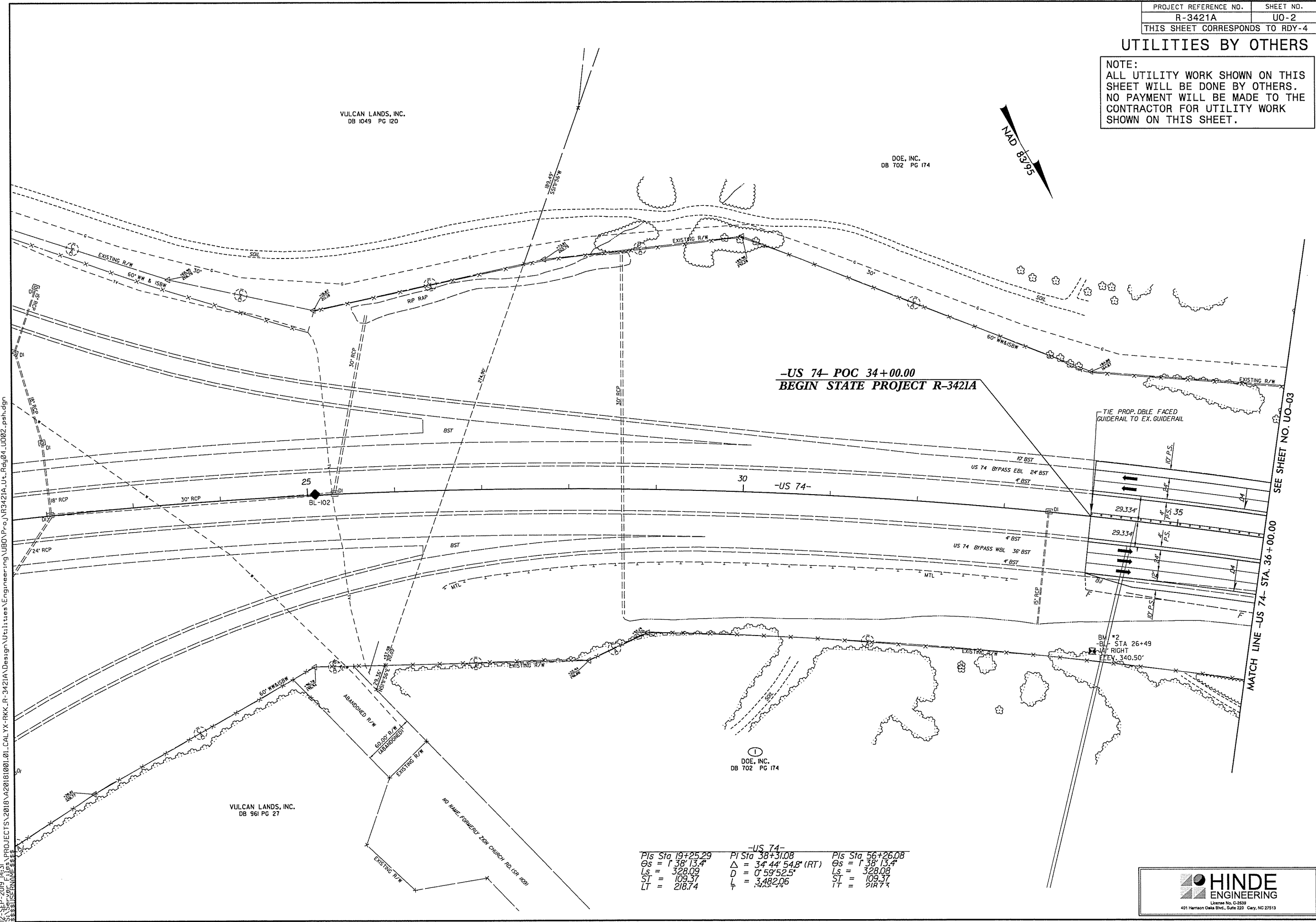
NOTE:  
 ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



VULCAN LANDS, INC.  
 DB 1049 PG 120

DOE, INC.  
 DB 702 PG 174

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 3/23/2019 10:48:58 AM



**-US 74- POC 34+00.00  
 BEGIN STATE PROJECT R-3421A**

MATCH LINE -US 74- STA. 36+00.00  
 SEE SHEET NO. UO-03

DOE, INC.  
 DB 702 PG 174

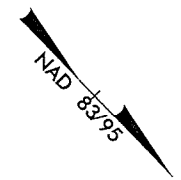
VULCAN LANDS, INC.  
 DB 961 PG 27

-US 74-		
PI Sta 19+25.29	PI Sta 38+31.08	PI Sta 56+26.08
θs = 1° 38' 13.4"	Δ = 34° 44' 54.8" (RT)	θs = 1° 38' 13.4"
Ls = 328.09	D = 0° 59' 52.5"	Ls = 328.08
SI = 109.37	L = 3,482.06	SI = 109.37
LT = 218.74		IT = 218.74

**HINDE ENGINEERING**  
 License No. C-2933  
 401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513

### UTILITIES BY OTHERS

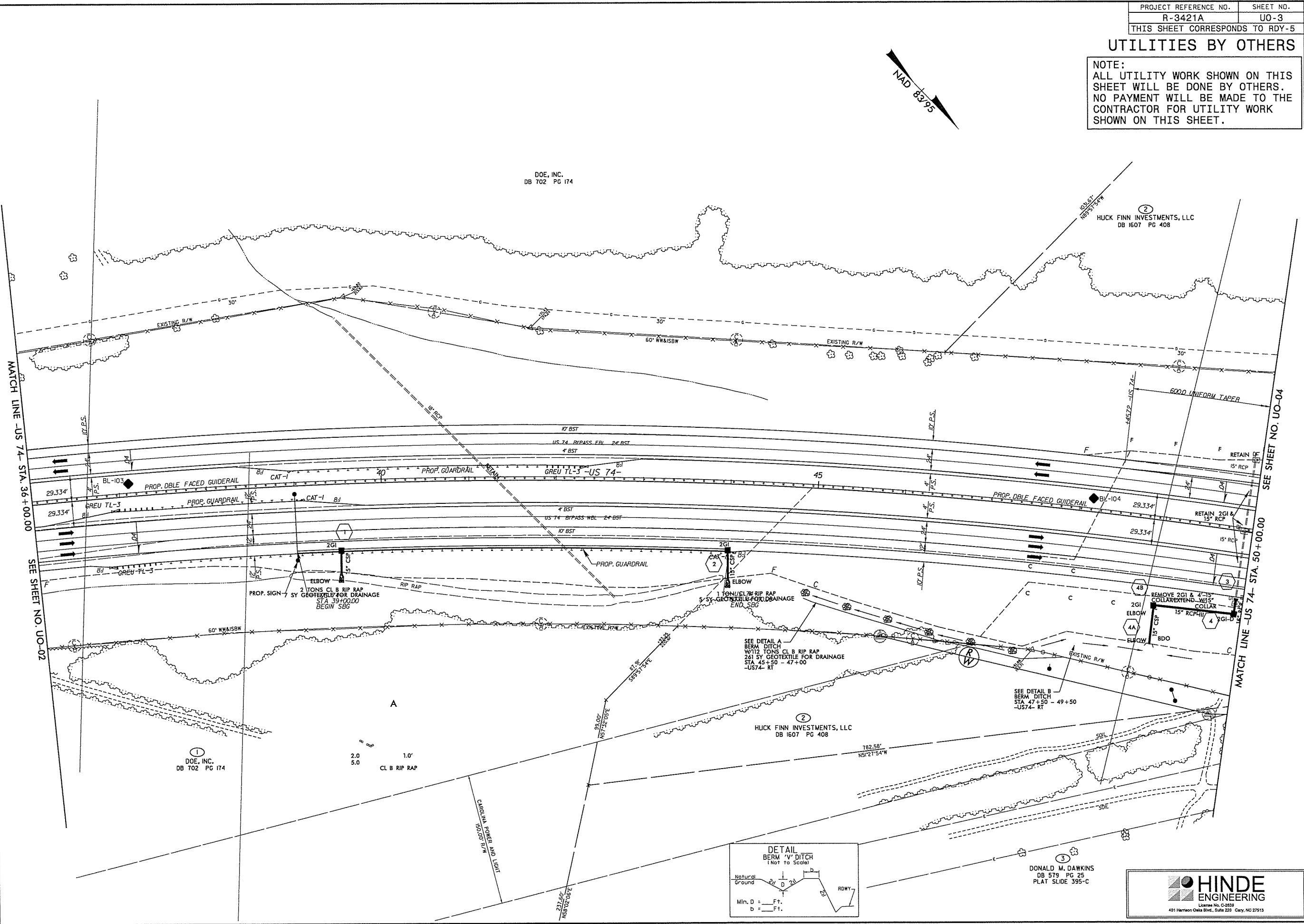
NOTE:  
 ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS.  
 NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



DOE, INC.  
 DB 702 PG 174

HUCK FINN INVESTMENTS, LLC  
 DB 1607 PG 408

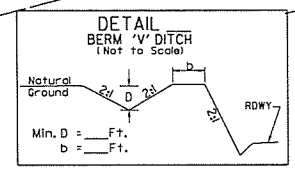
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 3338115581



DOE, INC.  
 DB 702 PG 174

HUCK FINN INVESTMENTS, LLC  
 DB 1607 PG 408

DONALD M. DAWKINS  
 DB 579 PG 25  
 PLAT SLIDE 395-C

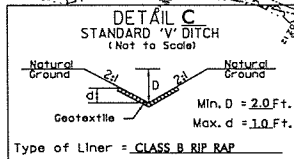
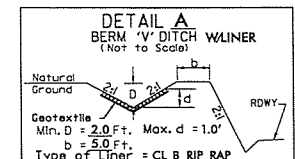
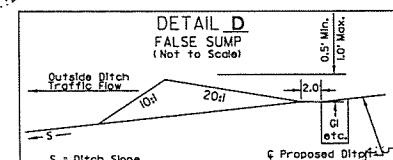
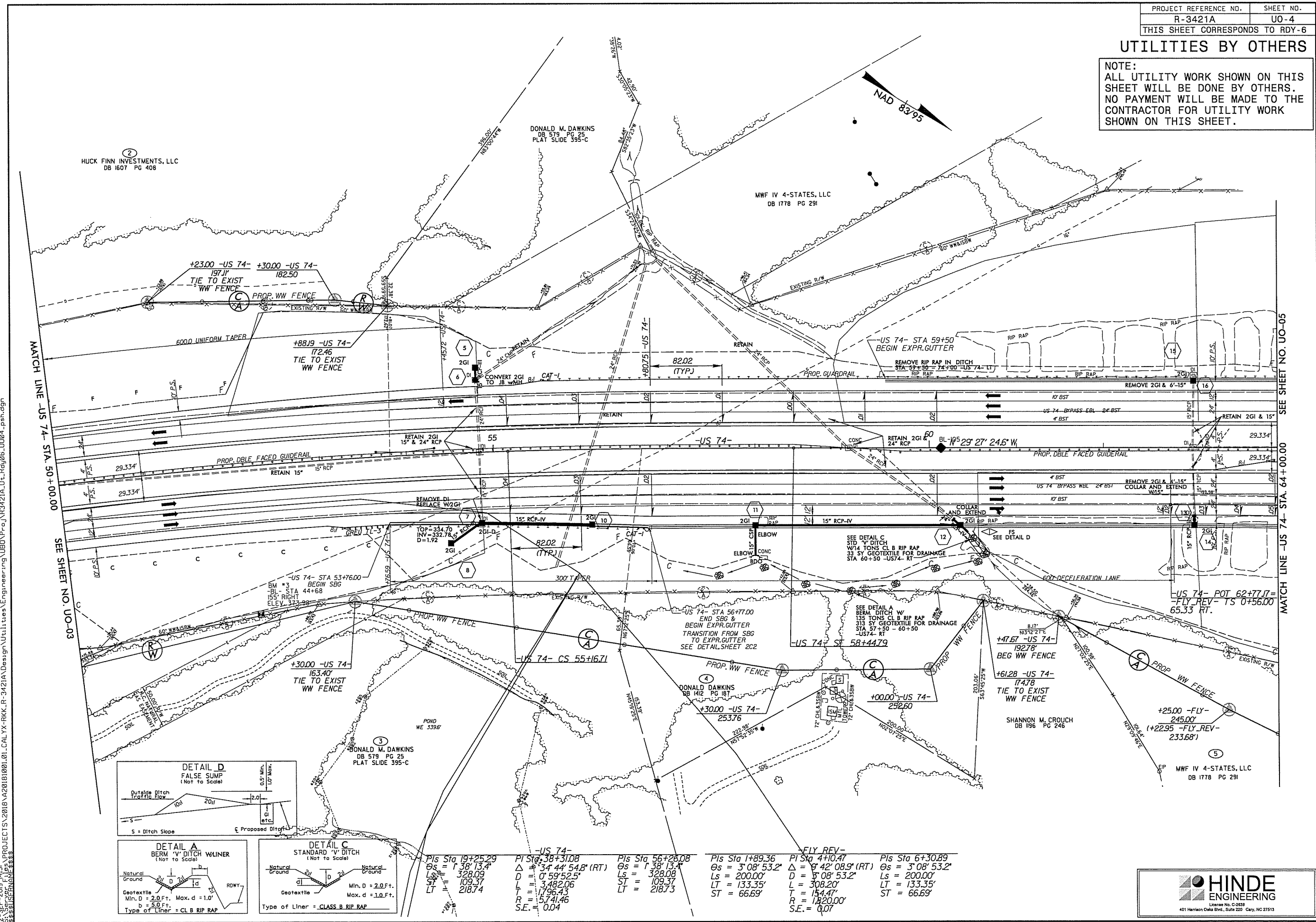


MATCH LINE -US 74- STA. 36 + 00.00  
 SEE SHEET NO. UO-02

MATCH LINE -US 74- STA. 50 + 00.00  
 SEE SHEET NO. UO-04

### UTILITIES BY OTHERS

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.

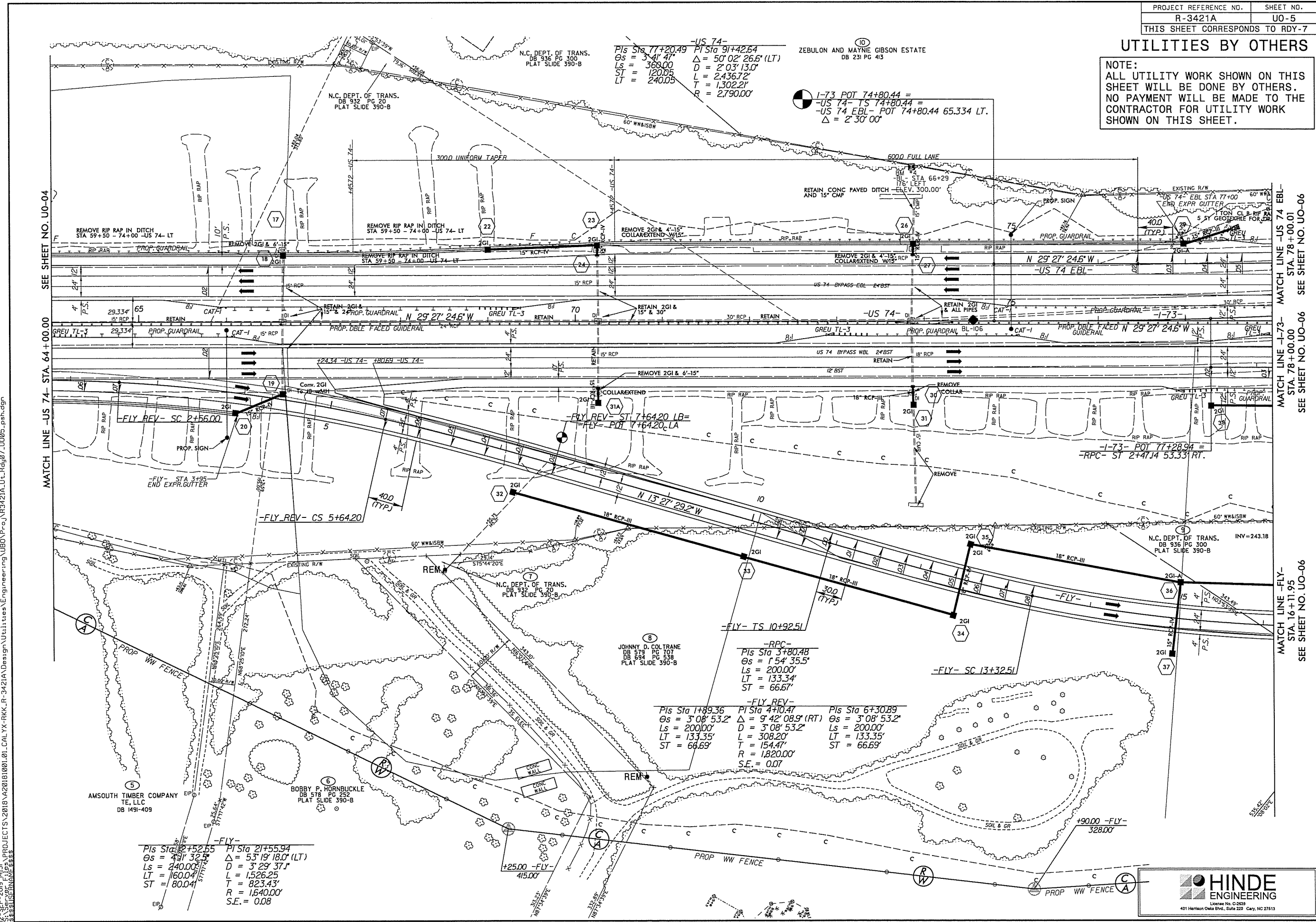


Station	PI Sta	PI Sta	PI Sta	PI Sta	PI Sta
19+25.29	38+31.08	56+28.08	1+89.36	4+10.47	6+30.89
Δ = 138°13.4'	Δ = 34°44'54.8" (RT)	Δ = 138°13.4'	Δ = 3°08'53.2"	Δ = 9°42'08.9" (RT)	Δ = 3°08'53.2"
Ls = 328.09	D = 0'59"52.5"	Ls = 328.08	Ls = 200.00'	D = 3'08"53.2"	Ls = 200.00'
ST = 109.37	L = 348.206	ST = 109.37	LT = 133.35'	L = 308.20'	LT = 133.35'
LT = 218.74	T = 1796.43	LT = 218.73	T = 154.47'	R = 1320.00'	ST = 66.69'
	R = 5741.46		R = 1320.00'	S.E. = 0.07	
	S.E. = 0.04				

12-SEP-2019 14:31 \\PROJECTS\2018\A20181001.01\CAL\YX-RK\R-3421A\Design\Utilities\Engineering\UO04\_PSH.dgn  
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### UTILITIES BY OTHERS

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.



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 3:31:15 PM

MATCH LINE -US 74- STA. 64+00.00  
 SEE SHEET NO. UO-04

MATCH LINE -US 74 EBL- STA. 78+00.01  
 SEE SHEET NO. UO-06

MATCH LINE -I-73- STA. 78+00.00  
 SEE SHEET NO. UO-06

MATCH LINE -FLY- STA. 16+11.95  
 SEE SHEET NO. UO-06

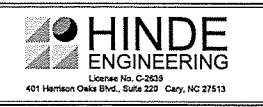
-FLY-  
 PIs Sta 12+52.55 PI Sta 21+55.94  
 Os = 431' 32.5" Δ = 53' 19" 18.0" (LT)  
 Ls = 240.00' D = 3' 29" 37"  
 LT = 160.04' L = 1526.25'  
 ST = 80.04' T = 823.43'  
 R = 1640.00'  
 S.E. = 0.08

-US 74-  
 PIs Sta 77+20.49 PI Sta 91+42.64  
 Os = 341' 47" Δ = 50' 02" 26.6" (LT)  
 Ls = 366.00' D = 2' 03" 13.0"  
 ST = 120.05' L = 2436.72'  
 LT = 240.05' T = 1302.21'  
 R = 2790.00'

1-73 POT 74+80.44 =  
 -US 74- IS 74+80.44 =  
 -US 74 EBL- POT 74+80.44 65.334 LT.  
 Δ = 2' 30" 00"

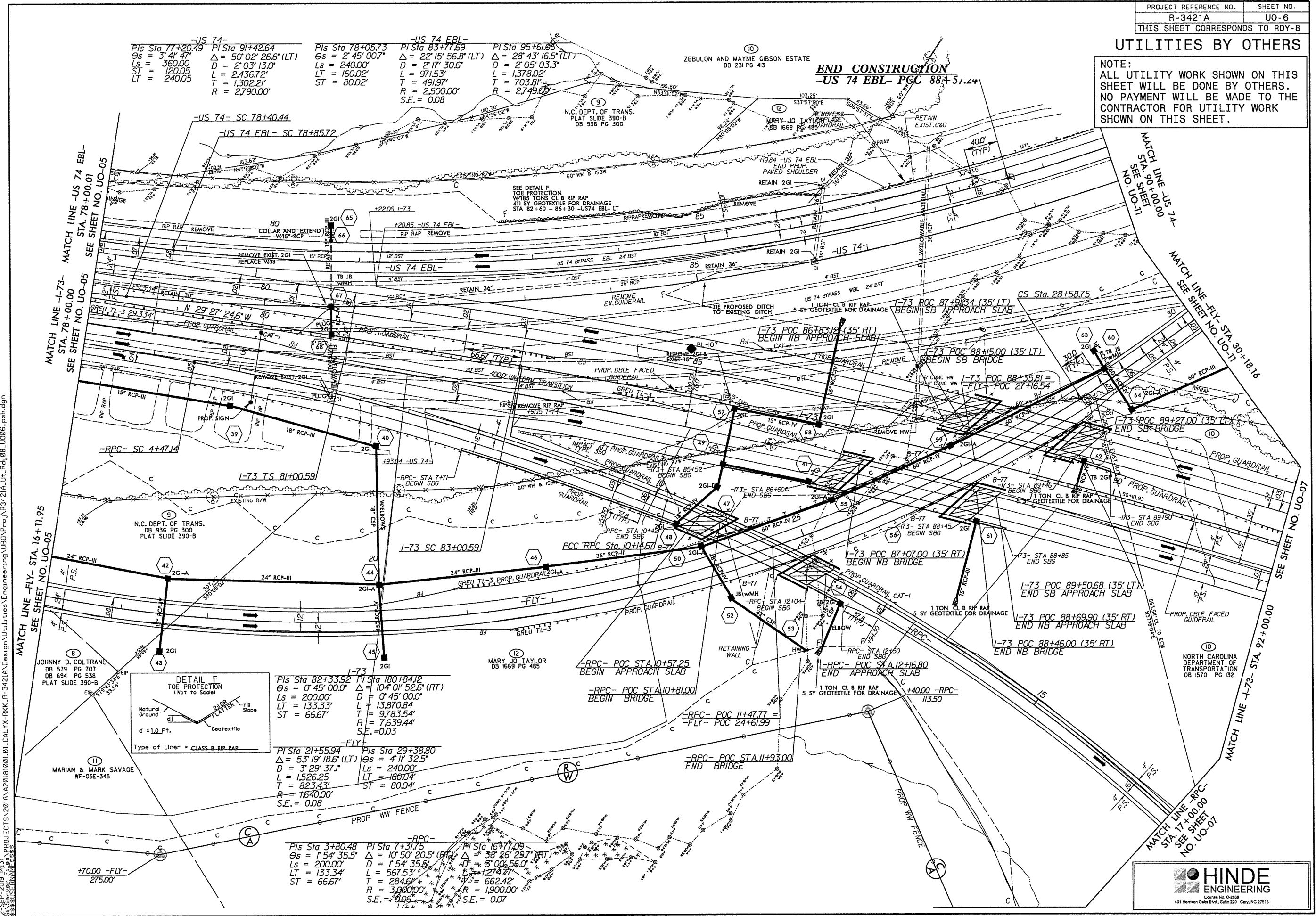
-RPC-  
 PIs Sta 3+80.48  
 Os = 154' 35.5"  
 Ls = 200.00'  
 LT = 133.34'  
 ST = 66.67'

-FLY REV-  
 PIs Sta 1+89.36 PI Sta 4+10.47 PI Sta 6+30.89  
 Os = 3' 08" 53.2" Δ = 9' 42" 08.9" (RT) Os = 3' 08" 53.2"  
 Ls = 200.00' D = 3' 08" 53.2" Ls = 200.00'  
 LT = 133.35' L = 308.20' LT = 133.35'  
 ST = 66.69' T = 154.47' ST = 66.69'  
 R = 1820.00'  
 S.E. = 0.07



### UTILITIES BY OTHERS

NOTE:  
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-US 74-		-US 74 EBL-	
PI Sta 77+20.49	PI Sta 91+42.64	PI Sta 78+05.73	PI Sta 83+77.69
Os = 3' 41' 47"	Δ = 50' 02' 26.6" (LT)	Os = 2' 45' 00.7"	Δ = 22' 15' 56.8" (LT)
Ls = 360.00	D = 2' 03' 13.0"	Ls = 240.00	D = 2' 05' 03.3"
ST = 120.05	L = 2,436.72'	L = 971.53'	L = 1,378.02'
LT = 240.05	T = 1,302.21'	T = 491.97'	T = 703.81'
	R = 2,790.00'	R = 2,500.00'	R = 2,749.00'
		S.E. = 0.08	

DETAIL F  
TOE PROTECTION  
(Not to Scale)

Type of Liner = CLASS B RIP RAP

PI Sta 82+33.92	PI Sta 180+84.12
Os = 0' 45' 00.0"	Δ = 104' 01' 52.6" (RT)
Ls = 200.00	D = 0' 45' 00.0"
LT = 133.33'	L = 13,870.84'
ST = 66.67'	L = 9,783.54'
	T = 7,639.44'
	R = 7,639.44'
	S.E. = 0.03

PI Sta 21+55.94	PI Sta 29+38.80
Δ = 53' 19' 18.6" (LT)	Os = 4' 11' 32.5"
D = 3' 29' 37.1"	Ls = 240.00
L = 1,526.25'	LT = 160.04'
T = 823.43'	ST = 80.04'
R = 1,540.00'	
S.E. = 0.08	

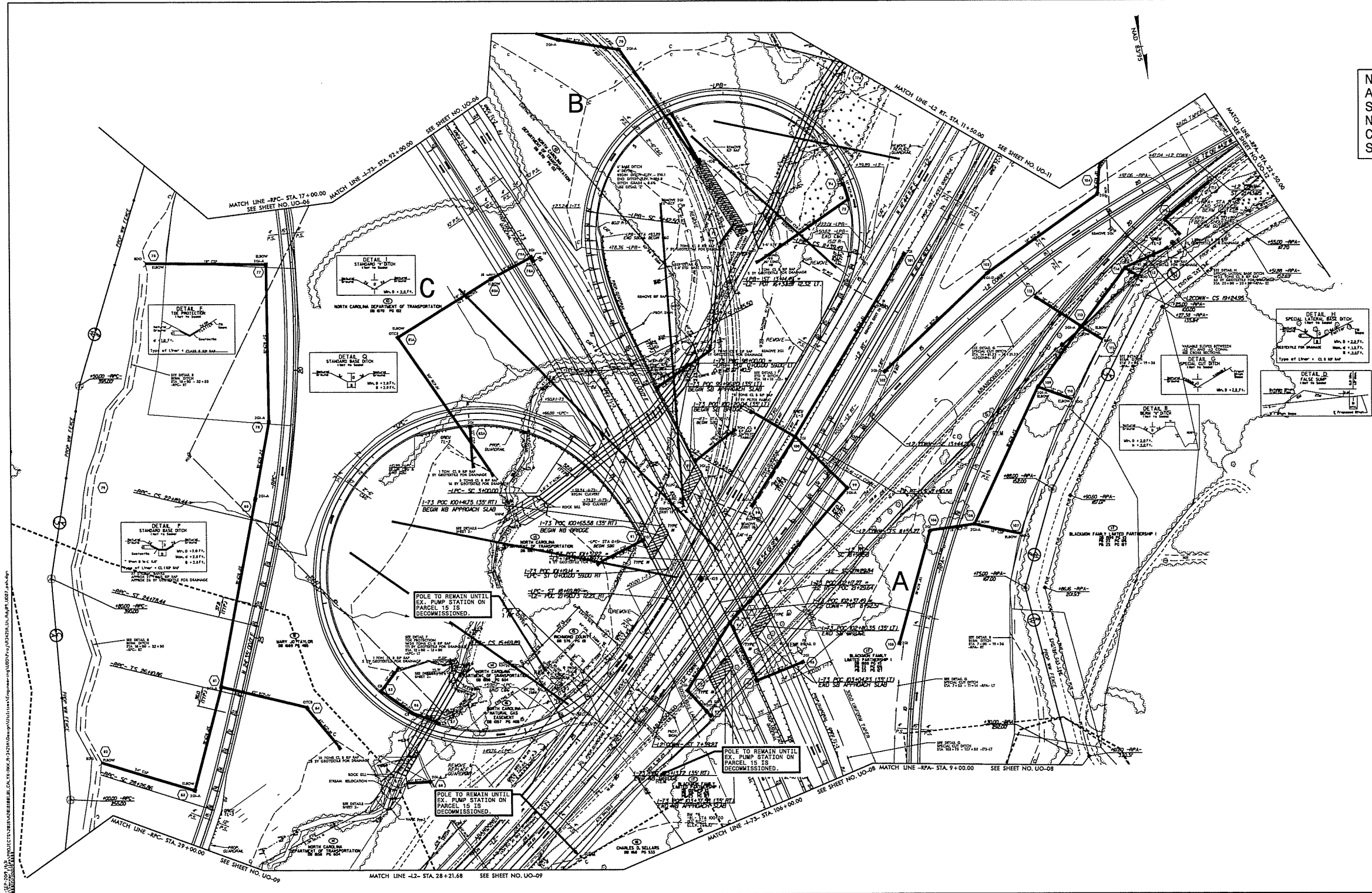
PI Sta 3+80.48	PI Sta 7+31.75	PI Sta 16+77.09
Os = 1' 54' 35.5"	Δ = 10' 50' 20.5" (RT)	Δ = 38' 26' 29.7" (RT)
Ls = 200.00	D = 1' 54' 35.5"	D = 5' 00' 56.0"
LT = 133.34'	L = 567.53'	L = 1,274.77'
ST = 66.67'	T = 284.61'	T = 662.42'
	R = 3,000.00'	R = 1,900.00'
	S.E. = 0.06	S.E. = 0.07

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PROJECT REFERENCE NO.	SHEET NO.
R-3421A	UO-7
THIS SHEET CORRESPONDS TO RDY-9	

### UTILITIES BY OTHERS

**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.

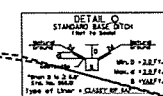
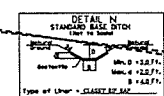
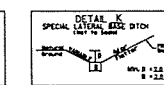
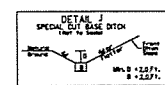
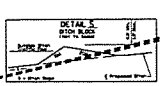
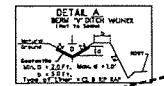
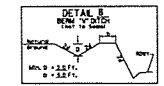
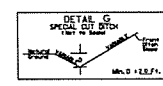
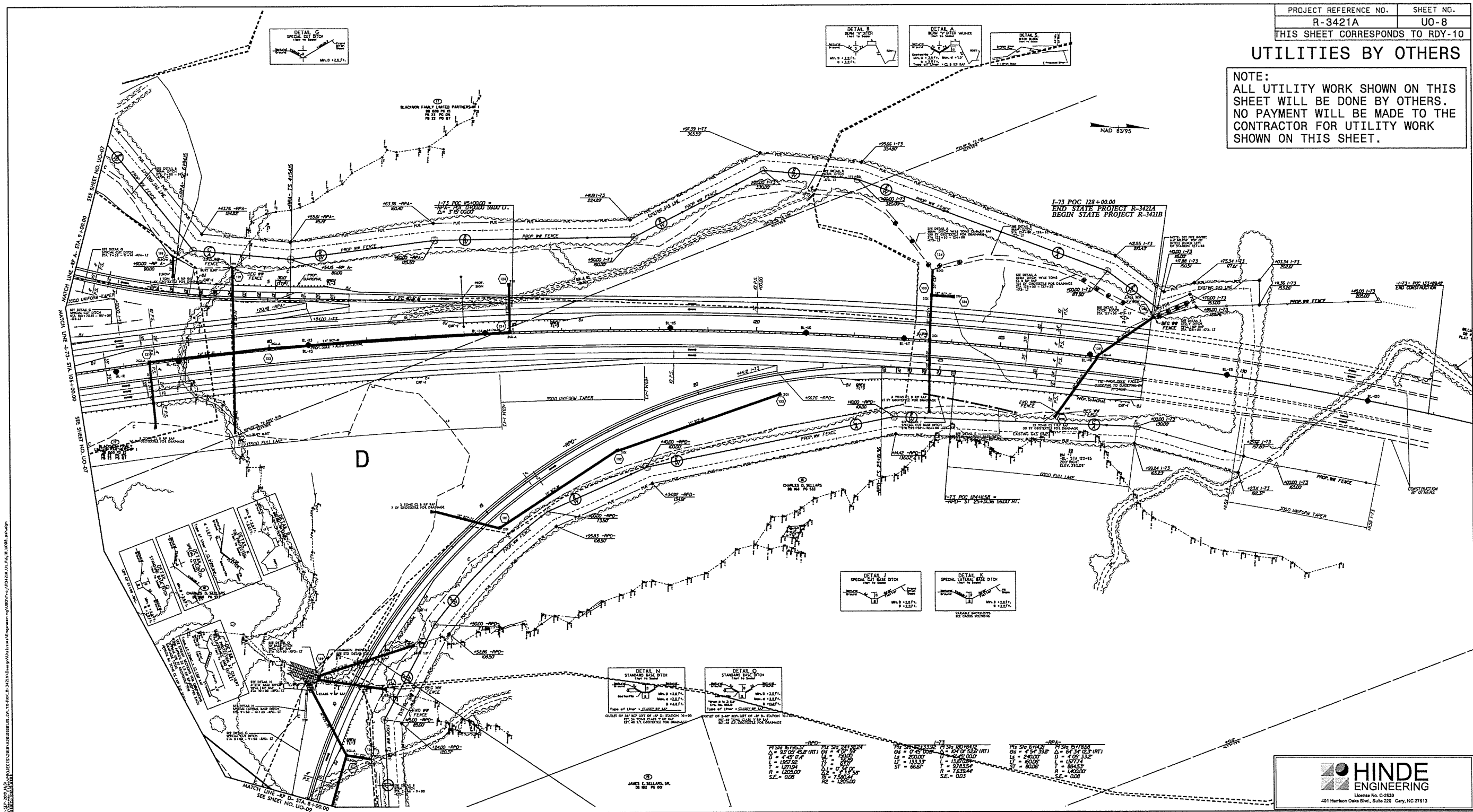


**HINDE ENGINEERING**  
 License No. C0253  
 401 Hickman Oaks Blvd., Suite 200 Cary, NC 27513



**UTILITIES BY OTHERS**

**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.

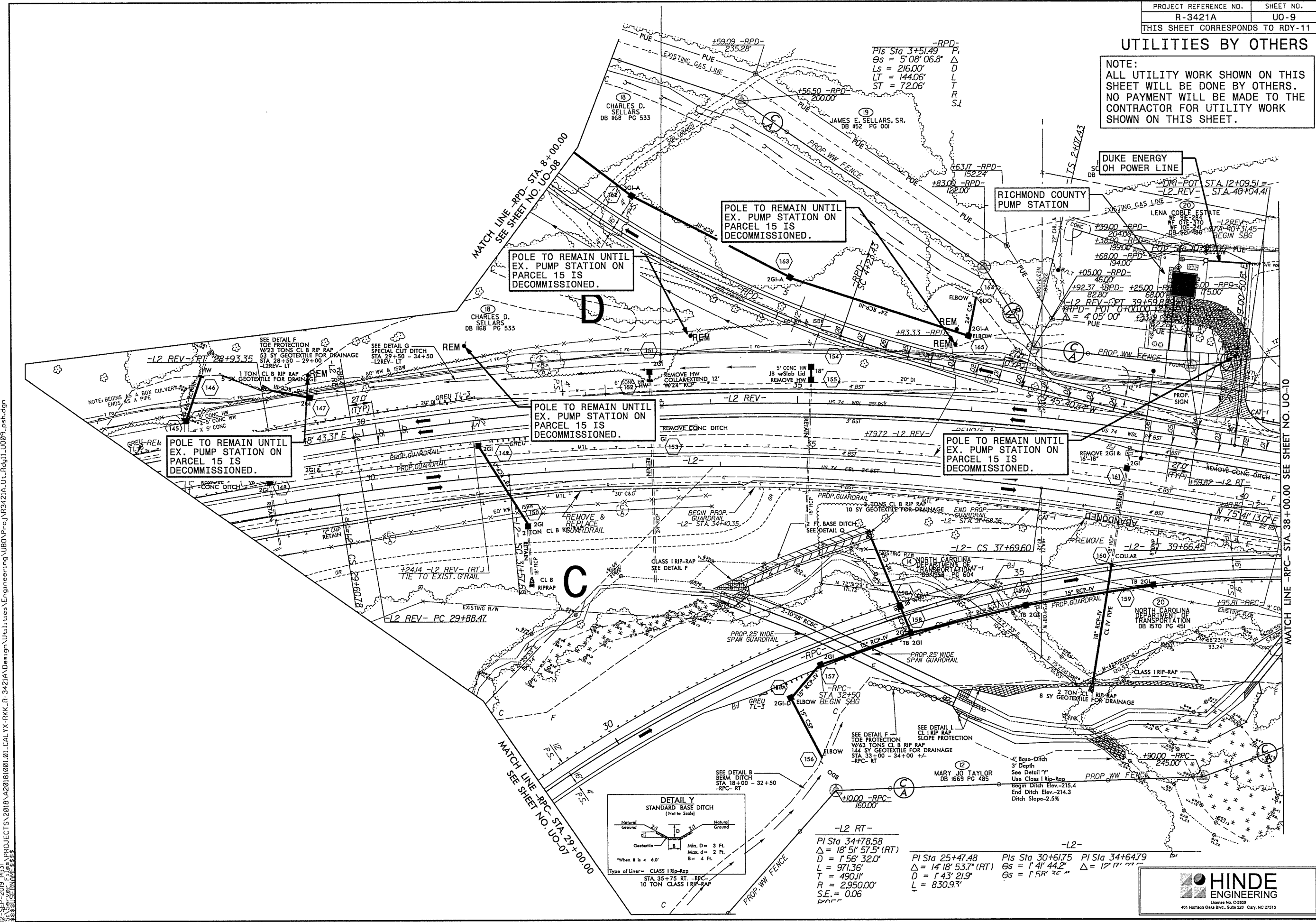


STATION	PI	SI	SI	PI	SI	SI	PI	SI	SI
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128+00.00	128+00.00	128+00.00	128+00.00	128+00.00	128+00.00	128+00.00	128+00.00	128+00.00	128+00.00

JAMES L. SELLARS, S.E.  
 License No. 34239

### UTILITIES BY OTHERS

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.



MATCH LINE - RPC - STA 8+00.00  
SEE SHEET NO. UO-08

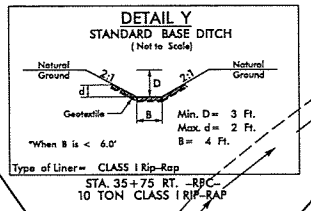
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POLE TO REMAIN UNTIL EX. PUMP STATION ON PARCEL 15 IS DECOMMISSIONED.

POLE TO REMAIN UNTIL EX. PUMP STATION ON PARCEL 15 IS DECOMMISSIONED.

POLE TO REMAIN UNTIL EX. PUMP STATION ON PARCEL 15 IS DECOMMISSIONED.

POLE TO REMAIN UNTIL EX. PUMP STATION ON PARCEL 15 IS DECOMMISSIONED.



-L2 RT-  
PI Sta 34+78.58  
 $\Delta = 18' 51' 57.5''$  (RT)  
D = 1' 56' 32.0"  
L = 971.36'  
T = 490.11'  
R = 2,950.00'  
S.E. = 0.06

PI Sta 25+47.48  
 $\Delta = 14' 18' 53.7''$  (RT)  
D = 1' 43' 21.9"  
L = 830.93'

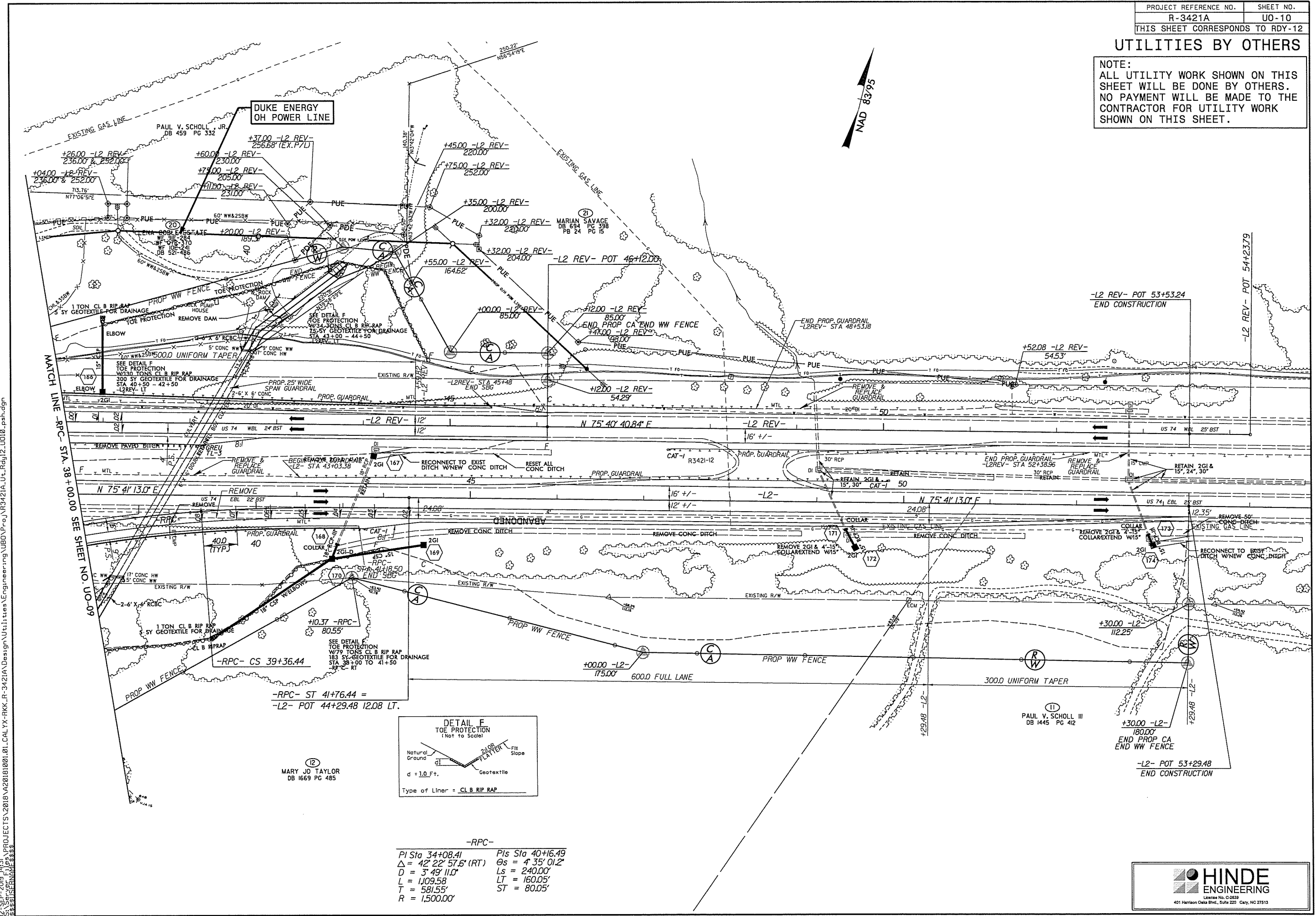
PIs Sta 30+61.75 PI Sta 34+64.79  
 $\Delta = 1' 41' 44.2''$   $\Delta = 12' 17' 27.7''$   
 $\Delta = 1' 58' 26.8''$

12-SEP-2019 14:31 \\PROJECTS\2018\A20181001\01\CAL\YX-RKK-R-3421A\Design\Utilities\Engineering\UBO\Pre-UO-9\RDY-11\UO091\_psh.dgn  
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 3421A-UBO-9-11-001.dwg

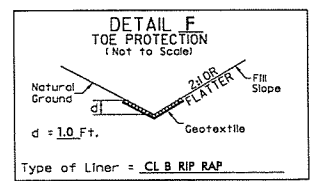
MATCH LINE - RPC - STA 38+00.00 SEE SHEET NO. UO-10

### UTILITIES BY OTHERS

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.



12-SEP-2019 14:31 \\projects\2018\2018101001\01\CAL\YX-RKK-R-3421A\Design\Utilities\Engineering\UO0101\UO101\_psh.dgn  
 2018-09-27 10:58:33 AM



-RPC-

PI Sta 34+08.41	PIs Sta 40+16.49
$\Delta = 42^\circ 22' 57.6''$ (RT)	$\Theta_s = 4^\circ 35' 01.2''$
$D = 3^\circ 49' 11.0''$	$L_s = 240.00'$
$L = 1109.58'$	$LT = 160.05'$
$T = 581.55'$	$ST = 80.05'$
$R = 1,500.00'$	

### UTILITIES BY OTHERS

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.

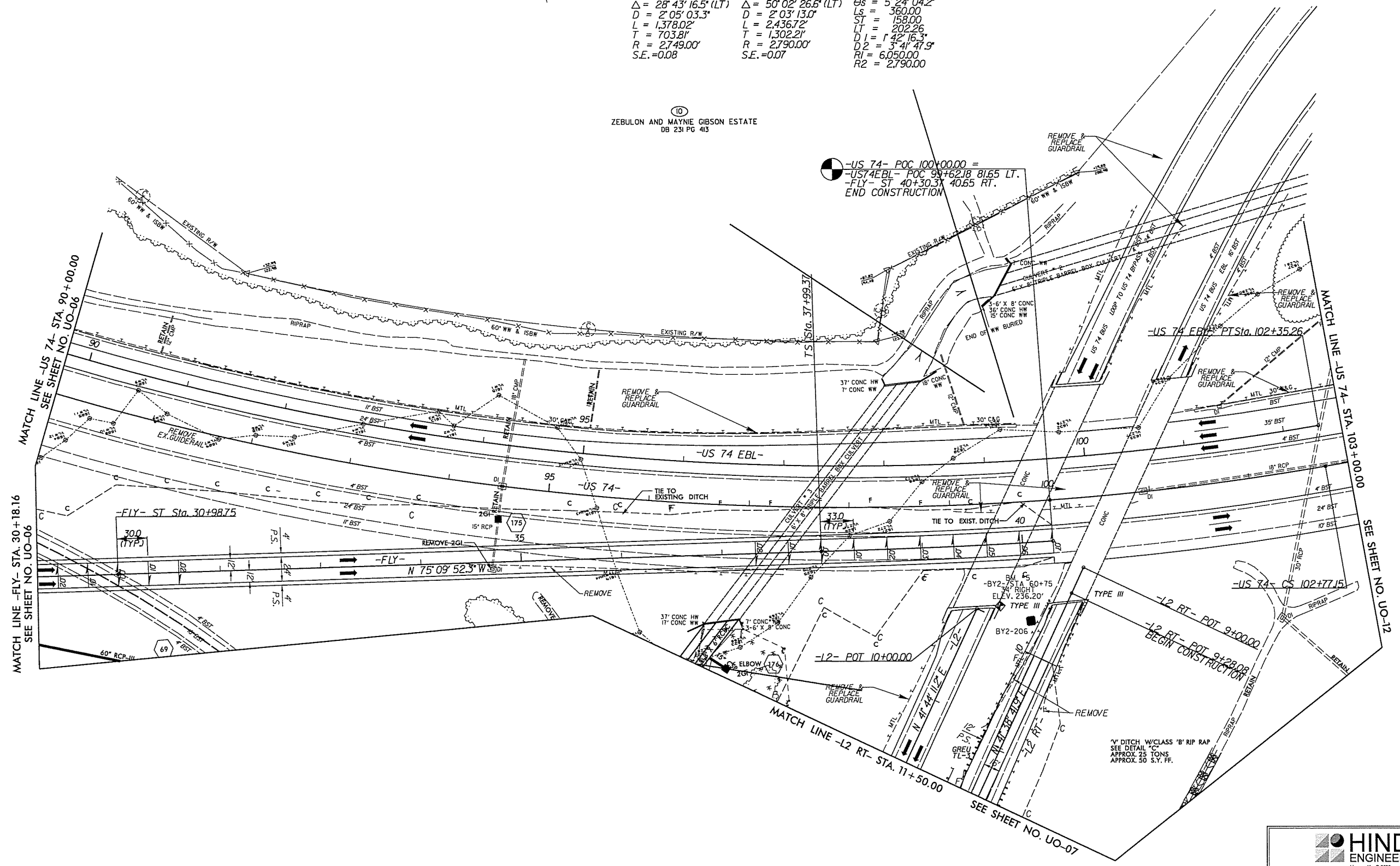
-FLY-		-FLY-	
PIs Sta 12+52.55	PI Sta 21+55.94	PIs Sta 29+38.80	PIs Sta 39+53.39
Os = 4' 11" 32.5"	Δ = 53' 19" 18.0" (LT)	Os = 4' 11" 32.5"	Os = 2' 20" 16.3"
Ls = 240.00'	D = 3' 29' 37.1"	Ls = 240.00'	Ls = 231.00'
LT = 160.04'	L = 1,526.25'	LT = 160.04'	LT = 154.01'
ST = 80.04'	T = 823.43'	ST = 80.04'	ST = 77.01'
	R = 1,640.00'		
	S.E. = 0.08		

-US 74 EBL-		-US 74-	
PI Sta 95+61.05	PI Sta 91+42.64	PIs Sta 104+35.15	
Δ = 28' 43" 16.5" (LT)	Δ = 50' 02" 26.6" (LT)	Os = 5' 24" 04.2"	
D = 2' 05" 03.3"	D = 2' 03" 13.0"	Ls = 360.00'	
L = 1,378.02'	L = 2,436.72'	ST = 158.00'	
T = 703.81'	T = 1,302.21'	LT = 202.26'	
R = 2,749.00'	R = 2,790.00'	D1 = 1' 42" 16.3"	
S.E. = 0.08	S.E. = 0.07	D2 = 3' 41" 47.9"	
		R1 = 6,050.00'	
		R2 = 2,790.00'	



10  
ZEBULON AND MAYNIE GIBSON ESTATE  
DB 231 PG 413

⊙ -US 74- POC 100+00.00 =  
-US 74 EBL- POC 99+62.18 81.65 LT.  
-FLY- ST 40+30.37 40.65 RT.  
END CONSTRUCTION

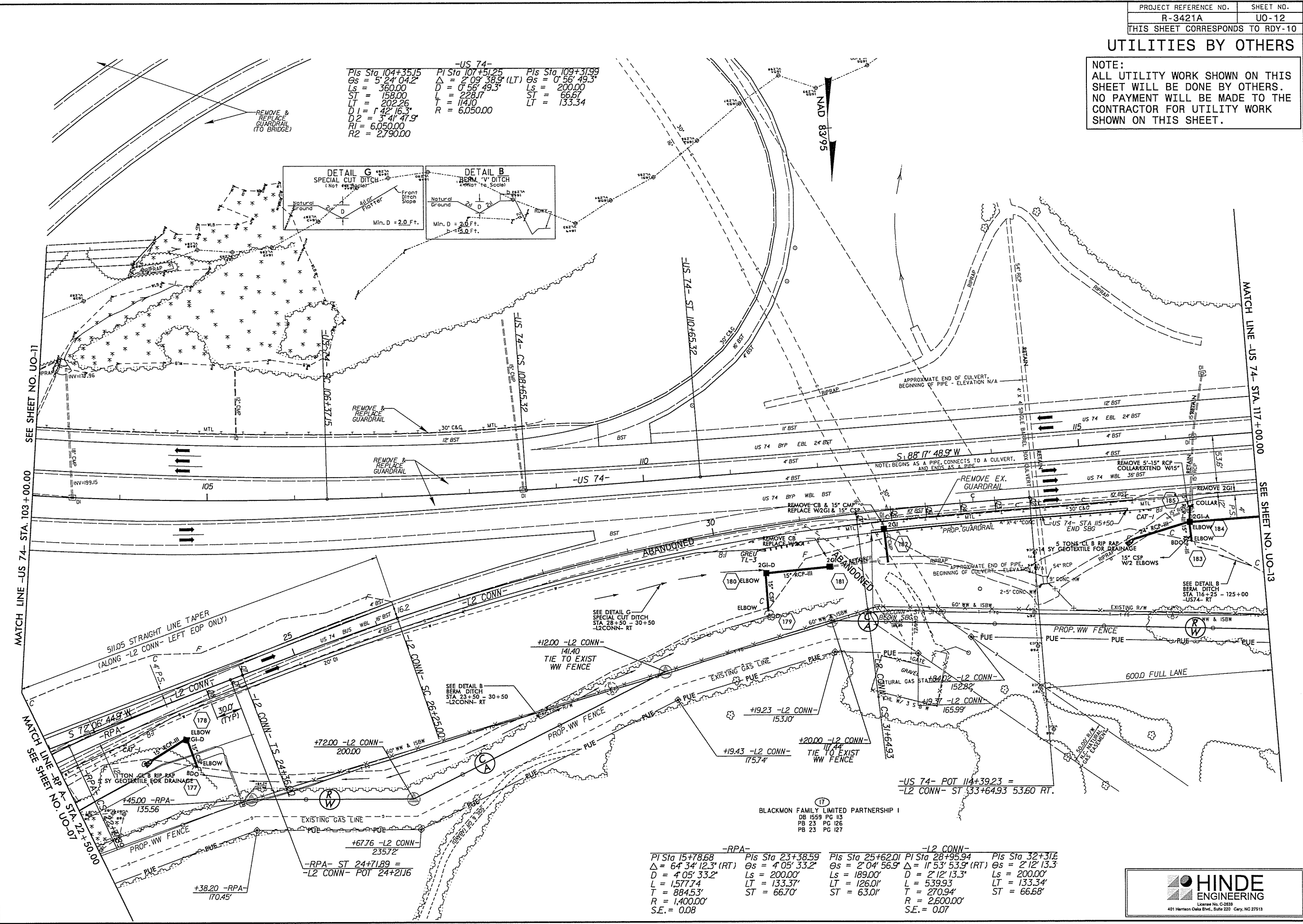


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### UTILITIES BY OTHERS

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.

12-SEP-2019 14:32 PROJECTS\2018\A20181001\01\CAL.YX-RKK.R-3421A\Design\Utilities\Engineering\UO-12\RDY-10\UO12\_psh.dgn



-US 74-

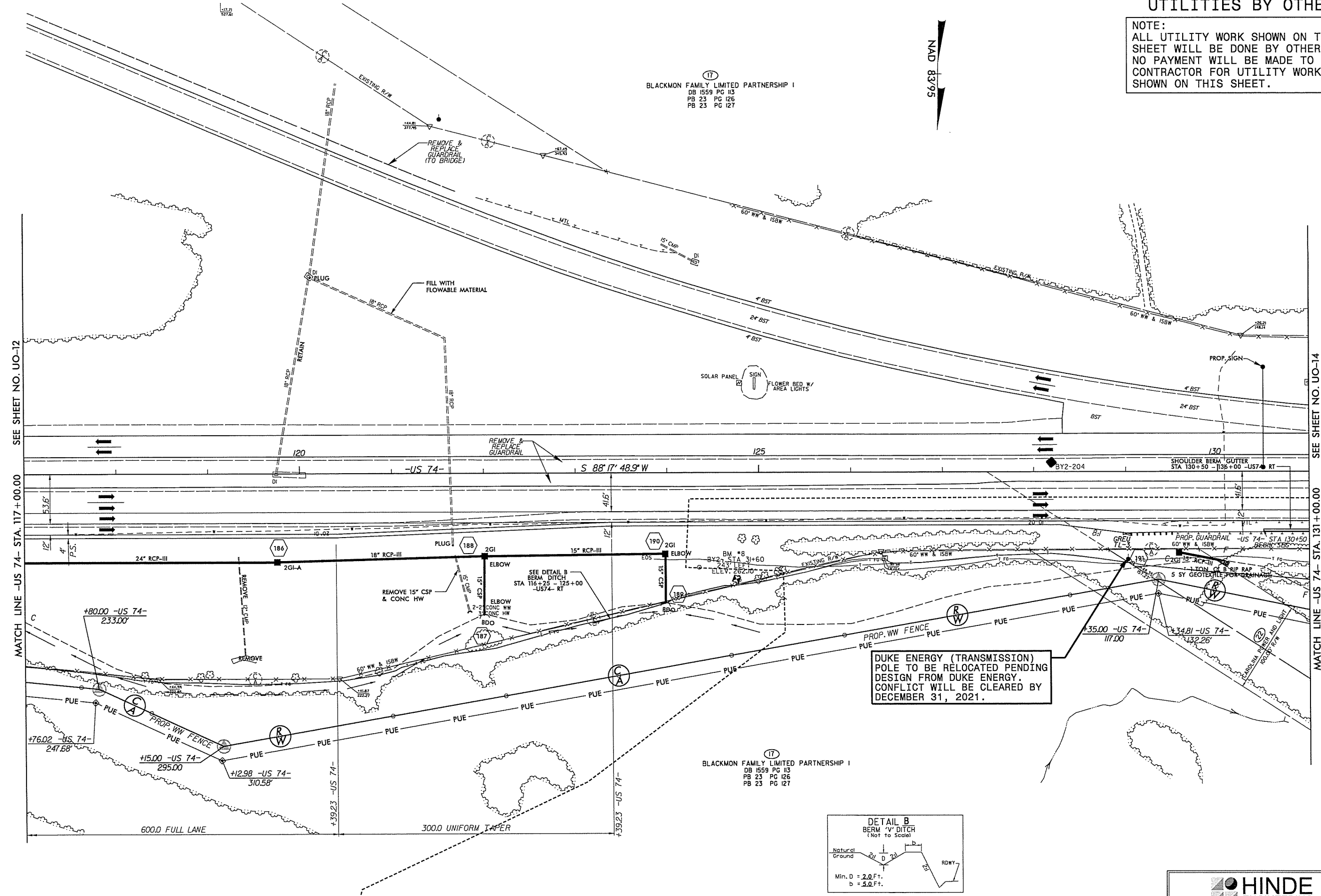
PIs Sta 104+35.15	PI Sta 107+51.25	PIs Sta 109+31.99
Os = 5' 24' 04.2"	Δ = 2' 09' 38.9" (LT)	Os = 0' 56' 49.3"
Ls = 360.00	D = 0' 56' 49.3"	Ls = 200.00
ST = 158.00	L = 228.17	ST = 66.67
LT = 202.26	R = 114.10	LT = 133.34
D1 = 1' 42' 16.3"	R = 6,050.00	
D2 = 3' 41' 47.9"		
RI = 6,050.00		
R2 = 2,790.00		

PI Sta 15+78.68	-RPA-	PIs Sta 23+38.59	-L2 CONN-	PIs Sta 25+62.01	PIs Sta 28+95.94	PIs Sta 32+31.6
Δ = 64' 34' 12.3" (RT)		Os = 4' 05' 33.2"		Os = 2' 04' 56.9"	Δ = 11' 53' 53.9" (RT)	Os = 2' 12' 13.3"
D = 4' 05' 33.2"		Ls = 200.00'		Ls = 189.00'	D = 2' 12' 13.3"	Ls = 200.00'
L = 1577.74		LT = 133.37'		LT = 126.0'	L = 539.93	LT = 133.34'
T = 884.53'		ST = 66.70'		ST = 63.01'	T = 270.94'	ST = 66.68'
R = 1,400.00'					R = 2,600.00'	
S.E. = 0.08					S.E. = 0.07	

### UTILITIES BY OTHERS

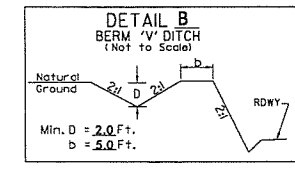
NOTE:  
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

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BLACKMON FAMILY LIMITED PARTNERSHIP I  
DB 1559 PG 13  
PB 23 PG 126  
PB 23 PG 127

BLACKMON FAMILY LIMITED PARTNERSHIP I  
DB 1559 PG 13  
PB 23 PG 126  
PB 23 PG 127

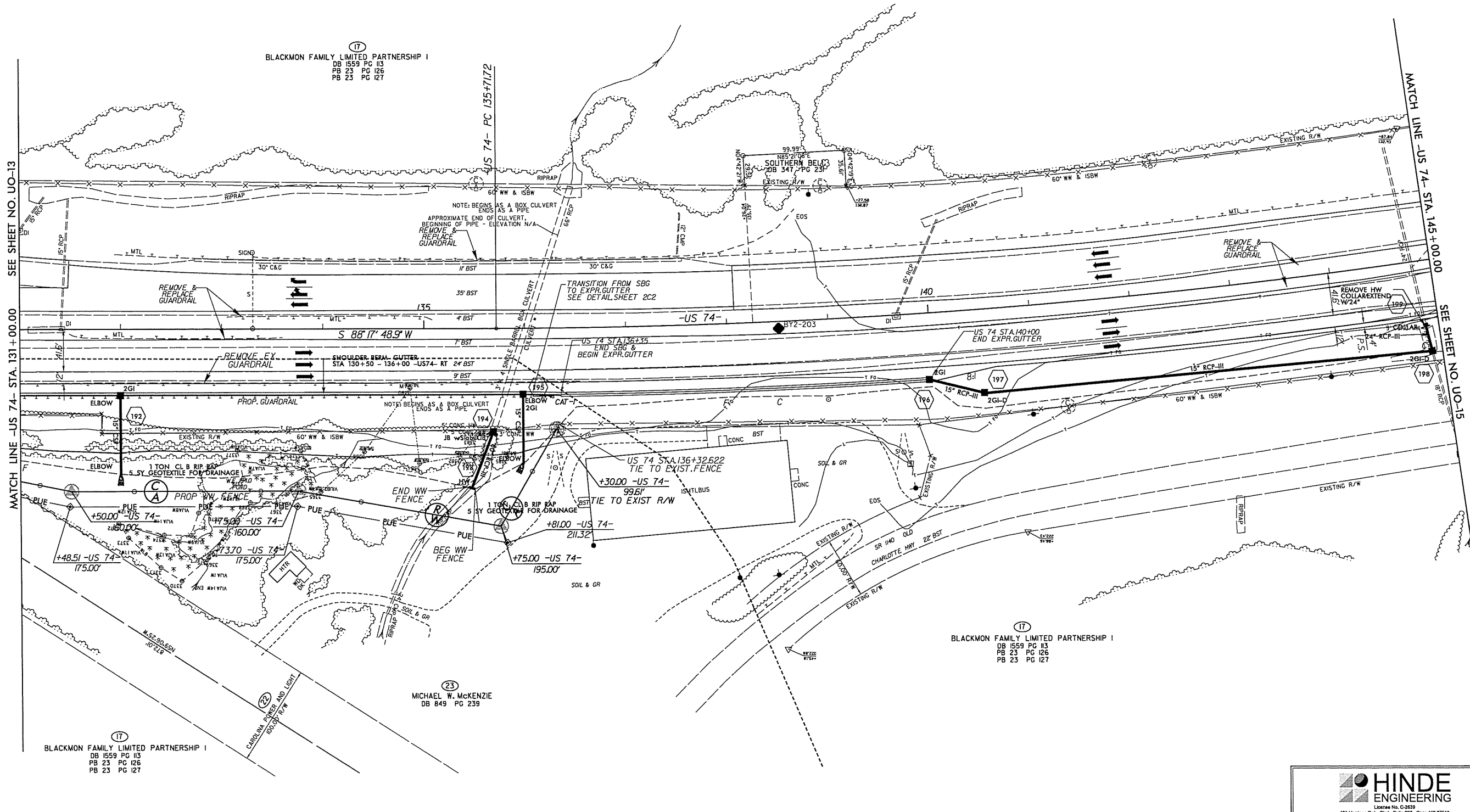


### UTILITIES BY OTHERS

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.

-US 74-  
 PI Sta 140+67.57  
 $\Delta = 8^{\circ} 43' 28.9" (LT)$   
 $D = 0^{\circ} 52' 53.3"$   
 $L = 989.786$   
 $T = 495.85$   
 $R = 6,500.00$

2 SEP 2019 14:32 PROJECTS\2018\A20181001\01\CAL\YX-RRK-R-3421A\Design\Utilities\Engineering\UBO\Proj\VR3421A-Ut-Redy16-U014\_psh.dgn



17  
 BLACKMON FAMILY LIMITED PARTNERSHIP I  
 DB 1559 PG 13  
 PB 23 PG 126  
 PB 23 PG 127

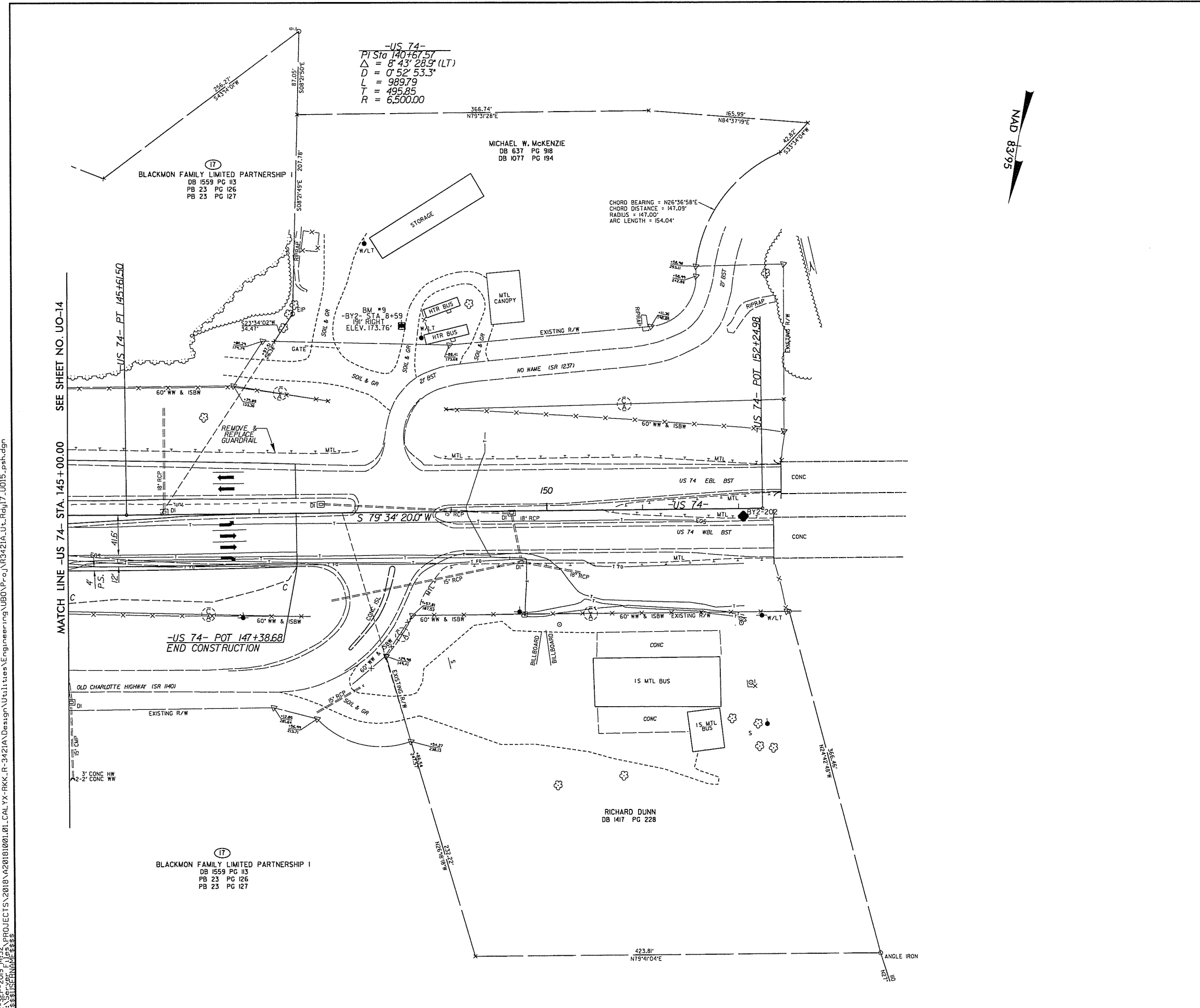
17  
 BLACKMON FAMILY LIMITED PARTNERSHIP I  
 DB 1559 PG 13  
 PB 23 PG 126  
 PB 23 PG 127

23  
 MICHAEL W. MCKENZIE  
 DB 849 PG 239



### UTILITIES BY OTHERS

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.



12-SEP-2019 14:32 PROJECTS\2018\A20181001\01\CAL YX-RKK-R-3421A\Design\Utilities\Engineering\UB0\Proj\3421A\_Ut\_Reg\7\_U015\_psh.dgn  
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**TIP PROJECT: R-3421B**

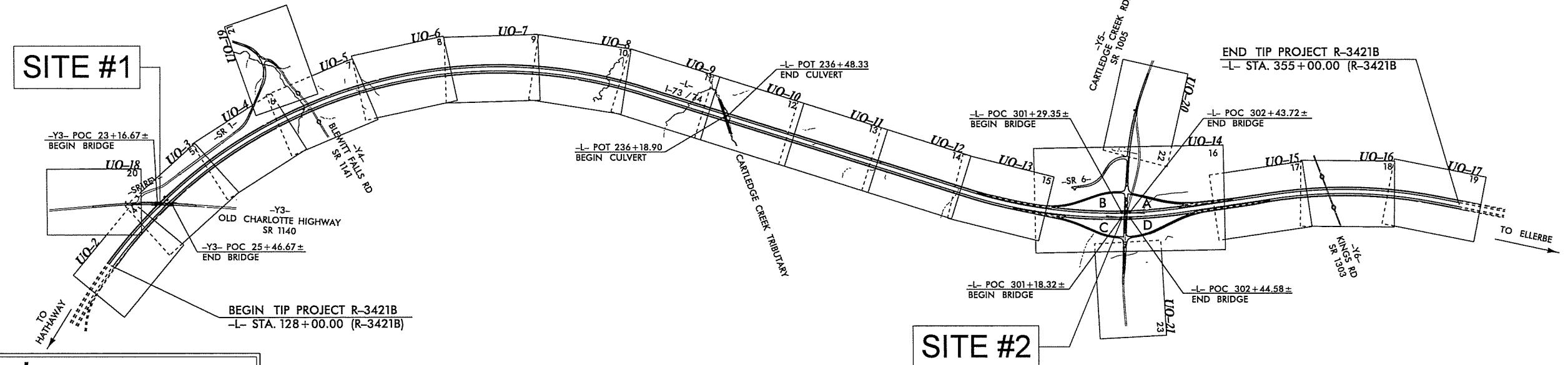
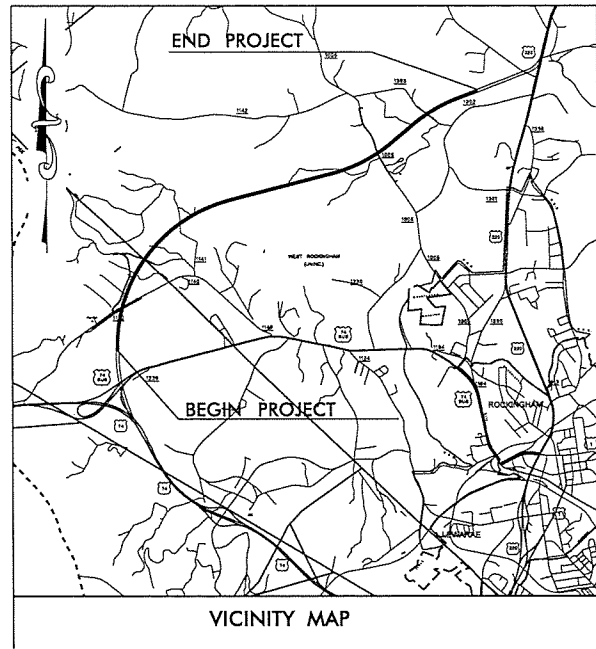
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
R-3421B	UO-1

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

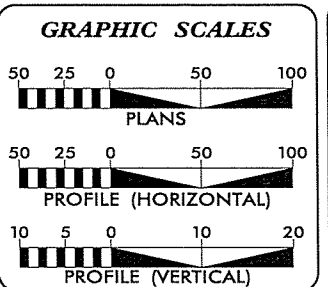
**UTILITIES BY OTHERS PLANS  
RICHMOND COUNTY**

**LOCATION: I-374 FROM 0.3 MILES SOUTH OF SR 1140 (OLD CHARLOTTE HIGHWAY) TO 0.2 MILES SOUTHWEST OF SR 1304 (HARRINGTON ROAD)**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, CULVERTS, STRUCTURES, MSE RETAINING WALLS, AND SIGNING**



**MULKEY**  
ENGINEERS & CONSULTANTS  
PO Box 33127  
RALEIGH, N.C. 27636  
(919) 851-1912  
(919) 851-1918 (FAX)  
WWW.MULKEYINC.COM

NOTE:  
THIS PROJECT IS A CONTROLLED ACCESS PROJECT WITH ACCESS LIMITED TO THE INTERCHANGE.



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-21	UBO PLAN SHEETS

**UTILITY OWNERS WITH CONFLICTS**  
(A) POWER - DUKE ENERGY  
(B) POWER - DUKE ENERGY (TRANSMISSION)  
(C) POWER - PEE DEE ELECTRIC  
(D) TELECOM - AT&T  
(E) TELECOM - MCNC  
(F) TELECOM - CHARTER / SPECTRUM

PREPARED IN THE OFFICE OF:

**HINDE ENGINEERING**  
License No. C-2639  
401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513  
(919) 653-0001

Michael E. Davis **UTILITY COORDINATION PROJECT MANAGER**  
Harris S. Winters **PROJECT UTILITY COORDINATOR**  
Jordan K. Chapman **PROJECT UTILITY DESIGNER**

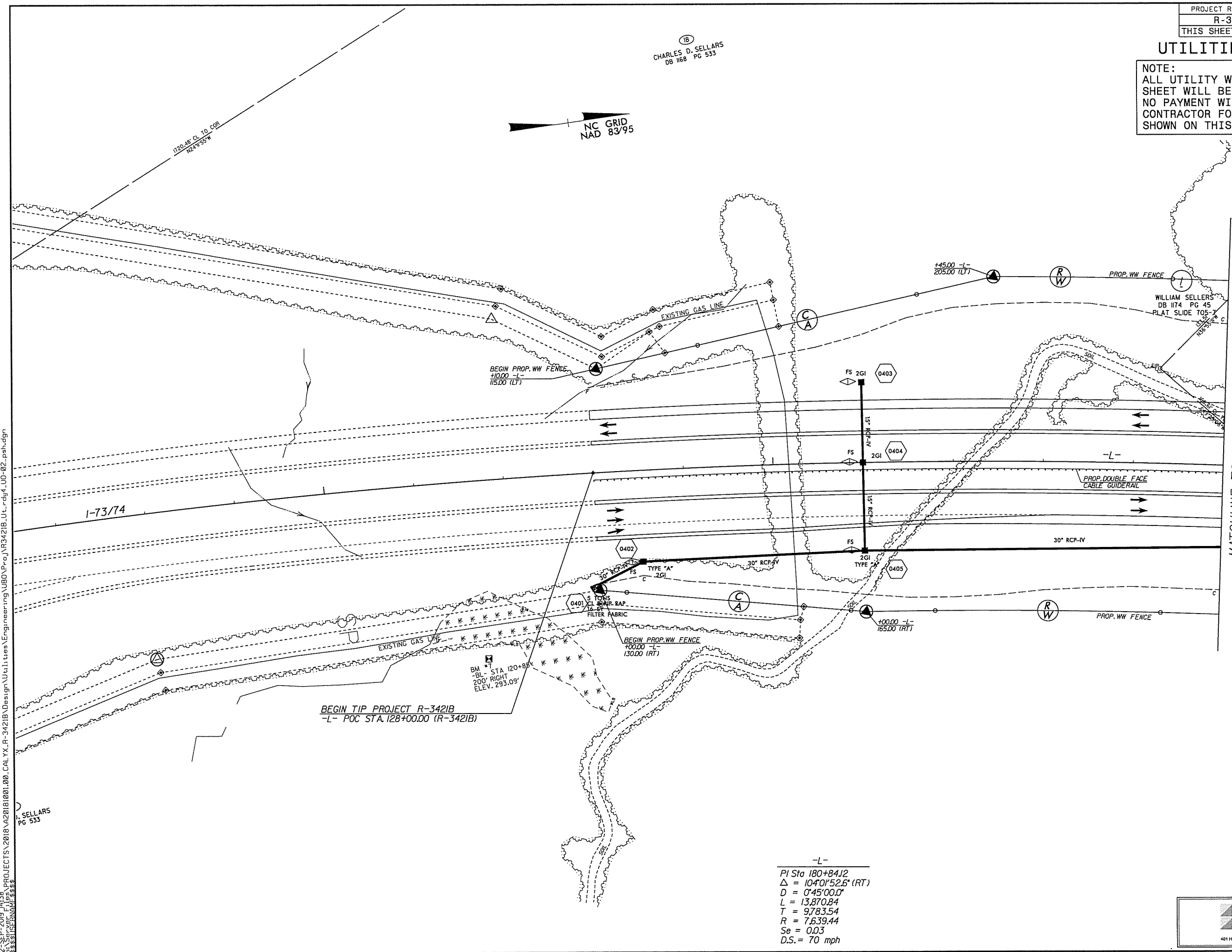
**DIVISION OF HIGHWAYS  
UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

Travis L. Morgan, PE **DIVISION CONTACT #1**  
James D. Yow **DIVISION CONTACT #2**

I2-SEP-2019 14:38 S:\Server\_Files\PROJECTS\2018\AZ0181001.00\_CAL.YX.R-3421B\Design\Utilities\Engineering\UBO\Pro\R3421B\_Ut\_.tsh\_UO1\_psh.dgn \$\$\$USERNAME\$\$\$

### UTILITIES BY OTHERS

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.



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 SELLARS PG 533

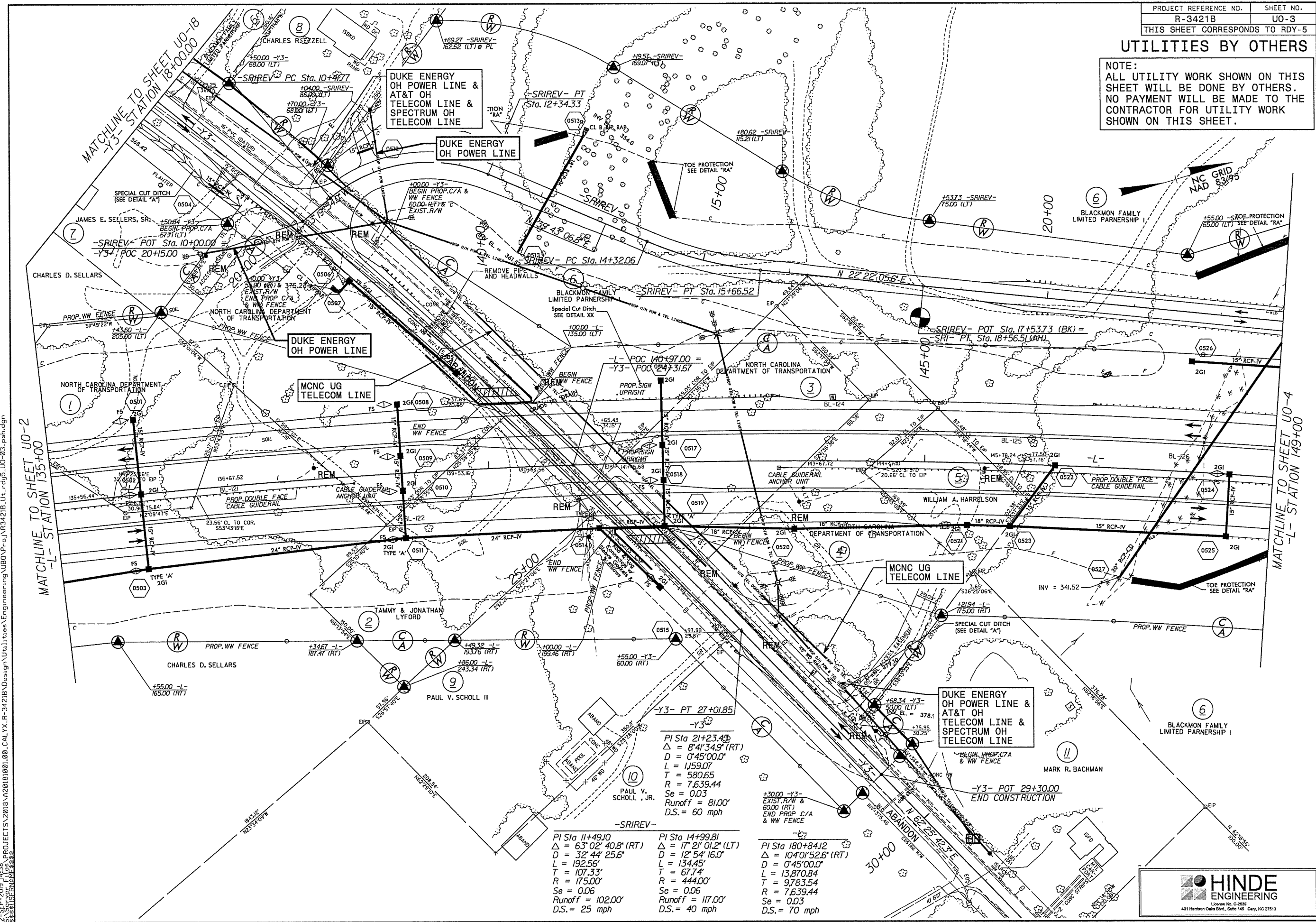
-L-

PI Sta	180+84.2
Δ	1040'52.6" (RT)
D	0'45'00.0"
L	13,870.84
T	9,783.54
R	7,639.44
Se	0.03
D.S.	70 mph



### UTILITIES BY OTHERS

NOTE:  
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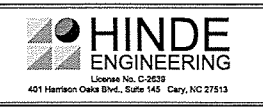
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 3421B\_UO-03.dwg

-Y3- PT 27+01.85  
 -Y3-  
 PI Sta 21+23.43  
 $\Delta = 63^{\circ}02'40.8''$  (RT)  
 $\Delta = 84^{\circ}34.9''$  (RT)  
 $D = 0^{\circ}45'00.0''$   
 $L = 1159.07$   
 $T = 580.65$   
 $R = 7,639.44$   
 $Se = 0.03$   
 $Runoff = 81.00'$   
 $D.S. = 60$  mph

-SRIREV-  
 PI Sta 11+49.10  
 $\Delta = 63^{\circ}02'40.8''$  (RT)  
 $\Delta = 32^{\circ}44'25.6''$   
 $D = 192.56'$   
 $T = 107.33'$   
 $R = 175.00'$   
 $Se = 0.06$   
 $Runoff = 102.00'$   
 $D.S. = 25$  mph

PI Sta 14+99.81  
 $\Delta = 17^{\circ}21'01.2''$  (LT)  
 $\Delta = 12^{\circ}54'16.0''$   
 $D = 134.45'$   
 $T = 67.74'$   
 $R = 444.00'$   
 $Se = 0.06$   
 $Runoff = 117.00'$   
 $D.S. = 40$  mph

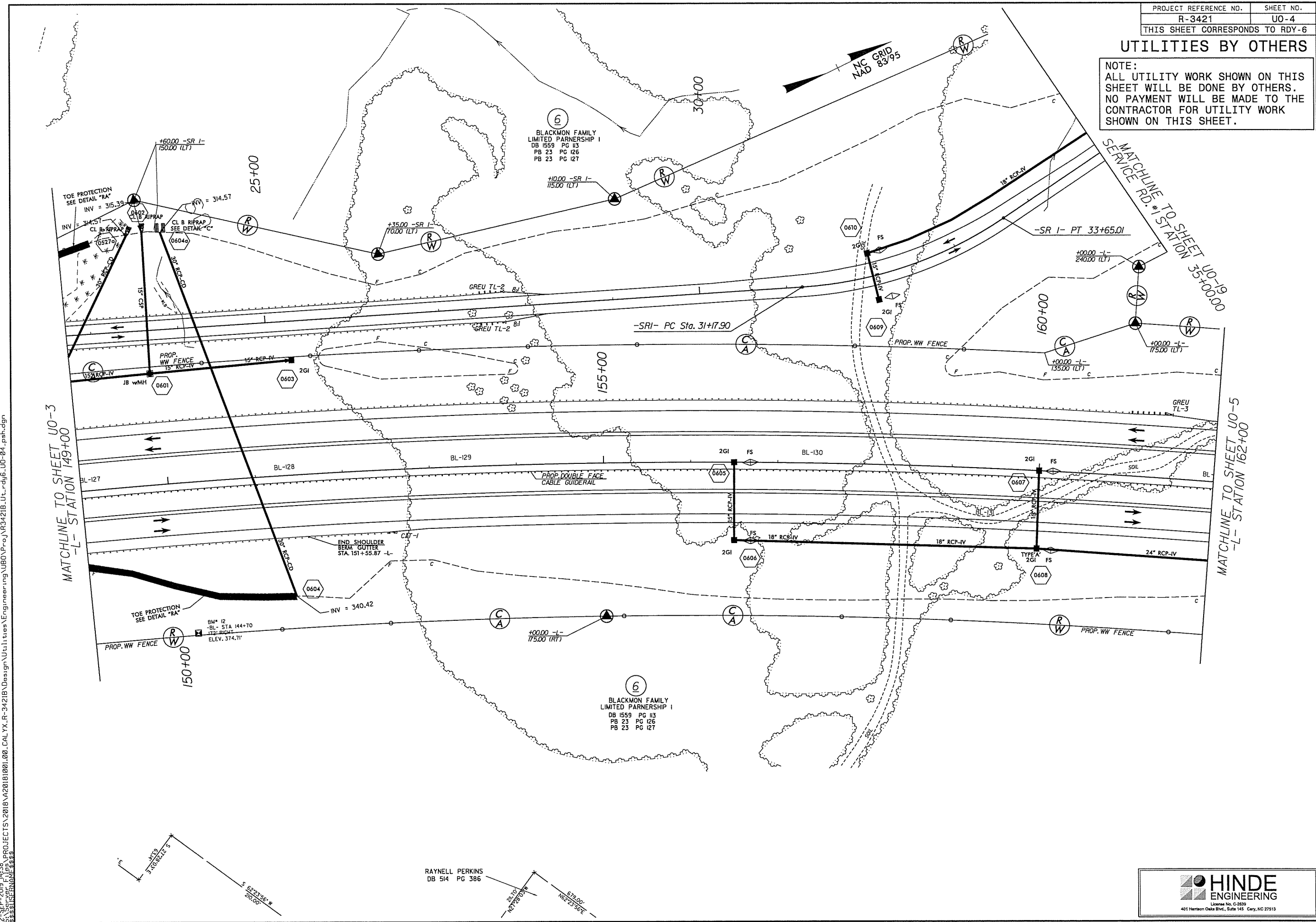
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 $\Delta = 104^{\circ}01'52.6''$  (RT)  
 $\Delta = 0^{\circ}45'00.0''$   
 $D = 13,870.84$   
 $T = 9,783.54$   
 $R = 7,639.44$   
 $Se = 0.03$   
 $D.S. = 70$  mph



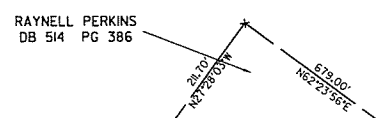
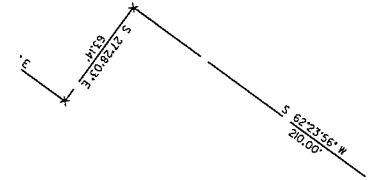
PROJECT REFERENCE NO.	SHEET NO.
R-3421	UO-4
THIS SHEET CORRESPONDS TO RDY-6	

### UTILITIES BY OTHERS

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.



L:\SEP-2019\4-38\PROJECTS\2018\A220181001\001\001.CAL.YX.R-3421B\Design\Utilities\Engineering\UBD\Proj\NR3421B\_Ut.rdj6\_UO-04\_psh.dgn  
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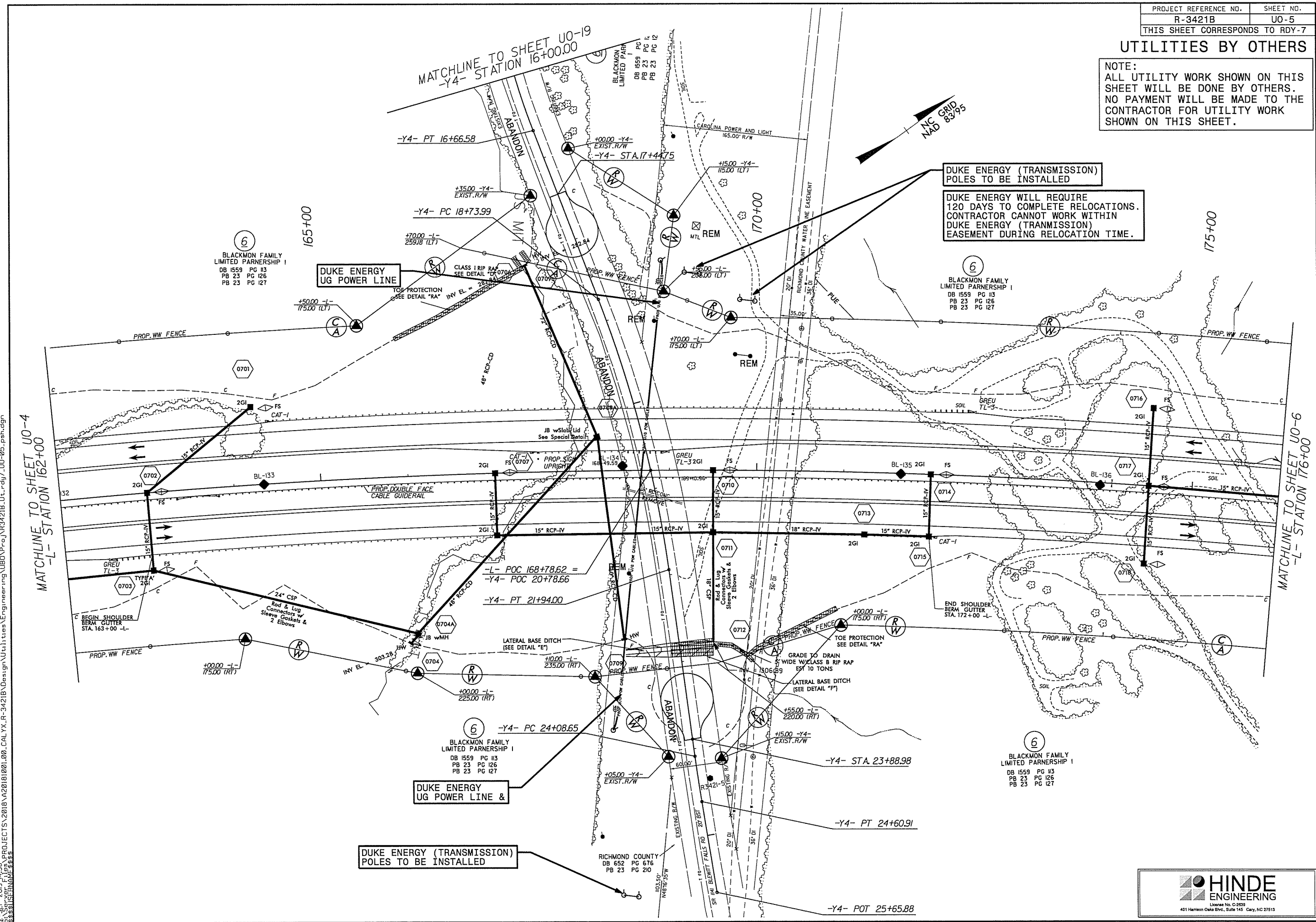
RAYNELL PERKINS  
DB 514 PG 386

**HINDE ENGINEERING**  
 License No. C-2629  
 401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513

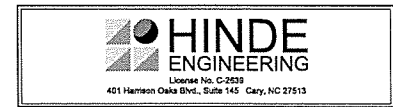
PROJECT REFERENCE NO.	SHEET NO.
R-3421B	U0-5
THIS SHEET CORRESPONDS TO RDY-7	

**UTILITIES BY OTHERS**

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.

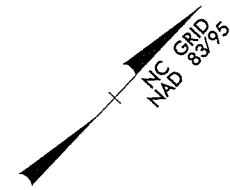


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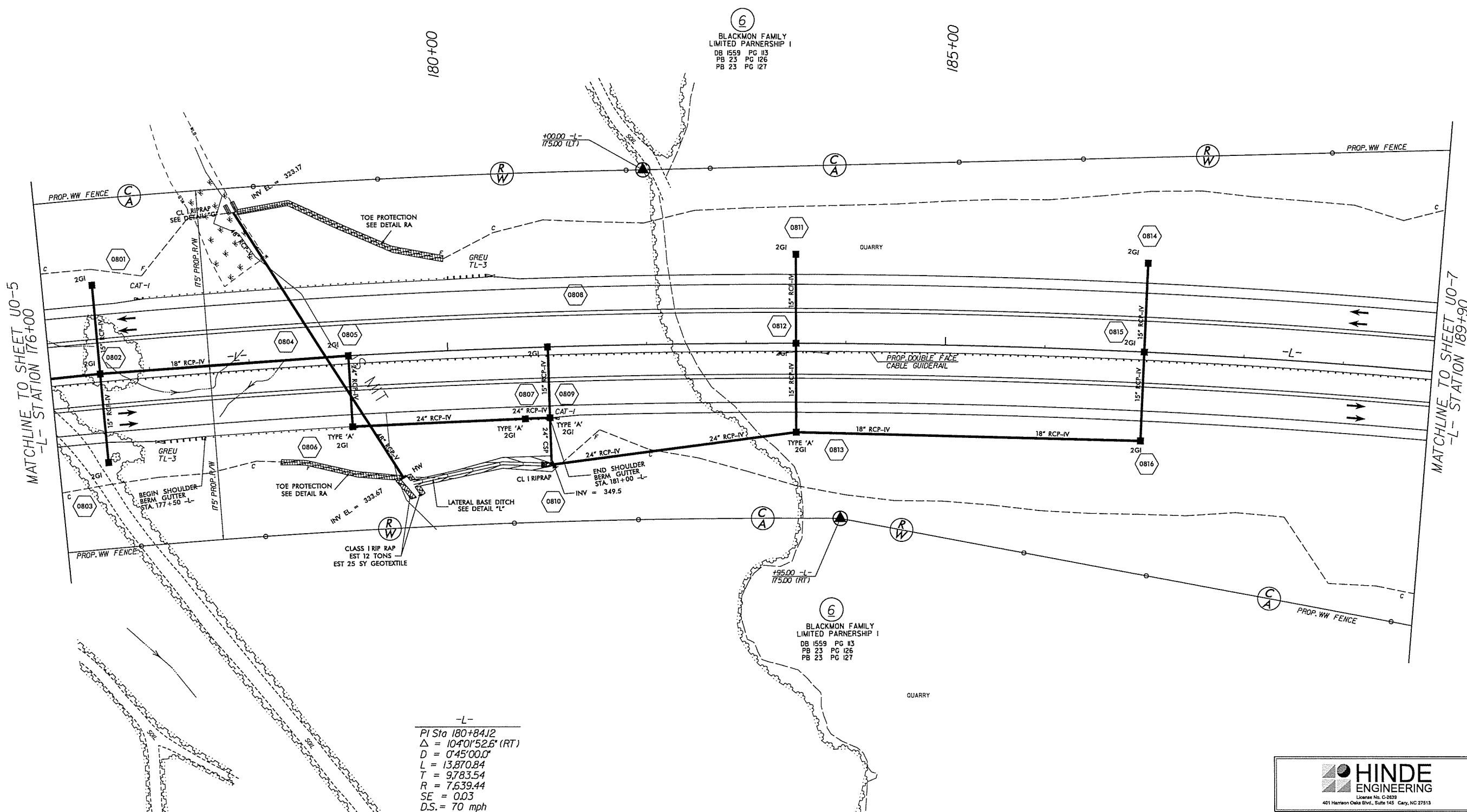


### UTILITIES BY OTHERS

NOTE:  
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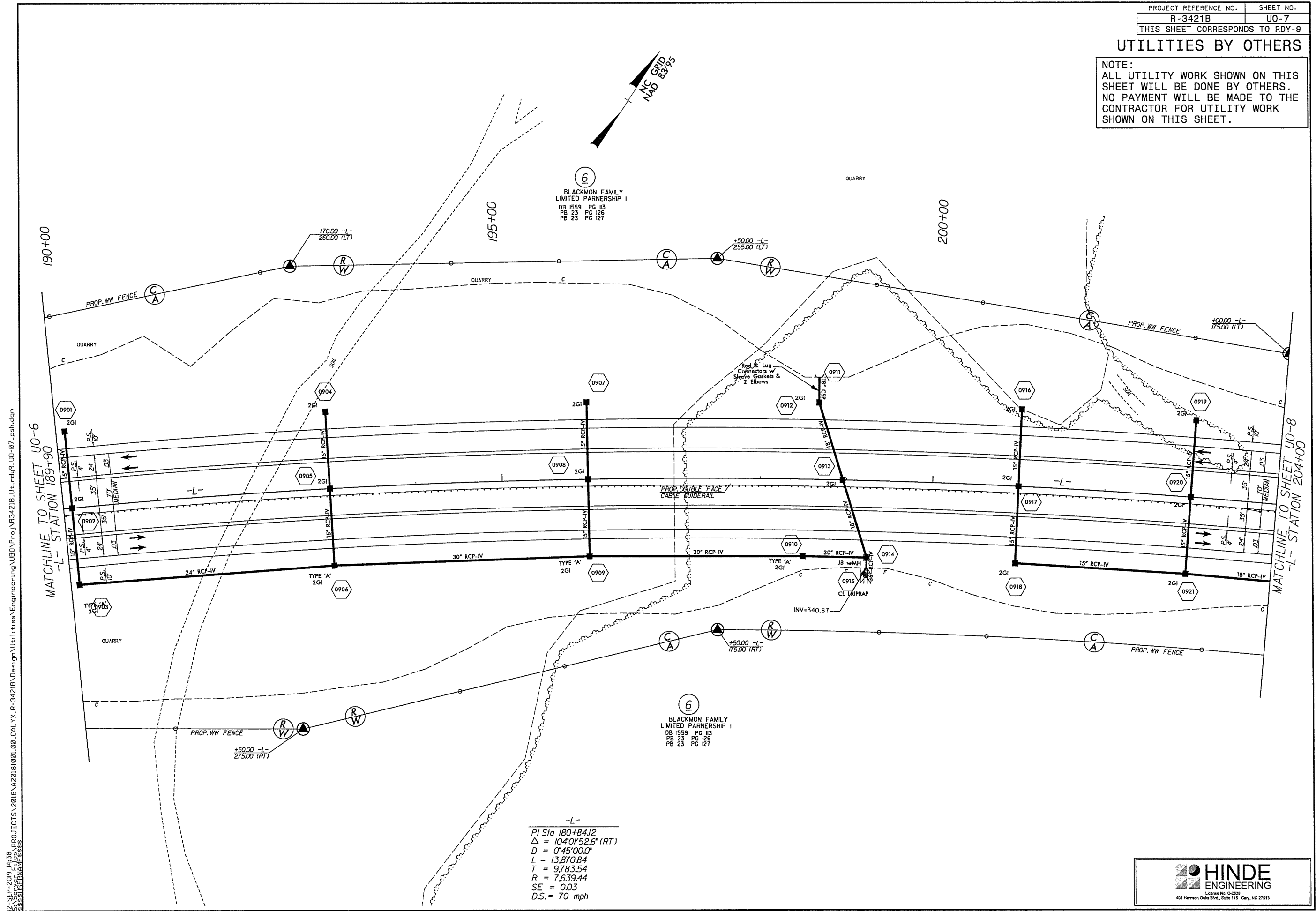
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-L-  
 PI Sta 180+84.12  
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 $T = 9,783.54$   
 $R = 7,639.44$   
 $SE = 0.03$   
 $D.S. = 70$  mph

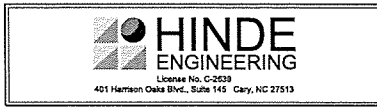
### UTILITIES BY OTHERS

NOTE:  
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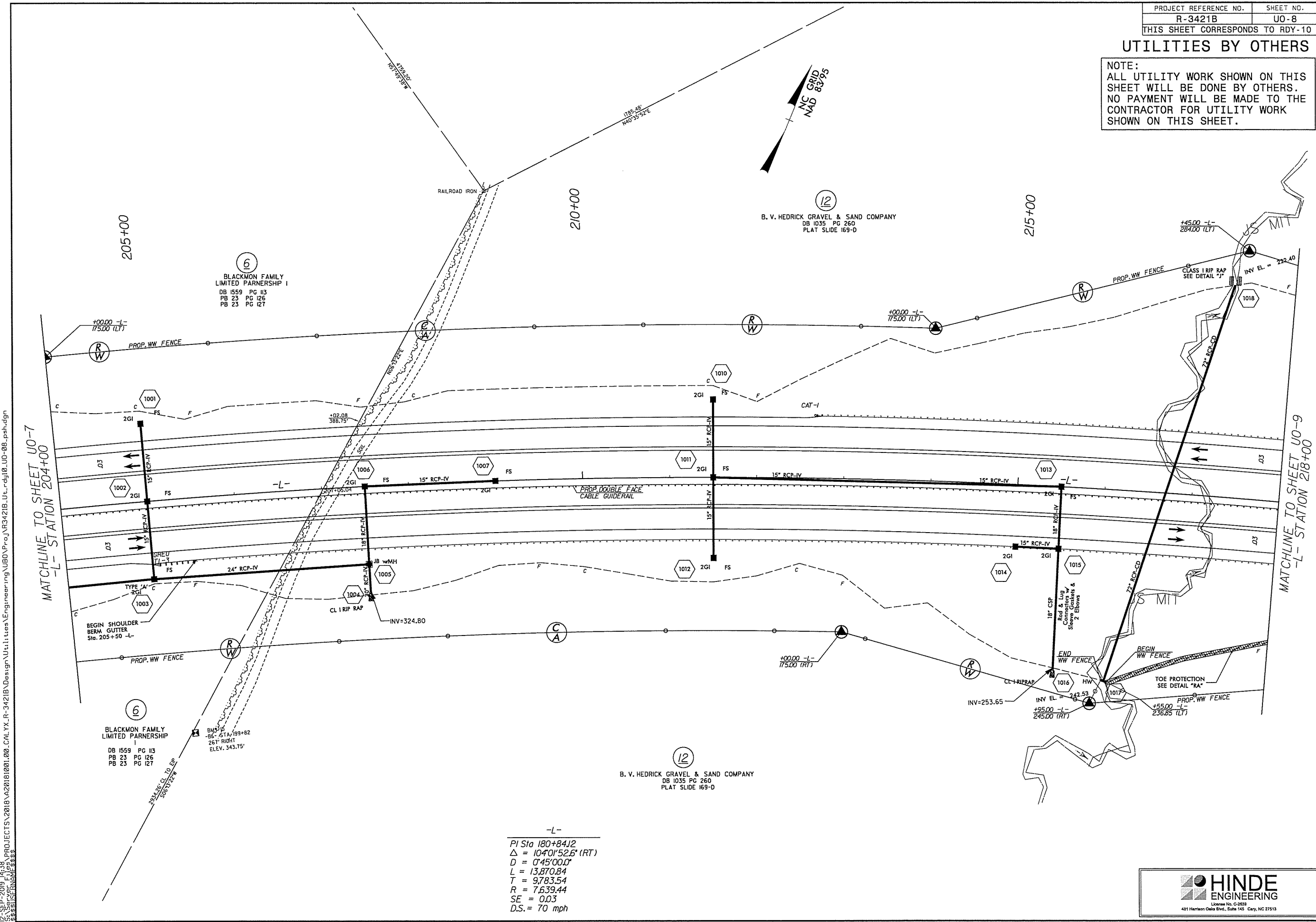
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-L-  
 PI Sta 180+84.12  
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 $L = 13,870.84$   
 $T = 9,783.54$   
 $R = 7,639.44$   
 $SE = 0.03$   
 $D.S. = 70$  mph



### UTILITIES BY OTHERS

NOTE:  
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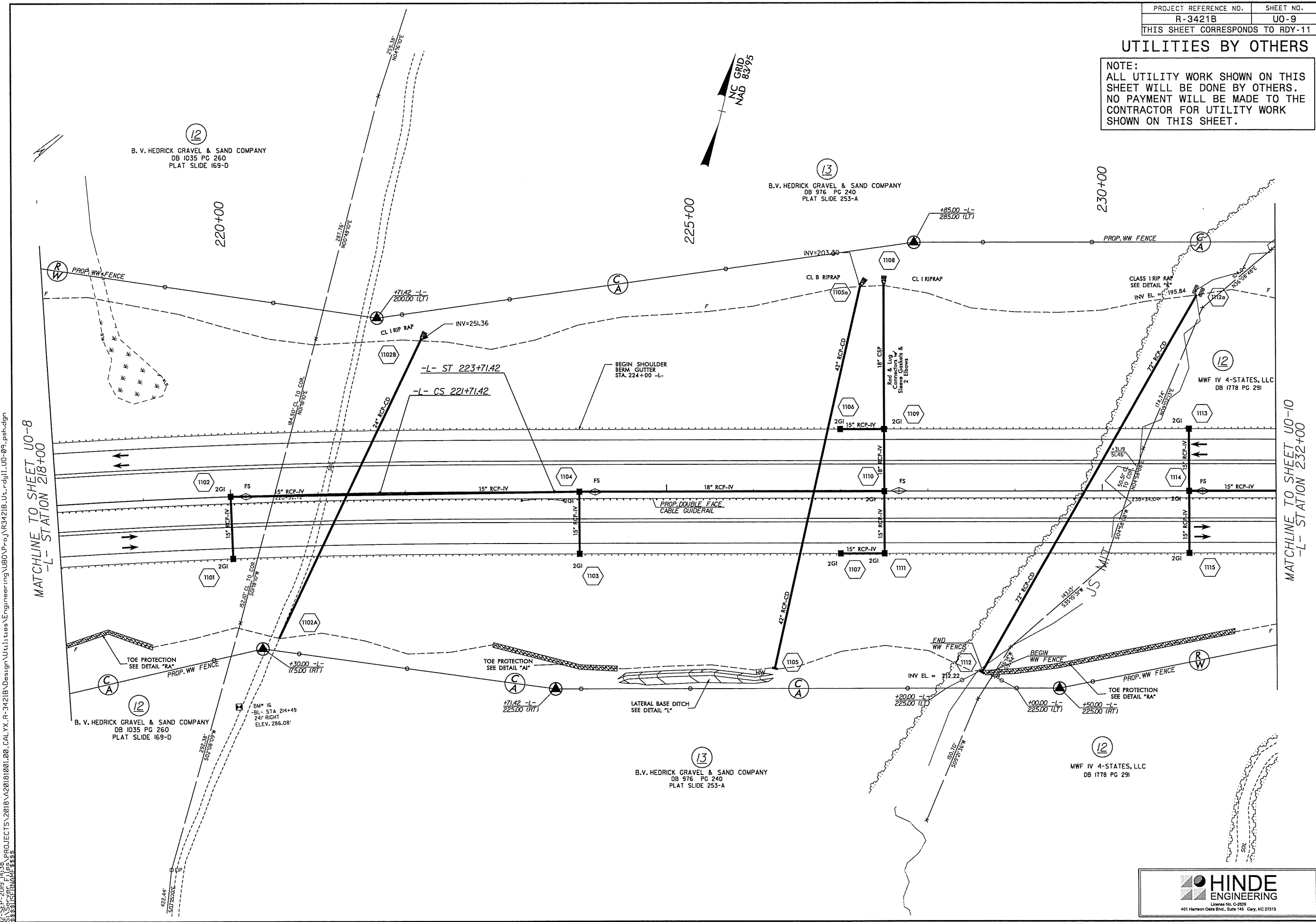
-L-

PI Sta	180+84.12
Δ	104°01'52.6" (RT)
D	0'45'00.0"
L	13,870.84
T	9,783.54
R	7,639.44
SE	0.03
D.S.	70 mph



### UTILITIES BY OTHERS

NOTE:  
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 3421B\_UO-09.dwg

MATCHLINE TO SHEET UO-8  
 -L- STATION 218+00

MATCHLINE TO SHEET UO-10  
 -L- STATION 232+00

12  
 B. V. HEDRICK GRAVEL & SAND COMPANY  
 DB 1035 PG 260  
 PLAT SLIDE 169-D

13  
 B.V. HEDRICK GRAVEL & SAND COMPANY  
 DB 976 PG 240  
 PLAT SLIDE 253-A

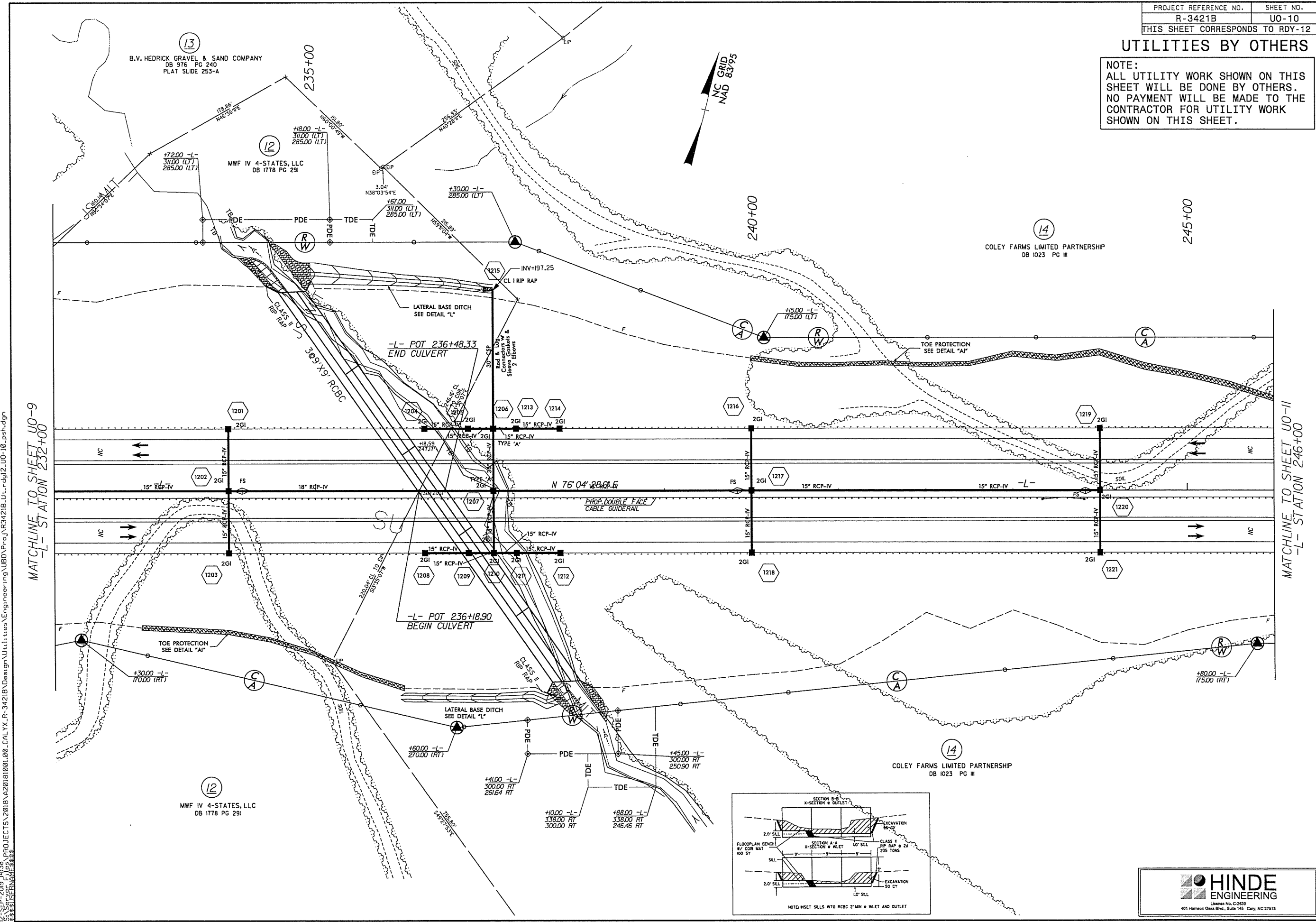
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 DB 976 PG 240  
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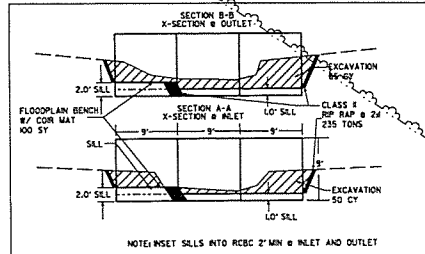
12  
 MWF IV 4-STATES, LLC  
 DB 1778 PG 291

### UTILITIES BY OTHERS

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.

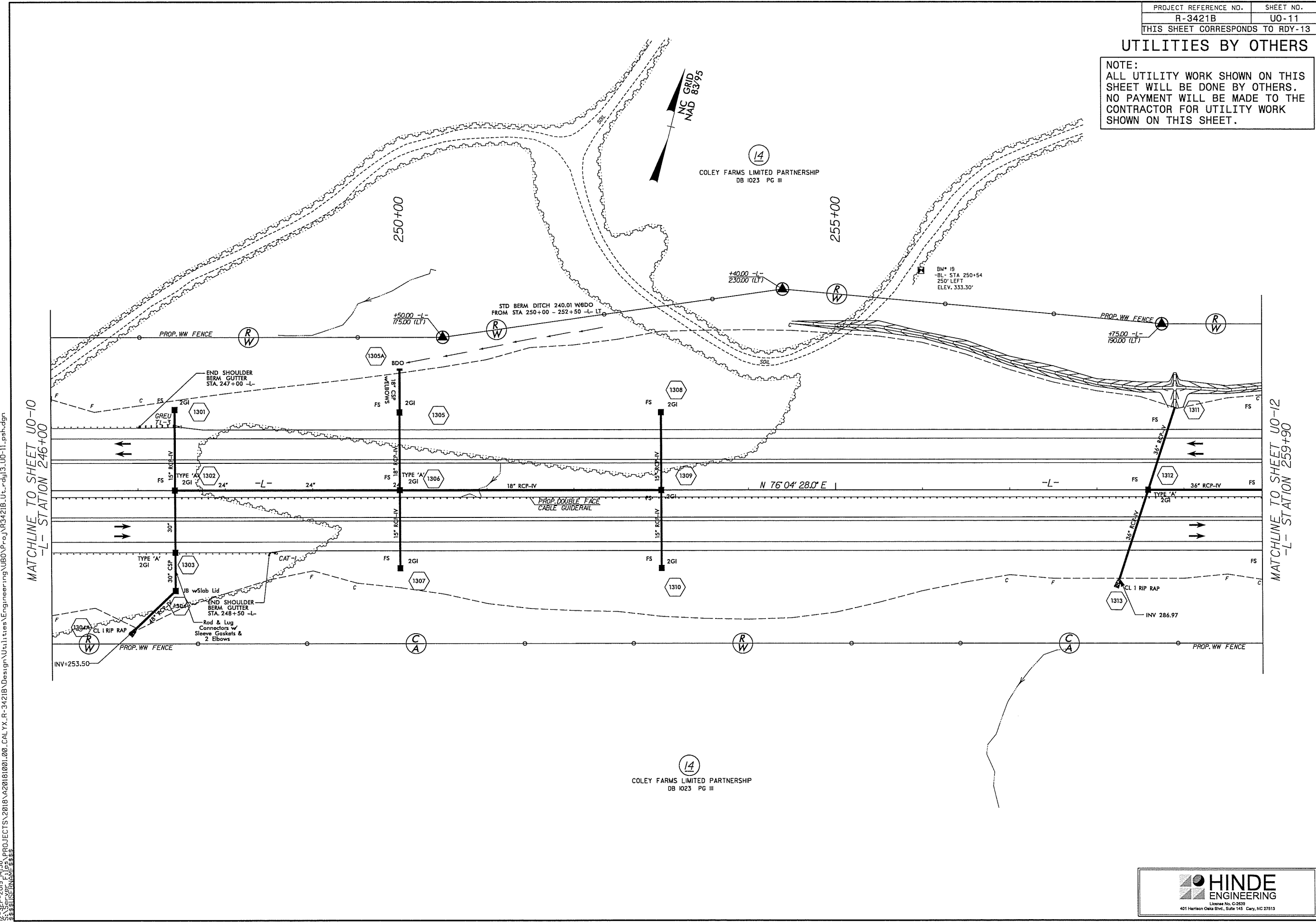


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 3:33 PM



### UTILITIES BY OTHERS

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.



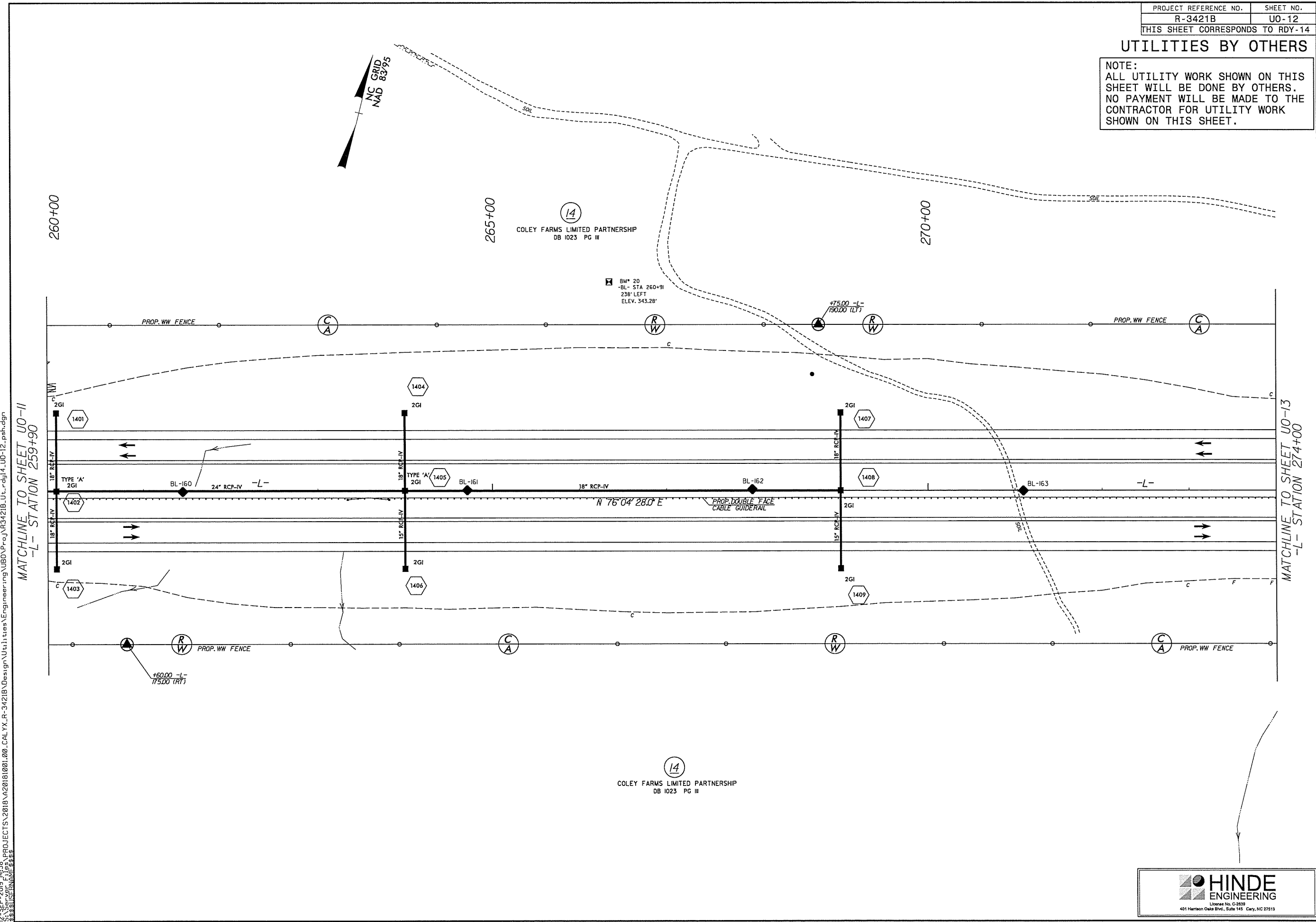
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 3:38:58 PM

  
 COLEY FARMS LIMITED PARTNERSHIP  
 DB 1023 PG III

PROJECT REFERENCE NO.	SHEET NO.
R-3421B	U0-12
THIS SHEET CORRESPONDS TO RDY-14	

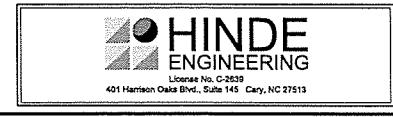
**UTILITIES BY OTHERS**

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.



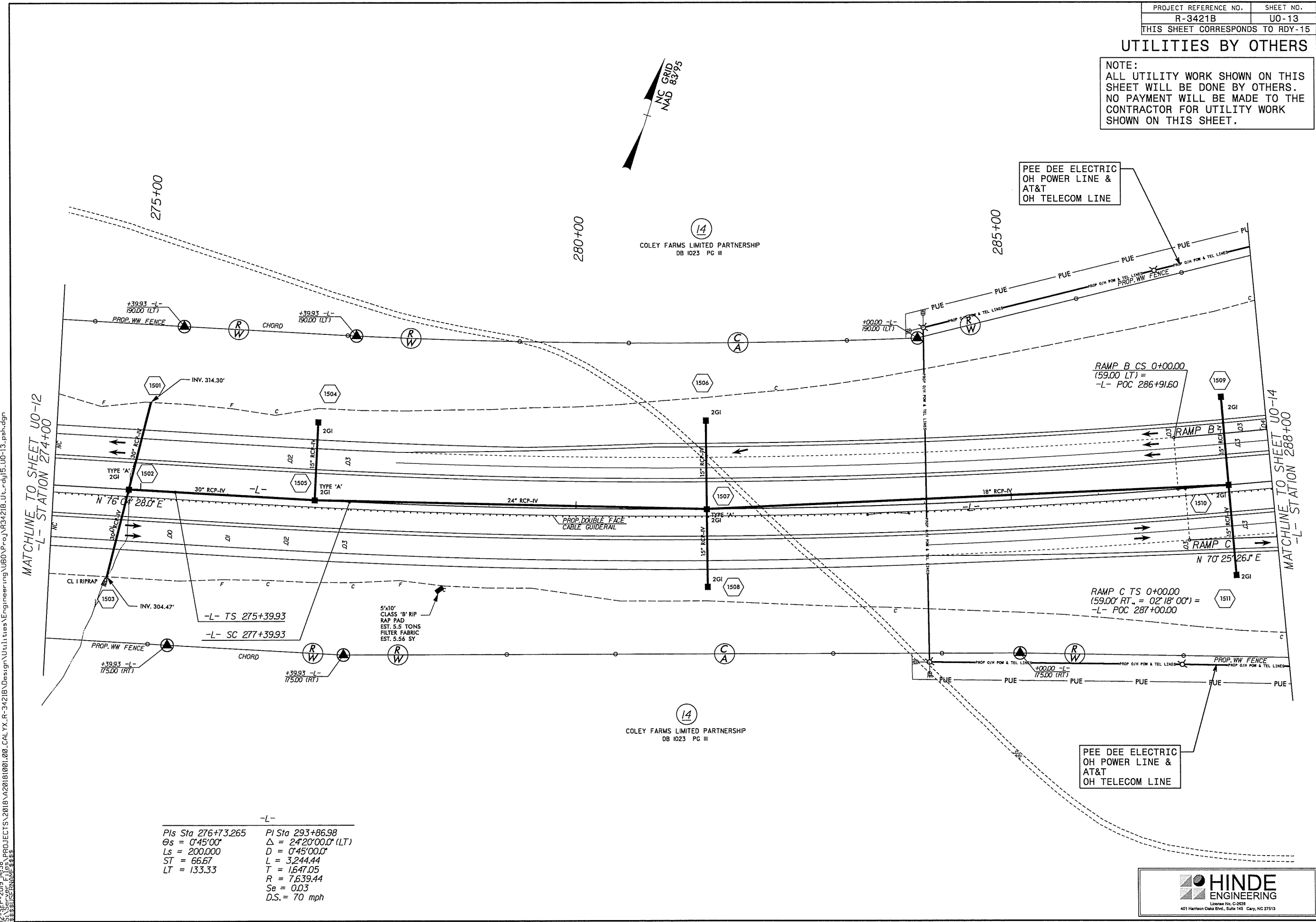
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 MATCHLINE TO SHEET U0-11  
 -L- STATION 259+90

MATCHLINE TO SHEET U0-13  
 -L- STATION 274+00



### UTILITIES BY OTHERS

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.

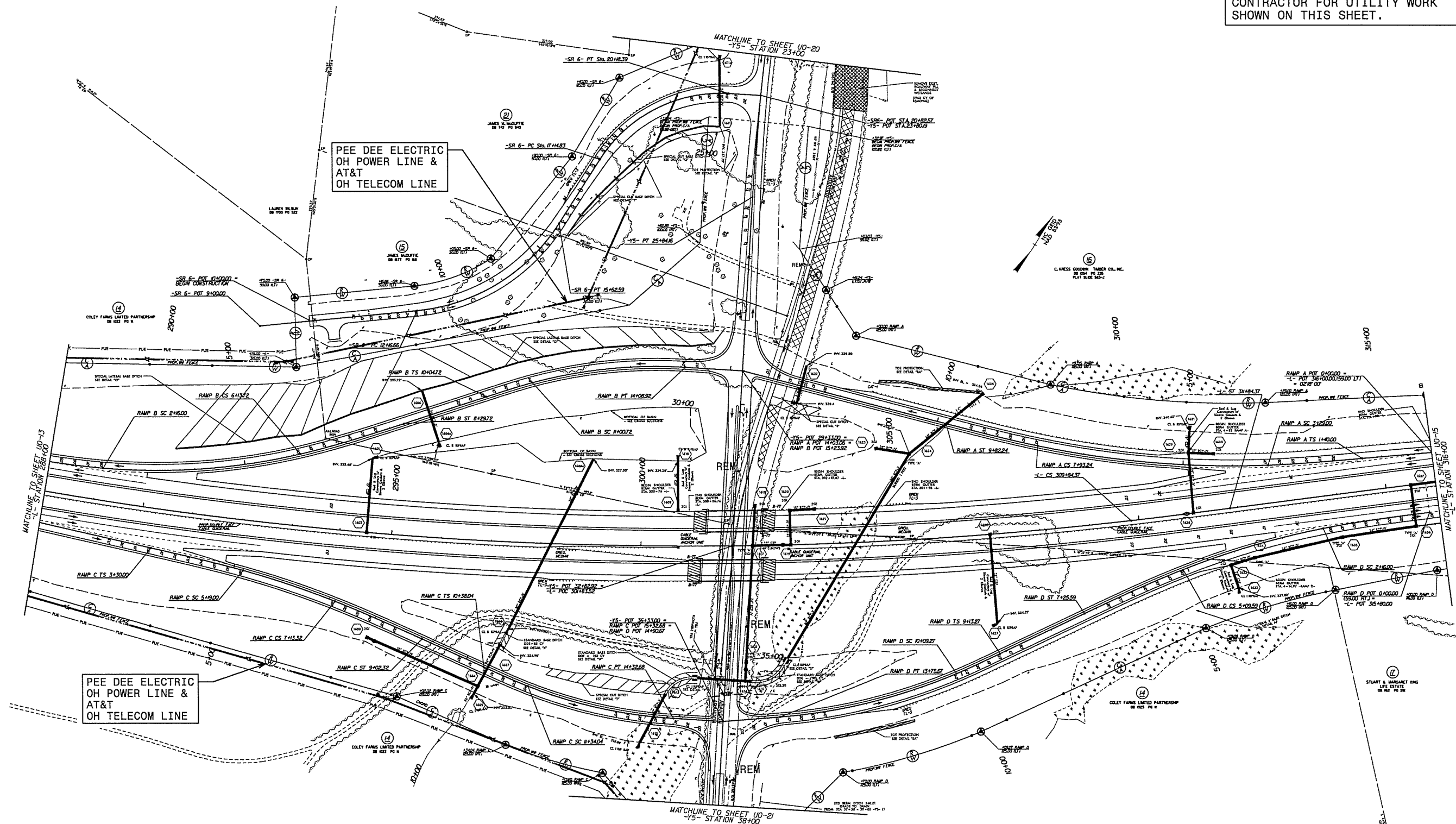


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 U:\Projects\2018\A20181001\000\CAL.YX.R-3421B\Design\Utilities\Engineering\U018\A20181001\000\CAL.YX.R-3421B.dgn

-L-	
PIs Sta 276+73.265	PI Sta 293+86.98
θs = 0°45'00"	Δ = 24°20'00.0" (LT)
Ls = 200.000	D = 0°45'00.0"
ST = 66.67	L = 3,244.44
LT = 133.33	T = 1,647.05
	R = 7,639.44
	Se = 0.03
	D.S. = 70 mph

### UTILITIES BY OTHERS

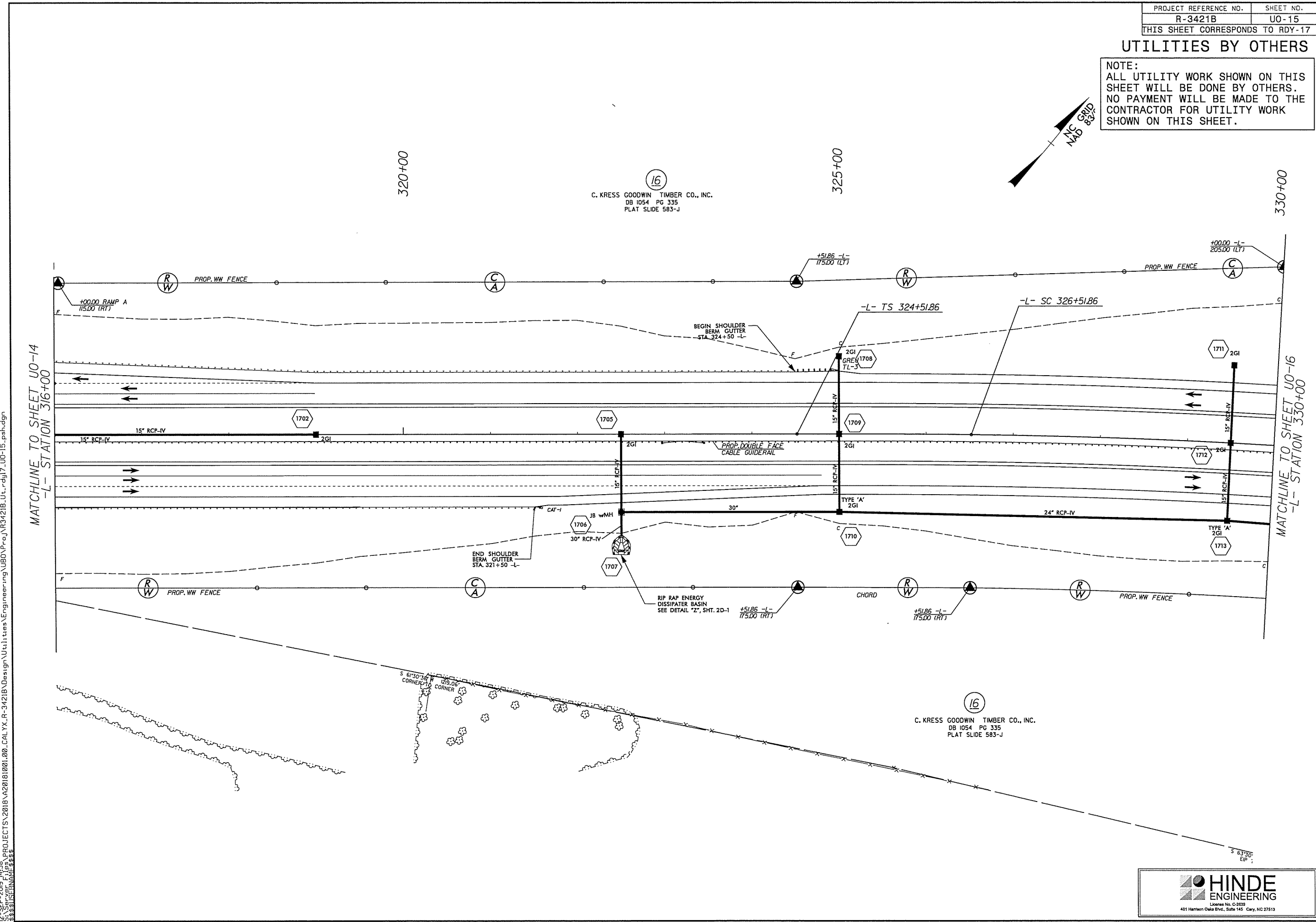
NOTE:  
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



I:\SEP-2019\_1438\_PROJECTS\1438\_PROJECTS\1438\_PROJECTS\Design\Utilities\Engineering\UB0\Proj\RDY-16\_U0-14\_psh.dgn  
 2018-09-20 10:01:00 CAL YX R-3421B\Design\Utilities\Engineering\UB0\Proj\RDY-16\_U0-14\_psh.dgn  
 2018-09-20 10:01:00 CAL YX R-3421B\Design\Utilities\Engineering\UB0\Proj\RDY-16\_U0-14\_psh.dgn

### UTILITIES BY OTHERS

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.



12-SEP-2019 14:38 PROJECTS\2018\A20181001\00\_CAL.YX.R-3421B\Design\Utilities\Uo15.dgn  
 23:38:15  
 23:38:15

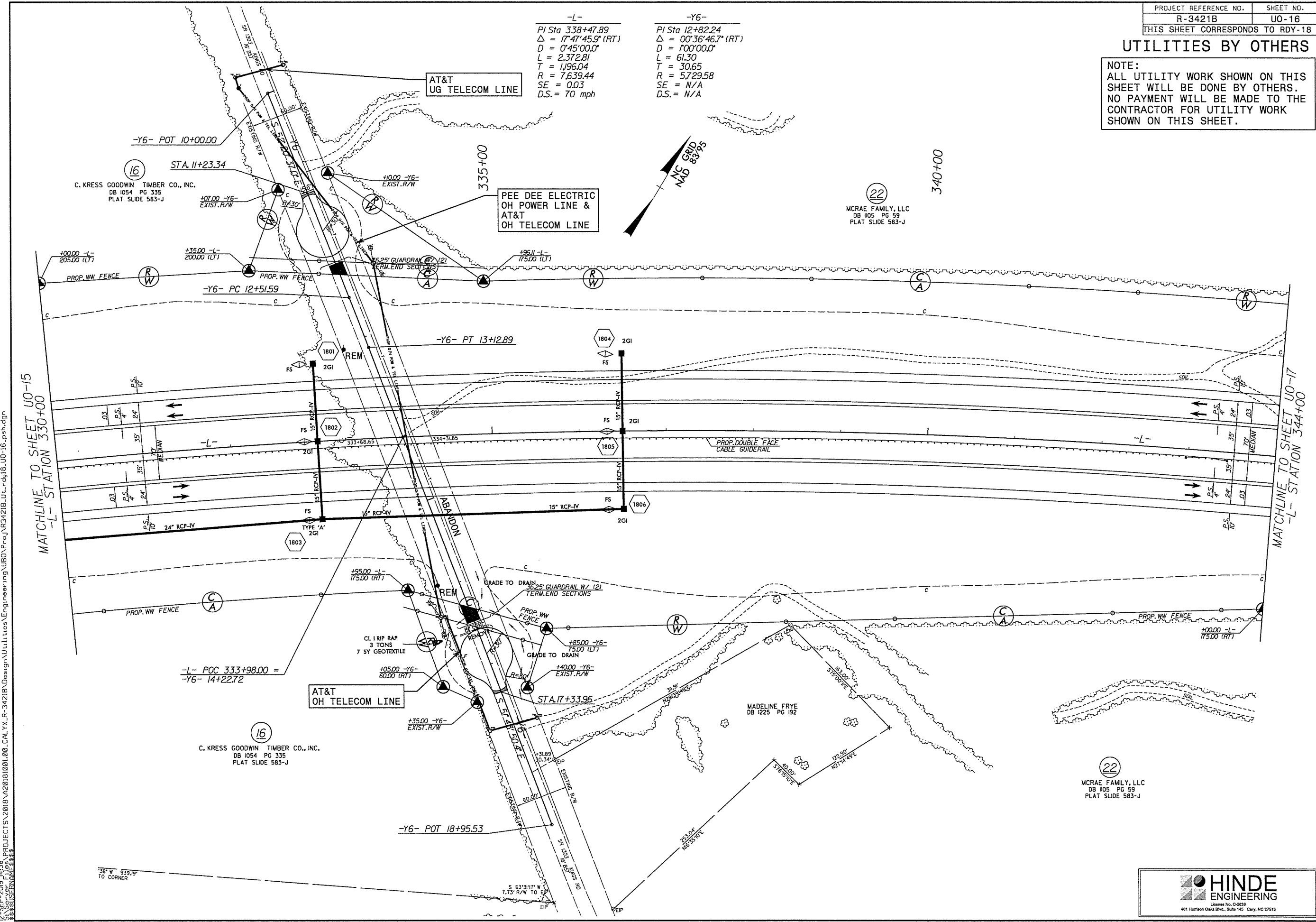
16  
 C. KRESS GOODWIN TIMBER CO., INC.  
 DB 1054 PG 335  
 PLAT SLIDE 583-J



### UTILITIES BY OTHERS

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.

-L-	-Y6-
PI Sta 338+47.89	PI Sta 12+82.24
$\Delta = 17'47'45.9" (RT)$	$\Delta = 00'36'46.7" (RT)$
$D = 0'45'00.0"$	$D = 1'00'00.0"$
$L = 2,372.81$	$L = 61.30$
$T = 1,196.04$	$T = 30.65$
$R = 7,639.44$	$R = 5,729.58$
$SE = 0.03$	$SE = N/A$
$D.S. = 70 \text{ mph}$	$D.S. = N/A$

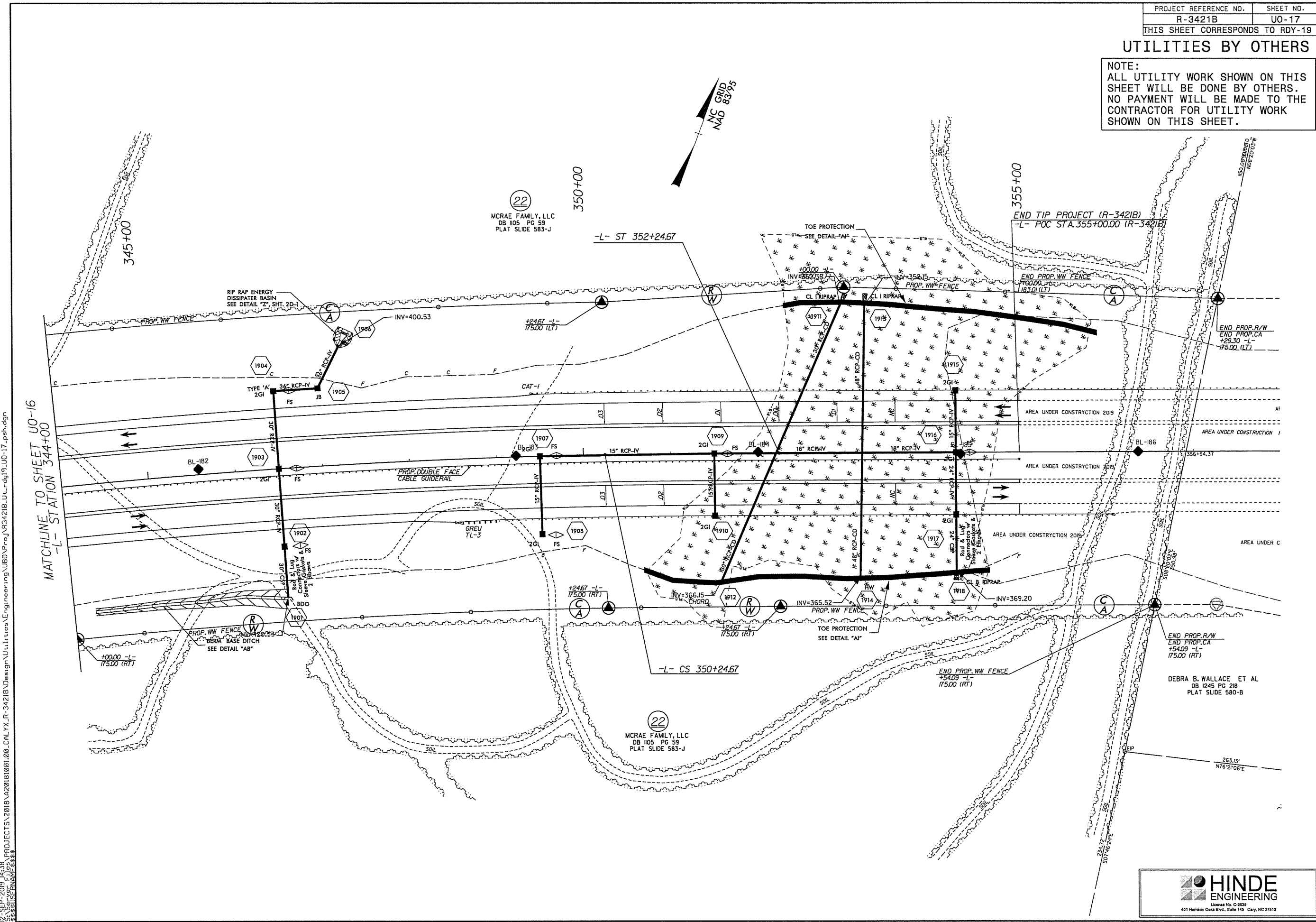


12-SEP-2019 14:35 PROJECTS\2018\A20181001\00.CAL.XY.R-3421B\Design\Utilities\Engineering\UB0\Proj\NR3421B\_U0-16\_psh.dgn  
 3:58:15 PM  
 3:58:15 PM



### UTILITIES BY OTHERS

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.



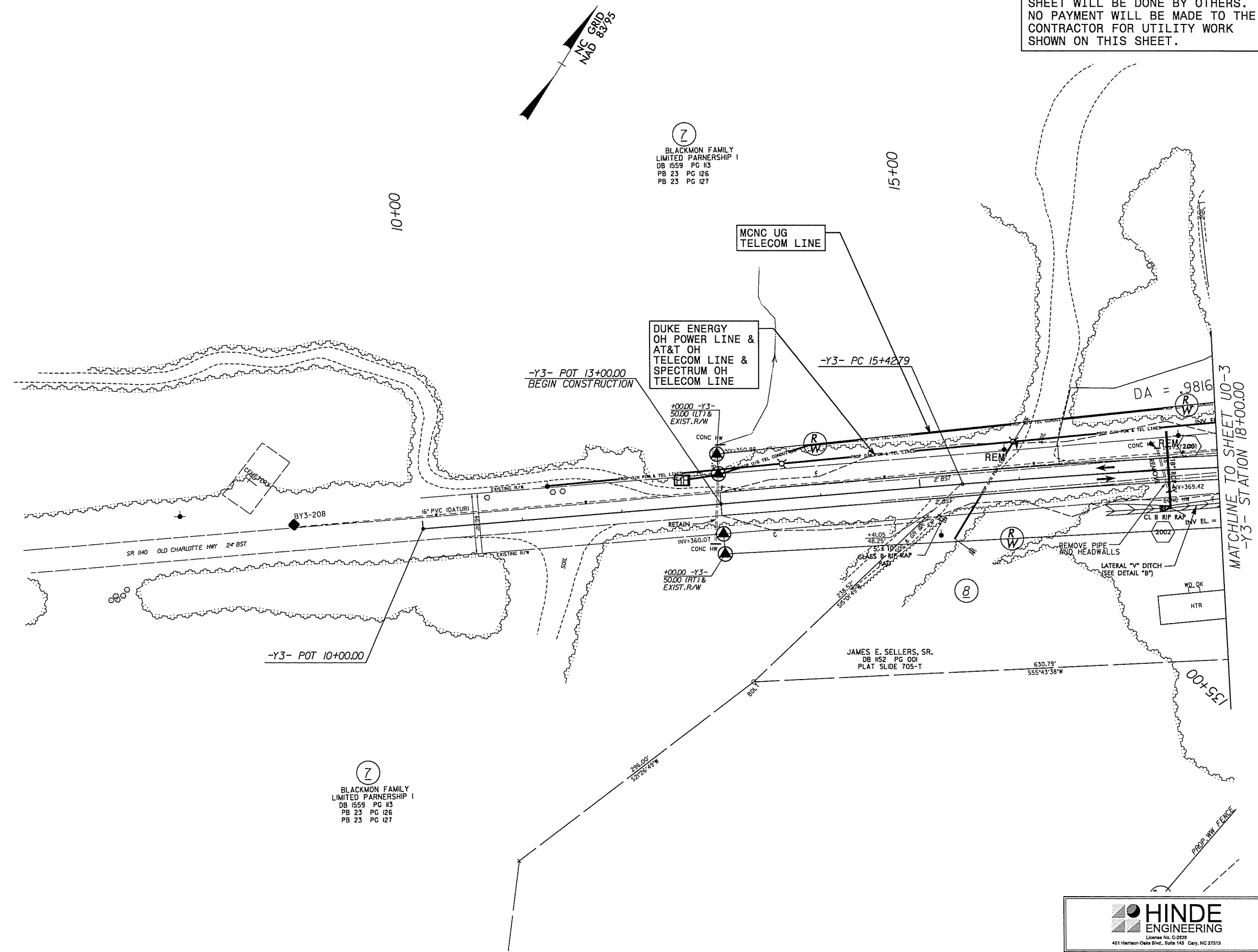
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 20181001 10:00:00 AM 10/1/2018 10:00:00 AM

PROJECT REFERENCE NO.	SHEET NO.
R-3421B	U0-18
THIS SHEET CORRESPONDS TO RDY-20	

**UTILITIES BY OTHERS**

**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.

C:\SEP-2019\4136\PROJECTS\2018\A20181001.00.CAL.XX.R-3421B\Design\Utilities\Engineering\UBD\Proj\NR3421B\_U0-18\_psh.dgn  
 2018.09.18 10:55:58 AM



(Z)  
 BLACKMON FAMILY  
 LIMITED PARTNERSHIP I  
 DB 1559 PG 113  
 PB 23 PG 126  
 PB 23 PG 127

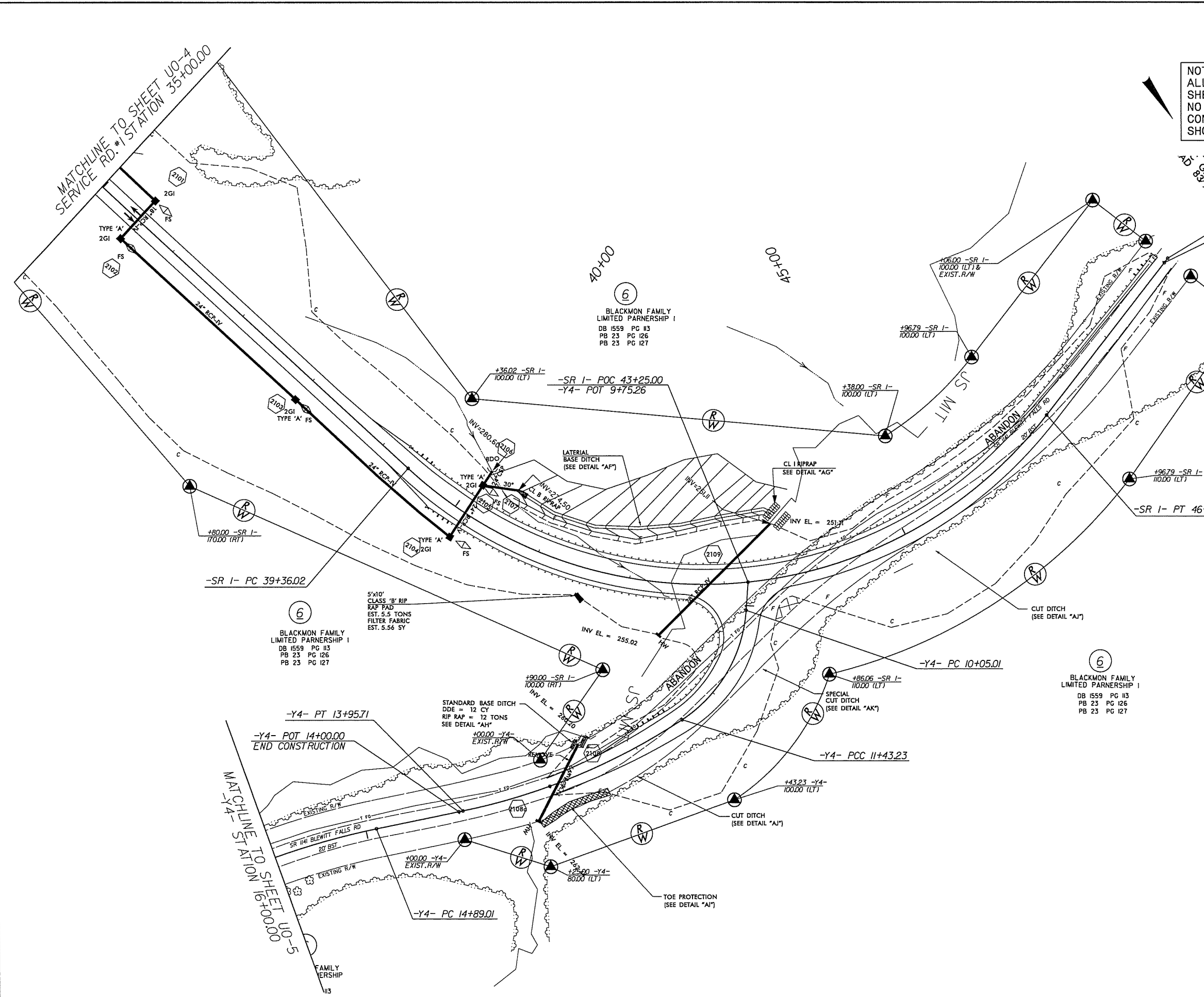
(Z)  
 BLACKMON FAMILY  
 LIMITED PARTNERSHIP I  
 DB 1559 PG 113  
 PB 23 PG 126  
 PB 23 PG 127

JAMES E. SELLERS, SR.  
 DB 1152 PG 001  
 PLAT SLIDE 705-T

**HINDE ENGINEERING**  
 License No. C-2529  
 451 Harrison Oaks Blvd., Suite 145, Cary, NC 27513

**UTILITIES BY OTHERS**

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.



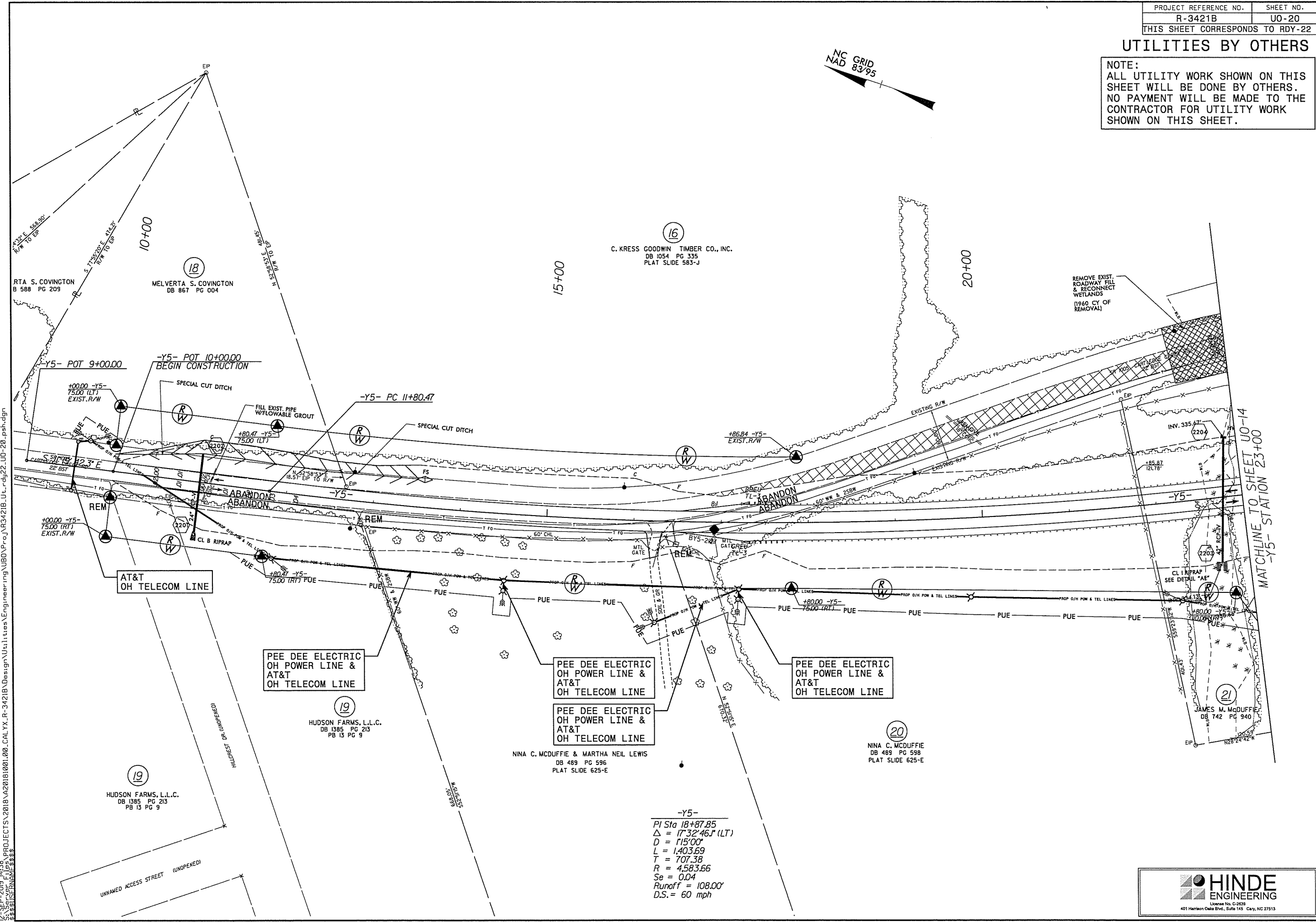
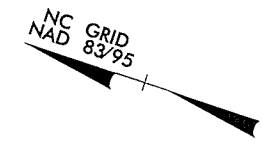
BLACKMON FAMILY LIMITED PARTNERSHIP I  
 DB 1559 PG 13  
 PB 23 PG 126  
 PB 23 PG 127

BLACKMON FAMILY LIMITED PARTNERSHIP I  
 DB 1559 PG 13  
 PB 23 PG 126  
 PB 23 PG 127

12-SEP-2019 14:35 PROJECTS\2018\A20181001\00\_CAL.X-R-3421B\Design\Utilities\Engineering\UB0\ProJ\R3421B.Ut\_rdy21\_U0-19\_psh.dgn  
 3:38 PM  
 3:38 PM

### UTILITIES BY OTHERS

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.



16  
C. KRESS GOODWIN TIMBER CO., INC.  
DB 1054 PG 335  
PLAT SLIDE 583-J

18  
MELVERTA S. COVINGTON  
DB 867 PG 004

19  
HUDSON FARMS, L.L.C.  
DB 1385 PG 213  
PB 13 PG 9

PEE DEE ELECTRIC  
OH POWER LINE &  
AT&T  
OH TELECOM LINE

19  
HUDSON FARMS, L.L.C.  
DB 1385 PG 213  
PB 13 PG 9

PEE DEE ELECTRIC  
OH POWER LINE &  
AT&T  
OH TELECOM LINE

19  
HUDSON FARMS, L.L.C.  
DB 1385 PG 213  
PB 13 PG 9

PEE DEE ELECTRIC  
OH POWER LINE &  
AT&T  
OH TELECOM LINE

PEE DEE ELECTRIC  
OH POWER LINE &  
AT&T  
OH TELECOM LINE

20  
NINA C. MCDUFFIE  
DB 489 PG 598  
PLAT SLIDE 625-E

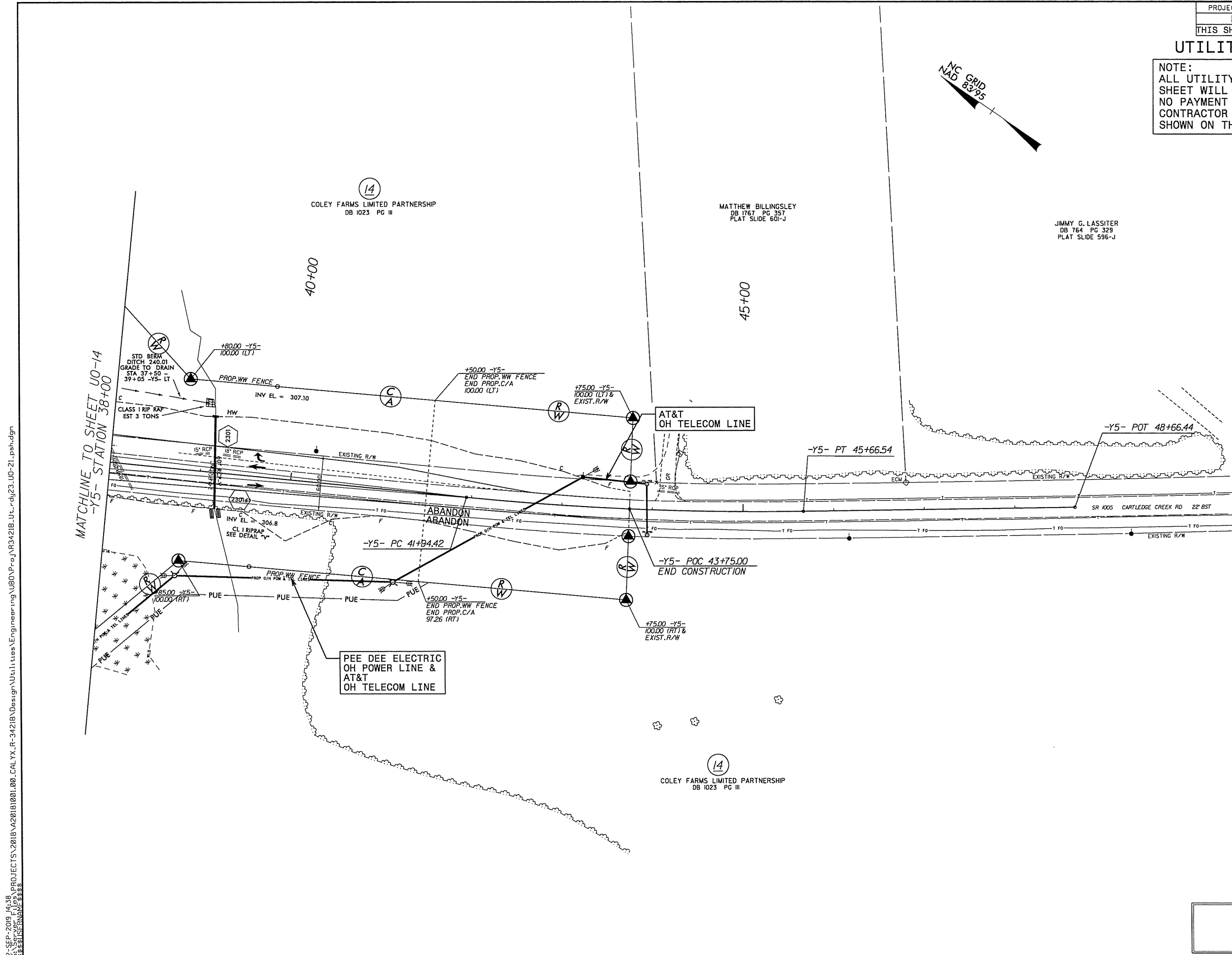
-Y5-  
PI Sta 18+87.85  
 $\Delta = 17' 32.46''$  (LT)  
 $D = 115' 00''$   
 $L = 1,403.69$   
 $T = 707.38$   
 $R = 4,583.66$   
 $Se = 0.04$   
Runoff = 108.00'  
D.S. = 60 mph

12-SEP-2019 14:35 PROJECTS\2018\A20181001\00\_CAL.X-R-3421B\Design\Utilities\Engineering\UBO\Pre\NR3421B\_U0-20\_psh.dgn  
 3:58:51 PM  
 3:58:51 PM

PROJECT REFERENCE NO.	SHEET NO.
R-3421B	U0-21
THIS SHEET CORRESPONDS TO RDY-23	

### UTILITIES BY OTHERS

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.



2 - SEP - 2019 14:38 PROJECTS\2018\A20181001\00\_CAL.YX.R-3421B\Design\Utilities\Engineering\U00\Proj\R3421B\_U0-21\_psh.dgn  
 2 - SEP - 2019 14:38 PROJECTS\2018\A20181001\00\_CAL.YX.R-3421B\Design\Utilities\Engineering\U00\Proj\R3421B\_U0-21\_psh.dgn  
 2 - SEP - 2019 14:38 PROJECTS\2018\A20181001\00\_CAL.YX.R-3421B\Design\Utilities\Engineering\U00\Proj\R3421B\_U0-21\_psh.dgn

**HINDE**  
 ENGINEERING  
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 401 Harrison Oaks Blvd., Suite 140 Cary, NC 27513