



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits
(along with corresponding Water Quality Certifications)

September 29, 2018 Ver 3

Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf>

A. Processing Information

County (or Counties) where the project is located: *

Lee

Is this project a public transportation project? *

Yes No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? *

Yes No

(NCDOT only) T.I.P. or state project number:

R-3830

WBS # *

38887.1.1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: *

- Section 404 Permit (wetlands, streams and waters, Clean Water Act)
 Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

1b. What type(s) of permit(s) do you wish to seek authorization? *

- Nationwide Permit (NWP)
 Regional General Permit (RGP)
 Standard (IP)

This form may be used to initiate the standard/individual permit process with the Corps. Please contact your Corps representative concerning submittals for standard permits. All required items that are not provided in the E-PCN can be added to the miscellaneous upload area located at the bottom of this form.

1c. Has the NWP or GP number been verified by the Corps? *

Yes No

Regional General Permit (RGP) Number:

198200031 - NCDOT Bridges, Widening Projects 2015

RGP Numbers (for multiple RGPs):

List all RGP numbers you are applying for not on the drop down list.

1d. Type(s) of approval sought from the DWR: *

check all that apply

- 401 Water Quality Certification - Regular
 Non-404 Jurisdictional General Permit
 Individual Permit
 401 Water Quality Certification - Express
 Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?

*

For the record only for DWR 401 Certification:

Yes No

For the record only for Corps Permit:

Yes No

1f. Is this an after-the-fact permit application? *

Yes No

1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

Yes No

Acceptance Letter Attachment

Click the upload button or drag and drop files here to attach document

R-3830 Revised - STR - RW - CF 04.pdf

67.84KB

FILETYPE MUST BE PDF

1h. Is the project located in any of NC's twenty coastal counties? *

Yes No

1j. Is the project located in a designated trout watershed? *

Yes No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

B. Applicant Information

1a. Who is the Primary Contact? *

NCDOT

1b. Primary Contact Email: *

jldilday@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx
(919)707-6111

1d. Who is applying for the permit? *

Owner (Check all that apply) Applicant (other than owner)

1e. Is there an Agent/Consultant for this project? *

Yes No

2. Owner Information

2a. Name(s) on recorded deed: *

NCDOT

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address *

Street Address

1000 Birch Ridge Road

Address Line 2

Century Center Building A

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27610

Country

USA

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6111

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

pharris@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

Widening of NC 42 from US 421 to SR 1579 and along SR 1579 from NC 42 to SR 1538 (Central)

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Sanford

2. Project Identification



2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude: *

35.465381
ex: 34.208504

Longitude: *

-79.082738
-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *

Patchet Creek

3b. Water Resources Classification of nearest receiving water: *

C

[Surface Water Lookup](#)

3c. What river basin(s) is your project located in? *

Cape Fear

3d. Please provide the 12-digit HUC in which the project is located. *

030300040201, 030300040202, 030300040101, 030300040204, 030300040105

[River Basin Lookup](#)

4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: *

NC 42 is a rural, two-lane undivided North Carolina Secondary Route.

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *

Yes No Unknown

4d. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)

[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

4e. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)

[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

4f. List the total estimated acreage of all existing wetlands on the property:

4.9 ac.

4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

1,300 linear feet

4h. Explain the purpose of the proposed project: *

To improve the safety and traffic operations along NC 42/SR 1579 (Broadway Road).

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *

The project is designed as a four-lane, median divided facility along NC 42, from US 421 to the existing five-lane section at the US421 interchange, and from there to SR 1579, at NC 42. The remainder of the project will be a three-lane facility with a continuous center turn lane. Standard road building equipment, such as trucks, dozers, and cranes will be used.

4j. Please upload project drawings for the proposed project.

[Click the upload button or drag and drop files here to attach document](#)

R3830_roadway combined.pdf

13.47MB

R-3830_Hyd_Permit_Drawings_2018-10-15.pdf

7.42MB

File type must be pdf

5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? *

Yes

No

Unknown

Comments:

5b. If the Corps made a jurisdictional determination, what type of determination was made? *

Preliminary Approved Not Verified Unknown N/A

Corps AID Number:

Example: SAW-2017-99999

SAW-2011-00310

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Anna Reusche

Agency/Consultant Company: Kimley-Horn, Inc.

Other:

5d. List the dates of the Corp jurisdiction determination or State determination if a determination was made by the Corps or DWR.

Preliminary JD dated 8/23/2012. Field visit dated 7/24/2012 conducted by Ronnie Smith. NCDWR stream call letter from Mason Herndon dated 9/7/2012.

5d1. Jurisdictional determination upload

Click the upload button or drag and drop files here to attach document

2011-00310 PJD_jld.pdf

2.54MB

NCDWQ_Lee R-3830 Stream Call Letter-signed.pdf

150.62KB

File type must be PDF

6. Future Project Plans

6a. Is this a phased project? *

Yes

No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

D. Proposed Impacts Inventory

1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

Wetlands

Streams-tributaries

Buffers

Open Waters

Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site # * (?)	2a1 Reason * (?)	2b. Impact type * (?)	2c. Type of W. *	2d. W. name *	2e. Forested *	2f. Type of Jurisdiction * (?)	2g. Impact area *
Site 1	Fill/Mech. Clearing	P	Headwater Forest	WK	Yes	Corps	0.008 (acres)
Site 2A	Bank Stabilization/Mech. Clearing	P	Riverine Swamp Forest	WH	Yes	Corps	0.034 (acres)
Site 2B	Mech. Clearing	P	Headwater Forest	WI	Yes	Corps	0.014 (acres)
Site 3A	Bank Stabilization	P	Riverine Swamp Forest	WF	Yes	Corps	0.044 (acres)
Site 3B	Mech. Clearing	P	Headwater Forest	WG	Yes	Corps	0.008 (acres)
Site 4	Fill	P	Headwater Forest	WE	Yes	Corps	0.030 (acres)
Site 5A	Bank Stabilization	P	Riverine Swamp Forest	WC	Yes	Corps	0.002 (acres)
Site 6	Fill	P	Headwater Forest	WB	Yes	Corps	0.030 (acres)
Site 6	Fill	T	Headwater Forest	WB	Yes	Corps	0.019 (acres)

2g. Total Temporary Wetland Impact

0.019

2g. Total Permanent Wetland Impact

0.170

2g. Total Wetland Impact

0.189

2h. Comments:

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact* (?)	3b. Impact type *	3c. Type of impact *	3d. S. name *	3e. Stream Type* (?)	3f. Type of Jurisdiction *	3g. S. width* Average (feet)	3h. Impact length* (linear feet)
S1	Site 1-pipe extension	Permanent	Fill	SD	Perennial	Both	4 Average (feet)	71 (linear feet)
S2	Site 1-bank stabilization	Permanent	Bank Stabilization	SD	Perennial	DWR	4 Average (feet)	14 (linear feet)
S3	Site 1-bank stabilization	Temporary	Bank Stabilization	SD	Perennial	DWR	4 Average (feet)	20 (linear feet)
S4	Site 2A-pipe extension	Permanent	Fill	SC	Perennial	Both	4 Average (feet)	78 (linear feet)
S5	Site 2A-bank stabilization	Permanent	Bank Stabilization	SC	Perennial	DWR	4 Average (feet)	18 (linear feet)
S6	Site 2A-bank stabilization	Temporary	Bank Stabilization	SC	Perennial	DWR	4 Average (feet)	43 (linear feet)
S7	Site 3A-pipe extension	Permanent	Fill	SB	Intermittent	Both	3 Average (feet)	88 (linear feet)
S8	Site 3A-bank stabilization	Permanent	Bank Stabilization	SB	Intermittent	DWR	3 Average (feet)	16 (linear feet)
S9	Site 3A-bank stabilization	Temporary	Bank Stabilization	SB	Intermittent	DWR	3 Average (feet)	25 (linear feet)
S10	Site 5A-pipe extension	Permanent	Fill	Patchet Creek	Perennial	Both	5 Average (feet)	56 (linear feet)
S11	Site 5A-pipe extension	Temporary	Fill	Patchet Creek	Perennial	Both	5 Average (feet)	13 (linear feet)
S12	Site 5A-bank stabilization	Permanent	Bank Stabilization	Patchet Creek	Perennial	DWR	5 Average (feet)	24 (linear feet)
S13	Site 5A-bank stabilization	Temporary	Bank Stabilization	Patchet Creek	Perennial	DWR	5 Average (feet)	19 (linear feet)
S14	Site 5B-pipe extension	Permanent	Fill	SAA	Intermittent	Both	1 Average (feet)	20 (linear feet)
S15	Site 5B-pipe extension	Temporary	Fill	SAA	Intermittent	Both	1 Average (feet)	10 (linear feet)

** All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

385

3i. Total temporary stream impacts:

130

3i. Total stream and ditch impacts:

515

3j. Comments:

72 linear feet of permanent impact is attributed to bank stabilization at multiple sites and does not require mitigation.

E. Impact Justification and Mitigation



1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project:*

NCDOT Best Management Practices for Construction and Maintenance Activities will be adhered to. See Stormwater Management Plan for additional measures.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques:*

Minimizing roadway sideslopes (max. 3:1) in vicinity of jurisdictional features. Variable width base ditches utilized to diffuse stormwater from roadway ditches into wetlands.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

Yes No

2c. If yes, mitigation is required by (check all that apply):

DWR Corps

2d. If yes, which mitigation option(s) will be used for this project?

Mitigation bank Payment to in-lieu fee program Permittee Responsible Mitigation

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.

Yes No

4b. Stream mitigation requested:

(linear feet)

313

4c. If using stream mitigation, what is the stream temperature:

warm

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

4d. Buffer mitigation requested (DWR only):

(square feet)

4e. Riparian wetland mitigation requested:

(acres)

0.17

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

4h. Comments

72 linear feet of permanent impact is attributed to bank stabilization and does not require mitigation.

6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.

Yes No

F. Stormwater Management and Diffuse Flow Plan (required by DWR)

*** Recent changes to the stormwater rules have required updates to this section.***

1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

Yes No

For a list of options to meet the diffuse flow requirements, click [here](#).

If no, explain why:

This project is not within the protected riparian buffers of the Cape Fear River basin.

2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250?*

Yes No

Comments:

See attached permit drawings.

G. Supplementary Information

1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? *

Yes No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? *

Yes No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

Yes No

NEPA or SEPA Final Approval Letter

Click the upload button or drag and drop files here to attach document

FILETYPE MUST BE PDF

2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? *

Yes No

3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? *

Yes No

3b. If you answered "no," provide a short narrative description.

Implementation of the proposed Build Alternative would not contribute, in conjunction with past, present, or future projects, to substantial adverse cumulative effects on resources in the study areas.

4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? *

Yes No N/A

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? *

Yes No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? *

Yes No

5c. If yes, indicate the USFWS Field Office you have contacted.

Raleigh

5d. Is another Federal agency involved? *

Yes No Unknown

5e. Is this a DOT project located within Division's 1-8? *

Yes No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? *

N.C. Natural Heritage Program database; USFWS-Raleigh Field Office website; biological surveys for protected species listed for Lee County, which include red-cockaded woodpecker (RCW), Cape Fear shiner and harperella. All species received biological conclusions of "No Effect", due to no habitat being present. There was no habitat for the bald eagle within 1.13 miles of the study area. Northern long-eared bat is covered under the PBO developed between USFWS and NCDOT.

Consultation Documentation Upload

Click the upload button or drag and drop files here to attach document

File type must be PDF

6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? *

Yes No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? *

NMFS County Index

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? *

Yes

No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? *

NEPA Documentation

7c. Historic or Prehistoric Information Upload

Click the upload button or drag and drop files here to attach document

File must be PDF

8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? *

Yes

No

8b. If yes, explain how project meets FEMA requirements:

NCDOT Hydraulics Unit coordination with FEMA

8c. What source(s) did you use to make the floodplain determination? *

FEMA Maps

Miscellaneous



Comments

Miscellaneous attachments not previously requested.

Click the upload button or drag and drop files here to attach document

File must be PDF or KMZ

Signature



*

By checking the box and signing below, I certify that:

- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: *

Mack Christopher Rivenbark, III

Signature

Mack C. Rivenbark, III

Date

2/22/2019



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

TIM BAUMGARTNER
Director

February 12, 2019

Mr. Philip S. Harris, III, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

R-3830, NC 42 / SR 1579 (Broadway Road) from US 421 in Sanford to SR 1538 (East Harrington Avenue) in Broadway, Lee County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory stream and wetland mitigation for the subject project. Based on the information supplied by you on February 8, 2019, the impacts are located in CU 03030004 of the Cape Fear River basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Cape Fear 03030004 SP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	313.0	0.17	0	0	0	0

*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

DMS commits to implementing sufficient compensatory stream and wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill
DMS Asset Management Supervisor

cc: Mr. Monte Matthews, USACE – Raleigh Regulatory Field Office
Ms. Amy Chapman, NCDWR
File: R-3830 Revised





North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.07; Released October 2016)

WBS Element: 38887.1.1 TIP No.: R-3830 County(ies): Lee Page 1 of 1

General Project Information

WBS Element:	38887.1.1	TIP Number:	R-3830	Project Type:	Roadway Widening	Date:	10/15/2018
NCDOT Contact:	Craig J. Lee, PE		Contractor / Designer:	TGS Engineers / Ben Henegar, P.E.			
Address:	1590 Mail Service Center Raleigh, NC 27699-1590		Address:	706 Hillsborough Street Suite 200 Raleigh, NC 27603			
	Phone:	(919) 707-6708		Phone:	(919) 773-8887 ext. 123		
	Email:	cilee@ncdot.gov		Email:	bhenegar@tgsengineers.com		
City/Town:	Sanford / Broadway		County(ies):	Lee			
River Basin(s):	Cape Fear		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	5.524 miles	Surrounding Land Use:	Commercial/Forested/Agriculture/Rural residential					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	53.2	ac.	28.0	ac.				
Typical Cross Section Description:	1.) Four 11.0' wide paved travel lanes, two 5.0' paved bike lanes, 2.5' curb and gutter, and 23.0' raised grassed median. - 3.1 Miles 2.) Three 11.0' wide paved travel lanes, two 4.0' paved shoulders, 4.0' grassed shoulders, and grassed side slopes ranging from 6(H):1(V) to 3(H):1(V) - 2.4 Miles.			Two 10.5' wide paved travel lanes w/ 2' to 4' grassed shoulders and grassed side slopes ranging from 6(H):1(V) to 3(H):1(V).				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	20,350	Year:	2039	Existing:	15,200	Year:	2019
General Project Narrative: (Description of Minimization of Water Quality Impacts)	R-3830 involves the widening of NC 42, from Dalrymple St. to E/W Harrington Avenue, from 2 lanes to 3 / 4 lanes. The project includes four jurisdictional stream crossings, the largest at Patchet Creek, -L- Sta. 228+24, proposed 72" RCP (buried 1.0'). <u>Project minimum measures include:</u> >Maximizing Shoulder Section - 2.4 miles of the project. >Minimizing Roadway Side Slopes - Maximum side slope used on project is 3:1. >Providing Adequate Ground Cover. >Stabilizing Embankments and Drainage Ditches. >Providing Adequate Energy Dissipation. >Utilizing Natural Features and Drainage Pathways - Existing drainage pathways were utilized to the maximum extent practicable. >Encouraging Diffuse Flow - Variable width base ditches were utilized to diffuse roadway ditch flow that discharge into wetlands.							

Waterbody Information

Surface Water Body (1):	Patchet Creek		NCDWR Stream Index No.:	18-20-9			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C					
	Supplemental Classification:	None					
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:			Buffer Rules in Effect:	N/A			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
(If yes, provide justification in the General Project Narrative)							

09/08/19

See Sheet 1A For Index of Sheets
 See Sheet 1B For Conventional Plan Sheet Symbols
 See Sheets 1C-1 through 1C-? For Survey Control Sheets

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3830	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38887.1.1	STP-0042(49)	PE	
38887.2.3	N/A	RW	

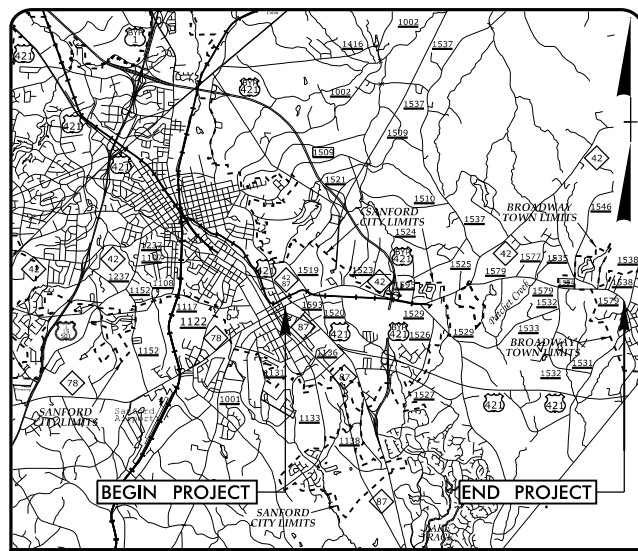
LEE COUNTY

**LOCATION: NC 42 FROM US 421 TO SR 1579 (MAIN STREET)
 IN SANFORD AND ALONG SR 1579 FROM NC 42
 TO SR 1538 (E. HARRINGTON AVE) IN BROADWAY**

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND SIGNALS

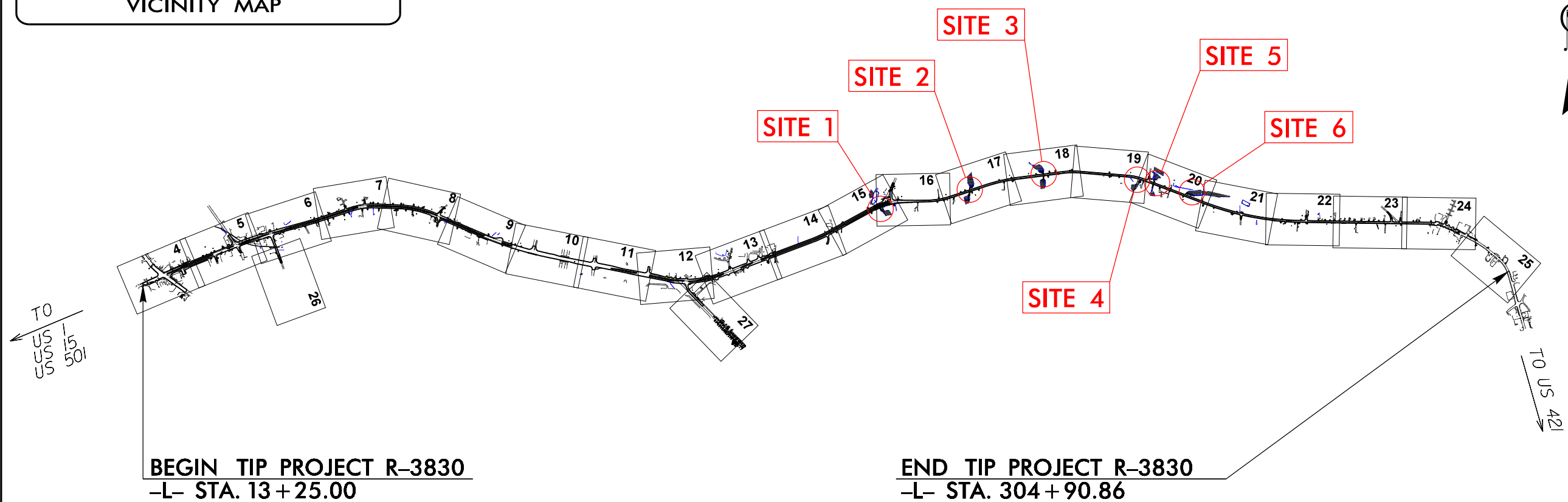
**PERMIT DRAWING
 SHEET 1 OF 20**

TIP PROJECT: R-3830



VICINITY MAP

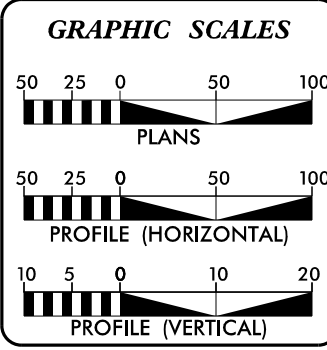
WETLAND AND SURFACE WATER IMPACTS



A DESIGN EXCEPTION IS REQUIRED FOR THE LANE WIDTH.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____.
 PORTIONS OF THIS PROJECT ARE WITHIN 'SANFORD' AND 'BROADWAY' MUNICIPAL BOUNDARIES.

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2019 =	15,200
ADT 2039 =	20,350
K =	8 %
D =	55 %
T =	4 % *
V =	50 MPH
* TTST=2% DUAL=2%	
FUNC CLASS =	MINOR ARTERIAL
	REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-3830	=	5.524 mile +/-
TOTAL LENGTH TIP PROJECT R-3830	=	5.524 mile +/-
LENGTH OF PROJECT BASED ON -L-		

Prepared For:
DIVISION OF HIGHWAYS
 1000 Birch Ridge Dr., Raleigh NC, 27610

By:
 TGS ENGINEERS
 706 HILLSBOROUGH ST
 SUITE 200
 RALEIGH, NC 27603

PH (919) 773-8887
 CORP. LICENSE NO.: C-0275

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 OCTOBER 30, 2017

LETTING DATE:
 OCTOBER 15, 2019

V. MARCUS LOWERY, PE
 PROJECT ENGINEER

TRAVIS COOK, EI
 PROJECT DESIGN ENGINEER

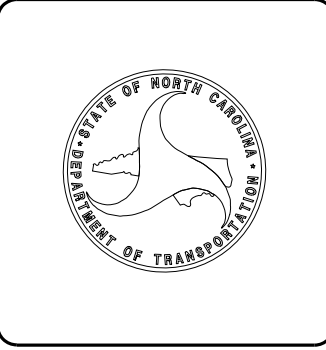
TATIA L. WHITE, PE, PLS
 PROJECT ENGINEER
 NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.


ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.







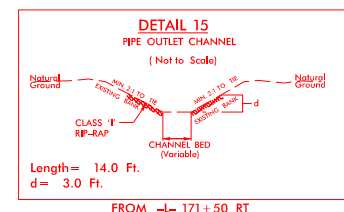
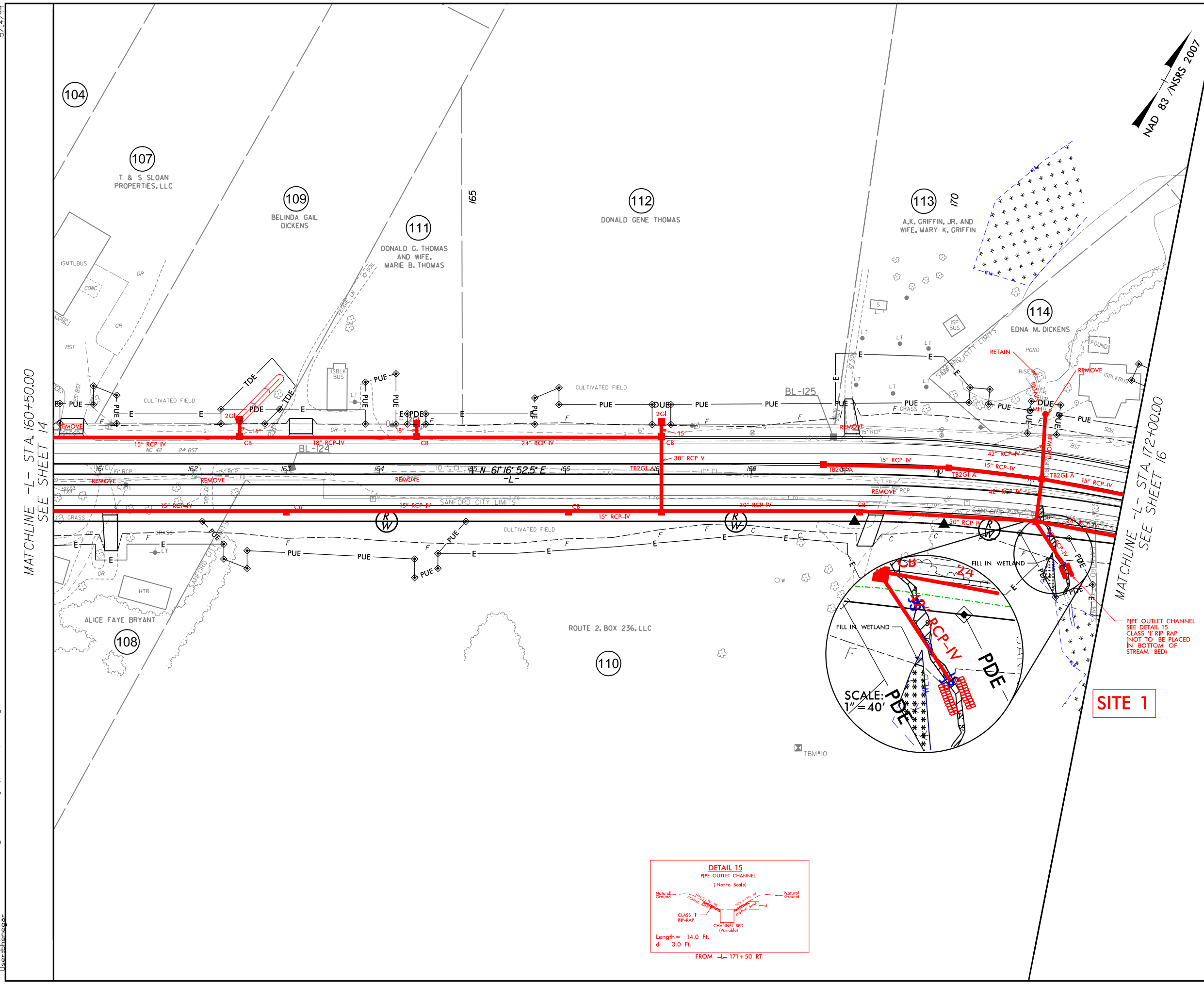
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5/14/99

PROJECT REFERENCE NO. R-3830	SHEET NO. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

**PERMIT DRAWING
SHEET 2 OF 20**

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER




SEE SHEET 33 FOR -L- PROFILE





SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

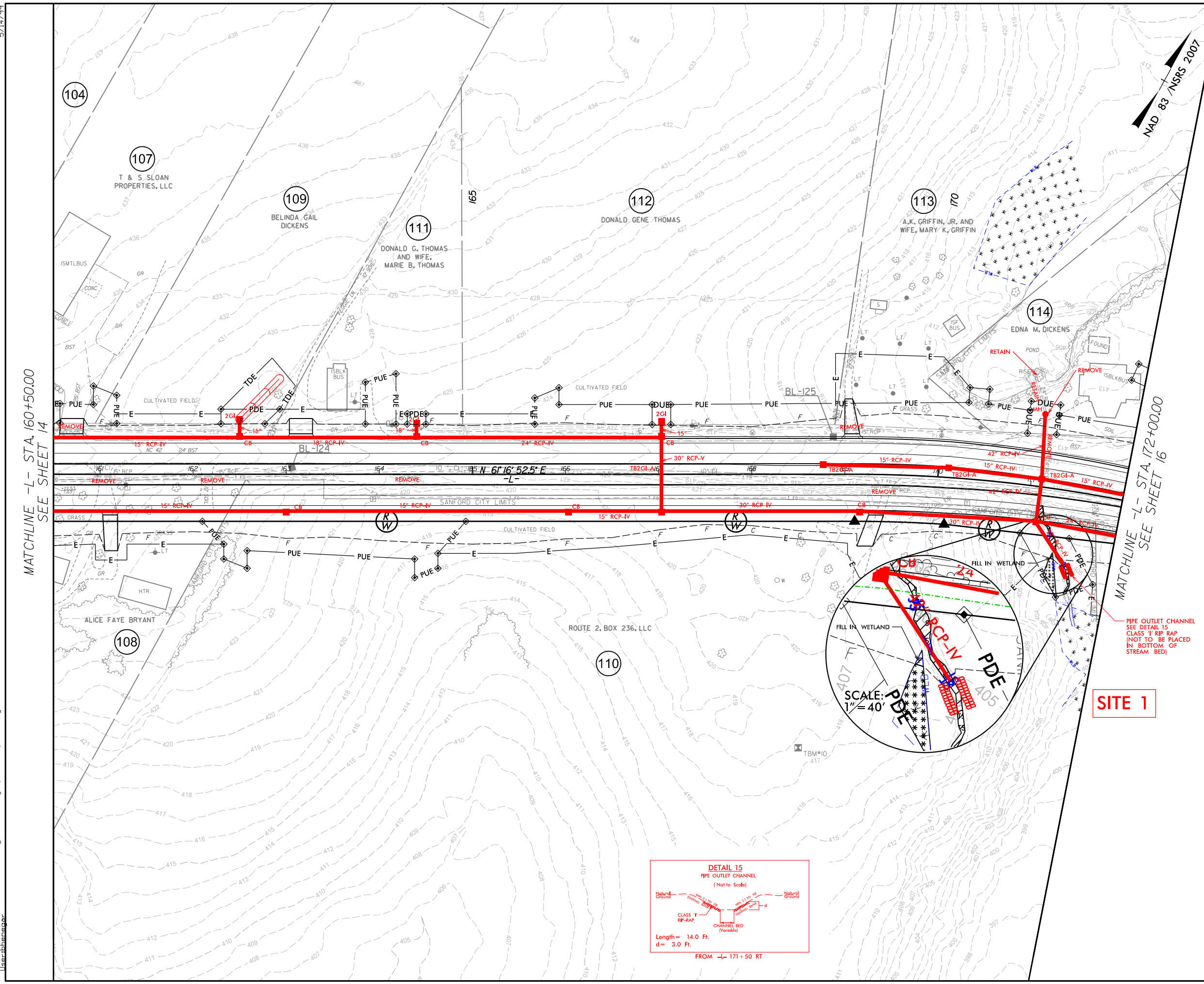
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 User: jshannon

5/14/99

PROJECT REFERENCE NO. R-3830		SHEET NO. 15	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

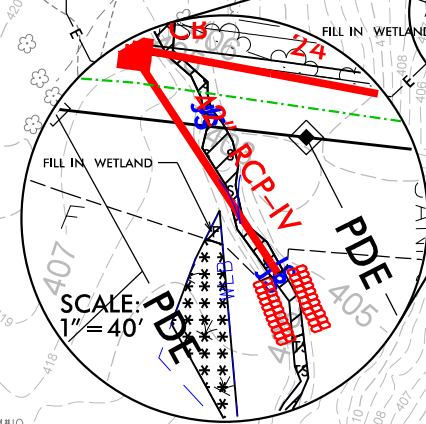
**PERMIT DRAWING
SHEET 3 OF 20**

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER

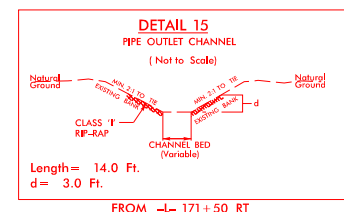


MATCHLINE -L- STA. 160+50.00
SEE SHEET 14

MATCHLINE -L- STA. 172+00.00
SEE SHEET 16



SITE 1



SEE SHEET 33 FOR -L- PROFILE


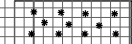
SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

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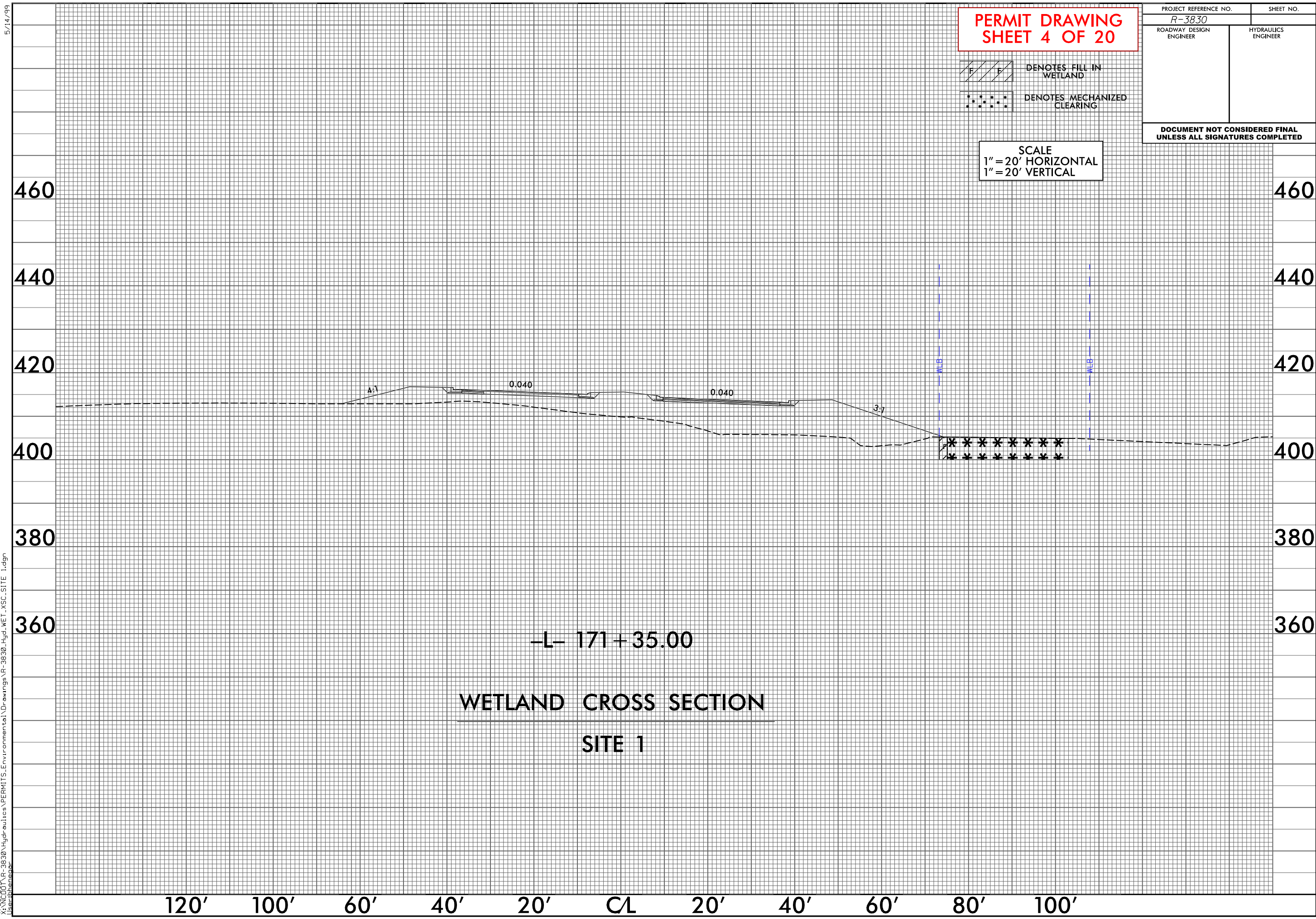
5/14/99

**PERMIT DRAWING
SHEET 4 OF 20**

PROJECT REFERENCE NO. <i>R-3830</i>	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

SCALE
 1" = 20' HORIZONTAL
 1" = 20' VERTICAL



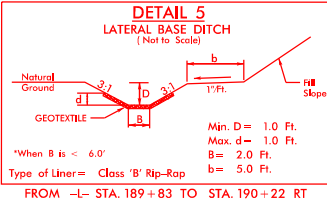
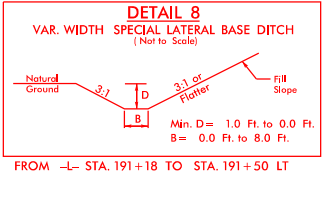
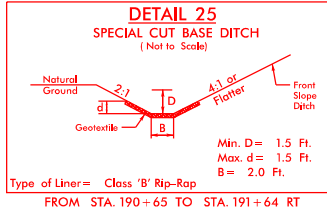
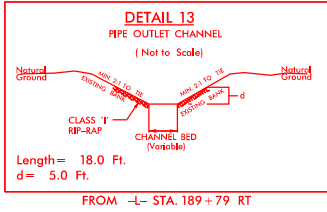
-L- 171+35.00

WETLAND CROSS SECTION

SITE 1

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User: jhanna

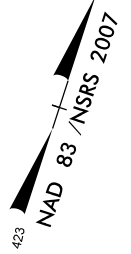
5/14/99



PERMIT DRAWING
SHEET 5 OF 20

- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

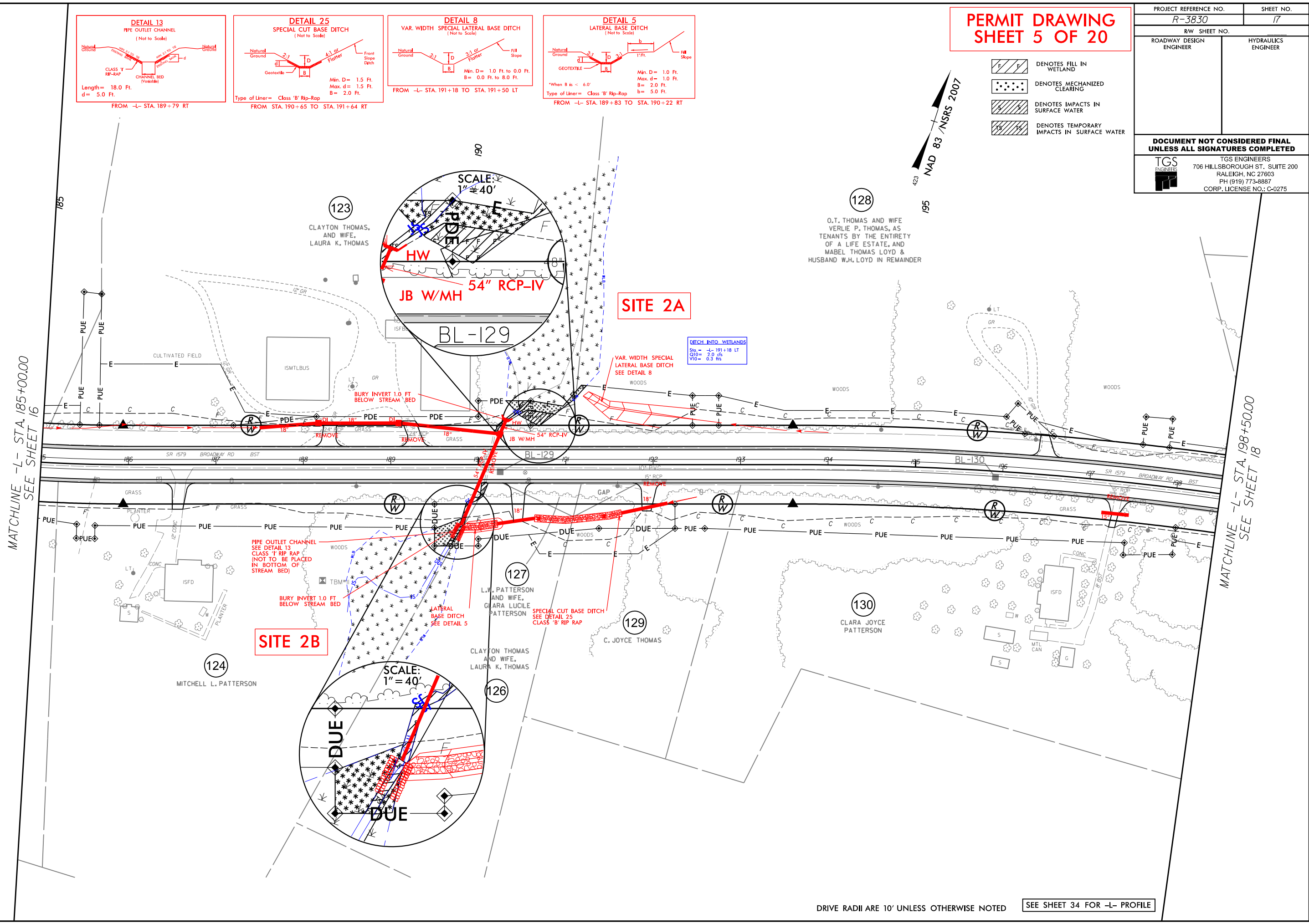
PROJECT REFERENCE NO. <i>R-3830</i>	SHEET NO. <i>17</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



MATCHLINE -L- STA. 185+00.00
SEE SHEET 16


MATCHLINE -L- STA. 198+50.00
SEE SHEET 18

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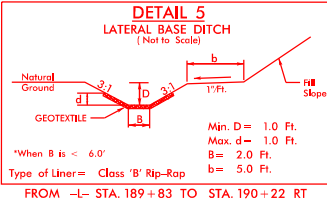
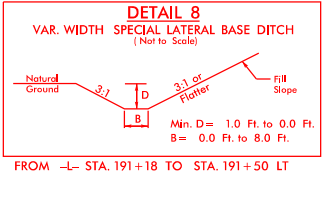
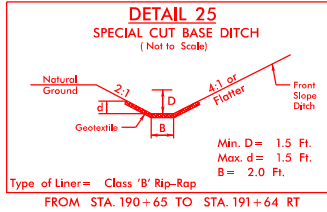
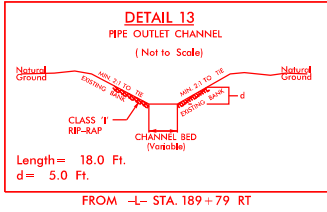






DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED SEE SHEET 34 FOR -L- PROFILE

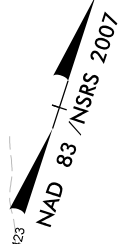
5/14/99

PROJECT REFERENCE NO. R-3830		SHEET NO. 17	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

**PERMIT DRAWING
SHEET 6 OF 20**

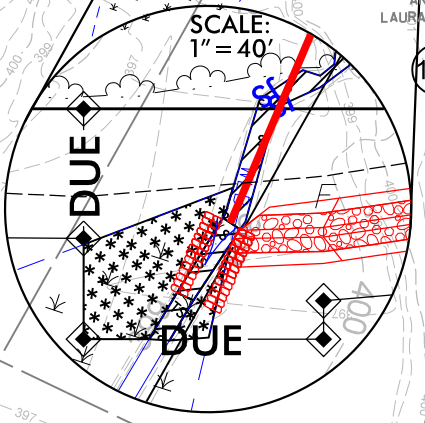
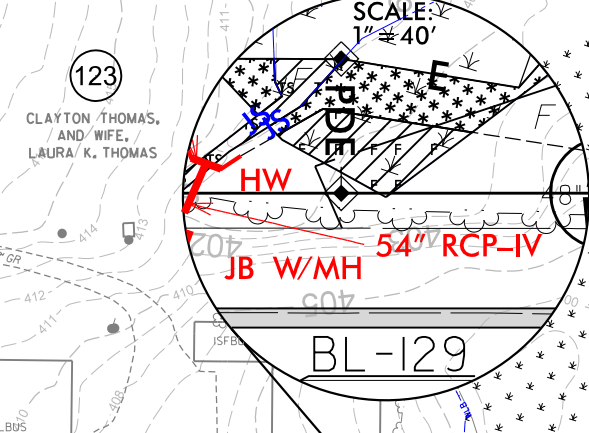
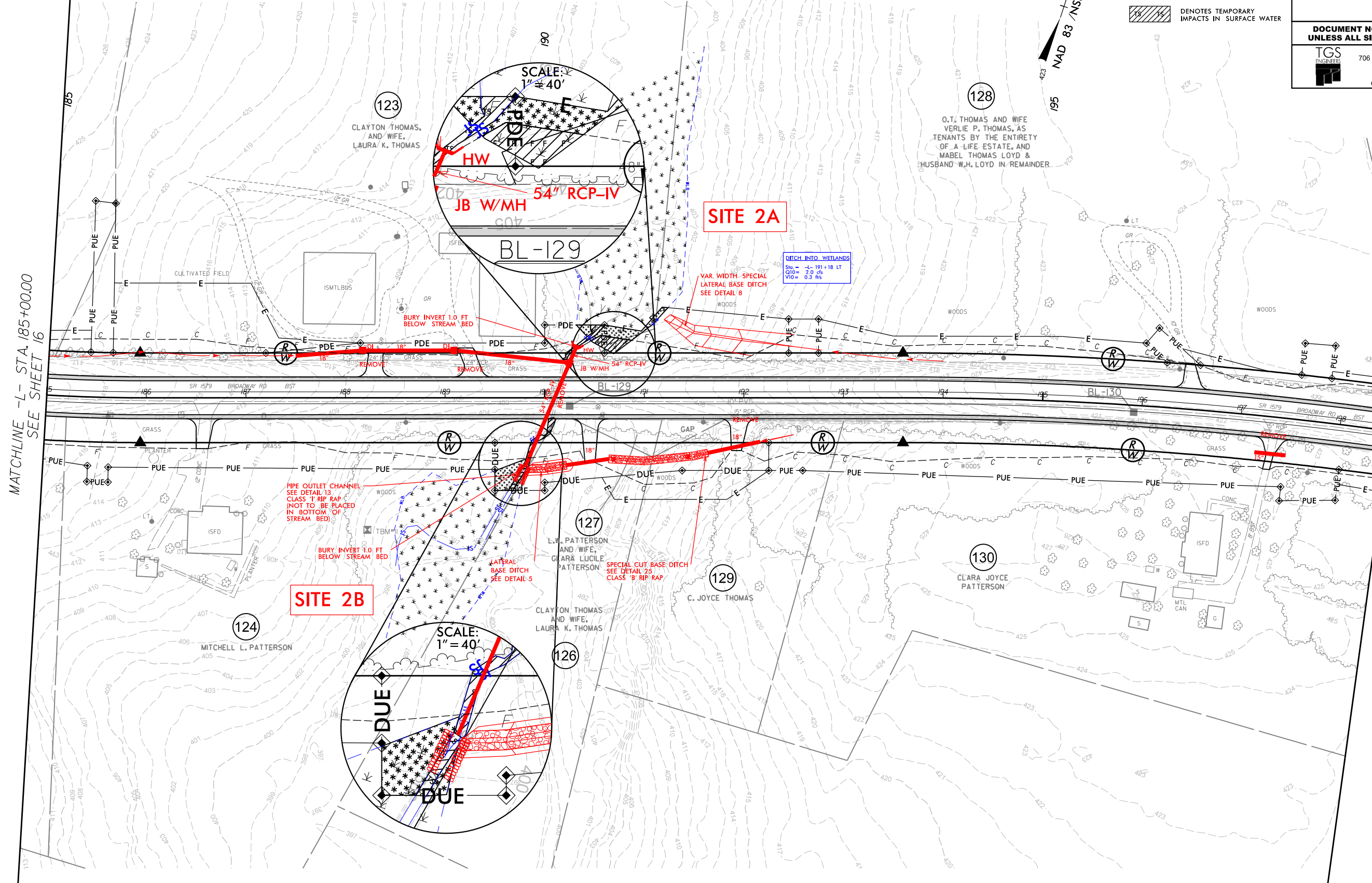


-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER



MATCHLINE -L- STA. 185+00.00
SEE SHEET 16

MATCHLINE -L- STA. 198+50.00
SEE SHEET 18



DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

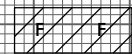
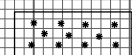
SEE SHEET 34 FOR -L- PROFILE

7/25/2018
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 User: jhanna

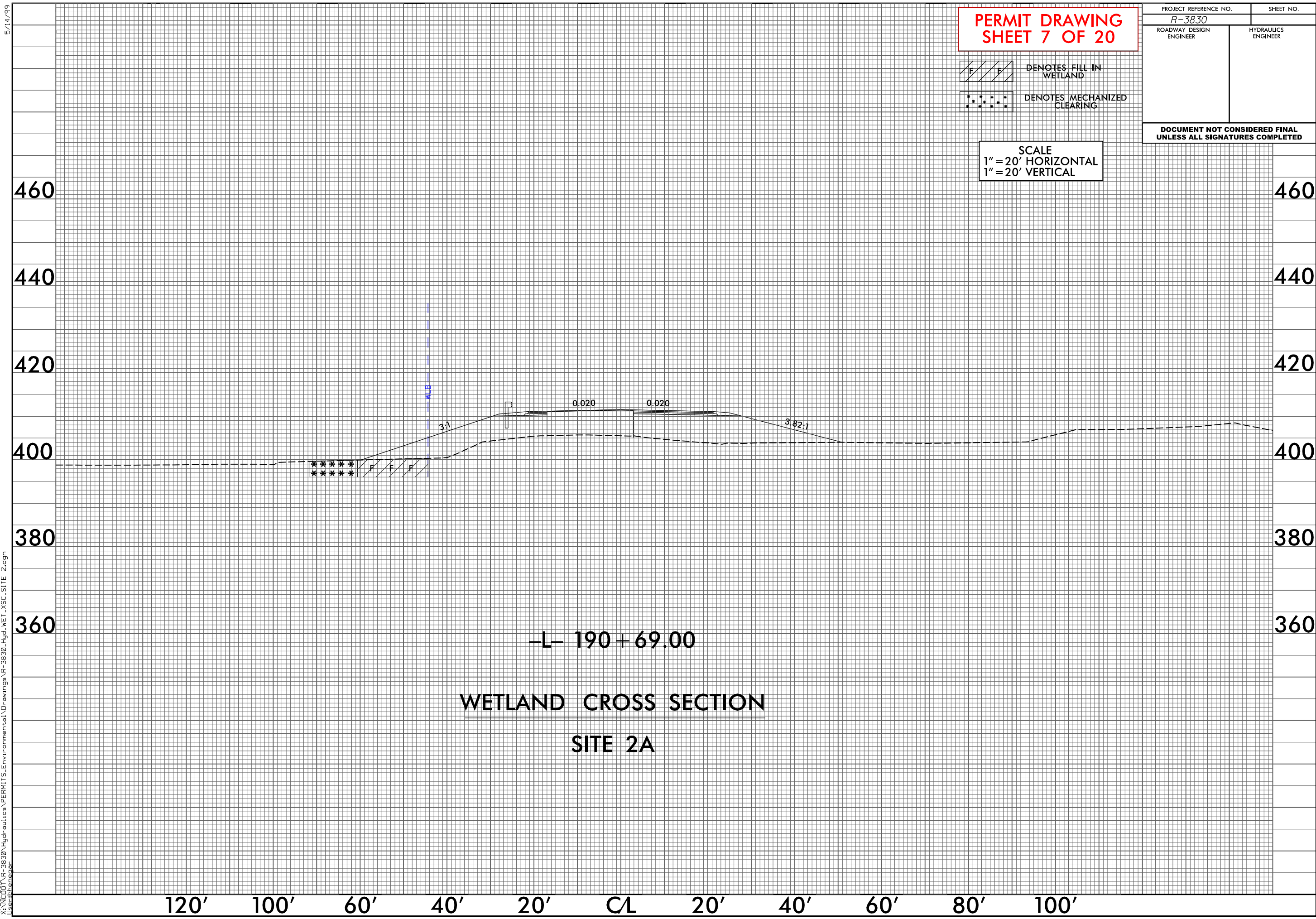
5/14/99

**PERMIT DRAWING
SHEET 7 OF 20**

PROJECT REFERENCE NO. R-3830	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

SCALE
 1" = 20' HORIZONTAL
 1" = 20' VERTICAL




-L- 190 + 69.00
WETLAND CROSS SECTION
SITE 2A






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 User: jhanna

5/14/99

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User: bhanoo

PERMIT DRAWING SHEET 9 OF 20

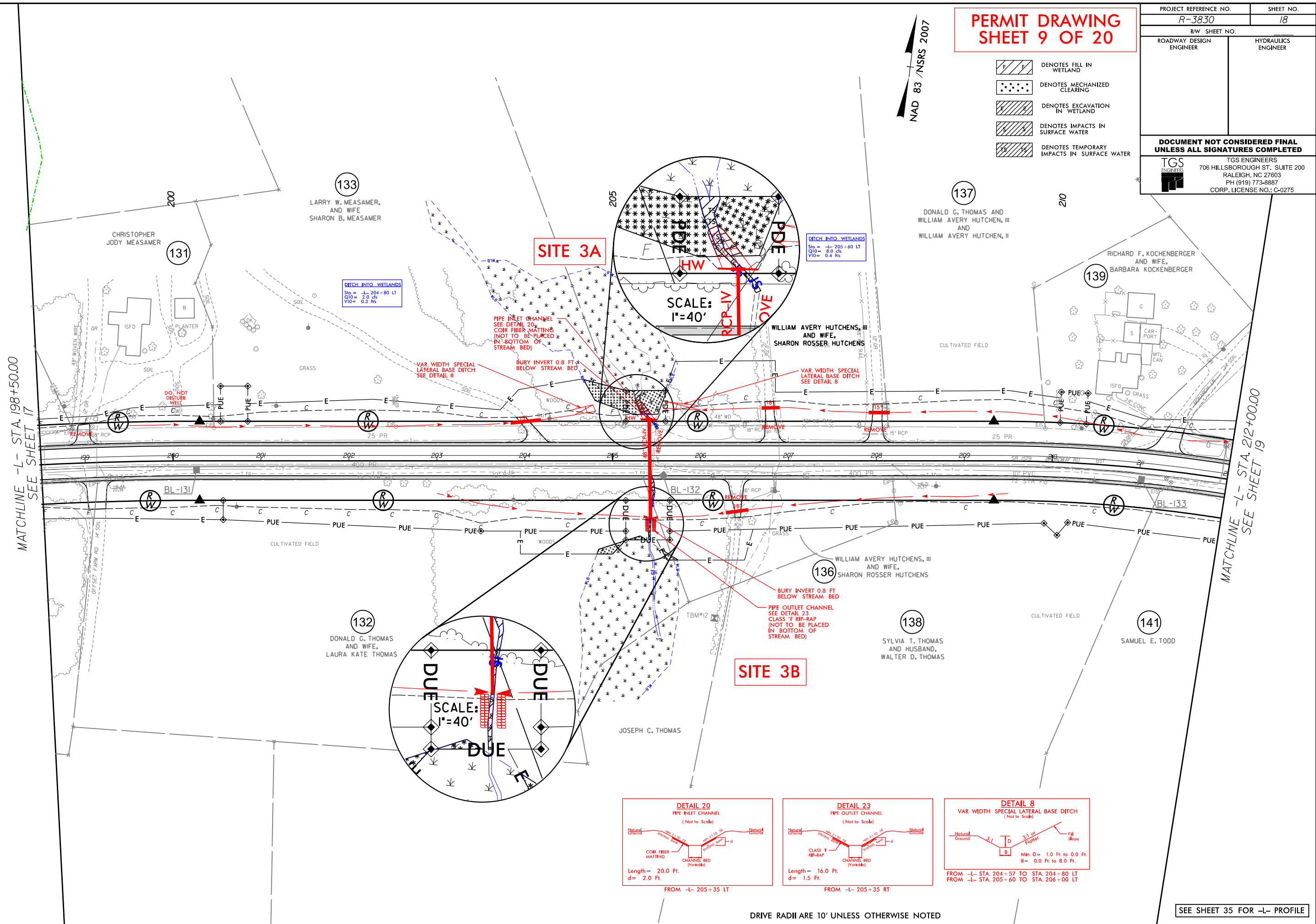
PROJECT REFERENCE NO. R-3830	SHEET NO. 18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES EXCAVATION IN WETLAND
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83 / NSRS 2007

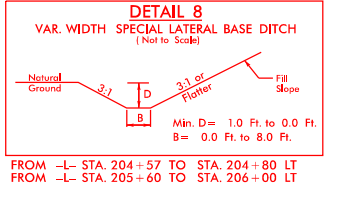
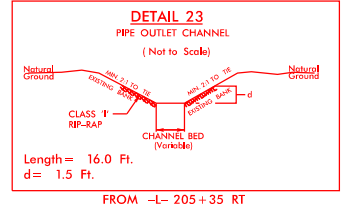
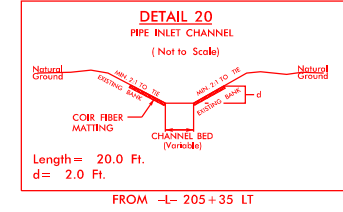
MATCHLINE -L- STA. 198+50.00
SEE SHEET 17

MATCHLINE -L- STA. 212+00.00
SEE SHEET 19



SITE 3A

SITE 3B




DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED






SEE SHEET 35 FOR -L- PROFILE

5/14/99

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PERMIT DRAWING SHEET 10 OF 20

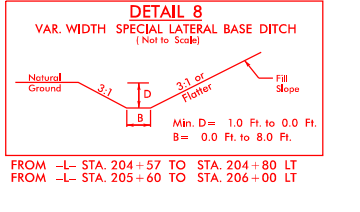
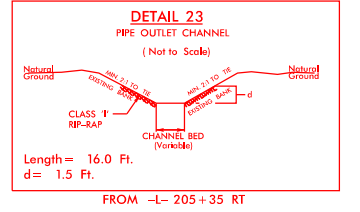
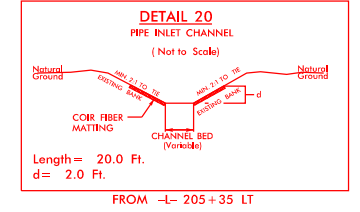
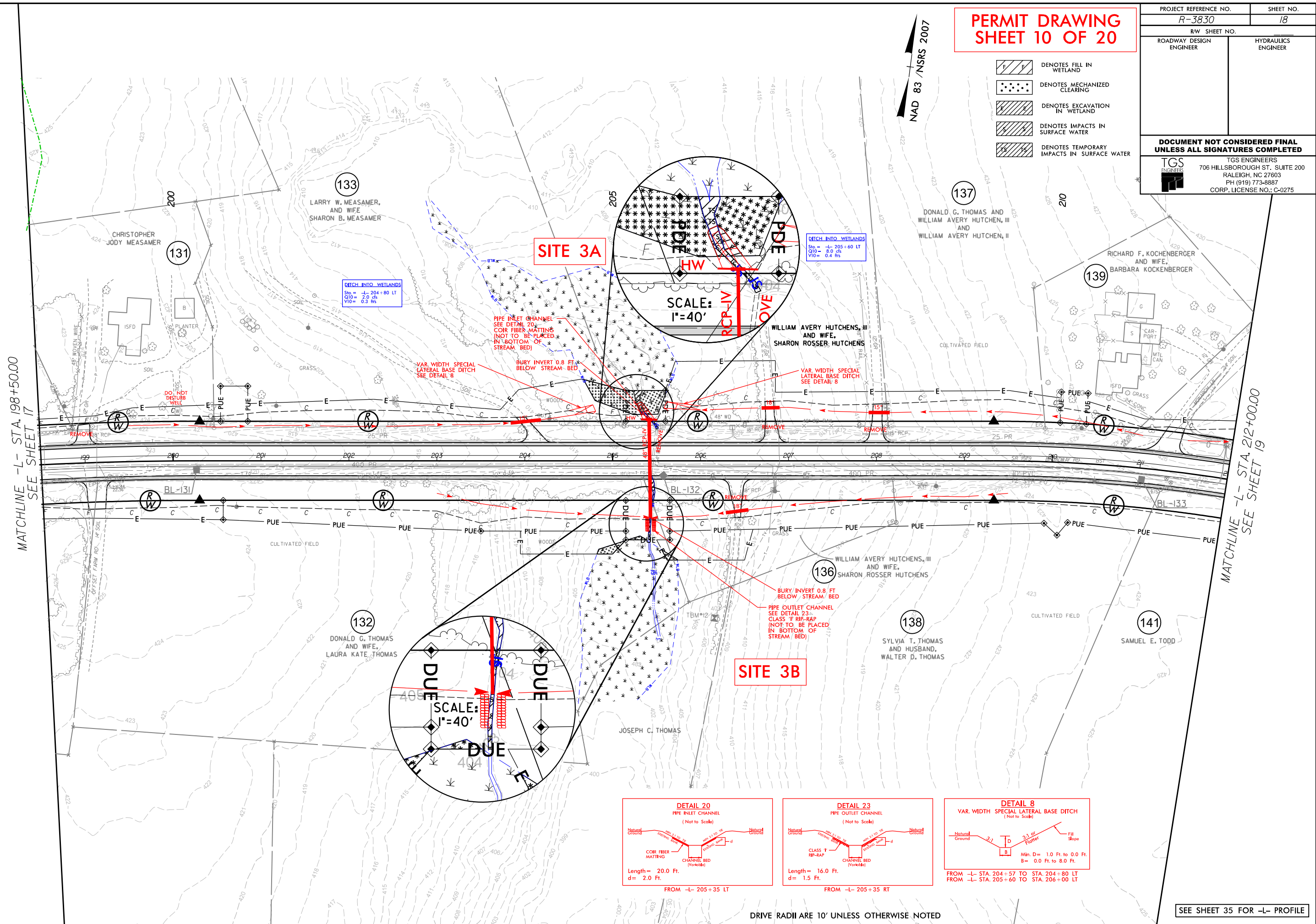
PROJECT REFERENCE NO. R-3830	SHEET NO. 18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES EXCAVATION IN WETLAND
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83 / NSRS 2007

MATCHLINE -L- STA. 198+50.00
SEE SHEET 7

MATCHLINE -L- STA. 212+00.00
SEE SHEET 19




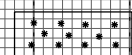
DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

SEE SHEET 35 FOR -L- PROFILE

5/14/99

**PERMIT DRAWING
SHEET 11 OF 20**

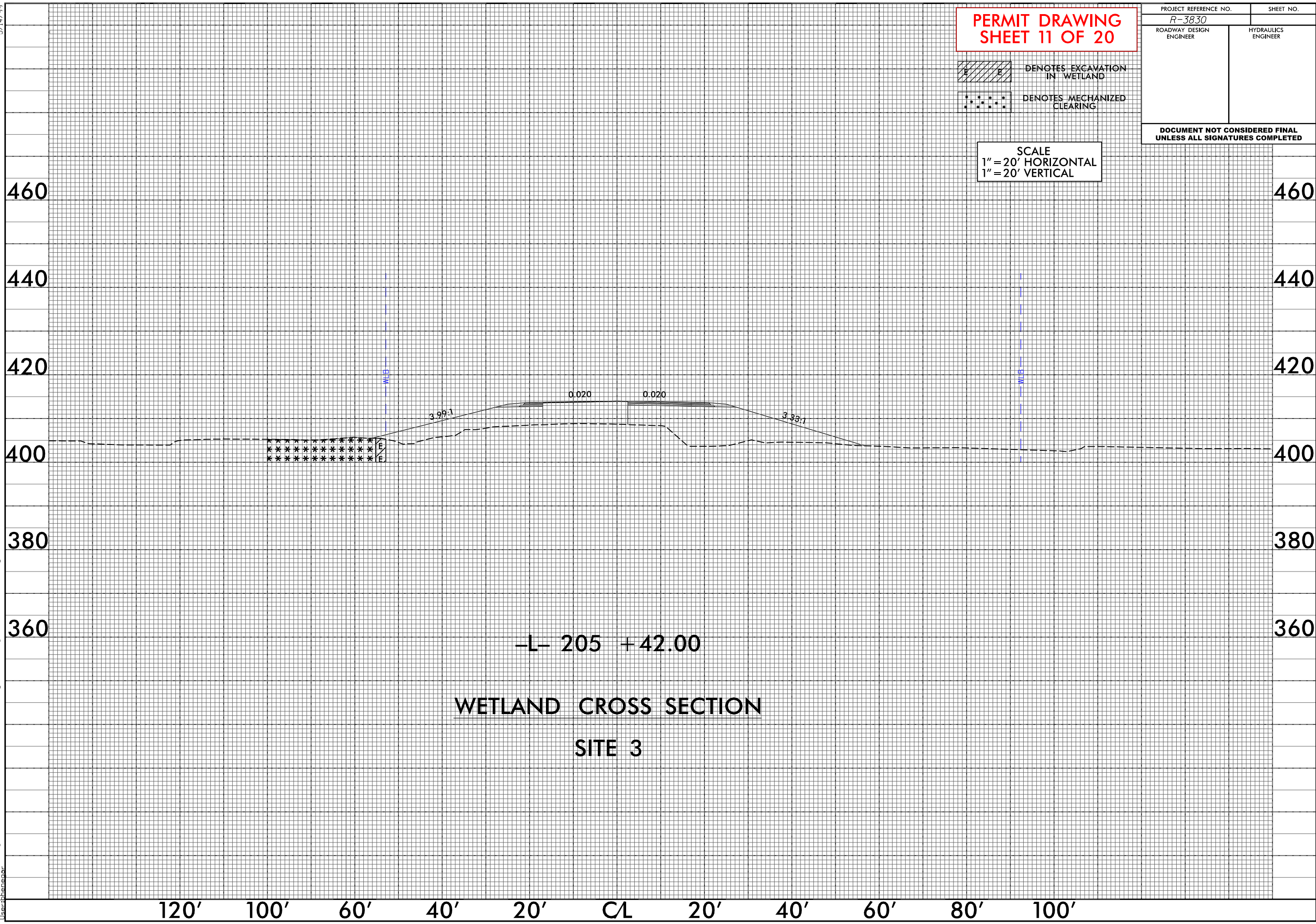
PROJECT REFERENCE NO. R-3830	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-  DENOTES EXCAVATION IN WETLAND
-  DENOTES MECHANIZED CLEARING


SCALE
1" = 20' HORIZONTAL
1" = 20' VERTICAL

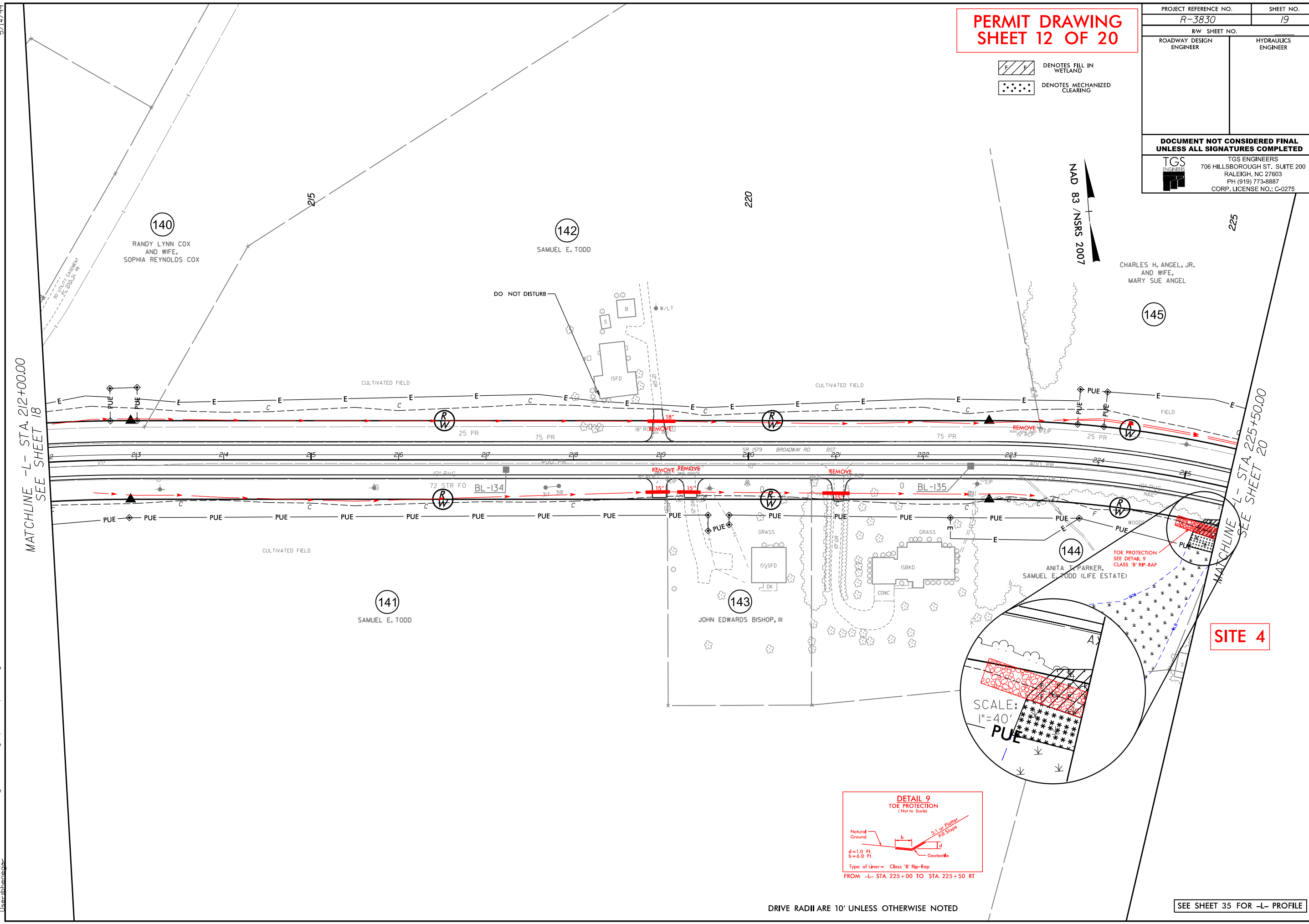
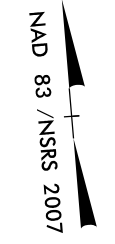
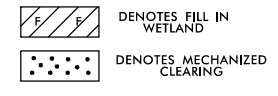
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

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User: jhanna



**PERMIT DRAWING
SHEET 12 OF 20**

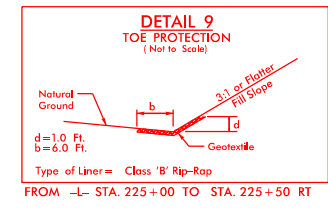
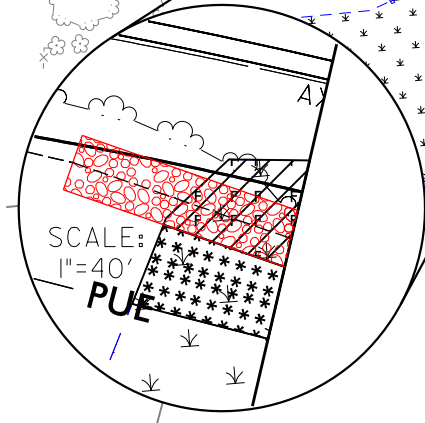
PROJECT REFERENCE NO. R-3830	SHEET NO. 19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



MATCHLINE -L- STA. 212+00.00
SEE SHEET 18

MATCHLINE -L- STA. 225+50.00
SEE SHEET 20

SITE 4




DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED


SEE SHEET 35 FOR -L- PROFILE


5/14/99
7/25/2018
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User: jshannon

5/14/99

PERMIT DRAWING SHEET 13 OF 20

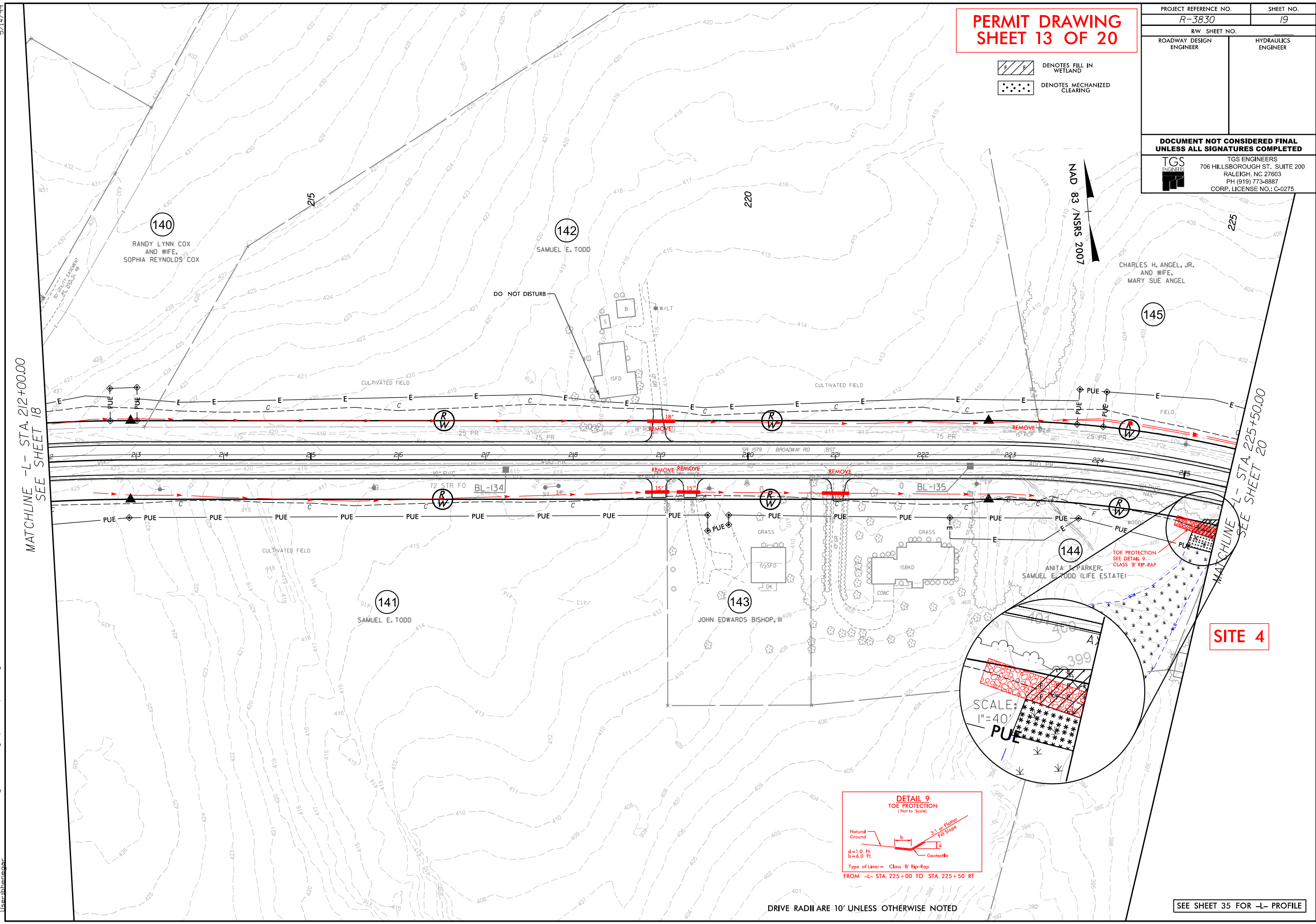
PROJECT REFERENCE NO. R-3830	SHEET NO. 19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

 DENOTES FILL IN WETLAND

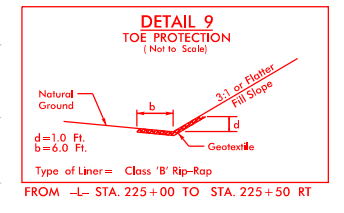
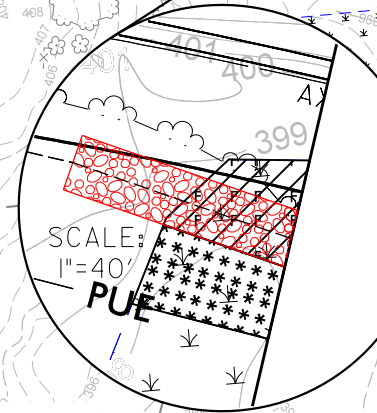
 DENOTES MECHANIZED CLEARING

MATCHLINE -L- STA. 212+00.00
SEE SHEET 18

MATCHLINE -L- STA. 225+50.00
SEE SHEET 20



SITE 4



DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED


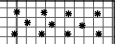
SEE SHEET 35 FOR -L- PROFILE

7/25/2018 10:08:00 AM
C:\Users\jshannon\Documents\Drawings\NR-3830-hyd-pmt-wet.pln 19.dgn

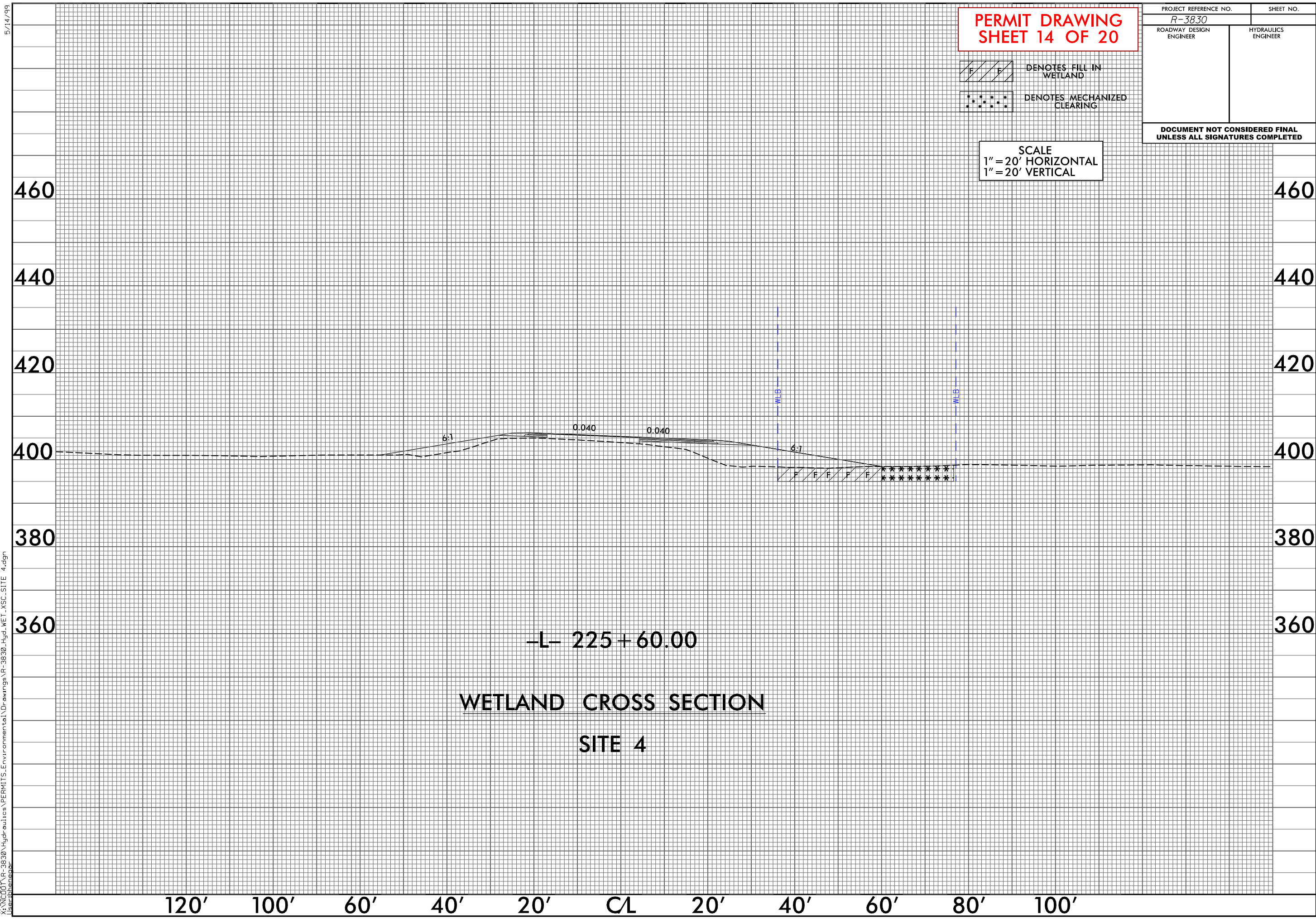
5/14/99

**PERMIT DRAWING
SHEET 14 OF 20**

PROJECT REFERENCE NO. <i>R-3830</i>	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

SCALE
 1" = 20' HORIZONTAL
 1" = 20' VERTICAL




-L- 225 + 60.00






WETLAND CROSS SECTION

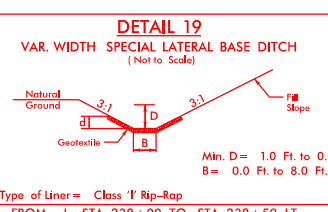
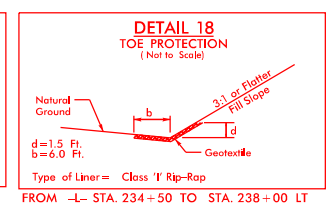
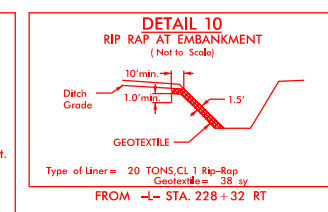
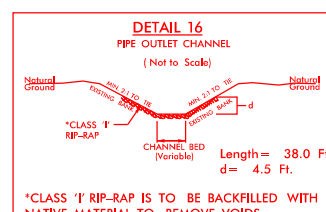
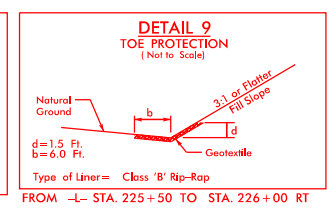
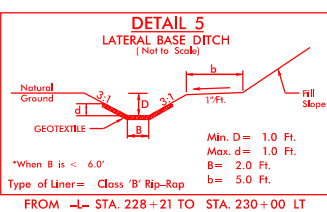
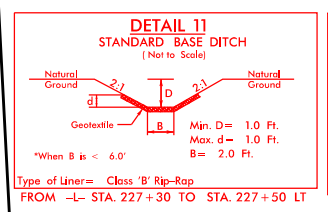
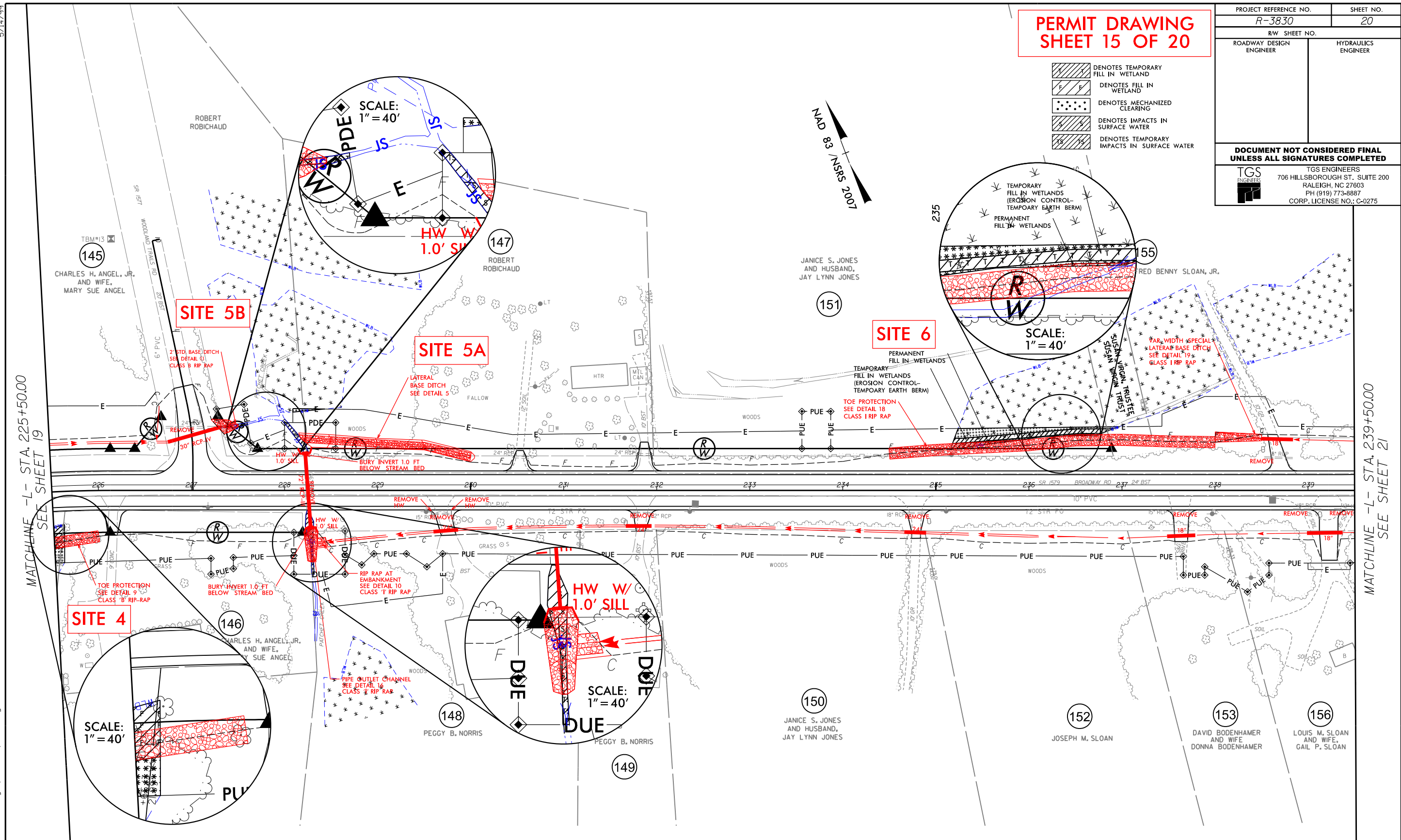
SITE 4

I:\Projects\2008\08-R-3830\Hydro\Hydro\Drawings\Drawings\R-3830_Hyd_WET_XSC_SITE_4.dgn
User: jhanna

**PERMIT DRAWING
SHEET 15 OF 20**

PROJECT REFERENCE NO. R-3830	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-  DENOTES TEMPORARY FILL IN WETLAND
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 42 FOR -Y17- PROFILE

DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

5/14/99
C:\Users\jones\Documents\Drawings\R-3830-hyd.pmt-wet-pln_20.dgn
10/15/2016
TGS ENGINEERS

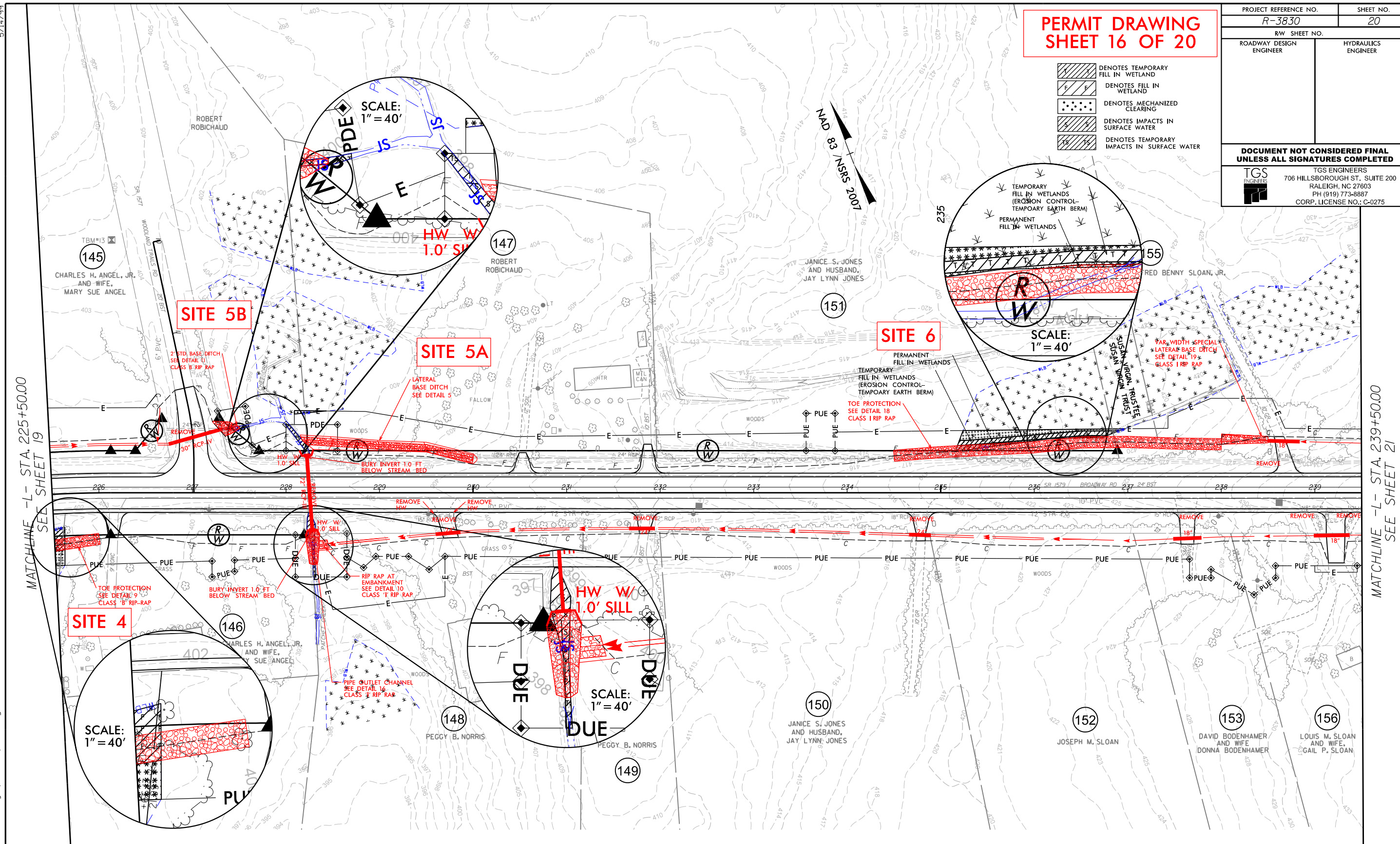
MATCHLINE -L- STA. 225+50.00
SEE SHEET 19

MATCHLINE -L- STA. 239+50.00
SEE SHEET 21

PERMIT DRAWING SHEET 16 OF 20

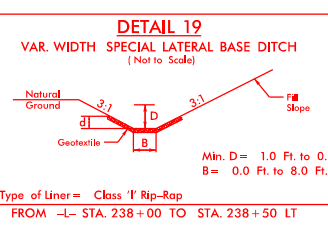
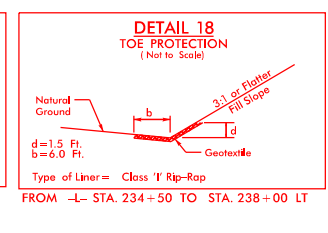
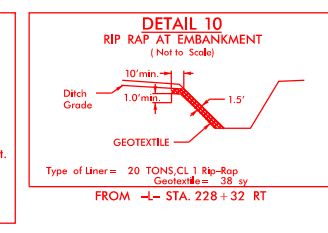
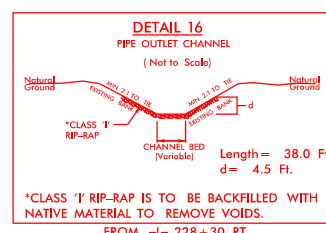
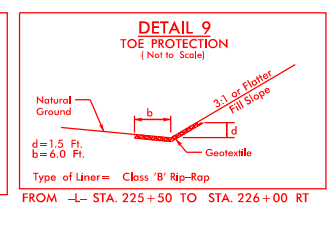
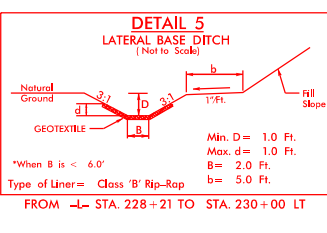
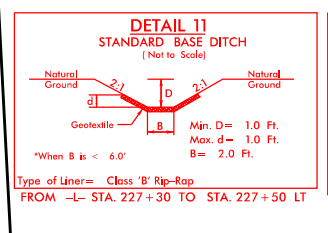
PROJECT REFERENCE NO. R-3830		SHEET NO. 20	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275			

- DENOTES TEMPORARY FILL IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



MATCHLINE -L- STA. 225+50.00
SEE SHEET 19

MATCHLINE -L- STA. 239+50.00
SEE SHEET 21



SEE SHEETS 2B-1 THRU 2B-6
FOR INTERSECTION DETAILS

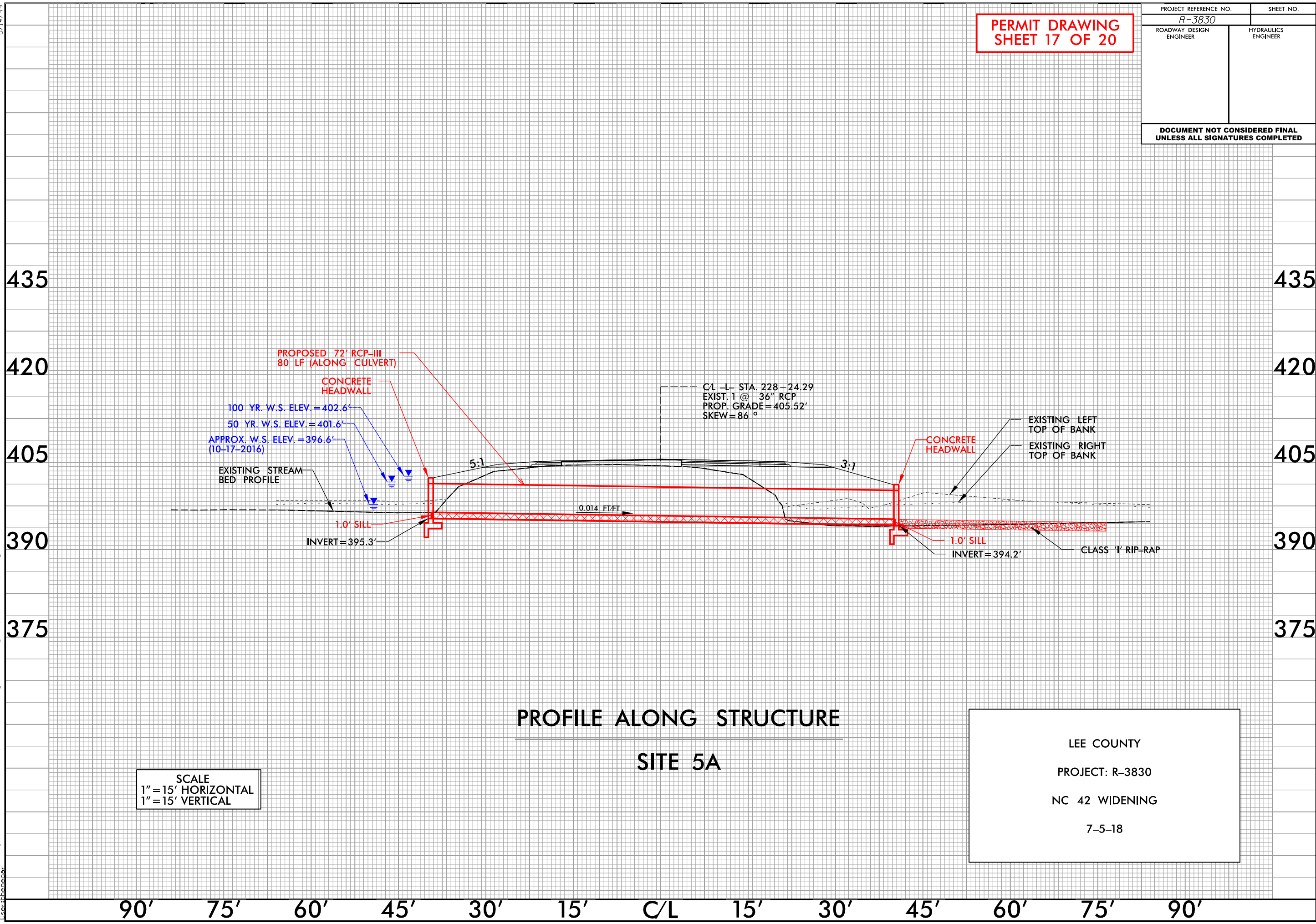
SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 42 FOR -Y17- PROFILE

DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

5/14/99
7/25/2018 R-3830 Hydraulics\PERMITS\Environmental\Drawings\R-3830_Hyd_Pipe_Profile.pmt.dgn User:shane

**PERMIT DRAWING
SHEET 17 OF 20**

PROJECT REFERENCE NO. R-3830	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**PROFILE ALONG STRUCTURE
SITE 5A**

SCALE
1" = 15' HORIZONTAL
1" = 15' VERTICAL

LEE COUNTY
PROJECT: R-3830
NC 42 WIDENING
7-5-18

5/14/99

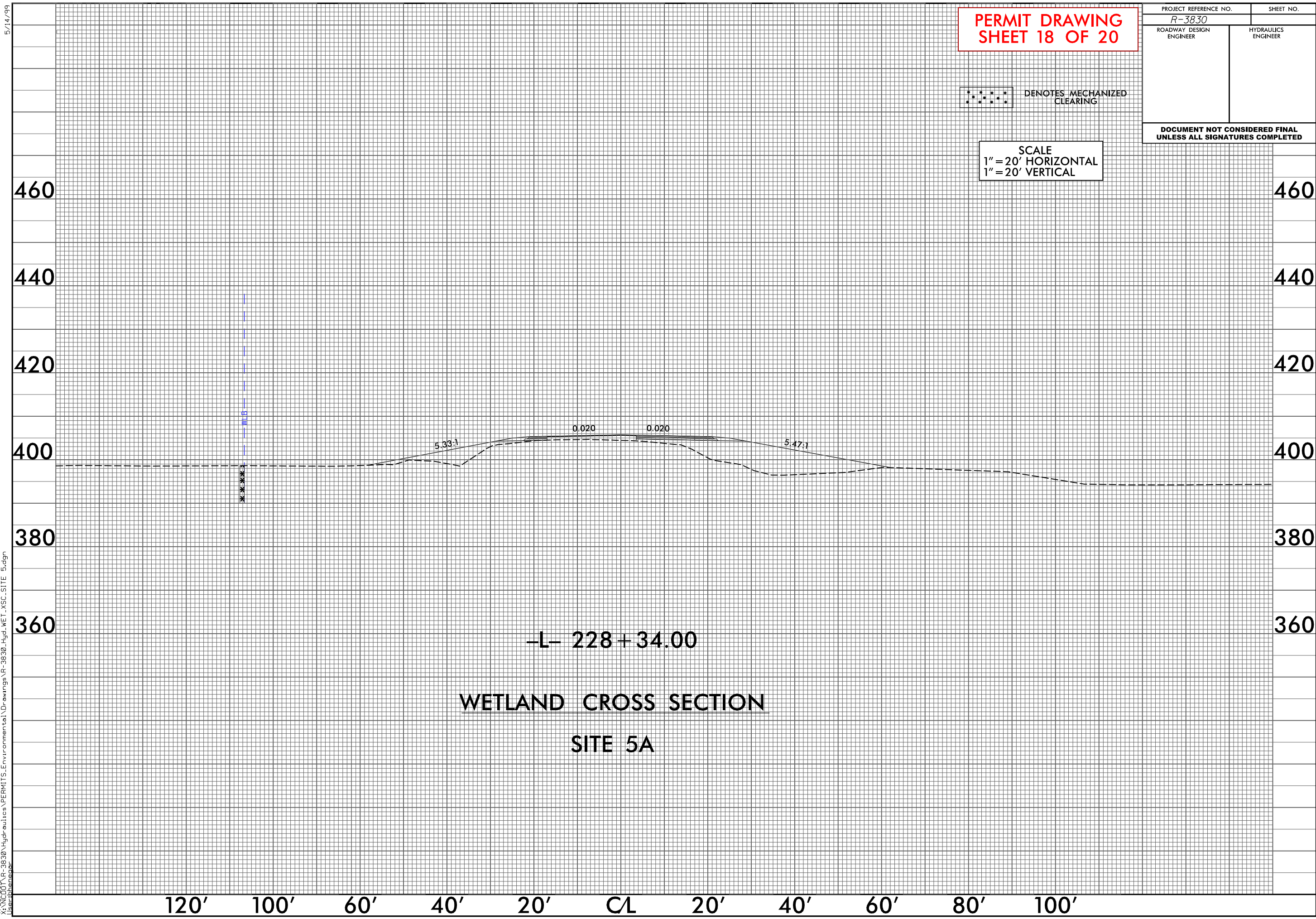
**PERMIT DRAWING
SHEET 18 OF 20**

PROJECT REFERENCE NO. <i>R-3830</i>	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

 DENOTES MECHANIZED CLEARING

SCALE
1" = 20' HORIZONTAL
1" = 20' VERTICAL



-L- 228 + 34.00

WETLAND CROSS SECTION

SITE 5A

X:\2008\08\08\08\Hydraulics\PERMITS\Environmental\Drawings\R-3830_Hyd_WET_XSC_SITE_5.dgn
User: jhanna

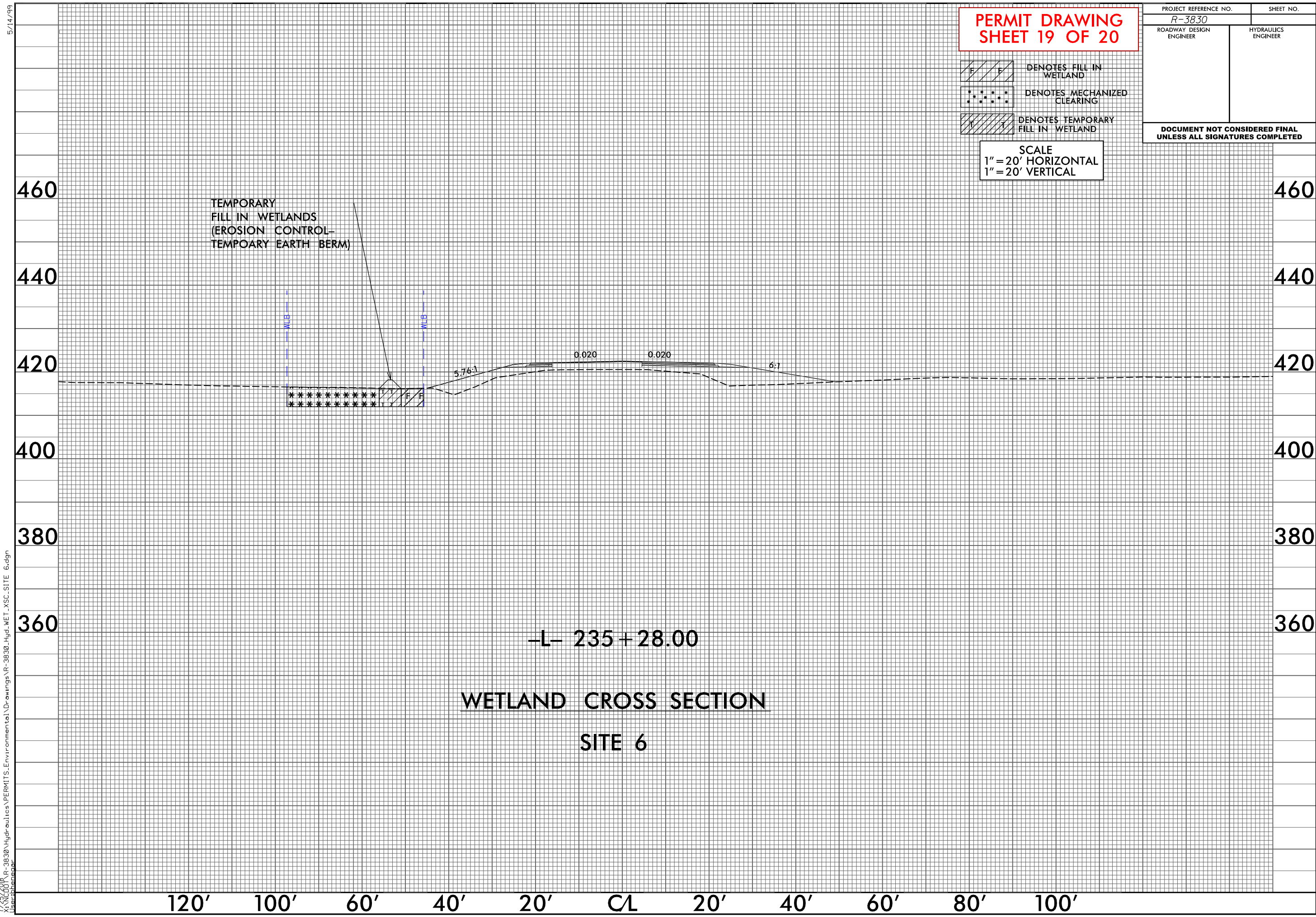
5/14/99

**PERMIT DRAWING
SHEET 19 OF 20**

PROJECT REFERENCE NO. <i>R-3830</i>	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY FILL IN WETLAND

SCALE
1" = 20' HORIZONTAL
1" = 20' VERTICAL



T:\2008\08-R-3830-Hydr-aulics\PERMITS-Environmental\Drawings\R-3830-Hyd-WET-XSC-SITE 6.dgn
User: jhanna

WETLAND AND SURFACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	L 171+00 RT	Prop. 42" RCP	< 0.01			< 0.01		< 0.01		71		
1	L 171+00 RT	Bank Stabilization						< 0.01	< 0.01	14	20	
2A	L 190+00 LT & RT	Prop. 54" RCP						< 0.01		78		
2A	L 190+00 LT & RT	Bank Stabilization	< 0.01			0.03		< 0.01	< 0.01	18	43	
2B	L 190+00 RT	Mech. Clearing in Wetland				0.01						
3A	L 205+50 LT & RT	Prop. 48" RCP						< 0.01		88		
3A	L 205+50 LT & RT	Bank Stabilization			< 0.01	0.04		< 0.01	< 0.01	16	25	
3B	L 205+50 RT	Mech. Clearing in Wetland				< 0.01						
4	L 225+50 RT	Fill in Wetland	0.02			0.01						
5A	L 228+00 LT & RT	Prop. 72" RCP						< 0.01		56	13	
5A	L 228+00 LT	Bank Stabilization				< 0.01		< 0.01	< 0.01	24	19	
5B	Y17 12+05 LT	Prop. 30" RCP						< 0.01	< 0.01	20	10	
6	L 235+00 To 237+00 LT	Fill in Wetland	< 0.01	0.02		0.02						
TOTALS*:			0.03	0.02	< 0.01	0.14		0.02	0.01	385	130	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 10/15/18
 Lee County
 R-3830
 38887.1.1

SHEET 20 OF 20

09/08/19

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols
See Sheets 1C-1 through 1C-2 For Survey Control Sheets

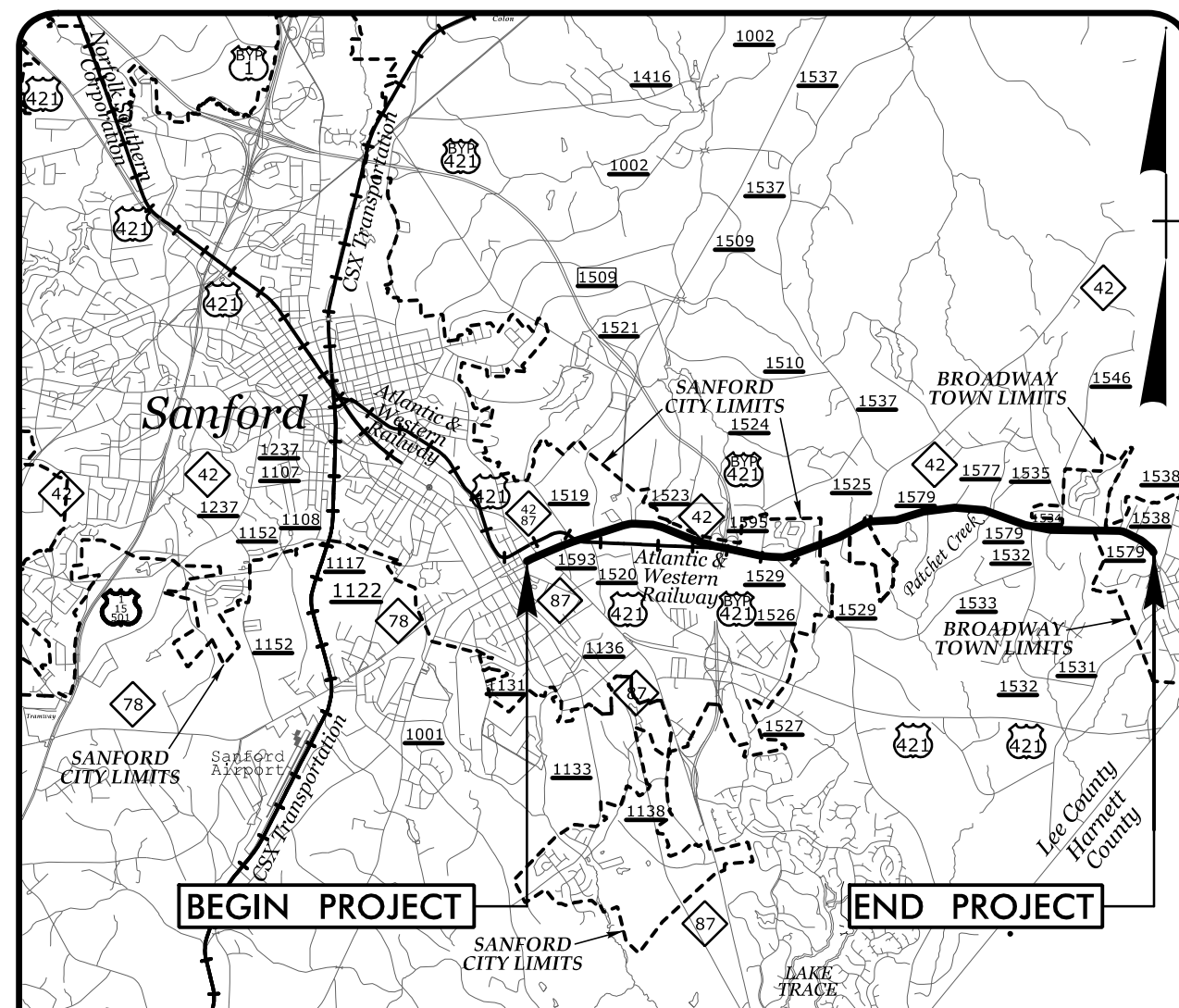
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

LEE COUNTY

**LOCATION: NC 42 FROM US 421 TO SR 1579 (MAIN STREET)
IN SANFORD AND ALONG SR 1579 FROM NC 42
TO SR 1538 (E. HARRINGTON AVE) IN BROADWAY
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND SIGNALS**

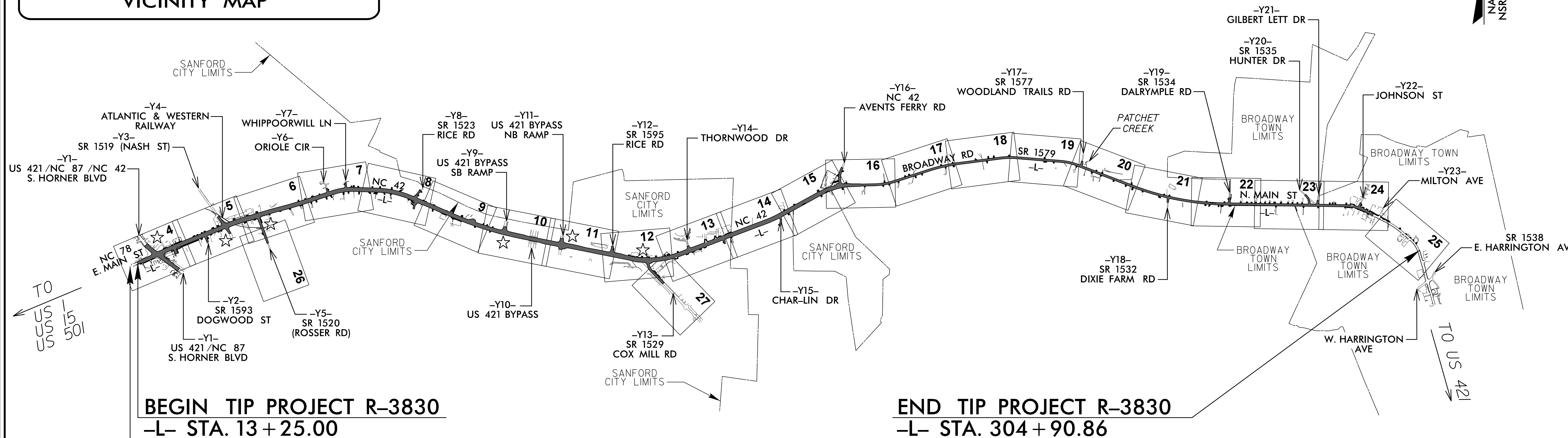
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3830	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38887.1.1	STP-0042(49)	PE	
38887.2.3	N/A	RW	
38887.3.2	N/A	CONST.	

TIP PROJECT: R-3830



VICINITY MAP

90% PLAN SUBMITTAL



BEGIN TIP PROJECT R-3830
-L- STA. 13 + 25.00

END TIP PROJECT R-3830
-L- STA. 304 + 90.86

BEGIN CONSTRUCTION
-L- STA. 11 + 37.00

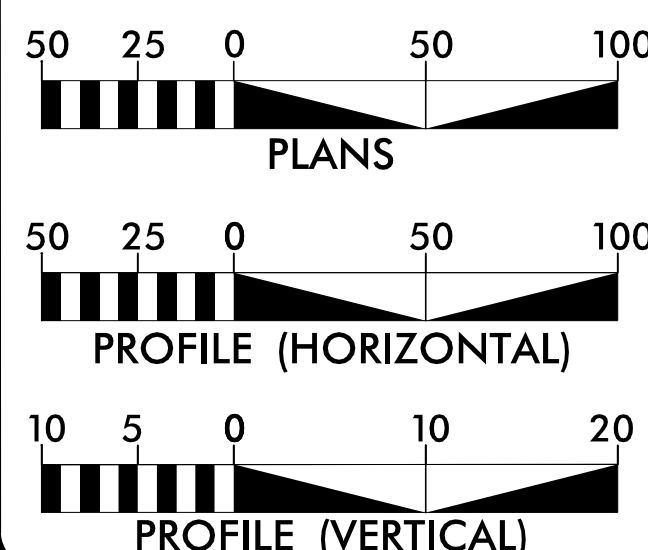
★ UPGRADE EXISTING SIGNAL

THIS IS NOT A CONTROLLED ACCESS PROJECT WITH THE EXCEPTION OF THE INTERCHANGE AND U-TURN BULBS.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

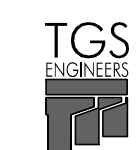
ADT 2019 = 15,200
 ADT 2039 = 20,350
 K = 8 %
 D = 55 %
 T = 4 % *
 V = 50 MPH
 * TTST=2% DUAL=2%
 FUNC CLASS =
 MINOR ARTERIAL
 REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-3830 = 5.524 mile
 TOTAL LENGTH TIP PROJECT R-3830 = 5.524 mile

LENGTH OF PROJECT BASED ON -L-

Prepared For:
DIVISION OF HIGHWAYS
 1000 Birch Ridge Dr., Raleigh NC, 27610



TGS ENGINEERS
 706 HILLSBOROUGH ST
 SUITE 200
 RALEIGH, NC 27603

By:
 PH (919) 773-8887
 CORP. LICENSE NO.:
 C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 OCTOBER 30, 2017

LETTING DATE:
 OCTOBER 15, 2019

V. MARCUS LOWERY, PE
 PROJECT ENGINEER

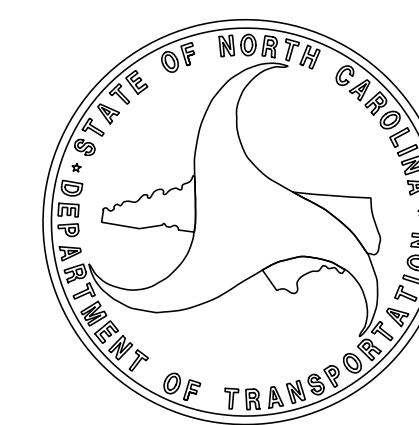
PAMELA R. WILLIAMS, PE
 NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



X:\NCDOT\Roadway\Proj\R-3830_rdy_tsh.dgn
User:mlowery
2/1/2019

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

12/2/2016

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin	
Computed Property Corner	
Property Monument	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

RAILROADS:

Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	
Primary Horiz Control Point	
Primary Horiz and Vert Control Point	
Exist Permanent Easement Pin and Cap	
New Permanent Easement Pin and Cap	
Vertical Benchmark	
Existing Right of Way Marker	
Existing Right of Way Line	
New Right of Way Line	
New Right of Way Line with Pin and Cap	
New Right of Way Line with Concrete or Granite R/W Marker	
New Control of Access Line with Concrete C/A Marker	
Existing Control of Access	
New Control of Access	
Existing Easement Line	
New Temporary Construction Easement	
New Temporary Drainage Easement	
New Permanent Drainage Easement	
New Permanent Drainage / Utility Easement	
New Permanent Utility Easement	
New Temporary Utility Easement	
New Aerial Utility Easement	

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	

VEGETATION:

Single Tree	
Single Shrub	

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

Hedge	
Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	

UTILITIES:

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

TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
U/G Telephone Cable LOS B (S.U.E.*)	
U/G Telephone Cable LOS C (S.U.E.*)	
U/G Telephone Cable LOS D (S.U.E.*)	
U/G Telephone Conduit LOS B (S.U.E.*)	
U/G Telephone Conduit LOS C (S.U.E.*)	
U/G Telephone Conduit LOS D (S.U.E.*)	
U/G Fiber Optics Cable LOS B (S.U.E.*)	
U/G Fiber Optics Cable LOS C (S.U.E.*)	
U/G Fiber Optics Cable LOS D (S.U.E.*)	

WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
U/G Water Line LOS B (S.U.E.*)	
U/G Water Line LOS C (S.U.E.*)	
U/G Water Line LOS D (S.U.E.*)	
Above Ground Water Line	

TV:

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

GAS:

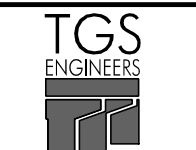
Gas Valve	
Gas Meter	
U/G Gas Line LOS B (S.U.E.*)	
U/G Gas Line LOS C (S.U.E.*)	
U/G Gas Line LOS D (S.U.E.*)	
Above Ground Gas Line	

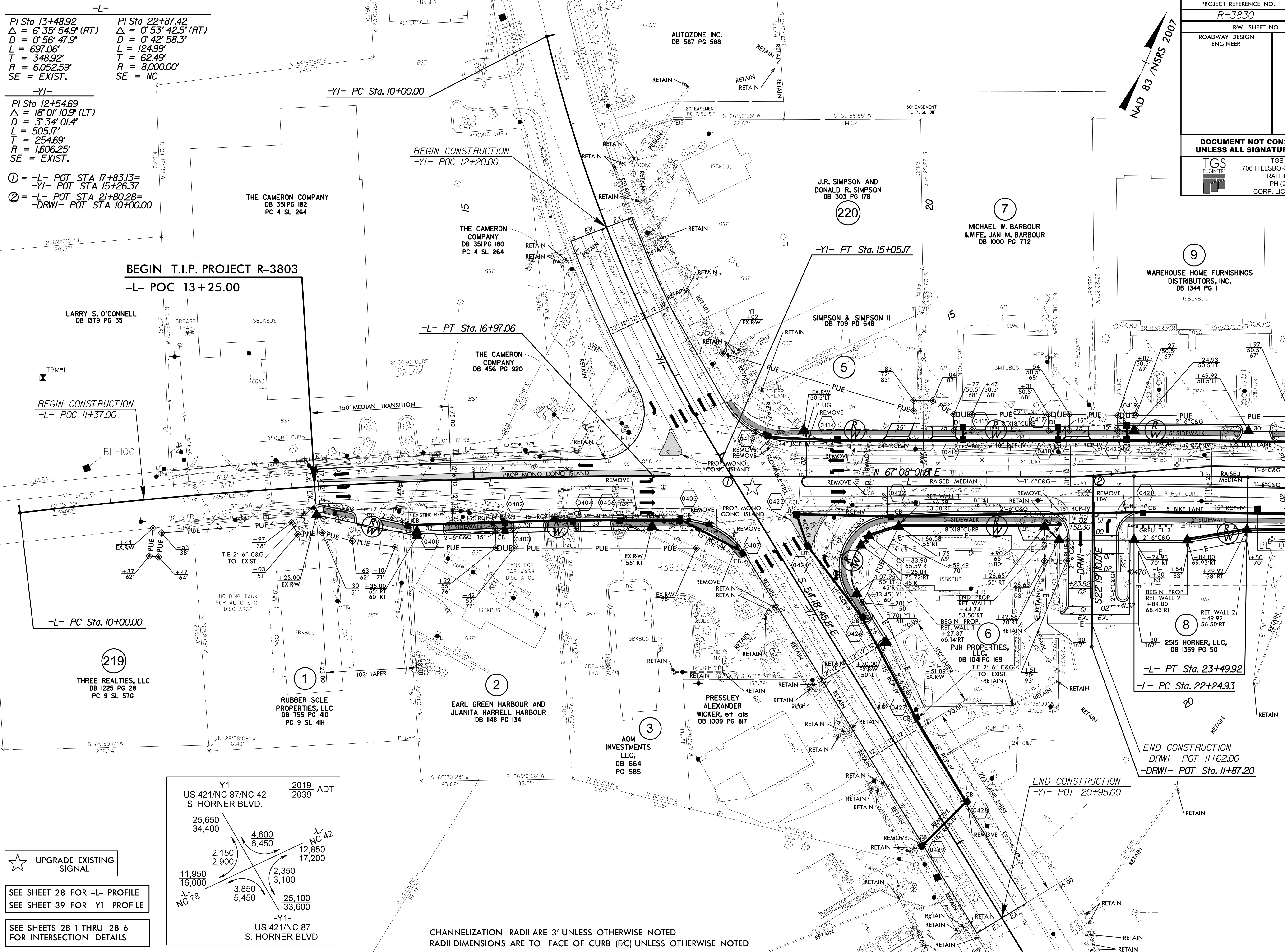
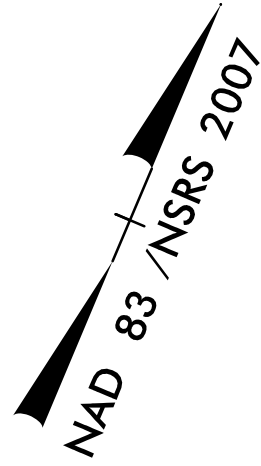
SANITARY SEWER:

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

MISCELLANEOUS:

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

PROJECT REFERENCE NO. R-3830	SHEET NO. 04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



-L-
 PI Sta 13+48.92
 $\Delta = 6' 35'' 54.9''$ (RT)
 $D = 0' 56'' 47.9''$
 $L = 697.06'$
 $T = 348.92'$
 $R = 6,052.59'$
 SE = EXIST.

-YI-
 PI Sta 22+87.42
 $\Delta = 0' 53'' 42.5''$ (RT)
 $D = 0' 42'' 58.3''$
 $L = 124.99'$
 $T = 62.49'$
 $R = 8,000.00'$
 SE = NC

-YI-
 PI Sta 12+54.69
 $\Delta = 18' 0'' 10.9''$ (LT)
 $D = 3' 34'' 01.4''$
 $L = 505.17'$
 $T = 254.69'$
 $R = 1,606.25'$
 SE = EXIST.

- ① = -L- POT STA 17+83.13 =
-YI- POT STA 15+26.37
- ② = -L- POT STA 21+80.28 =
-DRWI- POT STA 10+00.00

BEGIN T.I.P. PROJECT R-3803
-L- POC 13+25.00

BEGIN CONSTRUCTION
-L- POC 11+37.00

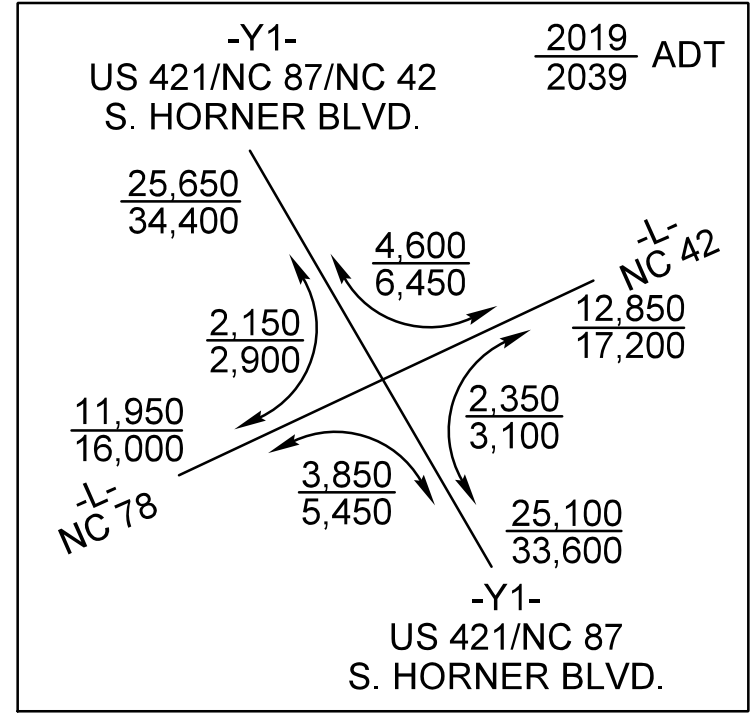
BEGIN CONSTRUCTION
-YI- POC 12+20.00

-L- PC Sta. 10+00.00

-L- PT Sta. 23+49.92
-L- PC Sta. 22+24.93

END CONSTRUCTION
-YI- POT 20+95.00

END CONSTRUCTION
-DRWI- POT 11+62.00
-DRWI- POT Sta. 11+87.20



- ★ UPGRADE EXISTING SIGNAL
- SEE SHEET 28 FOR -L- PROFILE
- SEE SHEET 39 FOR -YI- PROFILE
- SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

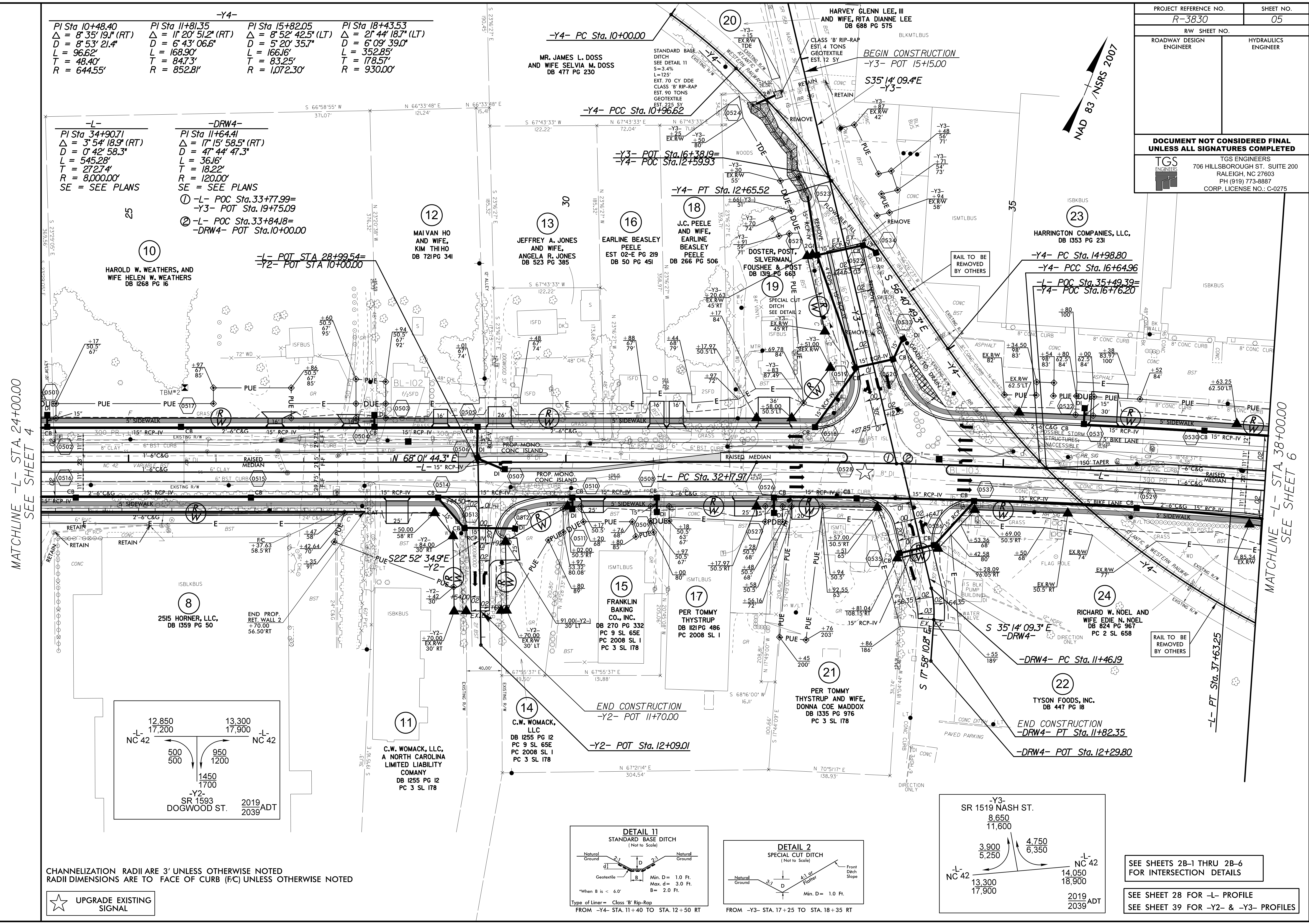
REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 003 AND 004 INTO PARCEL 003 (VMI)
 ROW REV. - AUGUST 8, 2018 - ADDED PUE AND REVISED TCE FROM -L- STA 21+26.65 TO STA 21+51.00 ON PARCELS 6 AND 8 (VMI)

MATCHLINE -L- STA. 24+00.00
 SEE SHEET 5

PI Sta 10+48.40 $\Delta = 8' 35" 19.1^{\circ} (RT)$ $D = 8' 53" 21.4^{\circ}$ $L = 96.62'$ $T = 48.40'$ $R = 644.55'$	PI Sta 11+81.35 $\Delta = 1' 20" 51.2^{\circ} (RT)$ $D = 6' 43" 06.6^{\circ}$ $L = 168.90'$ $T = 84.73'$ $R = 852.81'$	PI Sta 15+82.05 $\Delta = 8' 52" 42.5^{\circ} (LT)$ $D = 5' 20" 35.7^{\circ}$ $L = 166.16'$ $T = 83.25'$ $R = 1,072.30'$	PI Sta 18+43.53 $\Delta = 2' 44" 18.7^{\circ} (LT)$ $D = 6' 09" 39.0^{\circ}$ $L = 352.85'$ $T = 178.57'$ $R = 930.00'$
---	--	--	---

-L- PI Sta 34+90.71 $\Delta = 3' 54" 18.9^{\circ} (RT)$ $D = 0' 42" 58.3^{\circ}$ $L = 545.28'$ $T = 272.74'$ $R = 8,000.00'$ SE = SEE PLANS	-DRW4- PI Sta 11+64.41 $\Delta = 17' 15" 58.5^{\circ} (RT)$ $D = 47' 44" 47.3^{\circ}$ $L = 36.16'$ $T = 18.22'$ $R = 120.00'$ SE = SEE PLANS
--	---

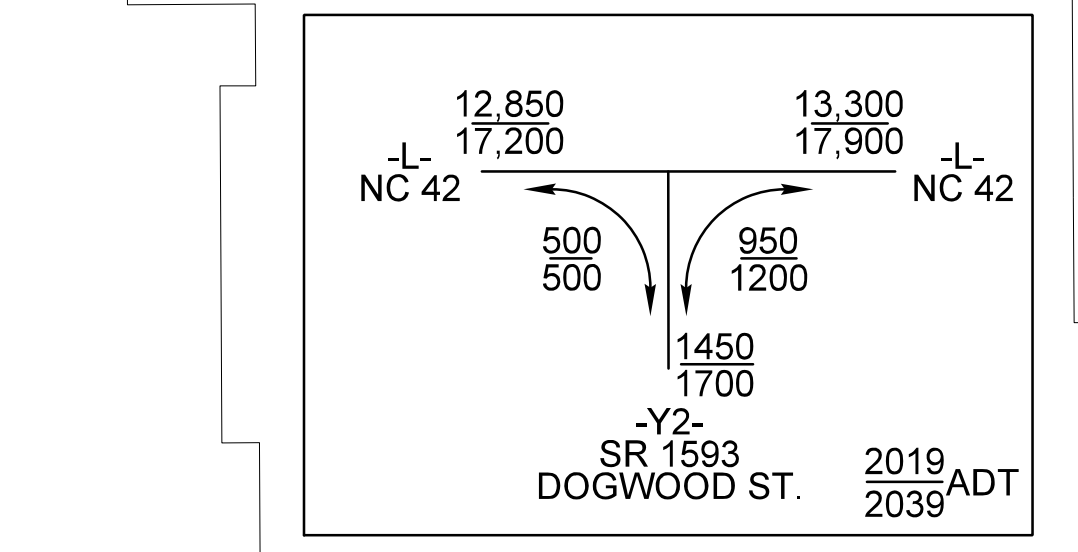
- ① -L- POC Sta. 33+77.99=
- Y3- POT Sta. 19+75.09
- ② -L- POC Sta. 33+84.18=
- DRW4- POT Sta. 10+00.00



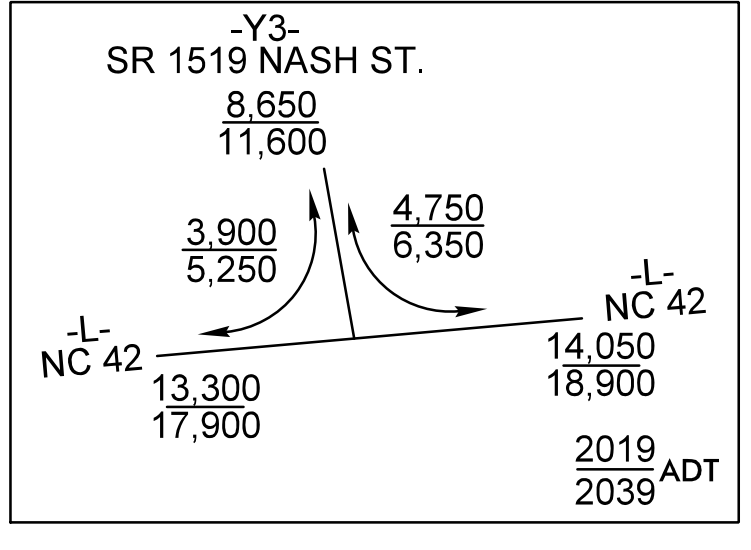
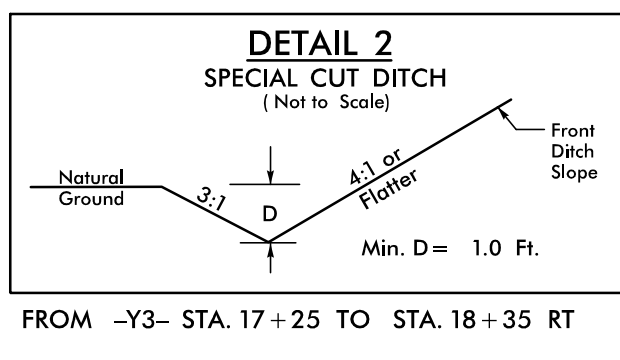
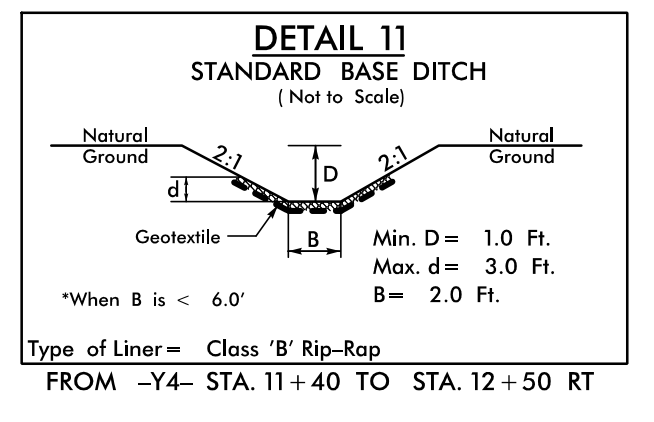
MATCHLINE -L- STA. 24+00.00
SEE SHEET 4

MATCHLINE -L- STA. 38+00.00
SEE SHEET 6

REVISIONS
ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 023 AND 025 INTO PARCEL 023 (VML)
ROW REV. - AUGUST 8, 2018 - REVISED PUE FROM -L- STA 25+97.00 TO STA 26+86.00 ON PARCEL 10 (VML)

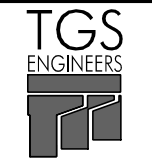


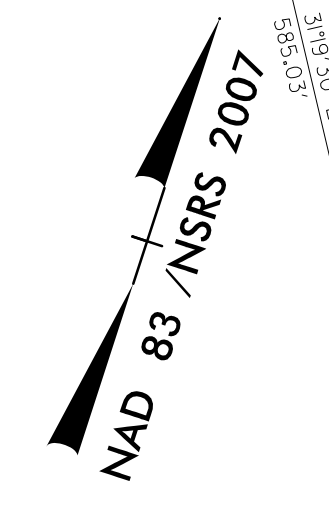
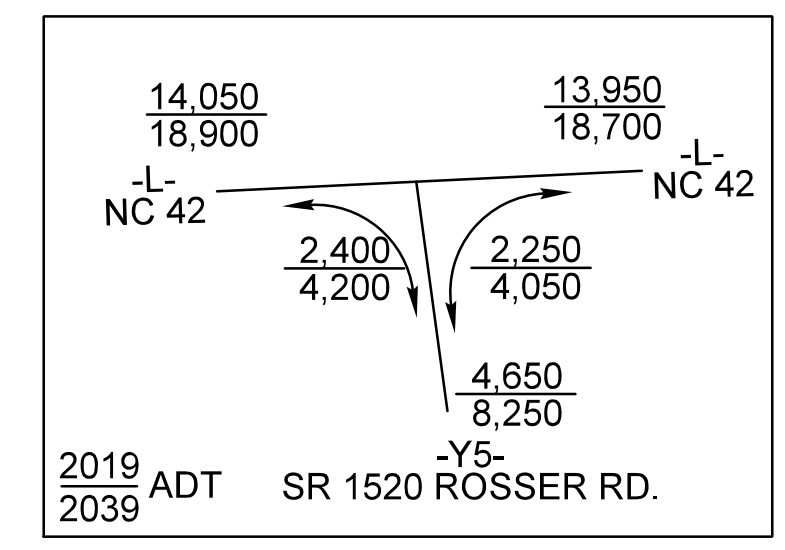
CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED



SEE SHEETS 2B-1 THRU 2B-6
FOR INTERSECTION DETAILS

SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 39 FOR -Y2- & -Y3- PROFILES

PROJECT REFERENCE NO. R-3830	SHEET NO. 06
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



-L-

PI Sta 42+84.8 Δ = 3° 08' 15.6" (RT) D = 0° 42' 58.3" L = 438.0' T = 219.1' R = 8,000.00' SE = NC

PI Sta 49+69.8 Δ = 3° 08' 15.6" (LT) D = 0° 42' 58.3" L = 438.0' T = 219.1' R = 8,000.00' SE = NC

-Y5-

PI Sta 11+11.37 Δ = 2° 11' 26.8" (LT) D = 2° 17' 30.6" L = 95.59' T = 47.80' R = 2,500.00' SE = SEE PLANS

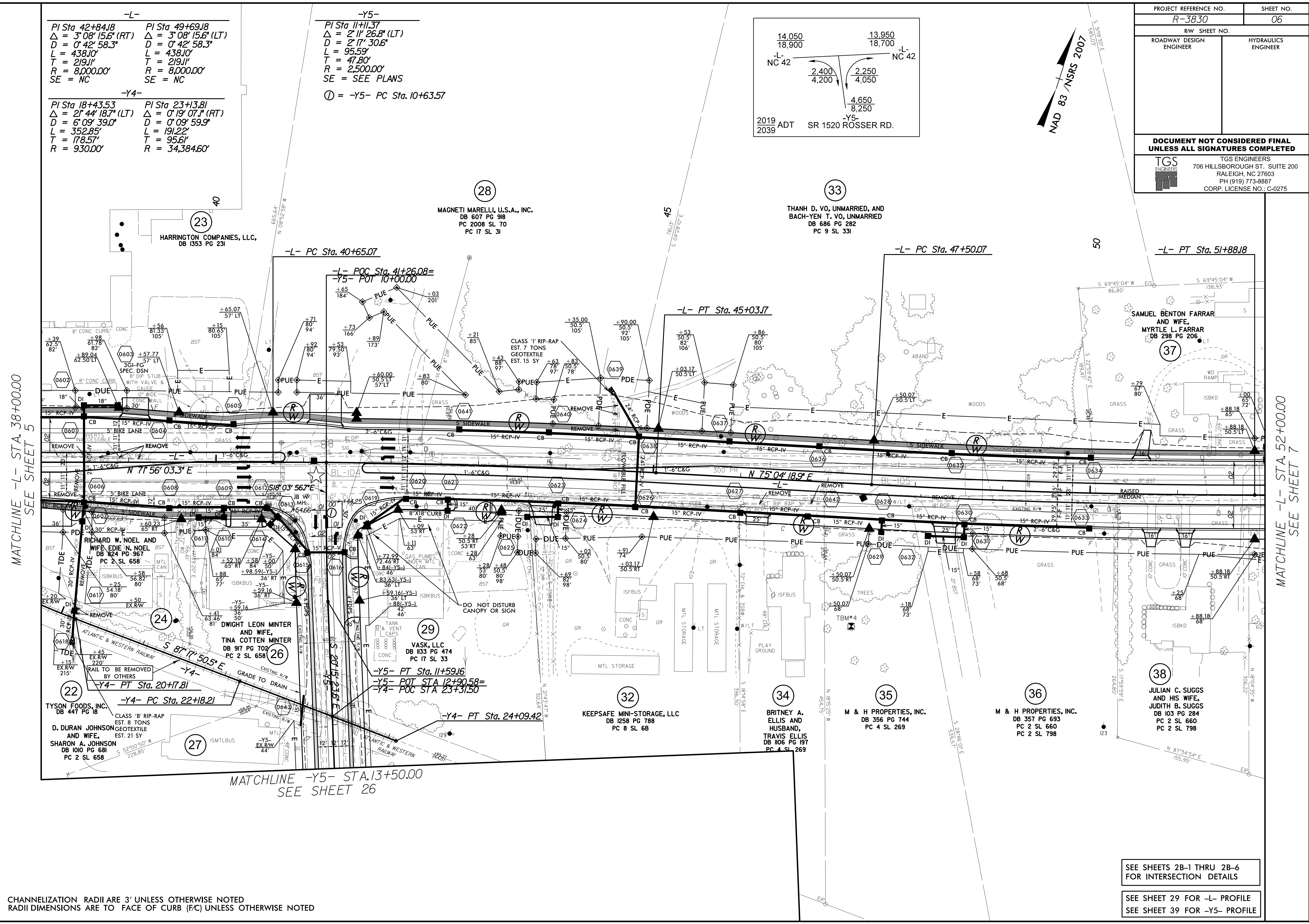
① = -Y5- PC Sta. 10+63.57

-Y4-

PI Sta 18+43.53 Δ = 2° 44' 18.7" (LT) D = 6° 09' 39.0" L = 352.85' T = 178.57' R = 930.00'

PI Sta 23+13.81 Δ = 0° 19' 07.1" (RT) D = 0° 09' 59.9" L = 191.22' T = 95.61' R = 34,384.60'

REVISIONS
 ROW REV. - APRIL 4, 2018 - CHANGED PARCEL 025 TO 023, COMBINED PARCELS 028 & 031 INTO PARCEL 028, ADDED 'DO NOT DISTURB CANOPY OR SIGN' TO PARCEL 029 (VML)
 ROW REV. - AUGUST 8, 2018 - REVISED PUE AND/OR DUE FROM -L- STA 43+28.00 TO STA 44+91.00 RT ON PARCELS 29 & 32 (VML)
 ROW REV. - JANUARY 22, 2019 - REVISED DRIVEWAY ENTRANCES AT -L- STA 42+96.41- RT AND -Y5- STA 11+45.47- LT- CHANNELIZATION FROM -L- STA 42+09.00 TO STA 43+28.00 RT- PROPOSED TCE FROM -Y5- STA 10+84.00 LT TO -L- STA 43+28.00 RT ON PARCEL 29 (VML)
 5/14/2019



CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

SEE SHEETS 2B-1 THRU 2B-6
 FOR INTERSECTION DETAILS

SEE SHEET 29 FOR -L- PROFILE
 SEE SHEET 39 FOR -Y5- PROFILE

MATCHLINE -L- STA. 38+00.00
 SEE SHEET 5

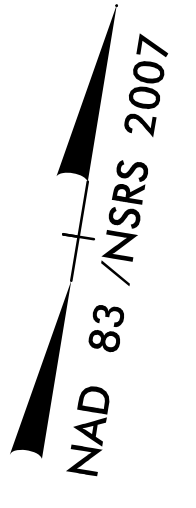
MATCHLINE -Y5- STA. 13+50.00
 SEE SHEET 26

MATCHLINE -L- STA. 52+00.00
 SEE SHEET 7

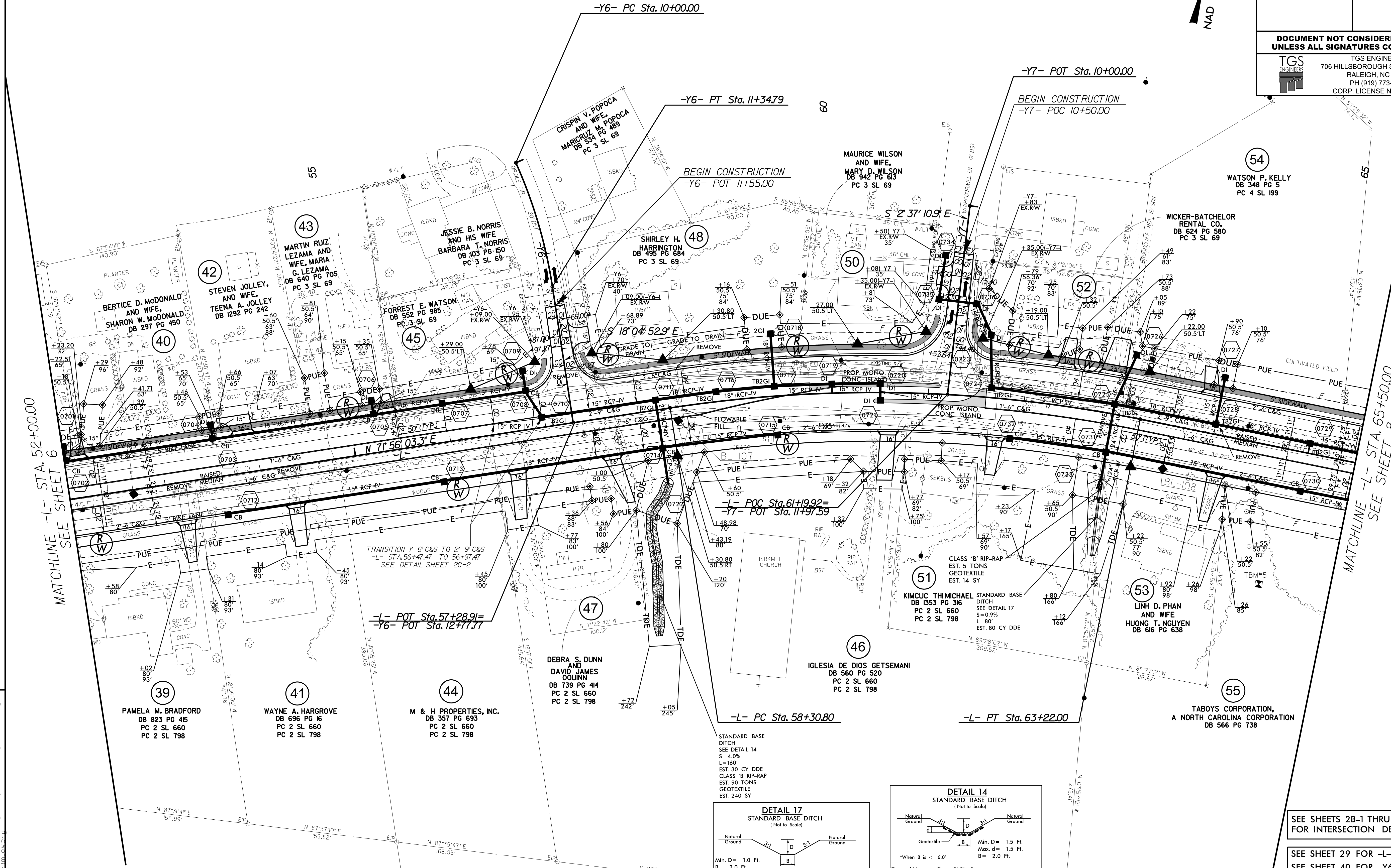
-L-
 PI Sta 60+78.95
 $\Delta = 20' 06' 09.9''$ (RT)
 $D = 4' 05' 33.2''$
 $L = 491.20'$
 $T = 248.15'$
 $R = 1,400.00'$
 $SE = 0.04$
 $Lr = 200'$
 NON-STANDARD

-Y6-
 PI Sta 10+67.81
 $\Delta = 15' 26' 45.5''$ (RT)
 $D = 11' 27' 33.0''$
 $L = 134.79'$
 $T = 67.81'$
 $R = 500.00'$
 SE = SEE PLANS

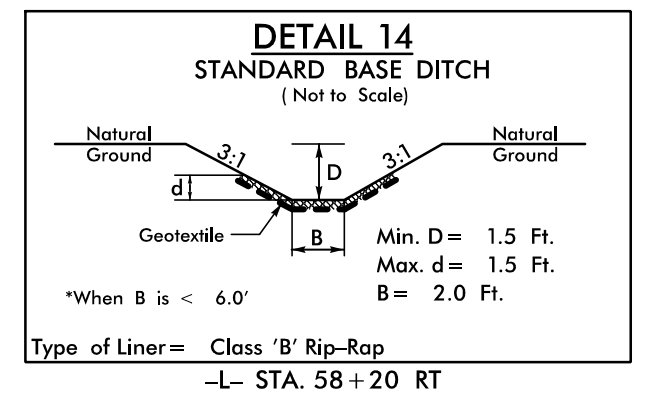
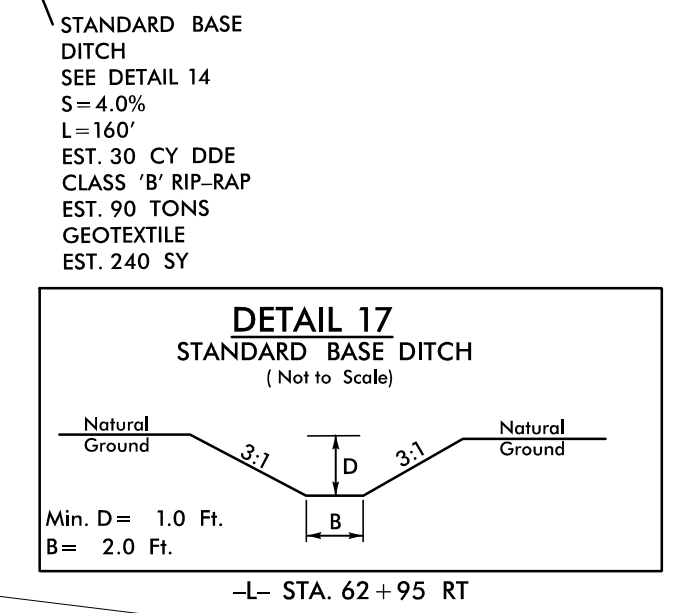
PROJECT REFERENCE NO. R-3830		SHEET NO. 07	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 048 AND 049 INTO PARCEL 048 (VML)



RADI DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED



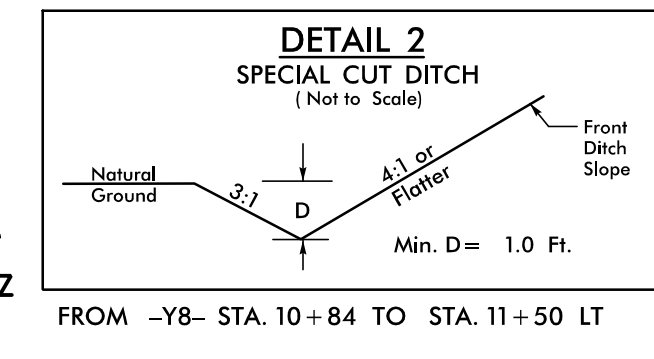
SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

SEE SHEET 29 FOR -L- PROFILE
 SEE SHEET 40 FOR -Y6- PROFILE
 SEE SHEET 40 FOR -Y7- PROFILE

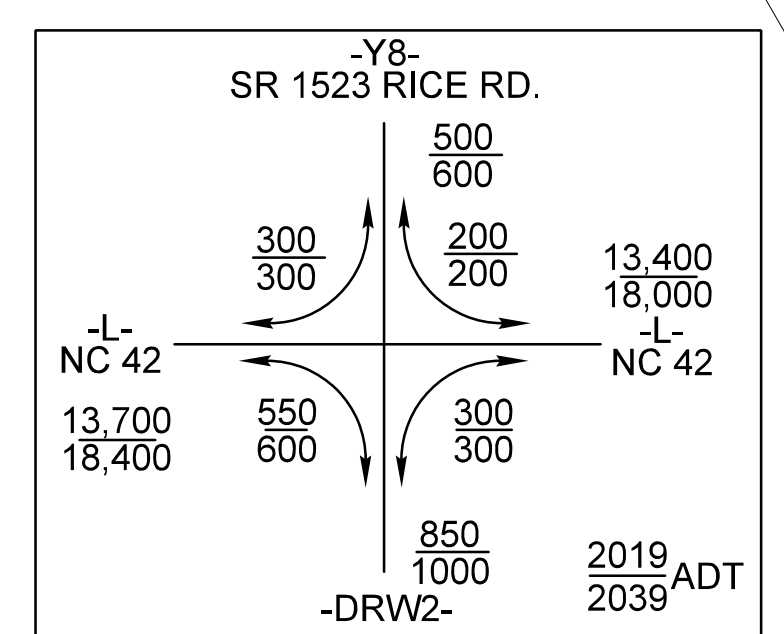
MATCHLINE -L- STA. 65+50.00
 SEE SHEET 8

MATCHLINE -L- STA. 52+00.00
 SEE SHEET 6

PROJECT REFERENCE NO. R-3830		SHEET NO. 08	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



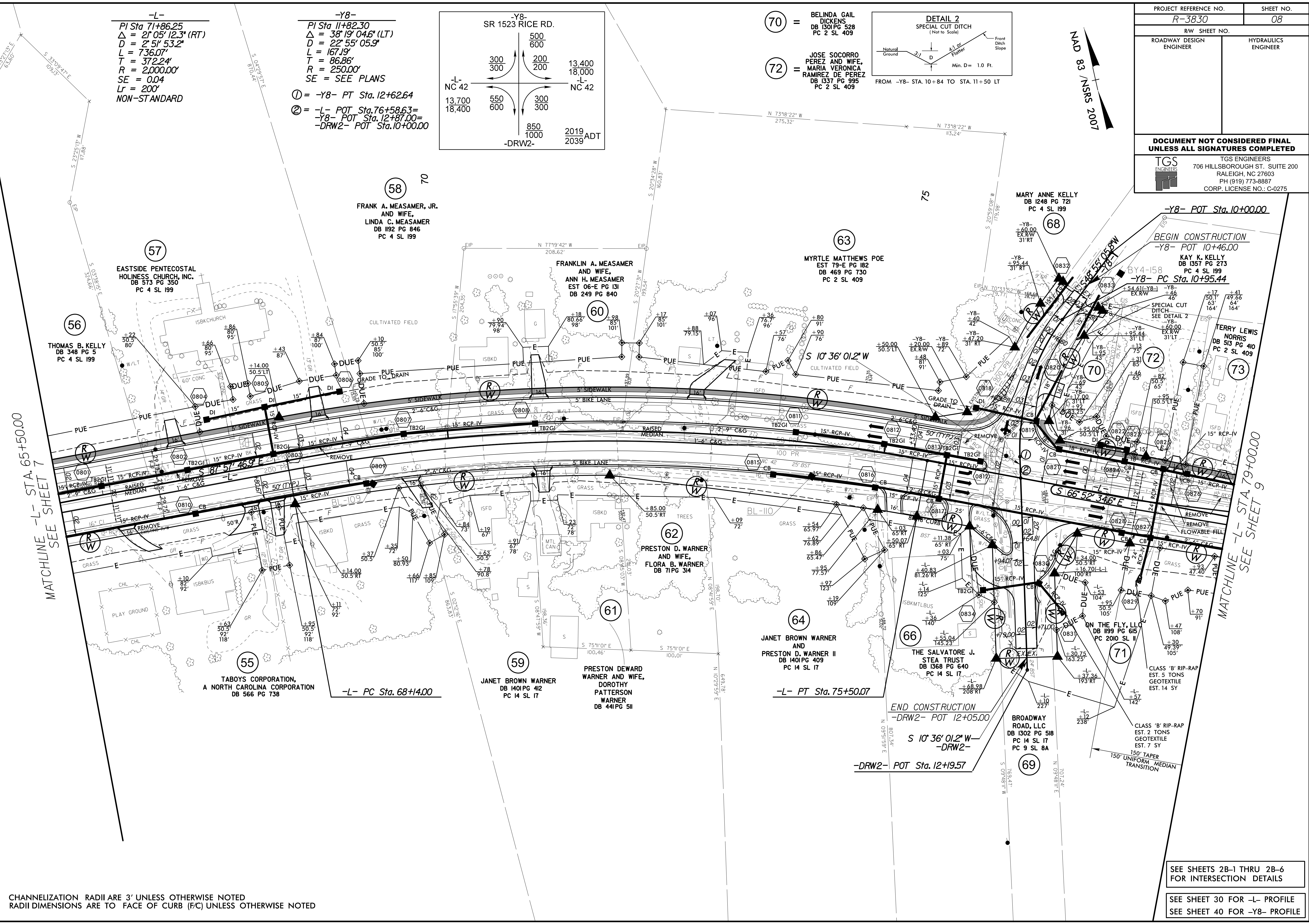
- 70 = BELINDA GAIL DICKENS DB 1301 PG 528 PC 2 SL 409
- 72 = JOSE SOCORRO PEREZ AND WIFE, MARIA VERONICA RAMIREZ DE PEREZ DB 1337 PG 995 PC 2 SL 409



-L-
PI Sta 71+86.25
 $\Delta = 21^{\circ}05'12.3"$ (RT)
 $D = 2'51"53.2"$
 $L = 736.07'$
 $T = 372.24'$
 $R = 2,000.00'$
 $SE = 0.04$
 $Lr = 200'$
NON-STANDARD

-Y8-
PI Sta 11+82.30
 $\Delta = 38^{\circ}19'04.6"$ (LT)
 $D = 22'55"05.9"$
 $L = 167.19'$
 $T = 86.86'$
 $R = 250.00'$
 $SE = \text{SEE PLANS}$
① = -Y8- PT Sta. 12+62.64
② = -L- POT Sta. 76+58.63 =
-Y8- POT Sta. 12+87.00 =
-DRW2- POT Sta. 10+00.00

REVISIONS
ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 063, 065, & 067 INTO PARCEL 063, COMBINED PARCELS 071 & 074 INTO PARCEL 071 (V.M.L.)
ROW REV. - AUGUST 8, 2018 - REVISED PUE FROM STA 67+16.00 TO STA 67+19.00 RT. OIL PAIRED, REVISED PUE FROM STA 75+48.00 LT TO -Y8- STA 11+40.00 RT. ON PARCEL 65, REMOVED PUE FROM PARCEL 68, REVISED DUE AND TOE FROM -L- STA 77+30.00 LT TO -L- STA 77+30.00 LT ON PARCEL 70 (V.M.L.)
ROW REV. - SEPTEMBER 19, 2018 - REPLACED PROPOSED 25' DRIVE WITH A 16' DRIVE AND ADDED A 16' DRIVE AT -L- STA 66+20 (RT) ON PARCEL 55 (V.M.L.)

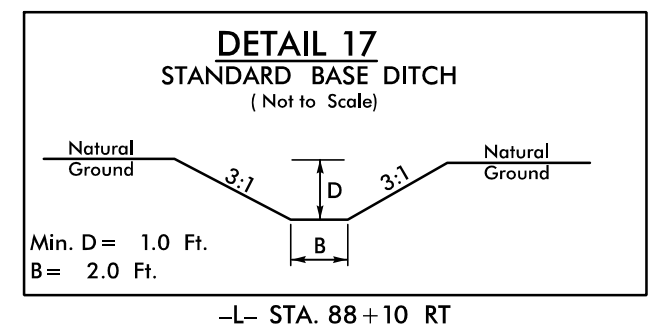


CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 40 FOR -Y8- PROFILE

-L-
 PI Sta 92+54.12
 $\Delta = 10' 4" 27.5" (LT)$
 $D = 0' 4" 59.8"$
 $L = 1,425.57'$
 $T = 714.86'$
 $R = 7,640.00'$
 SE = SEE PLANS

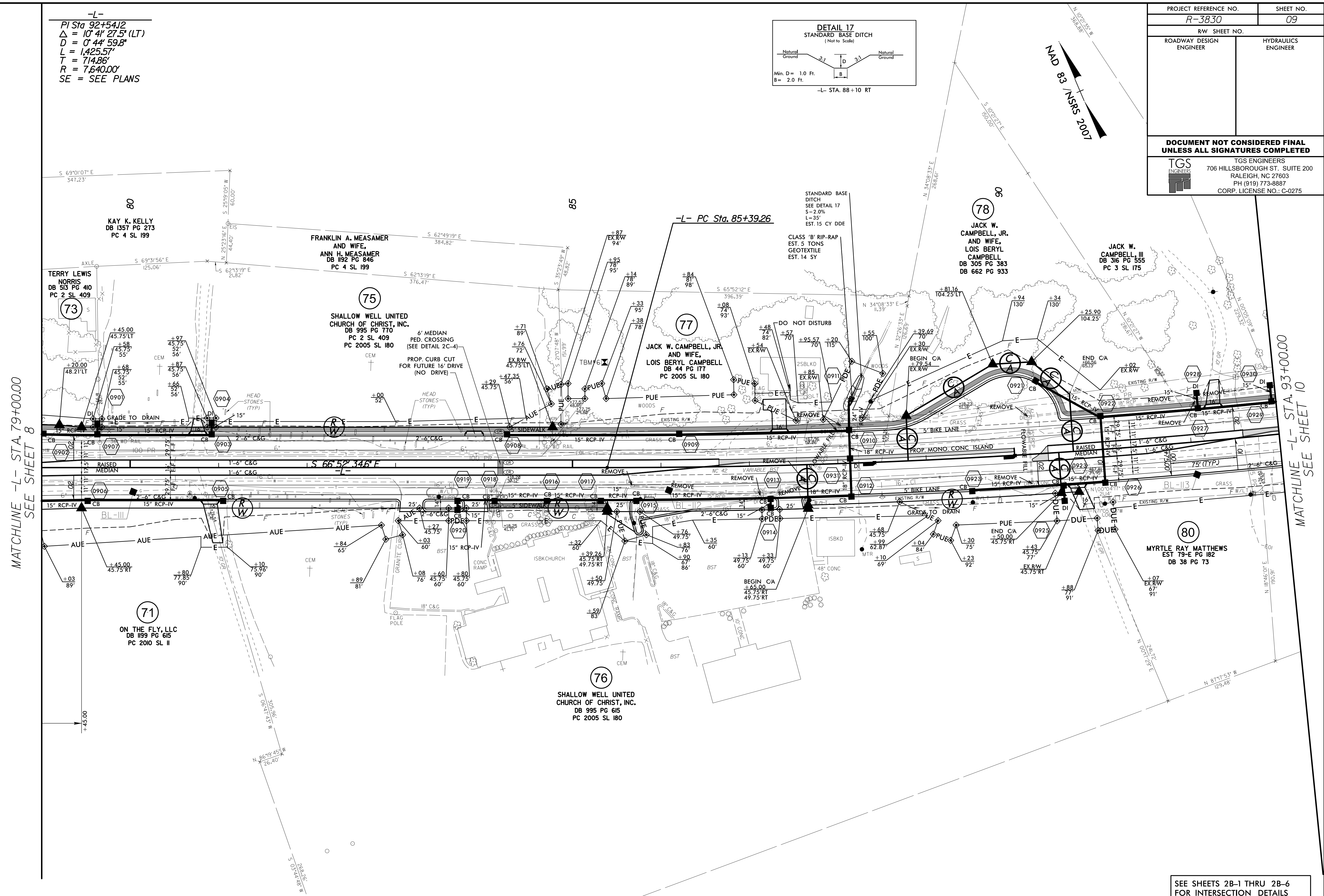


PROJECT REFERENCE NO. R-3830	SHEET NO. 09
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

REVISIONS
 ROW REV. - APRIL 4, 2008 - COMBINED PARCELS 071 & 074 INTO PARCEL 071, COMBINED PARCELS 078 & 079 INTO PARCEL 078 (NML)

MATCHLINE -L- STA. 79+00.00
 SEE SHEET 8

MATCHLINE -L- STA. 93+00.00
 SEE SHEET 10

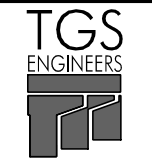


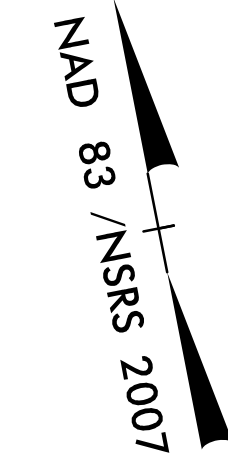
CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

SEE SHEETS 28-1 THRU 28-6 FOR INTERSECTION DETAILS

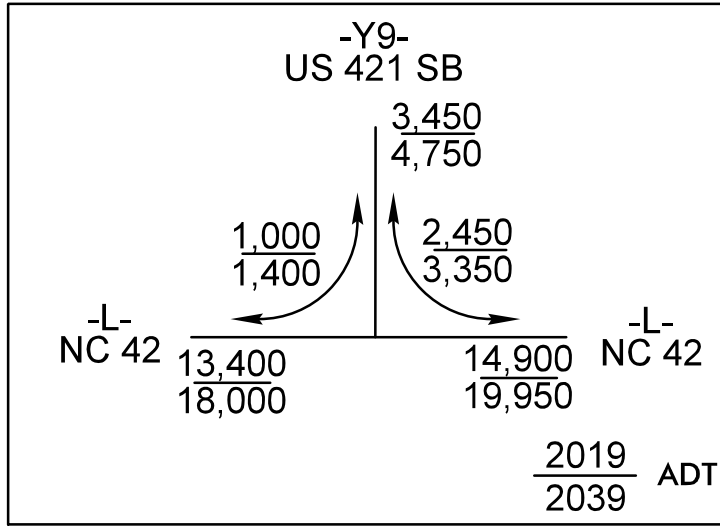
SEE SHEET 30 FOR -L- PROFILE

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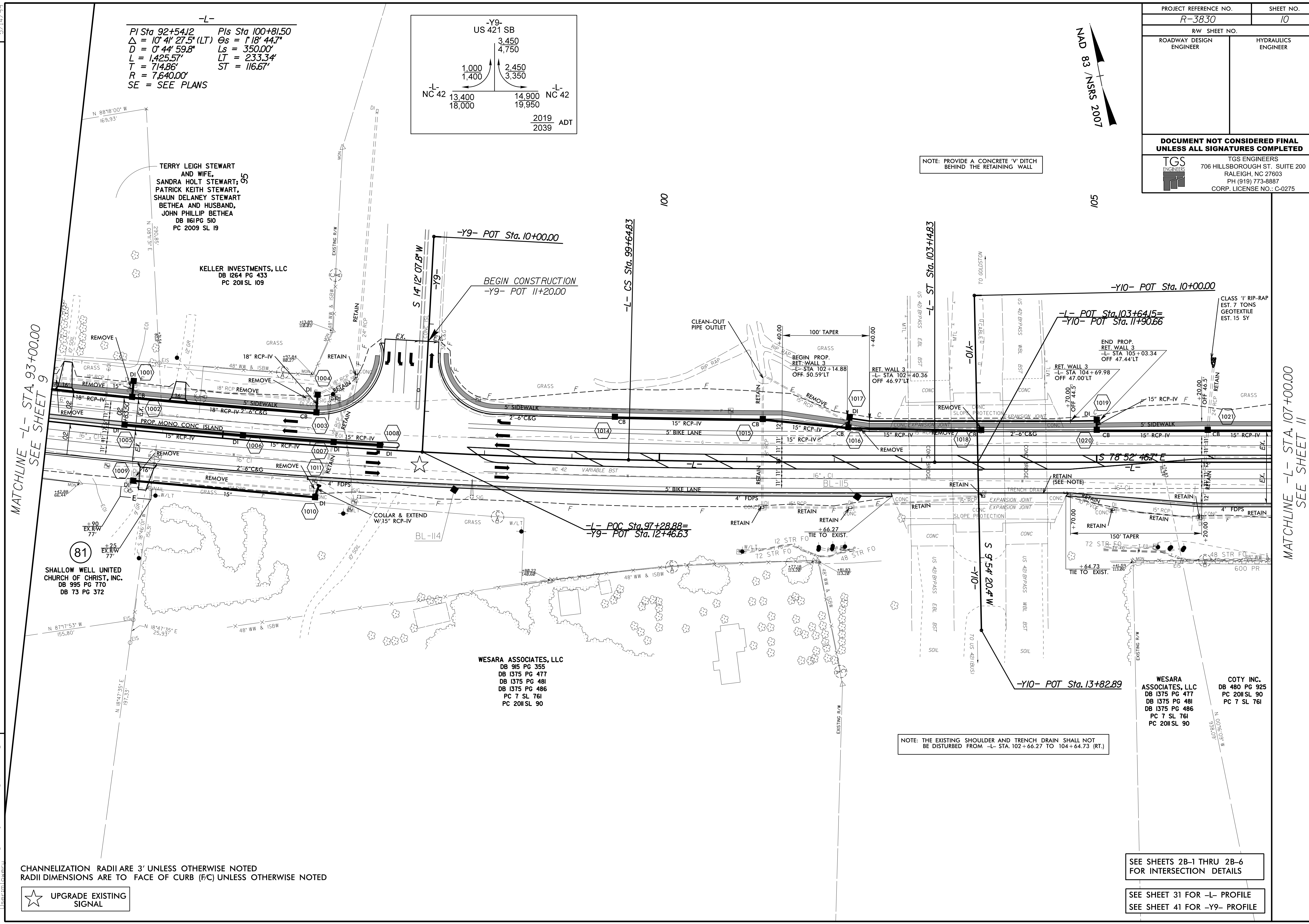
PROJECT REFERENCE NO. R-3830	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



-L-
 PI Sta 92+54.12 Pls Sta 100+81.50
 $\Delta = 10^{\circ} 41' 27.5''$ (LT) $\Theta_s = 1^{\circ} 18' 44.7''$
 $D = 0^{\circ} 44' 59.8''$ $L_s = 350.00'$
 $L = 1,425.57'$ $LT = 233.34'$
 $T = 714.86'$ $ST = 116.67'$
 $R = 7,640.00'$
 SE = SEE PLANS



NOTE: PROVIDE A CONCRETE 'V' DITCH BEHIND THE RETAINING WALL



MATCHLINE -L- STA. 93+00.00
SEE SHEET 9

MATCHLINE -L- STA. 107+00.00
SEE SHEET 11

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED



NOTE: THE EXISTING SHOULDER AND TRENCH DRAIN SHALL NOT BE DISTURBED FROM -L- STA. 102+66.27 TO 104+64.73 (RT.)

SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

SEE SHEET 31 FOR -L- PROFILE
 SEE SHEET 41 FOR -Y9- PROFILE

REVISIONS

5/21/2019
 N:\NCDOT\B-3830\B-3830\roadway\Proc\N-3830_rdy_psh_10.dgn
 Wesara Associates, LLC

81
 SHALLOW WELL UNITED CHURCH OF CHRIST, INC.
 DB 995 PG 170
 DB 73 PG 372


KELLER INVESTMENTS, LLC
 DB 1264 PG 433
 PC 2011 SL 109

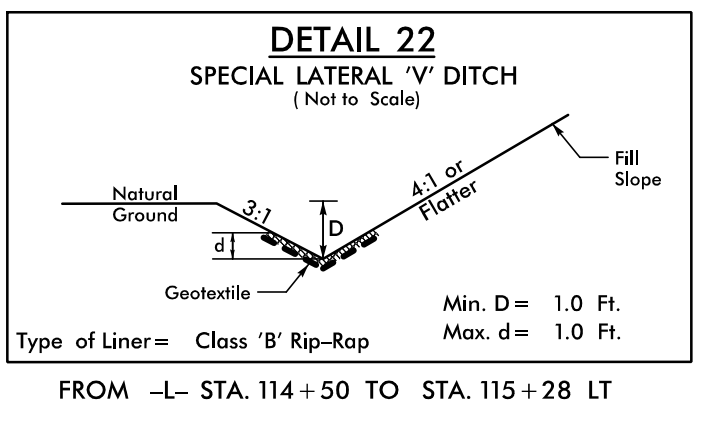
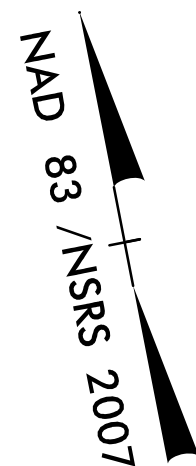
WESARA ASSOCIATES, LLC
 DB 915 PG 355
 DB 1375 PG 477
 DB 1375 PG 481
 DB 1375 PG 486
 PC 7 SL 761
 PC 2011 SL 90

WESARA ASSOCIATES, LLC
 DB 1375 PG 477
 DB 1375 PG 481
 DB 1375 PG 486
 PC 7 SL 761
 PC 2011 SL 90

COTY INC.
 DB 480 PG 925
 PC 2011 SL 90
 PC 7 SL 761

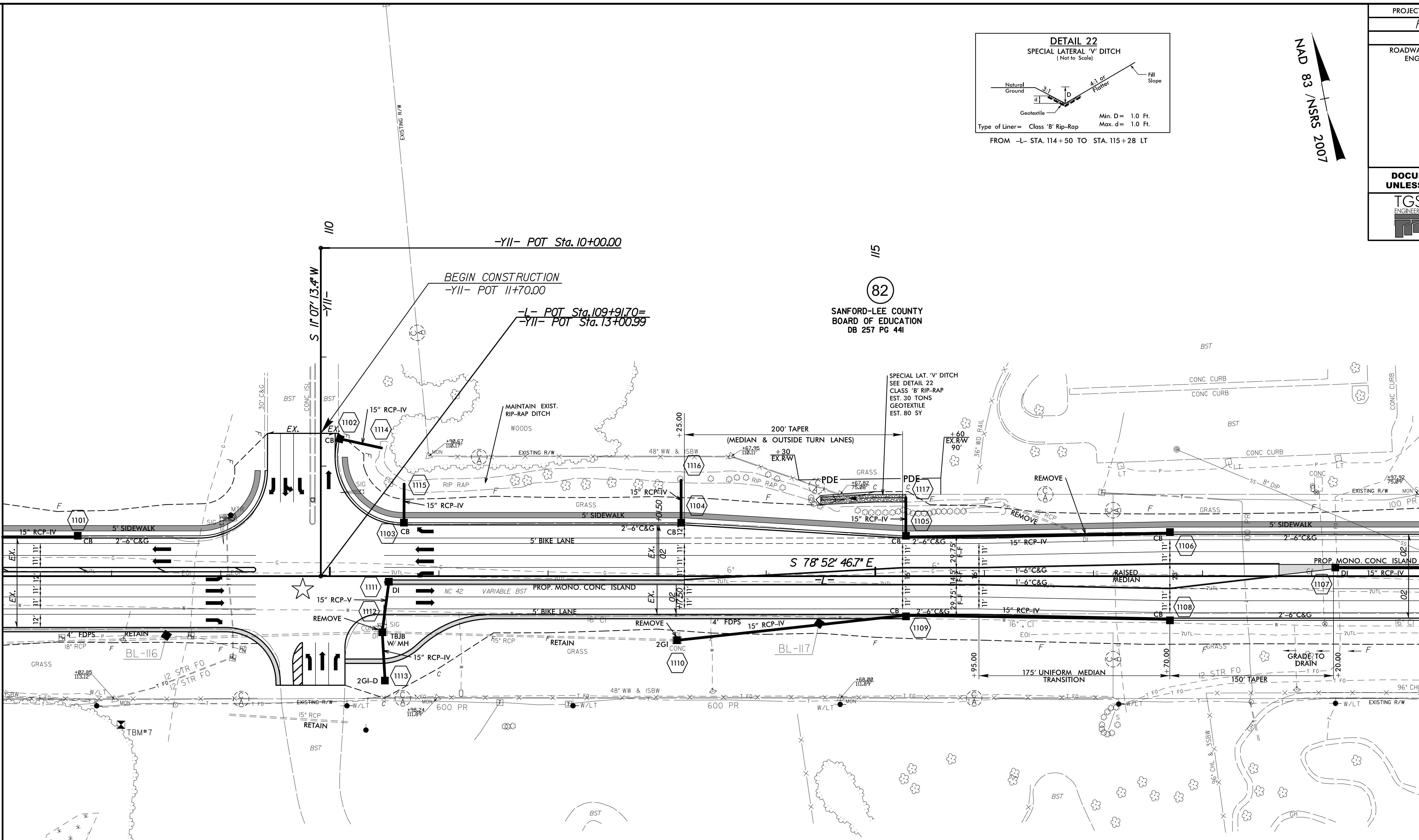
5/21/2019

PROJECT REFERENCE NO. R-3830	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



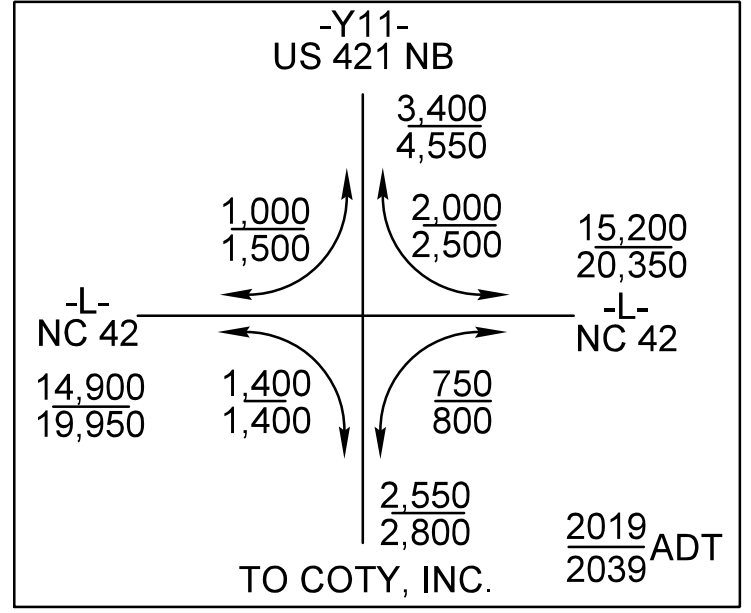
REVISIONS

MATCHLINE -L- STA. 107+00.00
SEE SHEET 10



MATCHLINE -L- STA. 120+00.00
SEE SHEET 12

COTY INC.
DB 480 PG 925
PC 2011 SL 90
PC 7 SL 761



CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
RADII DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED

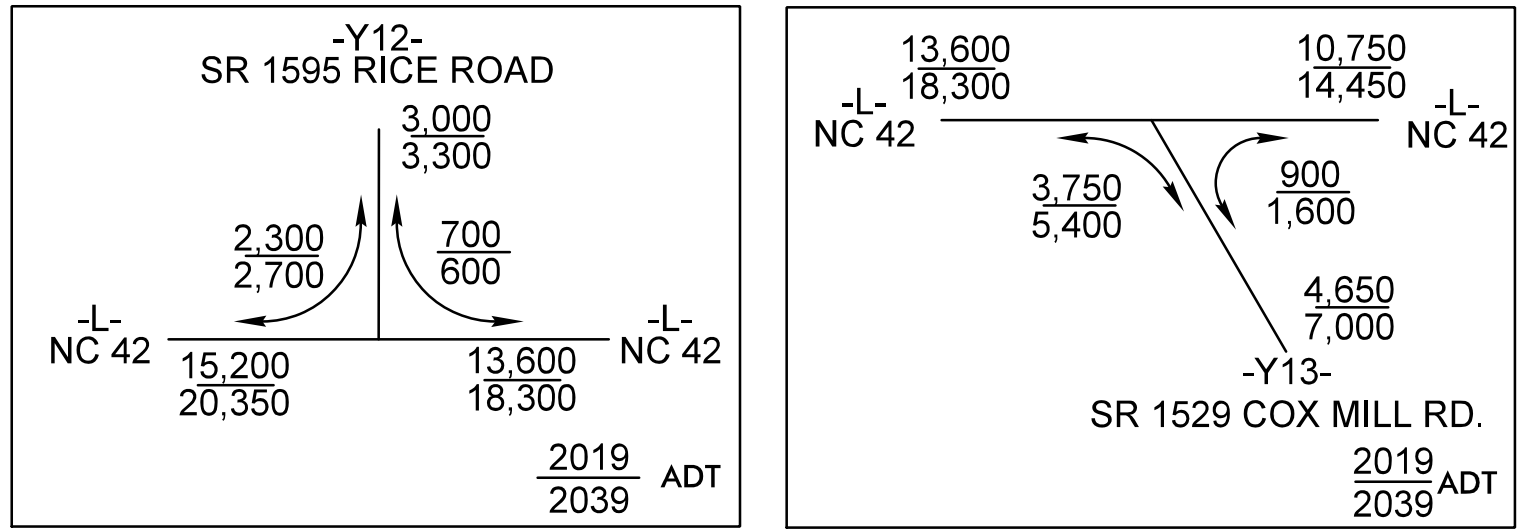
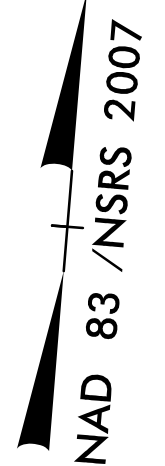
SEE SHEETS 2B-1 THRU 2B-6
FOR INTERSECTION DETAILS

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 41 FOR -Y11- PROFILE

 UPGRADE EXISTING SIGNAL

5/14/99

K:\NCDOT\YR-3830\Roadway\Proj\3830_r.dwg, psh_11.dgn

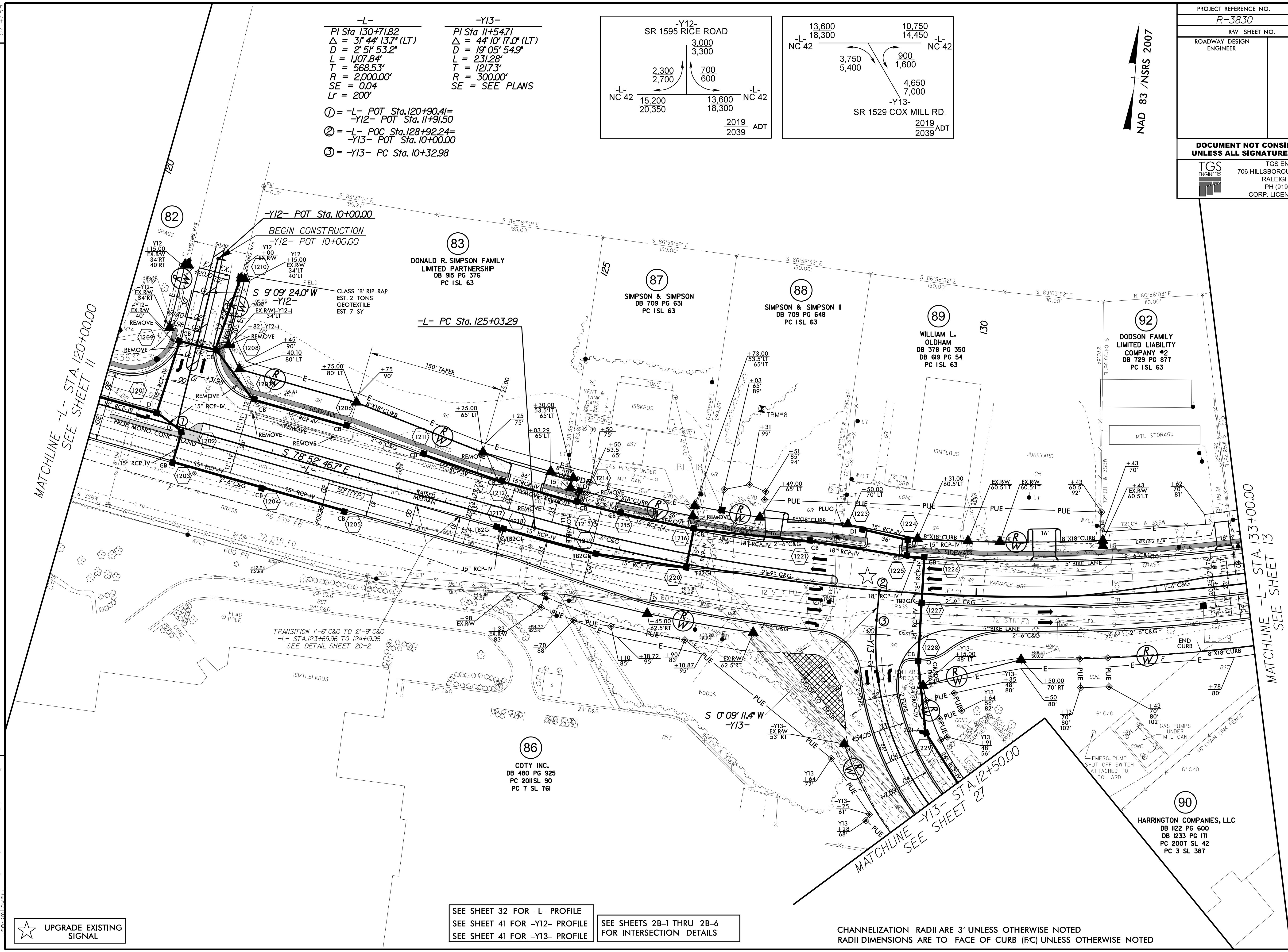


-L-
 PI Sta 130+71.82
 $\Delta = 31^\circ 44' 13.7''$ (LT)
 $D = 2' 51' 53.2''$
 $L = 1,107.84'$
 $T = 568.53'$
 $R = 2,000.00'$
 $SE = 0.04$
 $Lr = 200'$

-Y12-
 PI Sta 11+54.71
 $\Delta = 44^\circ 10' 17.0''$ (LT)
 $D = 19' 05' 54.9''$
 $L = 231.28'$
 $T = 121.73'$
 $R = 300.00'$
 $SE = SEE PLANS$

① = -L- POT Sta. 120+90.41 = -Y12- POT Sta. 11+91.50
 ② = -L- POC Sta. 128+92.24 = -Y13- POT Sta. 10+00.00
 ③ = -Y13- PC Sta. 10+32.98

REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 083, 084, & 085 INTO PARCEL 083; COMBINED PARCELS 089 & 091 INTO PARCEL 089 (VML)
 ROW REV. - DECEMBER 14, 2018 - PULLED 8"X18" CURB BACK FROM 55' TO 53.5' AND ADDED PDE & TCE FROM -L- 125+300.00 TO 126+73.00 ON PARCEL 87 (VML)
 ROW REV. - JANUARY 22, 2019 - REVISED DRAINAGE AND REMOVED DUE AND TDE AND ADDED PUE FROM -L- STA. 125+333.00 TO STA. 126+100.00 RT.; REVISED PUE FROM -Y13- STA. 11+64.00 TO STA. 12+50.00 RT. ON PARCEL 86; REVISED CHANNELIZATION, PROPOSED ROW & TCE AND ADDED PDE ON PARCEL 87 (VML)



★ UPGRADE EXISTING SIGNAL

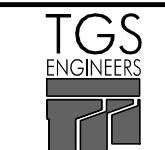
SEE SHEET 32 FOR -L- PROFILE
 SEE SHEET 41 FOR -Y12- PROFILE
 SEE SHEET 41 FOR -Y13- PROFILE

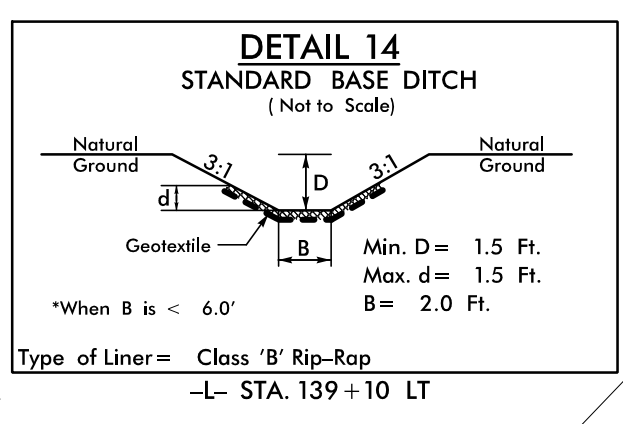
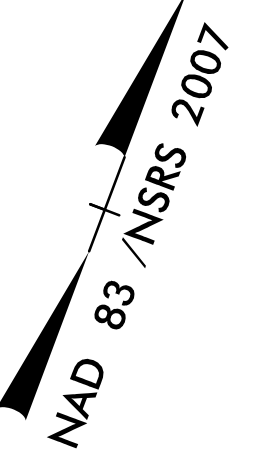
SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

5/14/19

I:\Projects\2019\12-3830\12-3830-Roadway\12-3830-Roadway\12-3830-Roadway.dgn
 User: jay.psh_12.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3830	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

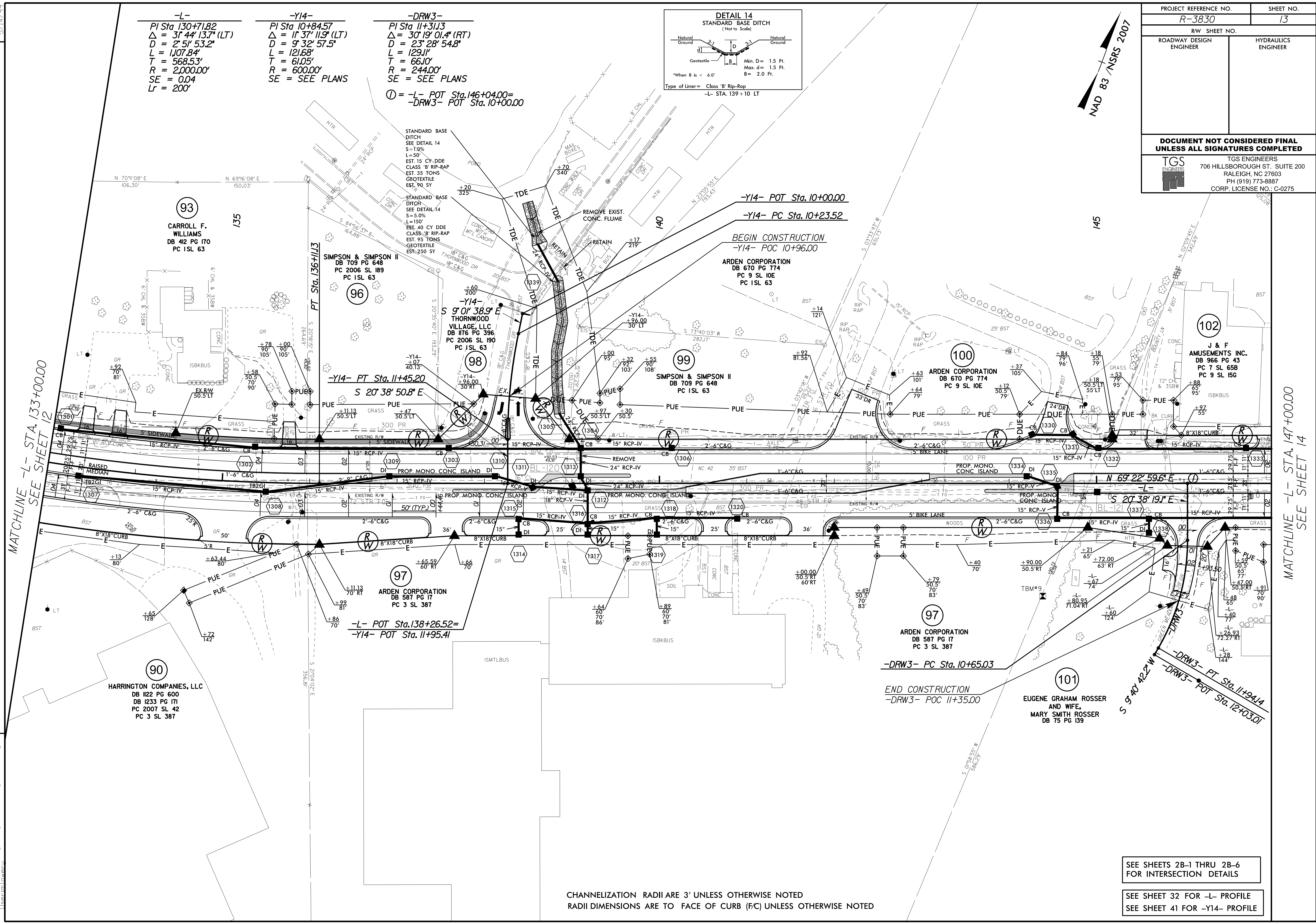


-L-
 PI Sta 130+71.82
 $\Delta = 31' 44" 13.7" (LT)$
 $D = 2' 51" 53.2"$
 $L = 1,107.84'$
 $T = 568.53'$
 $R = 2,000.00'$
 $SE = 0.04$
 $Lr = 200'$

-Y14-
 PI Sta 10+84.57
 $\Delta = 11' 37" 11.9" (LT)$
 $D = 9' 32" 57.5"$
 $L = 121.68'$
 $T = 61.05'$
 $R = 600.00'$
 $SE = SEE PLANS$

-DRW3-
 PI Sta 11+31.13
 $\Delta = 30' 19" 01.4" (RT)$
 $D = 23' 28" 54.8"$
 $L = 129.11'$
 $T = 66.10'$
 $R = 244.00'$
 $SE = SEE PLANS$

① -L- POT Sta. 146+04.00=
 -DRW3- POT Sta. 10+00.00



REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 090 & 094 INTO PARCEL 090, COMBINED PARCELS 093 & 095 INTO PARCEL 093 (NML)
 ROW REV. - AUGUST 8, 2018 - REVISED PUE FROM -L- STA 135+58.00 LT TO -Y14- STA 1107.00 RT ON PARCELS 93 AND 96 (NML)

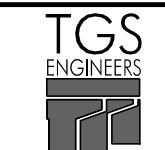
MATCHLINE -L- STA. 133+00.00
 SEE SHEET 12

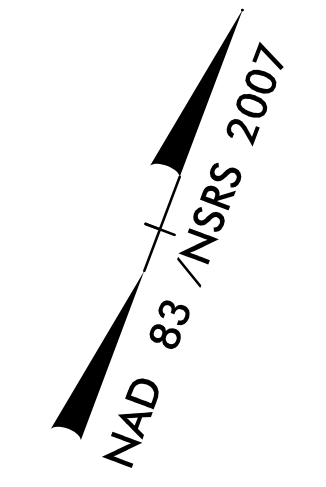
MATCHLINE -L- STA. 147+00.00
 SEE SHEET 14

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

SEE SHEETS 28-1 THRU 28-6
 FOR INTERSECTION DETAILS

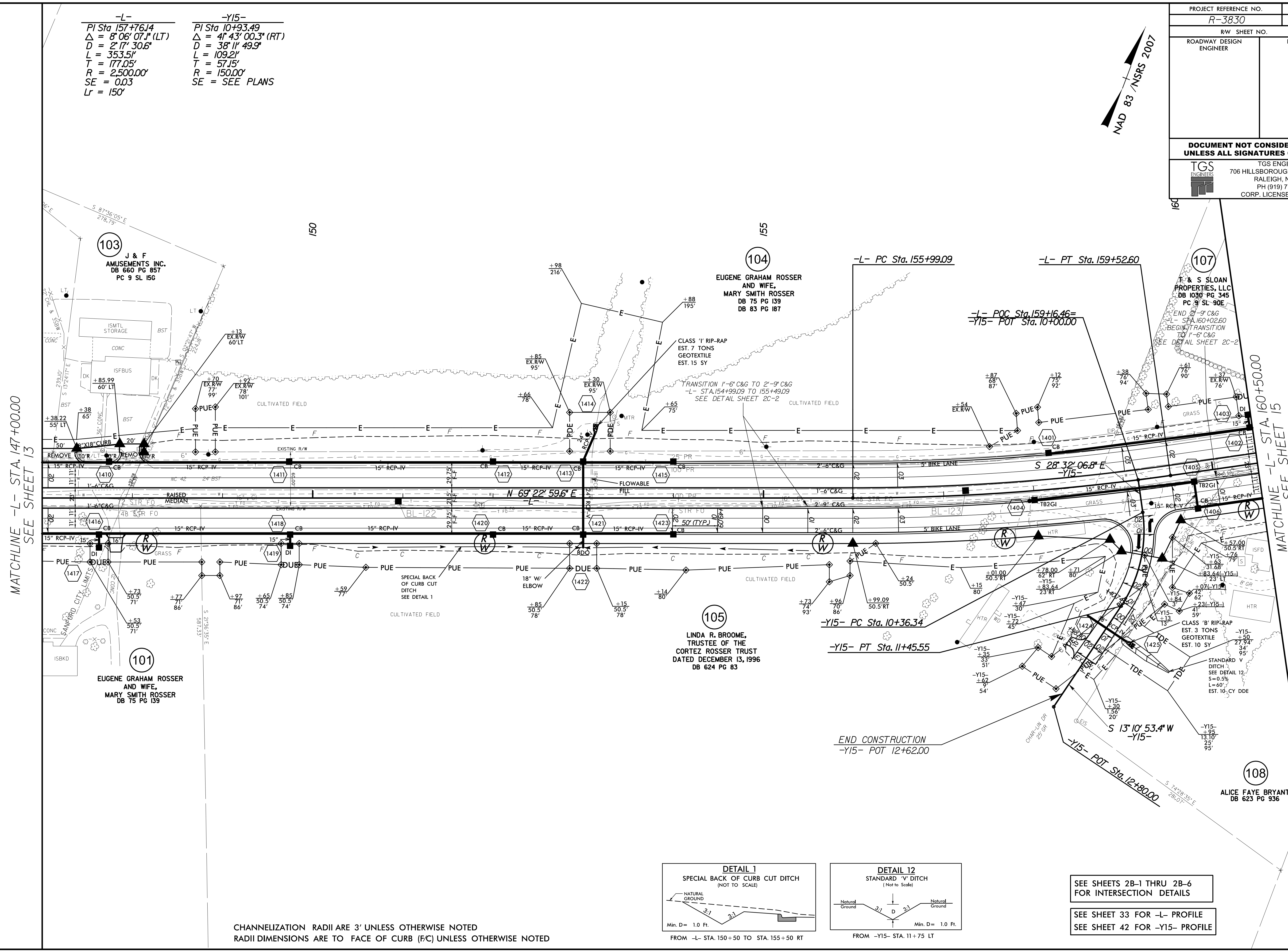
SEE SHEET 32 FOR -L- PROFILE
 SEE SHEET 41 FOR -Y14- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-3830	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



-L-
 PI Sta 157+76.14
 $\Delta = 8^{\circ} 06' 07.1''$ (LT)
 D = 2' 17" 30.6"
 L = 353.51'
 T = 177.05'
 R = 2,500.00'
 SE = 0.03
 Lr = 150'

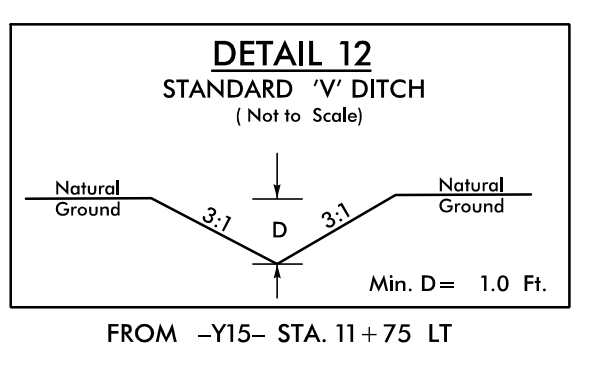
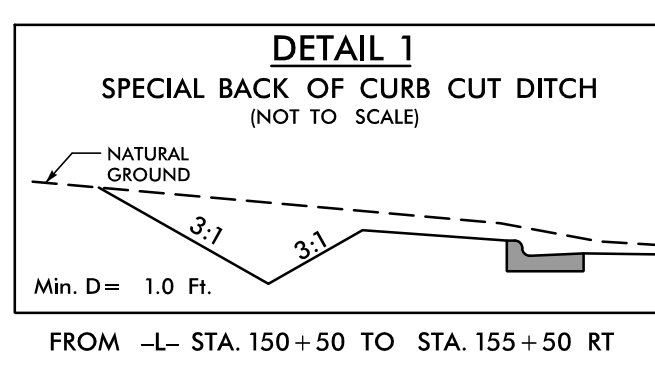
-Y15-
 PI Sta 10+93.49
 $\Delta = 41^{\circ} 43' 00.3''$ (RT)
 D = 38' 11" 49.9"
 L = 109.21'
 T = 57.15'
 R = 150.00'
 SE = SEE PLANS



REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 104 & 106 INTO PARCEL 104 (VML)
 ROW REV. - AUGUST 8, 2018 - REVISED PUE AND/OR DUE FROM -L- STA 148+97.00 TO STA 155+73.00 RT-ON PARCEL 105 (VML)

MATCHLINE -L- STA. 147+00.00
 SEE SHEET 13

MATCHLINE -L- STA. 160+50.00
 SEE SHEET 15



SEE SHEETS 2B-1 THRU 2B-6
 FOR INTERSECTION DETAILS

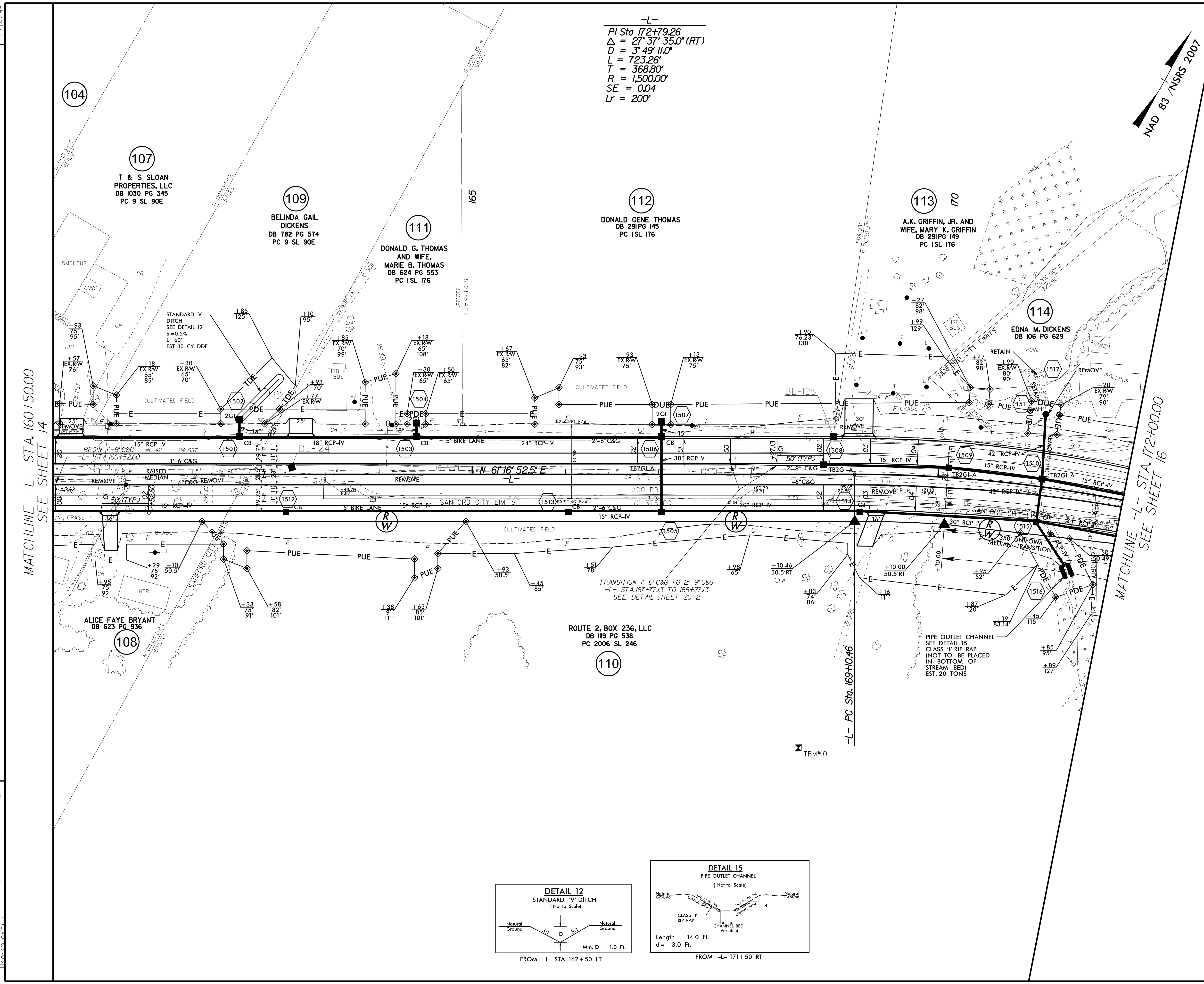
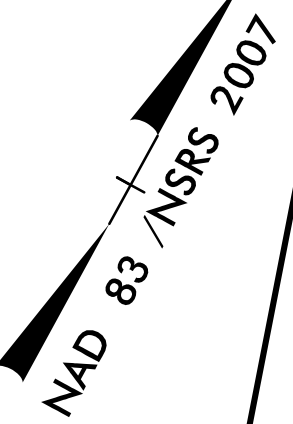
SEE SHEET 33 FOR -L- PROFILE
 SEE SHEET 42 FOR -Y15- PROFILE

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

5/14/2019
 N:\NCDDOT\Projects\3830\Roadway\Proje\3830_rdy_psh_14.dgn

PROJECT REFERENCE NO. R-3830		SHEET NO. 15	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275		TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

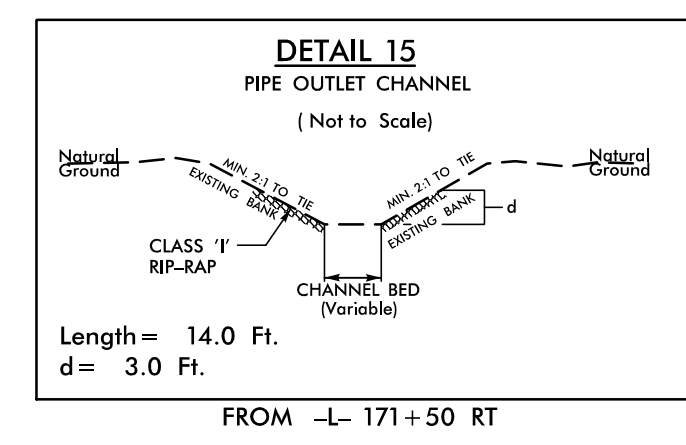
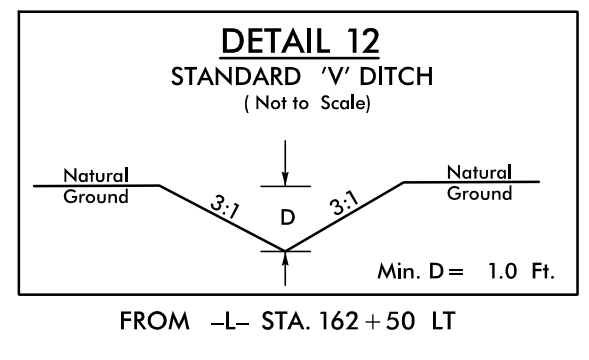
-L-
 PI Sta 172+79.26
 $\Delta = 27^{\circ} 37' 35.0" (RT)$
 $D = 3^{\circ} 49' 11.0"$
 $L = 723.26'$
 $T = 368.80'$
 $R = 1,500.00'$
 $SE = 0.04$
 $Lr = 200'$



MATCHLINE -L- STA. 160+50.00
SEE SHEET 14

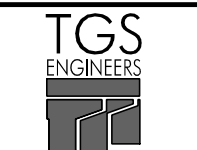
MATCHLINE -L- STA. 172+00.00
SEE SHEET 16

REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 104 & 106 INTO PARCEL 104 (V.M.)
 ROW REV. - SEPTEMBER 19, 2018 - INCREASED DRIVE WIDTH FROM 16' TO 30' ON PARCEL 113 (V.M.)
 ROW REV. - JANUARY 22, 2019 - REMOVED PUE AT -Y16- STA. 13+95.00 RT. (-L- STA. 171+85.99 LT) & -Y16- 13+82.00 RT. (-L- STA. 171+90.04 LT) ON PARCEL 114 (V.M.)

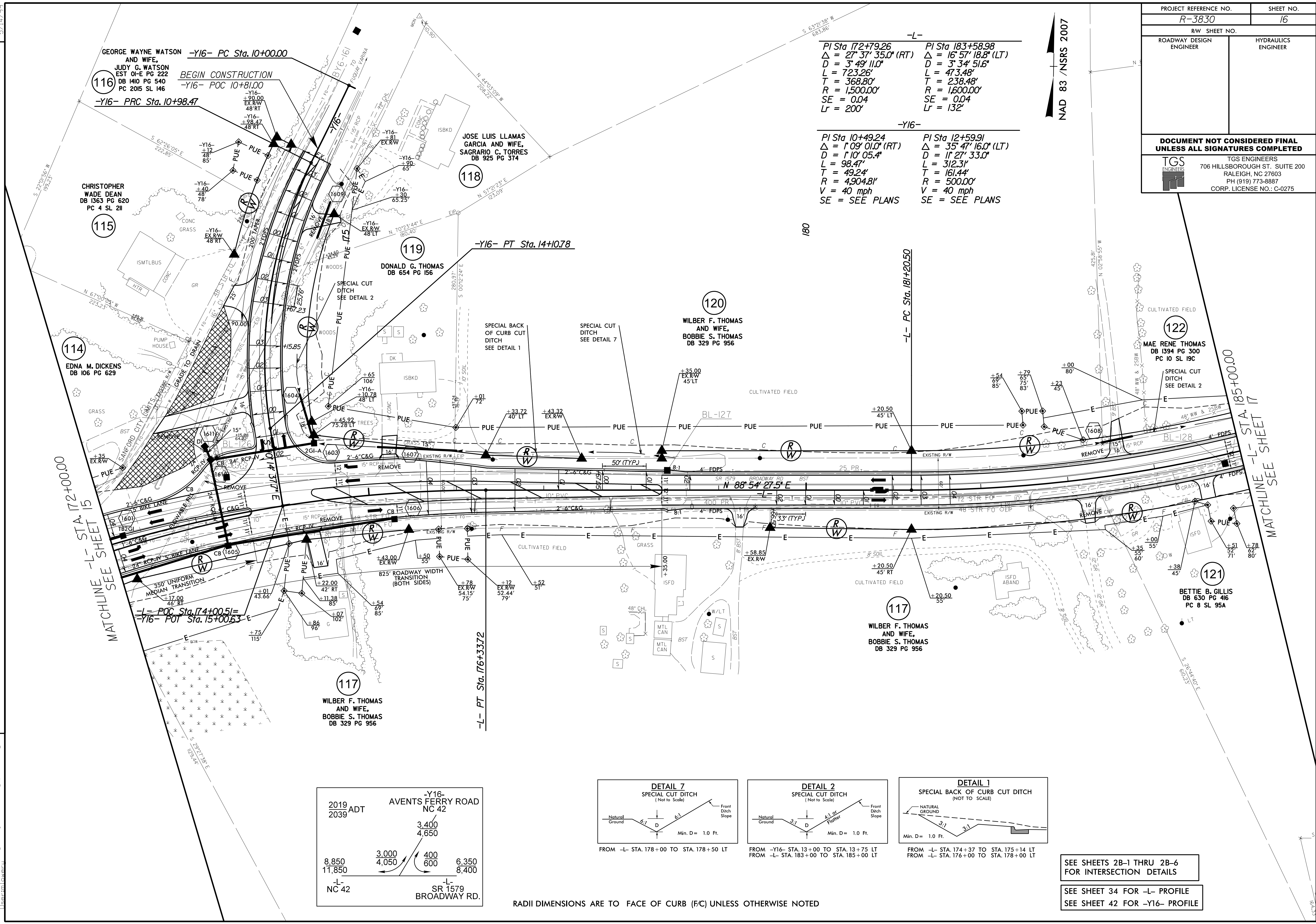


SEE SHEET 33 FOR -L- PROFILE
SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

K:\NCDOT\Projects\3830\Drawings\Proposed\3830_rdy_psh_15.dgn
 5/14/2019 10:30:00 AM
 User: jblower

PROJECT REFERENCE NO.	SHEET NO.
R-3830	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

REVISIONS
 ROW REV. - JUNE 4, 2018 - CORRECTED A PROPERTY LINE BETWEEN PARCELS 117 AND 121 (V.M.L.)
 ROW REV. - AUGUST 8, 2018 - REVISED PUE AND/OR TCE FROM -L- STA 175+50.00 TO STA 176+52.00 RT ON PARCEL 117; REVISED PUE FROM -L- STA 174+65.00 TO STA 183+23.00 LT ON PARCELS 119 & 120; REVISED TCE FROM -L- STA 182+79.00 TO STA 184+00.00 LT ON PARCELS 120 & 122 (V.M.L.)
 ROW REV. - JANUARY 22, 2019 - REVISED PUE FROM -Y16- STA 13+85.00 TO STA 13+99.00 RT ON PARCEL 114 (V.M.L.)



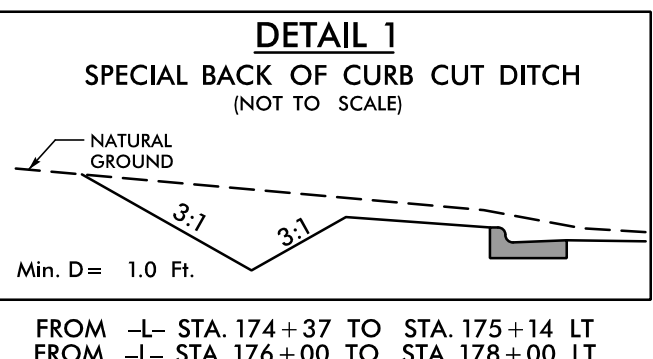
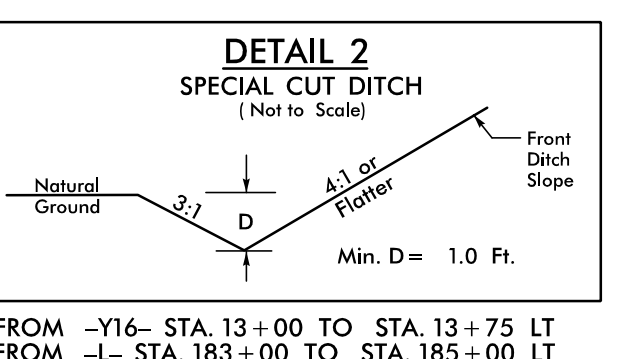
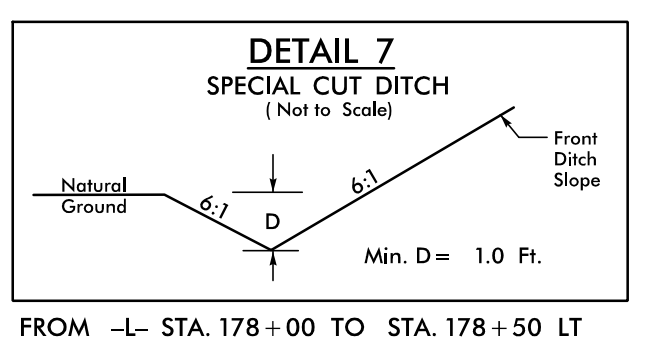
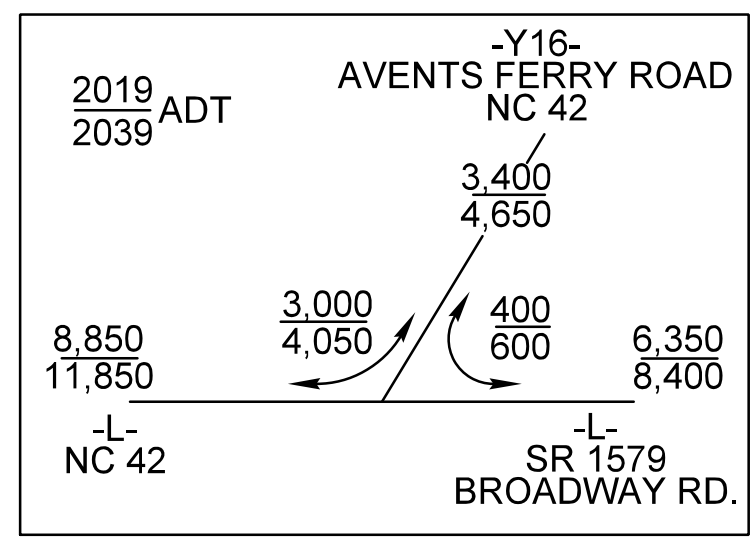
-L-	
PI Sta 172+79.26	PI Sta 183+58.98
$\Delta = 27^{\circ} 37' 35.0''$ (RT)	$\Delta = 16^{\circ} 57' 18.8''$ (LT)
D = 3' 49' 11.0"	D = 3' 34' 51.6"
L = 723.26'	L = 473.48'
T = 368.80'	T = 238.48'
R = 1,500.00'	R = 1,600.00'
SE = 0.04	SE = 0.04
Lr = 200'	Lr = 132'

-Y16-	
PI Sta 10+49.24	PI Sta 12+59.91
$\Delta = 1^{\circ} 09' 01.0''$ (RT)	$\Delta = 35^{\circ} 47' 16.0''$ (LT)
D = 1' 10' 05.4"	D = 1' 27' 33.0"
L = 98.47'	L = 312.31'
T = 49.24'	T = 161.44'
R = 4,904.81'	R = 500.00'
V = 40 mph	V = 40 mph
SE = SEE PLANS	SE = SEE PLANS

NAD 83 / NSRS 2007

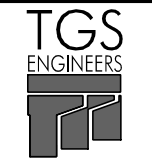
MATCHLINE -L- STA. 172+00.00
 SEE SHEET 15

MATCHLINE -L- STA. 185+00.00
 SEE SHEET 17



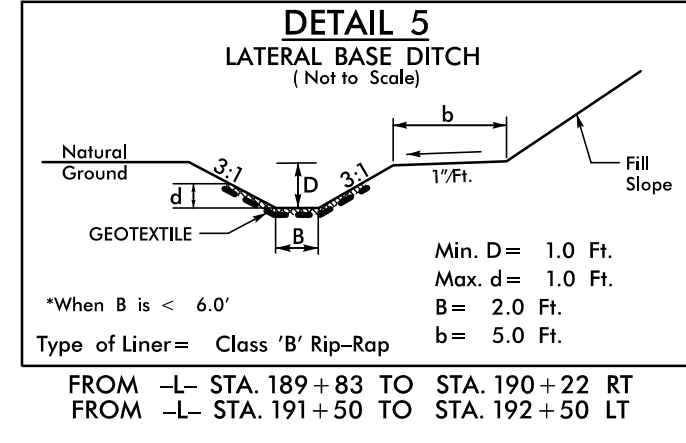
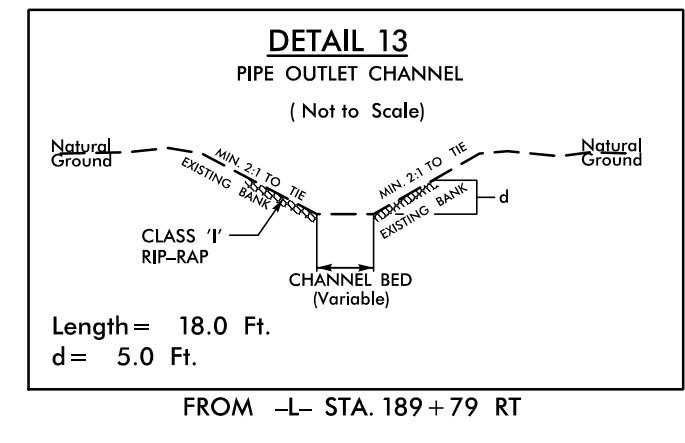
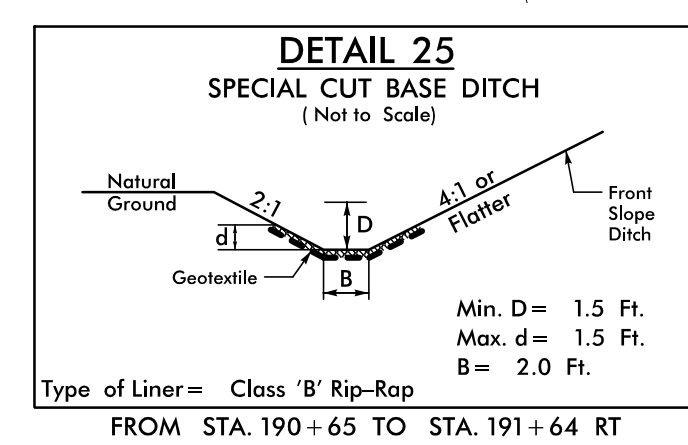
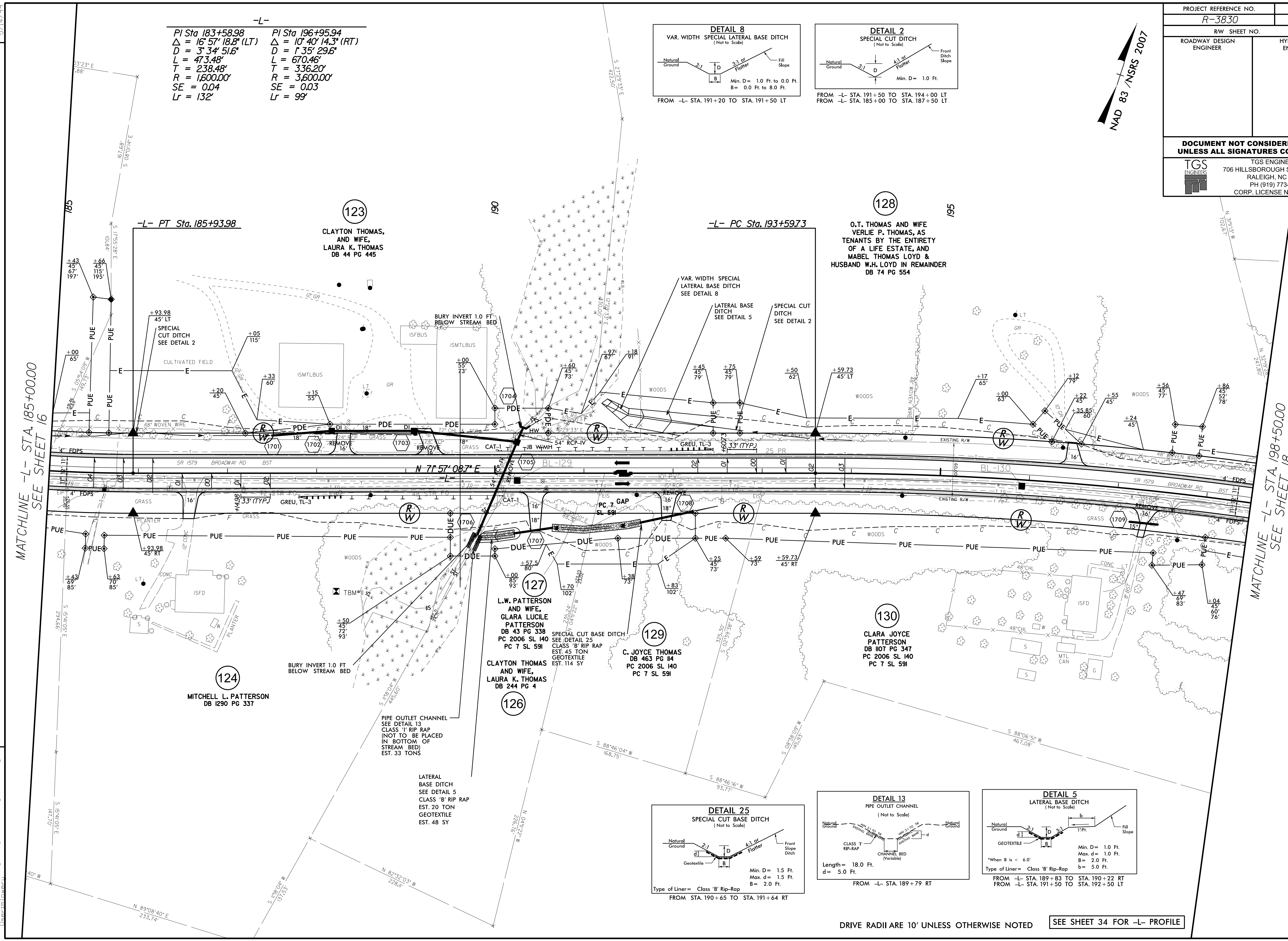
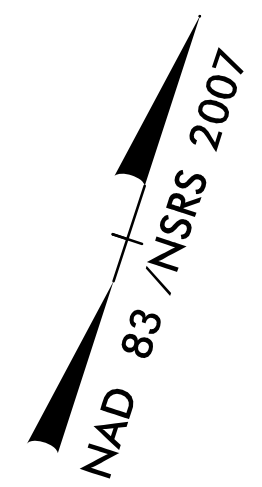
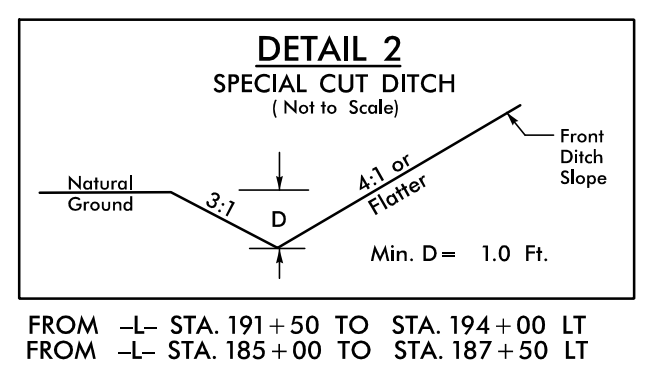
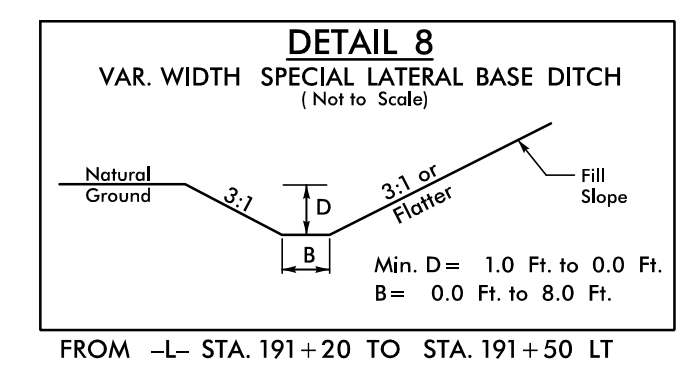
RADI DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS
 SEE SHEET 34 FOR -L- PROFILE
 SEE SHEET 42 FOR -Y16- PROFILE

PROJECT REFERENCE NO. R-3830		SHEET NO. 17	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-L-

PI Sta 183+58.98	PI Sta 196+95.94
$\Delta = 16^{\circ} 57' 18.8" (LT)$	$\Delta = 10^{\circ} 40' 14.3" (RT)$
$D = 3^{\circ} 34' 51.6"$	$D = 1^{\circ} 35' 29.6"$
$L = 473.48'$	$L = 670.46'$
$T = 238.48'$	$T = 336.20'$
$R = 1600.00'$	$R = 3360.00'$
$SE = 0.04$	$SE = 0.03$
$Lr = 132'$	$Lr = 99'$



DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

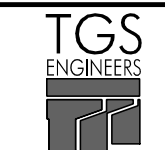
SEE SHEET 34 FOR -L- PROFILE

REVISIONS
ROW REV. - APRIL 4, 2008 - COMBINED PARCELS 124 & 125 INTO PARCEL 124 (VML)

MATCHLINE -L- STA. 185+00.00
SEE SHEET 16

MATCHLINE -L- STA. 198+50.00
SEE SHEET 18

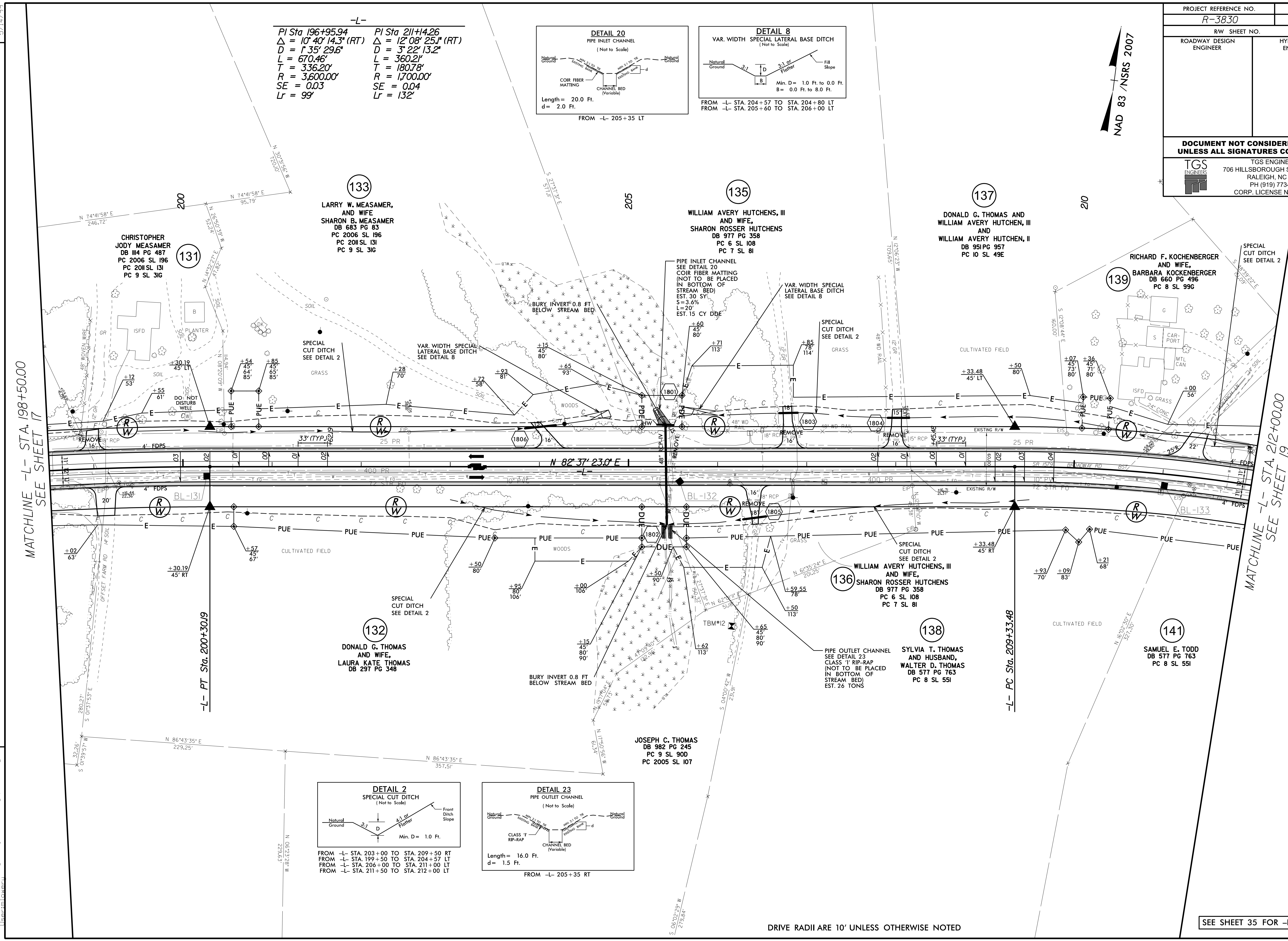
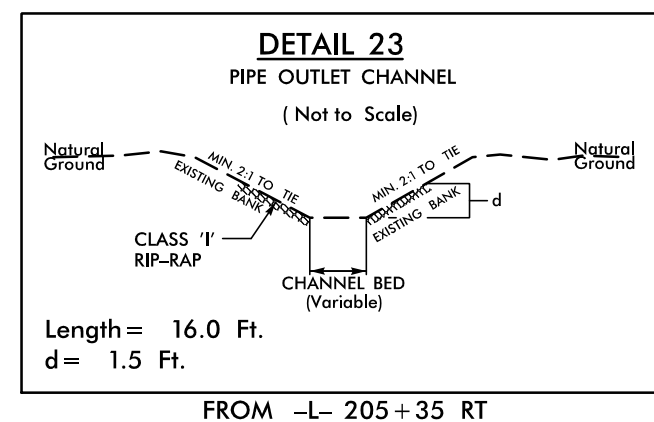
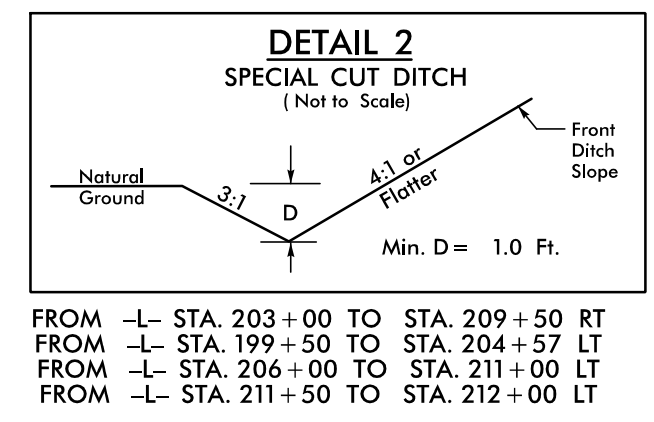
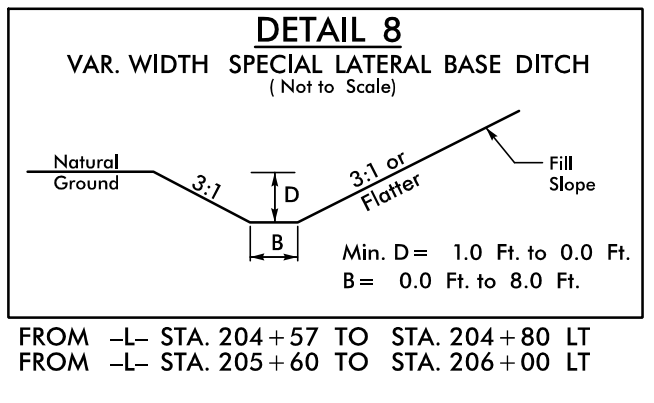
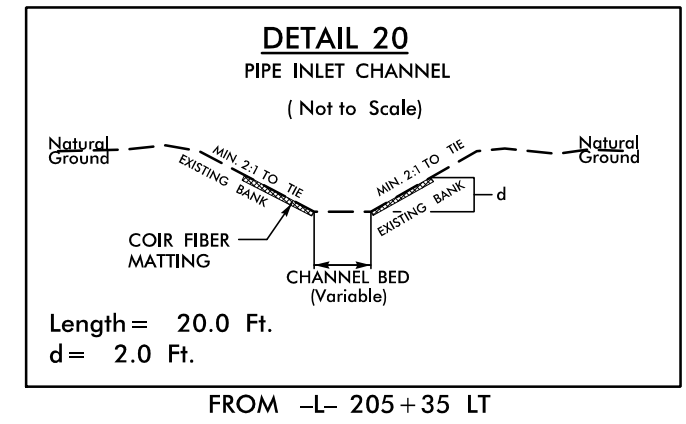
5/14/09
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User: jlp

PROJECT REFERENCE NO.	SHEET NO.
R-3830	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

NAD 83 / NSRS 2007

-L-

PI Sta 196+95.94 Δ = 10° 40' 14.3" (RT) D = 1' 35' 29.6" L = 670.46' T = 336.20' R = 3,600.00' SE = 0.03 Lr = 99'	PI Sta 211+4.26 Δ = 12° 08' 25.1" (RT) D = 3' 22' 13.2" L = 360.21' T = 180.78' R = 1,700.00' SE = 0.04 Lr = 132'
--	--



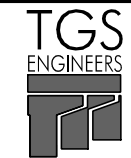
REVISIONS
ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 133 & 134 INTO PARCEL 133 (VML)

MATCHLINE -L- STA. 198+50.00
SEE SHEET 17

MATCHLINE -L- STA. 212+00.00
SEE SHEET 19

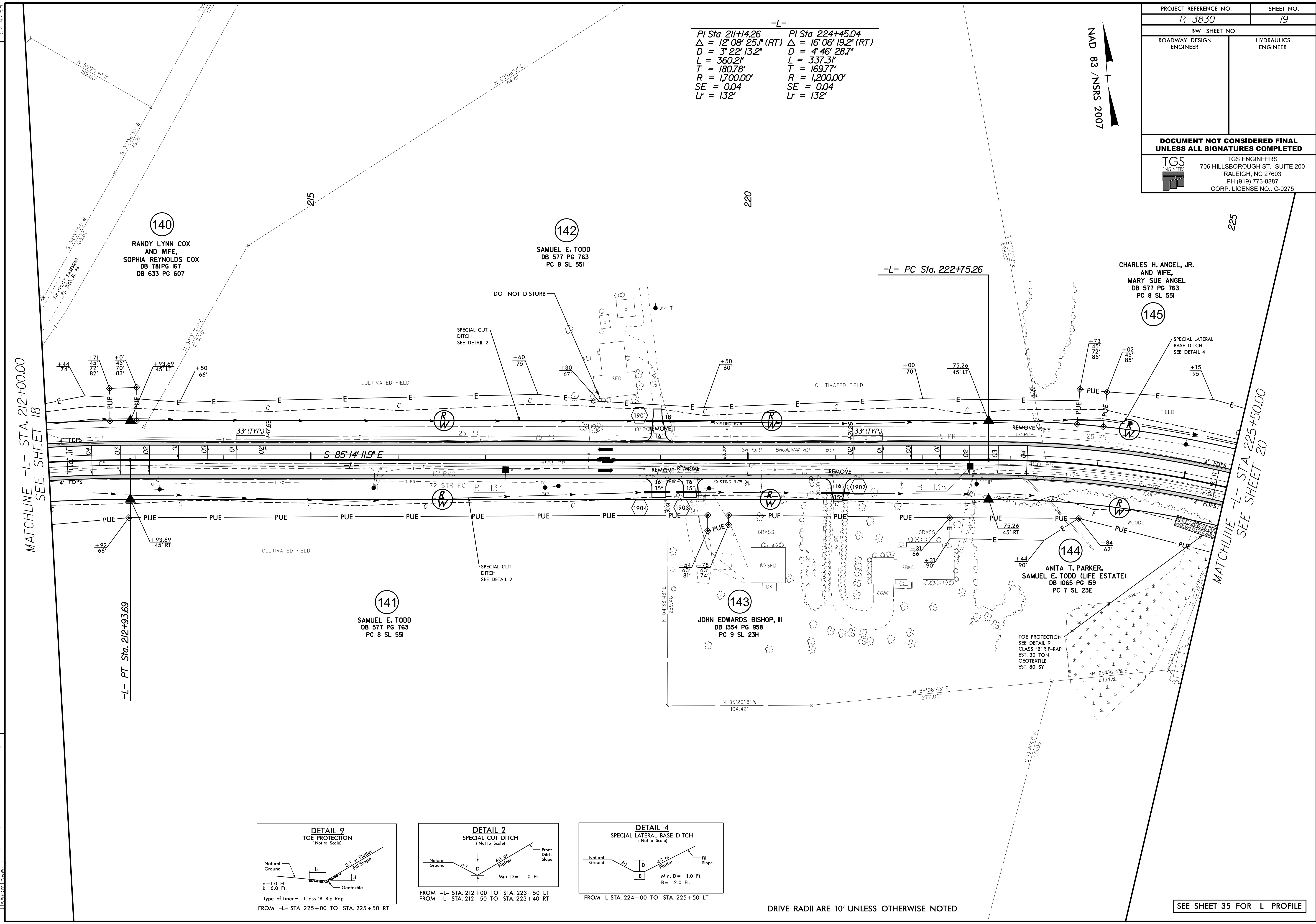
DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

SEE SHEET 35 FOR -L- PROFILE

PROJECT REFERENCE NO. R-3830	SHEET NO. 19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

NAD 83 / NSRS 2007

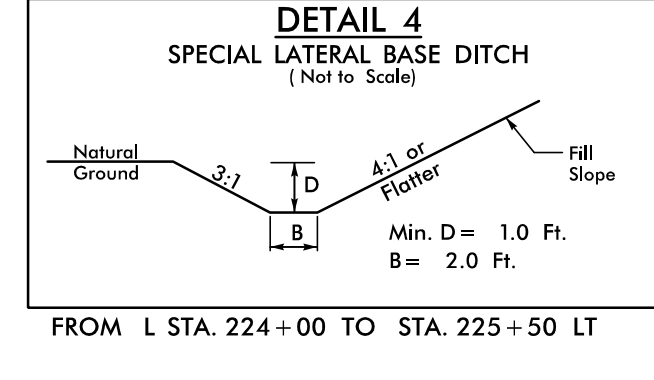
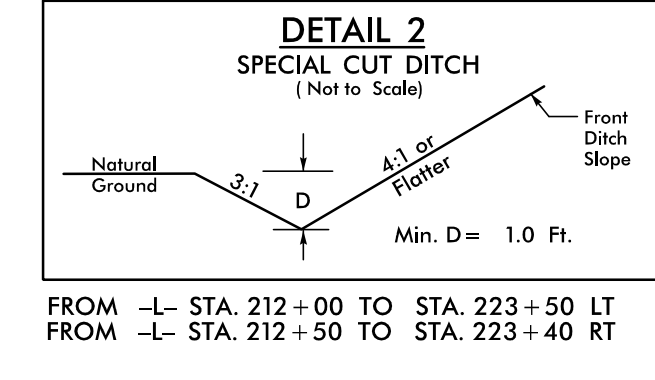
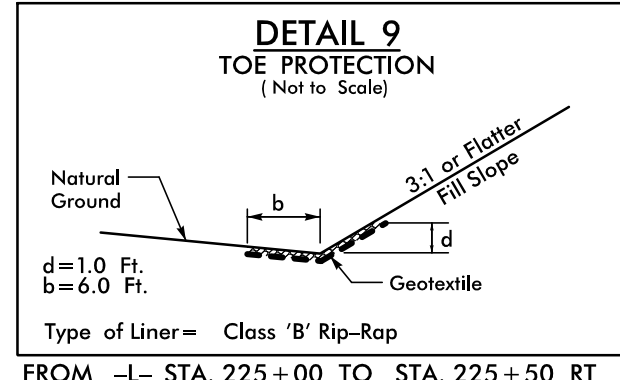
-L-
 PI Sta 211+4.26 Δ = 12° 08' 25.1" (RT) L = 360.21' T = 180.78' R = 1,700.00' SE = 0.04 Lr = 132'
 PI Sta 224+45.04 Δ = 16° 06' 19.2" (RT) L = 337.31' T = 169.77' R = 1,200.00' SE = 0.04 Lr = 132'



REVISIONS

MATCHLINE -L- STA. 212+00.00
SEE SHEET 18

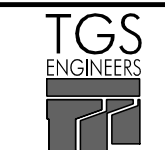
MATCHLINE -L- STA. 225+50.00
SEE SHEET 20

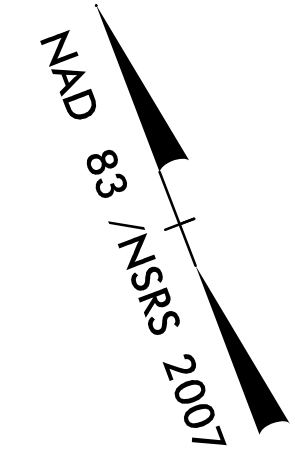


DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

SEE SHEET 35 FOR -L- PROFILE

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 User: jrb
 5/14/99

PROJECT REFERENCE NO. R-3830	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



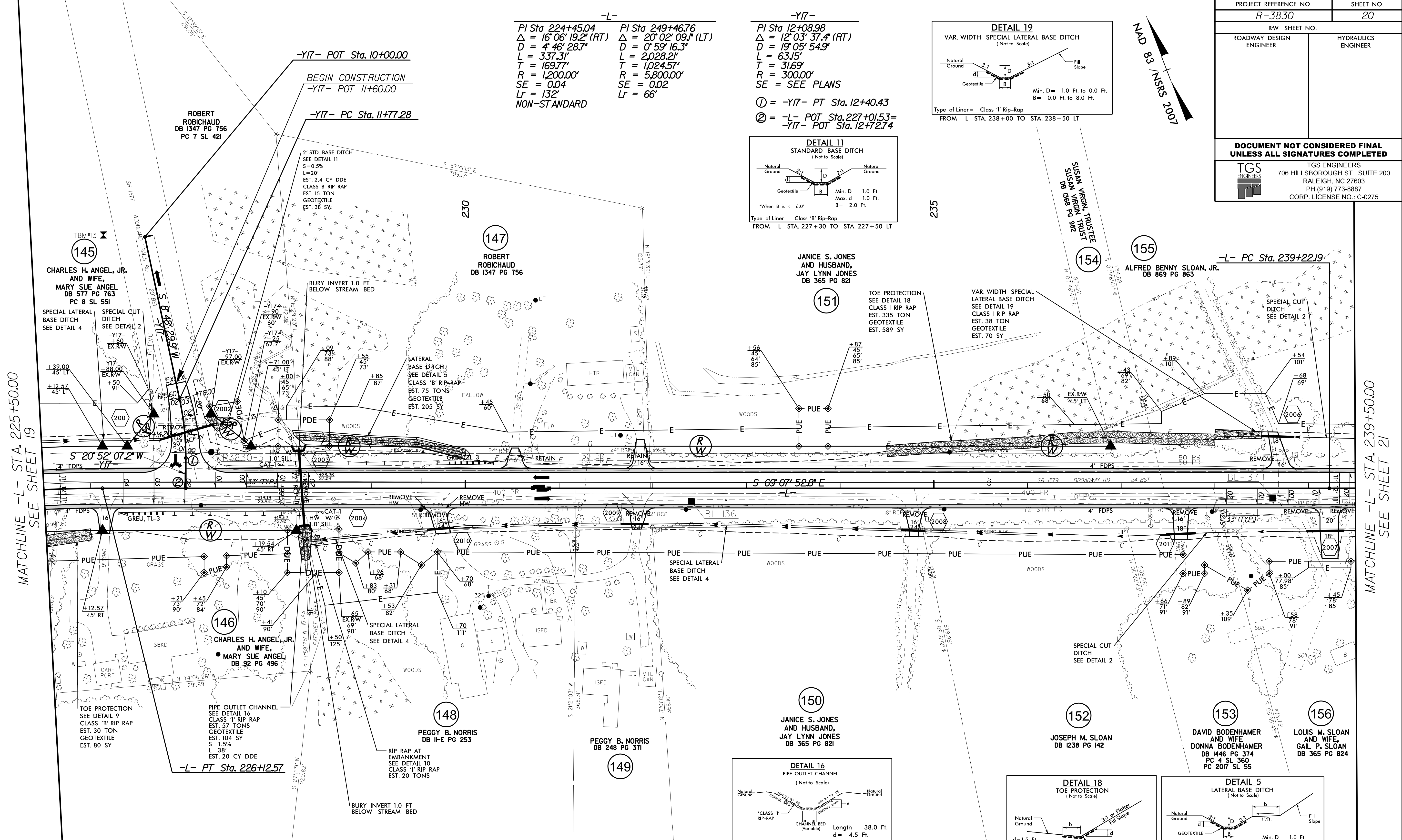
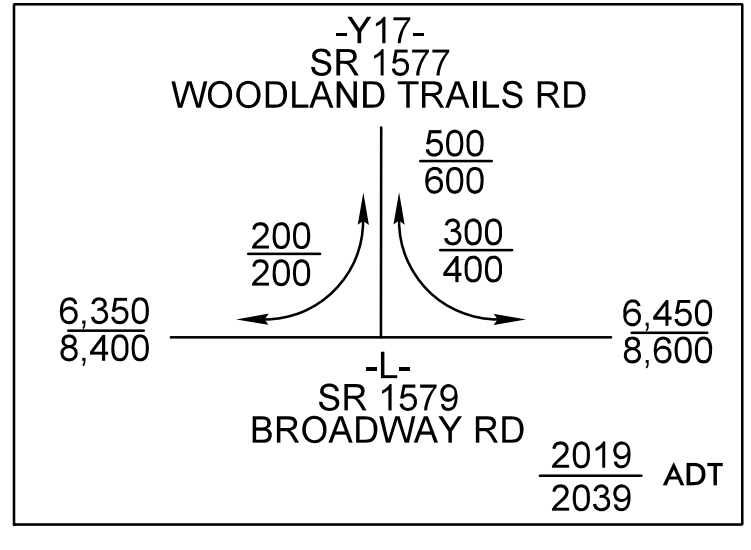
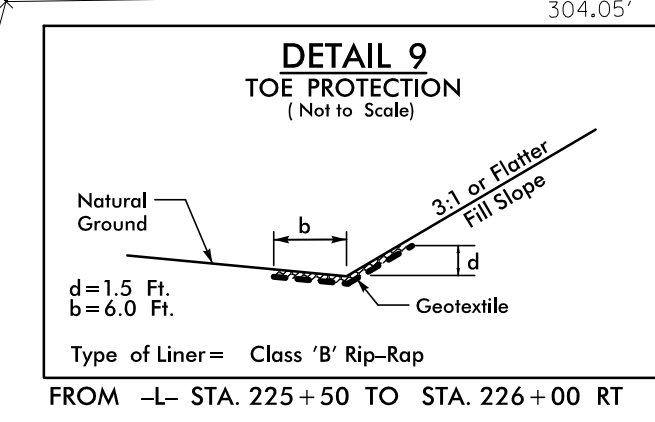
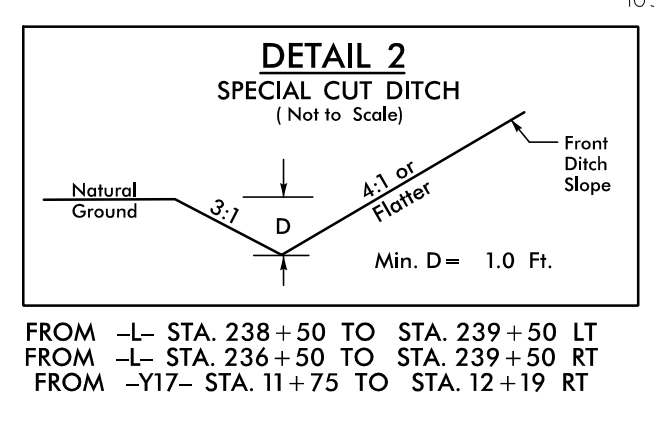
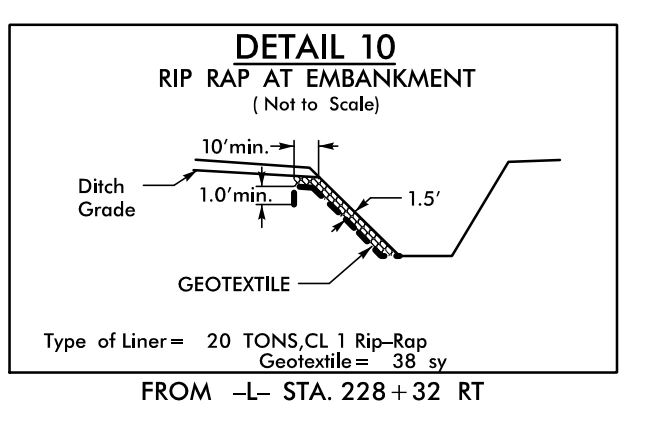
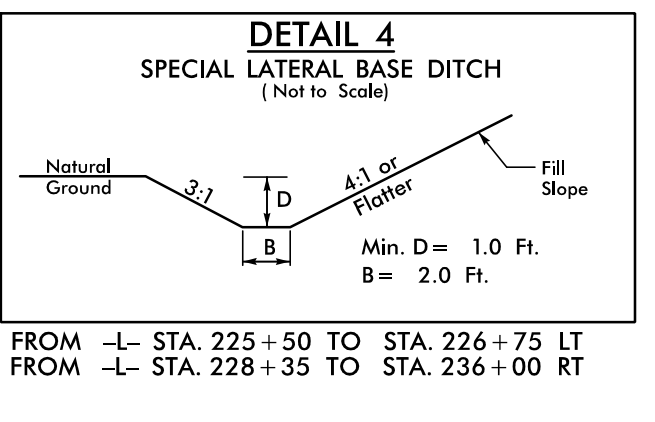
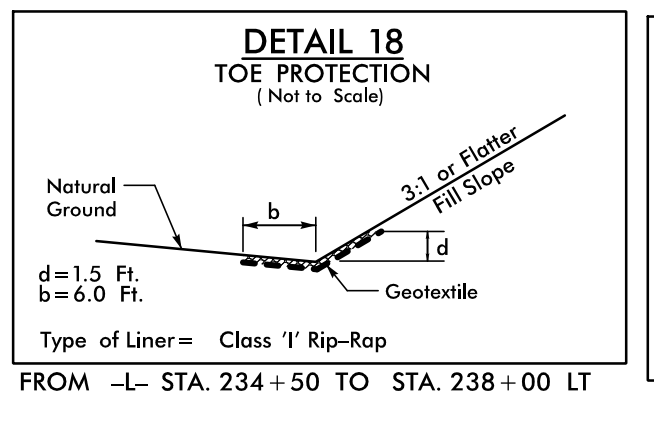
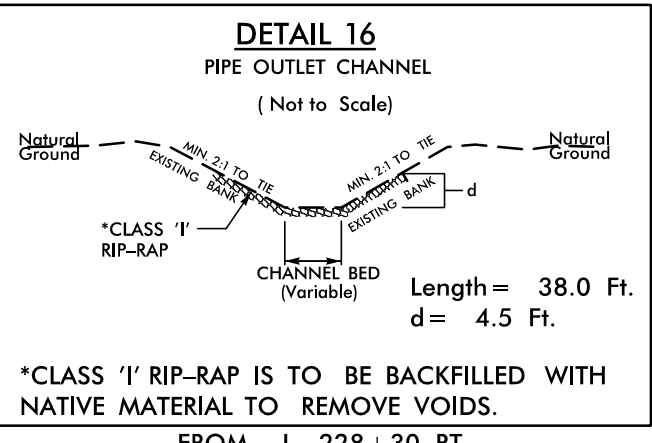
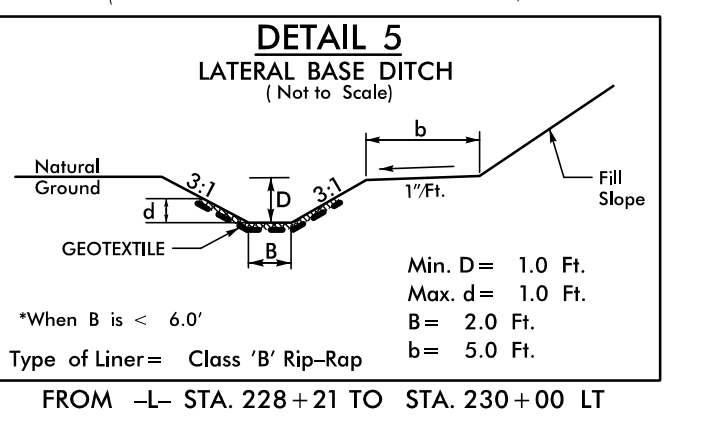
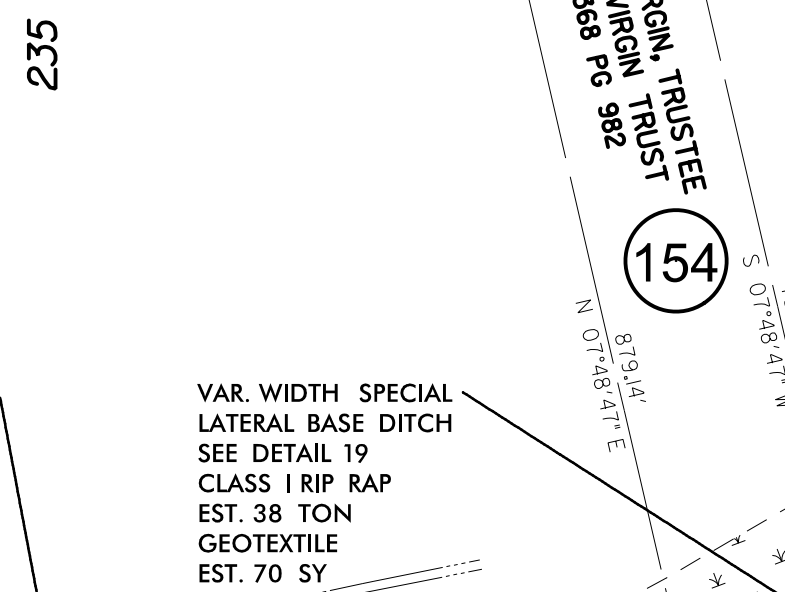
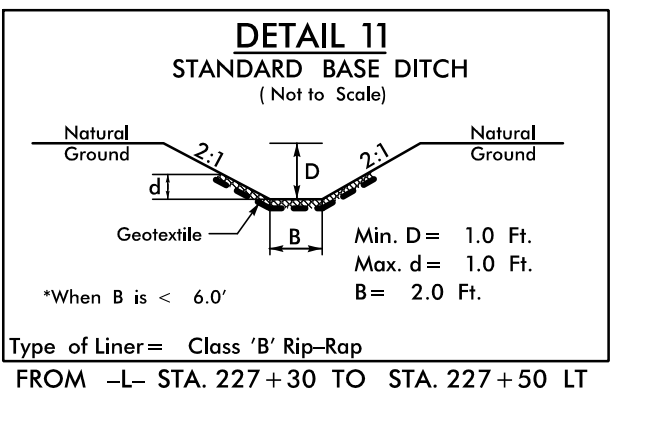
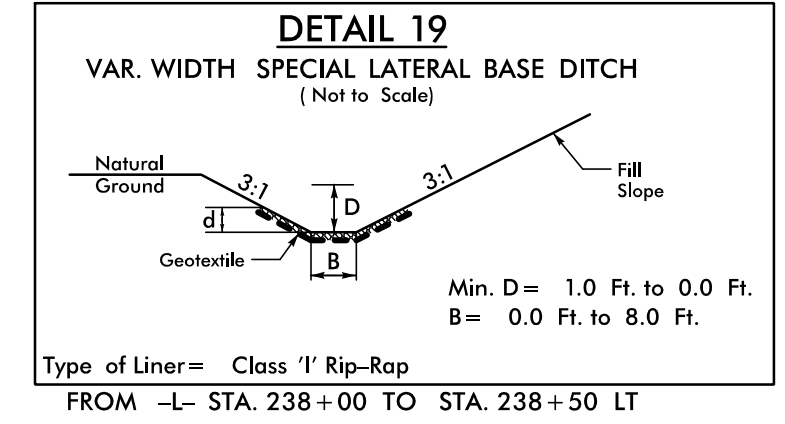
-L-

PI Sta 224+45.04 PI Sta 249+46.76
 $\Delta = 16' 06'' 19.2''$ (RT) $\Delta = 20' 02' 09.1''$ (LT)
 $D = 4' 46' 28.7''$ $D = 0' 59' 16.3''$
 $L = 337.31'$ $L = 2,028.21'$
 $T = 169.77'$ $T = 1,024.57'$
 $R = 1,200.00'$ $R = 5,800.00'$
 $SE = 0.04$ $SE = 0.02$
 $Lr = 132'$ $Lr = 66'$
NON-STANDARD

-Y17-

PI Sta 12+08.98
 $\Delta = 12' 03' 37.4''$ (RT)
 $D = 19' 05' 54.9''$
 $L = 63.15'$
 $T = 31.69'$
 $R = 300.00'$
 $SE = \text{SEE PLANS}$

① = -Y17- PT Sta. 12+40.43
 ② = -L- POT Sta. 227+01.53 =
 -Y17- POT Sta. 12+72.74



REVISIONS
 ROW REV. - AUGUST 8, 2018 - REVISED PUE AND/OR TCE FROM -L- STA. 230+45.00 TO STA. 236+50.00 LT. ON PARCEL 151, REVISED PUE FROM -L- STA. 237+66.00 TO STA. 239+50.00 RT. ON PARCELS 153 & 156, REVISED TCE ON PARCEL 156 (NML)
 ROW REV. - SEPTEMBER 19, 2018 - UPDATED PROPERTY OWNER NAME AND DEED REFERENCE AND ADDED A DRIVEWAY ON PARCEL 153 (NML)

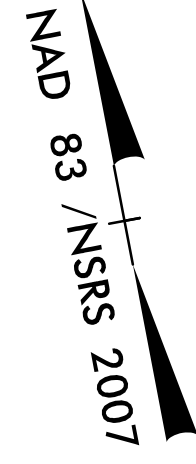
5/14/2019

MATCHLINE -L- STA. 225+50.00 SEE SHEET 19

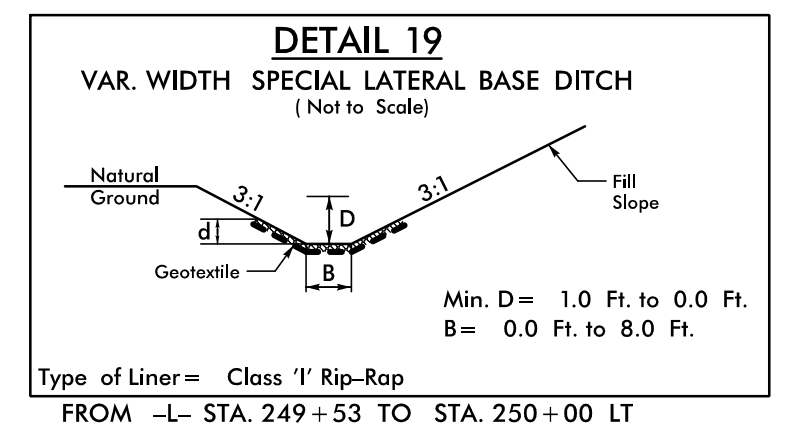
MATCHLINE -L- STA. 239+50.00 SEE SHEET 21

N:\NCDDOT\R-3830\Roadway\Proje\3830_rdy_psh_20.dgn
 2/1/2019 10:19:19 AM
 User: jacob

PROJECT REFERENCE NO. R-3830		SHEET NO. 21	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



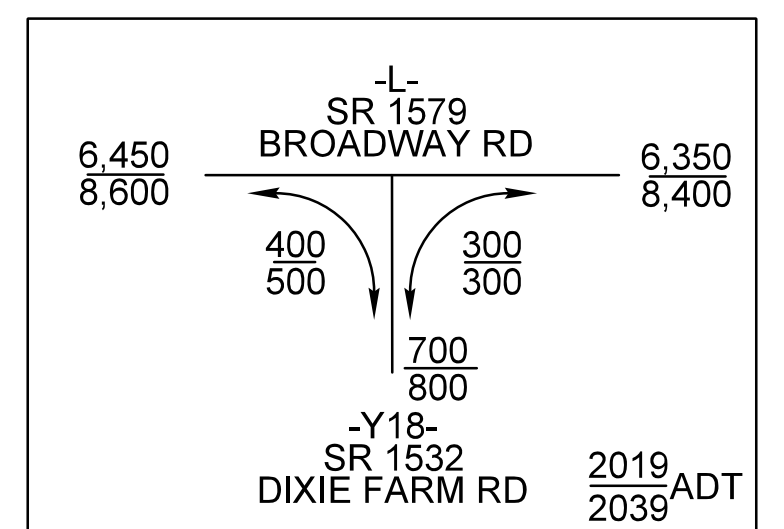
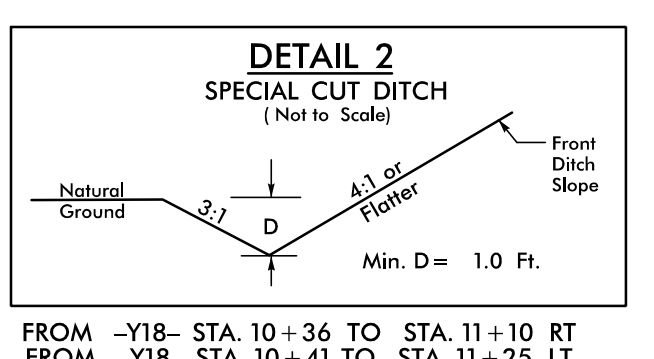
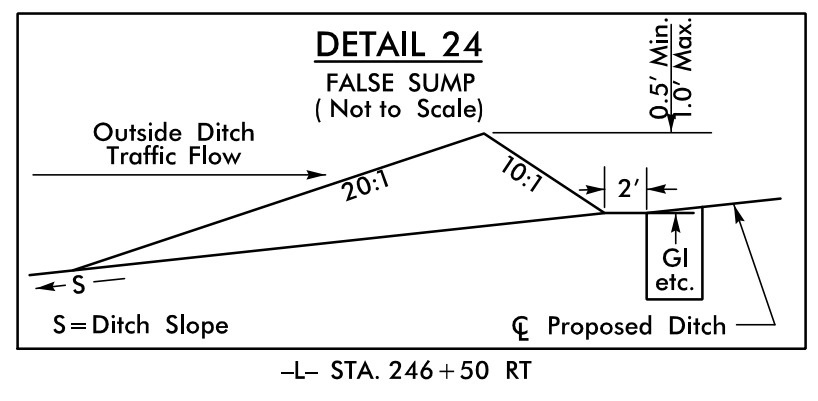
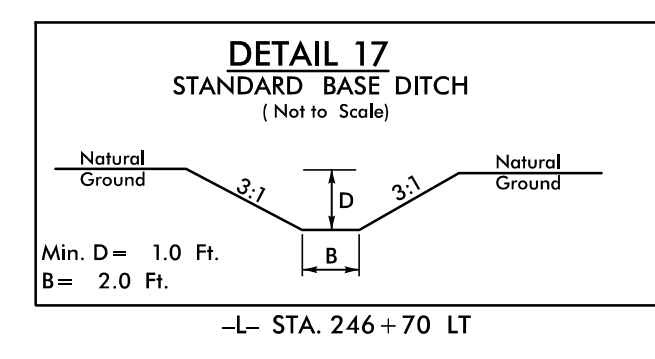
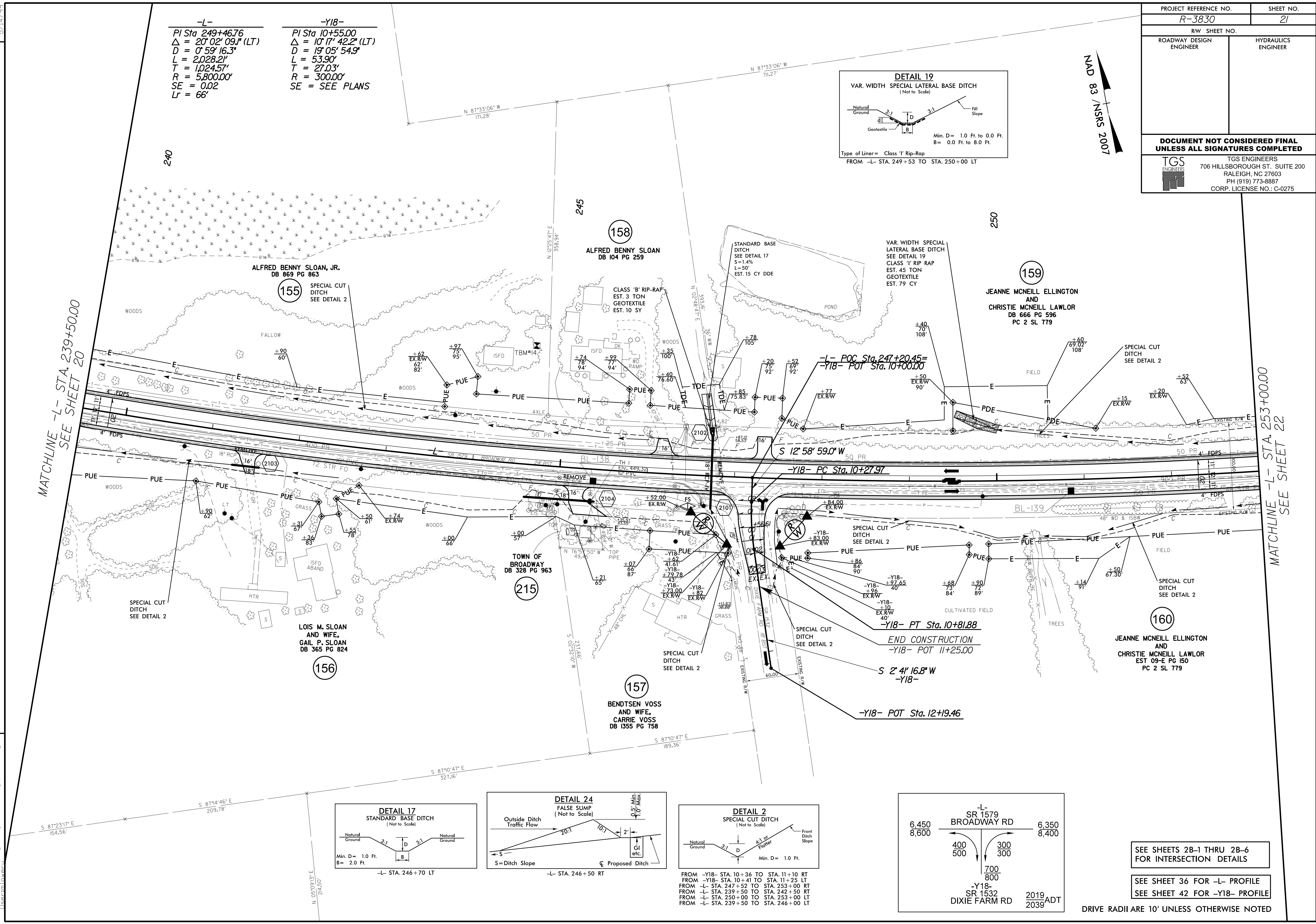
-L- PI Sta 249+46.76 $\Delta = 20^\circ 02' 09.1''$ (LT) D = 0' 59' 16.3" L = 2,028.21' T = 1,024.57' R = 5,800.00' SE = 0.02 Lr = 66'	-Y18- PI Sta 10+55.00 $\Delta = 10^\circ 17' 42.2''$ (LT) D = 19' 05' 54.9" L = 53.90' T = 27.03' R = 300.00' SE = SEE PLANS
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MATCHLINE -L- STA. 239+50.00
SEE SHEET 20

MATCHLINE -L- STA. 253+00.00
SEE SHEET 22

REVISIONS
ROW REV. - AUGUST 8, 2018 - REVISED PUE FROM -L- STA 239+50.00 TO STA 240+90.00 RT. ON PARCEL 156; REVISED PUE AND/OR TDE FROM -L- STA 243+97.00 TO STA 247+20.00 LT. ON PARCELS 155, 158, & 159; REVISED PUE FROM -L- STA 247+86.00 TO STA 249+68.00 RT. AND REMOVED TCE FROM -L- STA 247+77.00 TO STA 249+68.00 RT. ON PARCEL 160 (V.M.)



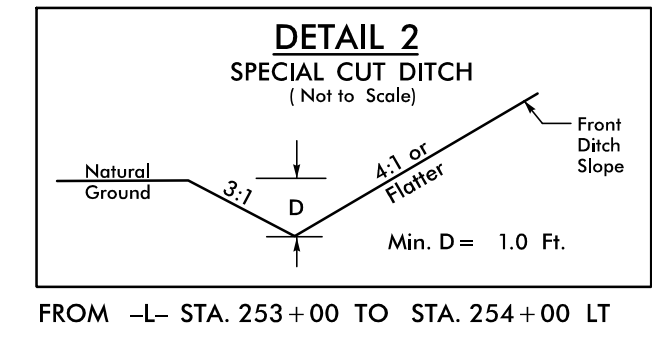
SEE SHEETS 2B-1 THRU 2B-6 FOR INTERSECTION DETAILS

SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 42 FOR -Y18- PROFILE

5/14/19
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\\ncdot1\p\3830\roadway\p\3830_rdy_psh_21.dgn
User: jlowell

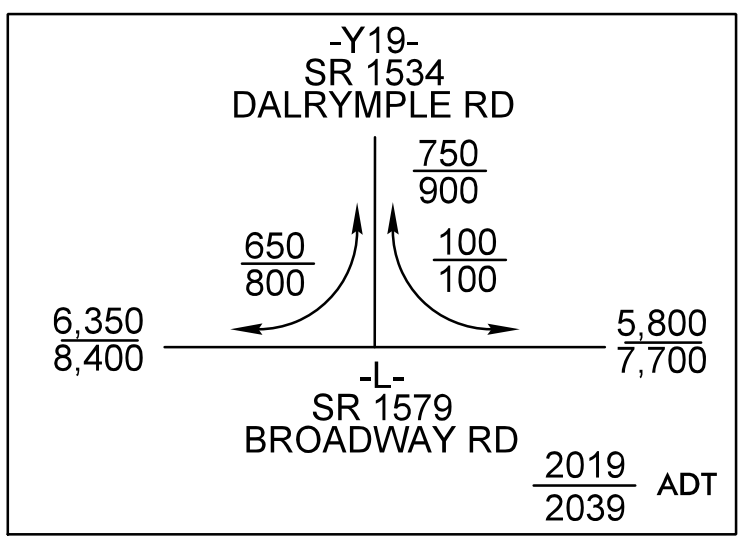
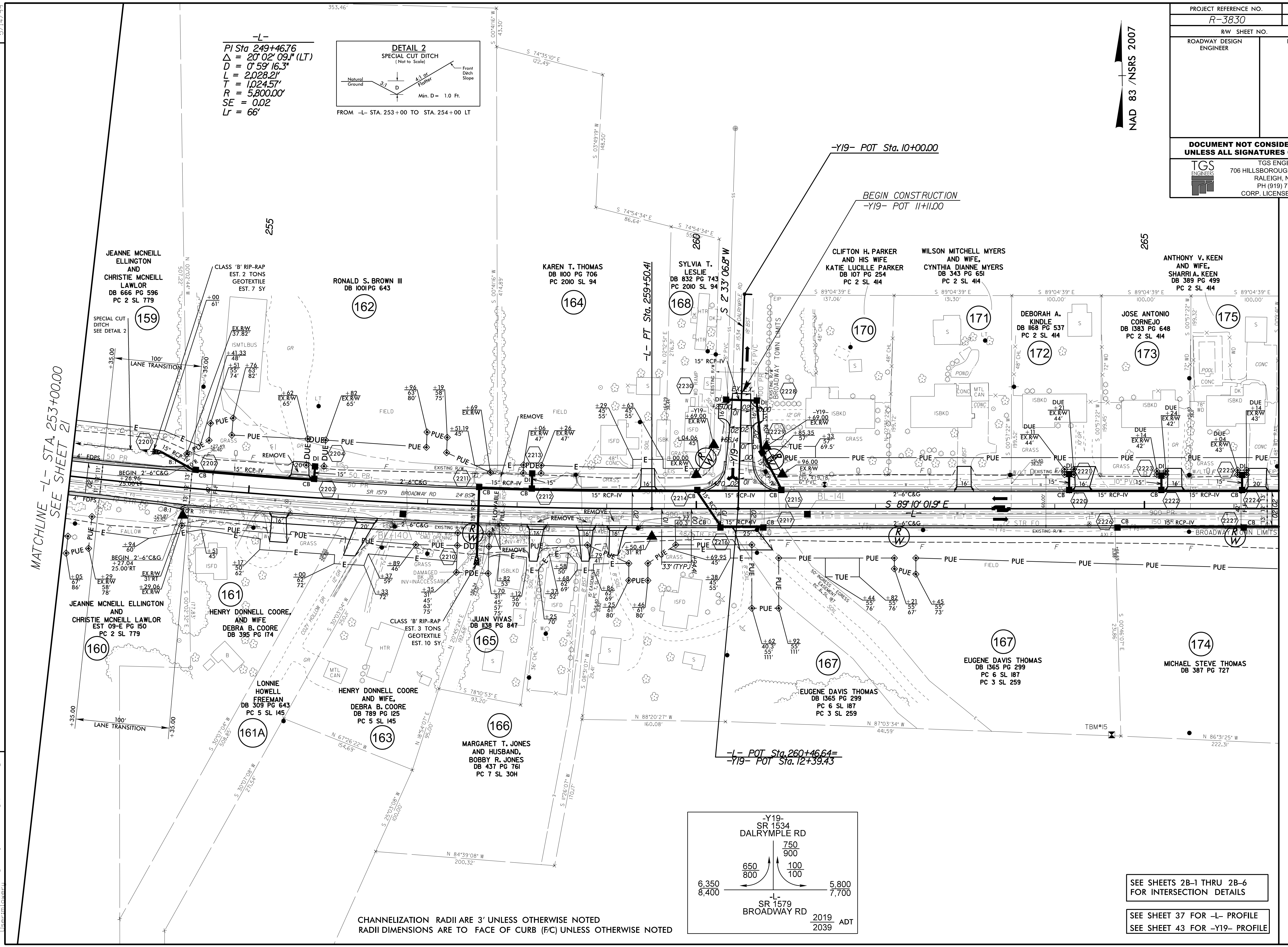
NAD 83 / NSRS 2007

-L-
 PI Sta 249+46.76
 $\Delta = 20^{\circ} 02' 09.1" (LT)$
 $D = 0' 59" 16.3"$
 $L = 2,028.21'$
 $T = 1,024.57'$
 $R = 5,800.00'$
 $SE = 0.02$
 $Lr = 66'$



REVISIONS

ROW REV. - APRIL 4, 2008 - COMBINED PARCELS 167 & 169 INTO PARCEL 161. ADDED PARCEL 161A (WML).
 ROW REV. - MAY 9, 2008 - ADDED PUE ON PARCELS 160, 161, 165, 166, 167, 168, 170, & 175. ADDED, DUE, AND REVISED PDE ON PARCEL 163. REVISED PUE ON PARCELS 166 & 167.
 REVISED TOE ON PARCEL 167; ADDED TCE FROM PARCELS 170-173 & 175; CONVERTED PUE TO DUE ON PARCELS 172, 173, & 175 (WML)



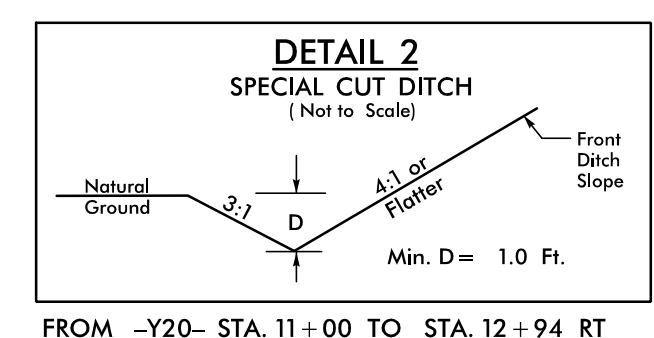
CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED

SEE SHEETS 2B-1 THRU 2B-6
 FOR INTERSECTION DETAILS

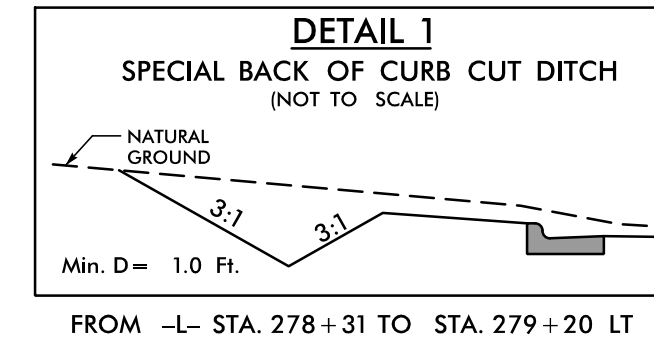
SEE SHEET 37 FOR -L- PROFILE
 SEE SHEET 43 FOR -Y19- PROFILE

MATCHLINE -L- STA. 266+50.00
 SEE SHEET 23

5/14/2009
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FROM -Y20- STA. 11+00 TO STA. 12+94 RT
FROM -Y20- STA. 11+00 TO STA. 13+00 LT



FROM -L- STA. 278+31 TO STA. 279+20 LT

-Y20-
 PI Sta 12+22.92
 Δ = 48° 04' 43.1" (RT)
 D = 22° 55' 05.9"
 L = 209.78'
 T = 111.51'
 R = 250.00'
 SE = SEE PLANS

-Y21-
 PI Sta 10+96.09
 Δ = 6° 48' 28.6" (LT)
 D = 7° 38' 22.0"
 L = 89.12'
 T = 44.61'
 R = 750.00'
 SE = SEE PLANS

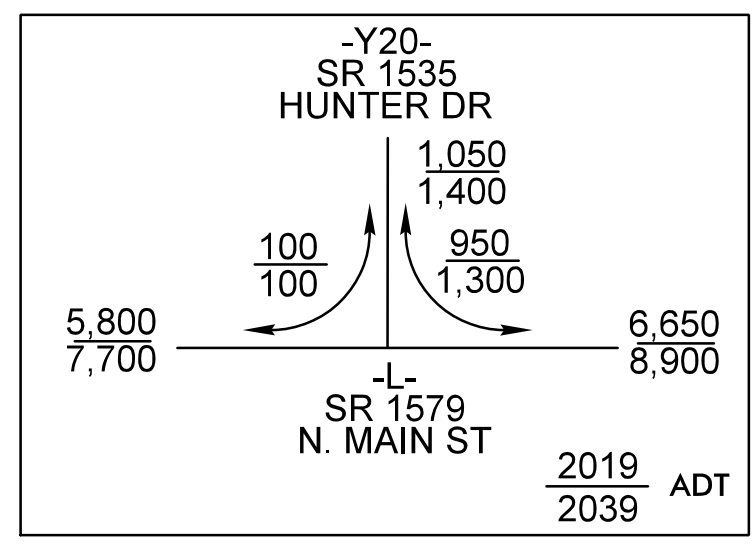
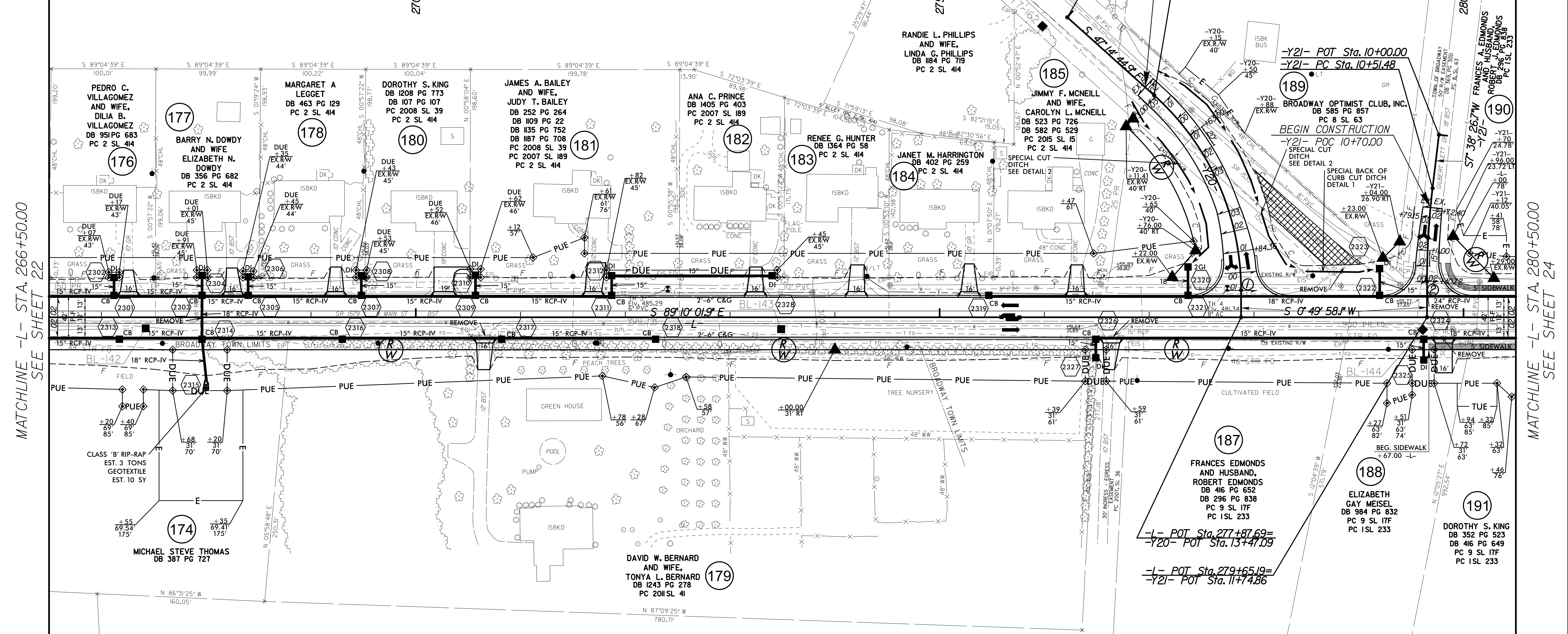
- ① = -Y20- PT Sta. 13+21.19
- ② = -Y21- PT Sta. 11+40.59

NAD 83 / NSRS 2007

REVISIONS
 ROW REV. - MAY 9, 2018 - ADDED PUE ON PARCELS 176-178, 180, 182-185; REVISED PUE ON PARCEL 181;
 ADDED TUE ON PARCELS 188 & 191; REVISED TCE ON PARCEL 180 (NW)
 ROW REV. - SEPTEMBER 19, 2018 - UPDATED PROPERTY LINES ON PARCELS 180 THROUGH 182; UPDATED DEED REFERENCES ON PARCEL 181 (NW)

MATCHLINE -L- STA. 266+50.00
SEE SHEET 22

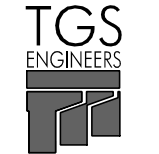
MATCHLINE -L- STA. 280+50.00
SEE SHEET 24



CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED

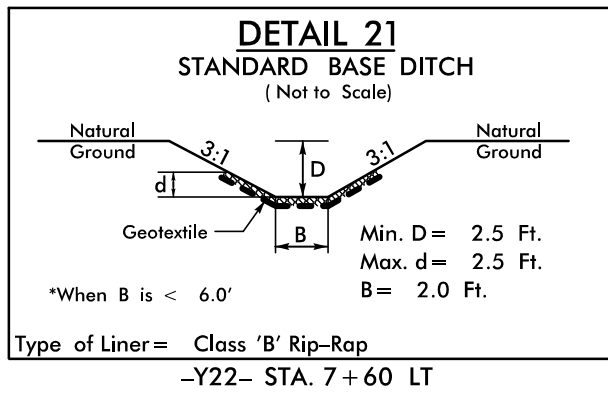
SEE SHEETS 2B-1 THRU 2B-6
FOR INTERSECTION DETAILS

SEE SHEET 37 FOR -L- PROFILE
 SEE SHEET 43 FOR -Y20- PROFILE
 SEE SHEET 43 FOR -Y21- PROFILE

PROJECT REFERENCE NO. R-3830		SHEET NO. 24
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275		

NAD 83 / NSRS 2007

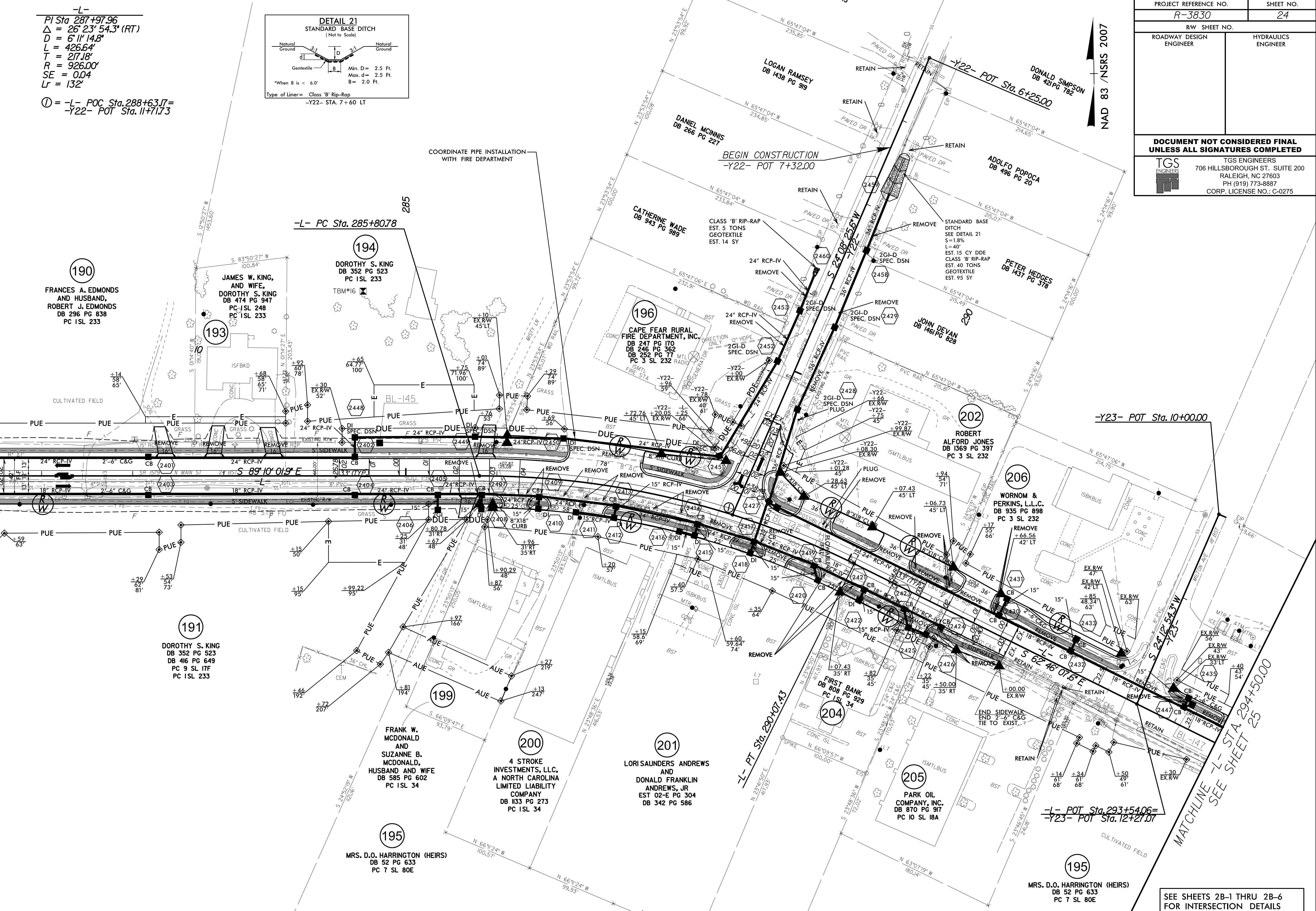
-L-
 PI Sta 287+97.96
 $\Delta = 26' 23'' 54.3'' (RT)$
 $D = 6'' 11' 14.8''$
 $L = 426.64'$
 $T = 217.18'$
 $R = 926.00'$
 $SE = 0.04$
 $LR = 132'$
 O -L- POC Sta. 288+63.17 =
 -Y22- POT Sta. 11+71.73



REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 191 & 192 INTO PARCEL 191; PARCELS 196, 197, & 198 INTO PARCEL 196; PARCELS 201 & 203 INTO PARCEL 201 (V.M.L.)
 ROW REV. - MAY 9, 2018 - ADDED PUE ON PARCELS 190, 191, 192, 200, 201, 204, & 207; REVISED PUE ON PARCELS 190, 191, 192, 193, 195, 199, & 205; REVISED TCE ON PARCELS 190, 191, & 193;
 REVISED DUE ON PARCELS 191, 192, 201, & 204; ADDED TUE ON PARCELS 190, 191, 201, 204, & 207; ADDED TUE ON PARCELS 201, 206, & 207; CONVERTED PUE TO DUE ON PARCELS 204 & 205 (V.M.L.)
 ROW REV. - AUGUST 8, 2018 - REVISED PUE AND TCE FROM -L- STA 284+46.00 TO STA 285+47.00 RT ON PARCEL 191; ADDED AUE ON PARCEL 191; REMOVED PUE AND ADDED AUE ON PARCEL 195; REVISED PUE AND ADDED AUE ON PARCEL 199 (V.M.L.)

MATCHLINE -L- STA. 280+50.00
 SEE SHEET 23

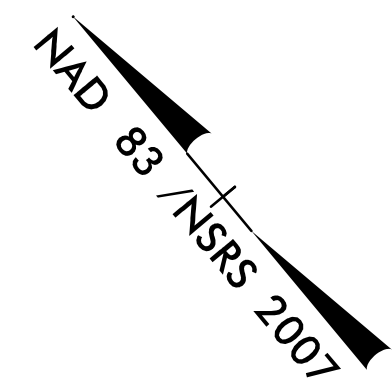
MATCHLINE -L- STA. 294+50.00
 SEE SHEET 25



DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED
 CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

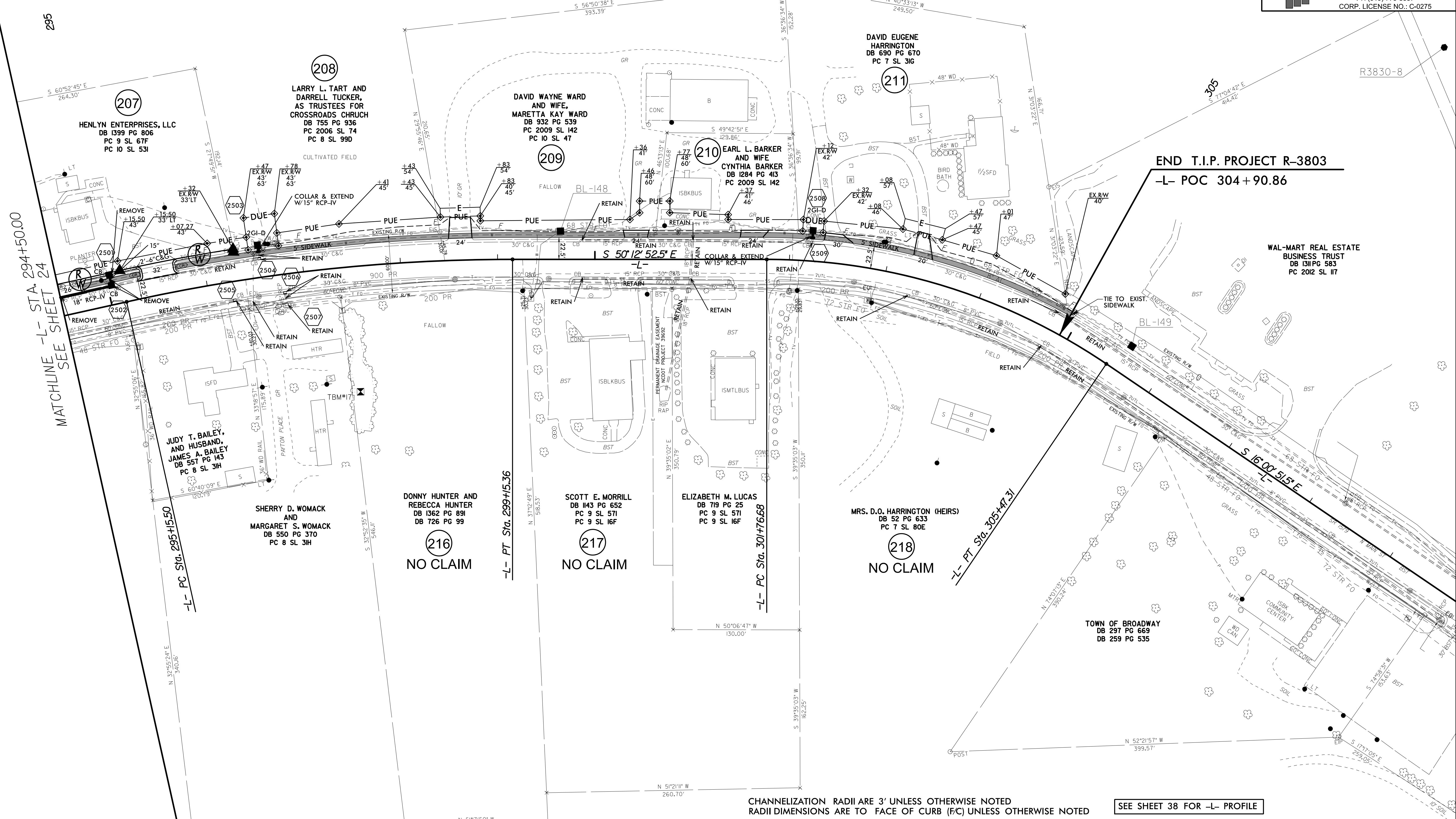
SEE SHEETS 2B-1 THRU 2B-6
 FOR INTERSECTION DETAILS
 SEE SHEET 38 FOR -L- PROFILE
 SEE SHEET 43 FOR -Y22- PROFILE

PROJECT REFERENCE NO.	R-3830
SHEET NO.	25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS	TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275



-L-
PI Sta 297+16.24 PI Sta 303+67.70
 $\Delta = 12^\circ 33' 15.1''$ (RT) $\Delta = 34^\circ 12' 01.0''$ (RT)
D = 3'08'22.7" D = 9'13'38.9"
L = 399.86' L = 370.64'
T = 200.73' T = 191.02'
R = 1,824.91' R = 620.93'

REVIEWS
ROW REV.- APRIL 4, 2018 - ADDED THE DESIGNATION 'NO CLAIM' TO PARCELS 216, 217 & 218 (VM)
ROW REV.- MAY 9, 2018 - ADDED PUE AND REMOVED TCE FROM PARCELS 207, 208 & 210; REVISED TCE ON PARCELS 209 & 211;
CONVERTED PDE TO DUE ON PARCEL 211 (VM)
ROW REV.- AUGUST 8, 2018 - REVISED PUE FROM -L- STA 300+46.00 TO STA 301+37.00 LT. ON PARCELS 209 & 210 (VM)

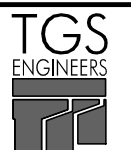


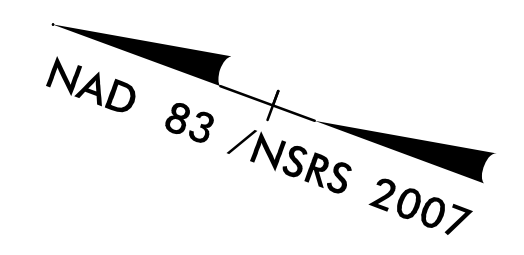
MATCHLINE -L- STA. 294+50.00
SEE SHEET 24

END T.I.P. PROJECT R-3803
-L- POC 304+90.86

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

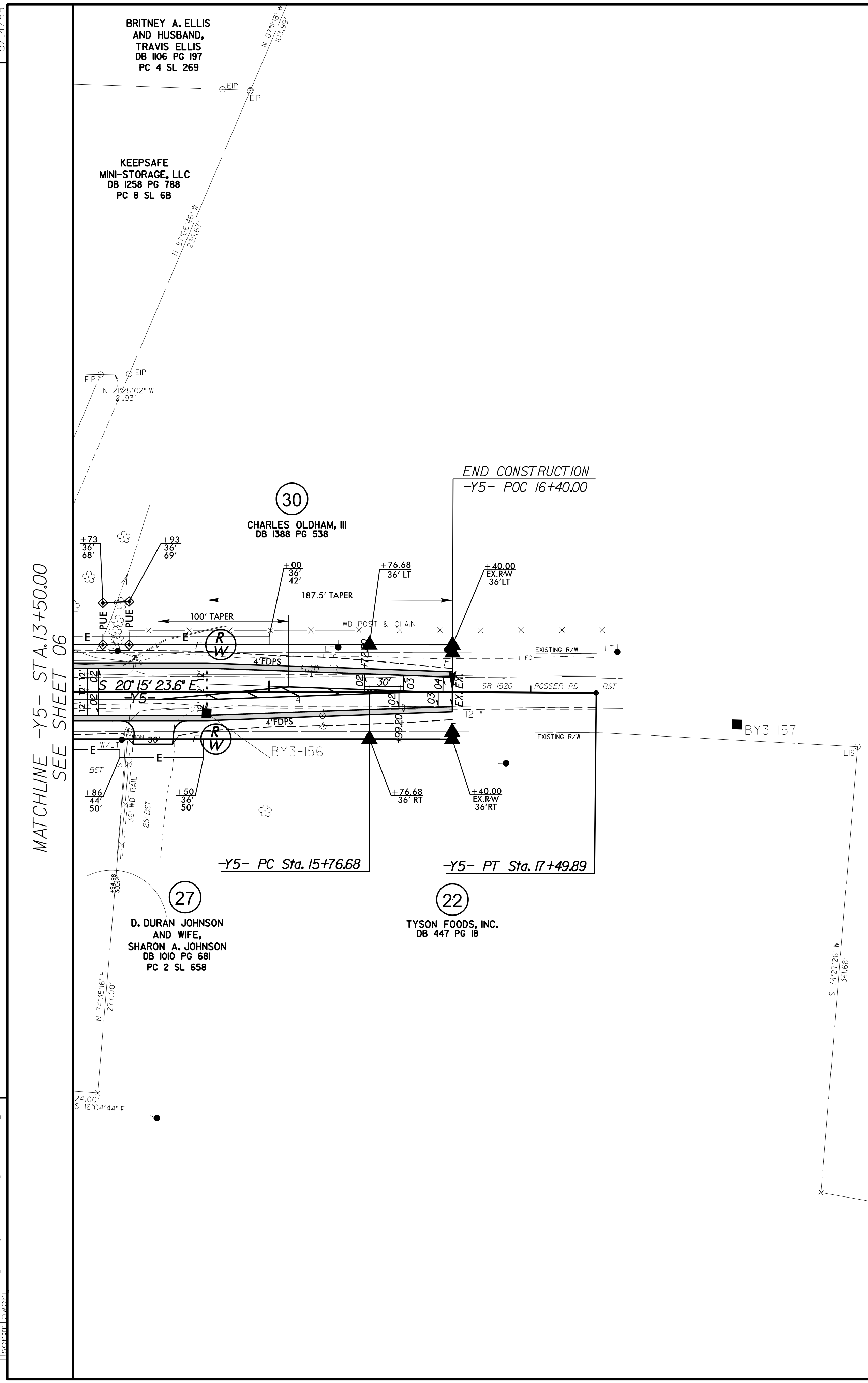
SEE SHEET 38 FOR -L- PROFILE

PROJECT REFERENCE NO. R-3830		SHEET NO. 26	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



-Y5-

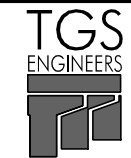
PI Sta 16+63.28
 $\Delta = 0' 33' 05.7''$ (RT)
 $D = 0' 19' 06.4''$
 $L = 173.21'$
 $T = 86.61'$
 $R = 17,992.44'$
SE = SEE PLANS



REVISIONS

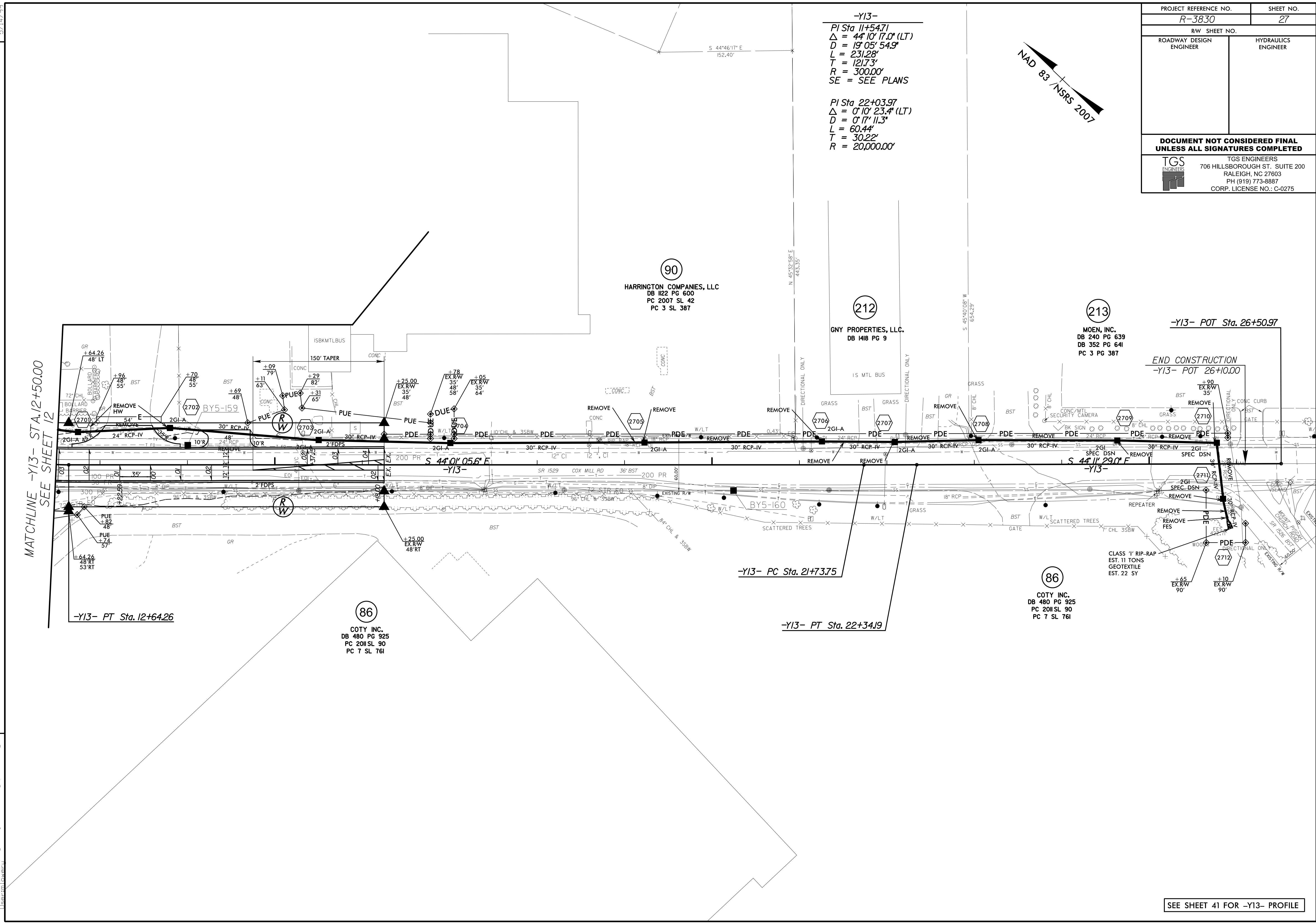
SEE SHEET 40 FOR -Y5- PROFILE

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User: jlp

PROJECT REFERENCE NO.	SHEET NO.
R-3830	27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

REVISIONS
 ROW REV. - APRIL 4, 2018 - COMBINED PARCELS 213 & 214 INTO PARCEL 213 (V.M.U.)
 FROM REV. - JANUARY 22, 2019 - REVISED PUE FROM -Y13- 12+50.00 TO 12+82.00 RT AND ELIMINATED PUE FROM -Y13- 12+82.00 TO 15+50.00 RT ON PARCEL 86;
 FROM REV. - JANUARY 22, 2019 - REVISED PUE FROM -Y13- 12+50.00 TO 16+78.00 LT ON PARCEL 90 (V.M.U.)
 ADDED PUE FROM 14+65.00 TO 16+78.00 LT ON PARCEL 90 (V.M.U.)

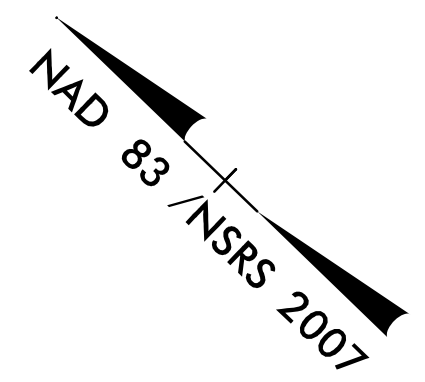
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-Y13-

PI Sta 11+54.71
 $\Delta = 44^{\circ} 10' 17.0''$ (LT)
 $D = 19^{\circ} 05' 54.9''$
 $L = 231.28'$
 $T = 121.73'$
 $R = 300.00'$
 SE = SEE PLANS

PI Sta 22+03.97
 $\Delta = 0^{\circ} 10' 23.4''$ (LT)
 $D = 0^{\circ} 17' 11.3''$
 $L = 60.44'$
 $T = 30.22'$
 $R = 20,000.00'$



MATCHLINE -Y13- STA. 12+50.00
 SEE SHEET 12

END CONSTRUCTION
 -Y13- POT 26+10.00

SEE SHEET 41 FOR -Y13- PROFILE