Project Submittal Interim Form

Updated September 4, 2020

*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.*

Project Type: *

- ( ) For the Record Only (Courtesy Copy)
- (•) New Project
- ( ) Modification/New Project with Existing ID
- ( ) More Information Response
- ( ) Other Agency Comments
- ( ) Pre-Application Submittal
- ( ) Re-Issuance\Renewal Request
- ( ) Stream or Buffer Appeal

Submittal Type: *

Individual

Project Contact Information

Name: Deanna Riffey

Who is submitting the information?

Email Address: * driffey@ncdot.gov

Project Information

Project Name: * Widening of NC-55 and construct a bypass around the town of Angier

Is this a public transportation project? *

- (•) Yes
- ( ) No

Is this a DOT project? *

- (•) Yes
- ( ) No

Is the project located within a NC DCM Area of Environmental Concern (AEC)? *

( ) Yes (•) No ( ) Unknown

TIP#: R-5705

WBS#: 46377.1.1

(Applies to DOT projects only)

County (ies) *

Harnett

Wake

Please upload all files that need to be submited.

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

R-5705 Phased Individual Harnett_Wake December 21 2021.pdf 91.4MB

Only pdf or kmz files are accepted.

Describe the attachments or add comments:

Cover letter, ENG Form, DMS Acceptance Letters, Permit/Buffer/Utility Drawings, Roadway Plans

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

- I, the project proponent, hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.
- I, the project proponent, hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I agree that submission of this online 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 online form.

Signature: * Mack C. Riverbank, III

Submittal Date: 12/21/2021

Is filled in automatically once submitted.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

December 21, 2021

US Army Corps of Engineers
Wilmington Regulatory Field Office
69 Darlington Avenue
Wilmington, NC 28403

Attention: Ms. Liz Hair
Regulatory NCDOT Project Manager

Subject: Application for a Phased Section 404 Individual Permit, Section 401 Individual Water Quality Certification, Neuse Riparian Buffer Authorization for the widening of NC-55 and construct a bypass around the town of Angier, North Carolina in Harnett and Wake Counties. TIP Nos. R-5705A, R-5705B, and R-5705C.

Debit $570 from WBS 46377.1.1

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to widen NC-55 and construct a bypass around the town of Angier, North Carolina in Harnett and Wake Counties. R-5705 has been divided into three sections: R-5705A [NC 55 from south of SR 1532 (Oak Grove Church Road) to north of NC 210], R-5705B [NC 55 from NC 210 to SR 4809 (Jicarilla Lane)], and R-5705C [NC 55 from south of SR 4809 (Jicarilla Lane) to NC 42].

The intent of this letter is to request approval for a Phased Section 404 Individual Permit, Section 401 Individual Water Quality Certification, Neuse River Buffer Authorization for R-5705A and R-5705B and preliminary (phased) permit for R-5705C. Additional information included in the application package is as follows: ENG Form 4345, stormwater management plan (R-5705A & R-5705B only), permit drawings, roadway plans, utility plans (R-5705A only), and North Carolina Division of Mitigation Services (NCDMS) Acceptance Letters for R-5705A and R-5705B.

PURPOSE AND NEED

The purpose for the proposed R-5705 project is to reduce traffic congestion and improve mobility on the NC 55 corridor in the project area, with a goal of achieving an overall level of service D (LOS D). The primary need for this project is demonstrated by the existing traffic congestion, anticipated future traffic congestion, and poor operating conditions. These conditions are substandard and anticipated to worsen if no action is taken.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Telephone: (919) 707-6000
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

PROJECT DESCRIPTION

The project is located within Harnett and Wake Counties in the Towns of Angier and Fuquay Varina. The project involves improving the NC 55 corridor from south of SR 1532 (Oak Grove Church Road) to NC 42. The proposed facility will bypass the Town of Angier to the west and will be constructed as a four-lane median divided roadway. Approximately 110-150 feet of right-of-way will be required along the existing alignment and approximately 150-200 feet of right-of-way will be required on new location to accommodate the multi-lane facility. Partial control of access is proposed throughout the project. The length of the project is approximately 11.5 miles.

PROJECT SCHEDULE

As stated above, R-5705 will be completed in three phases R-5705A, R-5705B, and R-5705C. Table 1 indicates anticipated construction LET dates.

Table 1. Anticipated LET Dates

Project	Anticipated LET Date
R-5705A	October 2022
R-5705B	October 2022
R-5705C	Post Year

Permit drawings for the proposed R-5705A and R-5705B have been completed. Preliminary impacts based on slope stakes plus 25 feet have been calculated for R-5705C. NCDOT will apply for permit modifications for R-5705C when final design is complete. Construction will not commence on R-5705C until permit modifications have been received based on final design.

SEPA DOCUMENT STATUS

The State Environmental Assessment / Finding of No Significant Impact (SEA/FONSI) was approved in November 2019. The document is available at:
https://xfer.services.ncdot.gov/pdea/EnvironmentalDocs/Documents/

A Right-of-Way Consultation was completed in January 2021. This document is available at:
https://xfer.services.ncdot.gov/pdea/EnvironmentalDocs/Consultations/R-5705_RWConsultation.pdf

INDEPENDENT UTILITY

The project has the following characteristics of independent utility:

1) The project connects logical termini and is of sufficient length to address environmental matters on a broad scope;
2) The project is a usable and reasonable expenditure, even if no additional transportation improvements are made in the area;
3) The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

SUMMARY OF IMPACTS

For R-5705A, proposed impacts to jurisdictional areas total 6.87 acres of permanent wetland impacts, 302 acres of temporary wetland impacts, 1,916 linear feet (lf) of permanent stream impacts (including 119 lf of bank stabilization), 374 linear feet of temporary stream impacts, and 6.79 acres of permanent surface water impacts. There will also be 0.15 acres of temporary fill in wetlands in hand clearing areas for erosion control devices.

R-5705B has 6.11 acres of permanent wetland impacts, 1.00 acre of temporary wetland impacts, 2,293 linear feet of permanent stream impacts (including 159 lf of bank stabilization), 478 linear feet of temporary stream impacts, and 2.11 acres of permanent surface water impacts. There will also be 0.08 acres of temporary fill in wetlands in hand clearing areas for erosion control devices.

Preliminary proposed impacts (based on proposed slope stakes plus 25 feet) for R-5705C include 5.75 acres of permanent riparian wetland impacts, 1,602 linear feet of permanent stream impacts, 0.04 acre of permanent surface water impact, and 145,513 square feet of Neuse riparian buffer impacts.

Table 2. R-5705A Jurisdictional Resources Impacts

Impact Type	Wetlands (ac)		Ponds (ac)	Streams (lf)		
	Perm	Temp		Perm.	Temp.	Bank Stab.
Cape Fear River Basin (HUC 03030004)	4.83	2.38	6.58	1,636	284	119
Cape Fear River Basin (HUC 03030006)	2.04	0.64	0.21	200	51	0

Table 3. R-5705B Jurisdictional Resources Impacts

Impact Type	Wetlands (ac)		Ponds (ac)	Streams (lf)		
	Perm	Temp		Perm.	Temp.	Bank Stab.
Cape Fear River Basin (HUC 03030004)	6.11	1.00	0	2,134	478	159

Table 4. R-5705C Jurisdictional Resources Impacts (Preliminary Design)

Impact Type*	Wetlands (ac)	Ponds (ac)	Tributary (ac)	Streams (lf)	Riparian Buffer (sq. ft.) Zones 1/2	
					Zone 1	Zone 2
Neuse River Basin (HUC 03020201)	5.75	0.03	0.01	1,602	97,390	48,123

*All impacts are assumed permanent. Types of impact will be quantified with permit modification.

SUMMARY OF MITIGATION

The NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent possible. The proposed construction of R-5705A, R-5705B, and R-5705C will result in unavoidable impacts to jurisdictional streams, open water ponds, riparian wetlands, and Neuse River riparian buffers. The impact totals per TIP are shown in Tables 8-15. NCDOT is utilizing NCDMS for compensatory mitigation for R-5705A and R-5705B. Currently, there is no compensatory mitigation presented for R-5705C due to it being preliminary design and a post year letting.

North Carolina Division of Water Resources (NCDWR) mitigation requirements for permanent stream and wetland impacts at the 1:1 ratio will be met under the United States Army Corps of Engineers (USACE) mitigation requirement ratio of 2:1. Mitigation is not proposed for bank stabilization.

RESOURCE STATUS

Water Resource Classifications

The study area lies within the Piedmont physiographic region of North Carolina. Jurisdictional features within the project footprint are located in both the Cape Fear and Neuse River Basins (USGS Hydrologic Unit Codes 03030004, 03030006, and 03020201, respectively), in Harnett and Wake Counties.

Table 5. R-5705A Impacted Jurisdictional Streams

Stream Name	Number of Impacted Unnamed Tributaries (UT)	NCDWR Index Number	NCDWR Classification
Buies Creek	N/A	18-18	WS-IV
East Buies Creek	N/A	18-18-1-(2)	WS-IV
UT to East Buies Creek	4	18-18-1-(2)	WS-IV
UT to Neills Creek	2	18-16-(0.7)a	WS-IV
UT to West Buies Creek	3	18-18-2-(1)	C
UT to Black River	2	18-68-12-1a	C; SW

Table 6. R-5705B Impacted Jurisdictional Streams

Stream Name	Number of Impacted Unnamed Tributaries (UT)	NCDWR Index Number	NCDWR Classification
UT to Neills Creek	11	18-16-(0.7)a	WS-IV

Table 7. R-5705C Impacted Jurisdictional Streams

Stream Name	Number of Impacted Unnamed Tributaries (UT)	NCDWR Index Number	NCDWR Classification
Black Creek	1	27-45-(1)	B:NSW
UT to Black Creek	5	27-45-(1)	B;NSW
Tributary to Black Creek	1		

There are no designated Outstanding Resource Waters (ORW), High Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within 1.0 mile downstream of the project area. There are no streams within the project area listed on the North Carolina 2020 Final 303(d) list of impaired waters for

sedimentation and turbidity. Detailed information about the type and quality of the streams can be found in the Natural Resources Technical Report (NRTR, 2019).

Jurisdictional Determinations

Wetland delineations for R-5705 project followed the *1987 Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), the *Regional Supplement to the Corps of Engineers Delineation Manual: Eastern Mountains and Piedmont Region*, and the *Regional Supplement to the Corps of Engineers Delineation Manual: Atlantic and Gulf Coastal Plain Region*. Stream identification and classification followed the NCDWR publication *Identification Methods for the Origins of Intermittent and Perennial Streams*.

Wetland and stream delineations were conducted between November 2019 and February 2020. Wetland and stream delineations were field verified by the USACE and the NCDWR in November 2019 and February 2020.

At this time, the USACE and NCDWR have not provided written verification of the resources within the for-R-5705.

IMPACTS TO JURISDICTIONAL RESOURCES

Utility Impacts

Utility impacts associated with relocation overhead telephone and power lines at three locations on R-5705A. See Table 8 for utility impact amount and type. No work will commence until jurisdictional impacts associated with utilities are quantified and permitted with the USACE and NCDWR.

Jurisdictional Impacts by TIP

Tables 8 through 15 provide individual site impact amounts to wetlands, surface waters, and Neuse River riparian buffers. The detailed permit drawings for each section of the project, R-5705A, R-5705B, and R-5705C, provide the station number, structure size/type, and type of impact associated with each site. R-5705A and R-5705B have impacts in Cape Fear River Basin, while R-5705C has impacts within the Neuse River Basin.

Impacts associated with R-5705A and R-5705B are based on final design. The impacts associated with R-5705C are preliminary and extend 25 feet outside of the estimated slope stake line. These impacts will be finalized through a permit modification prior to construction. The impacts stated in this application have change compared to what is presented in the SEA/FONSI. There were an additional five wetlands added (WCJ, WCK, WCL, WCM, and WCN) and one wetland deleted (WAI) due to the addition of Y7 to the project area and field visits by the agencies. Also, there were five streams added (SAQ, SAR. SAS, SAT, and SAU), three streams deleted (SQ, SU, and SAK), and one stream classification moved from perennial to a tributary water (SP). Wetland impacts increased by approximately 1.0 acre of wetland and stream impacts decreased by 63 linear feet of stream. It is expected that impacts will further decrease once final design is completed for the R-5705C section of the project.

Table 8. R-5705A Wetland Impacts

Permit Drawing Site Number	NRTR Label	Impact Type	Wetland Type	Permanent Impacts (ac.)	Temporary Impacts (ac.)
1	WCJ	Hand Clearing	Riparian		0.001
2	WCG	Fill	Riparian	0.02	
2	WCG	Excavation	Riparian	0.003	
2	WCG	Hand Clearing	Riparian		0.03
4	WCH	Fill	Riparian	0.22	
4	WCH	Excavation	Riparian	0.10	
4	WCH	Mechanized Clearing	Riparian	0.07	
4	WCH	Hand Clearing	Riparian		0.06
5	WCF	Fill	Riparian	0.05	
5	WCF	Hand Clearing	Riparian		0.01
9	WCE	Fill	Riparian	0.04	
9	WCE	Hand Clearing	Riparian		0.002
10	WCD	Fill	Riparian	0.09	
10	WCD	Excavation	Riparian	0.05	
10	WCD	Hand Clearing	Riparian	0.04	0.04
11	WCC	Fill	Riparian	1.11	
11	WCC	Excavation	Riparian	0.10	
11	WCC	Hand Clearing	Riparian		0.35
12	WCE	Fill	Riparian	0.09	0.91
12	WCE	Excavation	Riparian	0.04	
12	WCE	Hand Clearing	Riparian		0.09
13	WCA	Hand Clearing	Riparian		0.02
14*	WBZ	Fill	Riparian	0.004	
14*	WBZ	Hand Clearing	Riparian		0.02
15*	WBW	Fill	Riparian	0.97	
15*	WBW	Excavation	Riparian	0.34	
15*	WBW	Hand Clearing	Riparian		0.32
16*	WBX	Excavation	Riparian	0.005	
16*	WBX	Hand Clearing	Riparian		0.02
17*	WBV	Fill	Riparian	0.66	
17*	WBV	Excavation	Riparian	0.06	
17*	WBV	Hand Clearing	Riparian		0.17
19	WBU	Fill	Riparian	0.05	
19	WBU	Hand Clearing	Riparian		0.01
20	WBT	Fill	Riparian	0.08	
20	WBT	Excavation	Riparian	0.06	
20	WBT	Mechanized Clearing	Riparian	0.02	
20	WBT	Hand Clearing	Riparian		0.02
21	WBS	Fill	Riparian	0.06	
21	WBS	Excavation	Riparian	0.04	
21	WBS	Hand Clearing	Riparian		0.03
22	WBQ	Fill	Riparian	0.04	
22	WBQ	Excavation	Riparian	0.03	
22	WBQ	Hand Clearing	Riparian		0.005
23	WBP	Fill	Riparian	0.02	
23	WBP	Excavation	Riparian	0.02	
23	WBP	Hand Clearing	Riparian		0.02
24	WBN	Fill	Riparian	0.07	

Table 8. R-5705A Wetland Impacts (cont.)

Permit Drawing Site Number	NRTR Label	Impact Type	Wetland Type	Permanent Impacts (ac.)	Temporary Impacts (ac)
24	WBN	Excavation	Riparian	0.05	
24	WBN	Mechanized Clearing	Riparian	0.03	
24	WBN	Hand Clearing	Riparian		0.17
25	WBK	Fill	Riparian	0.31	
25	WBK	Excavation	Riparian	0.06	
25	WBK	Mechanized Clearing	Riparian	0.03	
25	WBK	Hand Clearing	Riparian		0.16
26	WBM	Fill	Riparian	0.004	
26	WBM	Hand Clearing	Riparian		0.02
27	WBL	Fill	Riparian	0.18	
27	WBL	Excavation	Riparian	0.05	
27	WBL	Mechanized Clearing	Riparian	0.006	
27	WBL	Hand Clearing	Riparian		0.02
29	WBO	Fill	Riparian	0.35	
29	WBO	Excavation	Riparian		0.04
29	WBO	Mechanized Clearing	Riparian	0.05	
29	WBO	Hand Clearing	Riparian		0.04
30	WBJ	Fill	Riparian	0.96	
30	WBJ	Hand Clearing	Riparian		0.14
31	WCL	Fill	Riparian	0.06	
31	WCL	Hand Clearing	Riparian		0.03
32	WCM	Fill	Riparian	0.15	
32	WCM	Excavation	Riparian	0.07	
32	WCM	Mechanized Clearing	Riparian	0.002	
32	WCM	Hand Clearing	Riparian		0.05
Utilities Site 1	WCE	Hand Clearing	Riparian		0.01
Utilities Site 2*	WBZ	Hand Clearing	Riparian		0.11
Utilities Site 3	WBN	Hand Clearing	Riparian		0.11
			Total Impacts	**6.87**	**3.02**
			HUC 03030004 Impact Total	**4.83**	**2.38**
			Hand Clearing		**1.47**
			Total Requiring Mitigation	**4.83**	
			HUC03030006 Impact Total	**2.04**	
			Hand Clearing		**0.64**
			Total Requiring Mitigation	**2.04**	

* Impacts in HUC 03030006

Table 9. R-5705A Surface Waters Impacts

Permit Drawing Site Number	NRTR Label	Impact Type	Permanent Surface Water Impacts		Temporary Surface Water Impacts	Stream Flow
			Ponds (ac)	Streams (lf)	Streams (lf)	
1	SAP	RCP			30	Intermittent
2	East Buies Creek	RCBC		34	10	Perennial
3	SAO	Fill		116	10	Perennial
4	East Buies Creek	RCBC		51		Perennial
4	East Buies Creek	Stabilization		49	10	Perennial
6	SAL	RCP		268	30	Perennial
7	SAM	RCP		30		Intermittent
8	PJ	RCP	0.95			N/A
11	Buies Creek	Fill		224	86	Perennial
15*	SAJ	RCP		102	35	Intermittent
15*	PT	RCP	0.21			N/A
16*	SAJ	RCP		57	9	Intermittent
18*	SAI	RCP		41	7	Intermittent
19	PS	Fill	0.23			N/A
20	SAH	RCP		204	31	Perennial
20	SAH	Stabilization		12	14	Perennial
24	SAG	RCBC		154	33	Perennial
25	PQ	RCBC	0.35			N/A
27	PO	RCBC	5.05			N/A
28	SAQ	Stabilization		19	15	Perennial
30	SAS	RCP		224	20	Intermittent
32	SAS	RCP		153	23	Perennial
33	SAT	Fill		178	11	Intermittent
		Total Impact:	**6.79**	**1916**	**374**	
HUC 03030004						
		Ponds	**6.58**			
		Bank Stabilization		**80**	**39**	
		Intermittent Streams		**432**	**61**	
		Perennial Streams		**1204**	**223**	
		Total Requiring Mitigation		**1636**		
HUC 03030006						
		Ponds	**0.21**			
		Intermittent Streams		**200**	**51**	
		Total Requiring Mitigation		**200**		

*Impacts in HUC 03030006

Table 10. R-5705B Wetland Impacts

Permit Drawing Site Number	NRTR Label	Impact Type	Wetland Type	Permanent Impacts (ac.)	Temporary Impacts (ac.)
2	WBI	Fill	Riparian	0.32	
2	WBI	Excavation	Riparian	0.006	
2	WBI	Hand Clearing	Riparian		0.04
4	WBD	Fill	Riparian	0.50	
4	WBD	Excavation	Riparian	0.007	
4	WBD	Hand Clearing	Riparian		0.04
5	WBG	Fill	Riparian	0.43	
5	WBG	Hand Clearing	Riparian		0.03
6	WBH	Fill	Riparian	1.16	
6	WBH	Excavation	Riparian	0.04	
6	WBH	Hand Clearing	Riparian		0.19
8	WBF	Fill	Riparian	0.73	
8	WBF	Excavation	Riparian	0.07	
8	WBF	Mechanized Clearing	Riparian	0.08	
8	WBF	Hand Clearing	Riparian		0.07
9	WBE	Fill	Riparian	0.03	
10	WBL	Excavation	Riparian	0.03	
10	WBL	Hand Clearing	Riparian		0.09
12	WAX	Fill	Riparian	0.22	
12	WAX	Hand Clearing	Riparian		0.02
13	WAZ	Fill	Riparian	0.04	
13	WAZ	Excavation	Riparian	0.07	
13	WAZ	Hand Clearing	Riparian		0.11
14	WBB	Fill	Riparian	0.006	
14	WBB	Hand Clearing	Riparian		0.01
15	WBA	Fill	Riparian	0.12	
15	WBA	Hand Clearing	Riparian		0.01
16	WAY	Fill	Riparian	0.45	
16	WAY	Excavation	Riparian	0.02	
16	WAY	Hand Clearing	Riparian		0.05
17	WAW	Fill	Riparian	1.46	
17	WAW	Excavation	Riparian	0.07	
17	WAW	Hand Clearing	Riparian		0.20
18	WAU/WXY	Fill	Riparian	0.14	
18	WAU	Excavation	Riparian	0.013	
18	WAU/WXY	Hand Clearing	Riparian		0.07
19	WAS	Fill	Riparian	0.02	
19	WAS	Hand Clearing	Riparian		0.02
20	WAT	Excavation	Riparian	0.007	
20	WAT	Hand Clearing	Riparian		0.02
21	WAR	Mechanized Clearing	Riparian	0.02	
22	WAN	Fill	Riparian	0.006	0.006
24	WAV	Fill	Riparian	0.02	
24	WAV	Excavation	Riparian	0.02	
24	WAV	Hand Clearing	Riparian	0.02	0.02
			HUC 03030004 Total Impacts	**6.11**	**1.0**
			Hand Clearing		0.99
			Total Requiring Mitigation	**6.11**	

Table 11. R-5705B Surface Waters Impacts

Permit Drawing Site Number	NRTR Label	Impact Type	Permanent Surface Water Impacts		Temporary Surface Water Impacts	Stream Flow
			Ponds (ac)	Streams (lf)	Streams (lf)	
1	PN	Fill	0.77			N/A
2	SAF	Fill/RCP		183	61	Perennial
2	SAF	Stabilization		15		Perennial
3	SAE	Fill		110		Perennial
4	SAC	Fill		213	39	Intermittent
4	SAC	Stabilization		10		Intermittent
7	PM	Fill	0.11			N/A
8	SAD	Fill/RCBC		400	60	Perennial
8	SAD	Stabilization		114		Perennial
9	SAB	RCP		168	12	Perennial
10	SAB	Fill/RCP			51	Perennial
10	PL	Fill/RCP	0.25			N/A
11	PK	RCP	0.98			N/A
12	SY	Fill/RCP		300	39	Perennial
15	SAA	RCP		86	20	Intermittent
16	SZ	Fill/RCP		207	42	Perennial
17	SW	Fill/RCP		235	48	Perennial
18	SW	Stabilization		20		Perennial
18	SW	Fill/RCP		136	39	Perennial
18	SW	RCP		12	34	Perennial
19	SV	Fill		84	17	Perennial
23	SX	RCP			16	Intermittent
HUC03030004						
		Total Impact	**2.11**	**2,293**	**478**	
		Bank Stabilization Perennial		**149**	**0**	
		Bank Stabilization Intermittent		**10**	**0**	
		Intermittent Streams		**299**	**75**	
		Perennial Streams		**1835**	**403**	
		Total Requiring Mitigation		**2,134**		

Table 12. R-5705C Preliminary Wetland Impacts

Permit Drawing Site Number	NRTR Label	Impact Type	Wetland Type	Permanent Wetland Impacts (ac)
2	WAN	Fill	Riverine	0.15
4	WAJ	Fill	Riverine	0.07
5	WY	Fill	Riverine	0.17
6	WAE	Fill	Riverine	0.28
7	WAH	Fill	Riverine	0.15
8	WX	Fill	Riverine	0.03
9	WP	Fill	Riverine	0.45
10	WU	Fill	Riverine	0.001
11	WO	Fill	Riverine	0.45
12	WS	Fill	Riverine	0.01
13	WJ	Fill	Riverine	0.98
14	WL	Fill	Riverine	0.92
15	WI	Fill	Riverine	0.97
16	WF	Fill	Riverine	0.31
17	WG	Fill	Riverine	0.08
18	WD	Fill	Riverine	0.65
19	WA	Fill	Riverine	0.06
	HUC 03020201 Total Impacts			5.75

Table 13. R-5705C Preliminary Surface Waters Impacts

Permit Drawing Site Number	NRTR Label	Impact Type	Permanent Surface Water Impacts		Stream Flow
			Ponds / Tributary (ac)	Streams (lf)	
1	PE	Fill	0.01		N/A
3	PD	Fill	0.03		N/A
7	SP	Fill	0.01		Tributary
8	SL	Fill		140	Perennial
9	SJ	Fill		159	Perennial
11	SI	Fill		115	Perennial
13	SB	Fill		582	Perennial
15	SB	Fill		357	Perennial
16	SE	Fill		93	Perennial
18	SA	Fill		155	Intermittent
Ponds/Tributary			**0.03**	**0.01**	
Perennial Streams				**1,447**	
Intermittent Streams				**155**	
Total Impact			**0.03**	**0.01**	**1,602**

Table 14. R-5705C Preliminary Neuse Buffer Impacts Zone 1

Permit Drawing Site Number & NRTR Label	Zone 1 Buffer Impacts	Zone 1 Wetlands in Buffers	Zone 1 Buffers Allowed	Zone 1 Buffers Mitigation Required
1 / SL	10,742	2,944		7,798
2 / SJ	10,851	371		10,480
3/ SI	9,364	0		9,364
4 / SB	48,205	41,380		6,825
5/ SE	7,682	3,977	3,705	
6 / SA	10,546	3,350		7,196

Table 15. R-5705C Preliminary Neuse Buffer Impacts Zone 2

Permit Drawing Site Number & NRTR Label	Zone 2 Buffer Impacts	Zone 2 Wetlands in Buffers	Zone 2 Buffers Allowed	Zone 2 Buffers Mitigation Required
1 / SL	6,748	1,750		4,998
2 / SJ	6,638	640		5,998
3 / SI	5,469	550		4,919
4 / SB	17,666	12,552		5,114
5 / SE	5,039	3,121	1,918	
6/ SA	6,563	982		5,581

MITIGATION OPTIONS

NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts, and to provide full compensatory mitigation for all remaining unavoidable jurisdictional impacts. Avoidance measures were taken during State Environmental Policy Act (SEPA) planning process. Minimization measures were incorporated as part of the project design.

Avoidance and Minimization

Jurisdictional features were delineated, field verified, and surveyed within the corridor for R-5705. Preliminary designs were adjusted to avoid and/or minimize impacts to jurisdictional features. NCDOT employs multiple strategies to avoid and minimize impacts to jurisdictional areas in all of its designs. For those impacts to jurisdictional streams and wetlands that cannot be avoided in their entirety, minimization efforts were utilized throughout the planning and design process. These are listed below.

- Design Standards in Sensitive Watersheds will be implemented for R-5705C.
- Considering environmental, hydraulic, and roadway perspectives, 3:1 slopes are proposed within the wetlands, where practical.
- Hand clearing is proposed at wetland locations where feasible.
- Some pipes outlets were moved to outlet right before wetlands to avoid impacts.
- Exclusion of driveways/ driveway fill from access points that are in wetlands areas.
- Rip rap pads are used at the outlet of open pipes.
- No staging of construction equipment or storage of construction supplies in jurisdictional wetlands or streams.
- NCDOT and its contractors will not fill or perform land clearing activities within jurisdictional wetlands, buffers, streams, or any areas under the jurisdiction of the USACE, except as authorized by the USACE and NCDWR.
- Borrow and waste activities will occur outside of jurisdictional features.
- Vegetated conveyances are used throughout the project.

- Proposed box culverts will have slopes of less than 1% so there is no need for sills and should reduce velocities at culvert outlets.
- Erosion control devices have been placed outside wetland boundaries.
- Countersunk riprap pads will be utilized to minimize sedimentation impacts to jurisdictional streams.

Compensatory Mitigation

NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above for R-5705A and R-5705B. The unavoidable impacts to jurisdictional resources will be offset by compensatory mitigation. Below is a description of proposed mitigation for each TIP.

TIP R-5705A and R-5705B

NCDOT has acquired compensatory mitigation for unavoidable impacts from the NCDMS for R-5705A and R-5705B (Tables 16 and 17) (see attached R-5705A and R-5705B NCDMS letters of acceptance). These impacts occur in HUCs 03030004 and 03030006. The total USACE stream and wetland mitigation requirements exceed the NCDWR stream and wetland mitigation requirements; therefore, NCDOT has requested that NCDMS provide compensatory mitigation for R-5705A and R-5705B permanent stream impacts and permanent riparian wetland impacts at a 2:1 ratio.

Table 16. R-5705A Proposed Compensatory Mitigation

Mitigation Type	Riparian Wetlands (ac)	Streams (lf)
Cape Fear River Basin (HUC 03030004)	4.83	1,636
Cape Fear River Basin (HUC 03030006)	2.04	200

Table 17. R-5705B Proposed Compensatory Mitigation

Mitigation Type	Riparian Wetlands (ac)	Streams (lf)
Cape Fear River Basin (HUC 03030004)	6.11	2,134

TIP R-5705C

Currently, there is no mitigation plan for R-5705C as the proposed construction date is more than 5 years from the date of this application. Compensatory mitigation for R-5705C will be provided in a permit modification submitted prior to construction. NCDOT anticipates using NCDMS to comply with any required compensatory mitigation.

FEDERALLY PROTECTED SPECIES

The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Environmental Conservation Online System (ECOS) identified federally protected species within the project study area on December 9, 2021 for R-5705A and R-5705B. For each species, the presence or absence of habitat is included below along with the Biological Conclusion rendered based on survey results.

Table 18. ESA federally protected species listed within the project study area

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
Alligator Mississippiensis	American Alligator	SAT	No	Not Required
Fusconaia masoni	Atlantic pigtoe	T	Yes	MA-NLAA
Haliaeetus leucocephalus	Bald Eagle	BGPA	Yes	No Effect
Lysimachia asperulaefolia	Rough-leaved loosestrife	E	Yes	No Effect
Notropis mekistocholas	Cape Fear shiner	E	Yes	MA-NLAA
Noturus furiosus	Carolina madtom	E	No	No Effect
Necturus lewisi	Neuse River waterdog	T	No	No Effect
Picoides borealis	Red cockaded woodpecker	E	Yes	No Effect
Rhus michauxii	Michaux's sumac	E	Yes	No Effect

MA-NLAA- May Affect, Not Likely to Adversely Affect; E-Endangered; T-Threatened;
SAT -Similarity to Appearance Threatened; BGPA-Bald and Golden Eagle Protection Act

Habitat was found within the project area for red-cockaded woodpecker, Michaux's sumac, and rough-leaved loosestrife. The most recent surveys for all three species were conducted in August and September of 2021. A review of the Natural Heritage Program (NHP) record, updated on October 18, 2021, indicates no known occurrences within 1.0 mile of the study area for any of the three species. There were no red-cockaded woodpeckers, Michaux's sumac, or rough-leaved loosestrife found during the surveys. A biological conclusion of No Effect was given for all three.

Northern long-eared bat

The US Fish and Wildlife Service has revised the previous programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, NLEBs are currently only known in 22 counties, but may potentially occur in 8 additional counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is **May Affect, Likely to Adversely Affect**. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake and Harnett Counties, where R-5705 is located.

Red-cockaded woodpecker
Three areas were found to have potential suitable foraging habitat. Two of these areas were marginal age (approximately 30 years old) and contained some hardwoods. The third area contained pine trees at least 65 years of age. A survey for potential nesting habitat was then conducted within 0.5 mile of each potential foraging habitat area. The most recent survey, conducted September 8, 2021, found two areas with pine trees at least 60 years of age. The location of the older pine stands was not optimal habitat, as there was moderately dense understory of hardwoods. No cavity trees or individuals were found in the observed pine stands and they are considered isolated from other habitat due to being over 200 feet away from other suitable foraging or nesting habitat.

Michaux' sumac
Habitat for Michaux's sumac is present within the study area. Suitable habitat for this species is areas in basic soils along continually disturbed terrain, such as roadsides. Some roadsides in the study area are sufficiently maintained to provide suitable habitat. Surveys were recently conducted for the project area in Wake County August 25, 2021 and August 31, 2021. No individuals were observed.

Rough-leaved loosestrife
Suitable habitat for rough-leaved loosestrife is present within the study area. Surveys of suitable habitat, consisting of maintained utility corridors and roadsides with adequate moisture regime, were recently conducted within Harnett County on August 25, 2021 and August 31, 2021. No individuals were observed.

Cape Fear shiner, Atlantic pigtoe, Carolina Madtom, and Neuse River waterdog
Based on results from the December 20, 2021 Aquatic Species Survey Report for R-5705A and R-5705B, no habitat for the Carolina Madtom and Neuse River waterdog was found. A biological conclusion of No Effect has been given for these two species. However, results from the Aquatic Survey Report does indicate habitat for the Cape Fear shiner and Atlantic pigtoe. Cape Fear shiner was located at one of three survey sites and Atlantic pigtoe was not found at any of the three survey locations. A biological conclusion of May Affect, Not Likely to Adversely Affect has been given to Cape Fear shiner and Atlantic pigtoe. For further details on the aquatic surveys, please refer to the R-5705A and R-5705B Aquatic Species Survey Report that is provided with this application. A review of NCNHP records, updated October 18, 2021, indicated no known occurrences of Cape Fear shiner, Atlantic pigtoe, Carolina madtom, and Neuse River waterdog within the project area.

Gary Jordan, from the USFWS, in an email dated December 14, 2021, proposed that NCDOT provide an informal consultation for concurrence with all species cumulatively for R-5705A and R-5705B. He also proposed to defer concurrence resolution for section R-5705C due to the Let date being slated for year 2040 if the USACE is agreeable to issuing their permit with Section 7 being unresolved at this time for Section C. Section 7 concurrence from the USFWS will be requested by the USACE and supporting species information is included with this application. Section 7 consultation will need to be reinitiated for Section C before construction through a future permit modification.

Bald and Golden Eagle Protection Act (BGPA)

A desktop-GIS assessment of the project study area, as well as the area within a 1.0-mile radius of the project limits, was performed on September 7, 2021 using 2017 color aerials. Multiple water bodies large enough or sufficiently open to be considered potential feeding sources were identified along the study corridor. A survey of the project study area and the area within 660 feet of the project limits for the presence of nests was conducted on September 8, 2021. During this site review, no eagles or eagle nests were observed within 660 feet of the project limits. Additionally, a review of the NHP record revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the lack of known occurrences in the vicinity, it has been determined that this project will not affect bald eagle.

CULTURAL RESOURCES

Historic Architectural Resources
A historic architecture review was completed by a NCDOT architectural historian in May 2016 and August 2018. No National Register-listed or eligible properties are located within the area of potential effect.

Archaeological Impacts
In 2019, an archaeological survey of the study area documented fifteen new sites. None of the sites were recommended as eligible for listing in the National Register of Historic Places. Since there were no previously-recorded or newly-documented archaeological sites eligible or listed on the National Register of Historic Places identified within the area of potential effect, a finding of No National Register of Historic Places listed, or eligible sites was deemed appropriate on April 4, 2019.

INDIRECT AND CUMULATIVE EFFECTS

Indirect Effects
Activities resulting from transportation impact include moderate travel time savings, increased access along the new location portion of the project corridor, changes in access along the existing portion, new network connections and a potential change in travel patterns. Based upon the output of the 2021 Indirect Cumulative Effects Screening Matrix, this partial control of access project has a potential to increase development potential and intensity in the areas adjacent to the project corridor particularly on the new location portion of the project as one access point will be permitted per parcel and this area is slated by Angier as an area for new development. This score is largely reflective of the healthy market for development, population and employment projections, water and sewer service availability, and the presence of available land.

Any development, with or without the project that potentially impacts jurisdictional resources, will be subject to regulatory permitting requirements. Furthermore, any development within the FLUSA will be subject to the requirements of adopted town and county ordinances and state and local buffer regulations and will occur in accordance with local land use and comprehensive plans. The presence of the Water Supply Watershed, which has density and impervious surface restrictions, and the implementation of Best Management Practices during construction, will further mitigate potential water quality effects.

Cumulative Effects
The construction of the proposed project, in conjunction with other planned transportation projects in the general vicinity, will improve mobility and change travel patterns. Growth and development within the FLUSA will continue to be influenced by its proximity to surrounding employments centers such as the Research Triangle Park, downtown Raleigh, Campbell University in Buies Creek, downtown Durham, and Fort Bragg and downtown Fayetteville to the south, land availability and the presence of water and sewer service. Any resultant induced development and complementary land development, coupled with the completion of planned transportation and private development projects, could constitute a cumulative effect on the study area.

With respect to past and present projects within and in the general vicinity of the FLUSA, development has occurred in the form of various types of land use along the NC 55 corridor and development (primarily residential subdivisions) is currently underway in the northern and central portion of the FLUSA and more is planned. In addition, there are transportation projects scheduled to be let in the near future just outside the FLUSA. The past, present, and future development and transportation projects within the FLUSA have been, are, and will be consistent with local land use and long-range transportation plans.

The potential exists for water resources within the FLUSA to be minimally impacted given the level of past, present, and planned projects. However, comprehensive planning, buffer regulations, and the presence of the Water Supply Watershed will minimize these effects. Direct natural environmental impacts by NCDOT projects will be addressed by programmatic agreements with resource agencies and will be further evaluated by the NCDOT Natural Environment Unit during project permitting. Natural environmental impacts that may result from any induced development may be avoided or minimized through the implementation of local, state, and federal regulations. Because few indirect impacts are anticipated, the cumulative effect of this project when considered in the context of other past present and future actions, and the resulting impact on the notable human and natural features, should be minimal. Therefore, potential indirect and cumulative effects to downstream water quality should be minimal.

FEMA COMPLIANCE

The project has been coordinated with appropriate state and local officials and the Federal Emergency Management Agency (FEMA) to assure compliance with FEMA, state, and local floodway regulations.

REGULATORY APPROVALS

Section 404: Application is hereby made for a USACE Individual 404 Permit as required for the above-described activities.

Section 401 and Neuse Riparian Buffer Rules: We are requesting a Section 401 Individual Water Quality Certification and Neuse Riparian Buffer Authorization from NCDWR. We are providing this application to NCDEQ, for their approval. Authorization to debit the $570.00 Permit Application Fee from TIP No. R-5705 WBS 46377.1.1 is hereby given.

A copy of the permit application and its distribution list will be posted on the NCDOT website at: https://xfer.services.ncdot.gov/pdea/PermApps/. Copies of the SEPA documents are also available on the NCDOT website at: https://xfer.services.ncdot.gov/pdea/EnvironmentalDocs/

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Deanna Riffey at driffey@ncdot.gov or 919-707-6151.

Sincerely,

DocuSigned by:
Mack C. Rivenbark III
AAAD1248B309416...

for Philip S. Harris, III, P.E., C.P.M
Environmental Analysis Unit Head

cc: NCDOT Permit Application Standard Distribution List

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 01-08-2018

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Philip Middle - S Last - Harris III	First - Middle - Last -
Company - NC Department of Transportation	Company -
E-mail Address - pharris@ncdot.gov	E-mail Address -
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address- 1598 Mail Service Center	Address-
City - Raleigh State - NC Zip - 27699 Country - US	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business 919-707-6000 c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____
SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
R-5705A, R-5705B, and R-5705C

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Multiple in Neuse and Cape Fear River Basins	Address
15. LOCATION OF PROJECT	City - State- Zip-
Latitude: ◦N Longitude: ◦W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE

See the attached vicinity maps by TIP numbers.

18. Nature of Activity (Description of project, include all features)

The project is located within Harnett and Wake Counties in the Towns of Angier and Fuquay Varina. The project involves improving the NC 55 corridor from south of SR 1532 (Oak Grove Church Road) to NC 42. The proposed facility will bypass the Town of Angier to the west and will be constructed as a four-lane median divided roadway. Approximately 110-150 feet of right-of-way will be required along the existing alignment and approximately 150-200 feet of right-of-way will be required on new location to accommodate the multi-lane facility. Partial control of access is proposed throughout the project. The length of the project is approximately 11.5 miles.

R-5705 has been divided into three sections: R-5705A [NC 55 from south of SR 1532 (Oak Grove Church Road) to north of NC 210], R-5705B [NC 55 from NC 210 to SR 4809 (Jicarilla Lane)], and R-5705C [NC 55 from south of SR 4809 (Jicarilla Lane) to NC 42].

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose for the proposed R-5705 project is to reduce traffic congestion and improve mobility on the NC 55 corridor in the project area, with a goal of achieving an overall level of service D (LOS D). The primary need for this project is demonstrated by the existing traffic congestion, anticipated future traffic congestion, and poor operating conditions. These conditions are substandard and anticipated to worsen if no action is taken.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Wetlands, streams, riparian buffers, and ponds will be impacted by both widening existing sections of NC 55 and construction of a section on new alignment along with installation of drainage features.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

See attached permit drawings

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

See attached cover letter

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- See attached mailing list.

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

DocuSigned by: Mack C. Rivenbark III AAAD1248B309416... for Philip S. Harris, III 12/21/2021

SIGNATURE OF APPLICANT | DATE | SIGNATURE OF AGENT | DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary

NORTH CAROLINA
Environmental Quality

December 9, 2021

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-5705A, NC 55 Widening from South of SR 1532 (Oak Grove Church Road) to North of NC 210, Harnett 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 December 9, 2021, the impacts are located in CUs 03030004 and 03030006 of the Cape Fear River basin in the Southern Inner Coastal Plain (SICP) Eco-Region, and are as follows:

Stream and Wetlands	River Basin	CU Location	Eco-Region	Stream			Wetlands		
				Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Cape Fear	03030004	SICP	0	0	1,636.000	4.830	0	0
Impacts	Cape Fear	03030006	SICP	0	0	200.000	2.040	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.

The impacts and associated mitigation needs were under projected by the NCDOT in the 2021 impact data. NCDEQ-DMS will commit to implement sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of 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 NCDEQ-DMS.

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

Sincerely,

Elizabeth Harmon

James B. Stanfill
DMS Asset Management Supervisor

cc: Ms. Liz Hair, USACE – Wilmington Regulatory Field Office
Ms. Amy Chapman, NCDWR
File: R-5705A

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary

NORTH CAROLINA
Environmental Quality

December 9, 2021

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-5705B, NC 55 Widening from NC 210 to SR 4809 (Jicarilla Lane), Harnett 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 December 9, 2021, the impacts are located in CU 03030004 of the Cape Fear River basin in the Southern Inner Coastal Plain (SICP) Eco-Region, and are as follows:

Stream and Wetlands	River Basin	CU Location	Eco-Region	Stream			Wetlands		
				Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Cape Fear	03030004	SICP	0	0	2,134.000	6.110	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.

The impacts and associated mitigation needs were under projected by the NCDOT in the 2021 impact data. NCDEQ-DMS will commit to implement sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of 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 NCDEQ-DMS.

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

Sincerely,

Elizabeth Harmon

James B. Stanfill
DMS Asset Management Supervisor

cc: Ms. Liz Hair, USACE – Wilmington Regulatory Field Office
Ms. Amy Chapman, NCDWR
File: R-5705B

Submitted 12/21/2021

North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

WBS Element: 46377.1.2 **TIP No.:** R-5705A **County(ies):** Harnett

General Project Information

WBS Element:	46377.1.2	**TIP Number:**	R-5705A	**Project Type:**	New Location	**Date:**	11/8/2021
NCDOT Contact:	Nicole Hackler, PE			**Contractor / Designer:**	Kimley-Horn & Associates		
	Address: 1000 Birch Ridge Drive 1582 Mail Service Center Raleigh NC 27699				**Address:** One Bank of America Plaza 421 Fayetteville St, STE 600 Raleigh, NC 27601		
	Phone: 919-707-6029				**Phone:** 919-677-2000		
	Email: nmhackler@ncdot.gov				**Email:** dan.robinson@kimley-horn.com		
City/Town:	Angier			**County(ies):**	Harnett		
River Basin(s):	Cape Fear			**CAMA County?**	No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	4.364 miles	**Surrounding Land Use:**	Widening: Rural farmland; New location: Rural farmland, forests

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	51.2 ac.	14.3 ac.
Typical Cross Section Description:	Widening Section: 4 lanes divided (2 lanes each way) with 4' paved shoulder -12' lane widths, 6:1 outside ditch front slopes with 4:1 back slopes. Raised grass median with 1'-6" curb and gutter, rasied concrete islands for turn lanes. New location section: Same as above except 4'-10' varied paved shoulders	2 lanes with paved shoulder and grass ditches - 11' lane widths, 2-4' paved shoulder, 3:1 side slopes or flatter
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 27100 Year: 2045	Existing: 15900 Year: 2022
General Project Narrative: (Description of Minimization of Water Quality Impacts)	This is a Central managed project. Existing drainage patterns have been maintained to the best extent practical. -Direct discharges are avoided where possible. Some pipe outlets have been moved to outlet right before wetlands to avoid impacts. -3:1 slopes with guardrail used for all culvert crossings (the use of 2:1 slopes is not feasible due to Geotech conditions and slope stability). -Erosion control basins have been placed outside of all wetland boundaries. -Vegetated conveyances used throughout the project, many of which which meet swale standards, will have a positive water quality benefit. These were used instead of closed system conveyance to the maximum extent practical. -Excluded driveways/driveway fill from access points that were in wetland areas. -Hand clearing proposed at all wetland locations except for 2 areas where clean water diversions will impact the wetland. -Culvert barrels with sills will be back filled with native material. Native material will consist of material that is excavated from the stream bed or floodplain at the project site during culvert construction. Native material is subject to approval by the engineer and may be subject to permit conditions. -Riprap pads used at the outlet of any open pipe. -Where conditions dictated, ditches were stopped before wetland boundaries with a riprap pad at the end to slow down velocities. -Where a ditch was already running through a wetland and was pushed out in proposed condition, the proposed ditch was designed with slope reduced and base widths increased as much as possible to get velocities down close to or below 2 ft/s. -All box culverts have slopes of less than 1% so there is no need for sills. This should help reduce velocities at culvert outlets. -Bank stabilization and outlet improvements have been proposed at box culverts to minimize erosion. -The pond being drained at site 27 will have a proposed channel with constructed banks and floodplain to match pre-dam conditions and low flow stream conditions as much as possible.	

Waterbody Information

Surface Water Body (1):	UT to East Buies Creek		**NCDWR Stream Index No.:**	18-18-1-(2)		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Water Supply IV (WS-IV)			
		Supplemental Classification:	None			
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:	SAU, SAP, SAO, SAL, SAM			**Buffer Rules in Effect:**	N/A	
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A	
Deck Drains Discharge Over Water Body?	N/A	(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)						

Submitted 12/21/2021

NCDOT Highway Stormwater PROGRAM

(Version 2.08; Released April 2018)

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

WBS Element:	46377.1.2	TIP No.:	R-5705A	County(ies):	Harnett	Page	2	of	2

Additional Waterbody Information

Surface Water Body (2):	East Buies Creek		**NCDWR Stream Index No.:**	18-18-1-(2)		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Water Supply IV (WS-IV)			
		Supplemental Classification:	None			
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:	East Buies Creek			**Buffer Rules in Effect:**	N/A	
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**		**Dissipator Pads Provided in Buffer?**	N/A	
Deck Drains Discharge Over Water Body?	N/A	(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)						

Surface Water Body (3):	Buies Creek		**NCDWR Stream Index No.:**	18-18		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Water Supply IV (WS-IV)			
		Supplemental Classification:	None			
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:	Buies Creek			**Buffer Rules in Effect:**	N/A	
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A	
Deck Drains Discharge Over Water Body?	N/A	(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)						

Surface Water Body (4):	UT to Black River		**NCDWR Stream Index No.:**	18-68-12-1a		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C			
		Supplemental Classification:	Swamp Waters (Sw)			
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:	SAJ, SAI			**Buffer Rules in Effect:**	N/A	
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A	
Deck Drains Discharge Over Water Body?	N/A	(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)						

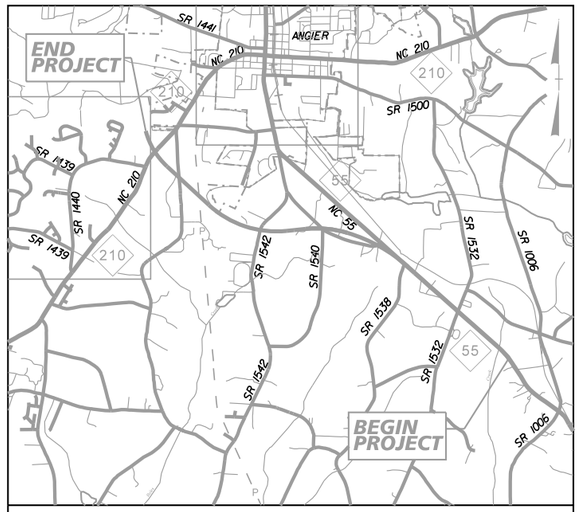
Surface Water Body (5):	UT to West Buies Creek		**NCDWR Stream Index No.:**	18-18-2-(1)		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C			
		Supplemental Classification:	None			
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:	SAH, SAG, SAQ, SAS, SAT			**Buffer Rules in Effect:**	N/A	
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A	
Deck Drains Discharge Over Water Body?	N/A	(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)						

Submitted 12/21/2021

09/08/99

TIP PROJECT: R-5705A

See Sheet 1B For Conventional Plan Sheet Symbols



VICINITY MAP

ROW PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HARNETT COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5705A	1	

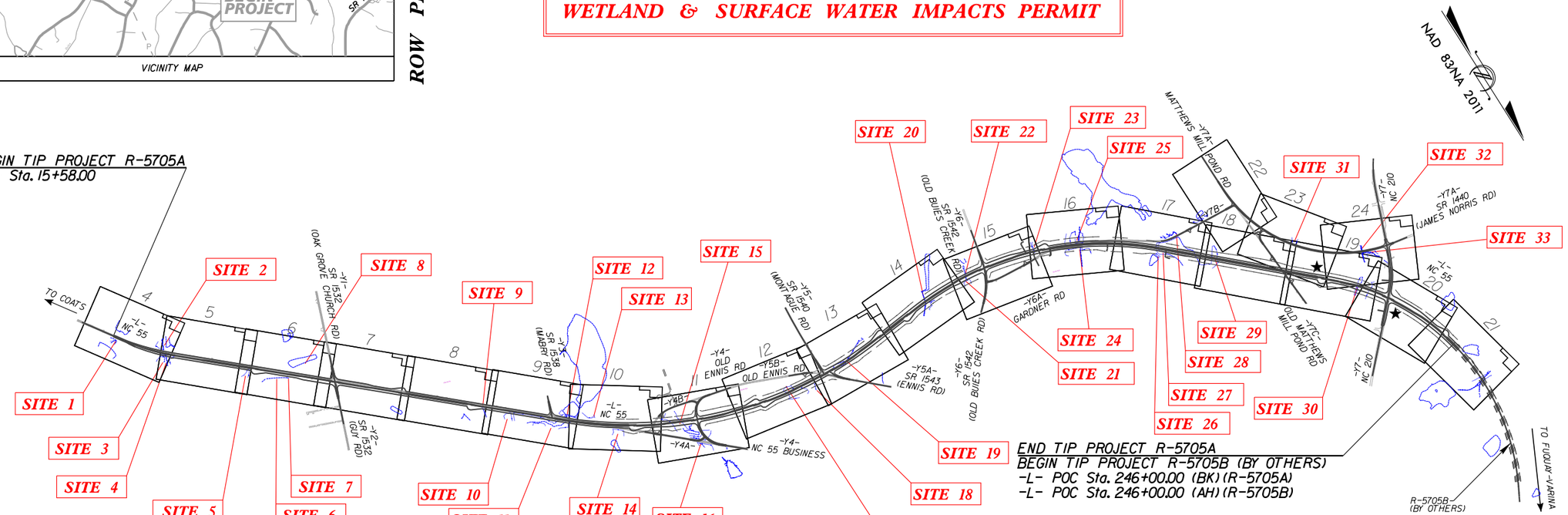
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
46377.1.2		P.E.
46377.2.1		RIGHT-OF-WAY
46377.2.5		UTILITIES

PERMIT DRAWING
SHEET 1 OF 71

LOCATION: NC 55 FROM SOUTH OF SR 1532 (OAK GROVE CHURCH ROAD) TO NORTH OF NC 210

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

WETLAND & SURFACE WATER IMPACTS PERMIT



** DESIGN SPEED = 50 MPH FROM -L- STA. 15+58.00 TO STA. 112+18.00 (EXISTING NC 55)
60 MPH FROM -L- STA. 112+18.00 TO STA. 246+00.00 (NEW LOCATION)

★ TRAFFIC SIGNAL

THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO ONE DRIVEWAY PER PARCEL AND FULL-CONTROL AT U-TURN BULBS
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

FINAL PERMIT DRAWINGS
SUBMITTED: 11-15-21
FINAL SUBMITTAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT:

$FILE$

11/15/2021

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

5 2.5 0 5 10
PROFILE (VERTICAL)

DESIGN DATA

AADT 2022 = 15,900
AADT 2045 = 27,100
K = 9%
D = 60%
T = 4%*
** V = 50/60 MPH
* (TTST 1% + DUAL 3%)
FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5705A = 4.364 MILES

PLANS PREPARED FOR THE NCDOT BY:

Kimley»Horn ©2019

NC LICENSE #P0102
227 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NORTH CAROLINA 27601
PHONE: (919) 677-2000

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 9, 2021

LETTING DATE:
OCTOBER 18, 2022

JEFFREY W. MOORE, P.E.
PROJECT ENGINEER

EVERETT J. LOVING, P.E.
PROJECT DESIGN ENGINEER

NICOLE M. HACKLER, P.E.
SENIOR PROJECT MANAGER
NCDOT PROJECT MANAGEMENT UNIT

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

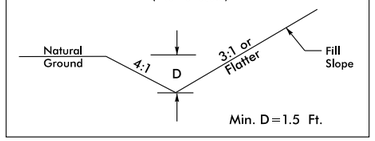
Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

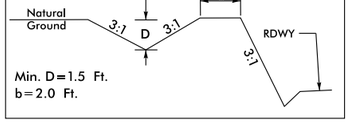
DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D=1.5 Ft.

FROM STA. 21+00 TO STA. 23+00 –L– RT
FROM STA. 26+85 TO STA. 28+75 –L– LT
FROM STA. 26+70 TO STA. 31+00 –L– RT
FROM STA. 53+50 TO STA. 59+30 –L– RT
FROM STA. 53+09 TO STA. 57+00 –L– LT
FROM STA. 63+30 TO STA. 64+81 –L– RT
FROM STA. 68+50 TO STA. 72+50 –L– RT
FROM STA. 76+00 TO STA. 77+20 –L– RT
FROM STA. 74+50 TO STA. 76+75 –L– LT
FROM STA. 78+50 TO STA. 80+50 –L– RT
FROM STA. 91+50 TO STA. 94+50 –L– RT
FROM STA. 93+00 TO STA. 96+00 –L– LT
FROM STA. 104+50 TO STA. 109+50 –L– RT
FROM STA. 108+40 TO STA. 110+00 –L– LT
FROM STA. 123+18 TO STA. 124+85 –L– LT
FROM STA. 132+50 TO STA. 133+50 –L– LT
FROM STA. 133+00 TO STA. 134+80 –L– RT
FROM STA. 134+58 TO STA. 140+00 –L– LT
FROM STA. 136+20 TO STA. 142+50 –L– RT
FROM STA. 151+00 TO STA. 153+20 –L– LT
FROM STA. 164+00 TO STA. 164+80 –L– RT
FROM STA. 178+50 TO STA. 180+50 –L– RT
FROM STA. 182+50 TO STA. 186+20 –L– LT
FROM STA. 198+25 TO STA. 201+50 –L– LT
FROM STA. 233+35 TO STA. 234+40 –L– LT
FROM STA. 233+90 TO STA. 235+00 –L– RT
FROM STA. 216+74 TO STA. 221+50 –L– RT
FROM STA. 224+50 TO STA. 227+30 –L– RT
FROM STA. 13+55 TO STA. 14+05 –Y1– LT
FROM STA. 10+70 TO STA. 13+50 –Y2– RT
FROM STA. 19+76 TO STA. 21+73 –Y5– LT
FROM STA. 13+50 TO STA. 15+40 –Y6– LT
FROM STA. 24+70 TO STA. 27+45 –Y7– RT
FROM STA. 29+00 TO STA. 31+95 –Y7– LT

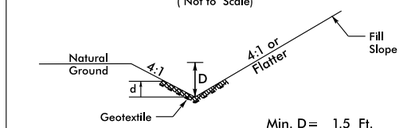
DETAIL 3
BERM 'V' DITCH
(Not to Scale)



Min. D=1.5 Ft.
b=2.0 Ft.

FROM STA. 16+28 TO STA. 17+55 –L– RT
FROM STA. 186+50 TO STA. 188+70 –L– RT
FROM STA. 190+00 TO STA. 190+50 –L– RT

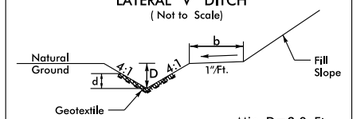
DETAIL 4
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= CL–B Rip–Rap
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.

FROM STA. 90+50 TO STA. 91+50 –L– RT
FROM STA. 27+45 TO STA. 29+00 –Y7– LT

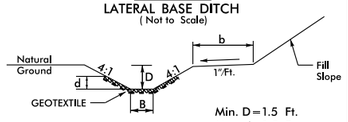
DETAIL 5
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= CL–B Rip–Rap
Min. D=2.0 Ft.
Max. d=1.5 Ft.
b= 5.0 Ft.

FROM STA. 24+06 TO STA. 26+30 –L– LT.

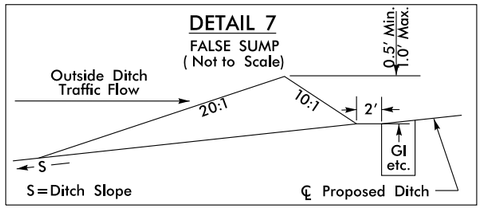
DETAIL 6
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Type of Liner= CL–I Rip–Rap
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=8.0 Ft.
b=5.0 Ft.

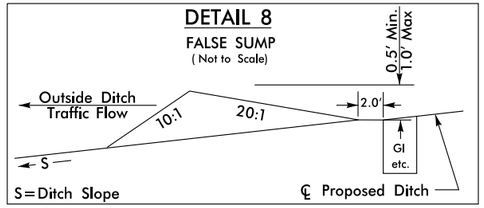
FROM STA. 23+00 TO STA. 24+88 –L– RT.

DETAIL 7
FALSE SUMP
(Not to Scale)



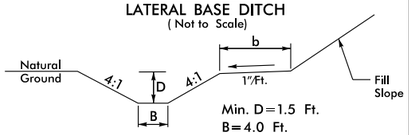
FROM STA. 47+33 TO STA. 47+48 –L– RT
FROM STA. 51+40 TO STA. 51+55 –L– RT
FROM STA. 50+00 TO STA. 50+15 –L– RT
FROM STA. 81+54 TO STA. 81+69 –L– LT
FROM STA. 83+54 TO STA. 83+69 –L– LT
FROM STA. 84+02 TO STA. 84+17 –L– LT
FROM STA. 86+04 TO STA. 86+19 –L– LT
FROM STA. 183+83 TO STA. 183+98 –L– RT

DETAIL 8
FALSE SUMP
(Not to Scale)



FROM STA. 192+53 TO STA. 192+68 –L– RT
FROM STA. 194+52 TO STA. 194+67 –L– RT
FROM STA. 207+33 TO STA. 207+48 –L– LT
FROM STA. 204+83 TO STA. 204+98 –L– LT
FROM STA. 11+24 TO STA. 11+39 –Y2– LT
FROM STA. 12+00 TO STA. 12+15 –Y2– LT

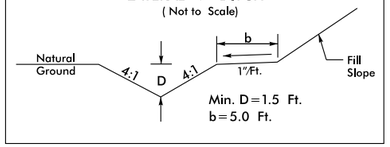
DETAIL 9
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=4.0 Ft.
b=5.0 Ft.

FROM STA. 25+75 TO STA. 26+70 –L– RT.

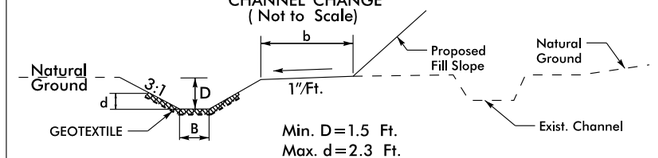
DETAIL 10
LATERAL 'V' DITCH
(Not to Scale)



Min. D=1.5 Ft.
b=5.0 Ft.

FROM STA. 153+20 TO STA. 154+75 –L– RT.

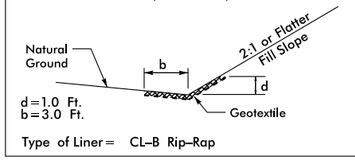
DETAIL 11
CHANNEL CHANGE
(Not to Scale)



Min. D=1.5 Ft.
Max. d=2.3 Ft.
B=4.0 Ft.
b=5.0 Ft.
Type of Liner= CL–I RIPRAP

FROM STA. 42+50 TO STA. 43+50 –L– RT

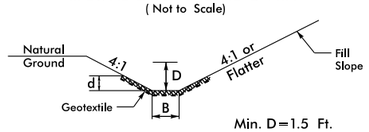
DETAIL 12
TOE PROTECTION
(Not to Scale)



d=1.0 Ft.
b=3.0 Ft.
Type of Liner= CL–B Rip–Rap

FROM STA. 44+00 TO STA. 45+68 –L– RT.
FROM STA. 161+07 TO STA. 162+43 –L– LT
FROM STA. 196+65 TO STA. 197+50 –L– RT
FROM STA. 227+95 TO STA. 230+45 –L– RT
FROM STA. 44+00 TO STA. 45+00 –Y7A– RT
FROM STA. 10+37 TO STA. 10+70 –Y7B– LT
FROM STA. 10+70 TO STA. 11+50 –Y7B– RT

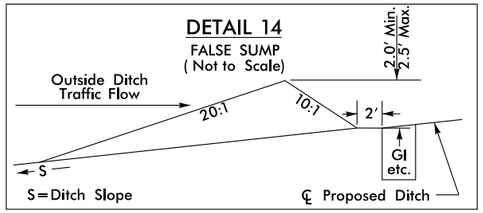
DETAIL 13
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
Max. d=1.0 Ft.
B=2.0 Ft.
Type of Liner= CL–B Rip–Rap

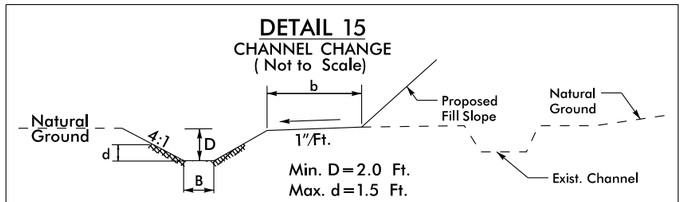
FROM STA. 72+00 TO STA. 73+02 –L– LT.

DETAIL 14
FALSE SUMP
(Not to Scale)



FROM STA. 77+22 TO STA. 77+82 –L– LT
FROM STA. 122+18 TO STA. 122+78 –L– LT
FROM STA. 124+85 TO STA. 125+45 –L– LT
FROM STA. 126+00 TO STA. 126+60 –L– LT
FROM STA. 20+85 TO STA. 21+15 –Y7A– RT

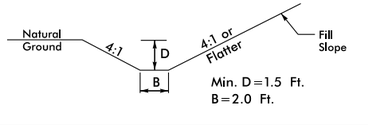
DETAIL 15
CHANNEL CHANGE
(Not to Scale)



Min. D=2.0 Ft.
Max. d=1.5 Ft.
B=4.0 Ft.
b=5.0 Ft.
Type of Liner= CL–I RIPRAP BANKS ONLY

FROM STA. 42+60 TO STA. 44+30 –Y7A– RT

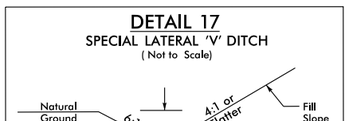
DETAIL 16
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=2.0 Ft.

FROM STA. 72+50 TO STA. 73+25 –L– RT
FROM STA. 151+50 TO STA. 153+75 –L– RT
FROM STA. 154+05 TO STA. 156+50 –L– RT
FROM STA. 178+00 TO STA. 179+00 –L– LT

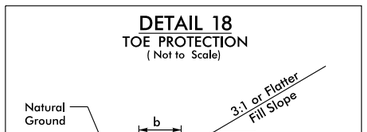
DETAIL 17
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D=1.5 Ft.

FROM STA. 82+50 TO STA. 85+00 –L– LT.
FROM STA. 146+50 TO STA. 148+50 –L– LT

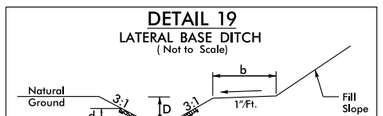
DETAIL 18
TOE PROTECTION
(Not to Scale)



d= 2.0 Ft.
b= 3.0 Ft.
Type of Liner= CL–I Rip–Rap

FROM STA. 88+15 TO STA. 90+40 –L– RT.
FROM STA. 90+48 TO STA. 90+58 –L– RT.

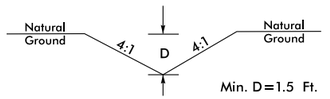
DETAIL 19
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Type of Liner= CL–I Rip–Rap
Min. D=1.0 Ft.
Max. d=1.0 Ft.
B=4.0 Ft.
b=5.0 Ft.

FROM STA. 85+50 TO STA. 88+05 –L– RT

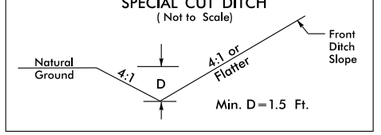
DETAIL 20
STANDARD 'V' DITCH
(Not to Scale)



Min. D=1.5 Ft.

FROM STA. 100+25 TO 101+50 –L– RT
AT STA. 64+81 RT

DETAIL 21
SPECIAL CUT DITCH
(Not to Scale)



Min. D=1.5 Ft.

FROM STA. 103+50 TO STA. 104+50 –L– RT
FROM STA. 159+50 TO STA. 160+50 –L– RT
FROM STA. 177+50 TO STA. 178+50 –L– RT
FROM STA. 23+50 TO STA. 24+50 –Y4– LT
FROM STA. 10+30 TO STA. 11+00 –Y6A– RT
FROM STA. 34+00 TO STA. 36+00 –Y7– LT

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PROJECT REFERENCE NO.	SHEET NO.
R–5705A	2D–1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 2 OF 71

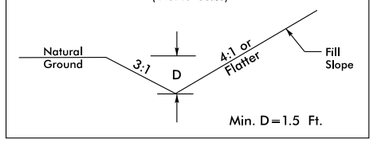
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Submitted 12/21/2021

5/14/99

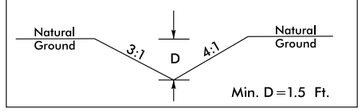
REVISIONS

DETAIL 22
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



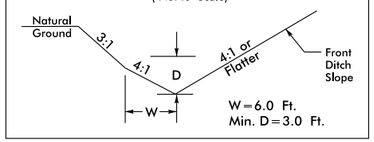
FROM STA. 130+09 TO STA. 132+50 –L– LT
FROM STA. 10+88 TO STA. 12+85 –Y3– RT
FROM STA. 10+88 TO STA. 12+95 –Y3– LT
FROM STA. 13+13 TO STA. 15+00 –Y4– LT
FROM STA. 16+00 TO STA. 16+63 –Y4B– LT
FROM STA. 10+65 TO STA. 13+50 –Y5A– RT
FROM STA. 17+65 TO STA. 22+44 –Y6– RT
FROM STA. 17+50 TO STA. 22+00 –Y6– LT
FROM STA. 14+80 TO STA. 16+90 –Y7A– RT
FROM STA. 29+00 TO STA. 30+50 –Y7A– RT
FROM STA. 32+50 TO STA. 34+00 –Y7A– LT
FROM STA. 31+50 TO STA. 36+50 –Y7A– RT
FROM STA. 39+50 TO STA. 41+00 –Y7A– LT
FROM STA. 39+50 TO STA. 40+50 –Y7A– RT
FROM STA. 10+55 TO STA. 12+50 –Y7C– LT

DETAIL 23
STANDARD 'V' DITCH
(Not to Scale)



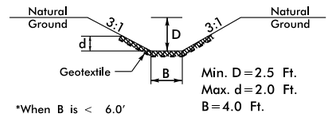
FROM STA. 15+15 TO 16+63 –Y4B– LT.

DETAIL 25
SPECIAL CUT DITCH
(Not to Scale)



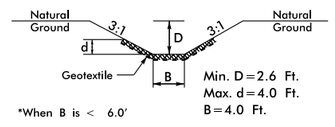
FROM STA. 112+85 TO STA. 118+75 –L– LT.
FROM STA. 121+00 TO STA. 123+18 –L– LT.
FROM STA. 190+00 TO STA. 192+50 –L– RT.

DETAIL 26
STANDARD BASE DITCH
(Not to Scale)



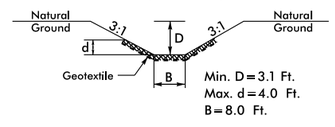
Type of Liner= CL–I Rip–Rap
AT STA. 45+00 –L– LT (EST. 70 L.F.)
AT STA. 108+30 –L– LT (EST. 90 L.F.)

DETAIL 27
STANDARD BASE DITCH
(Not to Scale)



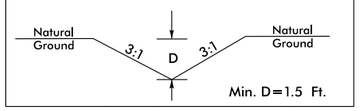
Type of Liner= CL–I Rip–Rap
AT STA. 22+30 –Y4– RT. (EST. 50 L.F.)

DETAIL 28
STANDARD BASE DITCH
(Not to Scale)



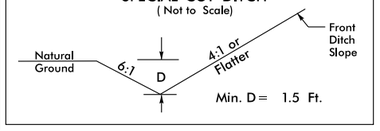
Type of Liner= CL–II Rip–Rap
AT STA. 19+25 –Y4A– RT. (EST. 50 L.F.)

DETAIL 29
STANDARD 'V' DITCH
(Not to Scale)



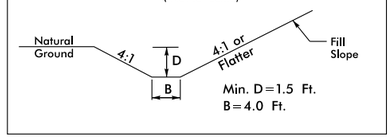
AT STA. 143+50 –L– LT (EST. 55 L.F)
AT STA. 18+50 –Y6A– LT (EST. 50 L.F)

DETAIL 30
SPECIAL CUT DITCH
(Not to Scale)



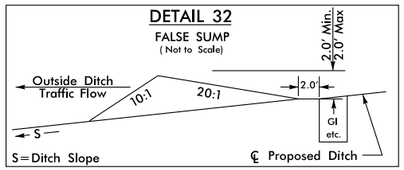
FROM STA. 145+50 TO STA. 146+50 –L– LT.

DETAIL 31
SPECIAL LATERAL BASE DITCH
(Not to Scale)



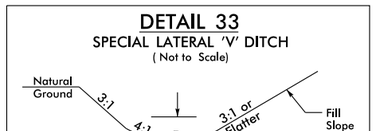
FROM STA. 45+00 TO STA. 46+00 –L– LT
FROM STA. 92+25 TO STA. 93+00 –L– LT
FROM STA. 160+50 TO STA. 161+80 –L– RT
FROM STA. 161+80 TO STA. 164+00 –L– RT
FROM STA. 173+00 TO STA. 173+65 –L– RT
FROM STA. 202+50 TO STA. 203+80 –L– LT
FROM STA. 203+80 TO STA. 205+00 –L– LT
FROM STA. 10+50 TO STA. 13+15 –Y1– LT
FROM STA. 22+00 TO STA. 23+50 –Y4– LT

DETAIL 32
FALSE SUMP
(Not to Scale)



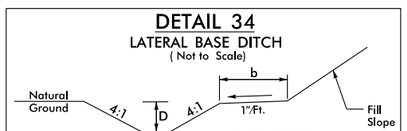
FROM STA. 17+15 TO STA.17+50 –Y6– LT

DETAIL 33
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



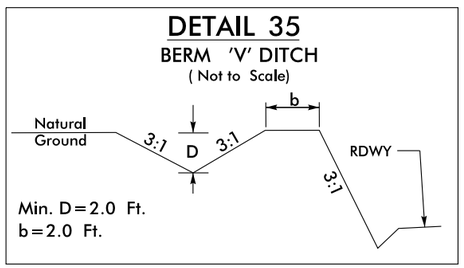
FROM STA. 166+10 TO STA. 170+00 –L– RT
FROM STA. 194+50 TO STA. 195+50 –L– RT

DETAIL 34
LATERAL BASE DITCH
(Not to Scale)



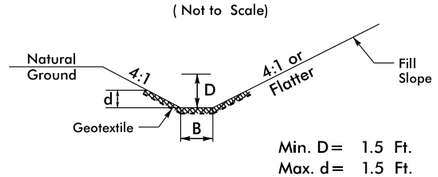
FROM STA. 179+00 TO STA. 181+50 –L– LT.

DETAIL 35
BERM 'V' DITCH
(Not to Scale)



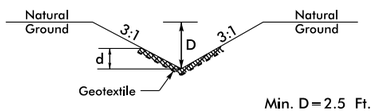
FROM STA. 190+50 TO STA. 192+50 –L– RT.

DETAIL 36
SPECIAL LATERAL BASE DITCH
(Not to Scale)



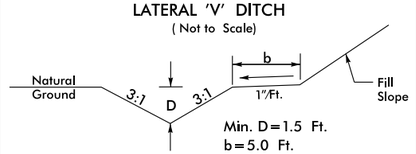
Type of Liner= CL–B Rip–Rap
FROM STA. 20+00 TO STA. 22+00 –Y4– LT

DETAIL 37
STANDARD 'V' DITCH
(Not to Scale)



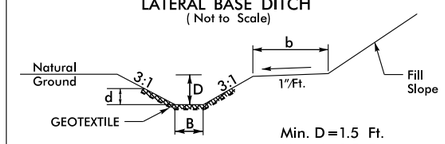
Type of Liner= CL–B Rip–Rap
FROM –L– STA. 132+50 LT. TO
–Y5B– STA. 13+90 LT. (EST. 64 L.F,
HEAD DITCH THROUGH –Y5B–)

DETAIL 38
LATERAL 'V' DITCH
(Not to Scale)



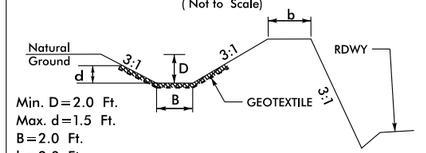
FROM STA. 132+10 TO STA. 133+00 –L– RT
FROM STA. 30+50 TO STA. 31+20 –Y7A– RT
FROM STA. 31+70 TO STA. 32+50 –Y7A– LT
FROM STA. 41+00 TO STA. 42+25 –Y7A– LT
FROM STA. 43+00 TO STA. 45+50 –Y7A– LT

DETAIL 39
LATERAL BASE DITCH
(Not to Scale)



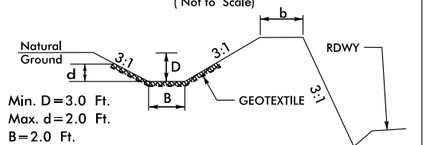
Type of Liner= CL–I Rip–Rap
FROM STA. 197+50 TO STA. 198+90 –L– RT

DETAIL 40
BERM BASE DITCH
(Not to Scale)



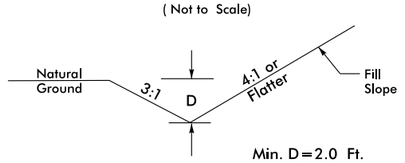
Type of Liner= CL–B Rip–Rap
FROM STA. 205+00 TO STA. 205+50 –L– LT.
FROM STA. 208+50 TO STA. 212+00 –L– LT.

DETAIL 41
BERM BASE DITCH
(Not to Scale)



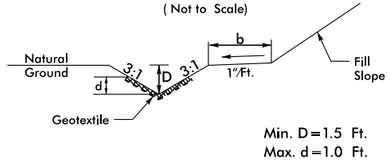
Type of Liner= CL–B Rip–Rap
FROM STA. 207+50 TO STA. 208+50 –L– LT.

DETAIL 42
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



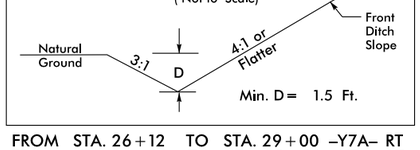
FROM STA. 15+92 TO STA. 22+00 –Y7A– LT.

DETAIL 43
LATERAL 'V' DITCH
(Not to Scale)



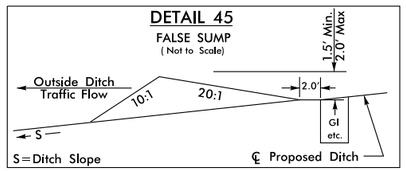
Type of Liner= CL–B Rip–Rap
FROM STA. 29+50 TO STA. 30+80 –Y7A– LT
FROM STA. 40+50 TO STA. 42+00 –Y7A– RT

DETAIL 44
SPECIAL CUT DITCH
(Not to Scale)



FROM STA. 26+12 TO STA. 29+00 –Y7A– RT
FROM STA. 26+00 TO STA. 29+50 –Y7A– LT
FROM STA. 45+50 TO STA. 46+00 –Y7A– LT

DETAIL 45
FALSE SUMP
(Not to Scale)



FROM STA. 15+41 TO STA.15+86 –Y7A– RT

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	2D-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 3 OF 71

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11/15/2021

Submitted 12/21/2021

5/14/99

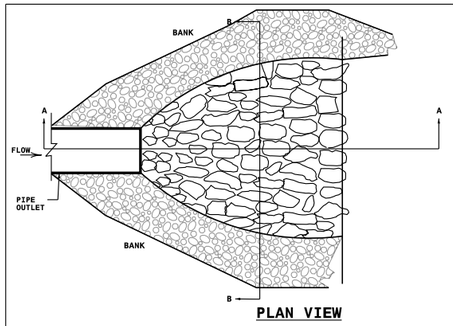
REVISIONS

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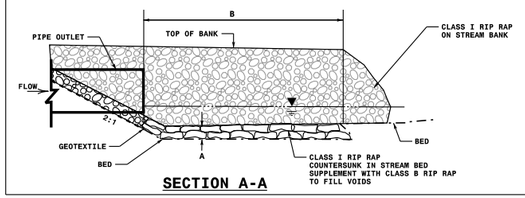
PROJECT REFERENCE NO.	SHEET NO.
R-5705A	2D-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 4 OF 71

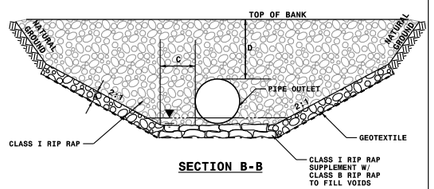
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PLAN VIEW



SECTION A-A



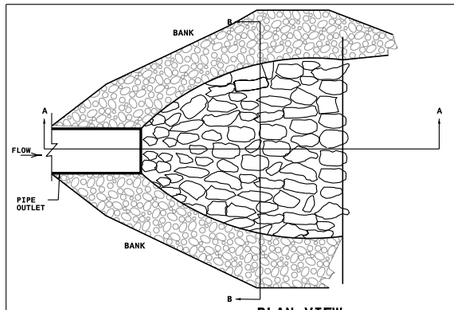
SECTION B-B

BASIN NUMBER	STATION	CULVERT SIZE	RIP RAP BASIN A	B	C	D
1	154+77 -L-	66"	1.5'	13'	0'	0.5'

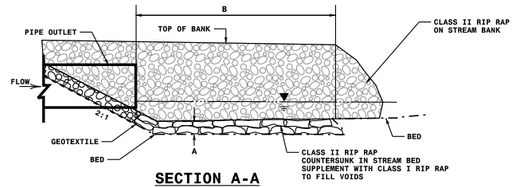
ALL DIMENSIONS ARE APPROXIMATE

NOTE:
USE CLASS I RIP RAP IN STREAM BED AND SUPPLEMENT WITH CLASS B TO FILL VOIDS AS NECESSARY

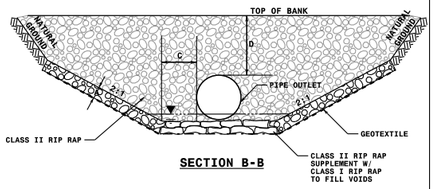
DETAIL 46
SPECIAL OUTLET PROTECTION
(NOT TO SCALE)
AT STA. 154+77 -L- LT



PLAN VIEW



SECTION A-A



SECTION B-B

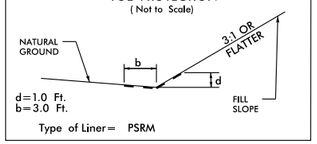
BASIN NUMBER	STATION	CULVERT SIZE	RIP RAP BASIN A	B	C	D
1	42+52.7 -Y7A-	72" RCP	1.5'	25'	0'	0.5'

ALL DIMENSIONS ARE APPROXIMATE

NOTE:
USE CLASS II RIP RAP IN STREAM BED AND SUPPLEMENT WITH CLASS I TO FILL VOIDS AS NECESSARY

DETAIL 47
SPECIAL OUTLET PROTECTION
(NOT TO SCALE)
AT STA. 42+52.70 -Y7A- LT

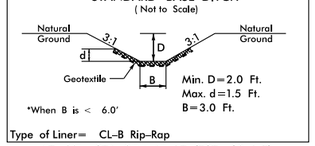
DETAIL 48
TOE PROTECTION
(Not to Scale)



Type of Liner= PSRM

FROM STA. 215+08 TO STA. 215+52 -L- LT.

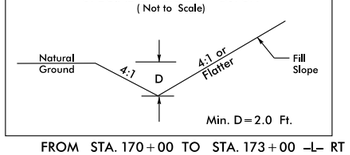
DETAIL 49
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= CL-B Rip-Rap

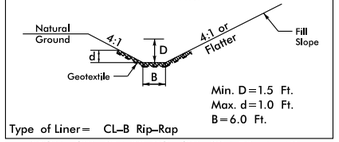
AT -Y7- STA. 27+45 LT. (EST. 60 L.F)

DETAIL 50
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 170+00 TO STA. 173+00 -L- RT

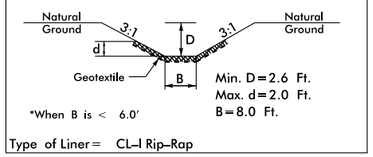
DETAIL 51
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL-B Rip-Rap

FROM STA. 21+00 TO STA. 22+50 -L- LT

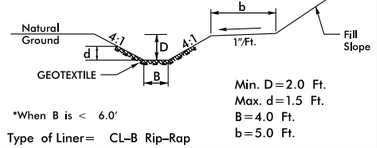
DETAIL 52
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= CL-I Rip-Rap

FROM STA. 15+95 TO STA. 19+17 -Y4A- LT.

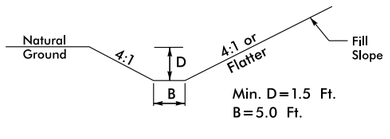
DETAIL 53
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL-B Rip-Rap

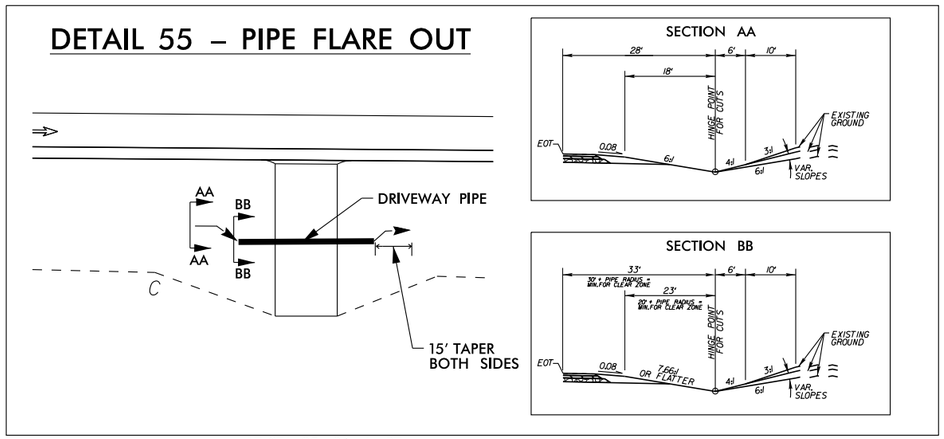
FROM STA. 25+10 TO STA. 25+50 -L- RT

DETAIL 54
SPECIAL LATERAL BASE DITCH
(Not to Scale)



FROM STA. 80+50 TO STA. 81+82 -L- RT.
FROM STA. 88+64 TO STA. 90+50 -L- LT

DETAIL 55 – PIPE FLARE OUT

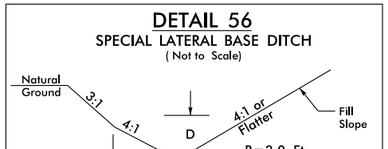


AT STA. 95+06 -L- RT
AT STA. 98+24 -L- LT
AT STA. 104+45 -L- LT
AT STA. 119+50 -L- LT

AT STA. 147+00 -L- RT
AT STA. 157+55 -L- RT
AT STA. 177+08 -L- RT
AT STA. 186+69 -L- LT

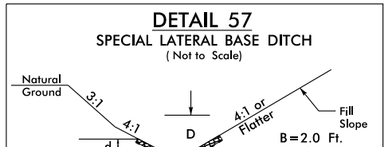
AT STA. 188+90 -L- RT
AT STA. 235+90 -L- RT

DETAIL 56
SPECIAL LATERAL BASE DITCH
(Not to Scale)



FROM STA. 105+50 TO STA. 106+30 -L- LT

DETAIL 57
SPECIAL LATERAL BASE DITCH
(Not to Scale)



FROM STA. 106+30 TO STA. 108+40 -L- LT

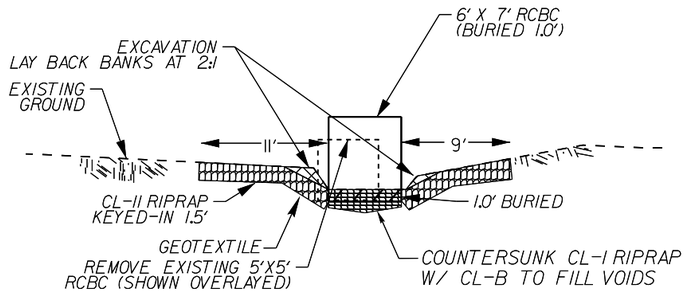
11/15/2021

Submitted 12/21/2021

5/14/99

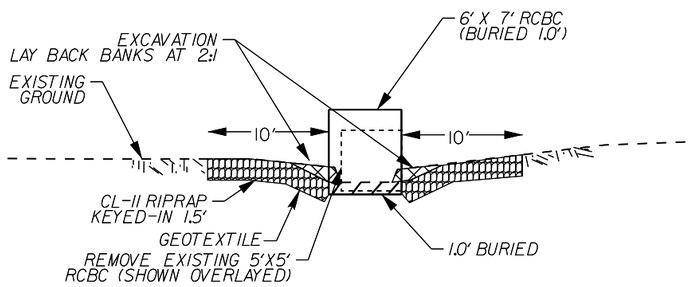
REVISIONS

DETAIL 58 TYPICAL OUTLET CHANNEL IMPROVEMENTS
LOOKING DOWNSTREAM
NOT TO SCALE



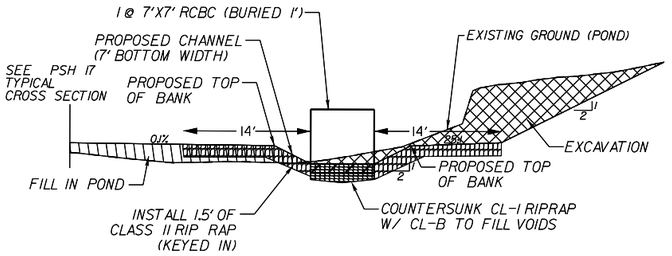
APPROX. STA. 24+10 -L- LT

DETAIL 59 TYPICAL - INLET CHANNEL IMPROVEMENTS
LOOKING DOWNSTREAM
NOT TO SCALE

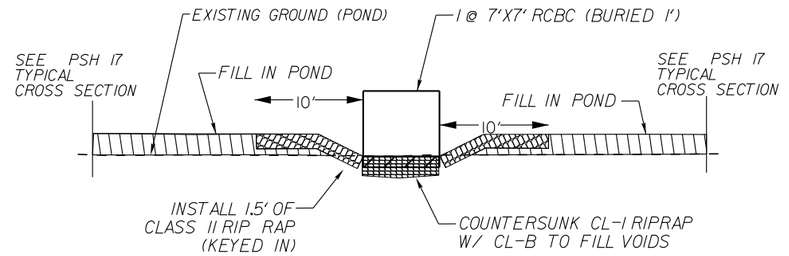


APPROX. STA. 24+70 TO 25+00 -L- RT

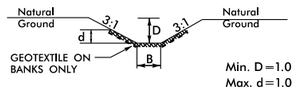
DETAIL 60 TYPICAL OUTLET CHANNEL IMPROVEMENTS
LOOKING DOWNSTREAM
NOT TO SCALE



DETAIL 61 TYPICAL - INLET CHANNEL IMPROVEMENTS
LOOKING DOWNSTREAM
NOT TO SCALE



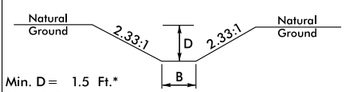
DETAIL 62
STANDARD BASE DITCH
(Not to Scale)



Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 4.0 Ft.
*When B is < 6.0'
Type of Liner = CL-I Rip-Rap

FROM STA. 86+50 TO STA. 86+87 -L- RT

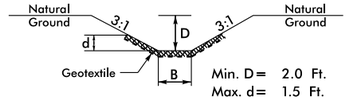
DETAIL 63
STANDARD BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.*
B = 5 Ft.
*MATCH EXIST DITCH INV.

STA. 174+10 -L- LT (EST. 78 L.F.)

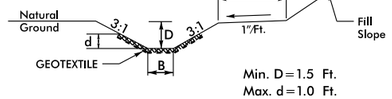
DETAIL 64
STANDARD BASE DITCH
(Not to Scale)



Min. D = 2.0 Ft.
Max. d = 1.5 Ft.
B = 6 Ft.
Type of Liner = Class I Rip-Rap

STA. 162+53 -L- LT (EST. 73 L.F.)

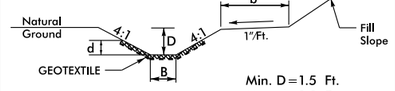
DETAIL 65
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max. d = 1.0 Ft.
B = 8.0 Ft.
b = 5.0 Ft.
Type of Liner = CL-B Rip-Rap

FROM STA. 42+00 TO STA. 42+58 -Y7A- RT.

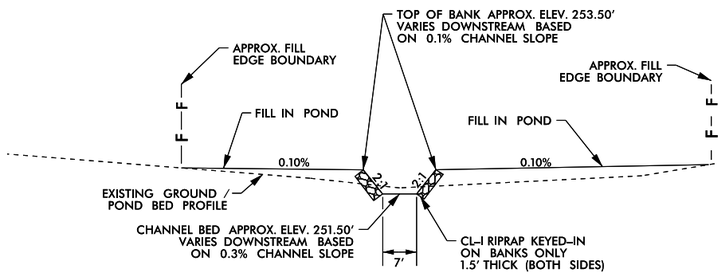
DETAIL 66
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
Type of Liner = CL-B Rip-Rap

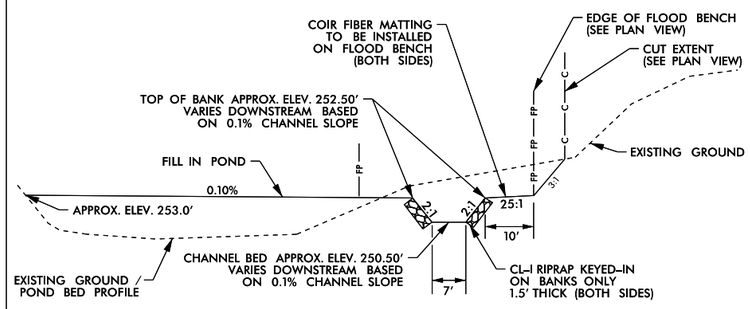
FROM STA. 42+25 TO STA. 42+48 -Y7A- LT.
FROM STA. 42+55 TO STA. 43+00 -Y7A- LT.

DETAIL TYPICAL SECTION P1



NOT TO SCALE

DETAIL TYPICAL SECTION P2



NOT TO SCALE

11/15/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	2D-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 5 OF 71

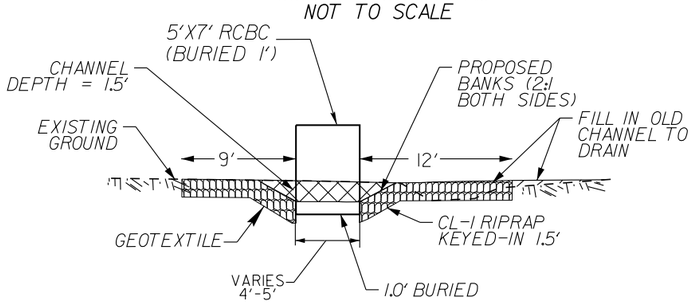
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Submitted 12/21/2021

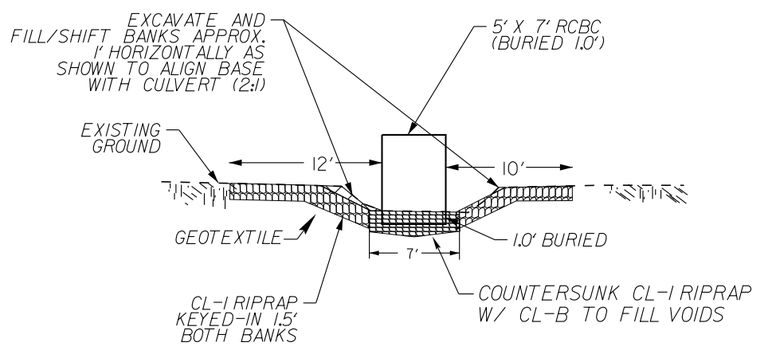
5/14/99

REVISIONS

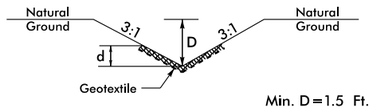
DETAIL 67 TYPICAL - INLET CHANNEL IMPROVEMENTS
LOOKING DOWNSTREAM
NOT TO SCALE



DETAIL 68 TYPICAL OUTLET CHANNEL IMPROVEMENTS
LOOKING DOWNSTREAM
NOT TO SCALE



DETAIL 69
STANDARD 'V' DITCH
(Not to Scale)



Type of Liner= CL-I Rip-Rap

FROM STA. 20+80 TO STA. 23+30 -Y7B- LT
(EQUATES TO: -L- LT. STA. 195+00 TO STA. 197+26)

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	2D-5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 6 OF 71

11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	DENOTES MECHANIZED CLEARING

PERMIT DRAWING
SHEET 7 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

VAN COATS
DB 3459 PG 434
PB 2016 PG 364

(1A) JAMES JOHNSON
DB 615 PG 21
PB 2016 PG 364

(1) JAMES JOHNSON
DB 731PG 732

(3) TONY WARREN
DB 3271PG 355

(5) DANNY HEDGEPETH
DB 926 PG 126
PC* E PG 76A

(4) HOWARD BRIDGES
DB 1754 PG 517

DOUGLAS JOHNSON
DB 3605 PG 628
PB 2016 PG 364

(2) JAMES JOHNSON
DB 730 PG 223

BEGIN CONSTRUCTION
-L- POT Sta. 12+60.83

BEGIN TIP PROJECT R-5705A
-L- POT Sta. 15+58.00

15+00

20+00

N 34° 10' 11.1" W
-L-
NC 55

NC 55 24' BST

SITE 1

SITE 2

SITE 3

SITE 4

CLEAN OUT PIPE OUTLET & RETAIN

BERM 'V' DITCH SEE DETAIL 3

ACCESS POINT

REMOVE

SPECIAL LATERAL & BASE DITCH SEE DETAIL 51 EST. 100 TONS CL-B RIPRAP EST. 250 S.Y. GFD

RIPRAP PAD AT OUTLET EST. 3 TONS CL-B RIPRAP EST. 10 S.Y. GFD

SEE TYPICAL OUTLET CHANNEL DETAIL 58 QUANTITIES IN TABLE ABOVE

6' x 7' RCBC (1.0' BURIED)

SPECIAL LATERAL 'V' DITCH SEE DETAIL

CLEAN WATER DIVERSION

GRADE TO DRAIN (TAPER PROPOSED DITCH INTO EXIST. DITCH)

LATERAL 8' BASE DITCH SEE DETAIL 6 EST. 130 C.Y. DDE EST. 165 TONS CL-I RIPRAP EST. 380 S.Y. GFD

MATCHLINE -L- STA 24+50 (SEE SHEET 5)

DITCH ENTERING WETLAND CALCS -L- STA. 21+00 TO 22+50 LT	
DA	1.19 AC.
C (FUTURE)	0.58
I	6.2 IN./HR
Q_{10} (FUTURE)	4.28 C.F.S
V_{10} (FUTURE)	2.00 F.P.S
SLOPE	0.048 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

CULVERT #1
ONE BARREL

	NORTH	EAST	ELEV.
CUL1	624925.48	2088902.82	249.12
CUL2	624928.77	2088898.61	249.13
CE1	624927.00	2088900.66	253.56
HW1	624928.18	2088898.34	255.20
CUL3	624854.02	2088887.29	248.84
CUL4	624857.34	2088882.93	248.64
CE2	624856.33	2088884.79	253.47
HW2	624856.18	2088885.51	255.04

DITCH ENTERING WETLAND CALCS -L- STA. 23+75 TO 24+00 RT	
DA	6.23 AC.
C (FUTURE)	0.50
I	6.2 IN./HR
Q_{10} (FUTURE)	19.30 C.F.S
V_{10} (FUTURE)	2.00 F.P.S
SLOPE	0.017 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 24+00 TO 24+70 RT	
DA	6.64 AC.
C (FUTURE)	0.50
I	6.2 IN./HR
Q_{10} (FUTURE)	20.58 C.F.S
V_{10} (FUTURE)	1.22 F.P.S
SLOPE	0.004 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

RY INVESTMENT
OPERTIES LLC
3497 PG 845

SEE SHEET 25 FOR -L- PROFILE

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	DENOTES MECHANIZED CLEARING

PERMIT DRAWING
SHEET 8 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

VAN COATS
DB 3459 PG 434
PB 2016 PG 364

(1A) JAMES JOHNSON
DB 615 PG 21
PB 2016 PG 364

(1) JAMES JOHNSON
DB 731PG 732

(3) TONY WARREN
DB 3271PG 355

(5) DANNY HEDGEPETH
DB 926 PG 126
PC# E PG 76A

(4) HOWARD BRIDGES
DB 1754 PG 517

DOUGLAS JOHNSON
DB 3605 PG 628
PB 2016 PG 384

(2) JAMES JOHNSON
DB 730 PG 223

BEGIN CONSTRUCTION
-L- POT Sta. 12+60.83

BEGIN TIP PROJECT R-5705A
-L- POT Sta. 15+58.00

15+00

20+00

MATCHLINE -L- STA 24+50 (SEE SHEET 5)

N 34° 10' 11.1" W

-L-
NC 55

NC 55 24" BST

SITE 1

SITE 2

SITE 3

SITE 4

CLEAN OUT PIPE OUTLET & RETAIN

BERM "V" DITCH SEE DETAIL 3

ACCESS POINT

REMOVE

SPECIAL LATERAL & BASE DITCH SEE DETAIL 5
EST. 100 TONS CL-B RIPRAP
EST. 250 S.Y. GFD

SEE TYPICAL OUTLET CHANNEL DETAIL 58 QUANTITIES IN TABLE ABOVE

6' x 7' RCBC (1.0' BURIED)

RIPRAP PAD AT OUTLET
EST. 5 TONS CL-B RIPRAP
EST. 10 S.Y. GFD

15" RCP-IV

TB 2GF

SPECIAL LATERAL V DITCH SEE DETAIL 1

CLEAN WATER DIVERSION

GRADE TO DRAIN (TAPER PROPOSED DITCH INTO EXIST. DITCH)

LATERAL B' BASE DITCH
SEE DETAIL 6
EST. 130 C.Y. DDE
EST. 165 TONS CL-I RIPRAP
EST. 380 S.Y. GFD

CULVERT #1
ONE BARREL

DITCH ENTERING WETLAND CALCS -L- STA. 21+00 TO 22+50 LT	
DA	1.19 AC.
C (FUTURE)	0.58
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	4.28 C.F.S
V_{10} (FUTURE)	2.00 F.P.S
SLOPE	0.048 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

	NORTH	EAST	ELEV.
CUL1	624925.48	2088902.82	249.12
CUL2	624928.77	2088898.61	249.13
CE1	624927.00	2088900.66	253.56
HW1	624928.18	2088898.34	255.20
CUL3	624854.02	2088887.29	248.84
CUL4	624857.34	2088882.93	248.64
CE2	624856.33	2088884.79	253.47
HW2	624856.18	2088885.51	255.04

DITCH ENTERING WETLAND CALCS -L- STA. 23+75 TO 24+00 RT	
DA	6.23 AC.
C (FUTURE)	0.50
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	19.30 C.F.S
V_{10} (FUTURE)	2.00 F.P.S
SLOPE	0.017 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 24+00 TO 24+70 RT	
DA	6.64 AC.
C (FUTURE)	0.50
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	20.58 C.F.S
V_{10} (FUTURE)	1.22 F.P.S
SLOPE	0.004 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

RY INVESTMENT
PERTIES LLC
3497 PG 845

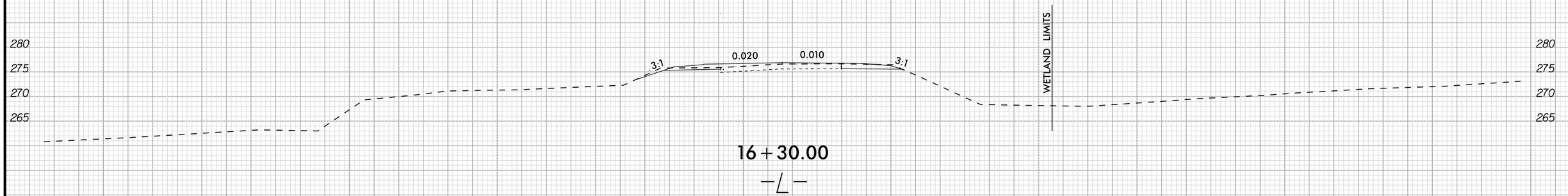
SEE SHEET 25 FOR -L- PROFILE

Submitted 12/21/2021

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

PERMIT DRAWING
SHEET 9 OF 71

SITE 1



16 + 30.00

—L—

11/15/2021

Submitted 12/21/2021

REVISIONS 5/14/99

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	DENOTES MECHANIZED CLEARING

PERMIT DRAWING
SHEET 10 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE -L- STA 24+50 (SEE SHEET 4)

MATCHLINE -L- STA 38+00 (SEE SHEET 6)

25+00 30+00 35+00

(5) DANNY HEDGEPETH DB 926 PG 126 PC* E PG 76A

(8) DANNY HEDGEPETH DB 124 PG 820 MB 2014 PG 9

(9) CHARLES GRAY DB 3252 PG 220

(10) CHARLES GRAY DB 1442 PG 909 MB 2004 PG 19

(7) JEFFREY WALTERS DB 968 PG 612

(6) JESSE MABRY DB 915 PG 464

(2)

LATERAL 'V' DITCH
SEE DETAIL 5
EST. 140 TONS CL-B RIPRAP
EST. 300 S.Y. GFD
EST. 120 C.Y. DDE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

SITE 2

SITE 4

SITE 3

SEDIMENT CONTROL BASIN

ACCESS POINT

POND

TREES

DECK

WOOD RAMP

CONC

GR

EXIST R/W

-L- NC 55

N 48°17'28.4" W

2GI

3GI-A

18"

24"

15" RCP-IV

18" RCP

REMOVE

DI

7' CONC. CHANNEL

4'-0" x 2'-0" RCBC (1' BURIED)

RIPRAP

CULTIVATED

LATERAL 4' BASE DITCH
SEE DETAIL 53
EST. 25 TONS CL-B RIPRAP
EST. 60 S.Y. GFD
EST. 20 C.Y. DDE

LATERAL 4' BASE DITCH
SEE DETAIL 9
EST. 200 C.Y. DDE

SEE TYPICAL INLET CHANNEL DETAIL 59
QUANTITIES ON SHEET 4

GRADE TO DRAIN

DITCH ENTERING WETLAND CALCS -L- STA. 24+70 TO 24+85 RT	
DA	45.77 AC.
C	0.50
I_{10}	3.8 IN./HR
Q_{10}	87 C.F.S
V_c	1.81 F.P.S
SLOPE	0.004 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 25+10 TO 25+50 RT	
DA	2.22 AC.
C	0.59
I_{10}	6.2 IN./HR
Q_{10}	8.12 C.F.S
V_c	1.96 F.P.S
SLOPE	0.02 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

SEE SHEET 25 FOR -L- PROFILE

11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING		DENOTES MECHANIZED CLEARING

PERMIT DRAWING
SHEET 11 OF 71

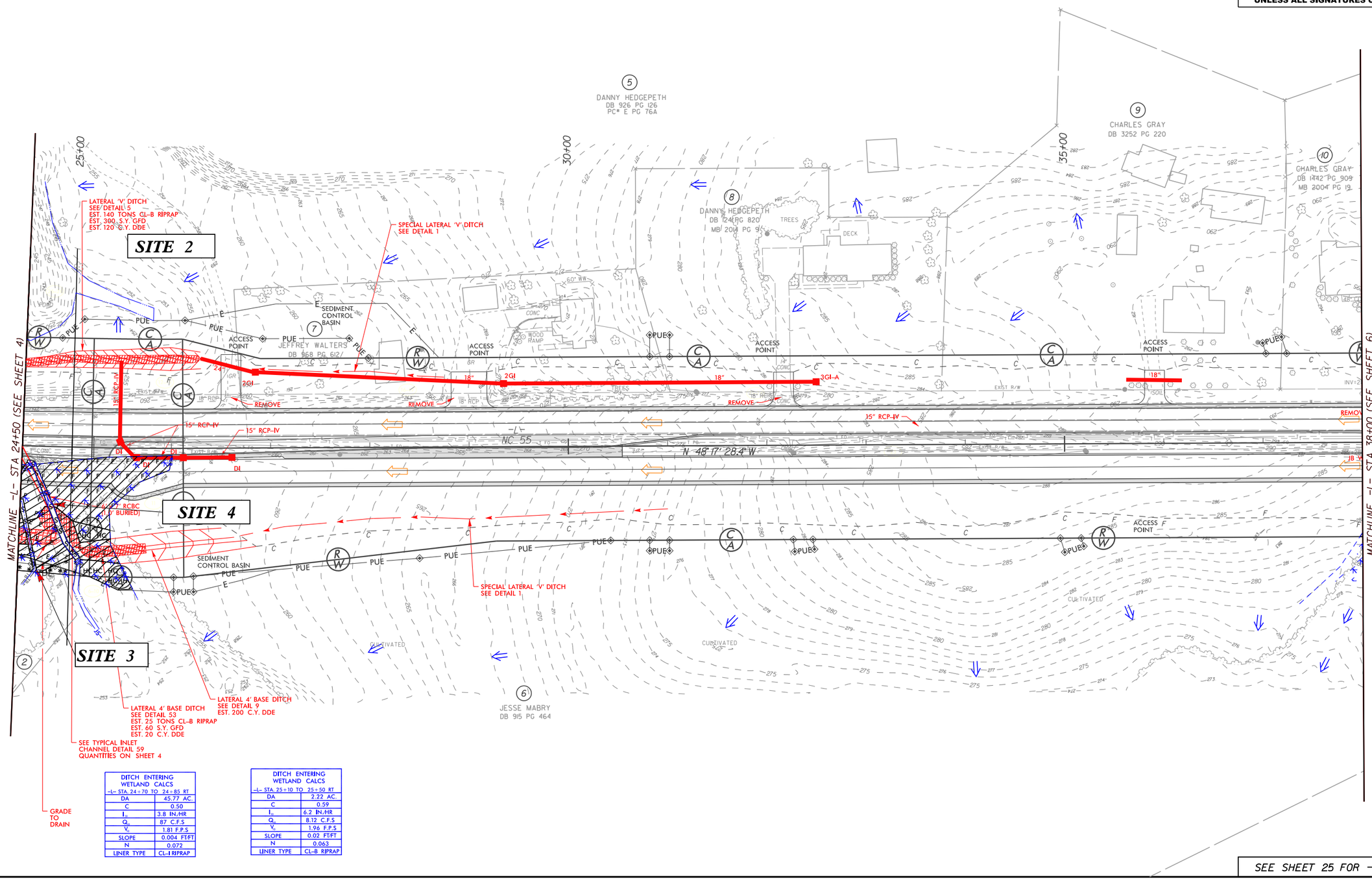
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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011



DITCH ENTERING WETLAND CALCS -L- STA 24+70 TO 24+85 RT	
DA	45.77 AC.
C	0.50
I_{10}	3.8 IN./HR
Q_{10}	87 C.F.S.
V_c	1.81 F.P.S.
SLOPE	0.004 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA 25+10 TO 25+50 RT	
DA	2.22 AC.
C	0.59
I_{10}	6.2 IN./HR
Q_{10}	8.12 C.F.S.
V_c	1.96 F.P.S.
SLOPE	0.02 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

SEE SHEET 25 FOR -L- PROFILE

11/15/2021

Submitted 12/21/2021

WETLAND AND STREAM IMPACTS

SITE IMPACT ZOOM: 1"=40'

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	4A/5A

PERMIT DRAWING SHEET 12 OF 71

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING
- S S — DENOTES IMPACTS IN SURFACE WATER
- TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING

NAD 83 NSRS 2007

SITE 2

SITE 3

SITE 4

RIPRAP PAD AT OUTLET
EST. 3 TONS CL-B RIPRAP
EST. 10 S.Y. CL-B RIPRAP

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

POND

PDE

PUE

ACCESS POINT

JEFFREY WA
DB 968 P

24"
2GI

REMOVE

18" RCP

15" RCP-IV

TB 2GI

DI

EXIST R/W

NC 55 24' BST

7' CONC

6' CONC HW

6' x 7' RCBC (1.0' BURIED)

CLEAN WATER DIVERSION

TDE

SEDIMENT CONTROL BASIN

SITES 2,3,4

20' 0' 20' 40'
GRAPHIC SCALE

REVISIONS

11/15/2021

Submitted 12/21/2021

WETLAND AND STREAM IMPACTS

SITE IMPACT ZOOM: 1"=40'

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	4A/5A

PERMIT DRAWING SHEET 13 OF 71

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING
- S S — DENOTES IMPACTS IN SURFACE WATER
- TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING

NAD 83 NSRS 2007

SITE 2

SITE 3

SITE 4

RIPRAP PAD AT OUTLET
EST. 3 TONS CL B RIPRAP
EST. 10 S.Y. CL B RIPRAP

PDE
PUE
ACCESS POINT
JEFFREY WA
DB 968 P
24"
2GI
REMOVE
18" RCP
15" RCP-IV
TB 2GI
DI
EXIST R/W
NC 55 24' BST
SPECIAL LATERAL 'V' DITCH SEE DETAIL 1
6' x 7' RCBC (1.0' BURIED)
CLEAN WATER DIVERSION
TDE
SEDIMENT CONTROL BASIN

SITES 2,3,4

20' 0' 20' 40'
GRAPHIC SCALE

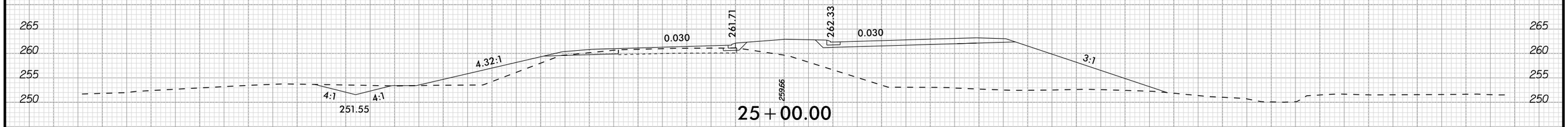
REVISIONS

11/15/2021

Submitted 12/21/2021

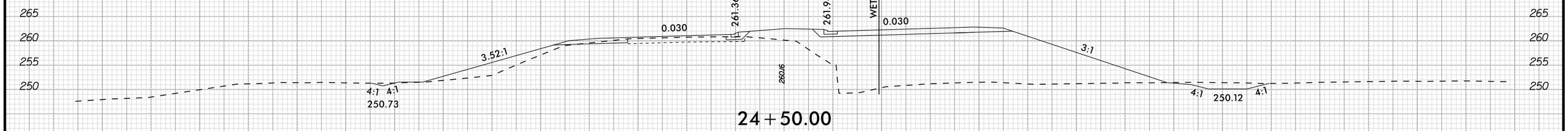
PERMIT DRAWING
SHEET 14 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

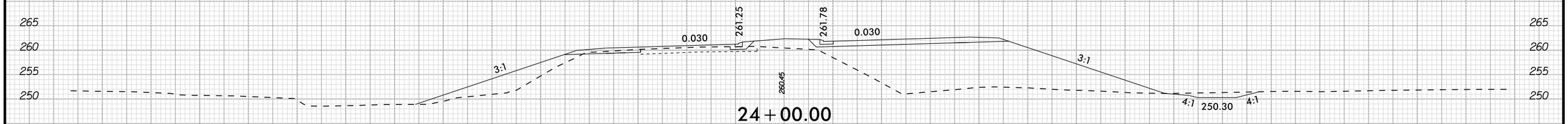


25+00.00

SITE 4

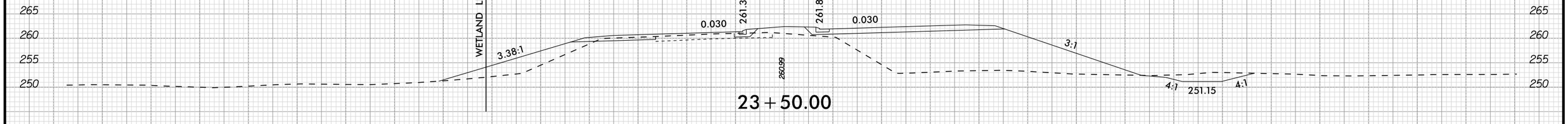


24+50.00



24+00.00

SITE 2



23+50.00

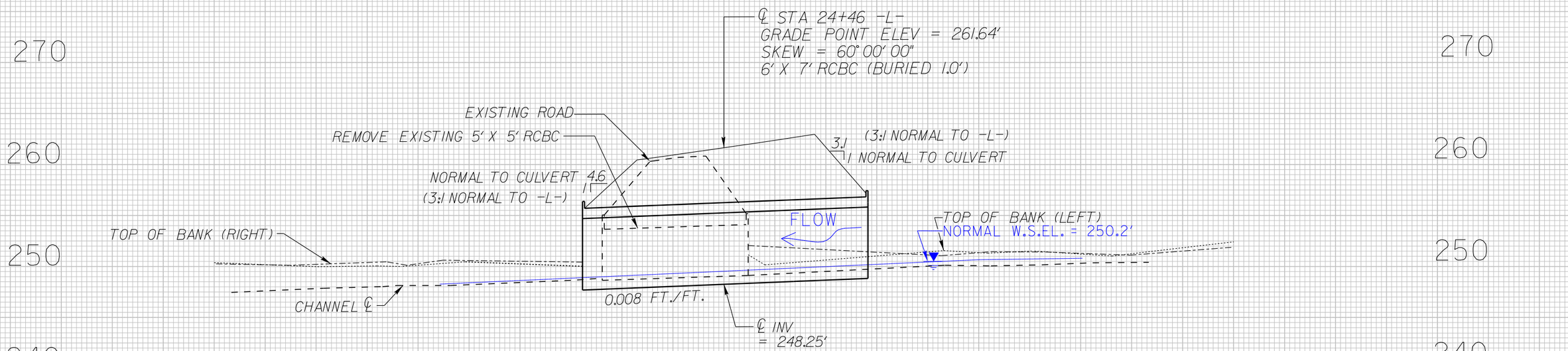
11/15/2021

Submitted 12/21/2021

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

PERMIT DRAWING
SHEET 15 OF 71

SITE 2,3,4



11/15/2021

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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5/14/99

REVISIONS

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- S S — DENOTES IMPACTS IN SURFACE WATER
- HC HC — DENOTES HAND CLEARING
- TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- P P — DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING
SHEET 16 OF 71

NAD 83/NA 2011

MATCHLINE -L- STA 38+00 (SEE SHEET 5)

MATCHLINE -L- STA 50+50 (SEE SHEET 7)

10 CHARLES GRAY DB 1442 PG 909 MB 2004 PG 19

11 NANCY MYATT DB 1101PG 767

12 CHARLES GRAY DB 2830 PG 178

13 SHERRY OATES DB 1822 PG 69 DB 2007 PG 518

14 SHERRILL MCLAMB DB 786 PG 810

15 NANCY MYATT DB 1101PG 767

18 SHERRILL MCLAMB DB 738 PG 754

19 SHERRILL MCLAMB DB 738 PG 291

20 VIRGINIA HOLLIDAY DB 635 PG 530

21 UNKNOWN PROPERTY OWNER

22 NANCY MYATT DB 1159 PG 680

6 JESSE MABRY DB 915 PG 464

100

SITE 5

SITE 6

SITE 7

SITE 8

NC 55

N 48° 17' 28.4" W

40+00

45+00

50+00

ACCESS POINT

REMOVE

REMOVE 24" RCP

42" RCP-IV

18" RCP-IV

15" RCP

18" RCP

24" RCP

30" RCP

36" RCP

48" RCP

DRAIN POINT W/ 2' BASIN DIA.
APPROX. START ELEV. 297.0'
END ELEV. 295.0'
SEE DETAIL 3G
EST. 20 TONS CL-1 RIPRAP
EST. 145 C.Y. EXC.
EST. 400 C.Y. DDE
SPECIAL LATERAL
TRASH DEBRIS
SEE DETAIL 3H

RIPRAP PAD, AT OUTLET
3 TONS CL-B RIPRAP
11 S.Y. GFD

CHANNEL CHANGE (4.0' BASE)
SEE DETAIL 11
EST. 150 C.Y. DDE
EST. 95 TONS CL-1 RIPRAP
EST. 210 S.Y. GFD

MIN. DEPTH 2GI-A
SEE DETAIL 840d17
SHEET 2C-1

TOE PROTECTION
SEE DETAIL 12
EST. 40 TONS CL-B RIPRAP
EST. 130 S.Y. GFD

GRADE TO DRAIN
APPROX. GRADE 15%
PROTECT W/EST. 15 TONS
CL-B RIPRAP
EST. 40 S.Y. GFD

FALSE SUMP
SEE DETAIL 7

O.E.P
10-YR
HW/D = 2.0

RETAIN

REMOVE EXIST JB

DIMOND CONC ISLAND

WOODS

POOL

FOOT BRIDGE

60' WD

48" SPLIT RAIL

48" CHL

12" CONC

8.20'

RIPRAP

CONC

GR

PUE

PDE

DUE

TDE

JS

S/S

F

C

E

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83 NA 2011

REVISIONS 5/14/99

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- S S — DENOTES IMPACTS IN SURFACE WATER
- HC HC — DENOTES HAND CLEARING
- TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- P P — DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING
SHEET 17 OF 71

MATCHLINE -L- STA 38+00 (SEE SHEET 5)

MATCHLINE -L- STA 50+50 (SEE SHEET 7)

10 CHARLES GRAY DB 1442 PG 909 MB 2004 PG 19

11 CHARLES GRAY DB 2830 PG 178

12 SHERRY OATES DB 1822 PG 69 DB 2007 PG 518

13 SHERRILL MCLAMB DB 786 PG 810

14 SHERRILL MCLAMB DB 738 PG 754

15 NANCY MYATT DB 1101PG 767

16 NANCY MYATT DB 1101PG 767

17 JESSE MABRY DB 915 PG 464

18 VIRGINIA HOLLIDAY DB 639 PG 530

19 UNKNOWN PROPERTY OWNER

20 NANCY MYATT DB 1159 PG 680

21 NANCY MYATT DB 1101PG 767

22 NANCY MYATT DB 1101PG 767

SITE 5

SITE 6

SITE 7

SITE 8

-L- STA 40+00

-L- STA 45+00

-L- STA 50+00

NC 55

N 48° 17' 28.4" W

REMOVE 24" RCP

42" RCP-IV

REMOVE EXIST JB

DIMOND CONC ISLAND

48" RCP-IV

18" RCP-IV

24" RCP-IV

2GI

2GI-A

DRAIN TO DI W/ BASE DITCH ABSORV STRUCT ELEV 297.0' END SLOPE PIPE SEE DETAIL 2G EST. 40 TONS CL-1 RIPRAP EST. 145 C.Y. EXC. EST. 400 C.Y. DDE SPECIAL LATERAL V BASE DITCH SEE DETAIL 3H

REMOVE

RIPRAP PAD AT OUTLET 3 TONS CL-B RIPRAP 17 S.Y. GFD

RETAIN

CHANNEL CHANGE (4.0' BASE) SEE DETAIL 11 EST. 150 C.Y. DDE EST. 95 TONS CL-1 RIPRAP EST. 210 S.Y. GFD

MIN. DEPTH 2GI-A SEE DETAIL 840d17 SHEET 2C-1

TOE PROTECTION SEE DETAIL 12 EST. 40 TONS CL-B RIPRAP EST. 130 S.Y. GFD

GRADE TO DRAIN APPROX. GRADE 15% PROTECT W/EST. 15 TONS CL-B RIPRAP EST. 40 S.Y. GFD

O.E.P 10-YR HW/D = 2.0

FALSE SUMP SEE DETAIL 7

10-YR HW/D = 0.8

O.E.P

ACCESS POINT

TDE

PDE

PUE

SSE

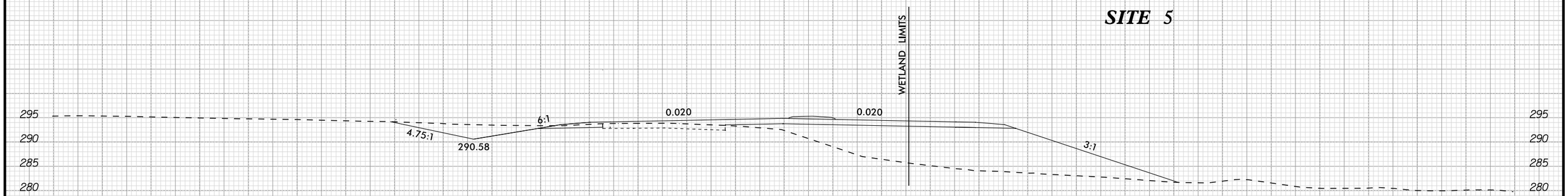
WOODS

Submitted 12/21/2021

PERMIT DRAWING
SHEET 18 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 5



38+30.00

—L—

11/15/2021

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83/NA 2011

REVISIONS
5/14/99

LEGEND

- F F — DENOTES FILL IN WETLAND
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 19 OF 71

MATCHLINE -L- STA 64+00 (SEE SHEET 7)

MATCHLINE -L- STA 78+00 (SEE SHEET 9)

28 CAROL BLALOCK
DB 88E PG 258

32 DANIEL MORTON
DB 3441 PG 835
MB 2008 PG 1042

35 JAMES GARNER
DB 1602 PG 219
MB 2002 PG 303

35 JAMES GARNER
DB 1071 PG 120

41 BUCKEYE GAS PRODUCTS
DB 817 PG 394

43 LYNN MUCHINSON
DB 1508 PG 838

46 JULEE JOHNSON
DB 2967 PG 15
MB 2011 PG 317

48 BENNY WEAVER
DB 2458 PG 329
MB 2006 PG 930

44 JEAN GARNER
DB 1665 PG 80
MB 2001 PG 1260

45

33 MARIO HERNANDEZ
DB 2857 PG 342
MB 2011 PG 303

34 JAMES GARNER
DB 1145 PG 360

36 BARBARA HENRIES
DB 2007 PG 3

37 D&D MOTOR SPORTS LLC
DB 2803 PG 711

39 WILLIAM HART
NO DEED INFO
PC* F PG 326C

40 JIMMY WALTERS
DB 1102 PG 980
PC* F PG 326C

42 JIMMY WALTERS
DB 606 PG 222

31 CURTIS ADAMS
DB 508 PG 169

65+00 70+00 75+00

-L- NC 55 N 48° 09' 47.9" W

N 48° 15' 11.4" W

SITE 9

SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL 13
EST. 60 TONS CL-B RIPRAP
EST. 160 S.Y. GFD

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

STANDARD 'V' DITCH
SEE DETAIL 20
BEGIN ELEV. = 314.28'
END ELEV. = 314.00'
APPROX. SLOPE = 0.6%
EST. 5 C.Y. DDE

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

SPECIAL LATERAL
2' BASE DITCH
SEE DETAIL 16

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

24" RCP-IV

15" RCP-IV

REMOVE

ACCESS POINT

PUE

TDE

WOODS

POND

SEE SHEET 2B-1 FOR INTERSECTION DETAIL
SEE SHEET 27 FOR -L- PROFILE

11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F / F — DENOTES FILL IN WETLAND

HC / HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 20 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE -L- STA 64+00 (SEE SHEET 7)

MATCHLINE -L- STA 78+00 (SEE SHEET 9)

65+00 70+00 75+00

NC 55 BST

N 48° 09' 47.9" W

N 48° 15' 11.4" W

SITE 9

(28) CAROL BLALOCK
DB 88E PG 258

(32) DANIEL MORTON
DB 3441 PG 835
MB 2008 PG 1042

(35) JAMES GARNER
DB 1602 PG 219
MB 2002 PG 303

(35) JAMES GARNER
DB 1071 PG 120

(41) BUCKEYE GAS PRODUCTS
DB 817 PG 394

(43) LYNN MUCHINSON
DB 1508 PG 838

(46) JULEE JOHNSON
DB 2967 PG 15
MB 2011 PG 317

(48) BENNY WEAVER
DB 2458 PG 329
MB 2006 PG 930

(44) JEAN GARNER
DB 1665 PG 80
MB 2001 PG 1260

(45)

(33) MARIO HERNANDEZ
DB 2857 PG 342
MB 2011 PG 303

(34) JAMES GARNER
DB 1145 PG 360

(36) BARBARA HENRIES
DB 2007 PG 3

(37) D&D MOTOR SPORTS LLC
DB 2803 PG 711

(39) WILLIAM HART
NO DEED INFO
PC* F PG 326C

(40) JIMMY WALTERS
DB 1102 PG 980
PC* F PG 326C

(42) JIMMY WALTERS
DB 606 PG 222

(31) CURTIS ADAMS
DB 508 PG 169

SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL 13
EST. 60 TONS CL-B RIPRAP
EST. 160 S.Y. GFD

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

STANDARD 'V' DITCH
SEE DETAIL 20
BEGIN ELEV. =314.28'
END ELEV. =314.00'
APPROX. SLOPE=0.6%
EST. 5 C.Y. DDE

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

SPECIAL LATERAL
2' BASE DITCH
SEE DETAIL 16

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

REMOVE

15" RCP

24" RCP-IV

15" RCP-IV

ACCESS POINT

PUE

TDE

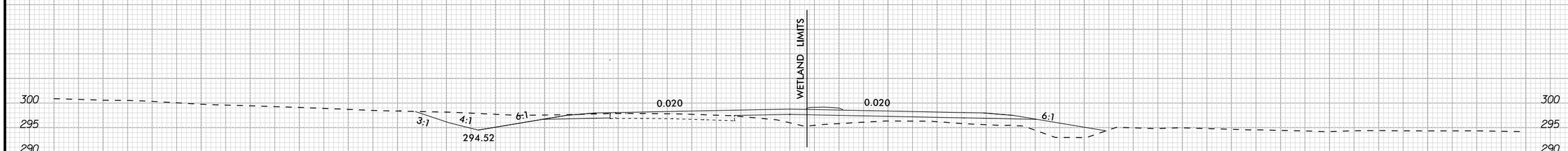
SEE SHEET 2B-1 FOR INTERSECTION DETAIL
SEE SHEET 27 FOR -L- PROFILE

Submitted 12/21/2021

PERMIT DRAWING
SHEET 21 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 9



77+18.00

—℄—

11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

MATCHLINE -L- STA 78+00 (SEE SHEET 8)

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	T T — DENOTES TEMPORARY FILL IN WETLAND

PERMIT DRAWING
SHEET 22 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

-Y3- SR 1538 (MABRY RD) N 19°50'33.4"E

-L- N 48°15'11.4" W NC 55

BEGIN CONSTRUCTION -Y3- POT Sta. 10+88.00

80+00 85+00 90+00

(46) JULEE JOHNSON DB 2967 PG 15 MB 2011 PG 317

(44) JEAN GARNER DB 1665 PG 80 MB 2001 PG 1260

(48) BENNY WEAVER DB 2458 PG 329 MB 2006 PG 930

(50) FRANK D'ALESIO DB 3604 PG 42 MB 2017 PG 390

(52) W E COLLIER DB 2768 PG 34

(45) JEANETTE STRICKLAND DB 1405 PG 740 MB 2000 PG 84

(47) MR CURRIN DB 1315 PG 641

(42) JIMMY WALTERS DB 606 PG 222

(49) BARBARA SMETZER DB 2038 PG 935

SITE 10

SITE 11

SITE 12

FALSE SUMP SEE DETAIL 7

SPECIAL LATERAL 'V' DITCH SEE DETAIL 17

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

SPECIAL LATERAL 5' BASE DITCH SEE DETAIL 54

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

RIPRAP PAD BEFORE ENTERING WETLAND EST. 6 TONS CL-B RIPRAP EST. 15 S.Y. GFD

RIPRAP PAD AT OUTLET EST. 33 TONS CL-I RIPRAP EST. 62 S.Y. GFD

4' BASE (HEAD) DITCH SEE DETAIL 62 EST. 18 TONS CL-I RIPRAP EST. 47 S.Y. GFD EST. 15 C.Y. DDE APPROX. GRADE = 4.5%

TOE PROTECTION SEE DETAIL 18 EST. 115 TONS CL-I RIPRAP EST. 280 S.Y. GFD

TOE PROTECTION SEE DETAIL 18 EST. 5 TONS CL-I RIPRAP EST. 15 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 4 EST. 60 TONS CL-B RIPRAP EST. 135 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

DITCH ENTERING WETLAND CALCS -L- STA. 80+75 TO 81+82 RT	
DA	0.65 AC.
C	0.59
I_a	6.2 IN./HR
Q_p	2.40 C.F.S
V_p	1.05 F.P.S
SLOPE	0.011 FT/FT
N	0.063
LINER TYPE	RIPRAP PAD

JURISDICTIONAL STREAM / CHANNEL CHANGE DITCH WITHIN WETLAND -L- STA. 85+50 TO 87+00 RT	
DA	35.51 AC.
C (FUTURE)	0.51
I_a	4.27 IN./HR
Q_p (FUTURE)	77.39 C.F.S
V_p (FUTURE)	2.69 F.P.S
SLOPE	0.01 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

JURISDICTIONAL STREAM / CHANNEL CHANGE DITCH WITHIN WETLAND -L- STA. 87+00 TO 88+05 RT	
DA	35.51 AC.
C (FUTURE)	0.51
I_a	4.27 IN./HR
Q_p (FUTURE)	77.39 C.F.S
V_p (FUTURE)	1.76 F.P.S
SLOPE	0.003 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 89+40 TO 90+50 LT	
DA	0.98 AC.
C (FUTURE)	0.53
I_a	6.2 IN./HR
Q_p (FUTURE)	3.22 C.F.S
V_p (FUTURE)	1.94 F.P.S
SLOPE	0.016 FT/FT
N	0.035
LINER TYPE	NONE

DITCH ENTERING WETLAND CALCS -L- STA. 90+50 TO 91+15 RT	
DA	3.69 AC.
C (FUTURE)	0.46
I_a	6.2 IN./HR
Q_p (FUTURE)	10.52 C.F.S
V_p (FUTURE)	2.00 F.P.S
SLOPE	0.018 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

SEE SHEET 2B-1 & 2B-2 FOR INTERSECTION DETAIL
SEE SHEET 27 FOR -L- PROFILE
SEE SHEET 34 FOR -Y3- PROFILE

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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NAD 83/NA 2011

5/14/99 REVISIONS

11/15/2021

MATCHLINE -L- STA 78+00 (SEE SHEET 8)

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	T T — DENOTES TEMPORARY FILL IN WETLAND

PERMIT DRAWING
SHEET 23 OF 71

-Y3- SR 1538 (MABRY RD) N 19°50'33.4"E

(50) FRANK D'ALESIO
DB 3604 PG 42
MB 2017 PG 390

(46) JULEE JOHNSON
DB 2967 PG 15
MB 2011 PG 317

(44) JEAN GARNER
DB 1665 PG 80
MB 2001 PG 1260

(48) BENNY WEAVER
DB 2458 PG 329
MB 2006 PG 930

(45) JEANETTE STRICKLAND
DB 1405 PG 740
MB 2000 PG 84

(47) MR CURRIN
DB 1315 PG 641

(42) JIMMY WALTERS
DB 606 PG 222

(49) BARBARA SMETZER
DB 2038 PG 935

(52) W E COLLINS
DB 2768
PG 34

80+00 85+00 90+00

-L- NC 55 N 48°15'11.4"W

BEGIN CONSTRUCTION
-Y3- POT Sta. 10+88.00

SITE 10

SITE 11

SITE 12

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

RIPRAP PAD BEFORE ENTERING WETLAND EST. 6 TONS CL-B RIPRAP EST. 15 S.Y. GFD

SPECIAL LATERAL 5' BASE DITCH SEE DETAIL 54

FALSE SUMP SEE DETAIL 7

SPECIAL LATERAL 'V' DITCH SEE DETAIL 17

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

SPECIAL LATERAL 5' BASE DITCH SEE DETAIL 54

4' BASE (HEAD) DITCH SEE DETAIL 62 EST. 18 TONS CL-I RIPRAP EST. 47 S.Y. GFD EST. 15 C.Y. DOE APPROX. GRADE = 4.5%

TOE PROTECTION SEE DETAIL 18 EST. 115 TONS CL-I RIPRAP EST. 280 S.Y. GFD

TOE PROTECTION SEE DETAIL 18 EST. 5 TONS CL-I RIPRAP EST. 15 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 4 EST. 60 TONS CL-B RIPRAP EST. 135 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

RIPRAP PAD AT OUTLET EST. 23 TONS CL-I RIPRAP EST. 62 S.Y. GFD

DITCH ENTERING WETLAND CALCS -L- STA. 80+75 TO 81+82 RT	
DA	0.65 AC.
C	0.59
I_{10}	6.2 IN./HR
Q_{10}	2.40 C.F.S
V_{10}	1.05 F.P.S
SLOPE	0.011 FT/FT
N	0.063
LINER TYPE	RIPRAP PAD

JURISDICTIONAL STREAM / CHANNEL CHANGE DITCH WITHIN WETLAND -L- STA. 85+50 TO 87+00 RT	
DA	35.51 AC.
C (FUTURE)	0.51
I_{10}	4.27 IN./HR
Q_{10} (FUTURE)	77.39 C.F.S
V_{10} (FUTURE)	2.69 F.P.S
SLOPE	0.01 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

JURISDICTIONAL STREAM / CHANNEL CHANGE DITCH WITHIN WETLAND -L- STA. 87+00 TO 88+05 RT	
DA	35.51 AC.
C (FUTURE)	0.51
I_{10}	4.27 IN./HR
Q_{10} (FUTURE)	77.39 C.F.S
V_{10} (FUTURE)	1.76 F.P.S
SLOPE	0.003 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 89+40 TO 90+50 LT	
DA	0.98 AC.
C (FUTURE)	0.53
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	3.22 C.F.S
V_{10} (FUTURE)	1.94 F.P.S
SLOPE	0.016 FT/FT
N	0.035
LINER TYPE	NONE

DITCH ENTERING WETLAND CALCS -L- STA. 90+50 TO 91+15 RT	
DA	3.69 AC.
C (FUTURE)	0.46
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	10.52 C.F.S
V_{10} (FUTURE)	2.00 F.P.S
SLOPE	0.018 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

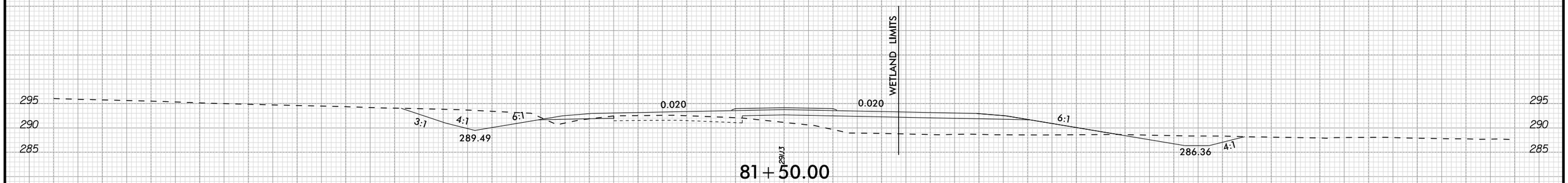
SEE SHEET 2B-1 & 2B-2 FOR INTERSECTION DETAIL
SEE SHEET 27 FOR -L- PROFILE
SEE SHEET 34 FOR -Y3- PROFILE

Submitted 12/21/2021

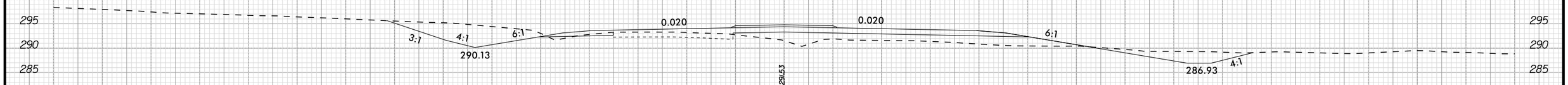
PERMIT DRAWING
SHEET 24 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 10



81+50.00



81+00.00

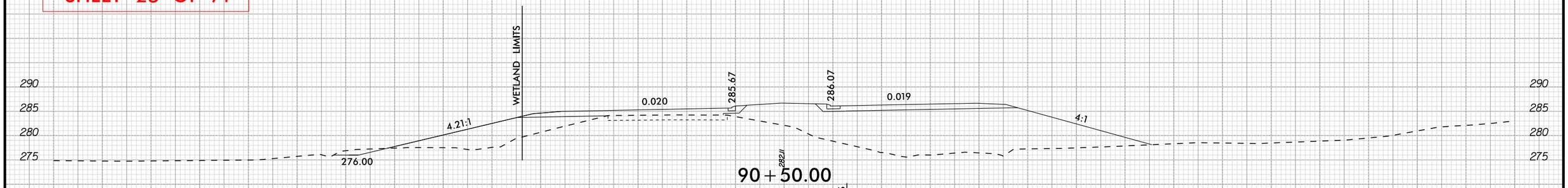
11/15/2021

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PERMIT DRAWING
SHEET 25 OF 71

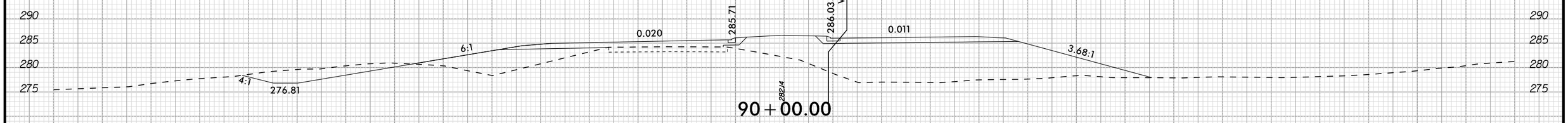
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	R-5705A	PERMIT SHEET - OF -

SITE 12

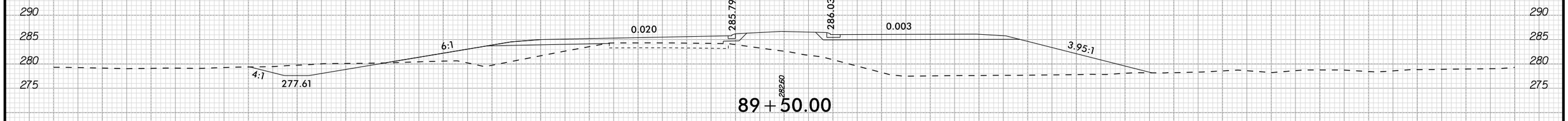


90 + 50.00

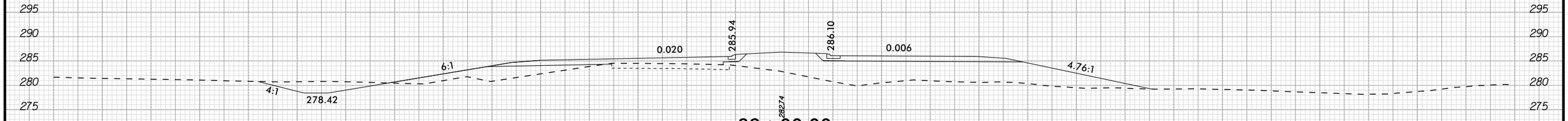
SITE 11



90 + 00.00



89 + 50.00



89 + 00.00

11/15/2021

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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INCOMPLETE PLANS
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NAD 83/NA 2011

REVISIONS
5/14/99

11/15/2021

LEGEND

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 26 OF 71

MATCHLINE -L- STA 92+50 (SEE SHEET 9)

MATCHLINE -L- STA 105+50 (SEE SHEET 11)

POND

WOODS

CULTIVATED

95+00

100+00

105+00

-L-
NC 55

FILL IN WETLAND

SITE 13

SITE 14

51 ISABEL LOREDO
DB 3258 PG 986
MB 2014 PG 313

56 JERRY TUCKER
DB 2208 PG 537
MB 2001 PG 641

KENNETH SNIPES
DB 3372 PG 76

57 CLAY GARDNER
DB 3454 PG 424

58

52 W E COLLIER
DB 2768 PG 34

53 A M COLLIER
DB 3278 PG 598

54 A M COLLIER
DB 3278 PG 600

55 NANCY CURRIN
DB 2627 PG 807
MB 2009 PG 275

49 BARBARA SMETZER
DB 2038 PG 935

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

REMOVE

15" RCP-IV

TB 2GI

18"

15"

DRIVEWAY FLARE OUT SEE DETAIL 55

DRIVEWAY FLAREOUT SEE DETAIL 55

ACCESS POINT

PUE

GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 4.0%

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

STANDARD 'V' DITCH SEE DETAIL 20 EST. 55 C.Y. DDE

SPECIAL CUT 'V' DITCH SEE DETAIL 21

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

N 48°15'11.4" W

-Y4A- ACCESS ROAD

TERMINAL END SECTION

BEGIN CONSTRUCTION
-Y4A- POT Sta. 11+40.00

DITCH ENTERING WETLAND CALCS
-L- STA. 100+25 RT

DA	0.66 AC.
C	0.50
I_{10}	6.2 IN/HR
Q_{10}	2.06 C.F.S.
V_c	1.24 F.P.S.
SLOPE	0.004 FT/FT
N	0.035
LINER TYPE	NONE

SEE SHEET 2B-2 FOR INTERSECTION DETAIL
SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 37 FOR -Y4A- PROFILE

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83/NA 2011

LEGEND

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 27 OF 71

REVISIONS
5/14/99

11/15/2021

MATCHLINE -L- STA 92+50 (SEE SHEET 9)

MATCHLINE -L- STA 105+50 (SEE SHEET 11)

SITE 13

SITE 14

FILL IN WETLAND

NC 55

-L-

-Y4A- ACCESS ROAD

POND

WOODS

CULTIVATED

95+00

100+00

105+00

TOE

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

DRIVEWAY FLARE OUT SEE DETAIL 55

DRIVEWAY FLAREOUT SEE DETAIL 55

REMOVE

TB 2GI

15" RCP-IV

18"

15"

ACCESS POINT

PUE

GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 4.0%

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

STANDARD 'V' DITCH SEE DETAIL 20 EST. 55 C.Y. DDE

SPECIAL CUT 'V' DITCH SEE DETAIL 21

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

N 48°15'11.4" W

TERMINAL END SECTION

BEGIN CONSTRUCTION
-Y4A- POT Sta. 11+40.00

DITCH ENTERING WETLAND CALCS -L- STA. 100+25 RT	
DA	0.66 AC.
C	0.50
I_{10}	6.2 IN/HR
Q_{10}	2.06 C.F.S.
V_c	1.24 F.P.S.
SLOPE	0.004 FT/FT
N	0.035
LINER TYPE	NONE

51 ISABEL LOREDO
DB 3288 PG 986
MB 2014 PG 313

52 W E COLLIER
DB 2768 PG 34

53 A M COLLIER
DB 3278 PG 598

53 A M COLLIER
DB 3278 PG 600

54 A M COLLIER
DB 3278 PG 598

55 NANCY CURRIN
DB 2627 PG 807
MB 2009 PG 275

56 JERRY TUCKER
DB 2208 PG 537
MB 2001 PG 641

57 CLAY GARDNER
DB 3454 PG 424

58 KENNETH SNIPES
DB 3372 PG 76

49 BARBARA SMETZER
DB 2038 PG 935

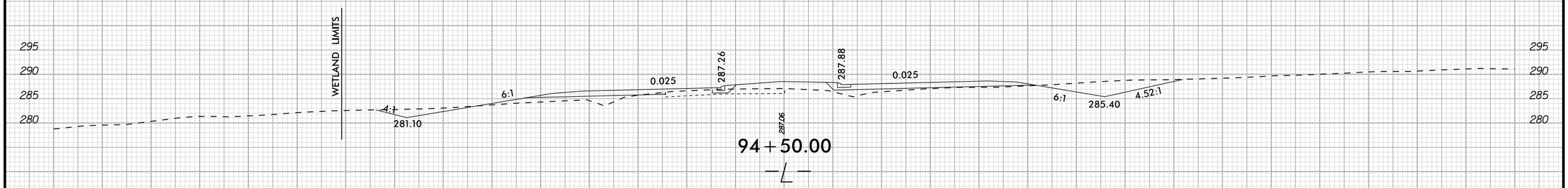
SEE SHEET 2B-2 FOR INTERSECTION DETAIL
SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 37 FOR -Y4A- PROFILE

Submitted 12/21/2021

PERMIT DRAWING
SHEET 28 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 13



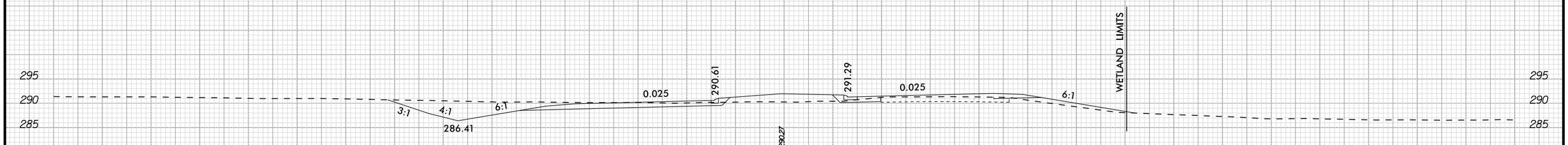
94+50.00
—℄—

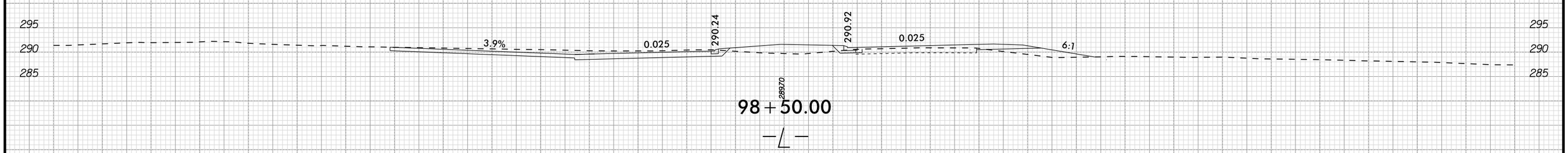
Submitted 12/21/2021

PERMIT DRAWING
SHEET 29 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 14





11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING	P P	DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING SHEET 30 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NC 2011

MATCHLINE -L- STA 105+50 (SEE SHEET 10)

MATCHLINE -L- STA 119+00 (SEE SHEET 12)

BEGIN CONSTRUCTION -Y4- POT Sta. 13+03.00

N 29° 36' 44.9" W

CURRIN HEIRS LLC DB 2612 PG 367

OLD ENNIS RD -Y4-

S 76° 21' 12.4" E

ENNIS RD 20' BST

GRADE TO DRAIN

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

REMOVE

GRADE TO DRAIN TO 15" RCP INLET

STANDARD 'V' DITCH SEE DETAIL 23

PROPOSED WORK (BY OTHERS)

(57) CLAY GARDNER DB 3454 PG 424

-Y4B- ACCESS ROAD 2

N 76° 21' 12.4" W

INV=284.63'

24" RCP

RETAIN

BEGIN CONSTRUCTION -Y4B- POT Sta. 15+05.00

110+00

(59) CLAY GARDNER DB 3454 PG 424 MB 2009 PG 277

WOODS

GRADE TO DRAIN

STANDARD 4' BASE DITCH SEE DETAIL 26 BEGIN ELEV. 284.09 END ELEV. 281.50 GRADE AT 3.35% EST. 40 C.Y. DDE EST. 100 TONS CL-I RIPRAP EST. 220 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 2' BASE DITCH SEE DETAIL 56

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

-L- NC 55

SITE 15

TB 2GI

15" RCP-IV

48" RCP-IV

DI

RIPRAP PAD AT OUTLET 26 TONS CL-I RIPRAP 50 S.Y. GFD

(58) CLAY GARDNER DB 3454 PG 422 MB 2009 PG 275

N 48° 15' 11.4" W

-Y4A- ACCESS ROAD 1

N 47° 59' 00.9" W

END CONSTRUCTION -Y4A- POT Sta. 12+90.74

(55) NANCY CURRIN DB 2627 PG 807 MB 2009 PG 275

BEGIN CONSTRUCTION -Y4A- POT Sta. 17+50.00

CULTIVATED

15+00

20+00

25+00

BACKFILL POND AS NECESSARY TO ESTABLISH MIN. DEPTH IN DITCH. EST. 420 C.Y. BACKFILL

DRAIN POND VIA STANDARD 8' BASE DITCH SEE DETAIL 52 APPROX. GRADE =1.0% EST. 450 TONS CL-I RIPRAP EST. 800 S.Y. GFD EST. 150 C.Y. DDE

PDE

SITE 16

STANDARD 4' BASE DITCH SEE DETAIL 28 GRADE AT 0.6% EST. 100 C.Y. DDE EST. 60 TONS CL-II RIPRAP EST. 150 S.Y. GFD

STANDARD 4' BASE DITCH SEE DETAIL 27 GRADE AT 0.6% EST. 110 C.Y. DDE EST. 45 TONS CL-I RIPRAP EST. 140 S.Y. GFD

(102) NANCY CURRIN DB 2933 PG 858 MB 2009 PG 277

(59) CLAY GARDNER DB 3454 PG 424 MB 2009 PG 277

(101) LINDA SEALE DB 3454 PG 424

N 22° 29' 23.7" E

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

DO NOT DISTURB TREE

(60) HERMAN WOOD DB 904 PG 981

SPECIAL CUT 'V' DITCH SEE DETAIL 25

30" RCP-IV

RIPRAP PAD AT OUTLET 11 TONS CL-I RIPRAP 22 S.Y. GFD

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 36 EST. 180 TONS CL-I RIPRAP EST. 410 S.Y. GFD

S 78° 06' 51.3" W

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

SPECIAL CUT DITCH SEE DETAIL 21

NC 55 -Y4- BUSINESS N 48° 18' 23.2" W

END CONSTRUCTION -Y4- POT Sta. 25+77.00

DITCH ENTERING WETLAND CALCS -L- STA. 106+30 TO 108+40 LT	
DA	2.05 AC.
C (FUTURE)	0.52
I_{10}	6.2 IN./HR
Q_p (FUTURE)	6.63 C.F.S
V_p (FUTURE)	1.88 F.P.S
SLOPE	0.022 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 108+40 TO 109+00 LT	
DA	1.63 AC.
C (FUTURE)	0.50
I_{10}	6.2 IN./HR
Q_p (FUTURE)	5.05 C.F.S
V_p (FUTURE)	1.94 F.P.S
SLOPE	0.008 FT/FT
N	0.035
LINER TYPE	NONE

OUTFALL DITCH THROUGH WETLAND CALCS -L- STA. 108+30 HEAD DITCH	
DA	20.53 AC.
C (FUTURE)	0.50
I_{10}	5.2 IN./HR
Q_p (FUTURE)	53.45 C.F.S
V_p (FUTURE)	3.76 F.P.S
SLOPE	0.033 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 108+50 TO 109+50 RT	
DA	0.78 AC.
C	0.33
I_{10}	6.2 IN./HR
Q_p	1.59 C.F.S
V_p	1.10 F.P.S
SLOPE	0.004 FT/FT
N	0.035
LINER TYPE	NONE

DITCH ENTERING WETLAND CALCS -Y4- STA. 22+00 TO 22+40 LT	
DA	2.01 AC.
C (FUTURE)	0.51
I_{10}	6.2 IN./HR
Q_p (FUTURE)	6.32 C.F.S
V_p (FUTURE)	1.98 F.P.S
SLOPE	0.009 FT/FT
N	0.035
LINER TYPE	NONE

DITCH ENTERING WETLAND CALCS -Y4- STA. 21+10 TO 22+00 LT	
DA	4.98 AC.
C (FUTURE)	0.56
I_{10}	6.2 IN./HR
Q_p (FUTURE)	17.20 C.F.S
V_p (FUTURE)	2.92 F.P.S
SLOPE	0.05 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

SEE SHEET 2B-2 & 2B-5 FOR INTERSECTION DETAIL
SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 34 FOR -Y4- PROFILE
SEE SHEET 37 FOR -Y4A- PROFILE
SEE SHEET 38 FOR -Y4B- PROFILE

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING	P P	DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING
SHEET 31 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NC 2011

MATCHLINE -L- STA 105+50 (SEE SHEET 10)

MATCHLINE -L- STA 119+00 (SEE SHEET 12)

BEGIN CONSTRUCTION -Y4B- POC Sta. 10+02.00
END CONSTRUCTION -Y4B- POC Sta. 11+10.00

BEGIN CONSTRUCTION -Y4B- POT Sta. 15+05.00

BEGIN CONSTRUCTION -Y4- POT Sta. 13+03.00

END CONSTRUCTION -Y4A- POT Sta. 12+90.74

BEGIN CONSTRUCTION -Y4A- POT Sta. 17+50.00

END CONSTRUCTION -Y4- POT Sta. 25+77.00

-Y4B- ACCESS ROAD 2 — N 76° 21' 12.4" W

-Y4A- ACCESS ROAD 1 — N 48° 15' 11.4" W

-Y4- OLD ENNIS RD — S 76° 21' 12.4" E

-L- NC 55 — N 22° 29' 23.7" E

NC 55 (-Y4- BUSINESS) — N 48° 18' 23.2" W

S 78° 06' 51.3" W — N 47° 59' 00.3" W — N 29° 36' 44.9" W

SITE 15

SITE 16

CLAY GARDNER DB 3454 PG 424 — (57)
CLAY GARDNER DB 3454 PG 424 MB 2009 PG 277 — (59)
CLAY GARDNER DB 3454 PG 424 MB 2009 PG 277 — (59)
CLAY GARDNER DB 3454 PG 424 MB 2009 PG 277 — (59)
CLAY GARDNER DB 3454 PG 424 MB 2009 PG 277 — (59)
CLAY GARDNER DB 3454 PG 422 MB 2009 PG 275 — (58)
NANCY CURRIN DB 2627 PG 807 MB 2009 PG 275 — (55)
NANCY CURRIN DB 2933 PG 858 MB 2009 PG 277 — (102)
CURRIN HEIRS LLC DB 2612 PG 367
HERMAN WOOD DB 904 PG 981 — (60)
LINDA SEALE DB 3454 PG 424 — (101)

PROPOSED WORK (BY OTHERS)

STANDARD 'V' DITCH SEE DETAIL 23

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

REMOVE

GRADE TO DRAIN

GRADE TO DRAIN TO 15" RCP INLET

RETAIN

DO NOT DISTURB TREE

STANDARD '4' BASE DITCH
SEE DETAIL 26
BEGIN ELEV. 284.09
END ELEV. 281.50
GRADE AT 3.35%
EST. 40 C.Y. DDE
EST. 100 TONS CL-I RIPRAP
EST. 220 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 2' BASE DITCH SEE DETAIL 56

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 28
EST. 100 TONS CL-II RIPRAP
EST. 150 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

RIPRAP PAD AT OUTLET
20 TONS CL-I RIPRAP
50 S.Y. GFD

BACKFILL POND AS NECESSARY TO ESTABLISH MIN. DEPTH IN DITCH.
EST. 420 C.Y. BACKFILL

DRAIN POND VIA STANDARD 8" BASE DITCH SEE DETAIL 52
APPROX. GRADE = 1.0%
EST. 450 TONS CL-I RIPRAP
EST. 800 S.Y. GFD
EST. 150 C.Y. DDE

SPECIAL CUT 'V' DITCH SEE DETAIL 25

RIPRAP PAD AT OUTLET
11 TONS CL-I RIPRAP
22 S.Y. GFD

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 36
EST. 180 TONS CL-I RIPRAP
EST. 410 S.Y. GFD

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

SPECIAL CUT DITCH SEE DETAIL 21

STANDARD 4' BASE DITCH
SEE DETAIL 28
GRADE AT 0.6%
EST. 100 C.Y. DDE
EST. 60 TONS CL-II RIPRAP
EST. 150 S.Y. GFD

STANDARD 4' BASE DITCH
SEE DETAIL 27
GRADE AT 0.6%
EST. 110 C.Y. DDE
EST. 45 TONS CL-I RIPRAP
EST. 140 S.Y. GFD

15" RCP-IV — 30" RCP-IV — 48" RCP-IV — TB 2GI — DI — PDE — TDE — REMOVE

DITCH ENTERING WETLAND CALCS -L- STA. 106+30 TO 108+40 LT	
DA	2.05 AC.
C (FUTURE)	0.52
I_m	6.2 IN./HR
Q_p (FUTURE)	6.63 C.F.S
V_p (FUTURE)	1.88 F.P.S
SLOPE	0.022 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 108+40 TO 109+00 LT	
DA	1.63 AC.
C (FUTURE)	0.50
I_m	6.2 IN./HR
Q_p (FUTURE)	5.05 C.F.S
V_p (FUTURE)	1.94 F.P.S
SLOPE	0.008 FT/FT
N	0.035
LINER TYPE	NONE

OUTFALL DITCH THROUGH WETLAND CALCS -L- STA. 108+30 HEAD DITCH	
DA	20.53 AC.
C (FUTURE)	0.50
I_m	5.2 IN./HR
Q_p (FUTURE)	53.45 C.F.S
V_p (FUTURE)	3.76 F.P.S
SLOPE	0.033 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

DITCH ENTERING WETLAND CALCS -L- STA. 108+50 TO 109+50 RT	
DA	0.78 AC.
C	0.33
I_m	6.2 IN./HR
Q_p	1.59 C.F.S
V_p	1.10 F.P.S
SLOPE	0.004 FT/FT
N	0.035
LINER TYPE	NONE

DITCH ENTERING WETLAND CALCS -Y4- STA. 22+00 TO 22+40 LT	
DA	2.01 AC.
C (FUTURE)	0.51
I_m	6.2 IN./HR
Q_p (FUTURE)	6.32 C.F.S
V_p (FUTURE)	1.98 F.P.S
SLOPE	0.009 FT/FT
N	0.035
LINER TYPE	NONE

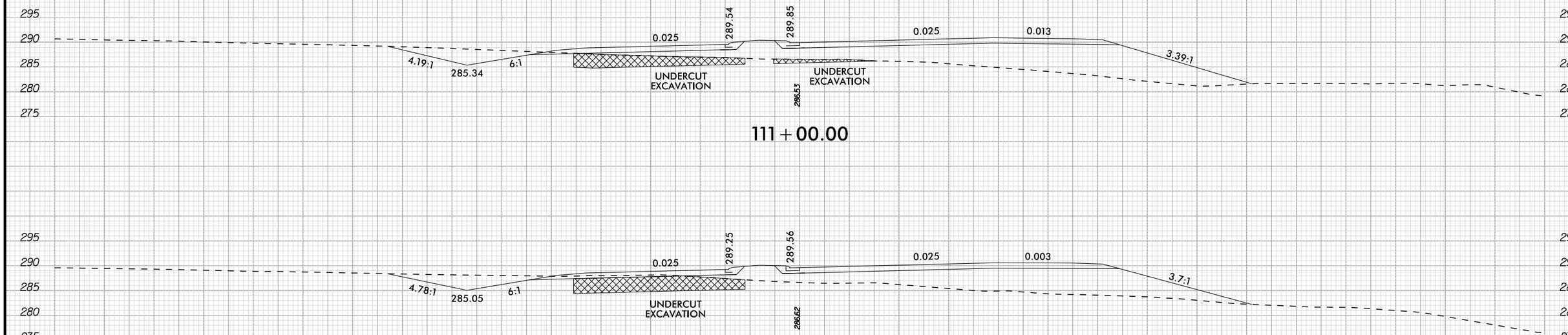
DITCH ENTERING WETLAND CALCS -Y4- STA. 21+10 TO 22+00 LT	
DA	4.98 AC.
C (FUTURE)	0.56
I_m	6.2 IN./HR
Q_p (FUTURE)	17.20 C.F.S
V_p (FUTURE)	2.92 F.P.S
SLOPE	0.05 FT/FT
N	0.072
LINER TYPE	CL-I RIPRAP

SEE SHEET 2B-2 & 2B-5 FOR INTERSECTION DETAIL
SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 34 FOR -Y4- PROFILE
SEE SHEET 37 FOR -Y4A- PROFILE
SEE SHEET 38 FOR -Y4B- PROFILE

Submitted 12/21/2021

PERMIT DRAWING
SHEET 32 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -



11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	

PERMIT DRAWING SHEET 33 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

CHRISTOPHER SCOTT DB 1268 PG 466
CLYDE SNYDER DB 1223 PG 264
JOHNNY PEARCE DB 3011 PG 477
CECIL AUSLEY DB 2006 PG 688
DETRICE JOHNSON DB 3544 PG 730
ADRIANO ALVAREZ DB 2199 PG 280
JUAN GONZALEZ DB 2377 PG 712 PC# F PG 620A
DAVID FELDMANN DB 3586 PG 623 PC# RCPG 620A
HERMAN WOOD DB 904 PG 981
HERMAN WOOD DB 612 PG 58
JAMES BURGIN DB 1880 PG 98 MB 2000 PG 565
JAMES BURGIN DB 1321 PG 0296
TONY MABRY DB 1417 PG 6 MB 2000 PG 279

HEDGE ROW
WOODS
CULTIVATED
CLEAN WATER DIVERSION
ACCESS POINT

120+00
125+00
130+00
10+00

OLD ENNIS RD
N 67° 11' 39.9" W
ENNIS RD 20' BST

TERMINAL END SECTION
END CONSTRUCTION
-Y5B- POT Sta. 13+19.00

BEGIN CONSTRUCTION
-Y5B- POT Sta. 12+15.00

SPECIAL CUT DITCH SEE DETAIL 25
FALSE SUMP TO ELEV. 286.7' SEE DETAIL 14
SPECIAL LATERAL 'V' DITCH SEE DETAIL 1
FALSE SUMP TO ELEV. 287.0' SEE DETAIL 14
FALSE SUMP TO ELEV. 286.5' SEE DETAIL 14
PIPE FLAREOUT SEE DETAIL 55
SPECIAL LATERAL 'V' DITCH SEE DETAIL 22
STANDARD 'V' DITCH SEE DETAIL 37 EST. 40 TONS CL-B RIPRAP EST. 90 S.Y. GFD EST. 180 C.Y. DDE GRADE AT 2.7%
REMOVE
SPECIAL LATERAL 'V' DITCH SEE DETAIL 38 EST. 20 C.Y. DDE

RETAIN
15" RCP
15" RCP-IV
24" RCP-IV
48" RCP-IV (BURIED 0.8')
48" HW
TB 2GI
TB 2GI-A
DI

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

RIPRAP PAD AT OUTLET
3 TONS CL-B RIPRAP
10 S.Y. GFD

RIPRAP PAD AT OUTLET
15 TONS CL-I RIPRAP
30 S.Y. GFD

SITE 17
SITE 18

MATCHLINE -L- STA 119+00 (SEE SHEET 11)
MATCHLINE -L- STA 133+00 (SEE SHEET 13)

SEE SHEET 2B-2 & 2B-3 FOR INTERSECTION DETAIL
SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 38 FOR -Y5A- PROFILE

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	

PERMIT DRAWING SHEET 34 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE -L- STA 119+00 (SEE SHEET 11)

MATCHLINE -L- STA 133+00 (SEE SHEET 13)

OPHER SCOTT
:68 PG 466

CLYDE SNYDER
DB 1223 PG 264

JOHNNY PEARCE
DB 5011 PG 477

CECIL AUSLEY
DB 2006 PG 688

DETRICE JOHNSON
DB 3544 PG 730

ADRIANO ALVAREZ
DB 2199 PG 280

JUAN GONZALEZ
DB 2377 PG 712
PC# F PG 620A

DAVID FELDMANN
DB 3586 PG 623
PC# RCPG 620A

HERMAN WOOD
DB 904 PG 981

HERMAN WOOD
DB 612 PG 58

JAMES BURGIN
DB 1880 PG 98
MB 2000 PG 56

JAMES BURGIN
DB 1880 PG 98
MB 2000 PG 56

TONY MABRY
DB 1417 PG 6
MB 2000 PG 278

HERMAN WOOD
DB 904 PG 981

JAMES BURGIN
DB 1321 PG 0296

OLD ENNIS RD
N 67° 11' 39.9" W

ENNIS RD 20' BIST

TERMINAL END SECTION
END CONSTRUCTION
-Y5B- POT. Sta. 13+19.00

BEGIN CONSTRUCTION
-Y5B- POT. Sta. 12+15.00

SITE 17

SITE 18

RETAIN

SPECIAL CUT DITCH SEE DETAIL 25

FALSE SUMP TO ELEV. 286.2' SEE DETAIL 14

FALSE SUMP TO ELEV. 287.6' SEE DETAIL 14

FALSE SUMP TO ELEV. 286.5' SEE DETAIL 14

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

SPECIAL LATERAL 'V' DITCH SEE DETAIL 38 EST. 20 C.Y. DDE

STANDARD 'V' DITCH SEE DETAIL/37 EST. 40 TONS CL-B RIPRAP EST. 90 S.Y. GFD EST. 180 C.Y. DDE GRADE AT 2.7%

REMOVE

CLEAN WATER DIVERSION

ACCESS POINT

PIPE FLAREOUT SEE DETAIL 55

15" RCP-IV

24" RCP-IV

48" RCP-IV (BURIED 0.8')

48" HW

TB 2GI

TB 2GI-A

DI

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

RIPRAP PAD AT OUTLET
3 TONS CL-B RIPRAP
10 S.Y. GFD

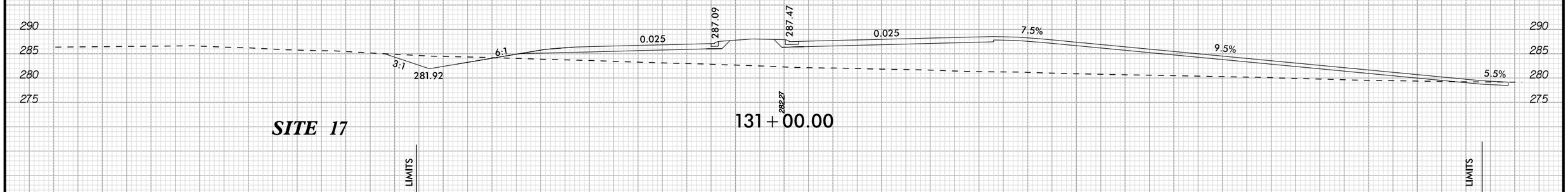
RIPRAP PAD AT OUTLET
15 TONS CL-I RIPRAP
30 S.Y. GFD

SEE SHEET 2B-2 & 2B-3 FOR INTERSECTION DETAIL
SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 38 FOR -Y5A- PROFILE

Submitted 12/21/2021

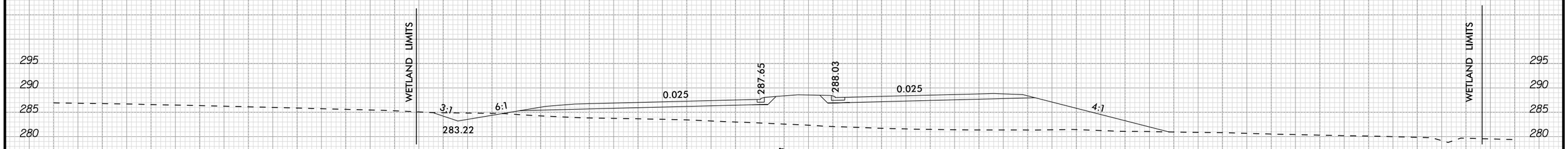
PERMIT DRAWING
SHEET 35 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

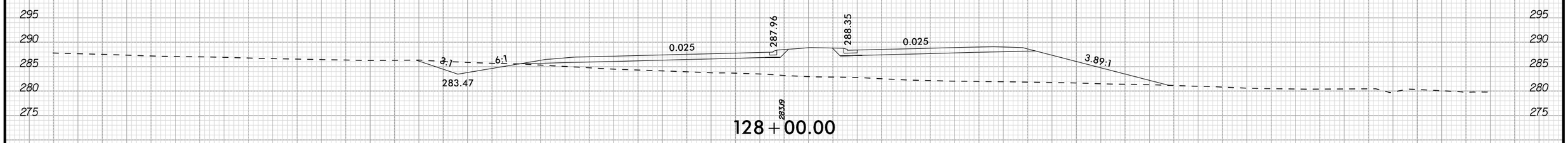


SITE 17

131+00.00



128+50.00



128+00.00

11/15/2021

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS
5/14/99

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- P P — DENOTES IMPACTS IN SURFACE WATER (POND)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 36 OF 71

NAD 83/NA 2011

-Y5- SR 1540 (MONTAGUE RD)
N 0° 58' 22" E

BEGIN CONSTRUCTION
-Y5- POT Sta. 19+76.00

135+00
20+00
140+00
145+00

DITCH WETLAND CALCS -L- STA. 140+00 LT.	
DA	2.05 AC.
C (FUTURE)	0.55
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	6.99 C.F.S.
V_{10} (FUTURE)	1.96 F.P.S.
SLOPE	0.007 FT/FT
N	0.04
LINER TYPE	GRASS

JON SALSBURY
DB 2382 PG 966
PC# F PG 620A

JUAN GONZALEZ
DB 2377 PG 712
PC# F PG 620A

(104) DAVID FELDMANN
DB 3586 PG 623
PC# F PG 620A

(103) BENNIE MANGUM
DB 799 PG 611

(64) JOSEPH LIPSCOMB
DB 1903 PG 67

(65) WILLIAM HAWLEY
DB 1889 PG 108
MB 2016 PG 67

(66) WILLIAM HAWLEY
DB 1889 PG 108
MB 2016 PG 67

(62) TONY MABRY
DB 1417 PG 6
MB 2000 PG 279

(63) CHRISTY JORDAN
DB 3524 PG 729
MB 2000 PG 466

(105) STEPHEN YEO
DB 3359 PG 962
MB 2000 PG 466

(67) DANIEL HONEYCUTT
DB 3182 PG 966

SHIRLEY HAWLEY
DB 3184 PG 180

LETESHA WYNN
DB 2436 PG 830
MB 2006 PG 466

BOBBY MABRY
DB 3404 PG 350
MB 2016 PG 25

THOMAS NORMAN
DB 2175 PG 234

CULTIVATED

SITE 19

N 22° 47' 34.0" W

-L- NC 55

S 84° 06' 40.8" W

N 46° 27' 13.9" W

N 47° 29' 43.8" W

-Y5A- SR 1543 (LEWIS RD)

MATCHLINE -L- STA 133+00 (SEE SHEET 12)

MATCHLINE -L- STA 146+50 (SEE SHEET 14)

END CONSTRUCTION
-Y5A- POT Sta. 13+80.00

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

STANDARD 'V' DITCH SEE DETAIL 29 EST. 5 C.Y. DDE APPROX. GRADE=3.6%

SPECIAL CUT 'V' DITCH SEE DETAIL 30

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

20' RIPRAP PAD AT OUTLET 16 TONS CL-B RIPRAP 44 S.Y. GFD

GRADE TO DRAIN REMOVE ABANDONED DRIVEWAY

GRADE TO DRAIN APPROX. GRADE=4.0%

RETAIN

ACCESS POINT

REMOVE

15" RCP-IV

30" RCP-IV

24" RCP-IV

TB 2GI

TB 2GI-A

DI

PUE

SEE SHEET 2B-3 FOR INTERSECTION DETAIL
SEE SHEET 29 FOR -L- PROFILE
SEE SHEETS 34 AND 35 FOR -Y5- PROFILE

Submitted 12/21/2021

REVISIONS 5/14/99

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- P P — DENOTES IMPACTS IN SURFACE WATER (POND)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 37 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE -L- STA 133+00 (SEE SHEET 12)

MATCHLINE -L- STA 146+50 (SEE SHEET 14)

-Y5- SR 1540 (MONTAGUE RD) E
N 0°58'22" E

-Y5A- SR 1543 (LEWIS RD)
N 47°29'43.8" W

-L- NC 55
S 84°06'40.8" W

BEGIN CONSTRUCTION
-Y5- POT Sta. 19+76.00

END CONSTRUCTION
-Y5A- POT Sta. 13+80.00

SITE 19

N 22°47'34.0" W

N 46°27'13.9" W

135+00 | 140+00 | 145+00 | 20+00

DITCH WETLAND CALCS -L- STA. 140+00 LT.	
DA	2.05 AC.
C (FUTURE)	0.55
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	6.99 C.F.S.
V_{10} (FUTURE)	1.96 F.P.S.
SLOPE	0.007 FT/FT
N	0.04
LINER TYPE	GRASS

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

GRADE TO DRAIN APPROX GRADE = 4.0%

REMOVE

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

20' RIPRAP PAD AT OUTLET
16 TONS CL-B RIPRAP
44 S.Y. GFD

GRADE TO DRAIN
REMOVE ABANDONED DRIVEWAY

STANDARD 'V' DITCH
SEE DETAIL 29
EST. 5 C.Y. DDE
APPROX. GRADE = 3.0%

SPECIAL CUT 'V' DITCH
SEE DETAIL 30

RETAIN

ACCESS POINT

TB 2GI | TB 2GI-A | 15" RCP-IV | 24" RCP-IV | 30" RCP-IV | DI

JON SALISBURY
DB 2382 PG 966
PC# F PG 620A

JUAN GONZALEZ
DB 2377 PG 712
PC# F PG 620A

DAVID FELDMANN
DB 3586 PG 623
PC# F PG 620A

BENNIE MANGUM
DB 799 PG 611

JOSEPH LIPSCOMB
DB 1903 PG 67

WILLIAM HAWLEY
DB 1889 PG 108
MB 2016 PG 67

TONY MABRY
DB 1417 PG 6
MB 2000 PG 279

CHRISTY JORDAN
DB 3524 PG 729
MB 2000 PG 466

STEPHEN YEO
DB 3359 PG 962
MB 2000 PG 466

LETESHA WYNN
DB 2136 PG 830
MB 2000 PG 466

BOBBY MABRY
DB 3404 PG 350
MB 2016 PG 25

SHIRLEY HAWLEY
DB 3184 PG 180

DANIEL HONEYCUTT
DB 3182 PG 966

THOMAS NORMAN
DB 2175 PG 234

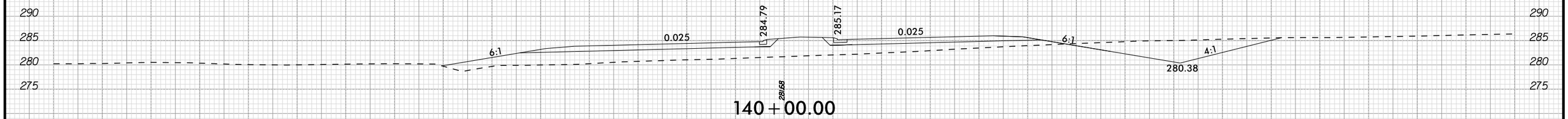
CULTIVATED

SEE SHEET 2B-3 FOR INTERSECTION DETAIL
SEE SHEET 29 FOR -L- PROFILE
SEE SHEETS 34 AND 35 FOR -Y5- PROFILE

Submitted 12/21/2021

PERMIT DRAWING
SHEET 38 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

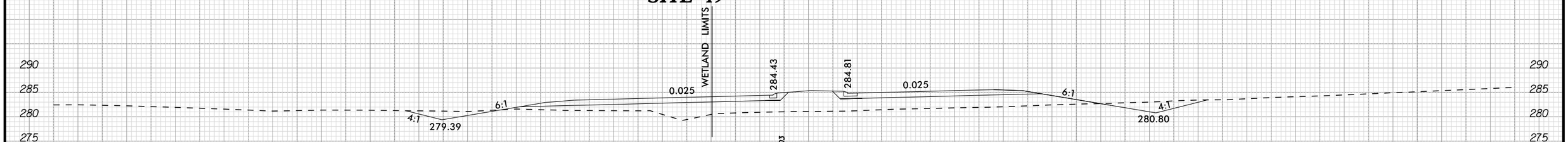


140+00.00



139+50.00

SITE 19



139+00.00

11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING		

PERMIT DRAWING
SHEET 39 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

66 WILLIAM HAWLEY
DB 1889 PG 108
MB 2016 PG 67

67 DANIEL HONEYCUTT
DB 3182 PG 966

68 SUNFLIGHT LLC
DB 1690 PG 178

69 STEVEN WICKER
DB 1889 PG 51
MB 2004 PG 81

70 NORDAN FARMS INC
DB 1690 PG 178

MATCHLINE -L- STA 146+50 (SEE SHEET 13)

MATCHLINE -L- STA 160+50 (SEE SHEET 15)

150+00

155+00

160+00

-L- NC 55

S 84° 06' 40.8" W

SITE 20

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 17

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

LATERAL 'V' DITCH
SEE DETAIL 10
EST. 80 C.Y. DDE

EST. 45 TONS CL-I RIPRAP ON BANKS
EST. 10 TONS COUNTERSUNK
CL-I RIPRAP IN STREAM BED
SUPPLEMENT VOIDS W/
EST. 3 TONS CL-B RIPRAP
EST. 70 S.Y. GFD
SEE DETAIL 46

66" RCP-IV
(1.0' BURIED)

TB 2GI-A
15" RCP-IV

TB 2GI
15" RCP-IV

TB 2GI
15" RCP-IV

TB 2GI
15" RCP-IV

REMOVE

66" RCP-IV
(1.0' BURIED)

SPECIAL LATERAL
2' BASE DITCH
SEE DETAIL 16

SPECIAL LATERAL
2' BASE DITCH
SEE DETAIL 16

SPECIAL CUT 'V' DITCH
SEE DETAIL 21

PIPE FLAREOUT
SEE DETAIL 55

PIPE FLAREOUT
SEE DETAIL 55

ACCESS POINT

ACCESS POINT

ACCESS POINT

CLEAN WATER DIVERSION

SEDIMENT CONTROL BASIN

CULTIVATED

POND

GR

12" WD

SOIL

DITCH WETLAND CALCS -L- STA. 154+05 RT.	
DA	8.21 AC.
C (FUTURE)	0.50
I	5.2 IN./HR
Q_{10} (FUTURE)	21.32 C.F.S.
V_c (FUTURE)	3.46 F.P.S.
SLOPE	0.015 FT/FT
N	0.035
LINER TYPE	GRASS

DESIGN NOTE:
UNABLE TO ACHIEVE <2 FPS VELOCITY INTO WETLAND DUE TO EXISTING DITCH HAVING >2 FPS VELOCITY INTO WETLAND (SEE CALCULATIONS ABOVE)

SEE SHEET 2B-3 FOR INTERSECTION DETAIL
SEE SHEET 30 FOR -L- PROFILE

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

REVISIONS
5/14/99

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	

PERMIT DRAWING
SHEET 40 OF 71

MATCHLINE -L- STA 146+50 (SEE SHEET 13)

MATCHLINE -L- STA 160+50 (SEE SHEET 15)

-L- NC 55

S 84° 06' 40.8" W

150+00

155+00

160+00

SITE 20

67 DANIEL HONEYCUTT DB 3182 PG 966

68 SUNFLIGHT LLC DB 1690 PG 178

69 STEVEN WICKER DB 1889 PG 51 MB 2004 PG 81

70 NORDAN FARMS INC DB 1690 PG 178

SPECIAL LATERAL 'V' DITCH SEE DETAIL 17

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

LATERAL 'V' DITCH SEE DETAIL 10 EST. 80 C.Y. DDE

EST. 45 TONS CL-I RIPRAP ON BANKS
EST. 10 TONS COUNTERSUNK CL-I RIPRAP IN STREAM BED SUPPLEMENT VOIDS W/ EST. 3 TONS CL-B RIPRAP
EST. 70 S.Y. GFD
SEE DETAIL 46

66" RCP-IV (1.0' BURIED)

TB 2GI-A

TB 2GI

15" RCP-IV

REMOVE

SPECIAL CUT 'V' DITCH SEE DETAIL 21

SPECIAL LATERAL 2' BASE DITCH SEE DETAIL 16

PIPE FLAREOUT SEE DETAIL 55

ACCESS POINT

SEDIMENT CONTROL BASIN

CLEAN WATER DIVERSION

CULTIVATED

POND

DITCH WETLAND CALCS -L- STA. 154+05 RT.	
DA	8.21 AC.
C (FUTURE)	0.50
I_{10}	5.2 IN./HR
Q_{10} (FUTURE)	21.32 C.F.S.
V_c (FUTURE)	3.46 F.P.S.
SLOPE	0.015 FT/FT
N	0.035
LINER TYPE	GRASS

DESIGN NOTE:
UNABLE TO ACHIEVE <2 FPS VELOCITY INTO WETLAND DUE TO EXISTING DITCH HAVING >2 FPS VELOCITY INTO WETLAND (SEE CALCULATIONS ABOVE)

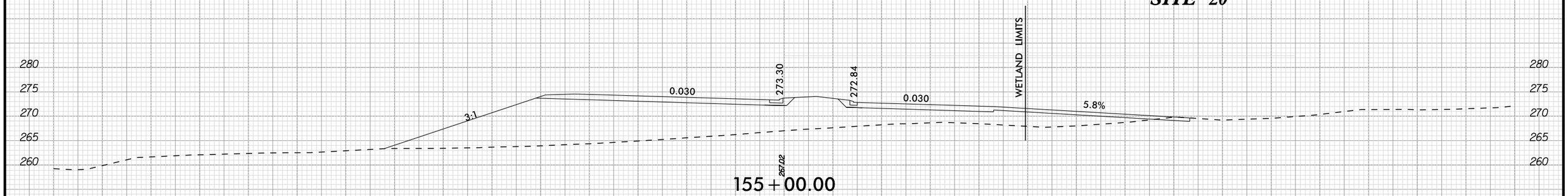
SEE SHEET 2B-3 FOR INTERSECTION DETAIL
SEE SHEET 30 FOR -L- PROFILE

Submitted 12/21/2021

PERMIT DRAWING
SHEET 41 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 20



155 + 00.00

154 + 50.00

154 + 25.00

154 + 00.00

—℄—

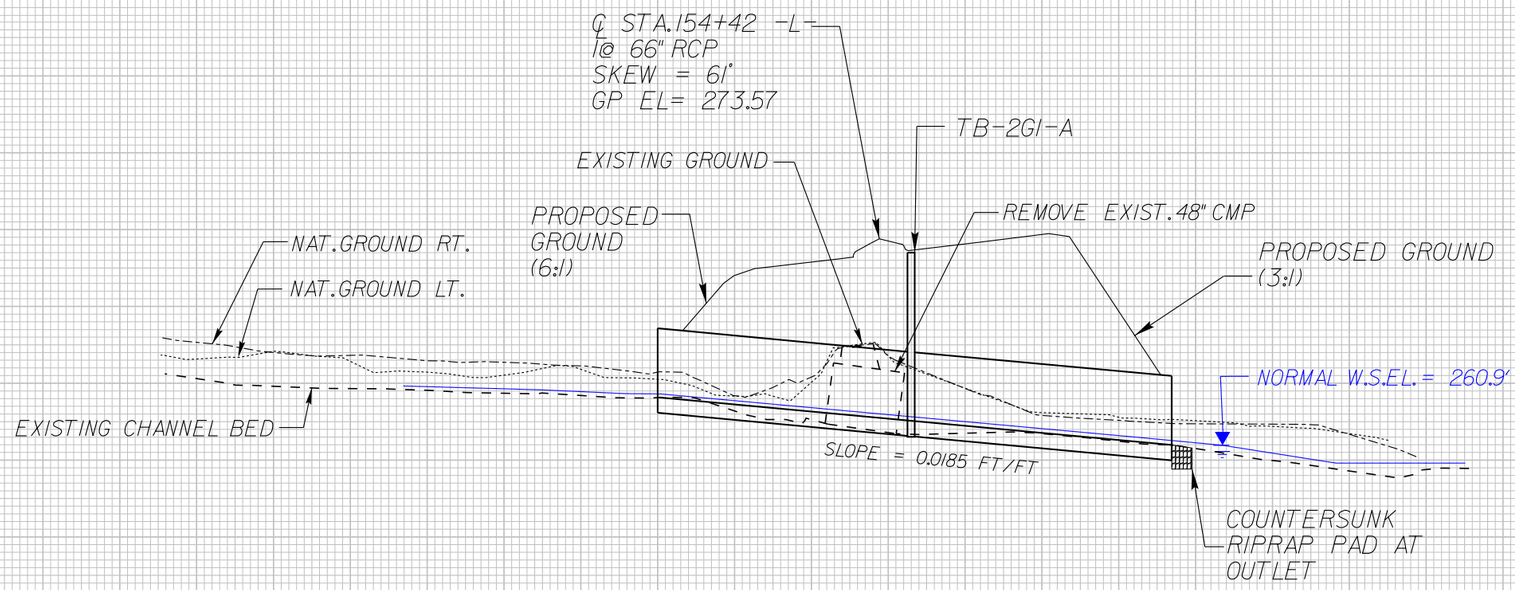
11/15/2021

Submitted 12/21/2021

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

PERMIT DRAWING SHEET 42 OF 71

SITE 20



11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 43 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE -L- STA 160+50 (SEE SHEET 14)

MATCHLINE -L- STA 174+50 (SEE SHEET 16)

SITE 22

SITE 21

SITE 23

-Y6- SR 1542 (OLD BUIES CREEK RD) N 12° 08' 31" E

-Y6- SR 1542 (OLD BUIES CREEK RD) N 46° 38' 57.9" E

-Y6A- GARDNER RD N 85° 26' 54.9" W

-L- NC 55

N 87° 24' 27.9" W

N 89° 47' 18.5" W

BEGIN CONSTRUCTION -Y6- POT Sta.13+41.00

END CONSTRUCTION -Y6- POT Sta.22+44.00

END CONSTRUCTION -DRW2- PT Sta. 12+00.00

BEGIN CONSTRUCTION -Y6A- POC Sta. 16+66.00

END CONSTRUCTION -Y6A- POC Sta. 18+19.00

END CONSTRUCTION -Y6A- POC Sta.11+17.00 DO NOT DISTURB TREES

165+00 | 170+00 | 15+00 | 15+00 | 20+00

(72) SUNFLIGHT LLC DB 1690 PG 178

(73) SUNFLIGHT LLC DB 1690 PG 178

(68) SUNFLIGHT LLC DB 1690 PG 178

(71) JAMIE MASON DB 2721PG 84

(70) NORDAN FARMS INC DB 1690 PG 178

(106) CONNIE ADAMS DB 950 PG 790

(107) GILBERT RITTER DB 1183 PG 808

(74) DOUGLAS WILLIAMS DB 2663 PG 491

(81) SUNNY DEAN DB 3502 PG 424 MB 2015 PG 249

CONNIE RITTER DB 1857 PG 257

CHRISTIAN CRUZ DB 3447 PG 522

RICHARD MILLER DB 3415 PG 856 MB 2004 PG 428

NORDAN FARMS INC DB 1690 PG 178

STANDARD 6' BASE DITCH
SEE DETAIL 64
EST. 20 C.Y. DDE
EST. 50 TONS CL-I RIP RAP
EST. 100 S.Y. GFD

TOE PROTECTION
SEE DETAIL 12
EST. 42 TONS CL-B RIPRAP
EST. 130 S.Y. GFD

RETAIN

POND

INV=260.10'

15" RCP

PDE

36" RCP-IV

15" RCP-IV

TB 2GI-A

DI

REMOVE

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

24" RCP-IV

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

PUE

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

FALSE SUMP TO ELEV. 279.9' SEE DETAIL 32

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 33

SPECIAL LATERAL 'V' DITCH SEE DETAIL 50

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

SPECIAL CUT DITCH SEE DETAIL 21

GRADE TO DRAIN

DO NOT DISTURB WELL

CULTIVATED

GARDNER RD 20' BST

EXIST R/W

ACCESS POINT

TERMINAL END SECTION

STANDARD 'V' DITCH
SEE DETAIL 29
EST. 35 C.Y. DDE
APPROX. GRADE=2.0%

30" RCP-IV

DITCH WETLAND CALCS -L- STA. 161+80 RT	
DA	0.63 AC.
C (FUTURE)	0.56
I_{10}	6.2 IN./HR
Q_p (FUTURE)	2.17 C.F.S
V_p (FUTURE)	1.76 F.P.S
SLOPE	0.016 FT/FT
N	0.035
LINER TYPE	GRASS

DITCH WETLAND CALCS -L- STA. 161+80 RT	
DA	2.42 AC.
C (FUTURE)	0.55
I_{10}	6.2 IN./HR
Q_p (FUTURE)	7.78 C.F.S
V_p (FUTURE)	1.53 F.P.S
SLOPE	0.004 FT/FT
N	0.35
LINER TYPE	GRASS

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 44 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE -L- STA 160+50 (SEE SHEET 14)

MATCHLINE -L- STA 174+50 (SEE SHEET 16)

SITE 22

SITE 23

SITE 21

BEGIN CONSTRUCTION -Y6- POT Sta.13+41.00

END CONSTRUCTION -DRW2- PT Sta. 12+00.00

END CONSTRUCTION -Y6- POT Sta.22+44.00

BEGIN CONSTRUCTION -Y6A- POC Sta.16+66.00

END CONSTRUCTION -Y6A- POC Sta.11+17.00
DO NOT DISTURB TREES

END CONSTRUCTION -Y6A- POC Sta.18+19.00

-Y6- SR 1542 (OLD BUIES CREEK RD) N 12° 08' 31" E

-Y6- SR 1542 (OLD BUIES CREEK RD) N 46° 38' 57" E

-Y6A- GARDNER RD N 85° 26' 54" W

-L- NC 55

N 87° 24' 27" W

N 89° 47' 18.6" W

15+00

165+00

170+00

20+00

15+00

SUNFLIGHT LLC DB 1690 PG 178 (72)

SUNFLIGHT LLC DB 1690 PG 178 (68)

SUNFLIGHT LLC DB 1690 PG 178 (73)

DOUGLAS WILLIAMS DB 2663 PG 491 (74)

JAMIE MASON DB 2721 PG 84 (71)

NORDAN FARMS INC DB 1690 PG 178 (70)

CONNIE ADAMS DB 950 PG 790 (106)

GILBERT RITTER DB 1183 PG 808 (107)

CONNIE RITTER DB 1857 PG 257

CHRISTIAN CRUZ DB 3447 PG 522

RICHARD MILLER DB 3416 PG 856 MB 2004 PG 428

SUNNY DEAN DB 3502 PG 424 MB 2015 PG 249

NORDAN FARMS INC DB 1690 PG 178

(81)

STANDARD 6' BASE DITCH SEE DETAIL 64 EST. 20 C.Y. DDE EST. 50 TONS CL-I RIP RAP EST. 100 S.Y. GFD

TOE PROTECTION SEE DETAIL 12 EST. 42 TONS CL-B RIPRAP EST. 130 S.Y. GFD

RETAIN

36" RCP-IV

15" RCP-IV

TB 2GI-A

TB 2GI

DI

REMOVE

RIPRAP PAD AT OUTLET 5 TONS CL-B RIPRAP 14 S.Y. GFD

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

24" RCP-IV

30" RCP-IV

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

SPECIAL LATERAL 'V' DITCH SEE DETAIL 33

SPECIAL LATERAL 'V' DITCH SEE DETAIL 50

SPECIAL CUT DITCH SEE DETAIL 21

FALSE SUMP TO ELEV. 279.9' SEE DETAIL 32

STANDARD 'V' DITCH SEE DETAIL 29 EST. 35 C.Y. DDE APPROX. GRADE=2.0%

GRADE TO DRAIN

ACCESS POINT

PUE

DO NOT DISTURB WELL

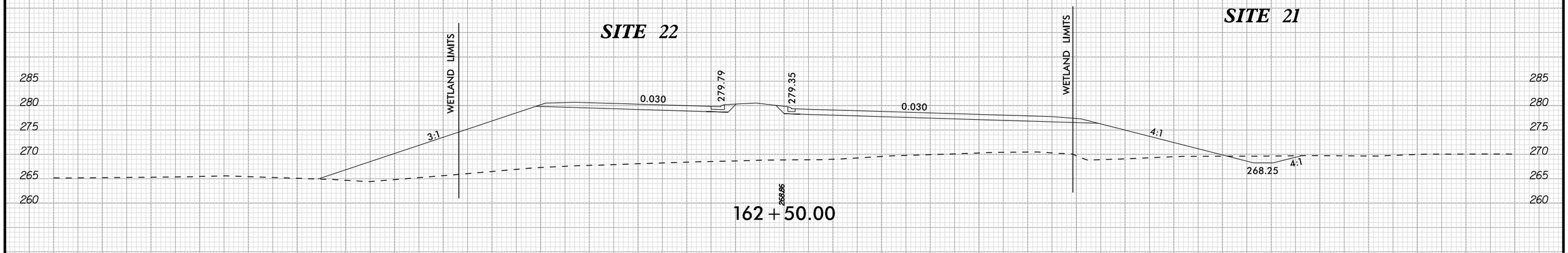
DITCH WETLAND CALCS -L- STA. 161+80 RT	
DA	0.63 AC.
C (FUTURE)	0.56
I_m	6.2 IN./HR
Q_p (FUTURE)	2.17 C.F.S.
V_p (FUTURE)	1.76 F.P.S.
SLOPE	0.016 FT/FT
N	0.035
LINER TYPE	GRASS

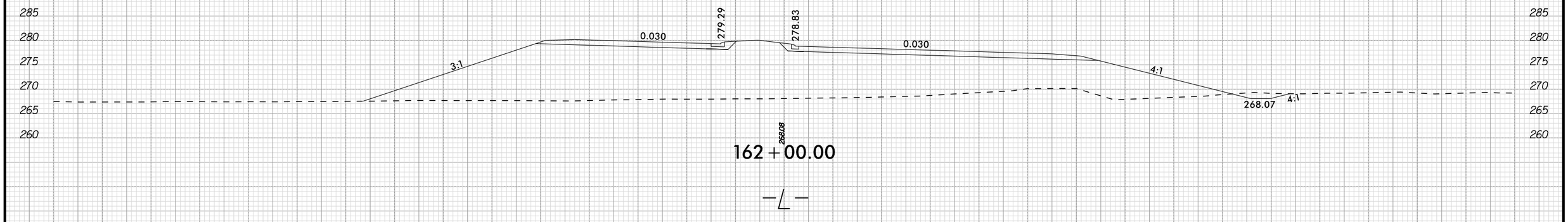
DITCH WETLAND CALCS -L- STA. 161+80 RT	
DA	2.42 AC.
C (FUTURE)	0.55
I_m	6.2 IN./HR
Q_p (FUTURE)	7.78 C.F.S.
V_p (FUTURE)	1.53 F.P.S.
SLOPE	0.004 FT/FT
N	0.35
LINER TYPE	GRASS

Submitted 12/21/2021

PERMIT DRAWING
SHEET 45 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -





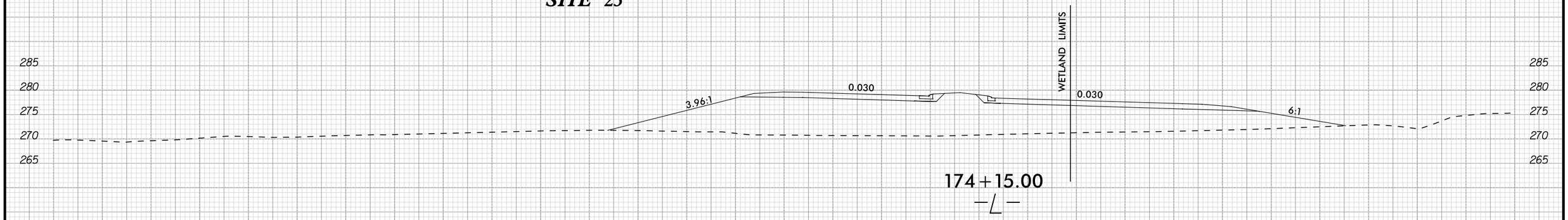
11/15/2021

Submitted 12/21/2021

PERMIT DRAWING
SHEET 46 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 23



11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING	P P	DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING
SHEET 47 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE -L- STA 174+50 (SEE SHEET 15)

MATCHLINE -L- STA 188+00 (SEE SHEET 17)

(76) ILLIAM TYSON
DB 1446 PG 986

REALIGN AND WIDEN EXISTING DITCH TO PROPERTY LINE
MATCH EXISTING DITCH INVERT ELEVATIONS
SEE DETAIL 63
EST 10 CY DDE

175+00

20' RIPRAP PAD AT OUTLET
20 TONS CL-B RIPRAP
45 S.Y. GFD

(78) DAVID GARDNER
DB 1085 PG 714

WOODS

(80) DAVID GARDNER
DB 1085 PG 714
MB 2003 PG 1243

DITCH WETLAND CALCS -L- STA. 181+50 LT.	
DA	1.32 AC.
C (FUTURE)	0.43
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	3.48 C.F.S
V_{10} (FUTURE)	1.5 F.P.S
SLOPE	0.005 FT/FT
N	0.035
LINER TYPE	GRASS

180+00

GRADE TO DRAIN (FILL)

FILL POND TO ELEV. 250.0' AT THIS SIDE
FILL TO ELEV. 249.0' AT OPPOSITE SIDE
GRADE AT APPROX. 1.2% TO DRAIN
(SEE GRADE TO DRAIN ARROWS)
EST. 1030 C.Y. BACKFILL

SITE 25

LATERAL 2' BASE DITCH
SEE DETAIL 34
EST. 60 C.Y. DDE
DITCH TO BE EXCAVATED
AFTER POND HAS BEEN
FILLED

ACCESS POINT

SPECIAL LATERAL
2' BASE DITCH
SEE DETAIL 16

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

15" RCP-IV

TB 2GI

INV=245.6

NC 55

DI

EXIST R/W

RIPRAP

15" RCP

REMOVE

GREU TL-3

SPECIAL CLIT
'V' DITCH
SEE DETAIL 21

N 22° 04' 22.0" E

54' 36.2" E

G.T.D

48" WD

GARDNER RD SR 1857

PIPE FLAREOUT
SEE DETAIL 55

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

TYPICAL INLET
IMPROVEMENTS
SEE DETAIL 67 &
QUANTITIES IN
TABLE ABOVE
GRADE CHANNEL
AT 1.0%

REMOVE FENCE AND
BRICK COLUMNS

REMOVE
& BACKFILL TO
DRAIN

(79) DAVID ADAMS
DB 1635 PG 609

SITE 24

(77) JERRY GREGORY
DB 1684 PG 453
MB 2000 PG 477

(75) RAFAEL CERVANTES
DB 2403 PG 599
MB 2000 PG 477

72" WD

S 76° 53' 18.3" E
END CONSTRUCTION
-DRW4- POT Sta. 11+26.90

DITCH WETLAND CALCS -L- STA. 180+50 RT.	
DA	1.51 AC.
C (FUTURE)	0.53
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	4.94 C.F.S
V_{10} (FUTURE)	1.31 F.P.S
SLOPE	0.003 FT/FT
N	0.035
LINER TYPE	GRASS

(81) CLINTON ADAMS
DB 1291 PG 300
MB 2003 PG 1071

N 5° 24' 08.4" E
END CONSTRUCTION
-DRW3- POT Sta. 12+38.00

CONTRACTOR SHALL COORDINATE DRIVEWAY REPLACEMENT LIMITS WITH THE PROPERTY OWNER. CONTRACTOR TO ADJUST AS DIRECTED BY THE ENGINEER.

(82) JAMES ALLEN
DB 3355 PG 413

DITCH WETLAND CALCS -L- STA. 182+50 LT.	
DA	0.74 AC.
C (FUTURE)	0.34
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	1.55 C.F.S
V_{10} (FUTURE)	1.8 F.P.S
SLOPE	0.015 FT/FT
N	0.035
LINER TYPE	GRASS

TOWN OF ANGIER

30' SS EASEMENT

TYPICAL OUTLET
IMPROVEMENTS
SEE DETAIL 68 &
QUANTITIES IN
TABLE ABOVE

PROPOSED SINGLE GATE,
47" HIGH, 12' WIDE, 12' OPENING
STA 182+00 TO 182+12 LT

185+00

POND

(84) JEREMY SKOLOZYNSKI
DB 3258 PG 306
PC* C PG 118D

48" ELEC

(85) MICHAEL ANTHONY
DB 1286 PG 579
PC* F PG 26B

CONC

GR

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

PUE

ACCESS POINT

PIPE FLAREOUT
SEE DETAIL 55

15" RCP

REMOVE

FALSE SUMP
SEE DETAIL 7

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

2GI-D

18"

N 32° 54' 14.5" E

2GI

15" CSP
W/ELBOWS

B.D.O.

N 48° 01' 02.7" E

PUE SEDIMENT CONTROL BASIN

END CONSTRUCTION
-DRW5- POT Sta. 11+07.00

BERM 'V' DITCH
SEE DETAIL 3

(83) RICHARD HALL
DB 982 PG 219

48" CMP

48" CHL

30' SS EASEMENT PER TOWN OF ANGIER

SEE SHEET 2B-4 FOR INTERSECTION DETAIL
SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 40 FOR -DRW3- PROFILE
SEE SHEET 40 FOR -DRW4- PROFILE

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING	P P	DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING
SHEET 48 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

(76) WILLIAM TYSON DB 1446 PG 986

REALIGN AND WIDEN EXISTING DITCH TO PROPERTY LINE MATCH EXISTING DITCH INVERT ELEVATIONS SEE DETAIL 63 EST 10 CY DDE

175+00

20' RIPRAP PAD AT OUTLET 20 TONS CL-B RIPRAP 45 S.Y. GFD

(78) DAVID GARDNER DB 1085 PG 714

(80) DAVID GARDNER DB 1085 PG 714 MB 2003 PG 1283

180+00

DITCH WETLAND CALCS -L- STA. 181+50 LT.	
DA	1.32 AC.
C (FUTURE)	0.43
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	3.48 C.F.S
V_{10} (FUTURE)	1.5 F.P.S
SLOPE	0.005 FT/FT
N	0.035
LINER TYPE	GRASS

GRADE TO DRAIN (FILL)

FILL POND TO ELEV. 250.0' AT THIS SIDE FILL TO ELEV. 249.0' AT OPPOSITE SIDE GRADE AT APPROX. 1.2% TO DRAIN (SEE GRADE TO DRAIN ARROWS) EST. 1030 C.Y. BACKFILL

SITE 25

LATERAL 2' BASE DITCH SEE DETAIL 34 EST. 60 C.Y. DDE DITCH TO BE EXCAVATED AFTER POND HAS BEEN FILLED

DITCH WETLAND CALCS -L- STA. 182+50 LT.	
DA	0.74 AC.
C (FUTURE)	0.34
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	1.55 C.F.S
V_{10} (FUTURE)	1.8 F.P.S
SLOPE	0.015 FT/FT
N	0.035
LINER TYPE	GRASS

TYPICAL OUTLET IMPROVEMENTS SEE DETAIL 68 & QUANTITIES IN TABLE ABOVE

(82) JAMES ALLEN DB 3355 PG 413

PROPOSED SINGLE GATE, 4' HIGH, 12' WIDE, 12' OPENING STA 182+00 TO 182+12 -LT

(84) JEREMY SKOLOZYNSKI DB 3258 PG 306 PC# C PG 11BD

185+00

(85) MICHAEL ANTHONY DB 1286 PG 579 PC# F PG 26B

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 2' BASE DITCH SEE DETAIL 16

PIPE FLAREOUT SEE DETAIL 55

REMOVE

GREU TL-3

SPECIAL CUT 'V' DITCH SEE DETAIL 21

N 22° 04' 22.0" E

54' 36.2" E

G.T.D

MATCHLINE -L- STA 174+50 (SEE SHEET 15)

MATCHLINE -L- STA 188+00 (SEE SHEET 17)

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

FALSE SUMP SEE DETAIL 7

2GI-D

2GI

N 32° 54' 14.5" E

15" CSP W/ELBOWS

B.D.O.

N 48° 01' 02.1" E

BERM 'V' DITCH SEE DETAIL 3

SITE 24

(79) DAVID ADAMS DB 1635 PG 609

REMOVE FENCE AND BRICK COLUMNS

REMOVE & BACKFILL TO DRAIN

(77) JERRY GREGORY DB 4684 PG 453 MB 2000 PG 477

(75) RAFAEL CERVANTES DB 5403 PG 599 MB 2000 PG 477

S 76° 53' 18.3" E
END CONSTRUCTION
-DRW4- POT Sta. 11+26.90

DITCH WETLAND CALCS -L- STA. 180+50 RT.	
DA	1.51 AC.
C (FUTURE)	0.53
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	4.94 C.F.S
V_{10} (FUTURE)	1.31 F.P.S
SLOPE	0.003 FT/FT
N	0.035
LINER TYPE	GRASS

(81) CLINTON ADAMS DB 1291 PG 300 MB 2003 PG 1071

(81) TON ADAMS 528 PG 185

N 5° 24' 08.4" E
END CONSTRUCTION
-DRW3- POT Sta. 12+38.00

CONTRACTOR SHALL COORDINATE DRIVEWAY REPLACEMENT LIMITS WITH THE PROPERTY OWNER. CONTRACTOR TO ADJUST AS DIRECTED BY THE ENGINEER.

END CONSTRUCTION
-DRW5- POT Sta. 11+07.00

(83) RICHARD HALL DB 982 PG 219

SEDIMENT CONTROL BASIN

ACCESS POINT

PUE

WOODS

POND

48" ELEC

48" CONC

48" CHL

30' SS EASEMENT PER TOWN OF ANGIER

SEE SHEET 2B-4 FOR INTERSECTION DETAIL
SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 40 FOR -DRW3- PROFILE
SEE SHEET 40 FOR -DRW4- PROFILE

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	16A/B

WETLAND AND STREAM IMPACTS

SITE IMPACT ZOOM: 1"=40'

PERMIT DRAWING SHEET 49 OF 71

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING
- S S — DENOTES IMPACTS IN SURFACE WATER
- TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- P P — DENOTES IMPACTS IN SURFACE WATER (POND)

SITE 25

LATERAL 2' BASE DITCH
SEE DETAIL 34
EST. 60 C.Y. DDE
DITCH TO BE EXCAVATED AFTER POND HAS BEEN FILLED

TYPICAL OUTLET IMPROVEMENTS SEE DETAIL 68 & QUANTITIES IN TABLE ABOVE

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

5' x 7' RCBC (1.0' BURIED)

15" RCP-IV

TB 2GI

REMOVE

SITE 24

FALSE SUMP SEE DETAIL 7

ACCESS POINT

JAMES ALLE
DB 3355 PG

30' SS EASEMENT

NAD 83 / NSRS 2007

PROPOSED SINC
47" HIGH, 12' WIDE
STA 182+00 TO

WOODS

NC 55

GREU TL-3

INV=245.62

SITE 24,25

20' 0' 20' 40'
GRAPHIC SCALE

REVISIONS

11/15/2021

Submitted 12/21/2021

WETLAND AND STREAM IMPACTS

SITE IMPACT ZOOM: 1"=40'

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	16A/B

PERMIT DRAWING
SHEET 50 OF 71

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING
- S S — DENOTES IMPACTS IN SURFACE WATER
- TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- P P — DENOTES IMPACTS IN SURFACE WATER (POND)

SITE 25

LATERAL 2' BASE DITCH
SEE DETAIL 34
EST. 60 C.Y. DDE
DITCH TO BE EXCAVATED
AFTER POND HAS BEEN
FILLED

ACCESS
POINT

TYPICAL OUTLET
IMPROVEMENTS
SEE DETAIL 68 &
QUANTITIES IN
TABLE ABOVE

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

FALSE SUMP
SEE DETAIL 7

6' x 7' RCBC
(1.0' BURIED)

15" RCP-IV

TB 2GI

REMOVE

SITE 24

SITE 24,25

NAD 83 / NSRS 2007

JAMES ALLE
DB 3355 PG

PROPOSED SINC
4'Z" HIGH, 12' WIDE
STA 182+00 TO

WOODS

GREU TL-3

NC 55

PUE

20' 0' 20' 40'
GRAPHIC SCALE

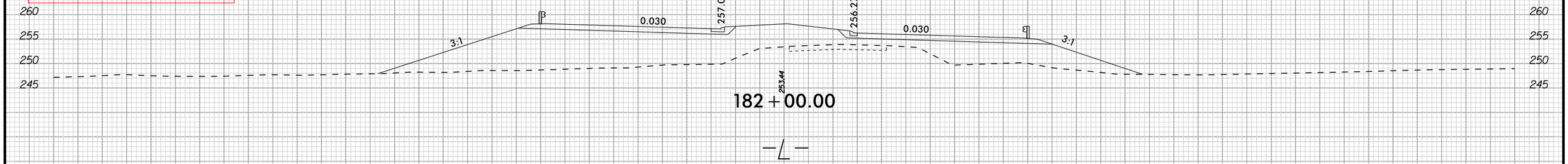
REVISIONS

11/15/2021

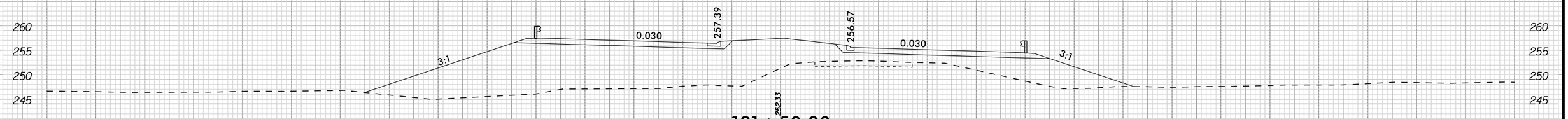
Submitted 12/21/2021

PERMIT DRAWING
SHEET 51 OF 71

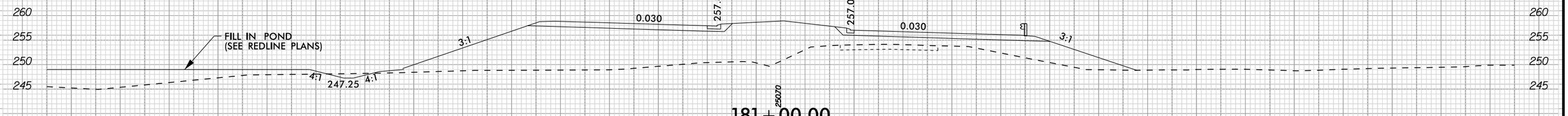
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -



182 + 00.00



181 + 50.00



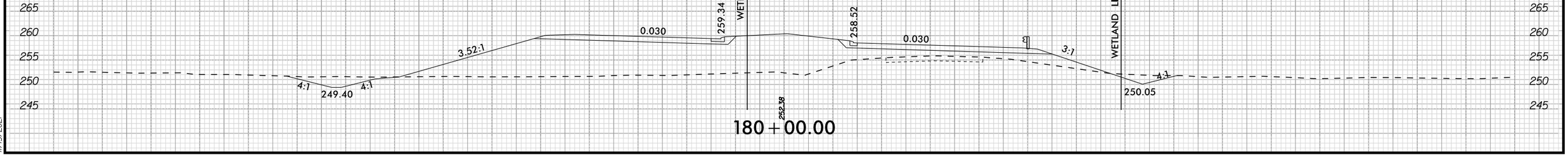
181 + 00.00



180 + 50.00

SITE 25

SITE 24



180 + 00.00

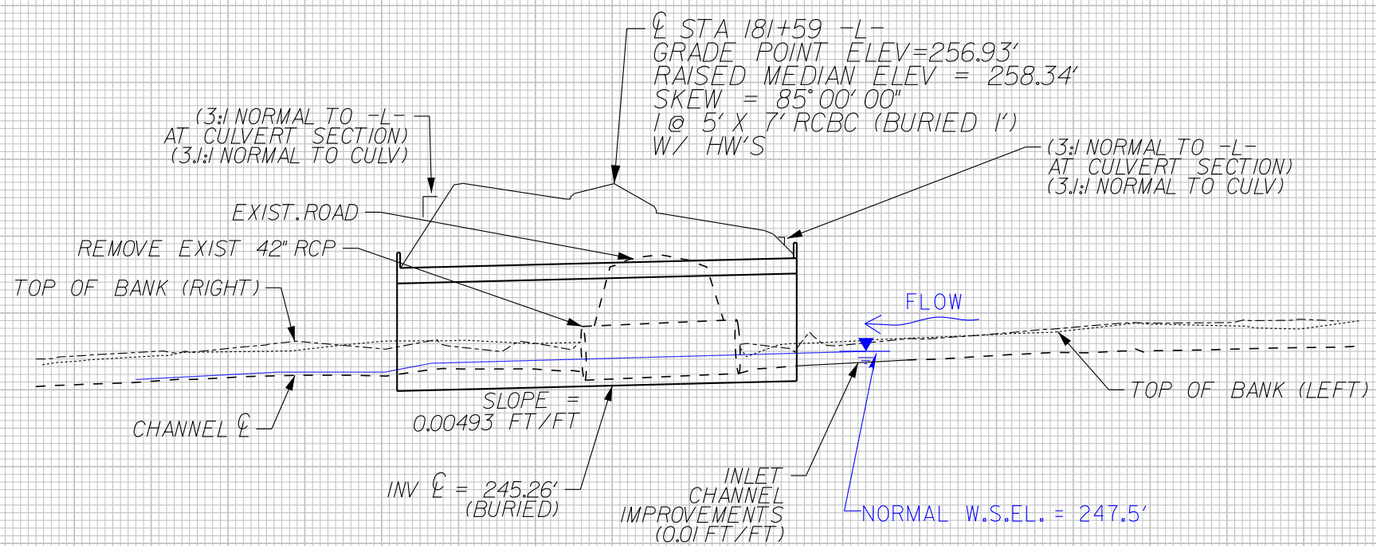
11/15/2021

Submitted 12/21/2021

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

PERMIT DRAWING
SHEET 52 OF 71

SITE 24,25



260 250 240

11/15/2021

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING	P P	DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING
SHEET 53 OF 71

REVISIONS
5/14/99
11/15/2021

NAD 83/NA 2011

MATCHLINE -L- STA 188+00 (SEE SHEET 16)

MATCHLINE -L- STA 202+00 (SEE SHEET 18)

SITE 28
SITE 27
SITE 26

BEGIN CONSTRUCTION -Y7B- POT Sta. 18+00.00
END CONSTRUCTION -Y7B- POT Sta. 19+00.00
S 85° 16' 23.4" E
ACCESS ROAD 3
TERMINAL END SECTION
REMOVE EXIST GUARDRAIL
REMOVE CMAP W/WEIR WALL
RETAIN
SEE TYPICAL SECTION P2
SPECIAL LATERAL 'V' DITCH SEE DETAIL 1
CLEAN WATER DIVERSION
TYPICAL OUTLET IMPROVEMENTS SEE DETAIL 40 QUANTITIES IN TABLE ABOVE
GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 2.0-4.0%
GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 4.0%
RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD
REMOVE
STANDARD JSI DITCH SEE DETAIL 69 EST. 95 C.Y. DDE EST. 122 TONS CL-1 RIPRAP EST. 285 S.Y. GFD
GRADE TO DRAIN SEE DETAIL
END CONSTRUCTION -DRW7- POT Sta. 11+45.00 SEE DETAIL SHEET 9A
N 37° 40' 52" W
N 40° 40' 27" E
N 38° 28' 29.2" W
SPECIAL CUT 'V' DITCH SEE DETAIL 25
15" CSP W/ELBOWS
FALSE SUMP SEE DETAIL 8
MIN DEPTH 2GI-A SEE DETAIL 840d17 SHEET 2C-1
B.D.O.
BERM 'V' DITCH SEE DETAIL 3
BERM 'V' DITCH SEE DETAIL 35
PIPE FLAREOUT SEE DETAIL 55
GRADE TO DRAIN PROTECT INLET W/CL-B RIPRAP EST. 9 TONS EST. 30 S.Y. GFD
SPECIAL LATERAL 'V' DITCH SEE DETAIL 33
TOE PROTECTION SEE DETAIL 12 EST. 40 TONS CL-B RIPRAP EST. 100 S.Y. GFD
LATERAL 3' BASE DITCH SEE DETAIL 39 EST. 63 TONS CL-1 RIPRAP EST. 160 S.Y. GFD
RIPRAP PAD AT OUTLET 8 TONS CL-B RIPRAP 21 S.Y. GFD
SEE TYPICAL SECTION P1
GRADE TO DRAIN SEE DETAIL
GRADE CULVERT ENTRANCE TO DRAIN W/ 7' BASE DITCH & 2:1 SIDE SLOPES (SEE DETAIL TYPICAL SECTION P1) START ELEVATION = APPROX. 252.0' END ELEV. = APPROX. 251.2' APPROX. GRADE =0.3%

"THIS POND WASN'T LOCATED,WERE ASKED TO LEAVE BY THE PROPERTY OWNER AND TOLD NOT TO GET BACK ON HER PROPERTY."

WILLIAM ARMENTROUT (88) DB 1061 PG 509 PC* F PG 26B
EVERETT BLAKE (86) DB 1327 PG 119 PC* F PG 26B
GORDAN SARTIN (116) DB 2321 PG 153 MB 2005 PG 923
CLAY GARDNER (90) DB 2983 PG 694 MB 2005 PG 923
KBNK HOLDINGS LLC (87) DB 2441 PG 803 MB 2004 PG 1274
RICHARD HALL (83) DB 982 PG 219
ROBERT COHEN (89) DB 2725 PG 684 MB 2004 PG 688

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7B- PROFILE

Submitted 12/21/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	P P — DENOTES IMPACTS IN SURFACE WATER (POND)

PERMIT DRAWING
SHEET 54 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS
5/14/99
11/15/2021

MATCHLINE -L- STA 188+00 (SEE SHEET 16)

MATCHLINE -L- STA 202+00 (SEE SHEET 18)

NAD 83/NA 2011

SITE 28
SITE 27
SITE 26

BEGIN CONSTRUCTION -Y7B- POT Sta. 18+00.00
END CONSTRUCTION -Y7B- POT Sta. 19+00.00
END CONSTRUCTION -DRW7- POT Sta. 11+45.00

S 85° 16' 23.4" E
N 42° 40' 27.7" E
N 37° 40' 52.8" W
N 38° 28' 29.2" W

REMOVE EXIST GUARDRAIL
TERMINAL END SECTION
REMOVE CMAP W/WEIR WALL
RETAIN
SEE TYPICAL SECTION P2
SPECIAL LATERAL 'V' DITCH SEE DETAIL 1
CLEAN WATER DIVERSION
TYPICAL INLET IMPROVEMENTS SEE DETAIL #1 QUANTITIES IN TABLE ABOVE
TYPICAL INLET IMPROVEMENTS SEE DETAIL #1 QUANTITIES IN TABLE ABOVE
TYP. 1' X 1' ICAC TO BURIED
SEE TYPICAL SECTION P1
GRADE TO DRAIN SEE DETAIL

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

STANDARD JSA DITCH
SEE DETAIL 69
EST. 95 C.Y. DDE
EST. 122 TONS CL-I RIPRAP
EST. 285 S.Y. GFD

GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 2.0-4.0%
GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 4.0%
REMOVE
RETAIN
ACCESS POINT
PIPE FLAREOUT SEE DETAIL 55

BERM 'V' DITCH SEE DETAIL 3
SPECIAL CUT 'V' DITCH SEE DETAIL 25
BERM 'V' DITCH SEE DETAIL 35
15" CSP W/ELBOWS
2GI
B.D.O.
FALSE SUMP SEE DETAIL 8
MIN DEPTH 2GI-A SEE DETAIL 840d17 SHEET 2C-1
SPECIAL LATERAL 'V' DITCH SEE DETAIL 33
GRADE TO DRAIN PROTECT INLET W/CL-B RIPRAP EST. 9 TONS EST. 30 S.Y. GFD
THIS POND WASN'T LOCATED WHEN STAKED TO LEAVE FOR THE PROPERTY OWNER WAS TOLD NOT TO GET BACK ON THEIR PROPERTY.

TOE PROTECTION SEE DETAIL 12 EST. 40 TONS CL-B RIPRAP EST. 100 S.Y. GFD
LATERAL 3' BASE DITCH SEE DETAIL 39 EST. 63 TONS CL-I RIPRAP EST. 160 S.Y. GFD

GRADE CULVERT ENTRANCE TO DRAIN W/ 7' BASE DITCH & 2:1 SIDE SLOPES (SEE DETAIL TYPICAL SECTION P1)
START ELEVATION = APPROX. 252.0'
END ELEV. = APPROX. 251.2'
APPROX. GRADE = 0.3%

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7B- PROFILE

WILLIAM ARMENTROUT DB 1061 PG 309 PC* F PG 26B
EVERETT BLAKE DB 1327 PG 119 PC* F PG 26B
GORDAN SARTIN DB 2321 PG 153 MB 2005 PG 923
CLAY GARDNER DB 2983 PG 694 MB 2005 PG 923
KBNK HOLDINGS LLC DB 2441 PG 803 MB 2004 PG 1274
RICHARD HALL DB 982 PG 219
ROBERT COHEN DB 2725 PG 684 MB 2004 PG 688

Submitted 12/21/2021

PERMIT DRAWING
SHEET 55 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 27

SITE 26



194 + 50.00

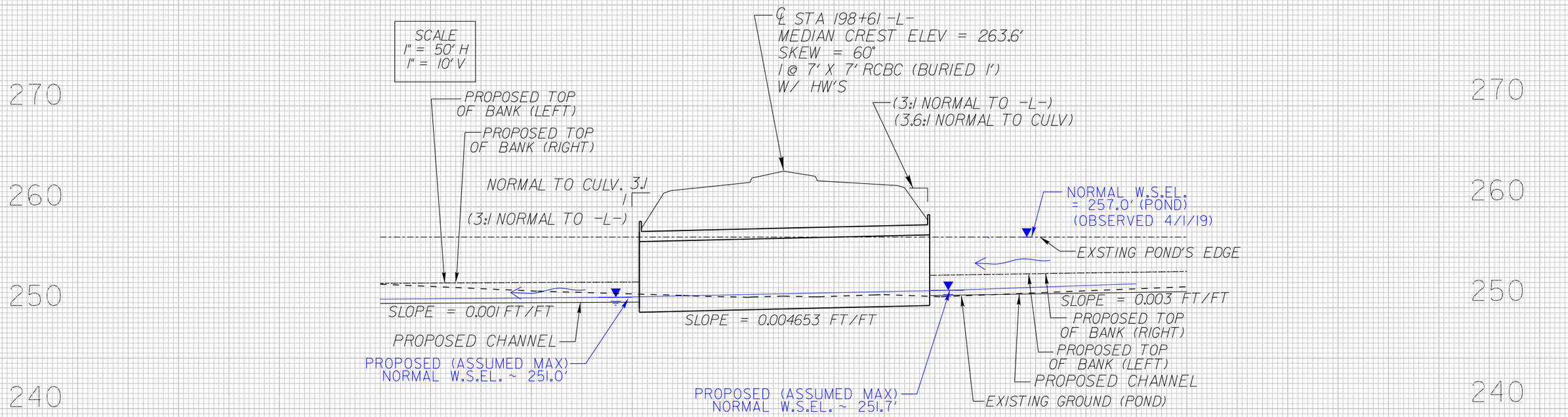
11/15/2021

Submitted 12/21/2021

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

PERMIT DRAWING
SHEET 56 OF 71

SITE 27,28



11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	E E — DENOTES EXCAVATION IN WETLAND
HC HC — DENOTES HAND CLEARING	DENOTES MECHANIZED CLEARING

PERMIT DRAWING
SHEET 57 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE (SEE SHEET 22)

MATCHLINE (SEE SHEET 23)

MATCHLINE (SEE SHEET 23)

MATCHLINE -L- STA 202+00 (SEE SHEET 17)

MATCHLINE -L- STA 216+00 (SEE SHEET 19)

205+00

210+00

215+00

DITCH WETLAND CALCS -L- STA. 203+80 LT.	
DA	1.60 AC.
C (FUTURE)	0.50
I_R	6.2 IN./HR
Q_R (FUTURE)	4.96 C.F.S
V_R (FUTURE)	1.37 F.P.S
SLOPE	0.004 FT/FT
N	0.04
LINER TYPE	GRASS

DITCH WETLAND CALCS -L- STA 203+80 LT.	
DA	0.36 AC.
C (FUTURE)	0.50
I_R	6.2 IN./HR
Q_R (FUTURE)	1.12 C.F.S
V_R (FUTURE)	1.98 F.P.S
SLOPE	0.055 FT/FT
N	0.04
LINER TYPE	GRASS

(90) CLAY GARDNER
DB 2983 PG 694
MB 2005 PG 923

(92) REBECCA PARTIN
DB 693 PG 508

(91) CLAY GARDNER
DB 3363 PG 296

REBECCA PARTIN
DB 693 PG 508

CULTIVATED

SITE 29

SITE 27

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

MIN DEPTH OF FILL SEE DETAIL 1 SHEET 2C-1

BERM 2' BASE DITCH SEE DETAIL 40 EST. 20 TONS CL-B RIPRAP EST. 55 S.Y. GFD

BERM 2' BASE DITCH SEE DETAIL 41 EST. 50 TONS CL-B RIPRAP EST. 135 S.Y. GFD

BERM 2' BASE DITCH SEE DETAIL 40 EST. 140 TONS CL-B RIPRAP EST. 380 S.Y. GFD

B.D.O.

18" CSP W/ELBOWS

24" CSP W/ELBOWS

24"

2GI-A

FALSE SUMP SEE DETAIL 8

CLEAN WATER DIVERSION

RIPRAP PAD AT OUTLET 10 TONS CL-I RIPRAP 20 S.Y. GFD

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

FLARE CUT DITCH OUT TO TIE TO EXIST. DITCH

ACCESS POINT

-Y7C- ACCESS ROAD 4

RETAIN

BEGIN CONSTRUCTION -Y7C- POT Sta. 14+95.00

END CONSTRUCTION -Y7C- POT Sta. 15+95.00

TERMINAL END SECTION

GRADE TO DRAIN

TOE PROTECTION SEE DETAIL 12 EST. 35 S.Y. PSRM

-Y7C- OLD MATTHEWS MILL POND RD

-L- NC 55

N 47° 19' 32.7" W

N 3° 28' 35.5" W

N 3° 42' 43.0" W

PUE

TDE

WLD

HC

SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7C- PROFILE
SEE SHEET 40 FOR -DRW5 PROFILE

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING

PERMIT DRAWING
SHEET 58 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

DITCH WETLAND CALCS -L- STA 203+80 LT.	
DA	1.60 AC.
C (FUTURE)	0.50
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	4.96 C.F.S
V_{10} (FUTURE)	1.37 F.P.S
SLOPE	0.004 FT/FT
N	0.04
LINER TYPE	GRASS

DITCH WETLAND CALCS -L- STA 203+80 LT.	
DA	0.36 AC.
C (FUTURE)	0.50
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	1.12 C.F.S
V_{10} (FUTURE)	1.98 F.P.S
SLOPE	0.055 FT/FT
N	0.04
LINER TYPE	GRASS

MATCHLINE (SEE SHEET 22)

MATCHLINE (SEE SHEET 23)

MATCHLINE (SEE SHEET 23)

MATCHLINE -L- STA 202+00 (SEE SHEET 17)

MATCHLINE -L- STA 216+00 (SEE SHEET 19)

205+00

210+00

215+00

SITE 29

SITE 27

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

MIN. DEPTH OF FILL SEE DETAIL 1 SHEET 2C-1

B.D.O.

BERM 2' BASE DITCH SEE DETAIL 40 EST. 20 TONS CL-B RIPRAP EST. 55 S.Y. GFD

BERM 2' BASE DITCH SEE DETAIL 41 EST. 50 TONS CL-B RIPRAP EST. 135 S.Y. GFD

BERM 2' BASE DITCH SEE DETAIL 40 EST. 140 TONS CL-B RIPRAP EST. 380 S.Y. GFD

CLEAN WATER DIVERSION

18" CSP W/ELBOWS

24" CSP W/ELBOWS

24"

2GI-A

FALSE SUMP SEE DETAIL 8

RIPRAP PAD AT OUTLET 15 TONS CL-I RIPRAP 30 S.Y. GFD

FLARE CUT DITCH OUT TO TIE TO EXIST. DITCH

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

ACCESS POINT

-Y7C- ACCESS ROAD 4

BEGIN CONSTRUCTION -Y7C- POT Sta. 14+95.00

END CONSTRUCTION -Y7C- POT Sta. 15+95.00

TERMINAL END SECTION

RETAIN

GRADE TO DRAIN

TOE PROTECTION SEE DETAIL 12 EST. 35 S.Y. PSRM

N 47° 19' 32.7" W

N 3° 28' 35.5" W

N 3° 42' 43.0" W

-L- NC 55

-Y7C- OLD MATTHEWS MILL POND RD

PUE

TDE

HC

CULTIVATED

(90) CLAY GARDNER DB 2983 PG 694 MB 2005 PG 923

(91) CLAY GARDNER DB 3363 PG 296

(92) REBECCA PARTIN DB 693 PG 508

(118) RETAIN

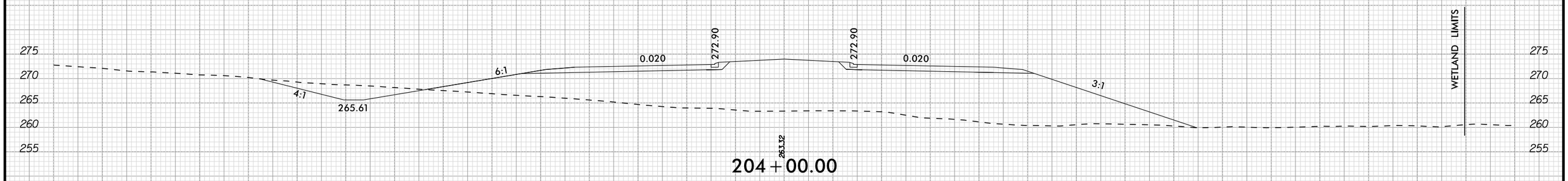
SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7C- PROFILE
SEE SHEET 40 FOR -DRW5 PROFILE

Submitted 12/21/2021

PERMIT DRAWING
SHEET 59 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 29



204+00.00

11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 60 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE (SEE SHEET 23)

MATCHLINE (SEE SHEET 24)

MATCHLINE -L- STA 216+00 (SEE SHEET 18)

MATCHLINE -L- STA 230+00 (SEE SHEET 20)

220+00

225+00

20+00

CULTIVATED

WOODS

(92) REBECCA PARTIN
DB 693 PG 508

(95)

(94) DEBORAH MATTHEWS
DB 903 PG 584

(113) WALLACE DUNCAN
DB 1615 PG 136
MB 2002 PG 431

(93) CUTTS CHAPEL FWB CHURCH
DB 2124 PG 562
MB 2002 PG 1391

NUNEZ CONCRETE INC
DB 2433 PG 335
MB 2006 PG 892

REBECCA PARTIN
DB 693 PG 508

SITE 30

RIPRAP PAD AT OUTLET
8 TONS CL-B RIPRAP
21 S.Y. GFD

30" RCP

REMOVE & BACKFILL

GRADE TO DRAIN

CLEAN WATER DIVERSION

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

N 47° 19' 32.7" W

-L- NC 55

15" RCP-IV

DI

TB 2GI

54" RCP-IV

RIPRAP PAD AT OUTLET
EST. 3 TONS CL-B RIPRAP
EST. 10 S.Y. GFD

TOE PROTECTION
SEE DETAIL 12
EST. 100 TONS CL-B RIPRAP
EST. 280 S.Y. GFD

SEDIMENT CONTROL BASIN

END CONSTRUCTION
-Y7C- POT Sta. 20+84.00

BEGIN CONSTRUCTION
-Y7C- POT Sta. 19+84.00
TERMINAL END SECTION

RETAIN EXIST. ROADWAY EMBANKMENT TO ACT AS FALSE SUMP DURING HIGH FLOW

OLD MATTHEWS MILL POND RD

-Y7C-

N 34° 43' 43.0" W

EXIST R/W

DITCH WETLAND CALCS -L- STA. 227+30 RT.	
DA	0.9 AC.
C (FUTURE)	0.5
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	2.79 C.F.S.
V_{10} (FUTURE)	1.18 F.P.S.
SLOPE	0.003 FT/FT
N	0.035
LINER TYPE	GRASS

★ TRAFFIC SIGNAL
SEE SHEET 2B-4 FOR INTERSECTION DETAIL
SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7C- PROFILE

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F	DENOTES FILL IN WETLAND	S S	DENOTES IMPACTS IN SURFACE WATER
HC HC	DENOTES HAND CLEARING	TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 61 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE (SEE SHEET 23)

MATCHLINE (SEE SHEET 24)

MATCHLINE -L- STA 216+00 (SEE SHEET 18)

MATCHLINE -L- STA 230+00 (SEE SHEET 20)

220+00

225+00

20+00

RIPRAP PAD AT OUTLET
8 TONS CL-B RIPRAP
21 S.Y. GFD

30" RCP

REMOVE & BACKFILL

GRADE TO DRAIN

CLEAN WATER DIVERSION

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

END CONSTRUCTION
-Y7C- POT Sta. 20+84.00

BEGIN CONSTRUCTION
-Y7C- POT Sta. 19+84.00
TERMINAL END SECTION

RETAIN EXIST. ROADWAY EMBANKMENT TO ACT AS FALSE SUMP DURING HIGH FLOW

N 34° 42' 43.0" W

-Y7C- OLD MATTHEWS MILL POND RD

N 47° 19' 32.7" W

-L- NC 55

15" RCP-IV

DI

TB 2GI

SITE 30

SEDIMENT CONTROL BASIN

RIPRAP PAD AT OUTLET
EST. 15 TONS CL-B RIPRAP
EST. 90 S.Y. GFD

54" RCP-IV

RIPRAP PAD AT OUTLET
EST. 3 TONS CL-B RIPRAP
EST. 10 S.Y. GFD

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

TOE PROTECTION
SEE DETAIL 12
EST. 100 TONS CL-B RIPRAP
EST. 280 S.Y. GFD

DITCH WETLAND CALCS -L- STA. 227+30 RT.	
DA	0.9 AC.
C (FUTURE)	0.5
I_{10}	6.2 IN/HR
Q_{10} (FUTURE)	2.79 C.F.S.
V_{10} (FUTURE)	1.18 F.P.S.
SLOPE	0.003 FT/FT
N	0.035
LINER TYPE	GRASS

(92) REBECCA PARTIN
DB 693 PG 508

(93) CUTTS CHAPEL FWB CHURCH
DB 2124 PG 562
MB 2002 PG 139

(94) DEBORAH MATTHEWS
DB 1903 PG 584

(95) NUNEZ CONCRETE INC
DB 2433 PG 335
MB 2006 PG 892

(113) WALLACE DUNCAN
DB 1515 PG 136
MB 2002 PG 431

CULTIVATED

WOODS

EXIST R/W

48" CMP

48" CHL

48" SPLIT RAIL

16" CONC

CONC

GR

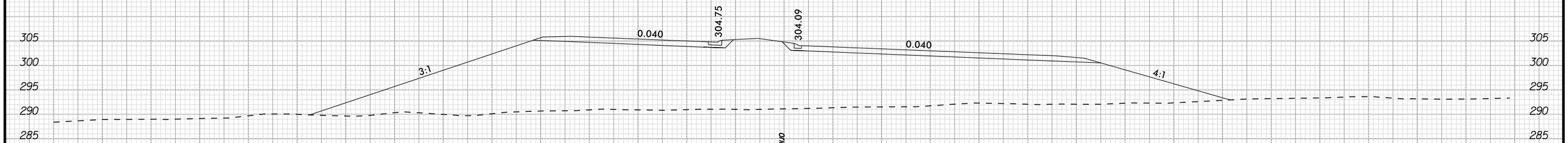
★ TRAFFIC SIGNAL

SEE SHEET 2B-4 FOR INTERSECTION DETAIL
SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7C- PROFILE

Submitted 12/21/2021

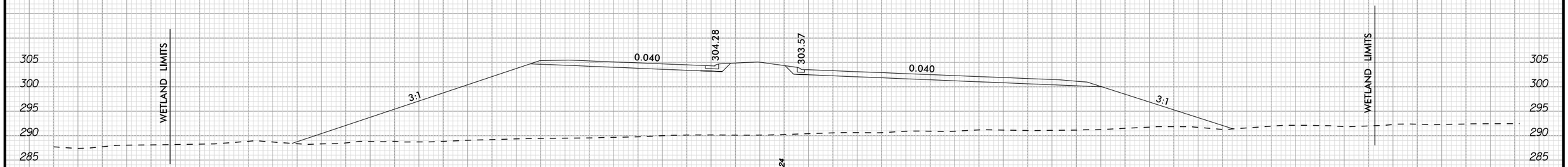
PERMIT DRAWING
SHEET 62 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -



229+00.00

SITE 30



228+50.00

11/15/2021

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LEGEND

- F F — DENOTES FILL IN WETLAND
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 63 OF 71

REVISIONS
5/14/99

11/15/2021

NAD 83/NA 2011

25+00 30+00 35+00

(117) DAVID GARDER
DB 3103 PG 553

CULTIVATED

N 66° 05' 58.6" E

S 34° 39' 38.4" E

DITCH ENTERING WETLAND CALCS -Y7A- STA. 30+00 TO 30+80 LT	
DA	0.61 AC.
C (FUTURE)	0.57
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	2.15 C.F.S
V_{10} (FUTURE)	0.77 F.P.S
SLOPE	0.003 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

DITCH ENTERING WETLAND CALCS -Y7A- STA. 31+70 TO 33+00 LT	
DA	0.57 AC.
C (FUTURE)	0.58
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	2.05 C.F.S
V_{10} (FUTURE)	1.95 F.P.S
SLOPE	0.012 FT/FT
N	0.035
LINER TYPE	GRASS

SITE 31

WOODS

LATERAL 'V' DITCH SEE DETAIL 43
EST. 5 C.Y. DDE
EST. 39 TONS CL-B RIPRAP
EST. 150 S.Y. GFD

LATERAL 'V' DITCH
EST. 5 C.Y. DDE
SEE DETAIL 38

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

SPECIAL CUT DITCH SEE DETAIL 44

RIPRAP PAD AT OUTLET
20 TONS CL-I RIPRAP
39 S.Y. GFD

SEDIMENT CONTROL HC BASIN

HC HC HC

-Y7A-
MATTHEWS MILL POND RD

42" RCP-IV

MATCHLINE -Y7A- STA 24+00 (SEE SHEET 22)

MATCHLINE -Y7A- STA 37+50 (SEE SHEET 24)

(92) REBECCA PARTIN
DB 693 PG 508

CULTIVATED

CLEAN WATER DIVERSION

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

LATERAL 'V' DITCH
EST. 5 C.Y. DDE
SEE DETAIL 38

SPECIAL CUT DITCH SEE DETAIL 44

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

HW

CULTIVATED

(92) REBECCA PARTIN
DB 693 PG 508

(118) LYMAN GREGORY
DB 408 PG 607

-Y7C-
ACCESS ROAD 4
N 3° 28' 35.5" W

MATTHEWS MILL POND RD. RT. BSL

15"

N 86° 20' 21.6" E

PUE

END CONSTRUCTION
-DRWII- POT Sta. 11+05.00

GRADE TO DRAIN SEE CROSS SECTION

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

(90) CLAY GARDNER
DB 2983 PG 694
MB 2005 PG 923

END CONSTRUCTION
-Y7C- POT Sta. 12+99.57

MATCHLINE (SEE SHEET 18)

MATCHLINE (SEE SHEET 18)

MATCHLINE (SEE SHEET 19)

Submitted 12/21/2021

5/14/99

REVISIONS

LEGEND

F F — DENOTES FILL IN WETLAND

HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 64 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	23
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

25+00

30+00

35+00

MATCHLINE -Y7A- STA 37+50 (SEE SHEET 24)

MATCHLINE -Y7A- STA 24+00 (SEE SHEET 22)

S 34° 39' 38.4" E

N 66° 05' 58.6" E

N 86° 20' 21.6" E

N 3° 28' 35.5" W

DITCH ENTERING WETLAND CALCS
-Y7A- STA. 30+00 TO 30+80 LT

DA	0.61 AC.
C (FUTURE)	0.57
I_a	6.2 IN./HR
Q_a (FUTURE)	2.15 C.F.S
V_a (FUTURE)	0.77 F.P.S
SLOPE	0.003 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

DITCH ENTERING WETLAND CALCS
-Y7A- STA. 31+70 TO 33+00 LT

DA	0.57 AC.
C (FUTURE)	0.58
I_a	6.2 IN./HR
Q_a (FUTURE)	2.05 C.F.S
V_a (FUTURE)	1.95 F.P.S
SLOPE	0.012 FT/FT
N	0.035
LINER TYPE	GRASS

SITE 31

(117) DAVID GARDER
DB 3103 PG 553

(92) REBECCA PARTIN
DB 693 PG 508

(118) LYMAN GREGORY
DB 408 PG 607

(90) CLAY GARDNER
DB 2983 PG 694
MB 2005 PG 923

CULTIVATED

WOODS

-Y7A-
MATTHEWS MILL POND

LATERAL 'V' DITCH
SEE DETAIL 43
EST. 5 C.Y. DDE
EST. 39 TONS CL-B RIPRAP
EST. 350 S.Y. GFD

LATERAL 'V' DITCH
EST. 5 C.Y. DDE
SEE DETAIL 38

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

SPECIAL CUT DITCH
SEE DETAIL 44

RIPRAP PAD AT OUTLET
20' TONS CL-I RIPRAP
39' S.Y. GFD

SEDIMENT CONTROL HC BASIN

42" RCP-IV

HW

SPECIAL CUT DITCH
SEE DETAIL 44

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

LATERAL 'V' DITCH
EST. 5 C.Y. DDE
SEE DETAIL 38

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

CLEAN WATER DIVERSION

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

GRADE TO DRAIN
SEE CROSS SECTION

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

-Y7C-
ACCESS ROAD 4

MATTHEWS MILL POND TO THE EAST

END CONSTRUCTION
-DRWII- POT Sta. 11+05.00

END CONSTRUCTION
-Y7C- POT Sta. 12+99.57

MATCHLINE (SEE SHEET 18)

MATCHLINE (SEE SHEET 18)

MATCHLINE (SEE SHEET 19)

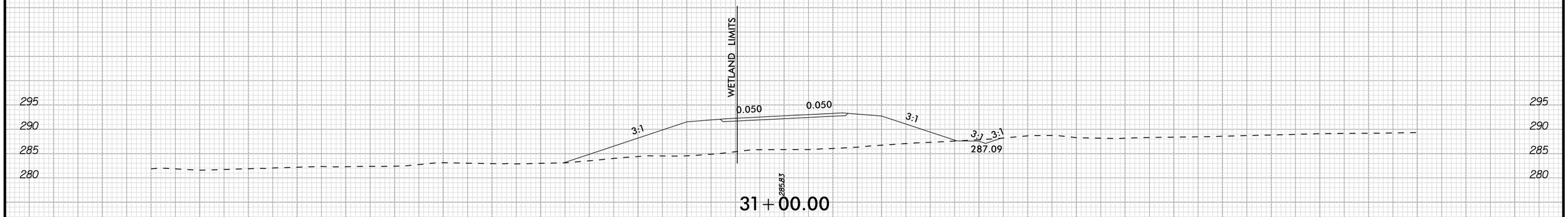
11/15/2021

Submitted 12/21/2021

PERMIT DRAWING
SHEET 65 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

SITE 31



-Y7A-

11/15/2021

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

- F F — DENOTES FILL IN WETLAND
- E E — DENOTES EXCAVATION IN WETLAND
- HC HC — DENOTES HAND CLEARING
- S S — DENOTES IMPACTS IN SURFACE WATER
- TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 66 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

20+00 | 40+00 | 45+00 | 50+00 | 25+00

JAMES JOHNSON
DB 2386 PG 596
MB 2008 PG 100

JAMES JOHNSON
DB 1969 PG 136
MB 2014 PG 66

KENNETH EDWARDS
DB 3551 PG 561
MB 2004 PG 738

(92) REBECCA PARTIN
DB 693 PG 508

(108) NC DUMPSTER LLC
DB 3337 PG 30

(109) PATSY MCLEAN
DB 1231 PG 527

(110) NCS CONTRACTING LLC
DB 3427 PG 571

(111) ROBERT SURLES
DB 537 PG 126

(112) DILLARD ENTERPRISES INC
DB 875 PG 308

(97) HUGH SURLES
DB 1107 PG 399

-Y7A- MATTHEWS MILL POND RD

-Y7A- STA 36+00 (SEE SHEET 23)

MATCHLINE -Y7A-

MATCHLINE (SEE SHEET 19)

MATCHLINE (SEE SHEET 19)

MATCHLINE -Y7- STA 29+50 (SEE SHEET 20)

BEGIN CONSTRUCTION
-Y7- POT Sta. 21+88.45

N 20° 46' 46.6" E

-Y7- NC 210

-Y7A- SR 1440 (JAMES NORRIS RD)
N 80° 04' 54.0" W

JAMES NORRIS RD

END CONSTRUCTION
-Y7A- POC Sta. 47+90.00

CLEAN WATER DIVERSION

RETAIN

RETAIN SYSTEM

24" RCP

72" RCP-JV (1.0' BURIED)

SITE 32

SITE 33

SEDIMENT CONTROL BASIN

DITCH ENTERING WETLAND CALCS -Y7A- STA. 42+25 TO 42+48 LT	
DA	0.75 AC.
C (FUTURE)	0.58
I_m	6.2 IN./HR
Q_m (FUTURE)	2.72 C.F.S
V_m (FUTURE)	1.95 F.P.S
SLOPE	0.04 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

DITCH ENTERING WETLAND CALCS -Y7A- STA. 42+55 TO 43+00 LT	
DA	0.81 AC.
C (FUTURE)	0.56
I_m	6.2 IN./HR
Q_m (FUTURE)	2.82 C.F.S
V_m (FUTURE)	1.99 F.P.S
SLOPE	0.041 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

DITCH ENTERING WETLAND CALCS -Y7A- STA. 42+00 TO 42+58 RT	
DA	1.33 AC.
C (FUTURE)	0.45
I_m	6.2 IN./HR
Q_m (FUTURE)	3.68 C.F.S
V_m (FUTURE)	1.90 F.P.S
SLOPE	0.054 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

CHANNEL CHANGE IN WETLAND CALCS -Y7A- STA. 42+60 TO 44+30 RT	
DA	13.1 AC.
C (FUTURE)	0.50
I_m	6.2 IN./HR
Q_m (FUTURE)	40.6 C.F.S
V_m (FUTURE)	4.94 F.P.S
SLOPE	0.039 FT/FT
N	0.045
LINER TYPE	CL-I BANKS

DESIGN NOTE:
UNABLE TO ACHIEVE <2 FPS VELOCITY INTO WETLAND DUE TO EXISTING DITCH HAVING >2 FPS VELOCITY INTO WETLAND

LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 8 TONS CL-B RIPRAP
EST. 17 S.Y. GFD

CL-II RIPRAP ON BANKS
CL-II RIPRAP IN STREAM BED
SUPPLEMENT WITH CL-I RIPRAP AS CONTRACTOR DEEMS NECESSARY
EST. 35 TONS CL-II RIPRAP
EST. 80 S.Y. GFD
SEE DETAIL 47

LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 10 C.Y. DDE
EST. 14 TONS CL-B RIPRAP
EST. 40 S.Y. GFD.

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

LATERAL 'V' DITCH
EST. 100 C.Y. DDE
SEE DETAIL 38

LATERAL 'V' DITCH
EST. 80 C.Y. DDE
SEE DETAIL 38

SPECIAL CUT DITCH
SEE DETAIL 44

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

LATERAL 'V' DITCH
SEE DETAIL 43
EST. 90 C.Y. DDE
EST. 30 TONS CL-B RIPRAP
EST. 70 S.Y. GFD

LATERAL 8' BASE DITCH
SEE DETAIL 65
EST. 30 C.Y. DDE
EST. 50 TONS CL-B RIPRAP
EST. 120 S.Y. GFD

TOE PROTECTION
SEE DETAIL 12
EST. 30 TONS CL-B RIPRAP
EST 90 S.Y. GFD

CHANNEL CHANGE
SEE DETAIL 15
EST. 190 C.Y. DDE
EST. 130 TONS CL-I RIPRAP ON BANKS ONLY
EST. 310 S.Y. GFD

RIPRAP PAD AT OUTLET
15 TONS CL-I RIPRAP
30 S.Y. GFD

36" RCP-JV

REMOVE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

STANDARD 3' BASE DITCH
SEE DETAIL 49
EST. 60 C.Y. DDE
EST. 35 TONS CL-B RIPRAP
EST. 95 S.Y. GFD
(GRADE AT APPROX. 10%)

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 4
EST. 65 TONS CL-B RIPRAP
EST. 165 S.Y. GFD

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

SEE SHEET 2B-6 FOR INTERSECTION DETAIL
SEE SHEET 36 FOR -Y7- PROFILE
SEE SHEET 37 FOR -Y7A- PROFILE

Submitted 12/21/2021

5/14/99

REVISIONS

11/15/2021

LEGEND

F F — DENOTES FILL IN WETLAND	S S — DENOTES IMPACTS IN SURFACE WATER
E E — DENOTES EXCAVATION IN WETLAND	TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER
HC HC — DENOTES HAND CLEARING	

PERMIT DRAWING
SHEET 67 OF 71

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

JAMES JOHNSON
DB 2386 PG 596
MB 2008 PG 100

JAMES JOHNSON
DB 1969 PG 136
MB 2014 PG 66

BEGIN CONSTRUCTION
-Y7- POT Sta. 21+88.45

N 20° 46' 46.6" E

-Y7- NC 210

40+00

45+00

50+00

20+00

25+00

(92) REBECCA PARTIN
DB 693 PG 508

(108) NC DUMPSTER LLC
DB 3337 PG 30

(109) PATSY MCLEAN
DB 1231 PG 527

KENNETH EDWARDS
DB 3551 PG 561
MB 2004 PG 738

-Y7A- SR 1440 (JAMES NORRIS RD)
N 80° 04' 54.0" W

JAMES NORRIS RD

-Y7A- MATTHEWS MILL POND RD

-Y7A- STA 36+00 (SEE SHEET 23)

MATCHLINE -Y7A-

MATCHLINE (SEE SHEET 19)

MATCHLINE (SEE SHEET 19)

MATCHLINE -Y7- STA 29+50 (SEE SHEET 20)

RETAIN

RETAIN SYSTEM

24" RCP

TOP=289.27'

INV=286.50'

TOP=286.66'

INV=283.29'

INV=283.17(OUT)

INV=282.29(IN)

INV=282.17(OUT)

TOP=286.25'

INV=282.50'

INV=282.38'

DITCH ENTERING WETLAND CALCS
-Y7A- STA. 42+25 TO 42+48 LT

DA	0.75 AC.
C (FUTURE)	0.58
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	2.72 C.F.S
V_{10} (FUTURE)	1.95 F.P.S
SLOPE	0.04 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 8 TONS CL-B RIPRAP
EST. 17 S.Y. GFD

CL-II RIPRAP ON BANKS
CL-II RIPRAP IN STREAM BED
SUPPLEMENT WITH CL-I RIPRAP AS CONTRACTOR DEEMS NECESSARY
EST. 35 TONS CL-II RIPRAP
EST. 80 S.Y. GFD
SEE DETAIL 47

DITCH ENTERING WETLAND CALCS
-Y7A- STA. 42+55 TO 43+00 LT

DA	0.81 AC.
C (FUTURE)	0.56
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	2.82 C.F.S
V_{10} (FUTURE)	1.99 F.P.S
SLOPE	0.041 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

LATERAL 'V' DITCH
EST. 100 C.Y. DDE
SEE DETAIL 38

SEDIMENT CONTROL BASIN

LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 10 C.Y. DDE
EST. 14 TONS CL-B RIPRAP
EST. 40 S.Y. GFD.

LATERAL 'V' DITCH
EST. 80 C.Y. DDE
SEE DETAIL 38

SPECIAL CUT DITCH
SEE DETAIL 44

SITE 32

72" RCP-IV
(1.0' BURIED)

HW=

CLEAN WATER DIVERSION

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

DITCH ENTERING WETLAND CALCS
-Y7A- STA. 42+00 TO 42+58 RT

DA	1.33 AC.
C (FUTURE)	0.45
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	3.68 C.F.S
V_{10} (FUTURE)	1.90 F.P.S
SLOPE	0.054 FT/FT
N	0.063
LINER TYPE	CL-B RIPRAP

LATERAL 'V' DITCH
SEE DETAIL 43
EST. 90 C.Y. DDE
EST. 30 TONS CL-B RIPRAP
EST. 70 S.Y. GFD

LATERAL 8' BASE DITCH
SEE DETAIL 65
EST. 30 C.Y. DDE
EST. 50 TONS CL-B RIPRAP
EST. 120 S.Y. GFD

CHANNEL CHANGE
SEE DETAIL 15
EST. 190 C.Y. DDE
EST. 130 TONS CL-I RIPRAP ON BANKS ONLY
EST. 310 S.Y. GFD

CHANNEL CHANGE IN WETLAND CALCS
-Y7A- STA. 42+60 TO 44+30 RT

DA	13.1 AC.
C (FUTURE)	0.50
I_{10}	6.2 IN./HR
Q_{10} (FUTURE)	40.6 C.F.S
V_{10} (FUTURE)	4.94 F.P.S
SLOPE	0.039 FT/FT
N	0.045
LINER TYPE	CL-I BANKS

DESIGN NOTE:
UNABLE TO ACHIEVE < 2 FPS VELOCITY INTO WETLAND DUE TO EXISTING DITCH HAVING > 2 FPS VELOCITY INTO WETLAND

SITE 33

TOE PROTECTION
SEE DETAIL 12
EST. 30 TONS CL-B RIPRAP
EST 90 S.Y. GFD

RIPRAP PAD AT OUTLET
15 TONS CL-I RIPRAP
30 S.Y. GFD

36" RCP-IV

REMOVE

(110) NCB CONTRACTING LLC
DB 3427 PG 571

(111) ROBERT SURLES
DB 537 PG 126

(112) DILLARD ENTERPRISES INC
DB 875 PG 308

(97) HUGH SURLES
DB 1107 PG 399

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

STANDARD 3' BASE DITCH
SEE DETAIL 49
EST. 60 C.Y. DDE
EST. 35 TONS CL-B RIPRAP
EST. 95 S.Y. GFD
(GRADE AT APPROX. 10%)

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 4
EST. 65 TONS CL-B RIPRAP
EST. 165 S.Y. GFD

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

-Y7- END CONSTRUCTION
-Y7A- POC Sta. 47+90.00

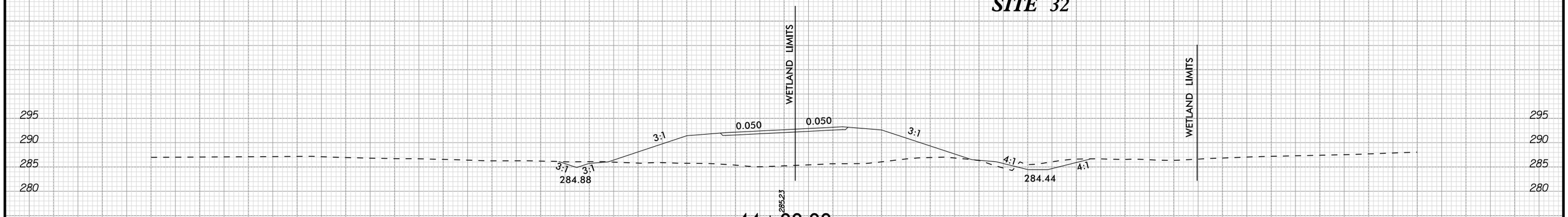
SEE SHEET 2B-6 FOR INTERSECTION DETAIL
SEE SHEET 36 FOR -Y7- PROFILE
SEE SHEET 37 FOR -Y7A- PROFILE

Submitted 12/21/2021

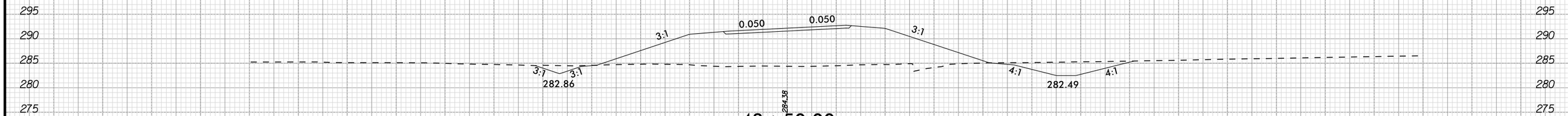
PERMIT DRAWING
SHEET 68 OF 71

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

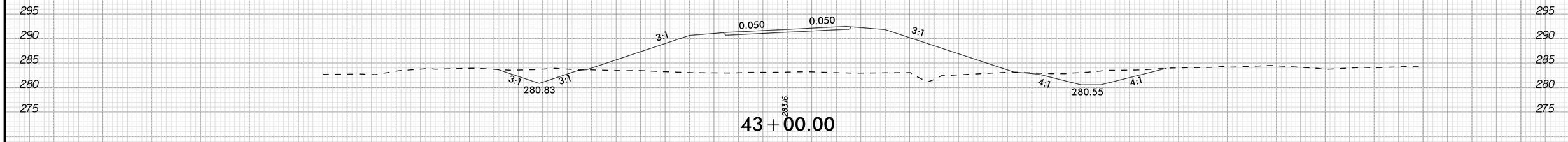
SITE 32



44+00.00



43+50.00



43+00.00

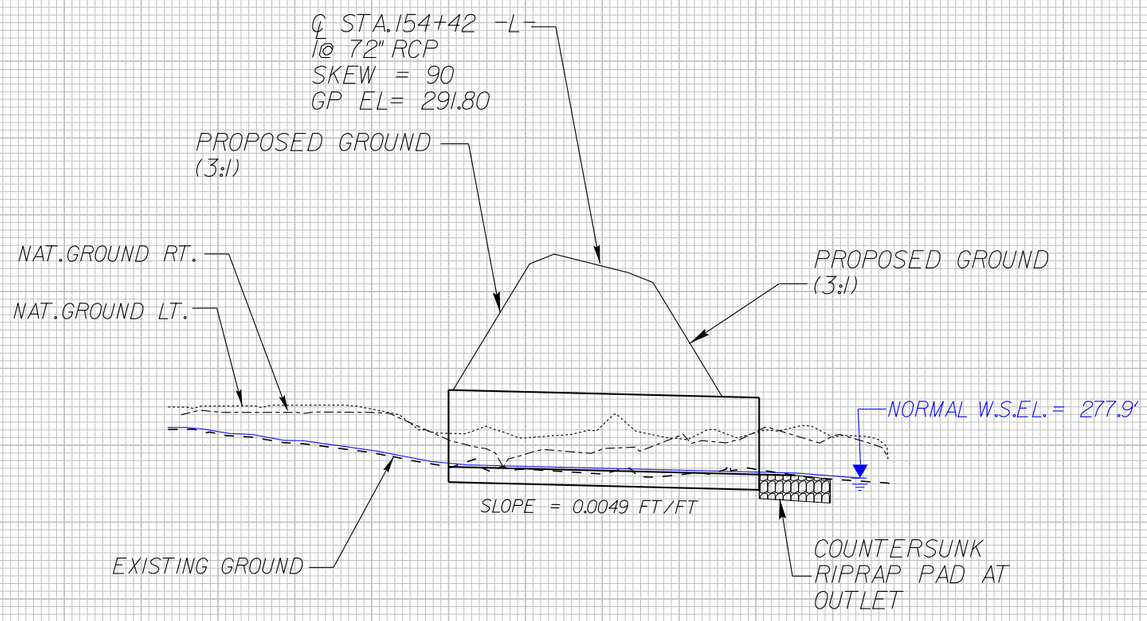
11/15/2021

Submitted 12/21/2021

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET - OF -

PERMIT DRAWING
SHEET 69 OF 71

SITE 32



290 280 270 260

290 280 270 260

11/15/2021

Submitted 12/21/2021

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 16+20 to 16+40 LT/RT	24" RCP					< 0.01		< 0.01		30	
2	-L- 23+03 to 24+16 LT/RT	6' x 7' RCBC	0.02		< 0.01		0.03	< 0.01	< 0.01	34	10	
3	-L- 24+28 to 24+54 RT	Roadway Fill						0.01	< 0.01	116	10	
4	-L- 24+54 to 24+83 RT	6' x 7' RCBC	0.22		0.10	0.07	0.06	< 0.01		51		
4	-L- 24+83 to 25+09 RT	Bank Stabilization						< 0.01	< 0.01	49	10	
5	-L- 37+97 to 38+48 RT	24" RCP	0.05				0.01					
6	-L- 42+50 to 44+74 RT	42" RCP						0.05	< 0.01	268	30	
7	-L- 44+74 to 45+04 RT	42" RCP						< 0.01	< 0.01	30		
8	-L- 44+50 to 49+00 LT	42" RCP						0.95				
9	-L- 76+77 to 77+38 RT	24" RCP	0.04				< 0.01					
10	-L- 80+58 to 81+90 RT	Roadway Fill	0.09		0.05		0.04					
11	-L- 82+04 to 91+50 RT	Roadway Fill	1.11		0.10		0.35	0.01	< 0.01	224	86	
12	-L- 89+35 to 92+38 LT	54" RCP	0.09	0.91	0.04		0.09					
13	-L- 94+02 to 94+88 LT	Roadway Fill					0.02					
14	-L- 98+38 to 99+24 RT	Roadway Fill	< 0.01				0.02					
15	-L- 106+38 to 113+76 LT/RT	48" RCP	0.97		0.34		0.32	< 0.01	< 0.01	102	35	
15	-L- 106+38 to 113+76 LT/RT	48" RCP						0.21				
16	-Y4A- 18+96 to 19+58 RT	48" RCP			< 0.01		0.02	0.01	< 0.01	57	9	
17	-L- 127+00 to 130+67 RT/LT	Roadway Fill	0.66		0.06		0.17					
18	-L- 132+03 to 132+13 RT	48" RCP						< 0.01	< 0.01	41	7	
19	-L- 136+18 to 140+48 RT	Roadway Fill	0.05				0.01					
19	-L- 136+18 to 140+48 RT	Roadway Fill						0.23				
20	-L- 153+56 to 154+84 RT/LT	66" RCP	0.08		0.06	0.02	0.02	0.04	< 0.01	204	31	
20	-L- 154+84 LT	Bank Stabilization						< 0.01	< 0.01	12	14	
TOTALS*:			3.36	0.91	0.76	0.09	1.17	1.53	0.03	1186	270	0

*Rounded totals are sum of actual impacts

NOTES:

0.055 acres of mechanized clearing on Site 4 is for clean water diversion erosion control feature

0.008 acres of mech. clearing on Site 4 is for temporary excavation associated with a temporary pipe for culvert phasing (shown as "E" hatching on plans but quantified as mechanized clearing in this table)

0.91 acres of temporary fill in wetland on Site 12 is being used to quantify the impact for the potential that the ponded water in the wetland will need to be temporarily drained during construction

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
09-13-2021
Harnett
R-5705A
46377.1.2

Submitted 12/21/2021

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
21	-L- 161+48 to 162+68 RT	36" RCP	0.06		0.04		0.03					
22	-L- 162+58 to 162+77 LT	36" RCP	0.04		0.03		< 0.01					
23	-L- 173+93 to 174+24 LT	30" RCP	0.02		0.02		0.02					
24	-L- 179+18 to 183+23 RT	5' x 7' RCBC	0.07		0.05	0.03	0.17	0.02	< 0.01	154	33	
25	-L- 179+25 to 182+36 LT	5' x 7' RCBC	0.31		0.06	0.03	0.16					
25	-L- 179+25 to 182+36 LT	5' x 7' RCBC						0.35				
26	-L- 194+11 to 194+75 RT	30" RCP	< 0.01				0.02					
27	-L- 194+13 to 202+60 RT/LT	Roadway Fill	0.18		0.05	< 0.01	0.02					
27	-L- 194+13 to 202+60 RT/LT	7' x 7' RCBC						5.05				
28	-Y7B- 20+53 to 20+69 RT	Bank Stabilization						< 0.01	< 0.01	19	15	
29	-L- 203+22 to 204+58 RT/LT	36" RCP	0.35		0.04	0.05	0.04					
30	-L- 227+38 to 229+82 RT/LT	54" RCP	0.96				0.14	0.02	< 0.01	224	20	
31	-Y7A- 30+84 to 31+61 LT	42" RCP	0.06				0.03					
32	-Y7A- 42+45 to 44+70 RT/LT	72" RCP	0.15		0.07	< 0.01	0.05	0.03	< 0.01	153	23	
33	-Y7A- 42+67 to 44+64 RT	Roadway Fill						0.03	< 0.01	178	11	
SHEET TOTALS*:			2.20		0.36	0.12	0.69	5.50	< 0.01	728	102	0
PROJECT TOTALS*:			5.56	0.91	1.12	0.21	1.86	7.03	0.03	1915	373	

*Rounded totals are sum of actual impacts

NOTES:

0.006 Acres of mechanized clearing on site 27 represents remnant wetland piece which will have significantly less supporting hydrology post-construction. The plans still call for hand clearing per guidance from 4B meeting

0.004 acres of mechanized clearing on Site 20, 0.012 acres of mechanized clearing on Site 24, and 0.005 acres of mechanized clearing on Site 25 is for temporary excavation associated with culvert construction and phasing (shown as "E" hatching on plans but quantified as mechanized clearing in this table).

There will be 0.15 acres of Temporary Fill in wetlands in the Hand Clearing areas for Erosion Control measures.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
09-13-2021
Harnett
R-5705A
46377.1.2
SHEET 71 OF 71

Submitted 12/21/2021

North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

WBS Element:	46377.1.3	TIP No.:	R-5705B	County(ies):	WAKE/HARNETT	Page	1	of	4

General Project Information

WBS Element:	46377.1.3	**TIP Number:**	R-5705B	**Project Type:**	Roadway Relocation	**Date:**	9/20/2021
NCDOT Contact:	Nicole Hackler, PE			**Contractor / Designer:**	TGS Engineers (Rusty Lassiter)		
Address:	1000 Birch Ridge Drive Raleigh, NC 27610			**Address:**	706 Hillsborough Street Suite 200 Raleigh, NC 27603		
Phone:	919-707-6029			**Phone:**	919-773-8887 ext. 121		
Email:	nmhackler@ncdot.gov			**Email:**	rlassiter@tgsengineers.com		
City/Town:	Angier			**County(ies):**	Wake	Harnett	
River Basin(s):	Cape Fear	Neuse		**CAMA County?**	No	No	
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	4.437 miles	**Surrounding Land Use:**	Business; Residential; Rural Farmland

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	51.0 ac.	12.0 ac.
Typical Cross Section Description:	4-lane divided roadway with a 30-foot raised median and 10-foot shoulders (4-foot paved shoulders)	Two 11-foot lanes with 3-foot paved shoulders
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 44400 Year: 2042	Existing: 30200 Year: 2022

General Project Narrative: (Description of Minimization of Water Quality Impacts)

Currently, NC 55 is primarily a two-lane roadway throughout the R5705B corridor, with turn lanes at major intersections. To relieve congestion and improve mobility, R5705B is proposing to widen portions of NC 55 to a median-divided, four-lane roadway and build a multi-lane bypass west of Angier. Proposed typical section for widening of NC 55 will be a 4-lane divided roadway with a 23-foot raised median, curb and gutter with a 10-foot berm. Proposed typical section for new location of NC 55 will be a 4-lane divided roadway with a 30-foot raised median and 10-foot shoulders (including 4-foot paved shoulders).

Waterbody Information

Surface Water Body (1):	UT to Neills Creek		**NCDWR Stream Index No.:**	18-16-(0.7)a	
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Water Supply IV (WS-IV)		
		Supplemental Classification:	None		
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				**Buffer Rules in Effect:**	N/A
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**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)					

WBS Element:	46377.1.3	TIP No.:	R-5705B	County(ies):	Wake Harnett	Page	2	of	4

Additional Waterbody Information

Surface Water Body (2):	UT to Neills Creek		**NCDWR Stream Index No.:**	18-16-(0.7)a	
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Water Supply IV (WS-IV)		
		Supplemental Classification:			
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:	SAF,SAE,SAC,SAD,SAB,SY,SAA,SZ,SW,SV,SX			**Buffer Rules in Effect:**	N/A
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A
Deck Drains Discharge Over Water Body?	N/A	(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)					

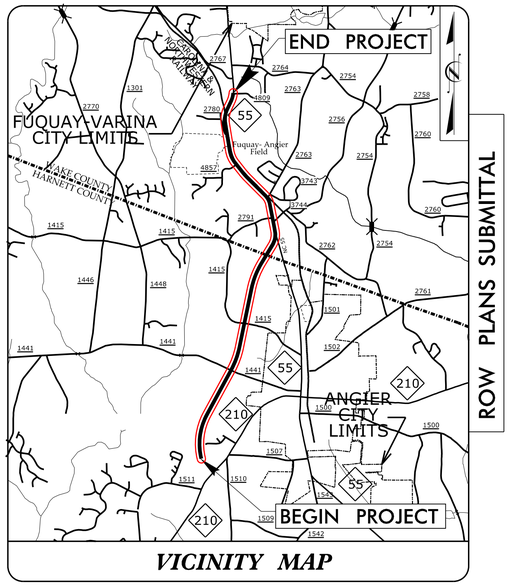
Submitted 12/21/2021

09/08/09

TIP PROJECT: R-5705B

CONTRACT:

See Sheet 1A For Index of Sheets



VICINITY MAP

ROW PLANS SUBMITTAL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HARNETT & WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5705B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
46377.1.3		PE
46377.2.2		ROW
46377.2.6		UTILITIES

LOCATION: NC 55 FROM NC 210 TO SR 4809 (JICARILLA LANE)

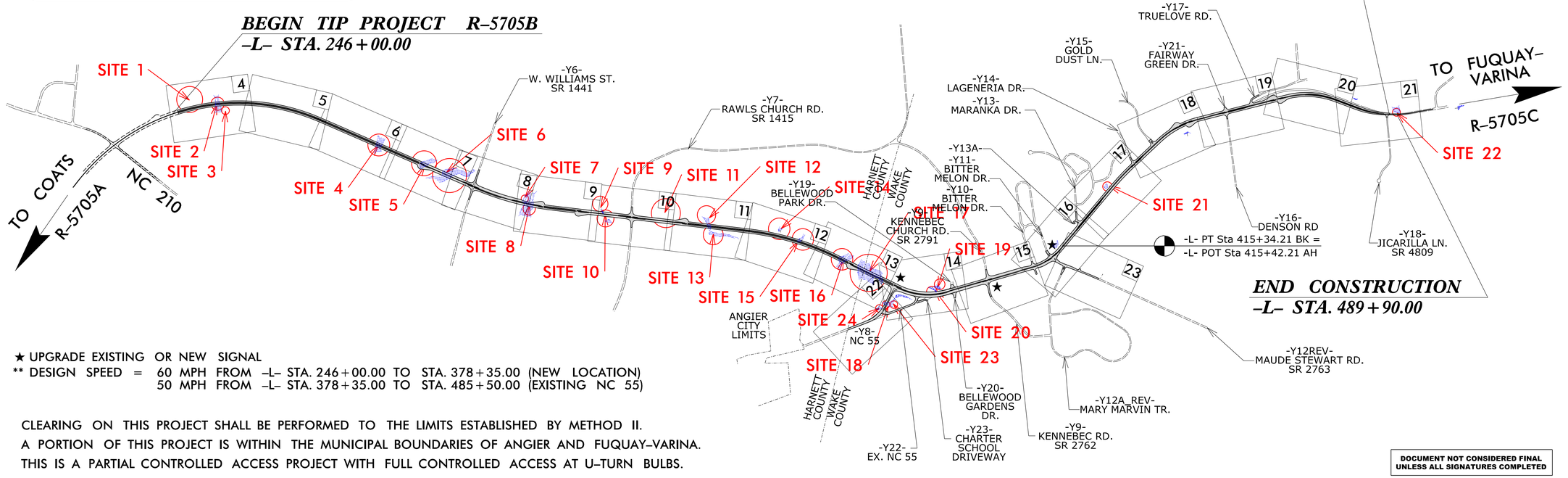
TYPE OF WORK: PAVING, GRADING, DRAINAGE, SIGNALS & CULVERT

NAD 83/NA 2011

WETLAND AND SURFACE WATER IMPACTS PERMIT

BEGIN TIP PROJECT R-5705B
-L- STA. 246+00.00

END TIP PROJECT R-5705B
-L- STA. 485+57.00



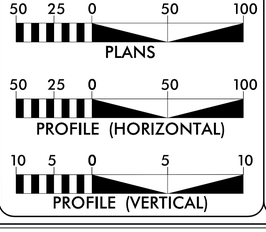
END CONSTRUCTION
-L- STA. 489+90.00

★ UPGRADE EXISTING OR NEW SIGNAL
** DESIGN SPEED = 60 MPH FROM -L- STA. 246+00.00 TO STA. 378+35.00 (NEW LOCATION)
50 MPH FROM -L- STA. 378+35.00 TO STA. 485+50.00 (EXISTING NC 55)

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF ANGIER AND FUQUAY-VARINA.
THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH FULL CONTROLLED ACCESS AT U-TURN BULBS.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2022 = 30,200
ADT 2045 = 44,200
K = 9 %
D = 60 %
T = 4 % *
**V = 50 & 60 MPH
* TTST =1% DUAL 3%
FUNC CLASS = MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT R-5705B = 4.536 MILES
TOTAL LENGTH PROJECT = 4.536 MILES

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

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 3, 2021

LETTING DATE:
OCTOBER 18, 2022

TOMMY REGISTER, P.E.
PROJECT ENGINEER

NICOLE M. HACKLER, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

9/17/2021
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User:rlassiter

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

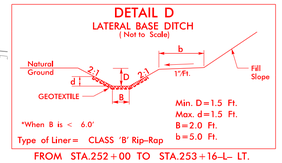
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706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PERMIT DRAWING SHEET _1_ OF _47_

NAD 83/NA 2011

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

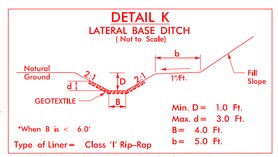


Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap

FROM STA.252+00 TO STA.253+16 –L– LT.

DETAIL K
LATERAL BASE DITCH
(Not to Scale)

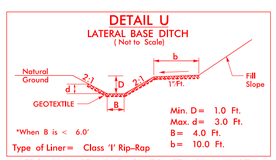


Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 5.0 Ft.

*When B is < 6.0'
Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 254+16 TO STA. 255+50 RT

DETAIL U
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 10.0 Ft.

*When B is < 6.0'
Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 253+67 TO STA. 254+18 RT

DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= CL I Rip-Rap

FROM STA. 253+15 –L– LT.

SITE 1

3' STANDARD BASE DITCH
SEE DETAIL 'AE'
S=1.3%
L=325'
EST. 475 CY DDE

CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

PROPOSED 15" RCP COMING FROM CB#2104 (R-5705A) DESIGNED BY OTHERS

15" RCP-IV

24" RCP-IV

SEE NCDOT TIP PROJECT R-5705A FOR RIGHT OF WAY PURCHASED UNDER NCDOT TIP PROJECT R-5705A

END PROPOSED R/W TIP PROJECT R-5705A
BEGIN PROPOSED R/W TIP PROJECT R-5705B
℄
100' LT

RIP RAP AT EMBANKMENT
SEE DETAIL 'N'

CLASS 'I' RIP RAP

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP

15" RCP-IV

15" RCP-IV

SURFACE WATER IMPACT

SURFACE WATER IMPACT

BURY PIPE

CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

15" RCP-IV

ACCESS POINT

ACCESS POINT

MATCHLINE SHEET 5
–L– STA. 259+00.00

200
ROBERTA WOOLARD

WOODS

GREU TL-3

CAT-1

CULTIVATED

PDE

TDE

PUE

98

ROY GARDNER

201
WILLIAM WHEELER

SEE NCDOT TIP PROJECT R-5705A FOR RIGHT OF WAY PURCHASED UNDER NCDOT TIP PROJECT R-5705A

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

4.0' LATERAL BASE DITCH
SEE DETAIL U
CLASS 'I' RIP RAP
(54' STREAM RELOCATION)

4.0' LAT. BASE DITCH
SEE DETAIL K
CLASS 'I' RIP RAP

END PROPOSED R/W TIP PROJECT R-5705A
BEGIN PROPOSED R/W TIP PROJECT R-5705B
℄
111.85' RT

SITE 2

SITE 3

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
P P	DENOTES IMPACTS IN SURFACE WATER (POND)
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND

100' 0' 100'
HORIZONTAL SCALE

JESUS GARCIA
ROBERT PHELPS
JAMES JOHNSON
CLARENCE LYON
ISFD
WOODS

SEE SHEET 24 FOR –L– PROFILE

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_04.dgn
User:cassiter

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

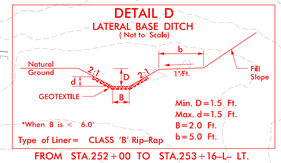
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RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PERMIT DRAWING SHEET _2_ OF _47_

NAD 83/NA 2011

REVISIONS 8/17/99

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



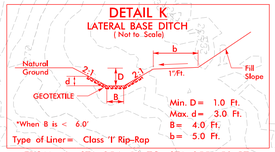
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

*When B is < 6.0'

Type of Liner= CLASS 'B' Rip-Rap

FROM STA.252+00 TO STA.253+16-L- LT.

DETAIL K
LATERAL BASE DITCH
(Not to Scale)



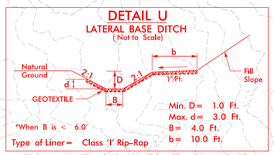
Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 5.0 Ft.

*When B is < 6.0'

Type of Liner= Class 'I' Rip-Rap

FROM -L- STA. 254+16 TO STA. 255+50 RT

DETAIL U
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 10.0 Ft.

*When B is < 6.0'

Type of Liner= Class 'I' Rip-Rap

FROM -L- STA. 253+67 TO STA. 254+18 RT

DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= CL I Rip-Rap

FROM STA. 253+15 -L- LT.

SITE 1

3' STANDARD BASE DITCH
SEE DETAIL 'AE'
S=1.3%
L=325'
EST. 475 CY DDE

CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

SEE NCDOT TIP PROJECT R-5705A FOR RIGHT OF WAY PURCHASED UNDER NCDOT TIP PROJECT R-5705A

END PROPOSED R/W TIP PROJECT R-5705A
BEGIN PROPOSED R/W TIP PROJECT R-5705B
℄
100' LT

RIP RAP AT EMBANKMENT
SEE DETAIL 'N'

CLASS 'I' RIP RAP

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP

CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

PROPOSED 15" RCP COMING FROM CB#2104 (R-5705A) DESIGNED BY OTHERS

15" RCP-IV
24" RCP-IV
18" RCP-IV

GREU TL-3
CAT-1

SURFACE WATER IMPACT

BURY PIPE

PUE

ACCESS POINT

MATCHLINE SHEET 5
-L- STA. 259+00.00

ROBERTA WOOLARD
WILLIAM WHEELER
ROY GARDNER
JESUS GARCIA
ROBERT PHELPS
JAMES JOHNSON
CLARENCE LYON

WOODS
CULTIVATED

SITE 2

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

4.0' LATERAL BASE DITCH
SEE DETAIL 'U'
CLASS 'I' RIP RAP
(54' STREAM RELOCATION)

4.0' LAT. BASE DITCH
SEE DETAIL 'K'
CLASS 'I' RIP RAP

END PROPOSED R/W TIP PROJECT R-5705A
BEGIN PROPOSED R/W TIP PROJECT R-5705B
℄
111.85' RT

SITE 3

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
P P	DENOTES IMPACTS IN SURFACE WATER (POND)
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND

HORIZONTAL SCALE
100' 0' 100'

SEE SHEET 24 FOR -L- PROFILE

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\With Contours\R5705B_Rdy_psh_04_con.dgn
User:jasier

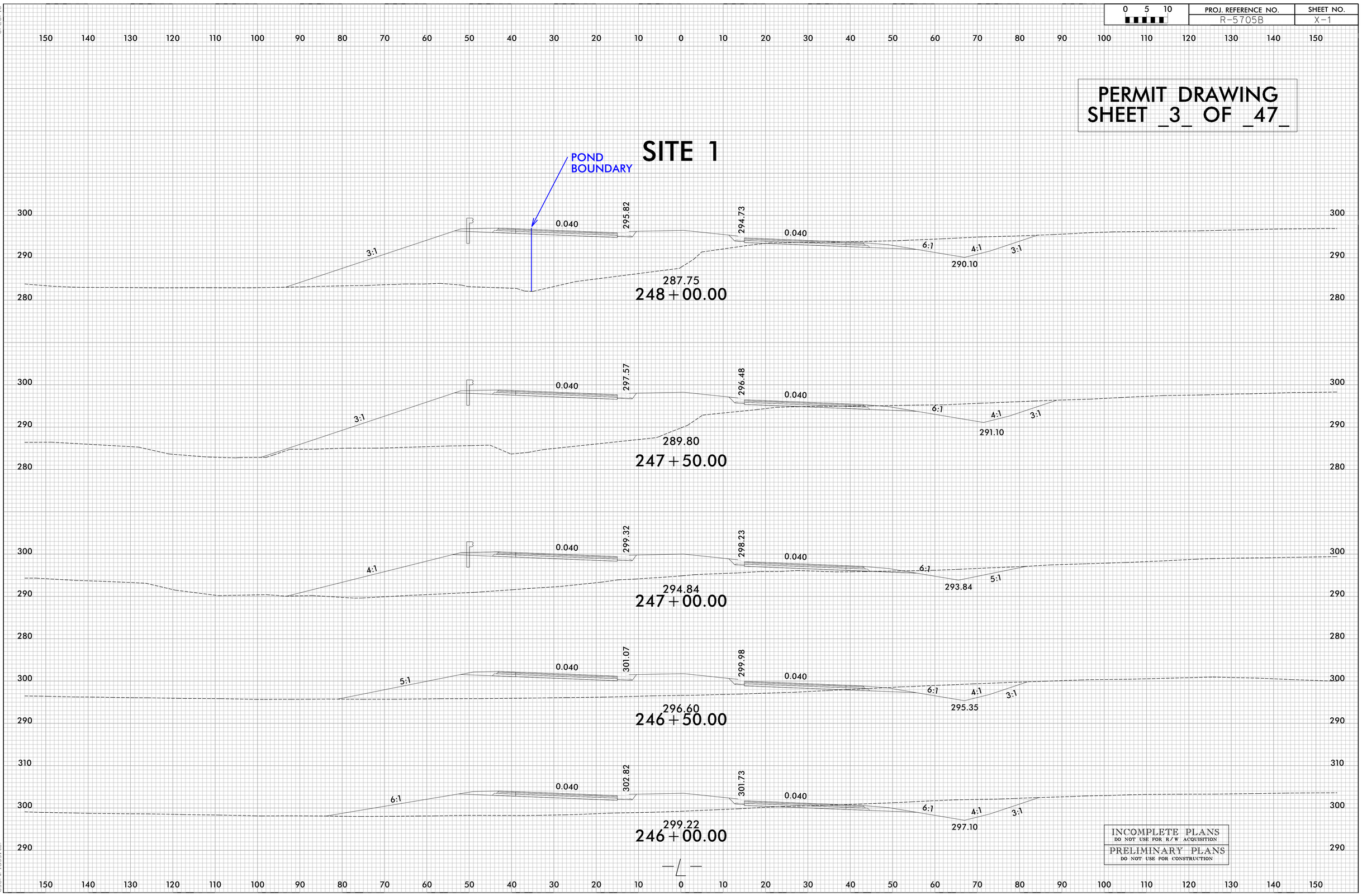
Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-1

PERMIT DRAWING
SHEET _3_ OF _47_

SITE 1



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\X-Sections\R5705B_Rdy_xpl_L(1).dgn
User:lassiter

Submitted 12/21/2021

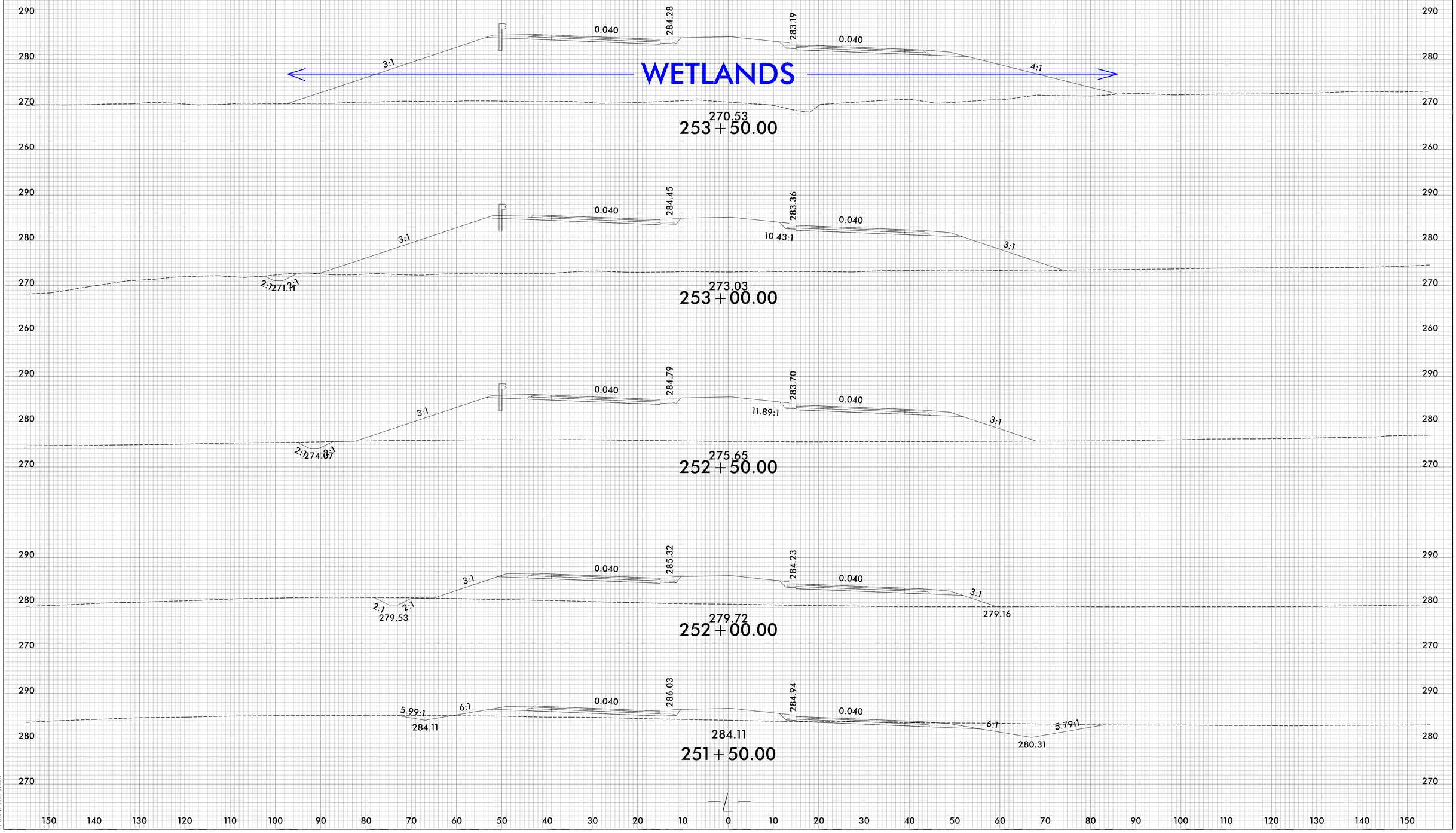
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-3

PERMIT DRAWING
SHEET _4_ OF _47_

SITE 2 and SITE 3

WETLANDS



9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\X-Sections\R5705B_Rdy_xpl_L(1).dgn
User:lossiter

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

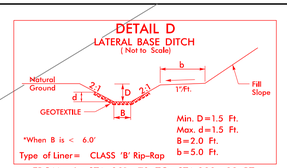
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PERMIT DRAWING SHEET _5_ OF _47_

NAD 83/NA 2011

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



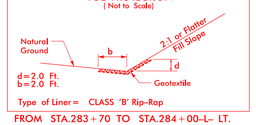
*When B is < 6.0'

Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

Type of Liner= CLASS 'B' Rip-Rap

FROM –L– STA. 281+72 TO STA.283+89 RT
FROM –L– STA. 283+92 TO STA. 287+00 RT

DETAIL A
TOE PROTECTION
(Not to Scale)



d=2.0 Ft.
b=2.0 Ft.

Type of Liner= CLASS 'B' Rip-Rap

FROM STA.283+70 TO STA.284+00–L– LT.

MATCHLINE SHEET 5
–L– STA. 273+00.00

MATCHLINE SHEET 7
–L– STA. 287+00.00

BEGIN SBG 282+00 LT. AND 281+71 RT.
END SBG 286+60 LT. AND 286+35 RT.

203 RONALD E WHEELER (TIC) & REDDIN ADAMS WHEELER (TIC)

204 BARBARA ENNIS

205 LEOTERRA HONEYCUTT LLC

202 LEOTERRA HONEYCUTT OAKS LLC

206 JERRY SMITH

LEOTERRA HONEYCUTT OAKS LLC CLASS 'I' RIP RAP

LATERAL BASE DITCH SEE DETAIL C

CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY

CLASS 'I' RIP RAP

CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY

TOE PROTECTION SEE DETAIL 'A'

15" RCP-IV

48" RCP-IV

HW

RIP RAP AT EMBANKMENT SEE DETAIL N

ACCESS POINT

SURFACE WATER IMPACT

GREU TL–3

CAT–1

CMP

FURY PIPE 0.9'

2.0' LATERAL BASE DITCH SEE DETAIL 'D' CLASS 'B' RIP RAP

PUE

POND

CENTURY LINK/CORNER

CULTIVATED

–L– ST Sta. 273+65.93

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 4

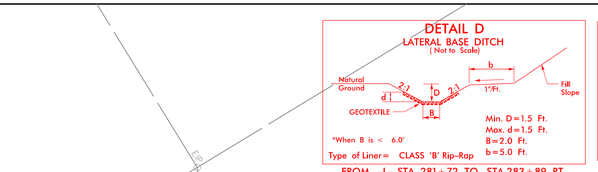
100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 25 FOR –L– PROFILE

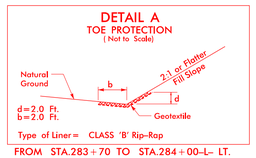
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User: lassiter

Submitted 12/21/2021

8/17/99



FROM –L– STA. 281+72 TO STA.283+89 RT
FROM –L– STA. 283+92 TO STA. 287+00 RT



FROM STA.283+70 TO STA.284+00–L– LT.

PERMIT DRAWING SHEET _6_ OF _47_

NAD 83/NA 2011

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

MATCHLINE SHEET 5
–L– STA. 273+00.00

MATCHLINE SHEET 7
–L– STA. 287+00.00

POND

203 RONALD E WHEELER (TIC) & REDDIN ADAMS WHEELER (TIC)

204 BARBARA ENNIS

205 LEOTERRA HONEYCUTT LLC

202 LEOTERRA HONEYCUTT OAKS LLC

206 JERRY SMITH

CENTER OF LITTLE CREEK

CULTIVATED

LATERAL BASE DITCH SEE DETAIL C

CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY

CLASS 'I' RIP RAP

ACCESS POINT

15" RCP-IV

48" RCP-IV

HW

RIP RAP AT EMBANKMENT SEE DETAIL N

–L– ST Sta. 273+65.93

BEGIN SBG 282+00 LT. AND 281+71 RT.
END SBG 286+60 LT. AND 286+35 RT.

CLASS 'I' RIP RAP

CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY

TOE PROTECTION SEE DETAIL 'A'

15" CSP

CAT–1

GREU TL–3

SURFACE WATER IMPACT

CULVERT PIPE 0.9%

2.0' LATERAL BASE DITCH SEE DETAIL 'D' CLASS 'B' RIP RAP

PUE

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 4

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 25 FOR –L– PROFILE

8/26/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\With Contours\R5705B_Rdy_psh_06_con.dgn
User: lassiter

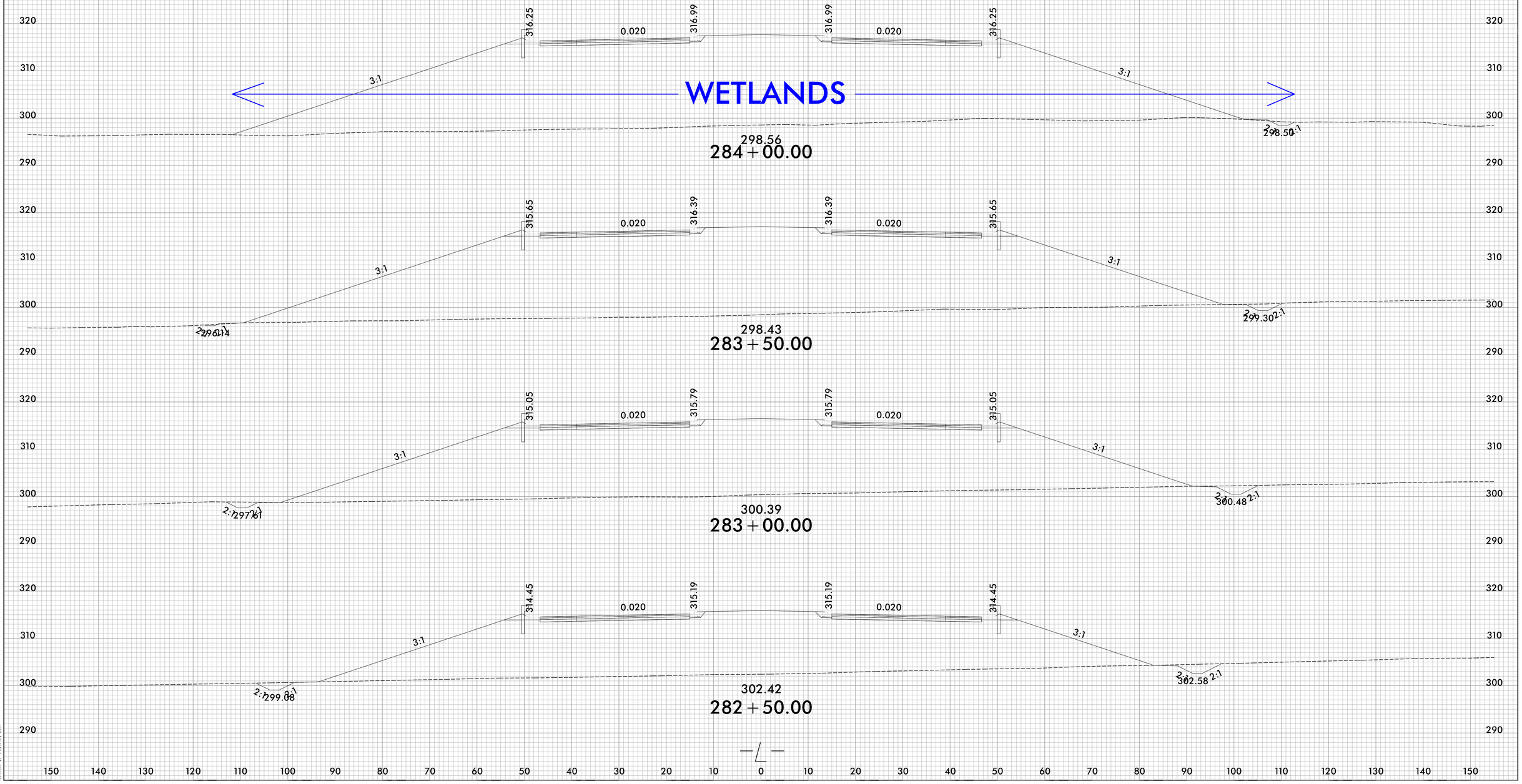
Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-14

PERMIT DRAWING
SHEET _7_ OF _47_

SITE 4



9/20/2021
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User:lassiter

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

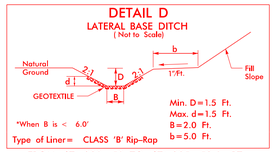
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PERMIT DRAWING
SHEET _8_ OF _47_

NAD 83/NA 2011

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



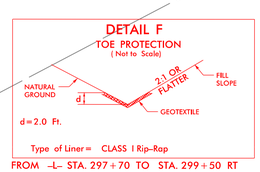
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.

*When B is < 6.0'

Type of Liner = CLASS 'B' Rip-Rap

FROM STA.290+50 TO STA.295+58–L– RT.
FROM STA.290+00 TO STA.293+50–L– LT.
FROM STA.299+50 TO STA.301+17–L– LT.

DETAIL F
TOE PROTECTION
(Not to Scale)



d = 2.0 Ft.

Type of Liner = CLASS I Rip-Rap

FROM –L– STA. 297+70 TO STA. 299+50 RT

SITE 5

BEGIN SBG 291+66 LT. AND 290+70 RT.
END SBG 301+16 LT. AND 301+00 RT.

204 BARBARA ENNIS
207 BARRY DOZE
206 JERRY SMITH
207 BARRY DOYLE

CULTIVATED
WOODS

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 SY

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP

2' LATERAL BASE DITCH
SEE DETAIL D
CLASS 'B' RIP RAP

CLASS 'I' RIP RAP

MATCHLINE SHEET 6
–L– STA. 287+00.00

MATCHLINE SHEET 8
–L– STA. 300+00.00

ACCESS POINT
CAT-1
GREU TL-3
SURFACE WATER IMPACT
BURY PIPE 0.8'
HW
PUE
15" RCP-IV
15" CSP
POND

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP

TOE PROTECTION
SEE DETAIL 'F'

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

100' 0' 100'
HORIZONTAL SCALE

SITE 6

CHALYBEATE SPRINGS OFF RD NC

SEE SHEET 25 FOR –L– PROFILE

8/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_07.dgn
User:Lossiter

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

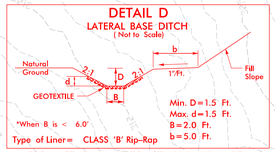
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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RALEIGH, NC 27603
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CORP. LICENSE NO.: C-0275

PERMIT DRAWING SHEET _9_ OF _47_

NAD 83/NA 2011

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



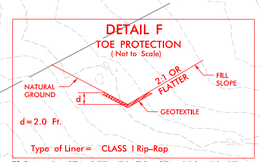
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.

*When B is < 6.0'

Type of Liner = CLASS 'B' Rip-Rap

FROM STA.290+50 TO STA.295+58 –L– RT.
FROM STA.290+00 TO STA.293+50 –L– LT.
FROM STA.299+50 TO STA.301+17 –L– LT.

DETAIL F
TOE PROTECTION
(Not to Scale)



d = 2.0 Ft.

Type of Liner = CLASS I Rip-Rap

FROM –L– STA. 297+70 TO STA. 299+50 RT

SITE 5

BEGIN SBG 291+66 LT. AND 290+70 RT.
END SBG 301+16 LT. AND 301+00 RT.

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 SY

2' LATERAL BASE DITCH
SEE DETAIL D
CLASS 'B' RIP RAP

CLASS 'I' RIP RAP

MATCHLINE SHEET 6
–L– STA. 287+00.00

MATCHLINE SHEET 8
–L– STA. 300+00.00

204 BARBARA ENNIS
207 BARRY DOYLE
206 JERRY SMITH
207 BARRY DOYLE
208 WILLIAM FARMER

ACCESS POINT
CULTIVATED
WOODS
POND
GREU TL-3
CAT-1
SURFACE WATER IMPACT
BURY PIPE 0.8'
HW
TOE PROTECTION
SEE DETAIL 'F'

15" RCP-IV
15" CSP
PUE

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

SITE 6

CHALYBEATE SPRINGS OFF RD NC

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 25 FOR –L– PROFILE

8/20/2021
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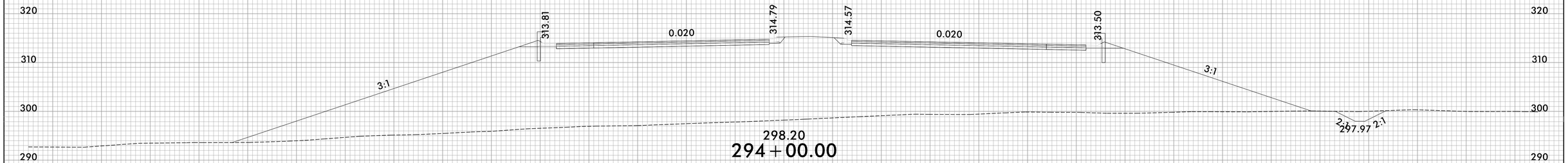
Submitted 12/21/2021

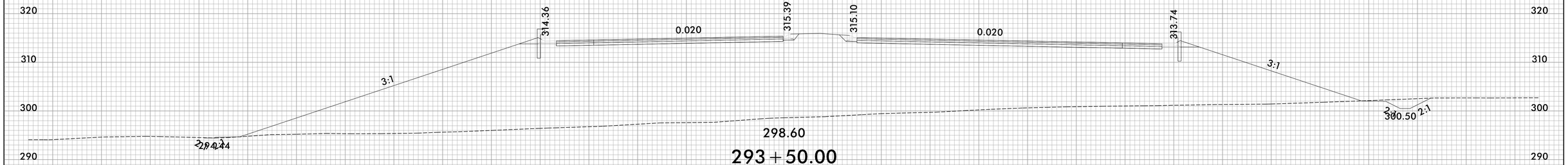
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-18

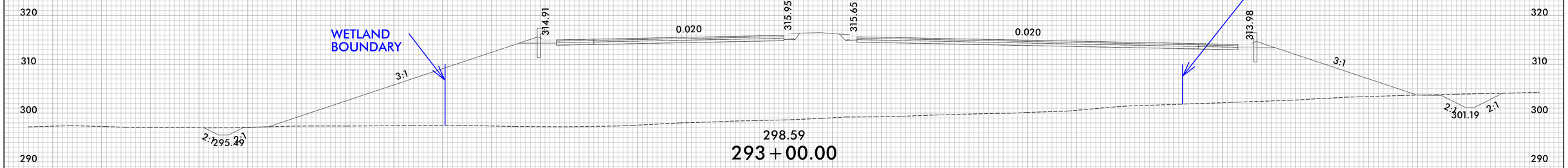
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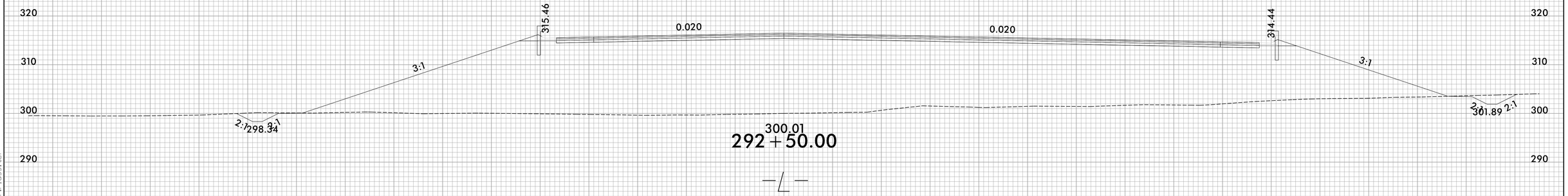
PERMIT DRAWING
SHEET _10_ OF _47_





SITE 5





9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\X-Sections\R5705B_Rdy_xpl_L(1).dgn
User:lossiter

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

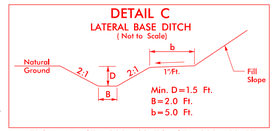
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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

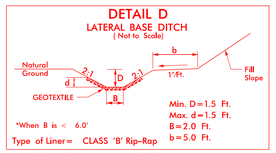
PERMIT DRAWING SHEET _11_ OF _47_

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 300+68 TO STA. 302+50 RT

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



FROM STA.299+50 TO STA.301+17–L– LT.

NAD 83/NA 2011

–Y6– POT Sta. 10+00.00

BEGIN SBG 291+66 LT. AND 290+70 RT.
END SBG 301+16 LT. AND 301+00 RT.

24" RCP-IV
CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
11 SY
2' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP
JB W/MH
PDE
PUE
15" RCP-IV
18" CSP
CAT-1
GREU TL-3
FS
ROD AND LUG
CB
ACCESS POINT
TOE PROTECTION
SEE DETAIL 'A'
CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY
2' LATERAL BASE DITCH
SEE DETAIL 'C'
CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
7 SY

–L– PC Sta. 303+16.42

–Y6– POT Sta. 19+42.34

MATCHLINE SHEET 7
–L– STA. 300+00.00

MATCHLINE SHEET 9
–L– STA. 312+00.00

BARRY DOYLE 207
RECIE FARMER 209
LAURA DICKENS 210
JERRY SMITH 211
LINWOOD MATTHEWS 212
SUSAN CHRISCOE 216

POND
ISFD
BK B
ISBKD
2SBKG
ISBFD
3SBFD
CONC
WOODS
CULTIVATED
GRV
GR
48" CHL
48" TWO
54" RCP
72" RCP
W.M. ENSLOW
S.R. 1442 (SR WILLIAMS ST)
SR 1442 (SR 2ND ST)

SITE 6

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

100' 0' 100'
HORIZONTAL SCALE

SEE SHEETS 25 THRU 26 FOR –L– PROFILE
SEE SHEET 33 FOR –Y6– PROFILE

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X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_08.dgn
User: lassiter

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PROJECT REFERENCE NO.	SHEET NO.
R-5705B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

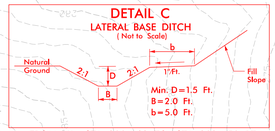
INCOMPLETE PLANS
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CORP. LICENSE NO.: C-0275

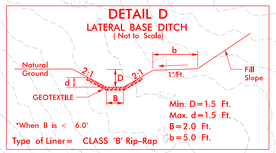
PERMIT DRAWING SHEET _12_ OF _47_

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 300+68 TO STA. 302+50 RT

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



FROM STA.299+50 TO STA.301+17–L– LT.

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–Y6– POT Sta. 10+00.00

BEGIN SBG 291+66 LT. AND 290+70 RT.
END SBG 301+16 LT. AND 301+00 RT.

24" RCP-IV
CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
11 SY
2' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP
JB W/MH
PDE
PUE
–L– PC Sta. 303+16.42
15" RCP-IV
CAT-1
15" CSP
GREU TL-3
FS
18" CSP
ACCESS POINT
TOE PROTECTION
SEE DETAIL 'A'
CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY
2' LATERAL BASE DITCH
SEE DETAIL 'C'
ROD AND LUG
CB
–Y6– POT Sta. 19+42.34

MATCHLINE SHEET 7
–L– STA. 300+00.00

MATCHLINE SHEET 9
–L– STA. 312+00.00

BARRY DOYLE 207
RECIE FARMER 209
LINWOOD MATTHEWS 212
LAURA DICKENS 210
JERRY SMITH 211
SUSAN CHRISCOE 216

SITE 6

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

100' 0' 100'
HORIZONTAL SCALE

SEE SHEETS 25 THRU 26 FOR –L– PROFILE
SEE SHEET 33 FOR –Y6– PROFILE

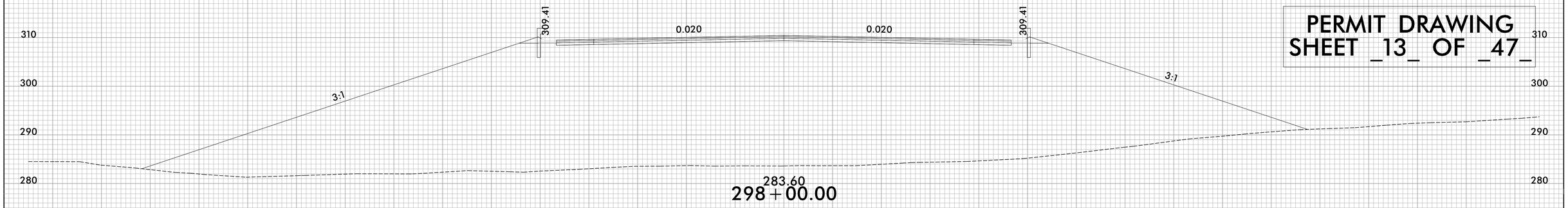
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User: jassler

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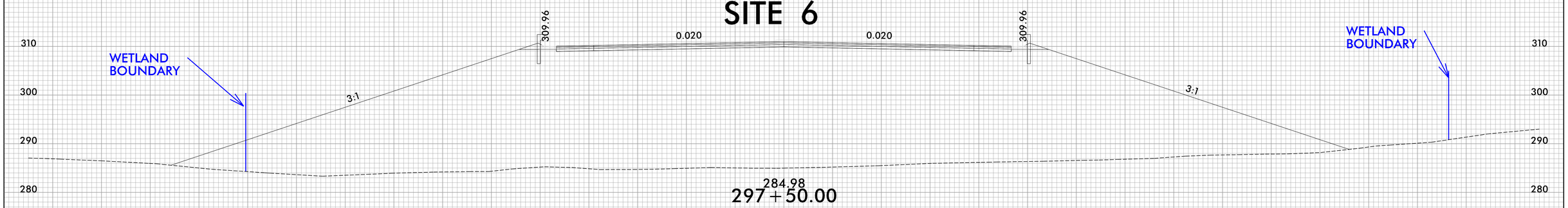
6/23/16

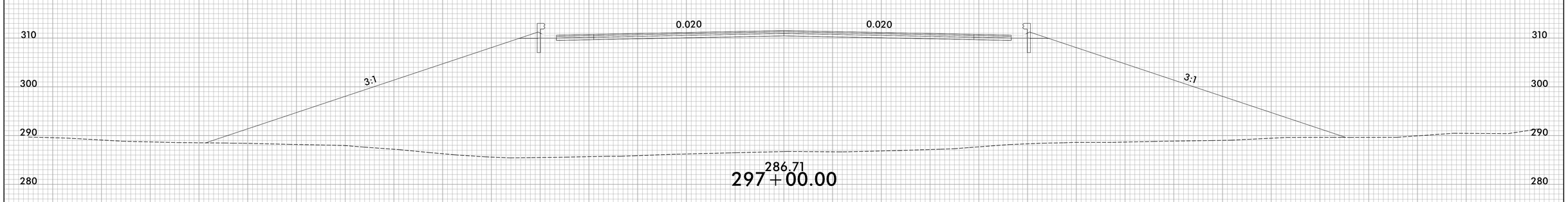
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	R-5705B	X-20

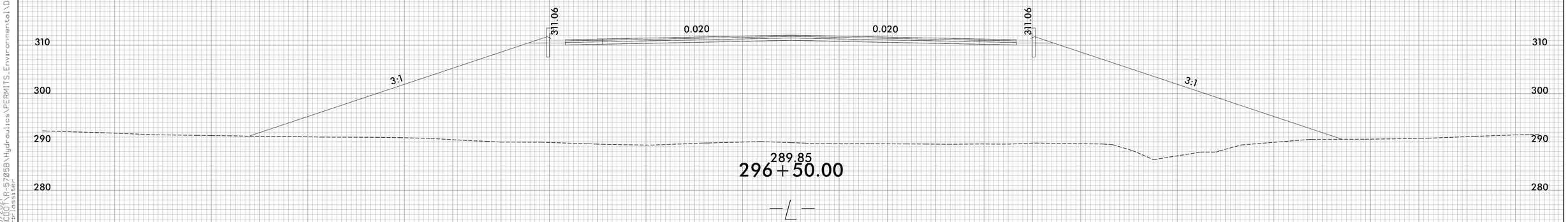
PERMIT DRAWING
SHEET _13_ OF _47_



SITE 6







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PROJECT REFERENCE NO.	SHEET NO.
R-5705B	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

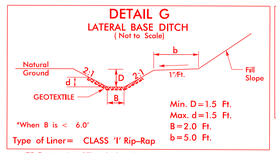
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PERMIT DRAWING
SHEET _14_ OF _47_

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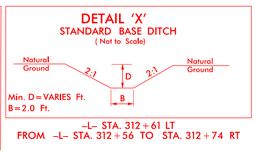
DETAIL G
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CLASS 'I' Rip-Rap

FROM –L– STA. 312+69 TO STA. 317+00 RT
FROM –L– STA. 313+82 TO STA. 317+50 LT

DETAIL 'X'
STANDARD BASE DITCH
(Not to Scale)



–L– STA. 312+61 LT
FROM –L– STA. 312+56 TO STA. 312+74 RT

SITE 7

BEGIN SBG 311+87 LT. AND END SBG 315+75 LT.

212
LINWOOD MATTHEWS

315

2' LAT. BASE DITCH
SEE DETAIL G
CLASS 'I' RIP RAP

2' STANDARD BASE DITCH
SEE DETAIL 'X'
EST. DDE= 25 CY
L= 53'
S= 1.9%

CLASS 'B' RIP RAP
EST. 2 TONS

218
ANN BLALOCK

–L– PT Sta. 317+84.22

18" CSP

15" RCP-IV

AT-1

2GI

SURFACE WATER IMPACT

SURFACE WATER IMPACT

15" RCP-IV

2@ 7'x7' RCBC WITH SILLS

CAT-1

15" RCP-IV

ACCESS POINT

MATCHLINE SHEET 8
–L– STA. 312+00.00

MATCHLINE SHEET 10
–L– STA. 326+00.00

320

325

WOODS

CULTIVATED

218
ANN BLALOCK

CULTIVATED

PUE

2' LAT. BASE DITCH
SEE DETAIL G
CLASS 'I' RIP RAP

CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 10 SY

2' STANDARD BASE DITCH
SEE DETAIL 'X'
EST. DDE=10 CY
L= 20'
S= 1.0%

DANNY HONEYCUTT

217

216
SUSAN CHRISCOE

SITE 8

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
P P	DENOTES IMPACTS IN SURFACE WATER (POND)
E E	DENOTES EXCAVATION IN WETLAND
	DENOTES MECHANIZED CLEARING
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

217
DANNY HONEYCUTT

SEE SHEET 26 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705B	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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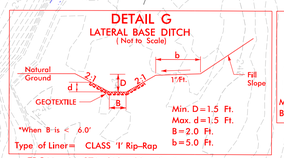
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PERMIT DRAWING SHEET _15_ OF _47_

NAD 83/NA 2011

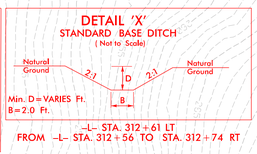
DETAIL G
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
*When B is < 6.0'
Type of Liner = CLASS 'I' Rip-Rap

FROM –L– STA. 312+69 TO STA. 317+00 RT
FROM –L– STA. 313+82 TO STA. 317+50 LT

DETAIL 'X'
STANDARD BASE DITCH
(Not to Scale)



Min. D = VARIES Ft.
B = 2.0 Ft.

–L– STA. 312+61 LT
FROM –L– STA. 312+56 TO STA. 312+74 RT

SITE 7

BEGIN SBG 311+87 LT. AND END SBG 315+75 LT.

212
LINWOOD MATTHEWS

2' STANDARD BASE DITCH
SEE DETAIL 'X'
EST. DDE = 25 CY
L = 53'
S = 1.9%

CLASS 'B' RIP RAP
EST. 2 TONS

2' LAT. BASE DITCH
SEE DETAIL G
CLASS 'I' RIP RAP

218
ANN BLALOCK

–L– PT Sta. 317+84.22

18" CSP
HDPE
15" RCP-IV
2GI
AT-1
ACCESS POINT
SURFACE WATER IMPACT
2@ 7'x7' RCBC WITH SILLS
CAT-1
PUE
CULTIVATED
WOODS

MATCHLINE SHEET 8
–L– STA. 312+00.00

MATCHLINE SHEET 10
–L– STA. 326+00.00

315 316 317 318 319 320 321 322 323 324 325 326

320
325

218
ANN BLALOCK

2' LAT. BASE DITCH
SEE DETAIL G
CLASS 'I' RIP RAP

CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 10 SY

2' STANDARD BASE DITCH
SEE DETAIL 'X'
EST. DDE = 10 CY
L = 20'
S = 1.0%

216
SUSAN CHRISCOE

217
DANNY HONEYCUTT

SITE 8

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
P P	DENOTES IMPACTS IN SURFACE WATER (POND)
E E	DENOTES EXCAVATION IN WETLAND
	DENOTES MECHANIZED CLEARING
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 26 FOR –L– PROFILE

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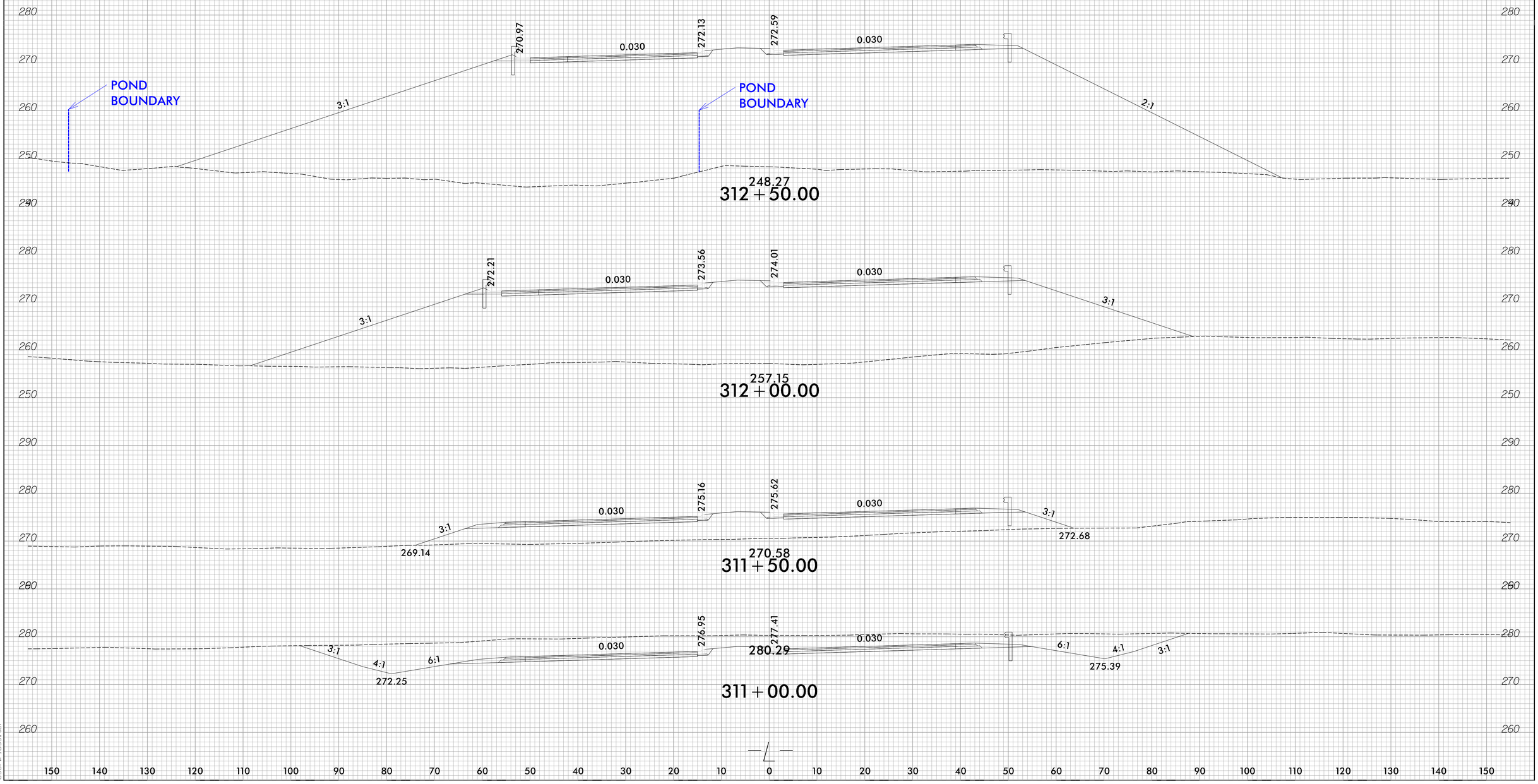
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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-26

PERMIT DRAWING
SHEET _16_ OF _47_

SITE 7



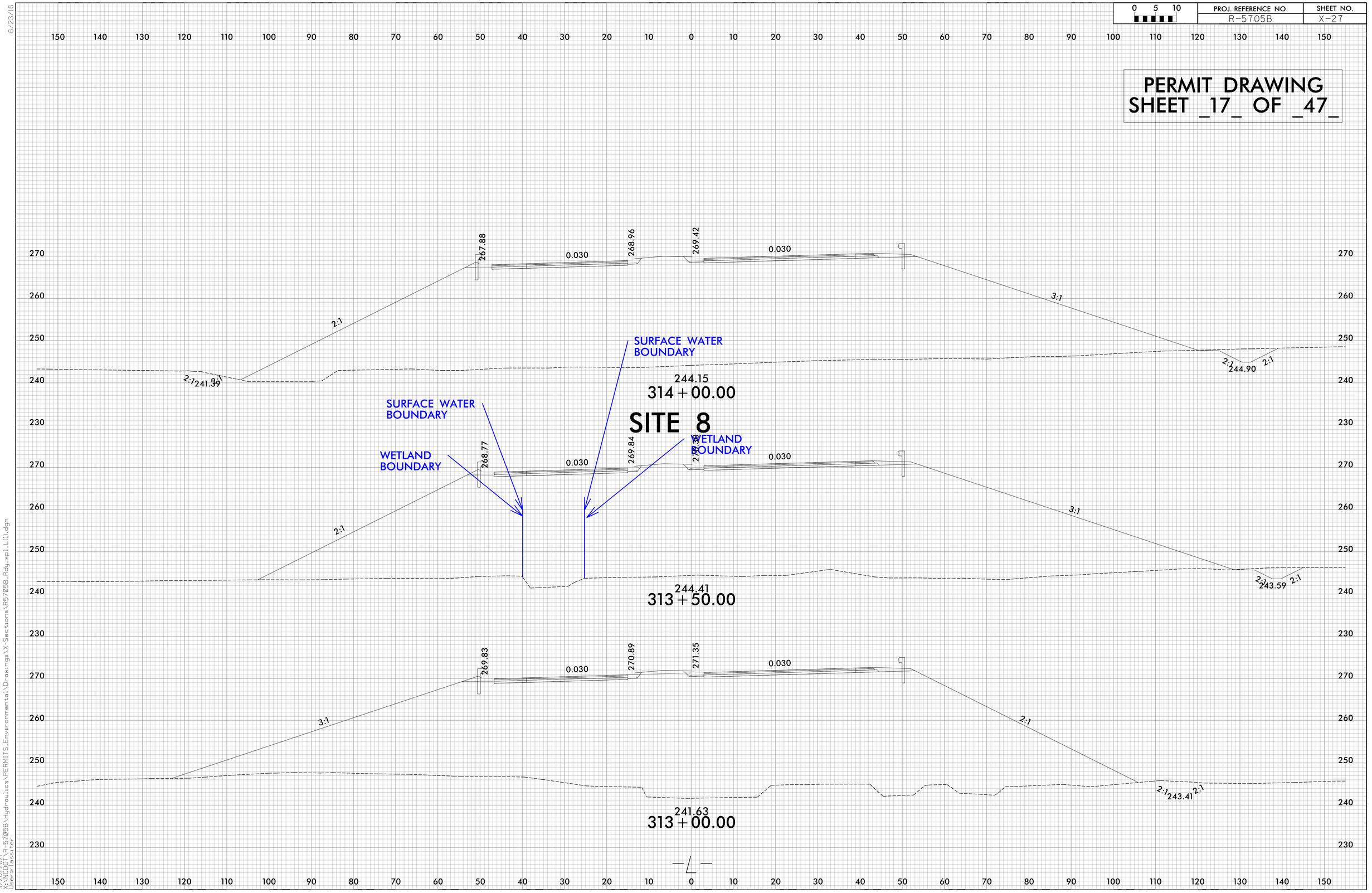
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User:tlassiter

Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-27

PERMIT DRAWING
SHEET _17_ OF _47_



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User:lassiter

PERMIT DRAWING
SHEET _18_ OF _47_

(NOT TO SCALE)

SKEWED MULTI–BARREL CULVERT LOW FLOW CHANNEL,SILLS AND FLOOD PLAIN

*NOTES:

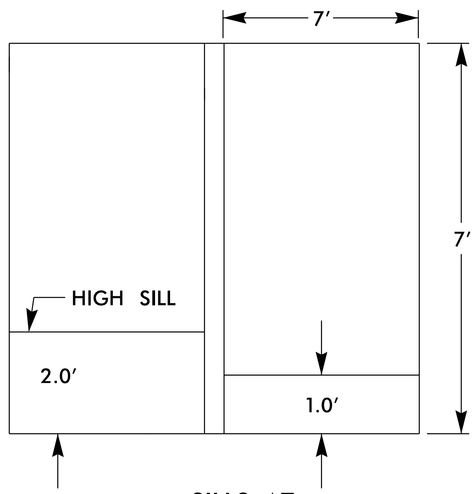
1) NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE THE STREAM OR FLOODPLAIN AT THE PROJECT SITE DURING CONSTRUCTION. ONLY MATERIAL THAT IS EXCAVATED FROM THE STREAM BED MAY BE USED TO LINE THE LOW FLOW CULVERT BARREL. RIP–RAP MAY BE USED TO SUPPLEMENT THE NATIVE MATERIAL IN THE HIGH FLOW CULVERT BARREL(S). IF RIP–RAP IS USED TO LINE THE HIGH FLOW CULVERT BARREL(S), NATIVE MATERIAL SHOULD BE PLACED ON TOP TO FILL VOIDS AND PROVIDE A FLAT SURFACE FOR ANIMAL PASSAGE. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.

2) SILLS ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.

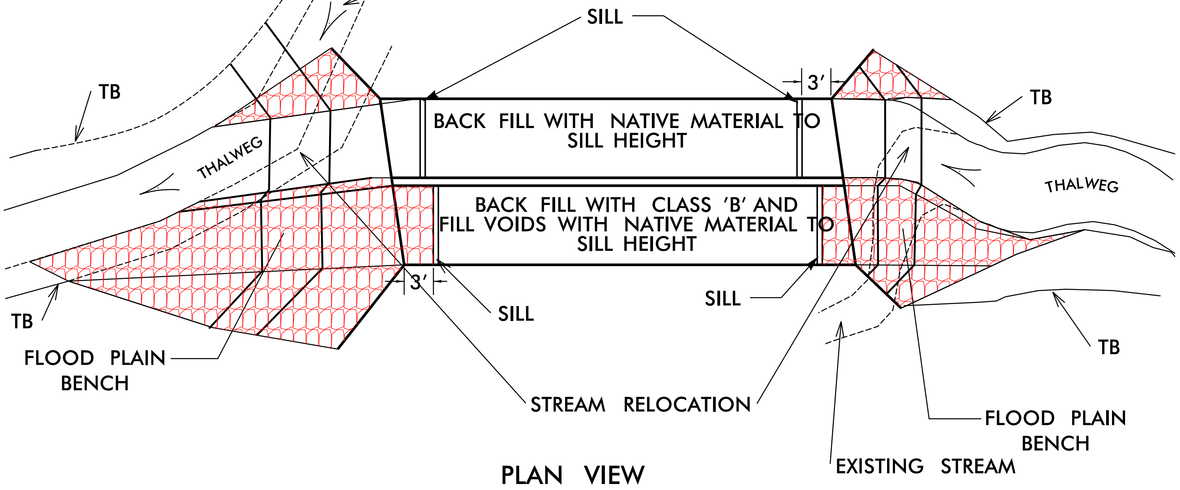
3) TOP OF LOW FLOW SILLS SHOULD MATCH STREAM BED ELEVATION IN LOW FLOW CHANNEL OF STREAM. (THALWEG)

4) DO NOT SET ELEVATION OF HIGH SILL ABOVE BANK FULL.

5) PLACE SILLS 3.0′ INSIDE INLET AND OUTLET



SILLS AT
INLET AND OUTLET



PLAN VIEW

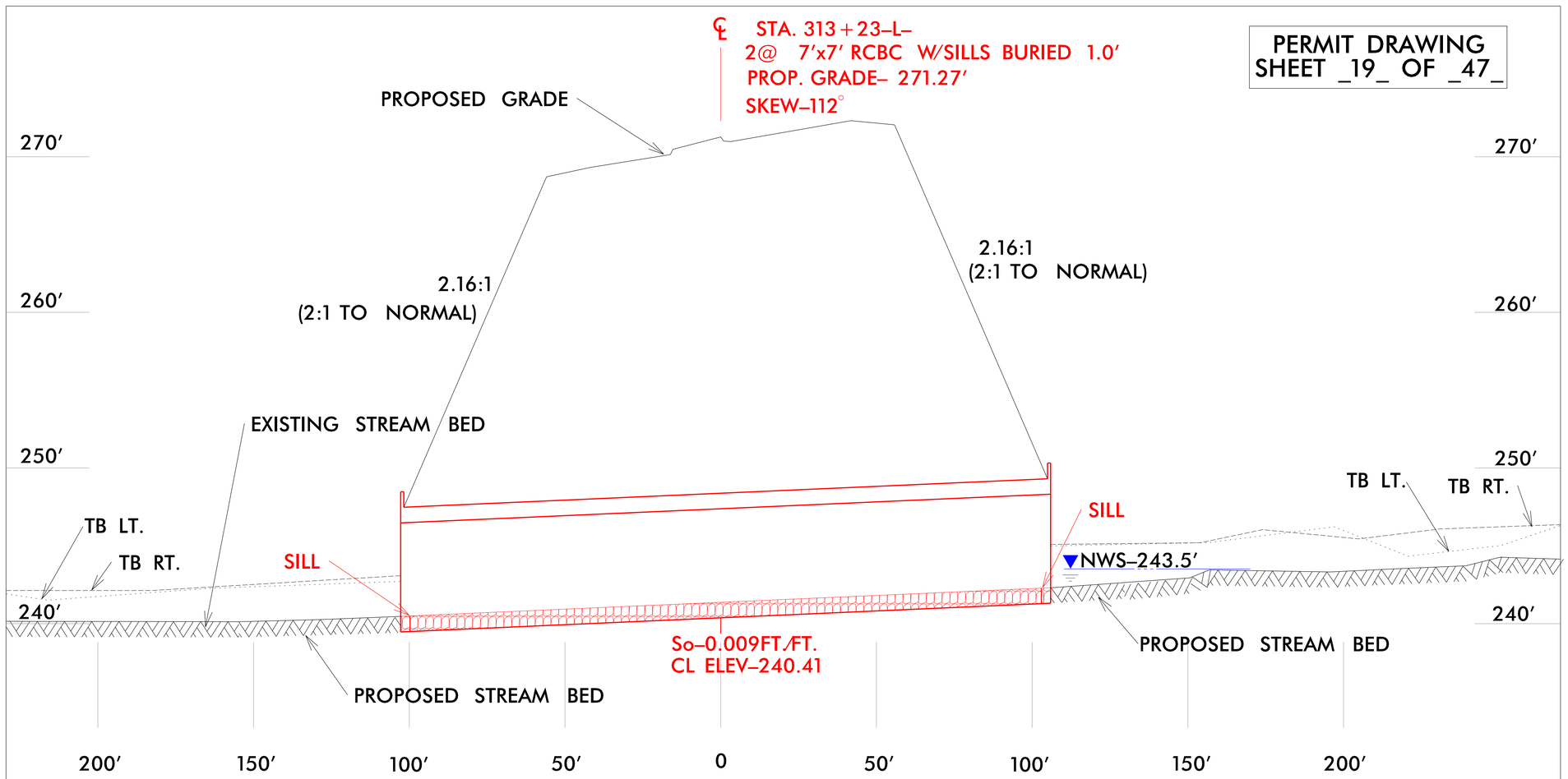
CULVERT DETAIL SHEET

SITE 8

Submitted 12/21/2021

Submitted 12/21/2021

PERMIT DRAWING
SHEET _19_ OF _47_



CULVERT AND STREAM PROFILE

SITE 8

Submitted 12/21/2021

8/17/99

PERMIT DRAWING
SHEET _20_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

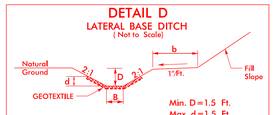
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DETAIL D
LATERAL BASE DITCH
(Not to Scale)



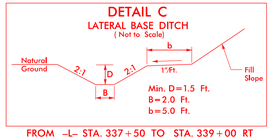
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.

*When B is < 6.0'

Type of Liner = CLASS 'B' Rip-Rap

FROM –L– STA. 328+10 TO STA. 331+50 RT

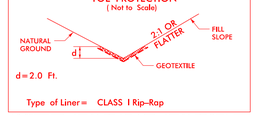
DETAIL C
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.

FROM –L– STA. 337+50 TO STA. 339+00 RT

DETAIL F
TOE PROTECTION
(Not to Scale)



d = 2.0 Ft.

Type of Liner = CLASS I Rip-Rap

FROM –L– STA. 337+50 TO STA. 337+96 LT

SITE 9

SITE 10

SITE 11

–Y7– POT Sta. 10+00.00

–Y7– PT Sta. 16+43.65

2' STANDARD BASE DITCH SEE DETAIL Q CLASS I RIP RAP

CL 'I' RIP RAP

CLASS 'B' RIP RAP EST. 7 TONS GEOTEXTILE EST. 7 SY

15" CSP

18" RCP-IV

48" RCP-IV

SURFACE WATER IMPACT

GREU TL-3

CAT-1

DRAIN POND

ACCESS POINT

2' LATERAL BASE DITCH SEE DETAIL 'D' CLASS 'B' RIP RAP

2' LATERAL BASE DITCH SEE DETAIL C

CLASS 'I' RIP RAP SEE DETAIL GEOTEXTILE SEE 23 SY

PUE

TDE

PDE

WOODS

CULTIVATED

ISFD

72" CMP

72" CHL

FARMS CHURCH RD 27 EST

BOBBY ELKINS

SUNFLIGHT LLC

ANN BLALOCK

218

219

MATCHLINE SHEET 9 –L– STA. 326+00.00

MATCHLINE SHEET 11 –L– STA. 339+50.00

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
P P	DENOTES IMPACTS IN SURFACE WATER (POND)
E E	DENOTES EXCAVATION IN WETLAND
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEETS 26 & 27 FOR –L– PROFILE
SEE SHEET 33 FOR –Y7– PROFILE

8/20/2021
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PERMIT DRAWING
SHEET _21_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

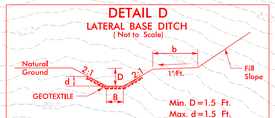
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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CORP. LICENSE NO.: C-0275

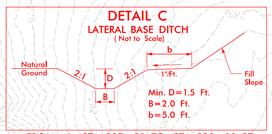
NAD 83/NA 2011

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



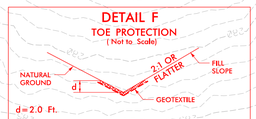
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap
FROM -L- STA. 328+10 TO STA. 331+50 RT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
FROM -L- STA. 337+50 TO STA. 339+00 RT

DETAIL F
TOE PROTECTION
(Not to Scale)



d=2.0 Ft.
Type of Liner= CLASS I Rip-Rap
FROM -L- STA. 337+50 TO STA. 337+96 LT

SITE 9

SITE 10

SITE 11

MATCHLINE SHEET 9
-L- STA. 326+00.00

MATCHLINE SHEET 11
-L- STA. 339+50.00

-Y7- POT Sta. 10+00.00

-Y7- PT Sta. 16+43.65

2' STANDARD BASE DITCH SEE DETAIL Q CLASS I RIP RAP

CL 'I' RIP RAP

CLASS 'B' RIP RAP EST. 7 TONS GEOTEXTILE EST. 7 SY

15" CSP

18" RCP-IV

15" RCP-IV

SURFACE WATER IMPACT

ACCESS POINT

DRAIN POND

PUE

TDE

PDE

2' LATERAL BASE DITCH SEE DETAIL 'D' CLASS 'B' RIP RAP

2' LATERAL BASE DITCH SEE DETAIL C

CLASS 'I' RIP RAP 15'W X 30'L GEOTEXTILE SEE 23 SY

GREU TL-3

CAT-1

ISFD

CULTIVATED

WOODS

BOBBY ELKINS

SUNFLIGHT LLC

ANN BLALOCK

PARKS CHURCH RD (SR 2237)

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
P P	DENOTES IMPACTS IN SURFACE WATER (POND)
E E	DENOTES EXCAVATION IN WETLAND
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

HORIZONTAL SCALE
100' 0' 100'

SEE SHEETS 26 & 27 FOR -L- PROFILE
SEE SHEET 33 FOR -Y7- PROFILE

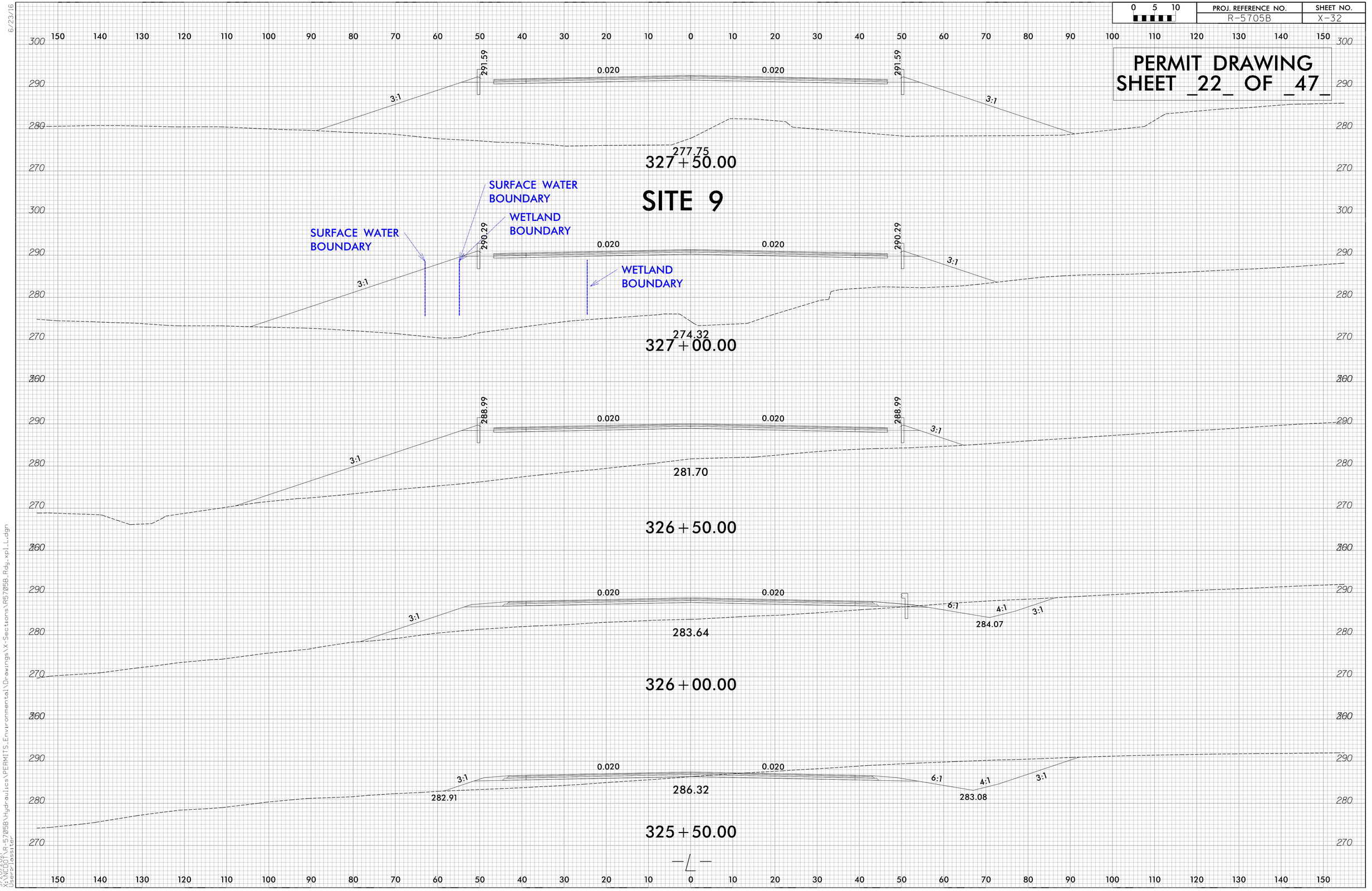
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User: lassiter

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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-32

PERMIT DRAWING
SHEET _22_ OF _47_



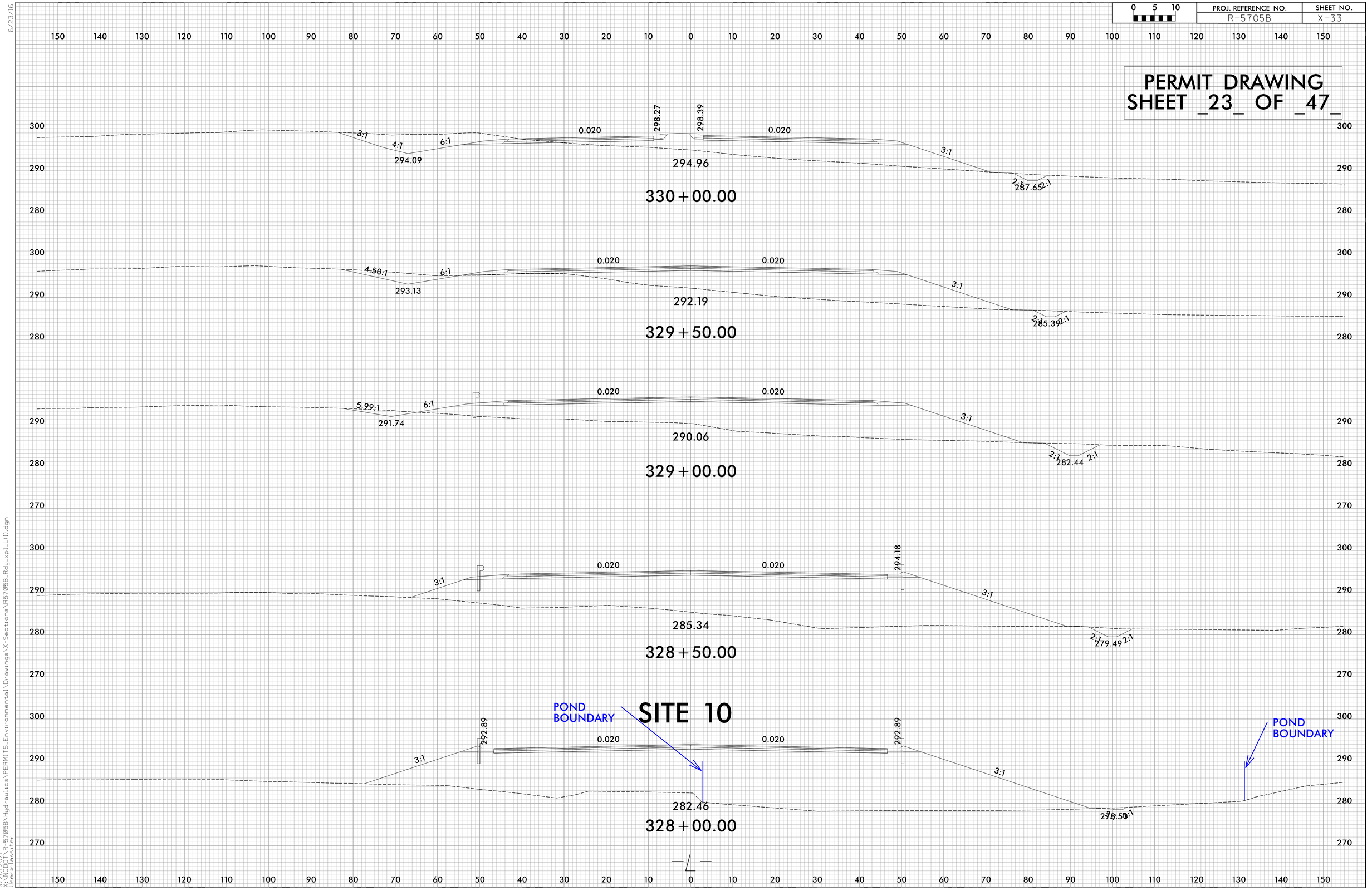
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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-33

PERMIT DRAWING
SHEET _23_ OF _47_



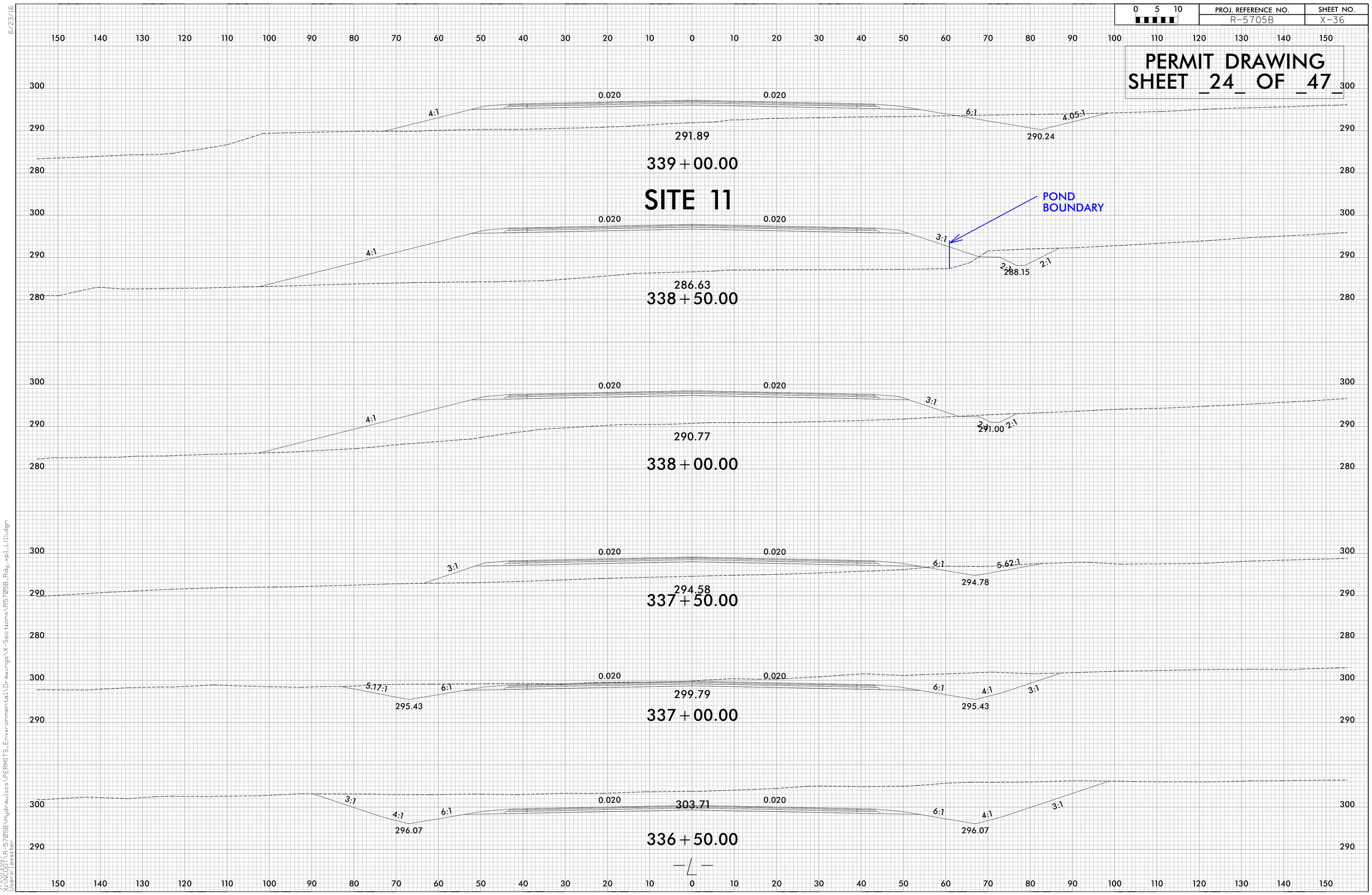
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User:lassiter

Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-36

PERMIT DRAWING
SHEET _24_ OF _47_



9/20/2021
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User:lassiter

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8/17/99

PERMIT DRAWING
SHEET _25_ OF _47_

NAD 83/NA 2011

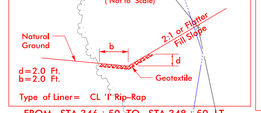
PROJECT REFERENCE NO.	SHEET NO.
R-5705B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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

DETAIL A
TOE PROTECTION
(Not to Scale)

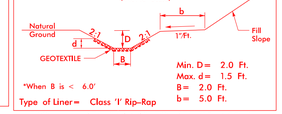


d=2.0 Ft.
b=2.0 Ft.

Type of Liner= CL 'I' Rip-Rap

FROM STA.346+50 TO STA.348+50 LT

DETAIL S
LATERAL BASE DITCH
(Not to Scale)



Min. D= 2.0 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
b= 5.0 Ft.

*When B is < 6.0'

Type of Liner= Class 'I' Rip-Rap

FROM -L- STA. 346+68 TO STA. 354+00 RT
FROM -L- STA. 343+50 TO STA. 346+65 RT

SITE 11

SITE 12

SITE 13

BEGIN SBG 344+92 LT. AND 344+34 RT.
END SBG 348+35 LT. AND 350+63 RT.

CULTIVATED

WOODS

219
SUNFLIGHT LLC

220
DWIGHT STEPHENSON

TOE

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 SY

CL 'I' RIP RAP

2' LATERAL BASE DITCH
SEE DETAIL C

15" RCP-IV

FS

CSP

SURFACE WATER IMPACT

TOE PROTECTION
SEE DETAIL A

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

ACCESS POINT

GREU TL-3

CAT-1

60" RCP-IV

BURY PIPE 1.0'

HW

PUE

2' LATERAL BASE DITCH
DETAIL S
CLASS 'I' RIP RAP

MATCHLINE SHEET 10
-L- STA. 339+50.00

MATCHLINE SHEET 12
-L- STA. 353+50.00

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND
P P	DENOTES IMPACTS IN SURFACE WATER (POND)
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 27 FOR -L- PROFILE

8/20/2021
R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_11.dgn
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PERMIT DRAWING
SHEET _26_ OF _47_

NAD 83/NA 2017

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL A
TOE PROTECTION
(Not to Scale)



d=2.0 Ft.
b=2.0 Ft.

Type of Liner= CL 'I' Rip-Rap

FROM STA.346+50 TO STA.348+50 LT

DETAIL S
LATERAL BASE DITCH
(Not to Scale)



Min. D= 2.0 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
b= 5.0 Ft.

*When B is < 6.0'

Type of Liner= Class 'I' Rip-Rap

FROM -L- STA. 346+68 TO STA. 354+00 RT
FROM -L- STA. 343+50 TO STA. 346+65 RT

SITE 11

SITE 12

SITE 13

BEGIN SBG 344+92 LT. AND 344+34 RT.
END SBG 348+35 LT. AND 350+63 RT.

MATCHLINE SHEET 10
-L- STA. 339+50.00

MATCHLINE SHEET 12
-L- STA. 353+50.00

219
SUNFLIGHT LLC

220
DWIGHT STEPHENSON

CULTIVATED

WOODS

TOE

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 SY

CL 'I' RIP RAP

2' LATERAL BASE DITCH
SEE DETAIL C

15" RCP-IV

15" CSP

FS

SURFACE WATER IMPACT

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

TOE PROTECTION
SEE DETAIL A

ACCESS POINT

GREU TL-3

CAT-1

60" RCP-IV

BURY PIPE 1.0'

HW

2' LATERAL BASE DITCH
DETAIL S
CLASS 'I' RIP RAP

PUE

-L-

F F — DENOTES FILL IN WETLAND

S S — DENOTES IMPACTS IN SURFACE WATER

E E — DENOTES EXCAVATION IN WETLAND

P P — DENOTES IMPACTS IN SURFACE WATER (POND)

HC HC — DENOTES HAND CLEARING

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 27 FOR -L- PROFILE

8/20/2021
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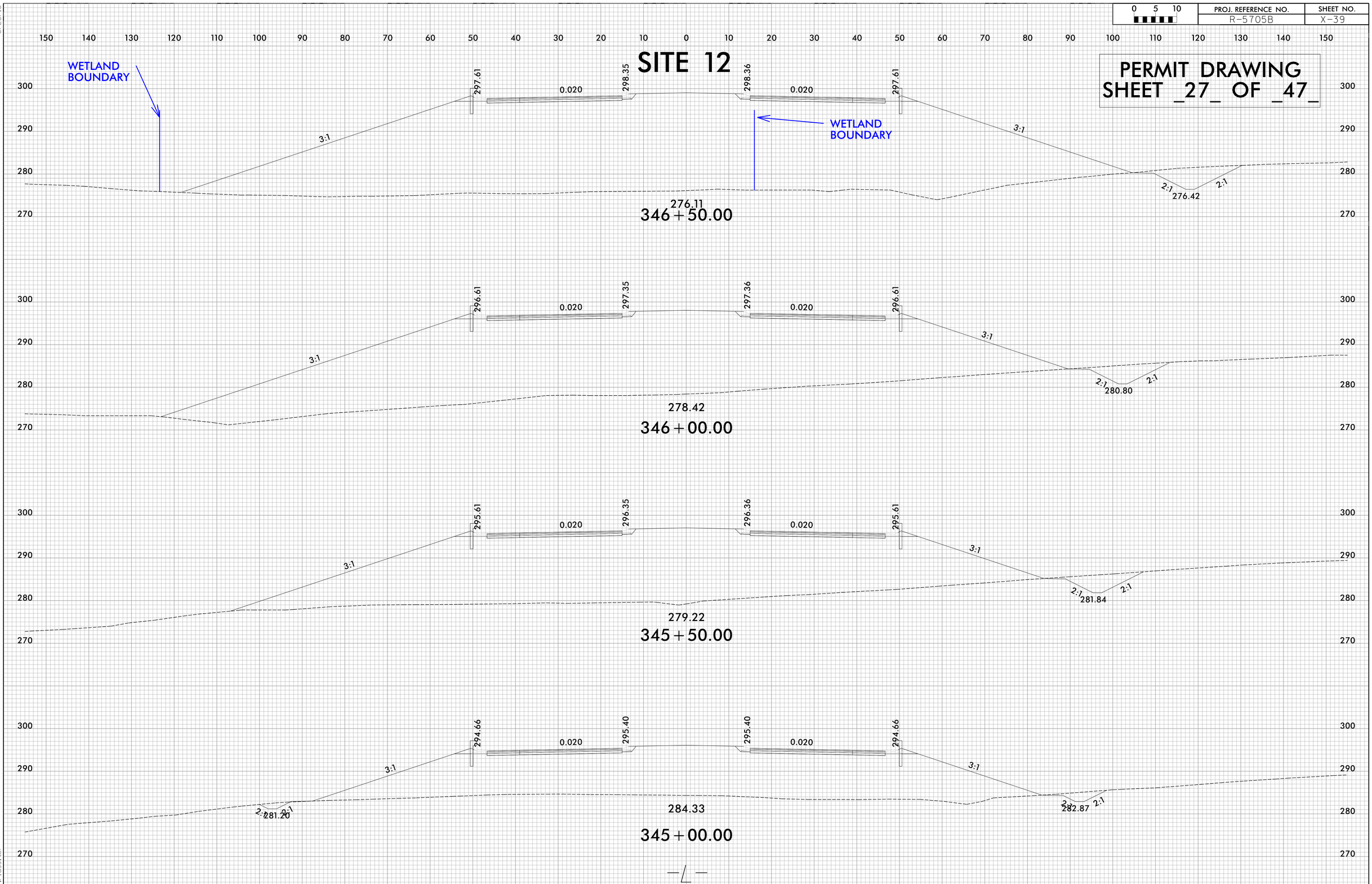
Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-39

SITE 12

PERMIT DRAWING
SHEET _27_ OF _47_



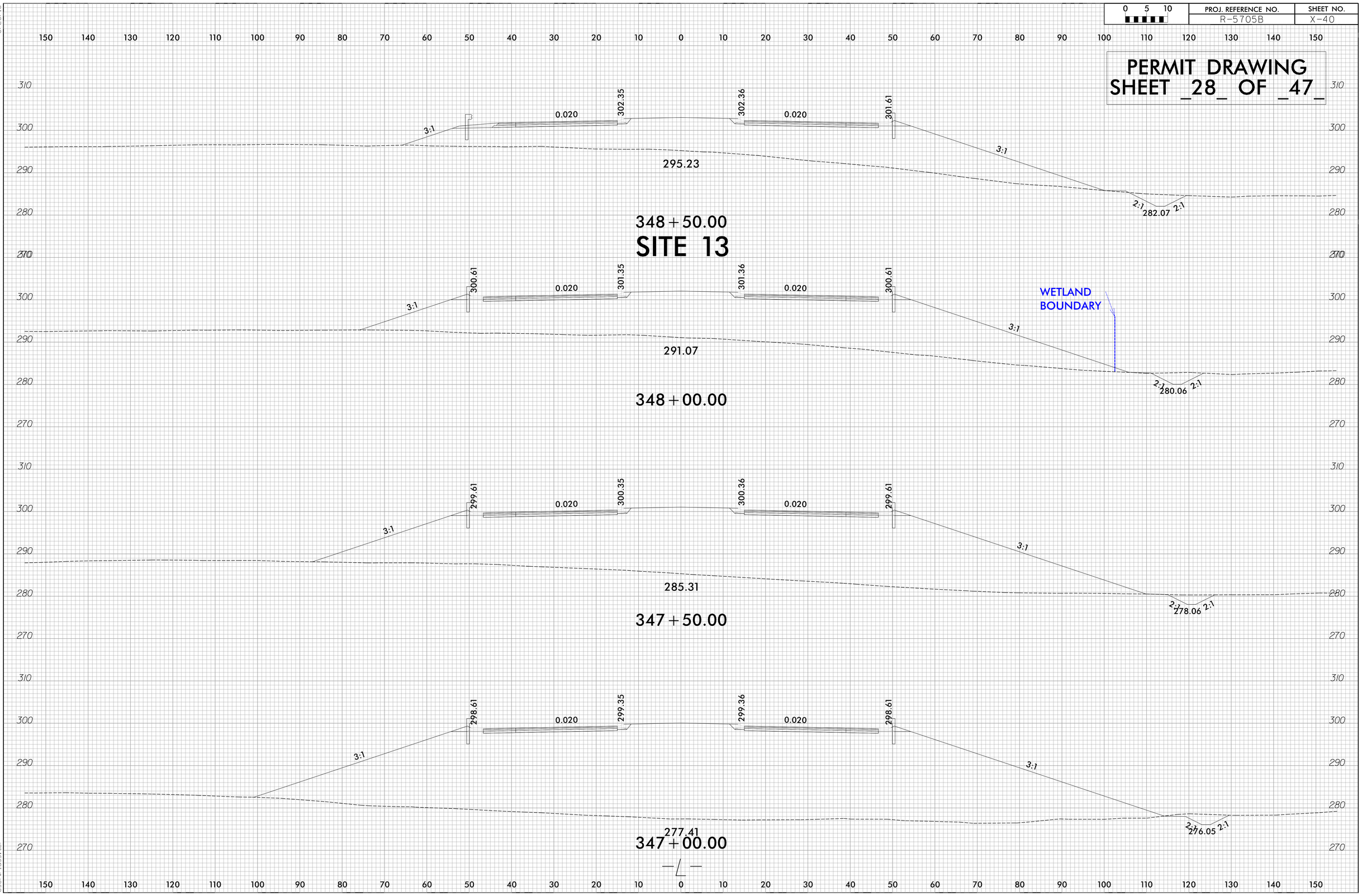
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User:lossiter

Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-40

PERMIT DRAWING
SHEET _28_ OF _47_



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Submitted 12/21/2021

8/17/99

PERMIT DRAWING
SHEET _29_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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/NA 2011

SITE 14

220 DWIGHT STEPHENSON

221 ROBERTA WOOLARD

355 360 365

CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 11 SY

SURFACE WATER IMPACT

ACCESS POINT

2' LATERAL BASE DITCH
SEE DETAIL C

15" RCP-IV

24" RCP-IV

CULTIVATED

MATCHLINE SHEET 11
-L- STA. 353+50.00

MATCHLINE SHEET 13
-L- STA. 367+50.00

-L- PC Sta. 353+67.90

SITE 15

220 DWIGHT STEPHENSON

221 ROBERTA WOOLARD

CULTIVATED

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 27 THRU 28 FOR -L- PROFILE

8/20/2021
R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_12.dgn
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PERMIT DRAWING
SHEET _30_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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/NA 2011

SITE 14

220 DWIGHT STEPHENSON

221 ROBERTA WOOLARD

355 360 365

CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 11 SY

SURFACE WATER IMPACT

ACCESS POINT

2' LATERAL BASE DITCH
SEE DETAIL C

15" RCP-IV

24" RCP-IV

CULTIVATED

MATCHLINE SHEET 11
-L- STA. 353+50.00

MATCHLINE SHEET 13
-L- STA. 367+50.00

-L- PC Sta. 353+67.90

SITE 15

220 DWIGHT STEPHENSON

221 ROBERTA WOOLARD

CULTIVATED

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 27 THRU 28 FOR -L- PROFILE

8/20/2021
R-5705B\Hydraulics\PERMITS_Environmental\Drawings\With Contours\R5705B_Rdy_psh_12_con.dgn
User: lassiter

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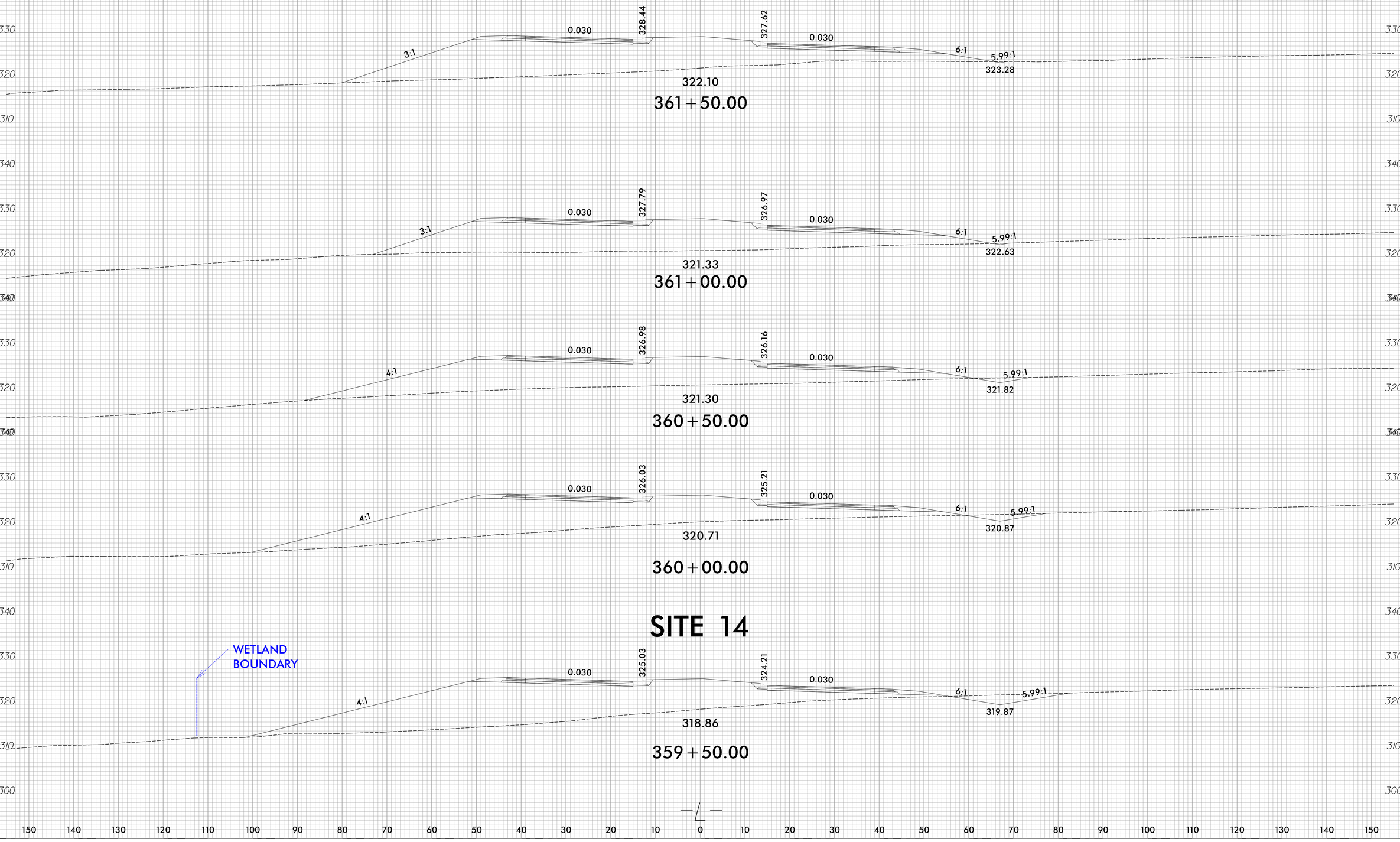
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-45

PERMIT DRAWING
SHEET _31_ OF _47_

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

340 330 320 310 340 330 320 340 330 320 310 340 330 320 300



9/20/2021
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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-46

PERMIT DRAWING
SHEET _32_ OF _47_

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

330 320 310 300

329.47 328.65

0.030 0.030

4:1 3:1 2:1 2:1

319.29 318.10

364+00.00

SITE 15

WETLAND BOUNDARY

WETLAND BOUNDARY

329.56 328.74

0.030 0.030

4:1 3:1 2:1 2:1

315.61 317.84

363+50.00

329.51 328.69

0.030 0.030

4:1 3:1 2:1 2:1

314.78 318.85

363+00.00

329.30 328.48

0.030 0.030

4:1 3:1 2:1

319.42 319.86

362+50.00

328.95 328.13

0.030 0.030

4:1 3:1 2:1

320.37 320.87

362+00.00

9/20/2021
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User:lossiter

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PERMIT DRAWING
SHEET _33_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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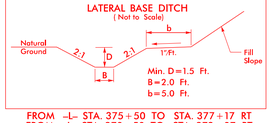
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
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CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

SITE 16

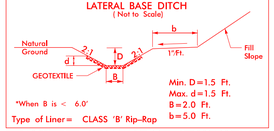
SITE 17

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 375+50 TO STA. 377+17 RT
FROM –L– STA. 370+50 TO STA. 372+07 RT
FROM –L– STA. 372+10 TO STA. 373+00 RT
FROM –L– STA. 380+00 TO STA. 381+50 RT

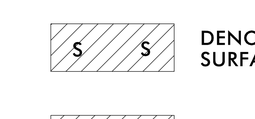
DETAIL D
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap

FROM –L– STA. 377+28 TO STA. 380+00 RT
FROM –L– STA. 370+00 TO STA. 372+39 LT.

DETAIL J
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM –L– STA. 375+00 TO STA. 375+50 RT

DETAIL AB
STANDARD BASE DITCH
(Not to Scale)



–L– STA. 376+07 LT

370
380
375

30' EASEMENT
WAKE COUNTY
HARNETT COUNTY
HARNETT COUNTY
WAKE COUNTY

221 ROBERTA WOOLARD
221 ROBERTA WOOLARD
222 RICHARD BULLOCK
222 RICHARD BULLOCK
223 RUTH PETREA
223 RUTH PETREA

2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP
CLASS 'I' RIP RAP
STANDARD BASE DITCH SEE DETAIL AB
CLASS 'I' RIP RAP EST. 40 TONS GEOTEXTILE EST. 75 SY
SURFACE WATER IMPACT
ACCESS POINT
15" CSP
15" RCP-IV
24" CMP
BURY PIPE 1.0
ALT. PIPE
2' LATERAL BASE DITCH SEE DETAIL C
–L– PT Sta. 370+67.12
SPECIAL LAT. 'V' DITCH SEE DETAIL J
2' LATERAL BASE DITCH SEE DETAIL C
2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP
2' LATERAL BASE DITCH SEE DETAIL C CLASS 'B' RIP RAP EST. 3 TON GEOTEXTILE EST. 10 SY
24" RCP
PUE
JS
TS
HC
CULTIVATED
WOODS

MATCHLINE SHEET 12
–L– STA. 367+50.00

MATCHLINE SHEET 14
–L– STA. 381+00.00

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 28 FOR –L– PROFILE

8/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\D-awings\R5705B_Rdy_psh_13.dgn
User: jassiter

Submitted 12/21/2021

8/17/99

PERMIT DRAWING
SHEET _34_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

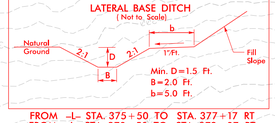
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

SITE 16

SITE 17

NAD 83/NA 2011

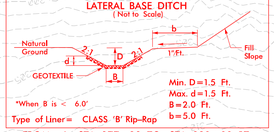
DETAIL C
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

FROM –L– STA. 375+50 TO STA. 377+17 RT
FROM –L– STA. 370+50 TO STA. 372+07 RT
FROM –L– STA. 372+10 TO STA. 373+00 RT
FROM –L– STA. 380+00 TO STA. 381+50 RT

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

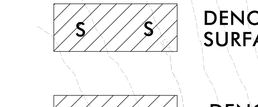


*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap

Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

FROM –L– STA. 377+28 TO STA. 380+00 RT
FROM –L– STA. 370+00 TO STA. 372+39 LT.

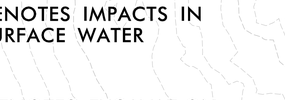
DETAIL J
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.0 Ft.

FROM –L– STA. 375+00 TO STA. 375+50 RT

DETAIL AB
STANDARD BASE DITCH
(Not to Scale)



Min. D= 2.0 Ft.
B= 5.0 Ft.

–L– STA. 376+07 LT

MATCHLINE SHEET 12
–L– STA. 367+50.00

MATCHLINE SHEET 14
–L– STA. 381+00.00

ROBERTA WOOLARD (221)
RUTH PETREA (223)
RICHARD BULLOCK (222)

2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP
CLASS 'I' RIP RAP
STANDARD BASE DITCH SEE DETAIL AB
CLASS 'I' RIP RAP EST. 40 TONS GEOTEXTILE EST. 75 SY
SURFACE WATER IMPACT
ACCESS POINT
15" CSP
15" RCP-IV
BURY PIPE 0.6'
BURY PIPE 1.0'
ALT. PIPE
2' LATERAL BASE DITCH SEE DETAIL C
–L– PT Sta. 370+67.12
SPECIAL LAT. 'V' DITCH SEE DETAIL J
2' LATERAL BASE DITCH SEE DETAIL C
2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP
2' LATERAL BASE DITCH SEE DETAIL C CLASS 'B' RIP RAP EST. 3 TON GEOTEXTILE EST. 10 SY
HARNETT COUNTY
WAKE COUNTY
WAKE COUNTY
MARNETT COUNTY
CULTIVATED
WOODS
PUE
JS
SS
TS
HW
–L–

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 28 FOR –L– PROFILE

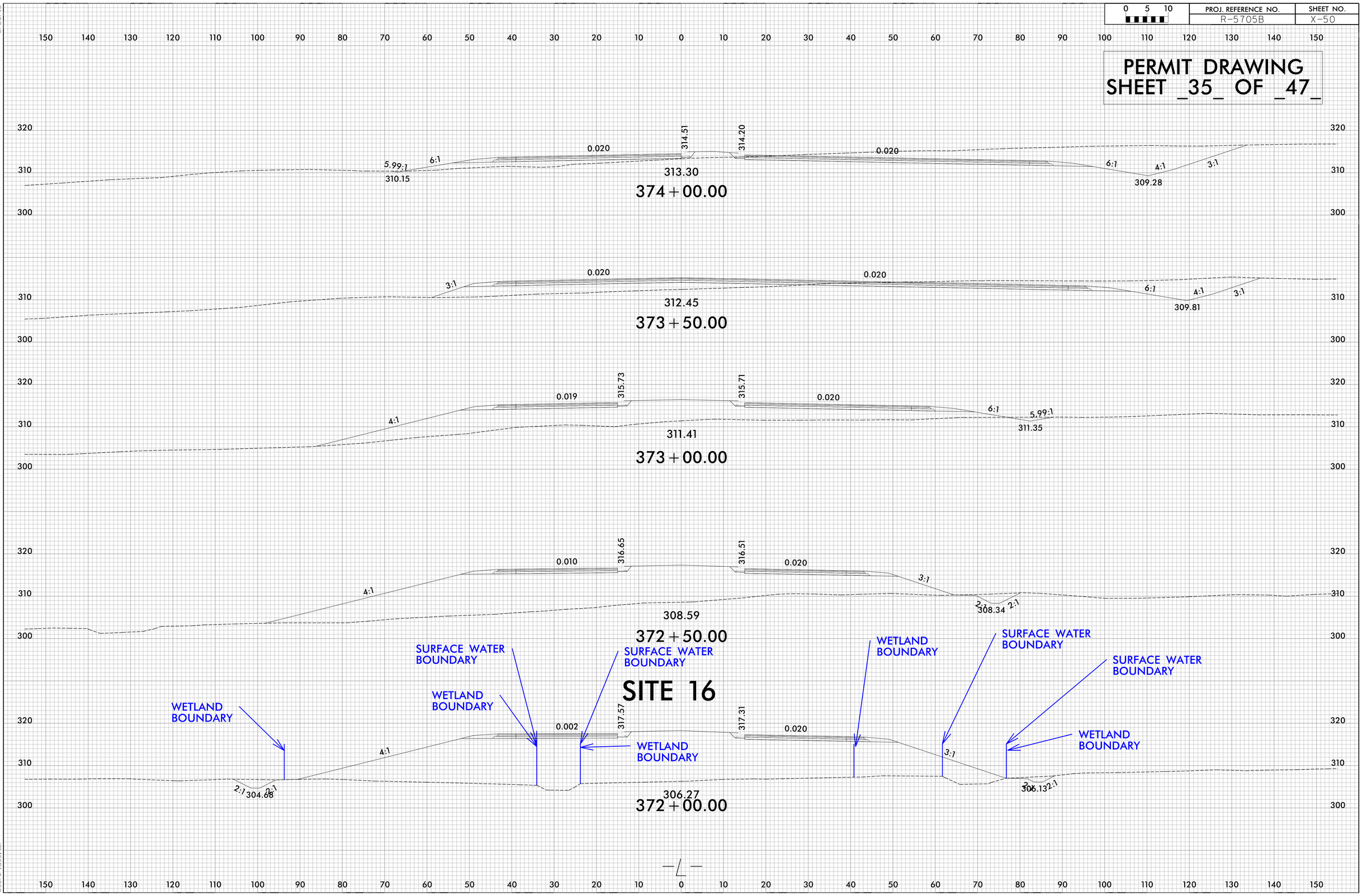
8/20/2021
R-5705B\Hydraulics\PERMITS_Environmental\0-awings\With Contours\R5705B_Rdy_psh_13_con.dgn
User: lassiter

Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-50

PERMIT DRAWING
SHEET _35_ OF _47_



9/20/2021
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User:lassiter

Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-51

PERMIT DRAWING
SHEET _36_ OF _47_

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320 310 300 290

0.020 313.60 313.35 0.020
3.59:1 3:1 2:1
304.83 304.50
376+50.00

SURFACE WATER BOUNDARY
SURFACE WATER BOUNDARY
WETLAND BOUNDARY
WETLAND BOUNDARY
WETLAND BOUNDARY

SITE 17

0.020 313.41 313.16 0.020
3:1 3:1 2:1
304.80 306.06
376+00.00

SURFACE WATER BOUNDARY
SURFACE WATER BOUNDARY

0.020 313.40 313.15 0.020
3:1 6:1 4.14:1
307.63
308.10
375+50.00

0.020 313.57 313.32 0.020
3:1 6:1 4.11:1
309.19
310.92
375+00.00

0.020 313.96 313.67 0.020
5.99:1 6:1 6:1 4:1 3:1
309.62 309.07
312.14
374+50.00

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\X-Sections\R5705B_Rdy_xpl_L(1).dgn
User:lossiter

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	14

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

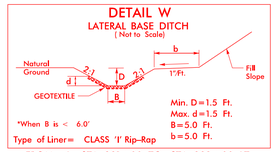
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PERMIT DRAWING SHEET _37_ OF _47_

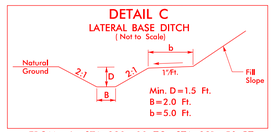
NAD 83/NA 2011

DETAIL W
LATERAL BASE DITCH
(Not to Scale)



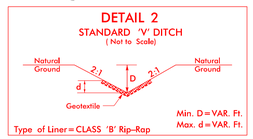
Type of Liner= CLASS 'I' Rip-Rap
FROM –L– STA. 391+00 TO STA. 392+00 LT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



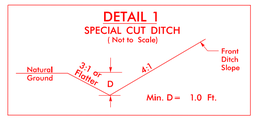
FROM –L– STA. 380+00 TO STA. 381+50 RT
FROM –Y8– STA. 12+92 TO STA. 13+00 RT

DETAIL 2
STANDARD 'V' DITCH
(Not to Scale)



Type of Liner= CLASS 'B' Rip-Rap
FROM STA. 17+00 –Y22– LT.

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



FROM –Y22– STA. 11+00 TO STA. 12+30 RT
FROM –Y22– STA. 14+63 TO STA. 16+50 RT.

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 18

MATCHLINE SHEET 13
–L– STA. 381+50.00

MATCHLINE SHEET 22
–Y8– STA. 13+00.00

223 RUTH PETREA

385 390 395

BELLEWOOD HOMEOWNERS ASSOC. INC 308

LENNAR CAROLN

KRYSTAL LAUREN MOORE

MICHAEL LANCE REESE

PROPOSED DITCH CLEAN-OUT
LENGTH– +/–240'
EXCAVATION– +/–70cu.yds
TO ELEV– 324.0'

5' LAT. BASE DITCH
SEE DETAIL W
CLASS 'I' RIP RAP

RETAIN CB

STANDARD V DITCH
SEE DETAIL 2
DDE– 5cu.yds.
FF– 9sq.yds
RIP RAP– 7 TONS

SPECIAL CUT DITCH
SEE DETAIL 1

15" RCP–IV
18" RCP–IV
24" RCP–IV
30" RCP
48" RCP–IV

CAROLINA CHARTER ACADEMY HOLDINGS LLC
PID 10705 PC 1850

304 BELLEWOOD HOMEOWNERS ASSOCIATION, INC.

303

305A SUMMER DISALVO & JUSTIN DISALVO

PETER CAMPBELL 305B

ROBERT CRAIG EVANS 305C

305D NATASSIA SANTANA & JOEL J. GOMEZ

307

DAVID ALEXANDER BERNAL 306

100' 0' 100'
HORIZONTAL SCALE

SITE 19

304 BELLEWOOD HOMEOWNERS ASSOCIATION, INC.
UPGRADE EXISTING OR NEW SIGNAL

MATCHLINE SHEET 15
–L– STA. 395+00.00

SEE SHEETS 28 THRU 29 FOR –L– PROFILE
SEE SHEET 33 FOR –Y8– PROFILE

W:\2021\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_14.dgn
User: jassler

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

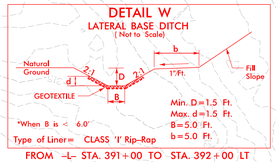
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TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PERMIT DRAWING SHEET _38_ OF _47_

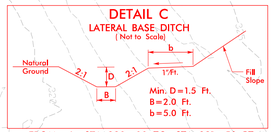
NAD 83/NA 2011

DETAIL W
LATERAL BASE DITCH
(Not to Scale)



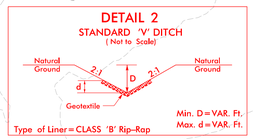
FROM –L– STA. 391+00 TO STA. 392+00 LT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



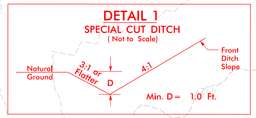
FROM –L– STA. 380+00 TO STA. 381+50 RT
FROM –Y8– STA. 12+92 TO STA. 13+00 RT

DETAIL 2
STANDARD 'V' DITCH
(Not to Scale)



FROM STA. 17+00 –Y22– LT.

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



FROM –Y22– STA. 11+00 TO STA. 12+30 RT
FROM –Y22– STA. 14+63 TO STA. 16+50 RT.

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 18

SITE 19

SITE 20

MATCHLINE SHEET 13
–L– STA. 381+50.00

MATCHLINE SHEET 22
–Y8– STA. 13+00.00

MATCHLINE SHEET 15
–L– STA. 395+00.00

223 RUTH PETREA

308 BELLEWOOD HOMEOWNERS ASSOC. INC

KRYSTAL LAUREN MOORE

LENNAR CAROLINA

MICHAEL LANCE REESE

385 390 395

PROPOSED DITCH CLEAN-OUT
LENGTH– +/–240'
EXCAVATION– +/–70cu.yds
TO ELEV– 324.0'

5' LAT. BASE DITCH
SEE DETAIL W
CLASS 'I' RIP RAP

STANDARD V DITCH
SEE DETAIL 2
DDE– 5cu.yds.
FF– 9sq.yds
RIP RAP– 7 TONS

SPECIAL CUT DITCH
SEE DETAIL 1

RETAIN CB

305A SUMMER DISALVO & JUSTIN DISALVO
PETER CAMPBELL 305B
ROBERT CRAIG EVANS
305C 305D
NATASSIA SANTANA & JOEL J. GOMEZ
307
DAVID ALEXANDER BERNAL 306
BELLEWOOD HOMEOWNERS ASSOCIATION, INC. 304
CAROLINA CHARTER ACADEMY HOLDINGS LLC
303

100' 0' 100'
HORIZONTAL SCALE

UPGRADE EXISTING OR NEW SIGNAL

SEE SHEETS 28 THRU 29 FOR –L– PROFILE
SEE SHEET 33 FOR –Y8– PROFILE

1/8/2021
X:\6001\R-5705B\Hydraulics\PERMITS\Environmental\Drawings\With Contours\R5705B_Rdy_psh_14_con.dgn
User: lassiter

Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-56

PERMIT DRAWING
SHEET _39_ OF _47_

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

340 330 320

WETLAND BOUNDARY

WETLAND BOUNDARY

SITE 20

329.66 333.73

4:1 0.040 0.040 4:1

2:1 2:1

325.30 330.80

391+00.00

328.82 332.94

4:1 0.040 0.040 4:1

330.30

390+50.00

SITE 19

WETLAND BOUNDARY

328.01 332.13

4:1 0.040 0.040 4:1

328.95

390+00.00

327.20 331.32

4:1 0.040 0.040 4:1

328.12

389+50.00

326.52 330.64

4:1 0.040 0.040 4:1

328.15

389+00.00

326.00 330.12

4:1 0.040 0.040 4:1

328.05

388+50.00

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\X-Sections\R5705B_Rdy_xpl.L(1).dgn
User:lassiter

Submitted 12/21/2021

8/17/99

PERMIT DRAWING
SHEET _40_ OF _47_

NAD 83/NA 2011

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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 SHEET 16
-L- STA. 422+00.00

MATCHLINE SHEET 18
-L- STA. 436+00.00

STEPHEN OMMS
CHAD MOODY
ANTHONY VALLE
MICHAEL LAGNESE
DANIELLE HARRISON
CHRIS THOMPSON
CRAIG GOLDEN
CLAUDE SIMMONS
JANET BLACKMAN
MATTHEW BAIRD
JOHNSONS LANDING HOMEOWNERS ASSC
THEODORE FRANZESE
TERRY RITCH
SHANE RUNDGREN
2015-3 IH2 BORROWER LP
BRUCE WEITZ
DEREK LAWHORN
JONATHAN MCLEAN
PHILIP BROWN
CHRISTOPHER M. MURPHY AND SPOUSE, TABITHA L. MURPHY
RICHARD SCANLON
CHRISTOPHER CARVER
THEODORE PATEREK
DENNIS GOLDENSOHN
KENNEBEC FLYING CLUB
AIRPORT

255 257 258 259 260 261 264 267 268 269 251

425 430 435

COYOTE MELON DR 22' BST
MALAHAR LN 22' BST
NC 55/N RALEIGH ST 34' BST
60' WD
60' CONC WALK
EXISTING R/W

15" RCP-IV
24" RCP-IV
18" RCP-IV
'B' RIP RAP

-Y14- POT Sta. 10+00.00
-Y14- PC Sta. 11+21.15
-Y14- PT Sta. 12+02.39
-L- PC Sta. 429+29.71
-L- PT Sta. 434+79.55

SPECIAL BACK OF CURB CUT DITCH
SEE DETAIL T

CONC
MTL C
MTL G

DENOTES MECHANIZED CLEARING

SITE 21

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 35 FOR -Y13- & -Y14- PROFILES

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_17.dgn
User: lassiter

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8/17/99

PERMIT DRAWING
SHEET _41_ OF _47_

NAD 83/NA 2011

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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 SHEET 16
-L- STA. 422+00.00

MATCHLINE SHEET 18
-L- STA. 436+00.00

-Y14- POT Sta. 10+00.00

-Y14- PC Sta. 11+21.15

-Y14- PT Sta. 12+02.39

-L- PC Sta. 429+29.71

-L- PT Sta. 434+79.55

SPECIAL BACK OF CURB
CUT DITCH
SEE DETAIL T

'B' RIP RAP

15" RCP-IV

24" RCP-IV

NC 55/N RALEIGH ST 34-BST

EXISTING R/W

KENNEBEC FLYING CLUB

AIRPORT

STEPHEN OMMS
CHAD MOODY
ANTHONY VALLE
MICHAEL LAGNESE
DANIELLE HARRISON
CHRIS THOMPSON
CRAIG GOLDEN
CLAUDE SIMMONS
MATTHEW BAIRD
JANET BLACKMAN
DENNIS GOLDENSOHN
THEODORE PATEREK
CHRISTOPHER CARVER
RICHARD SCANLON
PHILIP BROWN
CHRISTOPHER M. MURPHY AND SPOUSE, TABITHA L. MURPHY
JOHNSONS LANDING HOMEOWNERS ASSC
THEODORE FRANZESE
TERRY RITCH
SHANE RUNDGREN
2015-3 IH2 BORROWER LP
BRUCE WEITZ
DEREK LAWHORN
JONATHAN MCLEAN

255 257 258 259 260 261 251 264 267 268 269

SITE 21

DENOTES MECHANIZED CLEARING

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 35 FOR -Y13- & -Y14- PROFILES

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\With Contours\R5705B_Rdy_psh_17_con.dgn
[beir.lassiter]

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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 _42_ OF _47_

NAD 83/NA 2011

MATCHLINE SHEET 20
-L- STA. 477+50.00

-L- PC Sta. 480+20.81

-L- PT Sta. 485+54.32

-L- POT Sta. 486+80.31

-L- PT Sta. 489+35.98

CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

SPECIAL CUT DITCH
SEE DETAIL L

STANDARD 'V' DITCH
SEE DETAIL AA *
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

15" RCP-IV
18" RCP-IV
24" RCP-IV

ACCESS POINT
PUE
PUE POINT
TDE

289 ANS TRUST THE
290 GLENN POND
291 DANA HALEY
292 ANS TRUST THE
293 DONALD HESTER
294 ALESSANDRO BIANCO
295 BRYAN ZIMMERMAN
296 JIMMIE HANKS
297 SHIREY JO BAIRD
PEGGY WATERS
LISA WILSHIRE
CLAYTON FAMILY LLC
CITIMORTGAGE INC

SR 2141 BALDWINS RD BST
NC 55 34' BST
JICARILLA LN 18' BST
EXISTING R/W

F F DENOTES FILL IN WETLAND

T T DENOTES TEMPORARY FILL IN WETLAND

SITE 22

100' 0' 100'
HORIZONTAL SCALE

-L-	
PI Sta 482+90.42	PI Sta 488+08.47
△ = 20° 22' 43.0" (LT)	△ = 9° 59' 32.3" (LT)
D = 3° 49' 11.0"	D = 3° 54' 30.0"
L = 533.51'	L = 255.67'
T = 269.60'	T = 128.16'
R = 1,500.00'	R = 1,465.99'
SE = 04	
RO = 200'	

SEE SHEET 32 FOR -L- PROFILE

10/6/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_21.dgn
User: tassler

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET _43_ OF _47_

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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/NA 2011

MATCHLINE SHEET 20
-L- STA. 477+50.00

-L- PC Sta. 480+20.81

-L- PT Sta. 485+54.32

-L- POT Sta. 486+80.31

-L- PT Sta. 489+35.98

CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

SPECIAL CUT DITCH
SEE DETAIL L

STANDARD 'V' DITCH
SEE DETAIL AA

CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

15" RCP-IV
18" RCP-IV
24" RCP-IV

ACCESS POINT
PUE
PUE POINT
TOE
POND
SR 2141 MAUNERS RD SST
NC 55 34' BST
EXISTING R/W
JICARILLA LN 18' BST
12" RCP

ANS TRUST THE
289
292
ALESSANDRO BIANCO
294
SHIREY JO BAIRD
297
290
GLENN POND
PEGGY WATERS
291
DANA HALEY
293
DONALD HESTER
BRYAN ZIMMERMAN
295
296
JIMMIE HANKS
LISA WILSHIRE
CLAYTON FAMILY LLC
CITIMORTGAGE INC

F F DENOTES FILL IN WETLAND

T T DENOTES TEMPORARY FILL IN WETLAND

SITE 22

100' 0' 100'
HORIZONTAL SCALE

-L-	
PI Sta 482+90.42	PI Sta 488+08.47
△ = 20° 22' 43.0" (LT)	△ = 9° 59' 32.3" (LT)
D = 3° 49' 11.0"	D = 3° 54' 30.0"
L = 533.51'	L = 255.67'
T = 269.60'	T = 128.16'
R = 1,500.00'	R = 1,465.99'
SE = 04	
RO = 200'	

SEE SHEET 32 FOR -L- PROFILE

10/6/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\With Contours\R5705B_Rdy_psh_21_con.dgn
User: tassiter

Submitted 12/21/2021

8/17/99

PERMIT DRAWING
SHEET _44_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

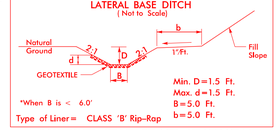
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner = Class 'I' Rip-Rap
FROM –Y8– STA. 13+62 TO STA. 13+78 RT

DETAIL V
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=5.0 Ft.
b=5.0 Ft.
Type of Liner = CLASS 'B' Rip-Rap
FROM –Y8– STA. 13+84 TO STA. 18+50 RT

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.
FROM –Y22– STA. 11+00 TO STA. 12+30 RT
FROM –Y22– STA. 14+63 TO STA. 16+50 RT.

–Y8– STA. 22+38.00
END CONST.

SITE 24

NAD 83/NA 2011

MATCHLINE SHEET 14
–Y8– STA. 13+00.00

RIP RAP AT EMBANKMENT SEE DETAIL N

5' LAT. BASE DITCH SEE DETAIL V CLASS 'B' RIP RAP

CLASS I RIP RAP

SURFACE WATER IMPACT

BURY PIPE 1.0'

DO NOT DISTURB USTs

CLASS B RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY.

SPECIAL CUT DITCH SEE DETAIL 1

CLASS B RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY.

TB JB w/MH

RIM=328.8
INV=316.8

CAROLINA CHARTER ACADEMY HOLDINGS LLC
DB 18395 PG 1890
PB 2018 PG2405

OCEAN 3 LLC
LINDERMAN PROPERTIES LLC
RICHARD BULLOCK
NANCY GILES
MICKEY BARBOUR
RUTH PETREA
STUART MATTHEWS
RANDY SMITH
RICHARD DWIGHT BULLOCK
SUNNI SKYS LLC

224 225 226 227 228 229 230 231 309 223 303

SITE 18

SITE 23

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

SEE SHEET 33 FOR –Y8– PROFILE

1/8/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\R5705B_Rdy_psh_22.dgn
User: lassiter

Submitted 12/21/2021

8/17/99

PERMIT DRAWING
SHEET _45_ OF _47_

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

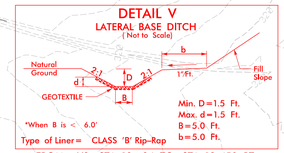
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



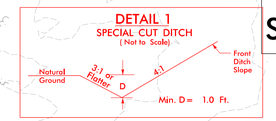
Type of Liner = Class 'I' Rip-Rap
FROM –Y8– STA. 13+62 TO STA. 13+78 RT

DETAIL V
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=5.0 Ft.
b=5.0 Ft.
Type of Liner = CLASS 'B' Rip-Rap
FROM –Y8– STA. 13+84 TO STA. 18+50 RT

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.
FROM –Y22– STA. 11+00 TO STA. 12+30 RT
FROM –Y22– STA. 14+63 TO STA. 16+50 RT.

–Y8– STA. 22+38.00
END CONST.

NAD 83/NA 2011

SITE 24

SITE 18

SITE 23

MATCHLINE SHEET 14
–Y8– STA. 13+00.00

SEE SHEET 33 FOR –Y8– PROFILE

F F	DENOTES FILL IN WETLAND
S S	DENOTES IMPACTS IN SURFACE WATER
E E	DENOTES EXCAVATION IN WETLAND
HC HC	DENOTES HAND CLEARING
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
HORIZONTAL SCALE

OCEAN 3 LLC
LINDERMAN PROPERTIES LLC
NANCY GILES
MICKEY BARBOUR
RICHARD BULLOCK
RANDY SMITH
RICHARD DWIGHT BULLOCK
STUART MATTHEWS
RUTH PETREA
SUNNISKYS LLC
CAROLINA CHARTER ACADEMY (THE DINGS LLC)
DO NOT DISTURB USTs
CLASS I RIP RAP
RIP RAP AT EMBANKMENT SEE DETAIL N
5' LAT. BASE DITCH SEE DETAIL V CLASS 'B' RIP RAP
CLASS B RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY.
SPECIAL CUT DITCH SEE DETAIL 1
SURFACE WATER IMPACT
BURY PIPE 1.0'
TB JB w/MH
CB
RIM=328.8'
INV=316.8'

1/8/2021
X:\R5705B\TV\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\With Contours\R5705B_Rdy_psh_22_con.dgn
User: lasalter

Submitted 12/21/2021

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705B	X-101

PERMIT DRAWING
SHEET _46_ OF _47_

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320
310

6:1 0.040 0.040 4:1
319.08
313.65
16+00.00

320
310

0.040 0.040 4:1
318.04
313.29
15+50.00

WETLAND BOUNDARY

SITE 24

320
310

0.040 0.040 4:1
316.54
312.75
15+00.00

300
320
310

0.040 0.040 DRIVEWAY 18.75%
316.27
14+50.00

300
320
310

3:1 32 0.030 0.030
315.86
311.57
14+00.00

WETLAND BOUNDARY

SITE 18

300
320
310

3:1 32 0.020 0.020
316.95
13+50.00

-Y8-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

9/20/2021
X:\NCDOT\R-5705B\Hydraulics\PERMITS_Environmental\Drawings\X-Sections\R5705B_Rdy_xpl_Y8_Site18-24.dgn
User:lassiter

Submitted 12/21/2021

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1	247+50-250+00-L-(Pond)	Roadway Fill						0.77				
2	253+00-253+70-L-	66" RCP/Roadway Fill	0.32		< 0.01		0.04	< 0.01	< 0.01	183	61	
	253+00-L- Lt	Bank Stabilization								15		
3	254+00-L- Rt	Roadway Fill						< 0.01		110		
4	283+62-284+64-L-	48"RCP/Roadway Fill	0.50		< 0.01		0.04	0.02	< 0.01	213	39	
	284+00-L- Lt	Bank Stabilization								10		
5	292+37-293+74-L-	Roadway Fill	0.43				0.03					
6	296+76-298+52-L-	48"RCP/Roadway Fill	1.16				0.19					
	298+52-301+10 Lt.	Lateral Ditch			0.04							
7	312+53-L- Lt(Pond)	Roadway Fill						0.11				
8	312+77-314+35-L-	2@7'x7' RCBC/Roadway Fill	0.73		0.07	0.08	0.07	0.07	0.01	400	60	
	313+50-L- Lt&Rt	Bank Stabilization								114		
9	327+00-327+29-L-	48"RCP	0.03					0.01	< 0.01	168	12	
10	327+00-329+00-L- Rt.	48"RCP/Roadway Fill			0.03		0.09	0.25				
11	338+41-L-(Pond)	36"RCP						0.98				
12	346+34-346+96-L-	60" RCP/Roadway Fill	0.22				0.02	0.02	< 0.01	300	39	
13	346+68-349+95-L- Rt.	Lateral Ditch	0.04		0.07		0.11					
14	359+42-L- Lt.	Roadway Fill	< 0.01				0.01					
15	363+50-L-Lt.	24"RCP	0.12				0.01	< 0.01	< 0.01	86	20	
16	371+11-372+36-L-	48"RCP/Roadway Fill	0.45		0.02		0.05	0.02	< 0.01	207	42	
17	375+00-380+00-L-	60"RCP/Roadway Fill	1.46				0.20	0.02	< 0.01	235	48	
	375+80-378+61-L- Rt.	Lateral Ditch			0.07							
18	13+85-Y8-Rt.&Lt.	Bank Stabilization 60"/54"							< 0.01	20		
	13+40-13+84-Y8-	60"RCP/Roadway Fill	0.14		< 0.01		0.05	0.01	< 0.01	136	39	
	12+31-Y22-	54"RCP	< 0.01		< 0.01		0.02	< 0.01	< 0.01	12	34	
19	390+30-L-Lt.	Roadway Fill	0.02				0.02	< 0.01	< 0.01	84	17	
20	391+15-L-Lt.	Ditch Excavation			< 0.01		0.02					
21	428+90-L-Lt.	24"RCP				0.02						
22	486+80-L-Lt.	24"RCP	< 0.01	< 0.01								
23	13+68-Y8-Lt.	60"RCP							< 0.01		16	
24	15+00-Y8-Rt.	15"RCP	0.02		0.02		0.02					
SHEET TOTALS*:			5.65	< 0.01	0.35	0.09	0.97	2.31	0.05	2293	427	

*Rounded totals are sum of actual impacts

**Notes:

There will be 0.08 acres of Temporary Fill in wetlands in the Hand Clearing areas for Erosion Control measures.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
11/8/2021
HARNETT/WAKE
R-5705B
46377.1.3
SHEET 47 OF 47

Submitted 12/21/2021

TIP PROJECT: R-5705C

CONTRACT:

$$$$$$$SYSTIME$$$$$$
$$$$$$$

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 15

FOR –Y17– PROFILE SEE SHEET 21

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

P P DENOTES IMPACTS IN SURFACE WATER (POND)

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 2 OF 26

NAD 83/2011

REVISIONS 8/17/99

BEGIN TIP PROJECT R-5705C
END TIP PROJECT R-5705B
–L– STA. 479+39.87

–L– POT Sta. 478+10.00

–L– PC Sta. 480+20.81

–L– POC Sta. 485+03.91

–Y17– POT Sta. 10+00.00
TIE PROPOSED R/W TO R/W BY OTHERS FROM TIP PROJECT R-5705B

–L– PT Sta. 488+13.34

MATCHLINE –L– STA. 491+50.00 SEE SHEET NO. 5

ANS TRUST THE
DB 15463 PG 1242

ABANDONED RR R/W

R/W BY OTHERS

WOODS

NC 55 N RALEIGH ST 27 BST

ANS TRUST THE
DB 15463 PG 1242
MB 1997 PG 217

ALESSANDRO BIANCO
DB 16667 PG 561
MB 2016 PG 361

SHIREY JO BAIRD
DB 4976 PG 589
MB 2016 PG 361

EASEMENT BY OTHERS

ISFD

ISF/BKD

HTR

GLENN POND
DB 15271 PG 1414
MB 1990 PG 464

N 25°22'00" E 1,100.00'

36" WD RAIL

48" CMP

48" CONC

60" RCP

15" RCP

12" RCP

EXISTING R/W

–L– F-6" C&G

2'-9" C&G

2'-6" C&G

1'-6" C&G

NC 55 34' BST

BST

CONC

T FO

OHP

GR

CAT-1

PROPOSED C/A ROW FROM TIP PROJECT R-5705B FURTHER COORDINATION IS REQUIRED WITH TRS

POND

SITE 1
R5705-AZ18

SITE 2

BRYAN ZIMMERMAN
DB 11490 PG 1062
MB 2005 PG 372

DANA HALEY
DB 8060 PG 312

DONALD HESTER
DB 5150 PG 389
MB 2005 PG 372

JIMMIE HANKS
DB 4890 PG 294
MB 1986 PG 56

LISA M BOSHIRE
DB 14985 PG 1237
MB 1986 PG 56

PEGGY WATERS
DB 8568 PG 1614

CLAYTON FAMILY LLC
DB 13908 PG 1871
MB 2009 PG 1003

CITIMORTGAGE INC
DB 14649 PG 300

CULTIVATED

END CONSTRUCTION
–Y17– STA 12+00.00

–L–

PI Sta 484+26.56
Δ = 30° 16' 20.6" (LT)
D = 3° 49' 11.0"
L = 792.53'
T = 405.75'
R = 1,500.00'
SE = .04
RUNOFF = 200'

USER: tmeadows
DGN: 5705C_RW_SHEET_2.dgn

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 15
FOR –Y17– PROFILE SEE SHEET 21

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

P P DENOTES IMPACTS IN SURFACE WATER (POND)

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 3 OF 26

NAD 83/2011

REVISIONS 8/17/99

BEGIN TIP PROJECT R-5705C
END TIP PROJECT R-5705B
–L– STA. 479+39.87

–L– POC Sta. 478+10.00

–L– PC Sta. 480+20.81

–L– POT Sta. 488+13.34

–L– POC Sta. 485+03.91

–Y17– POT Sta. 10+00.00
TIE PROPOSED R/W TO R/W BY OTHERS FROM TIP PROJECT R-5705B

END CONSTRUCTION
–Y17– STA 12+00.00

PROPOSED C/A ROW FROM TIP PROJECT R-5705B FURTHER COORDINATION IS REQUIRED WITH TGS

SITE 1
R5705-AZ18

SITE 2

ANS TRUST THE
DB 15463 PG 1242

ANS TRUST THE
DB 15463 PG 1242
MB 1997 PG 217

ALESSANDRO BIANCO
DB 16667 PG 561
MB 2016 PG 361

SHIREY JO BAIRD
DB 4976 PG 589
MB 2016 PG 361

GLENN POND
DB 15271 PG 1414
MB 1990 PG 464

DANA HALEY
DB 8060 PG 312

DONALD HESTER
DB 5150 PG 389
MB 2005 PG 372

BRYAN ZIMMERMAN
DB 11490 PG 1062
MB 2005 PG 372

JIMMIE HANKS
DB 4890 PG 294
MB 1986 PG 56

LISA WISHIRE
DB 14961 PG 1237
MB 1986 PG 56

CITIMORTGAGE INC
DB 14649 PG 300

PEGGY WATERS
DB 8568 PG 1614

CLAYTON FAMILY LLC
DB 13908 PG 1871
MB 2009 PG 1003

R/W BY OTHERS

EASEMENT BY OTHERS

ABANDONED RR R/W

EXISTING R/W

CULTIVATED

–L–
PI Sta 484+26.56
Δ = 30° 16' 20.6" (LT)
D = 3° 49' 11.0"
L = 792.53'
T = 405.75'
R = 1,500.00'
SE = .04
RUNOFF = 200'

MATCHLINE –L– STA. 491+50.00 SEE SHEET NO. 5

$$$$$SYSTIME$$$$$
$$$$$USERNAME$$$$$

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of: MOTT MACDONALD, PO Box 700, Fuquay-Varina, NC 27526, www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 15
FOR –Y18– PROFILE SEE SHEET 21
FOR –Y19– PROFILE SEE SHEET 22

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

P P DENOTES IMPACTS IN SURFACE WATER (POND)

NAD 83/2011

PERMIT DRAWING SHEET 4 OF 26

8/17/99 REVISIONS

MATCHLINE –L– STA. 491+50.00 SEE SHEET NO. 4

MATCHLINE –L– STA. 505+50.00 SEE SHEET NO. 6

GRAPHIC SCALE 50 0 50 100 150

MB 1986 PG 2262

JEFFERY JUDD
DB 13520 PG 1434
MB 1986 PG 2262

LLYOD OLIVE
DB 8669 PG 2505
MB 2000 PG 810

SARAH MURRAY
DB 1049 PG 11
MB 1988 PG 374

EDNA RUSSELL
MB 1988 PG 374

JEROME RUSSEL
WILL 214100-E
MB 1985 PG 1307

JUAN RODRIGUEZ
DB 11304 PG 1094
MB 1985 PG 1307

RICHARD RUSSELL
DB 3625 PG 66
MB 1985 PG 1307

PEGGY WATERS
DB 8568 PG 1614

WILLIAM BAGLIANI
DB 15322 PG 543

RUBEN AGUIRRE
DB 15730 PG 85
MB 1988 PG 374

CLAYTON FAMILY LLC
DB 13908 PG 1871
MB 2009 PG 1003

KATHY MOORE
DB 9460 PG 2526
MB 1983 PG 508

BEGIN CONSTRUCTION
–Y18– STA 16+42.89

–Y18– PT Sta. 16+39.21

–Y18– POT Sta. 10+00.00

–Y18– PC Sta. 12+95.22

–L– POT Sta. 494+25.75
–Y18– POT Sta. 17+29.94

–L– POT Sta. 502+17.48
–Y19– POT Sta. 10+00.00

END CONSTRUCTION
–Y19– STA 12+15.00

–Y19– POT Sta. 12+99.02

HIGH POINT
–L– 502+68.63

SITE 3

SITE 4

–Y18–
PI Sta 14+86.17
△ = 61° 55' 01.7" (LT)
D = 18° 00' 00.0"
L = 343.98'
T = 190.95'
R = 318.31'

S 33° 24' 25.3" E

N 4° 54' 20.2" W

S 89° 36' 05.5" E

N 00° 19' 50" E 365.44'

S 00° 30' 03" E 276.64'

S 85° 05' 47" W 157.38'

S 61° 59' 26" W 626.91'

N 02° 28' 58" E 124.07'

N 02° 28' 58" E 85.37'

S 00° 27' 10" W 29.25'

S 00° 27' 10" W 183.88'

S 00° 32' 11" W 106.07'

N 00° 17' 49" E 53.89'

S 85° 40' 56" E 264.40'

S 85° 40' 56" E 126.98'

N 85° 40' 56" E 115.05'

N 85° 54' 05" W 68.57'

S 81° 49' 55" W 14.83'

S 78° 36' 47" W 6.80'

N 04° 46' 36" W 100.59'

N 80° 09' 50" E 102.87'

N 87° 07' 24" E 278.34'

S 62° 43' 07" W 286.00'

N 65° 56' 55" E 210.16'

63.46' N 28° 08' 33" W

136.23' S 04° 55' 36" E

116.74'

S 04° 55' 36" E

CULTIVATED

WOODS

POND

Century Link, FO

Spirit Communications, FO

Century Link, FO/TV/P

Spectrum TV/P

EXISTING R/W

NC 55 33' BST

NC 55/N RALEIGH ST 34' BST

I-6" C&G

2'-6" C&G

15" RCP

18" RCP

24" RCP

30" RCP

36" DR

20' DR

40' DR

22' DR

ISFD

ISBKD

ISFBUS

CAR PORT

MTL CARPORT

HTR

BST

CONC

GRASS

10' CONC DR.

60' EIP TO R/W

48" CMP

24" CMP

GRASS CLOVER DR 2' DEEP

BM #24

BL-67 BY 10

SYSTIME=$$$

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 15
FOR –Y18– PROFILE SEE SHEET 21
FOR –Y19– PROFILE SEE SHEET 22

S S DENOTES IMPACTS IN SURFACE WATER
F F DENOTES FILL IN WETLAND
P P DENOTES IMPACTS IN SURFACE WATER (POND)

NAD 83/2011

PERMIT DRAWING SHEET 5 OF 26

8/17/99 REVISIONS

MATCHLINE –L– STA. 491+50.00 SEE SHEET NO. 4

MATCHLINE –L– STA. 505+50.00 SEE SHEET NO. 6

GRAPHIC SCALE 50 0 50 100 150

JEFFERY JUDD
DB 13520 PG 1434
MB 1986 PG 2262

LLYOD OLIVE
DB 8669 PG 2505
MB 2000 PG 810

EDNA RUSSELL
MB 1988 PG 374

SARAH MURRAY
DB 1049 PG 11
MB 1988 PG 374

JEROME RUSSEL
WILL 214100-E
MB 1985 PG 1307

JUAN RODRIGUEZ
DB 11304 PG 1094
MB 1985 PG 1307

RICHARD RUSSELL
DB 3625 PG 66
MB 1985 PG 1307

PEGGY WATERS
DB 8568 PG 1614

WILLIAM BAGLIANI
DB 15322 PG 543

RUBEN AGUIRRE
DB 15730 PG 85
MB 1988 PG 374

CLAYTON FAMILY LLC
DB 13908 PG 1871
MB 2009 PG 1003

KATHY MOORE
DB 9460 PG 2526
MB 1983 PG 508

BEGIN CONSTRUCTION
–Y18– STA 16+42.89

–Y18– PT Sta. 16+39.21

–L– POT Sta. 494+25.75
–Y18– POT Sta. 17+29.94

–Y18– POT Sta. 10+00.00

–L– POT Sta. 502+17.48
–Y19– POT Sta. 10+00.00

HIGH POINT
–L– 502+68.63

END CONSTRUCTION
–Y19– STA 12+15.00

–Y19– POT Sta. 12+99.02

–Y18–
PI Sta 14+86.17
△ = 61° 55' 01.7" (LT)
D = 18° 00' 00.0"
L = 343.98'
T = 190.95'
R = 318.31'

SITE 3

SITE 4

S 33°24'25.3" E

N 4°54'20.2" W

S 89°36'05.5" E 157.38'

N 80°09'50" E 102.87'

N 89°00'00" E 264.00'

N 89°00'00" E 365.44'

S 00°30'03" E 276.64'

S 85°54'05" W 668.57'

S 00°27'10" W 29.25'

S 00°17'49" E 406.07'

S 00°17'49" E 53.89'

N 02°28'58" E 124.07'

N 02°28'58" E 85.37'

S 61°59'26" W 626.91'

N 81°01'24" E 278.34'

S 62°43'07" W 286.00'

S 81°49'55" W 14.83'

S 28°16'47" W 63.46'

N 04°46'36" W 100.59'

N 28°08'33" W 63.46'

S 04°55'36" E 116.74'

136.23'

N 65°56'40" E 1226.98'

S 65°56'40" W 1126.98'

N 60°56'59" E 262.19'

S 00°19'50" E 365.44'

N 89°00'00" E 13.47'

S 89°36'05.5" E 157.38

Submitted 12/21/2021

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
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PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 15
FOR –Y18– PROFILE SEE SHEET 21
FOR –Y19– PROFILE SEE SHEET 22

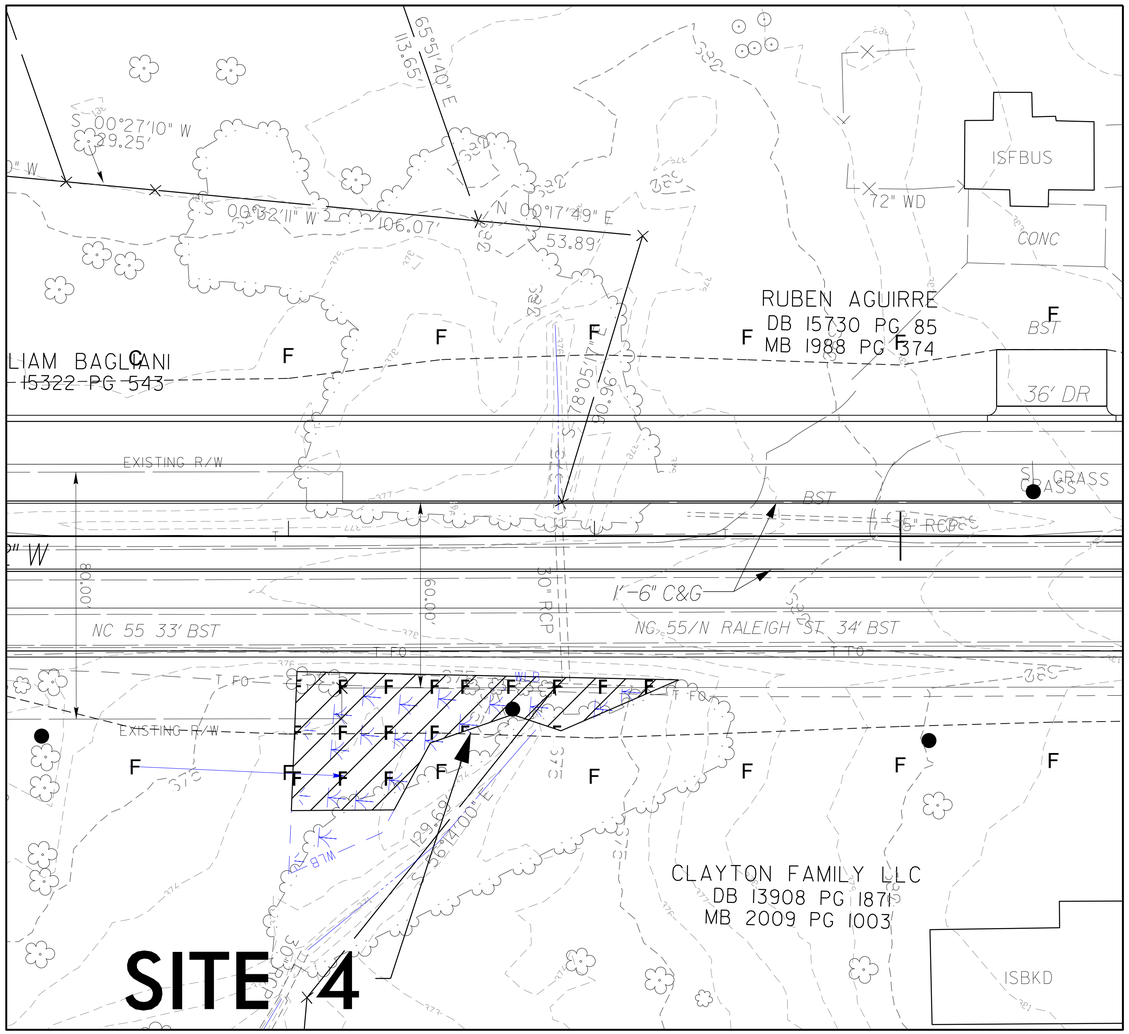
25′ 0′ 25′ 50′ 75′
GRAPHIC SCALE

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

NAD 83/2011

PERMIT DRAWING
SHEET 6 OF 26



SITE#68 ZIONS68 DGN

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEETS 15 & 16

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

PERMIT DRAWING
SHEET 7 OF 26

50' 0' 50' 100' 150'
GRAPHIC SCALE

NAD 83/2011

REVISIONS 8/17/99

MATCHLINE –L– STA. 505+50.00 SEE SHEET NO. 5

MATCHLINE –L– STA. 519+50.00 SEE SHEET NO. 7

SITE 6

SITE 5

SITE 5

PATRICIA SCOTT
DB 16853 PG 2077

MARY WILLIFORD
NO DEED INFO

THELMA MELVIN
WILL 553 ODE
MB 1993 PG 431

MARTIN DAVIS
DB 14008 PG 1179

WILLIAM BARNHOUSE
DB 2385 PG 368

CURTIS NESMITH
DB 15499 PG 2370
MB 1999 PG 877

ROBERT SULLIVAN
DB 12904 PG 680
MB 1983 PG 508

BOBBY CAPPS
DB 13152 PG 217
MB 1988 PG 368

ANN JAMES
DB 4504 PG 540
MB 1988 PG 368

JOHN KELLY
DB 4745 PG 78
MB 1988 PG 368

LOUIS WOOTEN
DB 8646 PG 379
MB 1983 PG 508

JEFFERSON BRACKETT
DB 3326 PG 618
MB 1983 PG 508

BILE HOME PARK LLC
146II PG 1896

CURTIS NESMITH
DB 15499 PG 2370
MB 1999 PG 877

BEGIN FULL C/A

END FULL C/A

PROP. CONC. MONOLITHIC ISLAND

425' LEFT TURN LANE

EXISTING R/W

Century Link, COPPER

Spectrum, TV

Spirit Communications, FO

NC 55 34' BST

POND

WOODS

N 4°54'20.2" W

S 87°11'32" W 14.87'

312.91' N 08°05'32" W

18.25' 42°56" W

S 88°56'59" E 29.25'

N 85°02'45" E 272.28'

S 85°10'22" W 519.31'

100.00' S 06°02'44" E

115.83' S 09°38'09" E

130.00' N 05°17'36" W

151.58' N 05°17'36" W

S 84°42'24" W 300.00'

N 84°14'36" E 300.00'

S 85°05'47" W 300.65'

N 85°00'06" E 290.25'

S 85°05'47" W 176.10'

N 85°06'29" E 220.34'

S 85°06'19" W 230.39'

N 85°05'47" E 260.72'

243.72' S 00°29'54" E

221.15' S 00°29'00" E

200.59' S 00°30'02" E

154.42' S 00°29'59" E

36.45' N 00°29'59" W

97.53' N 00°32'40" W

102.91' S 00°32'40" E

294.60' S 00°22'33" E

208.48'

320.74' N 87°00'00" E

BLDG

HTR

BST

ISBKD

ISFD

2SFD

DECK

CONC

WOODS

36" CHL

48" CHL

40" CONC

36" CONC

30" CONC

24" CONC

20" CONC

15" RCP

20" DIP

2'-6" C&G

1'-6" C&G

48" W.L.

48" MED.

34" BST

150' APER

460.42'

S 85°10'22" W 519.31'

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEETS 15 & 16

REVISIONS
8/17/99

DENOTES IMPACTS IN SURFACE WATER

DENOTES FILL IN WETLAND

GRAPHIC SCALE 50' 0' 50' 100' 150'

PERMIT DRAWING
SHEET 8 OF 26

NAD 83/2011

MATCHLINE –L– STA. 505+50.00 SEE SHEET NO. 5

MATCHLINE –L– STA. 519+50.00 SEE SHEET NO. 7

SITE 6

SITE 5

SITE 5

PATRICIA SCOTT
DB 16853 PG 2077

MARY WILLIFORD
NO DEED INFO

THELMA MELVIN
WILL 553-106
MB 1989 PG 431

CURTIS NESMITH
DB 15499 PG 2370
MB 1999 PG 877

CURTIS NESMITH
DB 15499 PG 2370
MB 1999 PG 877

MARTIN DAVIS
DB 14008 PG 1179

WILLIAM BARNHOUSE
DB 2385 PG 368

ROBERT SULLIVAN
DB 12904 PG 680
MB 1983 PG 508

BOBBY CAPPS
DB 13152 PG 217
MB 1988 PG 368

ANN JAMES
DB 4504 PG 540
MB 1988 PG 368

JOHN KELLY
DB 4745 PG 78
MB 1988 PG 368

LOUIS WOOTEN
DB 8646 PG 379
MB 1983 PG 508

JEFFERSON BRACKETT
DB 3326 PG 618
MB 1983 PG 508

BILE HOME PARK LLC
B 1461 PG 1896

BEGIN FULL C/A

END FULL C/A

PROP. CONC. MONOLITHIC ISLAND

EXISTING R/W

Century Link, Copper

Spectrum, TV

Spirit Communications, FO

POND

N 4° 54' 20.2" W

18.25'
42°56" W

S 87°11'32" W
14.87'

312.91'
N 08°05'32" W

S 85°10'22" W
519.36'

N 85°02'45" E
212.28'

S 86°58'39" E
215.25'

100.00'
S 06°02'44" E

115.83'
S 09°38'09" E

130.00'
N 05°17'36" W

151.58'
N 05°17'36" W

243.72'
S 00°29'54" E

22.15'
S 00°30'00" E

200.59'
S 00°30'02" E

154.42'
S 00°29'59" E

36.45'
N 00°29'59" W

97.53'
N 00°32'40" W

102.91'
S 00°32'40" E

294.60'
S 00°22'33" E

S 85°05'47" W 176.40'

S 85°05'47" W 208.48'

N 85°06'21" E 220.34'

S 85°36'19" W 230.39'

N 85°05'47" E 260.72'

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEET 16

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

PERMIT DRAWING SHEET 9 OF 26

50' 0' 50' 100' 150'
GRAPHIC SCALE

NAD 83/2011

8/17/99
REVISIONS

MATCHLINE –L– STA. 519 + 50.00 SEE SHEET NO. 6

MATCHLINE –L– STA. 533 + 50.00 SEE SHEET NO. 8

SITE 5
SITE 6
SITE 7
SITE 8

520
525
530

EUGENE LOCKHART
DB 13576 PG 1993

ABUNDANT SPACE SELF STORAGE LLC
DB 14218 PG 510
MB 2010 PG 600

GARLAND MCLAMB LLC
DB 17141 PG 2683

LOUISE FREEMAN
DB 11541 PG 1249
MB 1993 PG 204

HILDA WILSON
DB 15707 PG 2688
MB 1993 PG 204

IMPERIAL SELF STORAGE LLC
DB 16715 PG 2194
MB 2017 PG 274

PROPOSED 5' SIDEWALK
PROP. CONC. MONOLITHIC ISLAND
EXISTING R/W
Century Link, Copper
Other, FO Spirit Communications
Town of Fuquay-Varina, 12" PVC
425' LEFT TURN LANE
400' TAPER
BEGIN FULL C/A
END FULL C/A
ISBLKBUS
ISBKBUS
ISBK/FD
ISFB
ISMTL
2SFD
HTR
DECK
WOODS
GRV
GR.
BST
18" RCP
15" RCP
24" RCP
30" RCP
36" RCP
72" CMP
72" WD
72" CHL
60" CONC. WALK
80' CONC. WALK
2'-6" C&G
1'-6" C&G
NC 55/N RALEIGH ST 34' BST
NC 55 37' BST
20' DR
40' DR
44' DR
65'R
50.00'
BM #25
POINT -L- 520+75.34

S 85°17'08" W 272.38'
N 03°29'21" W 405.57'
N 85°17'08" E 90.53'
N 84°38'23" E 460.21'
N 12°41'46" W 382.56'
N 4°54'20.2" W
S 10°47'04" W 219.53'
N 09°51'26" W 253.97'
S 81°58'47" W 32.62'
N 61°42'23" W 320.04'
S 86°50'29" E 143.48'
S 02°59'41" E 104.78'
N 00°22'37" W 719.07'
N 61°42'23" W 308.28'
+42.00
+42.00
+42.00

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
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FOR –L– PROFILE SEE SHEET 16

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 10 OF 26

NAD 83/2011

REVISIONS
8/17/99

MATCHLINE –L– STA. 519+50.00 SEE SHEET NO. 6

MATCHLINE –L– STA. 533+50.00 SEE SHEET NO. 8

SITE 5
SITE 6
SITE 7
SITE 8

EUGENE LOCKHART
DB 13576 PG 1993

ABUNDANT SPACE SELF STORAGE LLC
DB 14218 PG 510
MB 2010 PG 600

GARLAND MCLAMB LLC
DB 17141 PG 2683

LOUISE FREEMAN
DB 11541 PG 1249
MB 1993 PG 204

HILDA WILSON
DB 15707 PG 2688
MB 1993 PG 204

IMPERIAL SELF STORAGE LLC
DB 16715 PG 2194
MB 2017 PG 274

-L-
N 4°54'20.2" W

BEGIN FULL C/A
END FULL C/A

425' LEFT TURN LANE
400' TAPER

PROP. CONC. MONOLITHIC ISLAND

PROPOSED 5' SIDEWALK

EXISTING R/W

Century Link, Copper

Spirit Communications

Town of Fuquay-Varina, 12" PVC

NC 55/N RALEIGH ST 34' BST

719.07'
N 00°22'37" W

253.97'
N 09°51'26" W

219.53'
S 10°47'04" W

N 03°29'21" W
405.57'

S 85°17'08" W
272.38'

N 84°38'23" E
460.21'

N 85°17'08" E
305.35'

N 27°41'46" W
382.56'

S 85°50'29" E
1043.48'

S 02°59'41" E
104.78'

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEET 17

FOR –Y22– PROFILE SEE SHEET 24

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

PERMIT DRAWING SHEET 11 OF 26

NAD 83/2011

NC GRID NAD 83 NA 2011

GRAPHIC SCALE 50' 0' 50' 100' 150'

8/17/99

REVISIONS

MATCHLINE –L– STA. 547+50.00 SEE SHEET NO. 8

MATCHLINE –L– STA. 561+50.00 SEE SHEET NO. 10

SITE 9

-L- POT Sta.549+55.98
-Y22- POT Sta.10+00.00

SITE 10

SITE 11

SITE 12

BEGIN FULL C/A

END FULL C/A

575' LEFT TURN LANE

575' RIGHT TURN LANE

BCELD MEADOWBROOK LLC
DB 1609 PG 2458
MB 1970 PG 217

SOUTH LAKES MAETER AASN INC.
DB 14186 PG 1094
MB 2008 PG 373

TOWN OF FUQUAY VARINA
DB 15344 PG 2186
MB 2014 PG 1219

FILL IN WETLAND

-Y22- PC Sta. 11+79.40

-Y22- PT Sta.13+21.63

END CONSTRUCTION
-Y22- STA 11+75.00

-Y22-
PI Sta 12+51.71
△ = 25° 28' 00.4" (LT)
D = 17° 54' 17.8"
L = 142.23'
T = 72.31'
R = 320.00'

-L-
N 4°54' 20.2" W

LOW POINT 552+14.10

HIGH POINT 556+99.11

LOW POINT 561+13.41

BL-76

BM#26

MARK SANCHEZ DB 15684 PG 1763 MB 2008 PG 373

DONALD BOUCHARD DB 15749 PG 1369 MB 2008 PG 373

BEVERLY EARWOOD DB 14871 PG 418 MB 2008 PG 373

MARK ROBERTSON DB 15341 PG 144 MB 2008 PG 373

KATHLEEN OLSON DB 16814 PG 1984 MB 2008 PG 373

POND

WOODS

PROP.CONC.MONOLITHIC ISLAND

Century Link, Copper

Spirit Communications, FO

Town of Fuquay-Varina, 12"

PCNC, 4", Plastic

NC 55/N RALEIGH ST 35' BST

NC 55 55' BST

NC 55 34' BST

60' CONC WALK

EXISTING SIDEWALK TO REMAIN

72' WD PROPOSED 5' SIDEWALK

2'-6" C&G

1'-6" C&G

6" C&G

20' DR

24" RCP

30" RCP

48" CONC

SYSTIME: 8/8/2022 11:58:39 AM

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEET 17

FOR –Y22– PROFILE SEE SHEET 24

8/17/99

REVISIONS

DENOTES IMPACTS IN SURFACE WATER

DENOTES FILL IN WETLAND

PERMIT DRAWING
SHEET 12 OF 26

NAD 83/2011

NC GRID NAD 83 NA 2011

GRAPHIC SCALE 50' 0' 50' 100' 150'

MATCHLINE –L– STA. 547+50.00 SEE SHEET NO. 8

MATCHLINE –L– STA. 561+50.00 SEE SHEET NO. 10

SITE 9

–L– POT Sta.549+55.98
–Y22– POT Sta.10+00.00

SITE 10

SITE 11

SITE 12

FILL IN WETLAND

BEGIN FULL C/A

END FULL C/A

LOW POINT 552+14.10

HIGH POINT 556+99.11

LOW POINT 558+13.41

575' LEFT TURN LANE

575' RIGHT TURN LANE

BCELD MEADOWBROOK LLC
DB 1609 PG 2458
MB 1970 PG 217

SOUTH LAKES MAETER AASN INC.
DB 14186 PG 1094
MB 2008 PG 373

TOWN OF FUQUAY VARINA
DB 15844 PG 2186
MB 2014 PG 1219

DONALD BOUCHARD
DB 15749 PG 1369
MB 2008 PG 373

MARK SANCHEZ
DB 15684 PG 1763
MB 2008 PG 373

BENJAMIN EARWOOD
DB 16871 PG 418
MB 2008 PG 373

MARK ROBERTSON
DB 15341
PG 144
MB 2008
PG 373

KATHLEEN OLSON
DB 17614
PG 1984
MB 2008
PG 373

–Y22– PC Sta. 11+79.40

–Y22– PT Sta.13+21.63

END CONSTRUCTION
–Y22– STA 11+75.00

–Y22–
PI Sta 12+51.71
△ = 25° 28' 00.4" (LT)
D = 17° 54' 17.8"
L = 142.23'
T = 72.31'
R = 320.00'

N 4°54' 20.2" W

BM=26

Century Link, Copper

Spirit Communications, FO

Town of Fuquay-Varina, 12" PVC, 4" Plastic

NC 55/N RALEIGH ST 35' BST

NC 55 55' BST

NC 55 34' BST

20' DR

PROP. CONC. MONOLITHIC ISLAND

2'-6" C&G

6" C&G

7'-6" C&G

60' CONC WALK

72" WD

65.0' WD

EXISTING SIDEWALK TO REMAIN

PROPOSED 5' SIDEWALK

WOODS

POND

EXISTING R/W

PROP. R/W

24" RCP

DCB

SYSTEM\$\$\$

Submitted 12/21/2021

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 17
FOR –Y22– PROFILE SEE SHEET 24

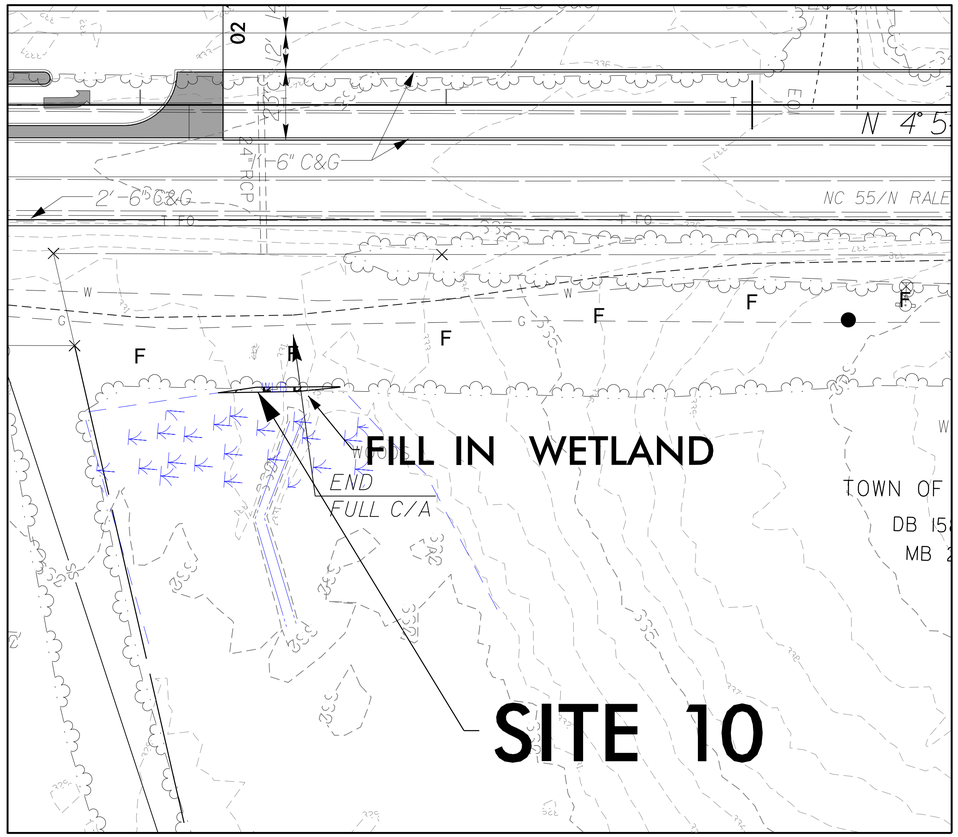
NAD 83/2011

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

25′ 0′ 25′ 50′ 75′
GRAPHIC SCALE

PERMIT DRAWING
SHEET 13 OF 26



Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of: MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEETS 17 & 18

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 14 OF 26

NAD 83/2011

REVISIONS
8/17/99

MATCHLINE –L– STA. 561+50.00 SEE SHEET NO. 9

MATCHLINE –L– STA. 575+50.00 SEE SHEET NO. 11

SITE 11

SITE 12

565 570 575

N 88°56'27" W 952.52'

S 89°10'08" W 925.24'

BEGIN FULL C/A

END FULL C/A

+17.50

425' LEFT TURN LANE

150' TAPER

HIGH POINT
-L- 569+63.00

MICHAEL RODGERS
DB 8108 PG 1165

MIDDLEBY MARSHALL INC.
DB 4533 PG 318
MB 1997 PG 1694

-L- 87+78

N 4°54'20.2" W

2-6" C&G

1'-6" C&G

20' DR

PROP. CONC. MONOLITHIC ISLAND

Other Town of Fuquay-Varina

Century Link, FO

NC 55 48' BST

NC 55 50' BST

Public Service Company of N C Inc., 4", Plastic

PSNC, 4", Plastic

Spectrum, TV/FO
Spirit Communications, FO
Duke Energy Progress
Town of Fuquay-Varina, 16', DIP
Town of Fuquay-Varina, 6', Unknown

Century Link, Copper/FO
Spirit Communications, FO
Duke Energy Progress
Town of Fuquay-Varina, 16', DIP
Town of Fuquay-Varina, 6', Unknown

100' RIGHT TURN LANE

120' TAPER

DEERE & COMPANY
DB 14947 PG 362
MB 1996 PG 998

EXISTING R/W

WOODS

POND

50'R

30' C&G

30' BST

18" C&G

BST

LT

FULL OF DEBRIS

260' T

S 89°56'08" W 209.12'

S 89°56'08" W 250.68'

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEETS 17 & 18

S S NADDENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 15 OF 26

NAD 83/2011

REVISIONS 8/17/99

MATCHLINE –L– STA. 561+50.00 SEE SHEET NO. 9

MATCHLINE –L– STA. 575+50.00 SEE SHEET NO. 11

SITE 11

SITE 12

565 570 575

BEGIN FULL C/A

END FULL C/A

HIGH POINT –L– 569+63.00

425' LEFT TURN LANE

150' TAPER

100' RIGHT TURN LANE

120' TAPER

MICHAEL ROGERS DB 8108 PG 1165

DEERE & COMPANY DB 14947 PG 362 MB 1996 PG 998

MIDDLEBY MARSHALL INC. DB 4533 PG 318 MB 1997 PG 1694

N 4° 54' 20.2" W

N 88° 27' 55.25" W 955.25'

S 89° 05' 24" W 925.24'

PROP. CONC. MONOLITHIC ISLAND

PROP. CONC. MONOLITHIC ISLAND

EXISTING R/W

Other Town of Fuquay-Varina

Century Link, FO

Century Link, Copper/FO
Spirit Communications, FO
Duke Energy Progress
Town of Fuquay-Varina, 16", DIP
Town of Fuquay-Varina, 6", Unknown

Spectrum, TV/FO
Spirit Communications, FO
Duke Energy Progress
Town of Fuquay-Varina, 16", DIP
Town of Fuquay-Varina, 6", Unknown

Public Service Company of N C Inc., 4", Plastic

PSNC, 4", Plastic

NC 55 48' BST

NC 55 50' BST

2'-6" C&G

1'-6" C&G

18" C&G

20' DR

50' R

30' BST

WOODS

POND

BST

LT

FULL OF DEBRIS

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD
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Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 18

FOR –Y23– PROFILE SEE SHEET 24

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 16 OF 26

NAD 83/2011

8/17/99 REVISIONS

MATCHLINE –L– STA. 575+50.00 SEE SHEET NO. 10

MATCHLINE –L– STA. 589+50.00 SEE SHEET NO. 12

BEGIN CONSTRUCTION
-Y23- STA 16+40.00

-L- POT Sta.577+60.99
-Y23- POC Sta.19+84.50

-Y23- PC Sta. 18+23.36

-Y23- PT Sta. 21+21.27

END CONSTRUCTION
-Y23- STA 22+50.00

-Y23- POT Sta. 24+25.47

LOW POINT
-L- 580+66.54

SITE 14

SITE 15

SITE 13

SITE 13

BUY & GO INC
DB 14156 PG 292

DONALD CHESSON F
DB 10616 PG 2213

DONALD CHESSON
DB 10614 PG 2448

TOWN OF FUQUAY VARINA
DB 15545 PG 1152

WILLOW CREEK HOMEOWNERS ASSOC INC
DB 8265 PG 264
MBF 1998 PG 180E

WILLOW CREEK HOA

CAROLINA TELEPHONE
Century Link, Copper
Spectrum, TV/FO
Town of Fuquay-Varina, 8" PVC
Town of Fuquay-Varina, 6" PVC
PSNC, 4" Plastic
EXISTING R/W

-Y23-
PI Sta 19+72.45
Δ = 5° 57' 29.5" (LT)
D = 2° 00' 00.0"
L = 297.91'
T = 149.09'
R = 2,864.79'

2022/2045 TRAFFIC VOLUMES		
	13800 / 21700	–Y23– SR 2765 OLD HONEYCUTT RD
24500 / 39600 NC 55	6860 / 9000	2900 / 6800
	300 / 400	1000 / 2400
–L–	5300 / 8700	–Y23– SR 2765 OLD HONEYCUTT RD
		21200 / 39400

$$$

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
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FOR –L– PROFILE SEE SHEET 18

FOR –Y23– PROFILE SEE SHEET 24

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 17 OF 26

NAD 83/2011

REVISIONS 8/17/99

MATCHLINE –L– STA. 575+50.00 SEE SHEET NO. 10

MATCHLINE –L– STA. 589+50.00 SEE SHEET NO. 12

BEGIN CONSTRUCTION
–Y23– STA 16+40.00

S 89°51'46.5" E 145.61'

–L– POT Sta. 577+60.99
–Y23– POC Sta. 19+84.50

–Y23– RC Sta. 18+23.36

END CONSTRUCTION
–Y23– STA 22+50.00

N 84°08'40.0" E 122.78'

–Y23– PT Sta. 21+21.27

–Y23– POT Sta. 24+25.47

N 4°54'20.2" W

LOW POINT
–L– 580+66.54

SITE 13

SITE 14

SITE 15

SITE 15

SITE 13

DENNIS HARMON DB 16505 PG 958

KELLI MOON DB 8926 PG 1889

AARON ROGERS DB 14956 PG 1425

ALICIA L. ARK DB 18554 PG 1609

CARLOS PINILLA DB 6428 PG 2715

JOHN BOWEN DB 6122 PG 2316

KEITH SMITH DB 8376 PG 1870

VIPUL KARUNDIA DB 14164 PG 1234

CHRISSY MILLS DB 11030 PG 350

RHONDA LEMAY DB 16931 PG 2208

PAUL STALLINGS DB 16938 PG 450

LUVIER TRIANA DB 11076 PG 1098

LAURA SHIPMAN DB 12086 PG 283

LIVINTON SUAREZ DB 12588 PG 2393

GREGORY BRYANT DB 9577 PG 477

JANE HOWARD DB 8[illegible] PG 2004

BUY & GO INC DB 14156 PG 292

DONALD CHESSON F DB 10616 PG 2213

DONALD CHESSON DB 10614 PG 2448

TOWN OF FUQUAY VARINA DB 15545 PG 1152

WILLOW CREEK HOMEOWNERS ASSOC INC DB 8265 PG 2614 MBF 1998 PG 1805

WILLOW CREEK HOA

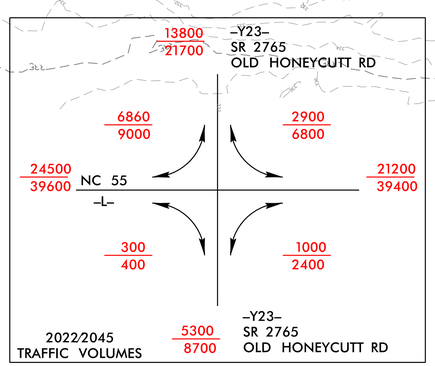
PROPOSED 5' SIDEWALK

RETAINING WALL 1

425' LEFT TURN LANE

400' RIGHT TURN LANE

–Y23–
PI Sta 19+72.45
Δ = 5°57'29.5" (LT)
D = 2°00'00.0"
L = 297.91'
T = 149.09'
R = 2,864.79'



Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
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PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEETS 18 & 19

8/17/99

REVISIONS

50' 0' 50' 100' 150'
GRAPHIC SCALE

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

NAD 83/2011

PERMIT DRAWING SHEET 18 OF 26

–L–
PI Sta 601+03.53
△ = 4° 52' 12.6" (LT)
D = 0° 34' 22.6"
L = 850.00'
T = 425.26'
R = 10,000.00'
SE = NC
RUNOFF = N/A

MATCHLINE –L– STA. 589+50.00 SEE SHEET NO. 11

MATCHLINE –L– STA. 603+50.00 SEE SHEET NO. 13

SITE 15

SITE 13

SITE 16

SITE 17

WILLOW CREEK II HOMEOWNERS ASSN INC
DB 11837 PG 2400

LIBERTY FELICIANO
DB 14057 PG 1121
MB 2004 PG 414

DEBORAH DOVER
DB 12902 PG 2495
MB 2004 PG 414

WILLOW CREEK II HOMEOWNERS ASSN INC
3808 PG 2619
PG 414

FRANCISCO RODRIGUEZ
DB 9256 PG 1784

SUE STEPHENSON
DB 11463 PG 1167

6240 NC 55 LLC
DB 11633 PG 1846

JCLU LTD VPTNRP LTD
PTNRP THE
DB 13910 PG 1929

WILLOW CREEK II HOMEOWNERS ASSN INC
593 PG 1449

ENGLISH FUQUAY VARINA CONGREGATION OF JEHOVAHS WIT
DB 11734 PG 1853

JOEL RAY SMITH
DB 13422 PG 755

MICHAEL LLOYD LESSARD
DB 15619 PG 1888

ETTA GRAY
DB 11028 P

–L– PC Sta. 596+78.27

–L– N 4° 54' 20.2" W

Century Link, Copper

Town of Fuquay-Varina, 12", Unknown

Town of Fuquay-Varina, 16" Spiral Communications

CenturyLink, Copper

Spectrum

BRYANT ESTATE DR

TERRA MOBILE ESTATE CIRCLE

ISB CHURCH

ISBLK BUS.

METAL CANOPY

WOODS

595

600

Submitted 12/21/2021

8/17/99

REVISIONS

50' 0' 50' 100' 150'
GRAPHIC SCALE

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

NAD 83/2011

PERMIT DRAWING
SHEET 19 OF 26

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEETS 18 & 19

–L–
PI Sta 601+03.53
Δ = 4° 52' 12.6" (LT)
D = 0° 34' 22.6"
L = 850.00'
T = 425.26'
R = 10,000.00'
SE = NC
RUNOFF = N/A

MATCHLINE –L– STA. 589+50.00 SEE SHEET NO. 11

MATCHLINE –L– STA. 603+50.00 SEE SHEET NO. 13

SITE 15
SITE 15
SITE 13
SITE 16
SITE 16
SITE 17

LIBERTY FELICIANO
DB 14057 PG 1121
MB 2004 PG 414

DEBORAH DOVER
DB 12902 PG 2445
MB 2004 PG 414

WILLOW CREEK II HOMEOWNERS ASSN INC
DB 11837 PG 2400

WILLOW CREEK II HOMEOWNERS ASSN INC
DB 11837 PG 2400
MB 2008 PG 2619

FRANCISCO RODRIGUEZ
DB 9256 PG 1784

SUE STEPHENSON
DB 11463 PG 1167

6240 NC 55 LLC
DB 11633 PG 1846

JCLU LTD VPTNRP LTD
PTNRP THE
DB 13910 PG 1929

ENGLISH FUQUAY VARINA CONGREGATION OF JEHOVAHS WIT
DB 11734 PG 1853

JOEL RAY SMITH
DB 13422 PG 755

MICHAEL LLOYD LESSARD
DB 15619 PG 1888

ETTA GRAY
DB 11028 P

BRYANT ESTATE DR
TERRA MOBILE ESTATE CIRCLE

Submitted 12/21/2021

8/17/99

REVISIONS

PERMIT DRAWING SHEET 20 OF 26

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of: MOTT MACDONALD, PO Box 700, Fuquay-Varina, NC 27526, www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 19

FOR –Y24– PROFILE SEE SHEET 25

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

NAD 83/2011

–L–
PI Sta 601+03.53
△ = 4° 52' 12.6" (LT)
D = 0° 34' 22.6"
L = 850.00'
T = 425.26'
R = 10,000.00'
SE = NC
RUNOFF = N/A

–L– PI Sta 619+98.87
△ = 1° 43' 48.1" (LT)
D = 0° 17' 11.3"
L = 603.89'
T = 301.97'
R = 20,000.00'
SE = NC
RUNOFF = N/A

SITE 18

SITE 18

–L– PC Sta. 616+96.90

–L– POT Sta.606+81.19
–DRI– POT Sta.10+00.00

–L– PT Sta. 605+28.27

END CONSTRUCTION
–DRI– STA 11+50.00

–DRI– POT Sta. 13+74.45

N 9° 46' 32.7" W

S 85° 02' 31" E

ANN JUDD HARVEY
DB 4281 PG 588
MB 87 PG 1061

AMERICAN BUILDERS & CONTRACTORS SUPPLY CO INC
DB 16565 PG 41

FUQUAY WAREHOUSE & STORAGE LLC
DB 15770 PG 1312

TCK ENTERTAINMENT LLC
DB 16690 PG 2728

ISMTL SELF STORAGE

MATCHLINE –L– STA. 603+50.00 SEE SHEET NO. 12

MATCHLINE –L– STA. 617+50.00 SEE SHEET NO. 14

Submitted 12/21/2021

8/17/99

REVISIONS

PERMIT DRAWING
SHEET 21 OF 26

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of: MOTT MACDONALD — PO Box 700, Fuquay-Varina, NC 27526, www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 19

FOR –Y24– PROFILE SEE SHEET 25

MATCHLINE –L– STA. 603+50.00 SEE SHEET NO. 12

MATCHLINE –L– STA. 617+50.00 SEE SHEET NO. 14

–L–
PI Sta 601+03.53
△ = 4° 52' 12.6" (LT)
D = 0° 34' 22.6"
L = 850.00'
T = 425.26'
R = 10,000.00'
SE = NC
RUNOFF = N/A

–L– PI Sta 619+98.87
△ = 1° 43' 48.1" (LT)
D = 0° 17' 11.3"
L = 603.89'
T = 301.97'
R = 20,000.00'
SE = NC
RUNOFF = N/A

SITE 18

SITE 18

–L– PT Sta. 605+28.27

–L– POT Sta.606+81.19
–DRI– POT Sta.10+00.00

–L– PC Sta. 616+96.90

HIGH POINT –L– 620+51.83

BEGIN FULL C/A

ANN JUDD HARVEY
DB 4281 PG 588
MB 87 PG 1061

BL-105

GREU TL 3

CAT-1

BL-104

WOODS

EXISING R/W

2'-6" C&G

8" PVC

–L– 8" PVC

N 9° 46' 32.7" W

Century Link Copper

Town of Fuquay-Varina, Unknown

Spirit Communications, FO

Spectrum

Town of Fuquay-Varina, IC, DIP, Not in Service

Duke Energy Progress

18" RCP by Spirit Communications

15" RCP

25" RCP

30" RCP

20" RCP

28" DR

30" DR

25" DR

S 85° 02' 31.8" E –DRI–

END CONSTRUCTION
–DRI– STA 11+50.00

–DRI– POT Sta. 13+74.45

AMERICAN BUILDERS & CONTRACTORS SUPPLY CO INC
DB 16565 PG 41

FUQUAY WAREHOUSE & STORAGE LLC
DB 15770 PG 1312

TCK ENTERTAINMENT LLC
DB 16690 PG 2728

IS MTL BUS

ISBLK BUS

HTR

CONC

GRAV DR 22' BST

COTTEN

BRYANT
765

ISMTL SELF STORAGE

S 27°26'18" W
375.12

TOP=357.89'
INV=350.61'
INV=350.78'
INV=350.97'
TOP=357.89'

TOP=358.06'
INV=351.23'
INV=350.69'
INV=350.78'
TOP=357.99'

TOP=355.08'
INV=350.08'

TOP=363.66'
INV=350.49'

TOP=368.87'
INV=350.87'

TOP=369.38'
INV=350.01'

TOP 369.77'
INV=361.87'

TOP=352.07'

–EL–

TES

RETAINING WALL 2

LOW POINT –L– 617+24.25

BEGIN FULL C/A

UP PIPE SOLUTIONS SEE DETAIL FOR CONC COVERS ON DI'S

SYSTIMES

Submitted 12/21/2021

PERMIT DRAWING SHEET 22 OF 26

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

50' 0' 50' 100' 150'
GRAPHIC SCALE

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of: MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEETS 19 & 20

REVISIONS 8/17/99

–L–
PI Sta 619+98.87
△ = 1° 43' 48.1" (LT)
D = 0° 17' 11.3"
L = 603.89'
T = 301.97'
R = 20,000.00'
SE = NC
RUNOFF = N/A

SITE 18

SITE 19

END TIP PROJECT R-5705C
–L– STA. 623+00.00

–L– PT Sta. 623+00.79

–L– POT Sta. 628+56.49

MATCHLINE –L– STA. 617+50.00 SEE SHEET NO. 13

554' TAPER

225' TAPER

150' TAPER

END FULL C/A

N 79°59'52" E 516.79'

N 79°58'32" E 36.90'

N 79°58'32" E 258.22'

N 79°57'23" E 74.59'

N 14°08'05" W 258.22'

N 11° 30' 20.8" W

S 05°25'28" E

S 11°34'49" E 266.00'

S 13°17'01" E 212.10'

N 13°16'38" W 217.11'

S 24°25'24" E 108.66'

S 37°47'39" E 80.01'

S 75°07'25" E 22.60'

N 62°58'40" E 59.05'

N 66°09'07" E 74.07'

N 86°59'18" E 22.60'

S 68°41'56" E 48.37'

S 75°07'25" E 48.37'

N 65°08'39" E 74.07'

N 56°59'07" E 59.05'

S 24°25'24" E 108.66'

N 65°08'39" E 74.07'

N 62°58'40" E 59.05'

S 75°07'25" E 22.60'

N 86°59'18" E 74.07

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of: MOTT MACDONALD, PO Box 700, Fuquay-Varina, NC 27526, www.mottmac.com/americas

FOR –L– PROFILE SEE SHEETS 19 & 20

PERMIT DRAWING
SHEET 23 OF 26

NAD 83/2011

GRAPHIC SCALE 50' 0' 50' 100' 150'

S S DENOTES IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

REVISIONS 8/17/99

MATCHLINE –L– STA. 617+50.00 SEE SHEET NO. 13

–L–
PI Sta 619+98.87
△ = 1° 43' 48.1" (LT)
D = 0° 17' 11.3"
L = 603.89'
T = 301.97'
R = 20,000.00'
SE = NC
RUNOFF = N/A

SITE 18

SITE 19

END TIP PROJECT R-5705C
–L– STA. 623+00.00

–L– PT Sta. 623+00.79

–L– POT Sta. 628+56.49

–EY2 LT–

–EY2 RT–

554' TAPER

225' TAPER

150' TAPER

END FULL C/A

N 11° 30' 20.8" W

MILLENNIUM TRUST CO LLCFBO JAMES SERINO IRA
DB 17057 PG 1834

ANCHOR PROPERTIES OF RALEIGH LLC
DB 16377 PG 2389

MAYO JONES
NO DEED

LINDA THOMAS
DB 5446 PG 145

ACC INVESTMENTS
DB 4375 PG 319
MB 1988 PG 1352

ACC INVESTMENTS
DB 4840 PG 744
MB 1991 PG 24

VICTOR PRIETO
DB 9598 PG 387

BRYAN FAMILY LTD
DB 8423 PG 942
MB 1995 PG 1205

HAROLD JOHNSON
DB 2926 PG 177

PROPERTIES OF RALEIGH LLC
DB 16377 PG 2389

PRY ROGERS
PROPERTIES, LLC
DB 13455 PG 1114
MB 1995 PG 1205

Town of Fuquay-Varina, 12", Unknown

Century Link Copper

FO, Spirit Communications

Town of Fuquay-Varina, 6", Unknown

(Not In Service)

Submitted 12/21/2021

WETLAND AND SURFACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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	From Sta. 482+54 to	Roadway Fill						0.01				
	Sta. 483+02 Rt											
2	From Sta. 486+27 to	Roadway Fill	0.15									
	Sta. 487+51 -L- Lt											
3	From Sta. 494+32 to	Roadway Fill						0.03				
	Sta. 495+08 -L- Rt											
4	From Sta. 498+01 to	Roadway Fill	0.07									
	Sta. 499+28 -L- Rt/Lt											
5	From Sta. 517+27 to	Roadway Fill	0.17									
	Sta. 519+72 -L- Rt											
6	From Sta. 518+36 to	Roadway Fill	0.28									
	Sta. 520+22 -L- Lt											
7	From Sta. 519+56 to	Roadway Fill	0.15					0.01		116		
	Sta. 522+84 -L- Rt											
8	From Sta. 522+74 to	Roadway Fill	0.03					0.01		140		
	Sta. 523+151 -L- Lt/Rt											
THIS PAGE SUBTOTAL*:			0.86					0.07		256	0	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
11/10/2021
WAKE COUNTY
R-5705C
46377.1.1
SHEET 24 OF 26

Revised 2018 Feb

Submitted 12/21/2021

WETLAND AND SURFACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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)
9	From Sta. 550+05 to	Roadway Fill	0.45					0.02		159		
	Sta. 554+27 -L- Lt/Rt											
10	From Sta. 553+25 to	Roadway Fill	< 0.01									
	Sta. 553+66 -L- Rt											
11	From Sta. 559+37 to	Roadway Fill	0.45					0.01		115		
	Sta. 564+73 -L- Lt/Rt											
12	From Sta. 561+43 to	Roadway Fill	0.01									
	Sta. 563+02 -L- Rt											
13	From Sta. 579+43 to	Roadway Fill	0.98					0.14		582		
	Sta. 590+37 -L- Rt											
14	From Sta. 581+10 to	Roadway Fill	0.92									
	Sta. 586+74 -L- Lt											
15	From Sta. 586+93 to	Roadway Fill	0.97					0.06		357		
	Sta. 592+43 -L- Lt											
THIS PAGE SUBTOTAL*:			3.78					0.22		1214	0	0
PAGE 1 SUBTOTALS*:			0.86					0.07		256	0	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
11/10/2021
WAKE COUNTY
R-5705C
46377.1.1

Submitted 12/21/2021

WETLAND AND SURFACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
							Hand			Existing	Existing	
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Channel Impacts Permanent (ft)	Channel Impacts Temp. (ft)	Natural Stream Design (ft)
16	From Sta. 599+85 to	Roadway Fill	0.31					< 0.01		93		
	Sta. 602+02 -L- Lt											
17	From Sta. 602+10 to	Roadway Fill	0.08									
	Sta. 602+85 -L- Lt											
18	From Sta. 613+01 to	Roadway Fill	0.65					< 0.01		155		
	Sta. 622+39 -L- Lt/Rt											
19	From Sta. 619+79 to	Roadway Fill	0.06									
	Sta. 621+47 -L- Rt											
THIS PAGE SUBTOTAL*:			1.11					0.01		248	0	0

PAGE 1 SUBTOTALS*:	0.86					0.07		256	0	0
PAGE 2 SUBTOTALS*:	3.78					0.22		1214	0	0

PROJECT TOTALS*:	5.75	0	0	0	0	0.31	0	1718	0	0

*Rounded totals are sum of actual impacts

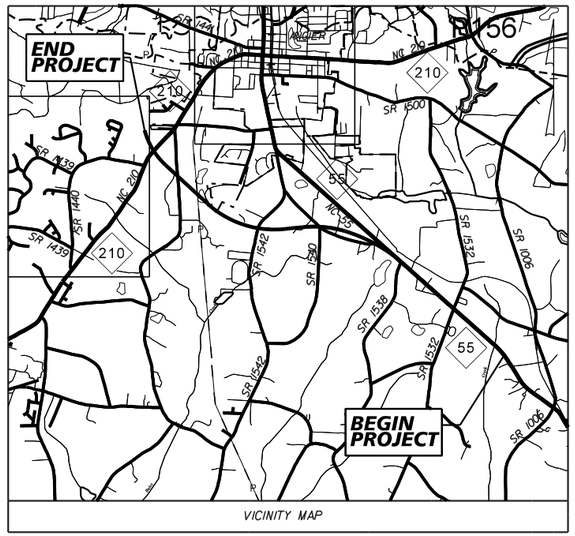
NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
11/10/2021
WAKE COUNTY
R-5705C
46377.1.1
SHEET 26 OF 26

Submitted 12/21/2021

09/08/99

TIP PROJECT: R-5705A



65% PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY ENVIRONMENTAL PERMIT PLANS
HARNETT COUNTY

T.I.P. NO.	SHEET NO.
R-5705A	UE-01

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

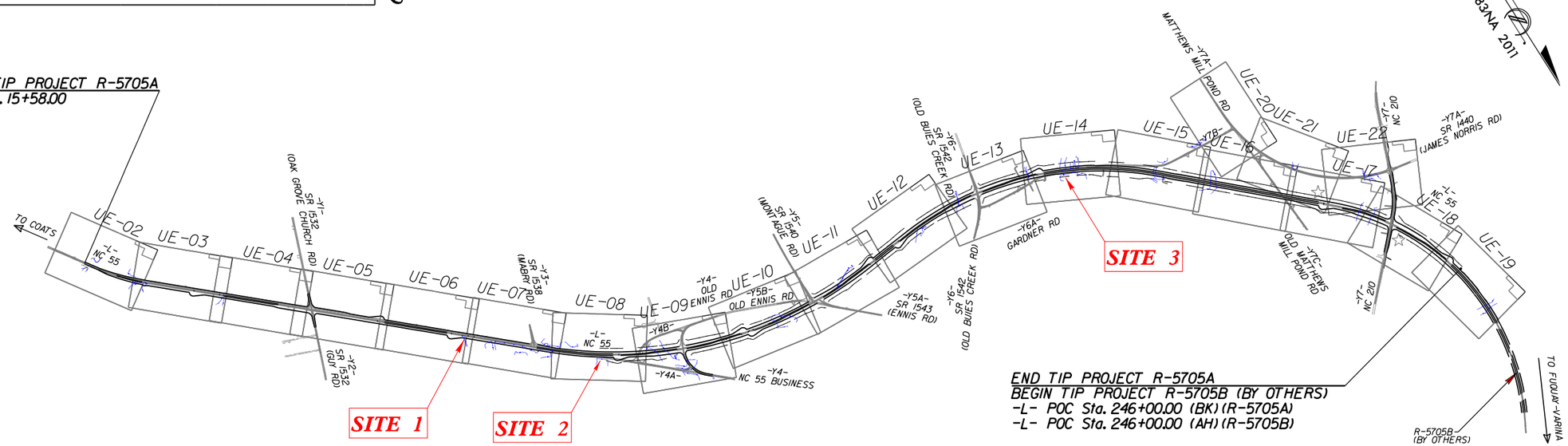
PERMIT DRAWING
SHEET 1 OF 14

PRELIMINARY

LOCATION: NC 55 FROM SOUTH OF SR 1532 (OAK GROVE CHURCH ROAD) TO NORTH OF NC 210

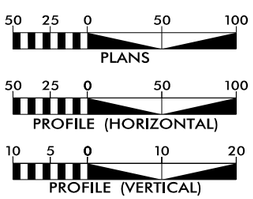
TYPE OF WORK: AERIAL AND UNDERGROUND RELOCATIONS OF WATER, SANITARY SEWER, POWER AND COMMUNICATIONS LINES

UTILITIES WETLAND & SURFACE WATER IMPACTS PERMIT



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.:	*DESCRIPTION:*
UE-1	*TITLE SHEET*
UE-02 THRU UE-22	*ENVIRONMENTAL PERMIT PLAN SHEETS*

UTILITY OWNERS WITH CONFLICTS

(A) POWER – DUKE ENERGY
(B) COMMUNICATIONS – CHARTER
(C) WATER – HARNETT REGIONAL WATER
(D) TOWN OF ANGIER

PREPARED IN THE OFFICE OF:

KCI
http://www.kci.com

KCI Associates of N.C., P.A.
4505 Falls of Neuse Road, Suite 400
Raleigh, NC 27609
Phone (919) 783-9214
Fax (919) 783-9266

JOHN FAISON	*UTILITY PROJECT MANAGER*
L. KELSEY BARTLETT	*PROJECT UTILITY COORDINATOR*
DANIEL ALLEN	*PROJECT UTILITY DESIGNER IN TRAINING*

DIVISION OF HIGHWAYS
UTILITIES UNIT
1555 BIRCH SERVICE CENTER
RALEIGH, NC 27699

KELVIN MARTIN	*UTILITY ENGINEER*
VACANT	*UTILITY AREA COORDINATOR*
KELVIN MARTIN	*UTILITY COORDINATOR*

8/20/2021
M:\2010\05\10\0583AM R-5705 AB&C\R-5705A\Utilities\Impacts Assessment Utilities\Utility Impacts Sheets\01_290_001_R-5705A_ut_U001_tsh.dgn
Shannon.Emrich

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-06

UTILITIES BY OTHERS

REFERENCE ROADWAY PLAN SHEET 08

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 2 OF 14

NAD 83/NA 2011

MATCHLINE -L- STA 64+00 (SEE UO-05)

MATCHLINE -L- STA 78+00 (SEE UO-07)

-L- PC Sta. 75+52.36

-L- PT Sta. 76+69.99

65+00 70+00 75+00

HARNETT REGIONAL WATER PROPOSED 16" WATER LINE

28 CAROL BLALOCK DB 88E PG 258

32 DANIEL MORTON DB 3441 PG 835 MB 2008 PG 1042

35 JAMES GARNER DB 1602 PG 2197 PG 303

38 JAMES GARNER DB 1071 PG 120

41 BUCKEYE GAS PRODUCTS DB 817 PG 394

43 LYNN MUCHINSON DB 1508 PG 838

46 JULEE JOHNSON DB 2967 PG 15 MB 2011 PG 317

48 BENNY WEAVER DB 2458 PG 329 MB 2006 PG 930

44 JEAN GARNER DB 1665 PG 80 MB 2001 PG 1260

45

33 MARIO HERNANDEZ DB 2857 PG 342 MB 2011 PG 303

34 JAMES GARNER DB 1145 PG 360

36 BARBARA HENRIES DB 2007 PG 3

37 D&Q MOTOR SPORTS LLC DB 2803 PG 711

39 WILLIAM HART NO DEED INFO PC* F PG 326C

40 JIMMY WALTERS DB 1102 PG 980 PC* F PG 326C

42 JIMMY WALTERS DB 606 PG 222

31 CURTIS ADAMS DB 508 PG 169

Harnett Co Dept Public Utilities, 16", DIP

Harnett Co Dept Public Utilities, 8" PVC

Harnett Co Dept Public Utilities, 16", DIP

Century Link, FO

Century Link, Copper

Spirit Comm, FO

TV, Spectrum

Century Link, FO

Harnett Co Dept Public Utilities, 8", PVC

Century Link, Copper FO, Spirit Comm

ABANDONED

REM

RPL

PUE

TDE

BST

GR

WOODS

POND

PROPANE TANK

72" CMP

-L- NC 55

N 48° 09' 47.9" W

N 48° 15' 11.4" W

BM#4

SITE 1

30'L x 10'W BORE PIT

10'L x 10'W RECEIVING PIT

HC

PROPOSED DUKE ENERGY, CENTURYLINK, & CHARTER/SPECTRUM JOINT USE LINE

SEGRA TO DIRECTIONALLY BORE PROPOSED U/G FOC CONDUITS

PROPOSED SEGRA HANDHOLE

ABANDONED COMM LINES

PROPOSED CENTURYLINK HANDHOLE & TEL LINE TO TIE INTO AERIAL

BORE AND JACK OF 8" WATER LINE

8/17/99

8/20/2021
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Shannon Emrich

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-06

UTILITIES BY OTHERS

REFERENCE ROADWAY PLAN SHEET 08

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 3 OF 14

NAD 83/NA 2011

MATCHLINE -L- STA 64+00 (SEE UO-05)

MATCHLINE -L- STA 78+00 (SEE UO-07)

-L- PC Sta. 75+52.36

-L- PT Sta. 76+69.99

65+00

70+00

75+00

HARNETT REGIONAL WATER PROPOSED 16" WATER LINE

(28) CAROL BLALOCK DB 88E PG 258

(32) DANIEL MORTON DB 3441 PG 835 MB 2008 PG 1042

(35) JAMES GARNER DB 1602 PG 2197 PG 303

(38) JAMES GARNER DB 1071 PG 120

(41) BUCKEYE GAS PRODUCTS DB 817 PG 394

(43) LYNN MUCHINSON DB 1508 PG 838

(46) JULEE JOHNSON DB 2967 PG 15 MB 2011 PG 317

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(39) WILLIAM HART NO DEED INFO PC* F PG 326C

(40) JIMMY WALTERS DB 1102 PG 980 PC* F PG 326C

(42) JIMMY WALTERS DB 606 PG 222

(45)

SITE 1

30'L x 10'W BORE PIT

10'L x 10'W RECEIVING PIT

BORE AND JACK OF 8" WATER LINE

PROPOSED DUKE ENERGY, CENTURYLINK, & CHARTER/SPECTRUM JOINT USE LINE

PROPOSED SEGRA HANDHOLE

ABANDONED COMM LINES

PROPOSED CENTURYLINK HANDHOLE & TEL LINE TO TIE INTO AERIAL

SEGRA TO DIRECTIONALLY BORE PROPOSED U/G FOC CONDUITS

PROPOSED DUKE ENERGY, CENTURYLINK, & CHARTER/SPECTRUM JOINT USE LINE

N 48°09'47.9"W

N 48°15'11.4"W

NC 55

BM#4

ABANDONED

REM

RPL

HC

POND

WOODS

Harnett Co Dept Public Utilities, 16", DIP

Harnett Co Dept Public Utilities, 8", PVC

Century Link, FO

Century Link, Copper

Spirit Comm, FO

TV Spectrum

PROP U/G (90) TEL CABLES

8/17/99

8/20/2021
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Shannon Emrich

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-06A

WETLAND AND STREAM IMPACTS
SITE IMPACT ZOOM: 1" = 40'

UTILITIES BY OTHERS

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 4 OF 14

NAD 83/NA 2011

Harnett Co Dept Public Utilities , 16", DIP

16" WL

EXIST R/W

TV, Spectrum

Century Link, FO

NC 55 25' BST

15" RCP-IV

Harnett Co Dept Public Utilities , 8", P

DI

N 48°15' 11.4" W

Century Link, Copper

FO, Spirit Comm

REM

ABANDONED

PROP O/H POW & TEL LINES

WOODS

8" WL

PROP U/G (FO) TEL CABLES

PUE

+24.41
106.48' RT

30'L x 10'W BORE PIT

SITE 1

8" TL IN

HC

+56.02
113.58' RT

+52.21
106.98' RT

+89.74
107.5' RT

+29.07

PROPOSED DUKE ENERGY, CENTURYLINK,
& CHARTER/SPECTRUM JOINT USE LINE

8/17/99
8/20/2021
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Shannon Emrich

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-06A

WETLAND AND STREAM IMPACTS
SITE IMPACT ZOOM: 1" = 40'

UTILITIES BY OTHERS

NOTE:
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LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 5 OF 14

NAD 83/NA 2011

Harnett Co Dept Public Utilities , 16", DIP

Century Link, FO

TV, Spectrum

15" RCP-IV

NC 55 25' BST

Harnett Co Dept Public Utilities , 8", PVC

Century Link, Copper

FO, Spirit Comm

N 48°15' 11.4" W

ABANDONED

ABANDONED

REM

REM

16" WL

8" WL

8" TL IN

PROP U/G (FO) TEL CABLES

PROP O/H POW & TEL LINES

EXIST R/W

WOODS

PUE

+24.41
106.48' RT

+56.02
113.58' RT

+52.21
106.98' RT

+89.74
107.5' RT

+29.07

SITE 1

30'L x 10'W BORE PIT

HC

PROPOSED DUKE ENERGY, CENTURYLINK, & CHARTER/SPECTRUM JOINT USE LINE

8/17/99
8/20/2021
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ShannonEmrich

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-08

UTILITIES BY OTHERS

REFERENCE ROADWAY PLAN SHEET 10

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 6 OF 14

NAD 83/NA 2011

MATCHLINE -L- STA 92+00 (SEE SHEET UO-07)

MATCHLINE -L- STA 105+50 (SEE SHEET UO-07)

95+00

100+00

105+00

HARNETT REGIONAL WATER
PROPOSED 16" WATER LINE

SEGRA TO DIRECTIONALLY BORE
PROPOSED U/G FOC CONDUITS

ABANDONED COMM LINES

PROPOSED CHARTER/SPECTRUM
AERIAL SPAN

DUKE ENERGY EXISTING POLE
NOT SHOWN IN FINAL SURVEY

PROPOSED DUKE ENERGY, CENTURYLINK,
& CHARTER/SPECTRUM JOINT USE LINE

HARNETT REGIONAL WATER
PROPOSED 8" WATER LINE

PROPOSED CHARTER/SPECTRUM U/G 2"
CONDUIT SERVICE LINE AT A DEPTH OF 36"

PROPOSED SEGRA HANDHOLE

-L- NC 55

SITE 2

-Y4A- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y4A- POT Sta. 11+40.00

TERMINAL END SECTION

ITEM 4A
ACCESS TERRACE

N 48°15'11.4"W

51 ISABEL LOREDO
DB 3258 PG 986
MB 2014 PG 313

52 W E COLLIER
DB 2768 PG 34

53 A M COLLIER
DB 3278 PG 598

54 A M COLLIER
DB 3278 PG 600

55 NANCY CURRIN
DB 2627 PG 807
MB 2009 PG 275

56 JERRY TUCKER
DB 2208 PG 537
MB 2001PG 641

57 CLAY GARDNER
DB 3454 PG 424

KENNETH SNIPES
DB 3372 PG 76

49 BARBARA SMETZER
DB 2038 PG 935

POND

WOODS

CULTIVATED

ABANDONED

Century Link, Copper

8/29/2021 10:05:38 AM
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Shannon.Emrich

Submitted 12/21/2021

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-08

UTILITIES BY OTHERS

REFERENCE ROADWAY PLAN SHEET 10

NOTE:
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LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 7 OF 14

NAD 83/NA 2011

MATCHLINE -L- STA 92+00 (SEE SHEET U0-07)

MATCHLINE -L- STA 105+50 (SEE SHEET U0-07)

HARNETT REGIONAL WATER
PROPOSED 16" WATER LINE

SEGRA TO DIRECTIONALLY BORE
PROPOSED U/G FOC CONDUITS

ABANDONED COMM LINES

PROPOSED CHARTER/SPECTRUM
AERIAL SPAN

DUKE ENERGY EXISTING POLE
NOT SHOWN IN FINAL SURVEY

PROPOSED DUKE ENERGY, CENTURYLINK,
& CHARTER/SPECTRUM JOINT USE LINE

HARNETT REGIONAL WATER
PROPOSED 8" WATER LINE

PROPOSED CHARTER/SPECTRUM U/G 2"
CONDUIT SERVICE LINE AT A DEPTH OF 36"

PROPOSED SEGRA HANDHOLE

SITE 2

-Y4A- POT Sta. 10+00.00

TERMINAL END SECTION
BEGIN CONSTRUCTION
-Y4A- POT Sta. 11+40.00

49 BARBARA SMETZER
DB 2038 PG 935

51 ISABEL LOREDO
DB 3258 PG 986
MB 2014 PG 313

52 W E COLLIER
DB 2768 PG 34

53 A M COLLIER
DB 3278 PG 598

54 A M COLLIER
DB 3278 PG 598

53 A M COLLIER
DB 3278 PG 600

55 NANCY CURRIN
DB 2627 PG 807
MB 2009 PG 275

56 JERRY TUCKER
DB 2208 PG 537
MB 2001 PG 641

KENNETH SNIPES
DB 3372 PG 16

57 CLAY GARDNER
DB 3454 PG 424

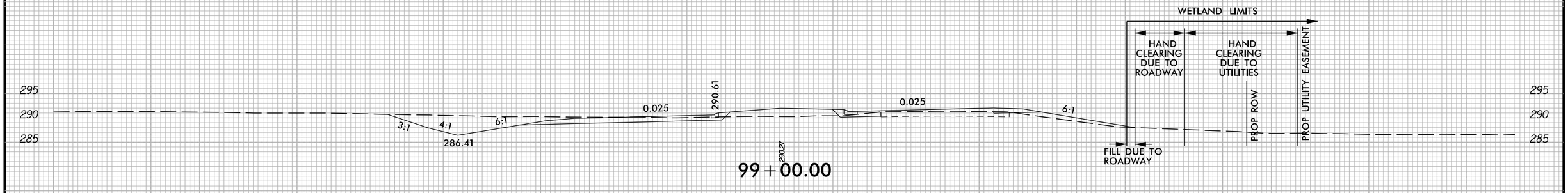
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Shannon.Emrich

Submitted 12/21/2021

PERMIT DRAWING
SHEET 8 OF 14

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET _ OF _

SITE 2



8/20/2021

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-14

UTILITIES BY OTHERS

REFERENCE ROADWAY SHEET 16

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 9 OF 14

NAD 83/NA 2011

MATCHLINE -L- STA 174+00 (SEE UO-13)

MATCHLINE -L- STA 188+00 (SEE UO-15)

WILLIAM TYSON
DB 1446 PG 986

DAVID GARDNER
DB 1085 PG 714
MB 2003 PG 1243

DAVID GARDNER
DB 1085 PG 714

JAMES ALLEN
DB 3355 PG 413

JEREMY SKOLOZYNSKI
DB 3258 PG 306
PC* C PG 118D

MICHAEL ANTHONY
DB 1286 PG 579
PC* F PG 26B

DAVID ADAMS
DB 1635 PG 609

JERRY GREGORY
DB 1684 PG 453
MB 2000 PG 477

RAFAEL CERVANTES
DB 3403 PG 599
MB 2000 PG 477

CLINTON ADAMS
DB 1291PG 300
MB 2003 PG 1071

CLINTON ADAMS

RICHARD HALL
DB 982 PG 219

HARNETT REGIONAL WATER
PROPOSED 6" WATER LINE

-L- POC Sta.174+00.00 =
-DRW3- POT Sta.10+00.00
Δ = 90°

-L- POC Sta.176+76.00 =
-DRW4- POT Sta.10+00.00
Δ = 90°

-L- POC Sta.186+21.00 =
-DRW5- POT Sta.10+00.00
Δ = 90°

PROPOSED SINGLE GATE.
47" HIGH, 12' WIDE, 12' OPENING
STA 182+00 TO 182+12 LT

-DRW3- PC Sta.10+76.13

-DRW3- PT Sta.10+93.81

-DRW4- PC Sta.10+94.27

-DRW4- PT Sta.11+22.56

S 76° 53' 18.3" E

END CONSTRUCTION

-DRW4- POT Sta.11+26.90

-DRW4- POT Sta.11+37.00

-Y6A- POT Sta.19+06.00

N 5° 24' 08.4" E

END CONSTRUCTION

-DRW3- POT Sta.12+38.00

-DRW3- POT Sta.12+50.00

N 18° 54' 36.2" E

N 22° 04' 22.0" E

N 32° 54' 14.5" E

N 48° 01' 02.1" E

-DRW5- PC Sta.10+78.15

-DRW5- PT Sta.10+91.33

END CONSTRUCTION

-DRW5- POT Sta.11+07.00

-DRW5- POT Sta.11+30.00

10'L x 10'W x 5'D
ENTRY POINT SLURRY
CONTAINMENT PIT

10'L x 10'W x 5'D
EXIT POINT SLURRY
CONTAINMENT PIT

DIRECTIONAL DRILLING
OF 12" WATER LINE

TOWN OF ANGIER PROPOSED
12" WATER LINE BETTERMENT

PROPOSED DUKE ENERGY, CENTURYLINK,
& CHARTER/SPECTRUM JOINT USE LINE

SITE 3

ABANDON

REM

REMOVE FENCE AND BRICK COLUMNS

CONTRACTOR SHALL COORDINATE DRIVEWAY REPLACEMENT LIMITS WITH THE PROPERTY OWNER. CONTRACTOR TO ADJUST AS DIRECTED BY THE ENGINEER.

BEGIN WWF
+74.94
130' RT
+76.67
144.31' RT

+54.32
130' RT
+56.2
146.55' RT

+82.32
118.57' RT
+80
130.31' RT

+25.71
105.39' RT

+29.39
101.04' LT

+27.92
115.35' LT

+49.22
100' LT

8/17/99

8/26/2021
R:\2016\05100583AM R-5705 AB&CVR-5705A\Utilities\Impacts Assessment Utilities\Utility Impacts Sheets\16_R5705A_ut_prm_rdy16A_U014A_psh.dgn
Shannon Finch

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-14

UTILITIES BY OTHERS

REFERENCE ROADWAY SHEET 16

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING SHEET 10 OF 14

NAD 83/NA 2011

HARNETT REGIONAL WATER
PROPOSED 6" WATER LINE

-L- POC Sta.174+00.00 =
-DRW3- POT Sta.10+00.00
Δ = 90°

-L- POC Sta.176+76.00 =
-DRW4- POT Sta.10+00.00
Δ = 90°

-L- POC Sta.186+21.00 =
-DRW5- POT Sta.10+00.00
Δ = 90°

MATCHLINE -L- STA 174+00 (SEE U0-13)

MATCHLINE -L- STA 188+00 (SEE U0-15)

-DRW3- PC Sta.10+76.13

-DRW3- PT Sta.10+93.81

-DRW4- PC Sta.10+94.27

-DRW4- PT Sta.11+22.56

-DRW4- POT Sta.11+26.90

-DRW4- POT Sta.11+37.00

-Y6A- POT Sta.19+06.00

-DRW5- PC Sta.10+78.15

-DRW5- PT Sta.10+91.33

-DRW5- POT Sta.11+07.00

-DRW5- POT Sta.11+30.00

N 18° 54' 36.2" E

N 22° 04' 22.0" E

N 5° 24' 08.4" E

S 76° 53' 18.3" E

N 32° 54' 14.5" E

N 46° 01' 02.1" E

END CONSTRUCTION

END CONSTRUCTION

10'L x 10'W x 5'D ENTRY POINT SLURRY CONTAINMENT PIT

10'L x 10'W x 5'D EXIT POINT SLURRY CONTAINMENT PIT

SITE 3

DIRECTIONAL DRILLING OF 12" WATER LINE

TOWN OF ANGIER PROPOSED 12" WATER LINE BETTERMENT

PROPOSED DUKE ENERGY, CENTURYLINK, & CHARTER/SPECTRUM JOINT USE LINE

PROPOSED SINGLE GATE, 47' HIGH, 12' WIDE, 12' OPENING STA 182+00 TO 182+12 LT

REMOVE FENCE AND BRICK COLUMNS

CONTRACTOR SHALL COORDINATE DRIVEWAY REPLACEMENT LIMITS WITH THE PROPERTY OWNER. CONTRACTOR TO ADJUST AS DIRECTED BY THE ENGINEER.

ABANDON

REM

HC

PUE

WOODS

POND

76 WILLIAM TYSON DB 1446 PG 986

78 DAVID GARDNER DB 1085 PG 714

80 DAVID GARDNER DB 1085 PG 714 MB 2003 PG 1243

82 JAMES ALLEN DB 3355 PG 413

84 JEREMY SKOLOZYNSKI DB 3258 PG 306 PC* E/PG 1180

85 MICHAEL ANTHONY DB 1286 PG 579 PC* F/PG 26B

79 DAVID ADAMS DB 1635 PG 609

77 JERRY GREGORY DB 1684/PG 453 MB 2000 PG 417

75 RAFAEL CERVANTES DB 3803/PG 599 MB 2000 PG 417

74A CLINTON ADAMS DB 1291PG 300 MB 2003 PG 1071

81 CLINTON ADAMS

83 RICHARD HALL DB 982 PG 219

Century Link Copper

Duke Energy

8/17/99

8/20/2021
K:\2010\2010100583AM R-5705 AB&CVR-5705A\Utilities\Impacts Assessment Utilities\Utility Impacts Sheets\17_R5705A_ut_prm_rdy16_U014_psh.dgn
Shannon Emrich

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-14A

WETLAND AND STREAM IMPACTS
SITE IMPACT ZOOM: 1" = 40'

UTILITIES BY OTHERS

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 11 OF 14

POT Sta. 10+00.00 -L-
NC 55
REM
REM
REM
GREW TL-3
6" WL
12" WL
12" WL INSTALL
PUE
HC
WOODS
+82.32
118.57' RT
+80
130.31' RT
+25.31
105.39' RT
79
DAVID ADAMS
B 1635 PG 609
10+94.27
N 16°59'49" E
217.46'
202.09
S 63°44'21" E
10'L x 10'W x 5'D
ENTRY POINT SLURRY
CONTAINMENT PIT
SITE 3
DIRECTIONAL DRILLING
OF 12" WATER LINE
TOWN OF ANGIER PROPOSED
12" WATER LINE BETTERMENT
-DRW5- PC
-DRW5- F
NAD 83/NA 2011

8/17/99

8/20/2021
M:\2016\05100583AM R-5705 AB&C\R-5705A\Utilities\Impacts Assessment Utilities\Utility Impacts Sheets\18_R5705A_ut_prm_rdy16_U014_psh_zoom wo con.dgn
Shannon Emrich

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	UE-14A

WETLAND AND STREAM IMPACTS
SITE IMPACT ZOOM: 1" = 40'

UTILITIES BY OTHERS

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

LEGEND

- DENOTES TEMPORARY IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- DENOTES PERMANENT IMPACTS DUE TO ROADWAY (DETERMINED BY OTHERS)
- HC HC — DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 12 OF 14

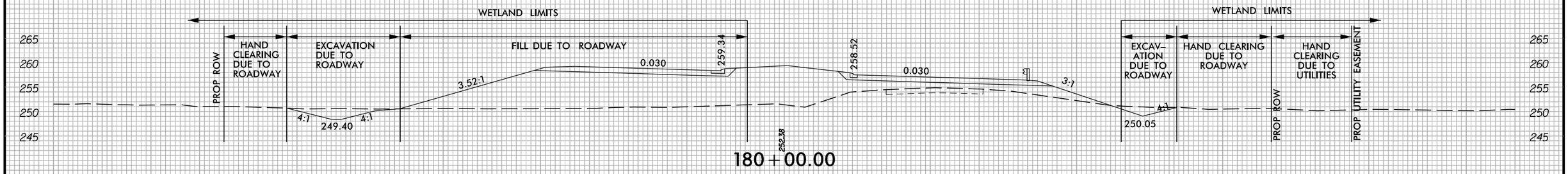
POT Sta. 10+00.00
REM
REM
REM
NC 55
GREW TL 3
6" WL
6" WL
6" WL
12" WL
12" WL INSTALL
12" WL INSTALL
PUE
PUE
PUE
PUE
PUE
HC
HC
HC

Submitted 12/21/2021

PERMIT DRAWING
SHEET 13 OF 14

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5705A	PERMIT SHEET _ OF _

SITE 3



180+00.00

8/20/2021

Submitted 12/21/2021

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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-77+27/77+56 RT	OH Power & Telephone Line					0.01					
2	-L- 98+43/100+17 RT	OH Power & Telephone Line					0.11					
3	-L-179+12/183+33 RT	OH Power & Telephone Line					0.11					
TOTALS*:							0.23			0	0	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
August 2021
Harnett County
R-5705A Utility Permit Plans
46377.1.2

Submitted 12/21/2021

TIP PROJECT: R-5705C

CONTRACT:

$$$

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR –L– PROFILE SEE SHEET 16

PERMIT DRAWING
SHEET 2 OF 8

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

GRAPHIC SCALE 50' 0' 50' 100' 150'

NAD 83/2011

REVISIONS 8/17/99

MATCHLINE –L– STA. 519+50.00 SEE SHEET NO. 6

MATCHLINE –L– STA. 533+50.00 SEE SHEET NO. 8

SITE 1

SITE 1

EUGENE LOCKHART
DB 13576 PG 1993

ABUNDANT SPACE SELF STORAGE LLC
DB 14218 PG 510
MB 2010 PG 600

GARLAND MCLAMB LLC
DB 17141 PG 2683

GARLAND MCLAMB LLC
DB 17141 PG 2683

LOUISE FREEMAN
DB 11541 PG 1249
MB 1993 PG 204

HILDA WILSON
DB 15707 PG 2688
MB 1993 PG 204

IMPERIAL SELF STORAGE LLC
DB 16715 PG 2194
MB 2017 PG 274

ISBLKBUS
ISBKBUS
ISBK/FD
ISFB
ISMTL
HTR
2SFD
DECK

BEGIN FULL C/A
END FULL C/A
BEGIN FULL C/A
END FULL C/A

425' LEFT TURN LANE
400' TAPER

PROPOSED 5' SIDEWALK
PROPOSED 5' SIDEWALK
PROP. CONC. MONOLITHIC ISLAND
PROP. CONC. MONOLITHIC ISLAND

-L- N 4°54'20.2" W

N 03°29'21" W 403.57'
S 85°47'08" W 272.38'
N 85°47'08" E 90.35'
N 84°36'22" E 480.21'
N 37°19'42" E 385.66'
S 12°47'04" W 219.53'
253.97' N 09°51'26" W
S 83°58'42" W 30.32'
S 86°50'28" E 14.48'
N 18°42'37" W 320.04'
S 02°59'47" E 104.78'
719.07' N 00°22'37" W

Century Link, Copper
Other, FO, Spirit Communications
Spirit Communications, Fiber
Town of Fuquay-Varina, 12", PVC,
NC 55/N RALEIGH ST 34' BST
NC 55/N RALEIGH ST 34' BST
NC 55 37' BST

WOODS
GRV
BST
CONC.
GR.
WOODS
WOODS
WOODS

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEET 17

FOR –Y22– PROFILE SEE SHEET 24

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

50' 0' 50' 100' 150'
GRAPHIC SCALE

NAD 83 NC CRD NA 2011

PERMIT DRAWING
SHEET 3 OF 8

NAD 83/2011

MATCHLINE –L– STA. 547+50.00 SEE SHEET NO. 8

MATCHLINE –L– STA. 561+50.00 SEE SHEET NO. 10

SITE 2

SITE 3

-L- POT Sta. 549+55.98
-Y22- POT Sta. 10+00.00

-Y22- PC Sta. 11+79.40

-Y22- PT Sta. 13+21.63

END CONSTRUCTION
-Y22- STA 11+75.00

-Y22-
PI Sta 12+51.71
Δ = 25° 28' 00.4" (LT)
D = 17° 54' 17.8"
L = 142.23'
T = 72.31'
R = 320.00'

-L- N 4°54'20.2" W

BCELD MEADOWBROOK LLC
DB 1609 PG 2458
MB 1970 PG 217

SOUTH LAKES MAETER AASN INC.
DB 14186 PG 1094
MB 2008 PG 375

TOWN OF FUQUAY VARINA
DB 15844 PG 2186
MB 2014 PG 1219

BEGIN FULL C/A

END FULL C/A

LOW POINT -L- 552+40.40

HIGH POINT -L- 556+99.11

LOW POINT -L- 560+31.14

BL -L-

BM #26

POND

575' LEFT TURN LANE

575' RIGHT TURN LANE

65' R/W

24' R/W

PROP. CONC. MONOLITHIC ISLAND

PROPOSED 5' SIDEWALK

EXISTING SIDEWALK TO REMAIN

60' CONC WALK

Century Link, Copper

Spirit Communications, FO

Town of Fuquay-Varina, 12" PSNC, 4" Plastic

NC 55 55' BST

NC 55/N RALEIGH ST 35' BST

20' DR

WOODS

DONALD BOUCHARD DB 3049 PG 359 2SFD

MARK SANCHEZ DB 3049 PG 359 2SFD

BEVERLY YEARWOOD DB 16871 PG 418 MB 2006 PG 315

KATHLEEN OLSON DB 16814 PG 1996 MB 2008 PG 373

MARK ROBERTSON DB 15341 PG 2048 MB 2008 PG 373

ISFD

DECK

CONC

EXISTING R/W

PROP. R/W

SYSTIME=$$$

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEET 18

FOR –Y23– PROFILE SEE SHEET 24

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING SHEET 4 OF 8

NAD 83/2011

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

REVISIONS 8/17/99

MATCHLINE –L– STA. 575+50.00 SEE SHEET NO. 10

MATCHLINE –L– STA. 589+50.00 SEE SHEET NO. 12

BEGIN CONSTRUCTION
-Y23- STA 16+40.00

-L- POT Sta. 577+60.99
-Y23- POC Sta. 19+84.50

-Y23- PC Sta. 18+23.36

-Y23- PT Sta. 21+21.27

END CONSTRUCTION
-Y23- STA 22+50.00

-Y23- POT Sta. 24+25.47

-Y23-
PI Sta 19+72.45
Δ = 5° 57' 29.5" (LT)
D = 2° 00' 00.0"
L = 297.91'
T = 149.09'
R = 2,864.79'

SITE 4

SITE 4

SITE 4

LOW POINT
-L- 580+66.54

13800 / 21700	–Y23– SR 2765 OLD HONEYCUTT RD	
6860 / 9000		2900 / 6800
24500 / 39600	NC 55 –L–	21200 / 39400
300 / 400		1000 / 2400
2022/2045 TRAFFIC VOLUMES	5300 / 8700	–Y23– SR 2765 OLD HONEYCUTT RD

DONALD CHESSON F
DB 10616 PG 2213

DONALD CHESSON
DB 10674 PG 2448

BUY & GO INC
DB 14156 PG 292

TOWN OF FUQUAY VARINA
DB 15545 PG 152

WILLOW CREEK HOMEOWNERS ASSOC INC
DB 8265 PG 2661
MB 1998 PG 1806

WILLOW CREEK HOA

JOHN BOWEN DB 6722 PG 236
CARLOS PENALVA DB 6428 PG 278
ALICIA L. LARK DB 9254 PG 639
ARRON ROGERS DB 9526 PG 1423
KELLI MOON DB 8526 PG 0889
DENISE HARMON DB 16505 PG 952
KEITH SMITH DB 8516 PG 810
VIRGIL ARMENDA DB 6244 PG 2
CHRISSY WILLS DB 8082 PG 360
BRENDA LEMAY DB 9550 PG 2206
PAUL STALLINGS DB 16938 PG 459
LUVER TRIANA DB 14076 PG 1088
LAURA SHIPMAN DB 12026 PG 2832
LILIMAN SUAREZ DB 12958 PG 2551
GREGORY BRYANT DB 9562 PG 477
JAE NAMKUNG DB 8511 PG 2720
DB 1 MB 2000

N 84°13'44.0" E
N 4°54'20.2" W
S 89°51'46.5" E
S 02°26'08" W 89.96'

WOODS
CANOPY
ISBKD
DECK
ISBLK G
RIP RAP
PROPOSED 5' SIDEWALK
3 UP TANKS
RETAINING WALL 1
400' RIGHT TURN LANE
150' TAPER
425' LEFT TURN LANE
PROP. CONC. MONOLITHIC ISLAND
NC 55 / N RALEIGH ST 50' BST 2'-6" C&G
NC 55 45' BST
NC 55 34' BST
30' C&G
24' RCP
2'-6" C&G
9" CONC HB 48" CONC SW 1'-6" C&G
BEGIN FULL C/A
END FULL C/A
OLD HONEYCUTT RD SR 2765
EXISTING R/W
Century Link, FO
Spectrum, TV/FO
Town of Fuquay-Varina, 8" PVC
Town of Fuquay-Varina, 6" PVC
PSNC, 4" Plastic

Submitted 12/21/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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FOR –L– PROFILE SEE SHEETS 18 & 19

8/17/99

REVISIONS

50' 0' 50' 100' 150'
GRAPHIC SCALE

ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2

NAD 83/2011

BUFFER DRAWING
SHEET 5 OF 8

–L–
PI Sta 601+03.53
Δ = 4° 52' 12.6" (LT)
D = 0° 34' 22.6"
L = 850.00'
T = 425.26'
R = 10,000.00'
SE = NC
RUNOFF = N/A

MATCHLINE –L– STA. 589+50.00 SEE SHEET NO. 11

MATCHLINE –L– STA. 603+50.00 SEE SHEET NO. 13

SITE 4

SITE 5

SITE 5

LIBERTY FELICIANO
DB 14057 PG 1121
MB 2004 PG 414

DEBORAH DOVER
DB 13902 PG 2425
MB 2004 PG 414

YELLOW CREEK II HOMEOWNERS ASSN INC
DB 11837 PG 2400

YELLOW CREEK II HOMEOWNERS ASSN INC
DB 8593 PG 1449

FRANCISCO RODRIGUEZ
DB 9256 PG 1784

SUE STEPHENSON
DB 11463 PG 1167

6240 NC 55 LLC
DB 11633 PG 1846

JCLU LTD VPTNRP LTD
PTNRP THE
DB 13910 PG 1929

ENGLISH FUQUAY VARINA CONGREGATION OF JEHOVAHS WIT
DB 11734 PG 1853

JOEL RAY SMITH
DB 13422 PG 755

MICHAEL LLOYD LESSARD
DB 15619 PG 1888

ETTA GRAY
DB 11028 P

–L– PC Sta. 596+78.27

–L– N 4°54'20.2"W

S 01°45'40" W 280.19'
S 01°45'40" W 220.50'
S 01°45'40" W 104.29'

N 85°12'40" E 100.00'

S 04°57'01" E 86.64'
S 04°57'01" E 163.26'

S 88°53'19" E 748.86'
S 88°53'19" E 748.52'
S 88°53'19" E 748.52'
S 88°53'19" E 748.52'
S 88°53'19" E 748.52'
S 88°53'19" E 748.52'

S 89°22'43" E 2638.98'
S 89°22'43" E 2638.98'
S 89°22'43" E 2638.98'
S 89°22'43" E 2638.98'

S 89°56'20" E 1000.00'
S 89°56'20" E 1000.00'

N 89°17'48" E 659.76'
N 89°17'48" E 659.76'

N 00°37'40" E 2716.47'
N 00°37'40" E 2716.47'

595
600

28' DR
20' DR
33' BST
NC 55 34' BST
34' DR
25' DR
BRYANT ESTATE DR 16' BST
TERRA MOBILE ESTATE CIRCLE 18' BST

8" PVC
15" RCP
18" RCP
2'-6" C&G
6" C&G
EXISING R/W
Century Link, Copper
Town of Fuquay-Varina, 12", Unknown
Town of Fuquay-Varina 16" DIP (Not In Service)
Spirit Communications, FO
TV, Spectrum
Century Link, Copper
SSFM Valve
ISBKD
ISFD
ISB CHURCH
ISBLK BUS.
METAL CANOPY
HTR
WOODS
CONC

Submitted 12/21/2021

PERMIT DRAWING
SHEET 6 OF 8

PROJECT REFERENCE NO.	SHEET NO.
R-5705C	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MATT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

FOR -L- PROFILE SEE SHEETS 19 & 20

50' 0' 50' 100' 150'
GRAPHIC SCALE

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

NAD 83/2011

-L-
PI Sta. 619+98.87
Δ = 1° 43' 48.1" (LT)
D = 0° 17' 11.3"
L = 603.89'
T = 301.97'
R = 20,000.00'
SE = NC
RUNOFF = N/A

SITE 6

END FULL C/A

554' TAPER

225' TAPER

150' TAPER

-L- PT Sta. 623+00.79

END TIP PROJECT R-5705C
-L- STA. 623+00.00

MATCHLINE -L- STA. 617+50.00 SEE SHEET NO. 13

REVISIONS

8/17/99

MILLENNIUM TRUST CO LLCFBO JAMES SERINO IRA DB 17057 PG 1834

ANCHOR PROPERTIES OF RALEIGH LLC DB 16377 PG 2359

MAYO JONES NO DEED

LINDA THOMAS DB 5446 PG 145

ACC INVESTMENTS DB 4375 PG 319 MB 1988 PG 1352

ACC INVESTMENTS DB 4840 PG 744 MB 1991 PG 24

VICTOR PRETO DB 9598 PG 387

HAROLD JOHNSON DB 2928 PG 177

BRYAN FAMILY LTD DB 1438 PG 373 DB 1438 PG 342

TERRY ROGERS PROPERTIES LLC DB 1999 PG 1205

Town of Fuquay-Varina, 12", Unknown

Century Link Copper

FO, Spirit Communications

Town of Fuquay-Varina 16" DIP (Not In Service)

Town of Fuquay-Varina, 6", Unknown

Town of Fuquay-Varina, 8", Unknown

Century Link Copper

FO, Century Link

FO, Spectrum

FO, Level 3

FO, Zayo

FO, Lumen

FO, Crown Castle

FO, Verizon

FO, AT&T

FO, Windstream

FO, Fuquay-Varina

FO, Google

FO, Sprint

FO, Fuquay-Varina

FO, Unknown

FO, Unknown

FO, Unknown

Submitted 12/21/2021

RIPARIAN BUFFER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	From -L- Sta. 521+54 to	Roadway Fill	x						10742	6748	17489		
	Sta. 523+74 Lt/Rt												
2	From -L- Sta. 549+50 to	Roadway Fill	x						10851	6638	17489		
	Sta. 551+59 Lt/Rt												
3	From -L- Sta. 558+86 to	Roadway Fill	x						9364	5469	14833		
	Sta. 560+30 Lt/Rt												
4	From -L- Sta. 582+07 to	Roadway Fill	x						13950	6502	20452		
	Sta. 592+01 Lt/Rt												
4	From -L- Sta. 582+07 to	Roadway Fill			x				34255	11164	45418		
	Sta. 592+01 Lt/Rt												
5	From -L- Sta. 600+16 to	Roadway Fill	x			7682	5039	12721					
	Sta. 601+49 Lt/Rt												
6	From -L- Sta. 618+85 to	Roadway Fill	x						10546	6563	17108		
	Sta. 620+74 Lt/Rt												
TOTALS*:						**7682**	**5039**	**12721**	**89706**	**43084**	**132790**	**0**	**0**

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
12/20/21
WAKE COUNTY
R-5705C
46377.1.1
SHEET 7 OF 8

Submitted 12/21/2021

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS ZONE 1 (ft^2)	WETLANDS IN BUFFERS ZONE 2 (ft^2)
1	From -L- 521+54	to 523+52 Rt/Lt	2944	1750
2	From -L- 550+31	to 550+81 Lt	371	640
3	From -L- 560+04	to 560+30 Lt	0	550
4	From -L- 582+07	to 591+98 Rt/Lt	41380	12552
5	From -L- 600+18	to 601+49 Lt	3977	3121
6	From -L- 618+59	to 620+78 Rt/Lt	3350	982
TOTAL:			**52022**	**19595**

Revised 2018 Feb

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
12/20/21
WAKE COUNTY
R-5705C
46377.1.1
SHEET 8 OF 8

Rev. Jan 2009

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

5/14/99

REVISIONS

3/5/2021

-L-
PI Sta 21+82.71
△ = 14° 07' 17.3" (LT)
D = 1° 38' 13.3"
L = 862.63'
T = 433.51'
R = 3,500.00'
SE = 0.03
RO = 72'

-L- PC Sta. 17+49.20

BEGIN CONSTRUCTION
-L- POT Sta. 12+60.83

BEGIN TIP PROJECT R-5705A
-L- POT Sta. 15+58.00

VAN COATS
DB 3459 PG 434
PB 2016 PG 364

(1A) JAMES JOHNSON
DB 615 PG 21
PB 2016 PG 364

(1) JAMES JOHNSON
DB 731 PG 732

(3) TONY WARREN
DB 3271 PG 355

(4) HOWARD BRIDGES
DB 1754 PG 517

(5) DANNY HEDGEPETH
DB 926 PG 126
PC* E PG 76A

DOUGLAS JOHNSON
DB 3605 PG 628
PB 2016 PG 364

(2) JAMES JOHNSON
DB 730 PG 223

GREGORY INVESTMENT PROPERTIES LLC
DB 3497 PG 845

QUANTITY ESTIMATE

GEOTEXTILE	140 SY.
CLASS-II RIPRAP	
CULVERT	90 TONS
CLASS-I RIPRAP	
CHANNEL BED-COUNTERSUNK	10 TONS
CLASS-B RIPRAP	
CHANNEL BED-COUNTERSUNK	3 TONS
EXCAVATION	
CULVERT	50 CY
CHANNEL	5 CY

CULVERT #1
ONE BARREL

	NORTH	EAST	ELEV.
CUL1	624925.48	2088902.82	249.12
CUL2	624928.77	2088898.61	249.13
CE1	624927.00	2088900.66	253.56
HW1	624928.18	2088898.34	255.20
CUL3	624854.02	2088887.29	248.84
CUL4	624857.34	2088882.93	248.64
CE2	624856.33	2088884.79	253.47
HW2	624856.18	2088885.51	255.04

SEE SHEET 25 FOR -L- PROFILE
SEE SHEETS 2D-1TO 2D-4 FOR DRAINAGE DETAILS

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NA 2011

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L-
PI Sta 21+82.71
Δ = 14° 07' 17.3" (LT)
D = 1° 38' 13.3"
L = 862.63'
T = 433.51'
R = 3,500.00'
SE = 0.03
RO = 150'

-L- PT Sta. 26+11.83

MATCHLINE -L- STA 24+50 (SEE SHEET 4)

MATCHLINE -L- STA 38+00 (SEE SHEET 6)

25+00 30+00 35+00

(5) DANNY HEDGEPETH
DB 926 PG 126
PC* E PG 76A

(8) DANNY HEDGEPETH
DB 1241 PG 820
MB 2014 PG 9

(9) CHARLES GRAY
DB 3252 PG 220

(10) CHARLES GRAY
DB 1442 PG 909
MB 2004 PG 19

(7) JEFFREY WALTERS
DB 968 PG 612

(6) JESSE MABRY
DB 915 PG 464

(2)

LATERAL 'V' DITCH
SEE DETAIL 5
EST. 140 TONS CL-B RIPRAP
EST. 300 S.Y. GFD
EST. 120 C.Y. DDE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

SEDIMENT CONTROL BASIN

100' TAPER

FALSE SUMP
SEE DETAIL 8

6' x 7' RCBC
(1.0' BURIED)

LATERAL 4' BASE DITCH
SEE DETAIL 53
EST. 25 TONS CL-B RIPRAP
EST. 60 S.Y. GFD
EST. 20 C.Y. DDE

LATERAL 4' BASE DITCH
SEE DETAIL 9
EST. 200 C.Y. DDE

SEE TYPICAL INLET
CHANNEL DETAIL 59
QUANTITIES ON SHEET 4

GRADE TO DRAIN

NC 55

N 48° 17' 28.4" W

MONO CONC ISLAND

CULTIVATED

ACCESS POINT

REMOVE

20' DR

36' DR

20' CONC DR

4' PS

6' C&G

2'-9" C&G

15" RCP-IV

18" RCP

2GI

TREES

DECK

ISBKD

PATIO

ISFD

2SFD

WOOD RAMP

CONC

Harnett Co Dept Public Utilities - 6" PVC

FO, Spirit Comm

Century Link, Copper

SEE SHEET 2B-1 FOR INTERSECTION DETAILS 1 AND 2
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 25 FOR -L- PROFILE

3/5/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

5/14/99

REVISIONS

3/5/2021

MATCHLINE -L- STA 38+00 (SEE SHEET 5)

MATCHLINE -L- STA 50+50 (SEE SHEET 7)

10 CHARLES GRAY DB 1442 PG 909 MB 2004 PG 19

11 NANCY MYATT DB 1101PG 767

12 CHARLES GRAY DB 2830 PG 173

13 SHERRY OATES DB 1822 PG 69 DB 2007 PG 518

14 SHERRILL MCLAMB DB 786 PG 810

15 NANCY MYATT DB 1101PG 767

16 NANCY MYATT DB 1101PG 767

17 NANCY MYATT DB 1101PG 767

18 SHERRILL MCLAMB DB 738 PG 754

19 SHERRILL MCLAMB DB 839 PG 291

20 VIRGINIA HOLLIDAY DB 635 PG 530

21 UNKNOWN PROPERTY OWNER

22 NANCY MYATT DB 1159 PG 680

6 JESSE MABRY DB 915 PG 464

100

-L- NC 55 N 48° 17' 28.4" W

40+00 45+00 50+00

FALSE SUMP SEE DETAIL 8 END C/A +22 90' LT

+82.53 90' LT

100' TAPER

BEGIN C/A +82 90' LT

+74.51 118.92' LT

+93.8 124.23' LT

+01.75 95.3' LT

+42.02 124.02' LT

+28.79 97.1' LT

+24.3 99.3' LT

+19.73 90' LT

+06.57 96.63' LT

+08.39 90' LT

END C/A +87 90' LT

BEGIN C/A +47 90' LT

+59.97 115.2' LT

+47.58 90' LT

END C/A +11 90' LT

BEGIN C/A BEGIN CLF +15 90' LT

END C/A END CLF +15 90' LT

+90 270' LT

+20 210' LT

+30 170' LT

DRAIN POND W/4' BASE DITCH APPROX. START ELEV. 297.0' END ELEV. 296.0' SEE DETAIL 26 EST. 60 TONS CL-I RIPRAP EST. 145 S.Y. GFD EST. 400 C.Y. DDE

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

REMOVE BEGIN C/A +75 90' LT

+63 90' LT

+79 124' LT

+48 161.5' LT

+73 90' LT

END C/A +40 90' LT

+87 182' LT

+90 436' LT

+21 321' LT

+86.23 117.62' LT

+06 114.62' LT

+02.27 90' LT

+82.04 90' LT

BEGIN C/A BEGIN CLF +24 90' LT

+89 90' LT

+96 98' LT

+14.24

ACCESS POINT

PUE

PDE

TDE

CLF

REMOVE EXIST JB

HW

O.E.P 10-YR HW/D = 0.8

O.E.P 10-YR HW/D = 2.0

REMOVE 24" RCP

42" RCP-IV

24" RCP-IV

RIPRAP PAD AT OUTLET 3 TONS CL-B RIPRAP 11 S.Y. GFD

END CLF +26.93 95' RT

+23.53 101.91' RT

+42.84 111.40' RT

BEGIN CLF +60.4 95' RT

+63.33 105.67' RT

+32 95' RT

RETAIN

CHANNEL CHANGE (4.0' BASE) SEE DETAIL 11 EST. 150 C.Y. DDE EST. 95 TONS CL-I RIPRAP EST. 210 S.Y. GFD

+07 130' RT

END C/A END CLF +50 130' RT

ACCESS POINT

MIN DEPTH 2GI-A SEE DETAIL 840d17 SHEET 2C-1

BEGIN C/A BEGIN CLF +10 105' RT

TOE PROTECTION SEE DETAIL 12 EST. 40 TONS CL-B RIPRAP EST. 130 S.Y. GFD

END CLF +21 105' RT

END C/A +78 105' RT

ACCESS POINT

GRADE TO DRAIN APPROX. GRADE 15% PROTECT W/EST. 15 TONS CL-B RIPRAP EST. 40 S.Y. GFD

+59.12 111.29' RT

BEGIN C/A +38 105' RT

+31

100' TAPER

+69 144' RT

BEGIN CLF +87 105' RT

+79.97 105' RT

+78.99 113.57' RT

+59.84 105' RT

FALSE SUMP SEE DETAIL 7

240' TAPER

+16

REMOVE

20' CONC DR

20' DR

28' DR

1'-6" C&G

4' PS

2GI

2GI-A

Horizontal Directional Drill Public Utilities 6" PVC

Century Link, Copper Splrit Comm, FO

SEE SHEETS 2D-1TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 26 FOR -L- PROFILE

2022 ADT / 2045 ADT			
	-Y1- SR 1532 (OAK GROVE CHURCH RD)		DHV = 9% DIR = 60% TTST = 1% DUAL = 3%
-L- NC 55	9300 / 14100	500 / 1100	1700 / 3000
			11000 / 17100 -L- NC 55
DHV = 9% DIR = 60% TTST = 2% DUAL = 2%		300 / 800	900 / 1900 DHV = 9% DIR = 60% TTST = 2% DUAL = 2%
			2300 / 5900 -Y2- SR 1532 (GUY RD) DHV = 9% DIR = 60% TTST = 1% DUAL = 4%
			3300 / 7300

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

REVISIONS 5/14/99

3/5/2021

MATCHLINE -L- STA 50+50 (SEE SHEET 6)

MATCHLINE -L- STA 64+00 (SEE SHEET 8)

-L-
PI Sta 57+12.71
△ = 0° 07' 40.5" (RT)
D = 0° 06' 52.5"
L = 111.64'
T = 55.82'
R = 50,000.00'
SE = NC
RO = NONE

-Y1- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y1- POT Sta. 10+45.00

-L- POT Sta. 52+56.13 =
-Y1- POT Sta. 14+55.00
△ = 111° 00' 17.1"

-L- POT Sta. 52+55.16 =
-Y2- POT Sta. 10+00.00
△ = 110° 56' 35.7"

-L- PC Sta. 56+56.89

-L- PT Sta. 57+68.53

END CONSTRUCTION
-Y2- POT Sta. 13+60.00

(99) CANDACE TAYLOR
DB 2609 PG 517
MB 2009 PG 136

(24) A AND L PROPERTIES LLC
DB 3350 PG 890

(27) CARRIE BULLARD
DB 502 PG 121

(28) CAROL BLALOCK
DB 88E PG 258

(21) UNKNOWN PROPERTY OWNER

(22)

(23) NANCY MYATT
DB 1229 PG 887

(100) NANCY MYATT
DB 1101PG 767

(26) JEAN SMITH
DB 3175 PG 397
MB 2013 PG 271

(25) TONI GAINES
DB 3183 PG 524
MB 2013 PG 271

(29) CARRIE BULLARD
DB 695 PG 318

(30) LUCILLE PATE
DB 634 PG 613

(31) CURTIS ADAMS
DB 508 PG 169

SEE SHEET 2B-1 FOR INTERSECTION DETAILS 3 AND 4
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 26 FOR -L- PROFILE
SEE SHEET 33 FOR -Y1- PROFILE
SEE SHEET 34 FOR -Y2- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NA 2011

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L-
PI Sta 76+11.18
Δ = 0° 05' 23.5" (LT)
D = 0° 04' 35.0"
L = 117.63'
T = 58.82'
R = 75,000.00'
SE = NC
RO = NONE

-L- PT Sta. 76+69.99
-L- PC Sta. 75+52.36

MATCHLINE -L- STA 64+00 (SEE SHEET 7)
MATCHLINE -L- STA 78+00 (SEE SHEET 9)

65+00 70+00 75+00

(28) CAROL BLALOCK
DB 88E PG 258

(32) DANIEL MORTON
DB 3441 PG 835
MB 2008 PG 1042

(35) JAMES GARNER
DB 1602 PG 2197
MB 2002 PG 303

(38) JAMES GARNER
DB 1071 PG 120

(41) BUCKEYE GAS PRODUCTS
DB 817 PG 394

(43) LYNN MUCHINSON
DB 1508 PG 838

(46) JULEE JOHNSON
DB 2967 PG 15
MB 2011 PG 317

(48) BENNY WEAVER
DB 2458 PG 329
MB 2006 PG 930

(44) JEAN GARNER
DB 1665 PG 80
MB 2001 PG 1260

(45) JEANETTE STRICKLAND
DB 1405 PG 740
MB 2000 PG 84

(33) MARIO HERNANDEZ
DB 2857 PG 342
MB 2011 PG 303

(34) JAMES GARNER
DB 1145 PG 360

(36) BARBARA HENRIES
DB 2007 PG 3

(37) D&O MOTOR SPORTS LLC
DB 2803 PG 711

(39) WILLIAM HART
NO DEED INFO
PC* F PG 326C

(40) JIMMY WALTERS
DB 1102 PG 980
PC* F PG 326C

(42) JIMMY WALTERS
DB 606 PG 222

(31) CURTIS ADAMS
DB 508 PG 169

SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL 13
EST. 60 TONS CL-B RIPRAP
EST. 160 S.Y. GFD

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 16

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

STANDARD 'V' DITCH
SEE DETAIL 20
BEGIN ELEV. = 314.28'
END ELEV. = 314.00'
APPROX. SLOPE = 0.6%
EST. 5 C.Y. DDE

N 48° 09' 47.9" W
N 48° 15' 11.4" W

SEE SHEET 2B-2 FOR INTERSECTION DETAIL 5
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 27 FOR -L- PROFILE

3/5/2021

5/14/99

REVISIONS

3/5/2021

2022 ADT / 2045 ADT	–Y3– SR 1538 (MABRY RD)	DHV = 9%, DIR = 65%, TTST = 1%, DUAL = 3%
–L– NC 55	600/800; 11000/17100; 100/200; 500/600; 11400/17500	–L– NC 55
DHV = 9%, DIR = 60%, TTST = 2%, DUAL = 2%		DHV = 9%, DIR = 60%, TTST = 2%, DUAL = 2%

–L–
PI Sta 119+02.62
Δ = 47° 38' 07.8" (LT)
D = 0° 52' 53.3"
L = 5,404.08'
T = 2,869.25'
R = 6,500.00'
SE = 0.025
RO = 150'

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NA 2011

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE –L– STA 78+00 (SEE SHEET 8)

MATCHLINE –L– STA 92+00 (SEE SHEET 10)

(46) JULEE JOHNSON
DB 2967 PG 15
MB 2011 PG 317

(44) JEAN GARNER
DB 1665 PG 80
MB 2001 PG 1260

(45) JEANETTE STRICKLAND
DB 1405 PG 740
MB 2000 PG 84

(42) JIMMY WALTERS
DB 606 PG 222

(47) MR CURRIN
DB 1315 PG 641

(48) BENNY WEAVER
DB 2458 PG 329
MB 2006 PG 930

(49) BARBARA SMETZER
DB 2038 PG 935

(50) FRANK D'ALESIO
DB 3604 PG 42
MB 2017 PG 390

(51) ISABEL LOREDO
DB 3258 PG 986
MB 2014 PG 313

(52) W E COLLIER
DB 2768 PG 34

–Y3– POT Sta. 10+00.00

BEGIN CONSTRUCTION
–Y3– POT Sta. 10+88.00

–L– POT Sta. 88+43.18 =
–Y3– POT Sta. 13+75.00
Δ = 111°54'15.0"

–L– PC Sta. 90+33.37

SEE SHEET 2B-2 FOR INTERSECTION DETAIL 6
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 27 FOR –L– PROFILE
SEE SHEET 34 FOR –Y3– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS 5/14/99

3/5/2021

-L-
PI Sta 119+02.62
△ = 47° 38' 07.8" (LT)
D = 0° 52' 53.3"
L = 5,404.08'
T = 2,869.25'
R = 6,500.00'
SE = 0.025
RO = 150'

NAD 83/NA 2011

MATCHLINE -L- STA 92+00 (SEE SHEET 9)

MATCHLINE -L- STA 105+50 (SEE SHEET 11)

95+00

100+00

105+00

(51) ISABEL LOREDO
DB 3258 PG 986
MB 2014 PG 313

(56) JERRY TUCKER
DB 2208 PG 537
MB 2001PG 641

KENNETH SNIPES
DB 3372 PG 76

(57) CLAY GARDNER
DB 3454 PG 424

(52) W E COLLIER
DB 2768 PG 34

(53) A M COLLIER
DB 3278 PG 598

(54) A M COLLIER
DB 3278 PG 600

(55) NANCY CURRIN
DB 2627 PG 807
MB 2009 PG 275

(49) BARBARA SMETZER
DB 2038 PG 935

-Y4A- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y4A- POT Sta. 11+40.00

-Y4A- ACCESS ROAD 1

-L- NC 55

280' MEDIAN TAPER (LT/RT)

TDE

+00 218' LT

+70 112' LT

END C/A
END CLF
+20 100' LT
112'

ACCESS POINT

BEGIN C/A
BEGIN CLF
+80 100' LT

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

SPECIAL LATERAL
4' BASE DITCH
SEE DETAIL 31

+00 100' LT

DRIVEWAY FLARE OUT
SEE DETAIL 55

+28.23 100' LT

+14.38 110.97' LT

END CLF
+05.43 100' LT

END C/A
+19 100' LT

BEGIN C/A
BEGIN CLF
+79 100' LT

ACCESS POINT

+11.01 113.16' LT

+90.75 115.02' LT

END CLF
+89.34 100' LT

BEGIN FULL C/A
+88 100' LT

BEGIN CLF
+09.74 100' LT

+09.21 127.52' LT

BEGIN CLF
+07 100' LT 116.5'

+89.18 131.35' LT

+84.99 110.09' LT

+62.47 108.61' LT

END CLF
+63.05 100.09' LT

END FULL C/A
+50 100' LT

END C/A
+35 100' LT

END CLF
+10 100' LT

DRIVEWAY FLAREOUT
SEE DETAIL 55

BEGIN C/A
BEGIN CLF
+95 100' LT

ACCESS POINT

REMOVE

BL-12

1'-6" C&G

2'-9" C&G

4' PS

15" RCP-IV

TB 2GI

20' DR

18"

15"

GRADE TO DRAIN
SEE CROSS SECTIONS
APPROX GRADE = 4.0%

SEDIMENT CONTROL BASIN

+40 159' RT

+16.92 115.15' RT

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

END C/A
END CLF
+06 115' RT 118.68'

BEGIN C/A
+66 100' RT

+18.24 123.47' RT

+19.91 137.74' RT

+98.50 123.67' RT

+00.46 140.13' RT

END C/A
+76 95' RT

BEGIN C/A
BEGIN CLF
+36 95' RT

DRIVEWAY FLARE OUT
SEE DETAIL 55

+53 95' RT

+40.63 120.83' RT

+43.88 114.03' RT

+65.90 113.73' RT

+57.67 130.85' RT

END C/A
END CLF
+70 95' RT

BEGIN C/A
+30 95' RT

+80.48 114.22' RT

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

STANDARD 'V' DITCH
SEE DETAIL 20
EST. 55 C.Y. DDE

BEGIN FULL C/A
+88 120' RT

+29.68 130.28' RT

+68 140' RT

END CLF
+40 123.5' RT

+81.89 136.75' RT

+33.82 157.59' RT

+53.01 161.25' RT

+36.29 143.95' RT

END FULL C/A
+50 100' RT

BEGIN CLF
+60 119.07' RT

+59.96 123.58' RT

SPECIAL CUT
'V' DITCH
SEE DETAIL 21

SPECIAL LATERAL
'V' DITCH
SEE DETAIL 1

TERMINAL END SECTION

No Associated Piping found

SEE SHEET 2B-2 FOR INTERSECTION DETAIL 7
SEE SHEETS 2D-1TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 37 FOR -Y4A- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NC 2011

MATCHLINE -L- STA 105+50 (SEE SHEET 10)

MATCHLINE -L- STA 119+00 (SEE SHEET 12)

-Y4B- PC Sta. 10+00.00
BEGIN CONSTRUCTION
-Y4B- POC Sta. 10+02.00
END CONSTRUCTION
-Y4B- POC Sta. 11+10.00
-Y4B- PCC Sta. 11+58.42
-Y4B- PT Sta. 13+20.06
-Y4B- PC Sta. 15+59.63
-Y4B- PC Sta. 19+25.01
-Y4A- PC Sta. 14+85.91
-Y4A- PT Sta. 16+03.54
-Y4A- PC Sta. 18+45.50
-Y4A- PT Sta. 19+90.38
-Y4- PC Sta. 14+21.25
-Y4- PT Sta. 17+75.36
-Y4- PT Sta. 24+81.05
BEGIN CONSTRUCTION
-Y4B- POT Sta. 15+05.00
BEGIN CONSTRUCTION
-Y4A- POT Sta. 17+50.00
END CONSTRUCTION
-Y4A- POT Sta. 12+90.74
END CONSTRUCTION
-Y4- POT Sta. 25+77.00
BEGIN CONSTRUCTION
-Y4- POT Sta. 13+03.00
-Y4- POC Sta. 16+10.00 =
-Y4B- POT Sta. 17+12.00
△ = 90°
-Y4- POC Sta. 21+95.00 =
-Y4A- POT Sta. 20+20.00
△ = 90°
-L- PI Sta 119+02.62
△ = 47° 38' 07.8" (LT)
D = 0° 52' 53.3"
L = 5,404.08'
T = 2,869.25'
R = 6,500.00'
SE = 0.025
RO = 150'
-Y4- PI Sta 16+35.36
△ = 81° 09' 23.9" (LT)
D = 22° 55' 05.9"
L = 354.11'
T = 214.11'
R = 250.00'
SE = 0.04
RO = 72'
-Y4- PI Sta 22+44.79
△ = 70° 47' 46.9" (LT)
D = 12° 43' 56.6"
L = 556.03'
T = 319.78'
R = 450.00'
SE = 0.035
RO = 63'
-Y4B- PI Sta 10+79.97
△ = 19° 18' 46.2" (RT)
D = 12° 11' 26.1"
L = 158.42'
T = 79.97'
R = 470.00'
-Y4B- PI Sta 12+39.51
△ = 11° 26' 00.5" (RT)
D = 7° 04' 24.8"
L = 161.64'
T = 81.09'
R = 810.00'
-Y4B- PI Sta 16+26.18
△ = 46° 44' 27.5" (RT)
D = 37° 12' 18.2"
L = 125.63'
T = 66.55'
R = 154.00'
SE = 0.02
RO = NONE
-Y4A- PI Sta 15+44.73
△ = 0° 16' 10.5" (RT)
D = 0° 13' 45.1"
L = 117.63'
T = 58.82'
R = 25,000.00'
-Y4A- PI Sta 19+23.80
△ = 53° 54' 07.8" (LT)
D = 37° 12' 18.2"
L = 144.88'
T = 78.30'
R = 154.00'
SE = NC
RO = NONE
N 29° 36' 44.9" W
N 76° 21' 12.4" W
N 48° 15' 11.4" W
N 47° 59' 00.9" W
N 22° 29' 23.7" E
S 76° 21' 12.4" E
S 78° 06' 51.3" W
N 48° 18' 23.2" W
-Y4A- ACCESS ROAD 1
-Y4B- ACCESS ROAD 2
-L- NC 55
-Y4- OLD ENNIS RD
-Y4- NC 55 BUSINESS
CLAY GARDNER DB 3454 PG 424
CLAY GARDNER DB 3454 PG 422 MB 2009 PG 275
CLAY GARDNER DB 3454 PG 424 MB 2009 PG 277
NANCY CURRIN DB 2627 PG 807 MB 2009 PG 275
NANCY CURRIN DB 2933 PG 858 MB 2009 PG 277
CURRIN HEIRS LLC DB 2612 PG 367
LINDA SEALE DB 3454 PG 424
HERMAN WOOD DB 904 PG 981
R5705-AZ7
BYI-103
BYI-104
SEE SHEET 2B-2 FOR INTERSECTION DETAIL 8
SEE SHEET 2B-5 FOR INTERSECTION DETAILS 18 AND 19
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 34 FOR -Y4- PROFILE
SEE SHEET 37 FOR -Y4A- PROFILE
SEE SHEETS 38 & 39 FOR -Y4B- PROFILE

3/5/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

REVISIONS

5/14/99

3/5/2021

-Y5B-
PI Sta 13+19.80
Δ = 11° 15' 53.4" (RT)
D = 7° 00' 00.3"
L = 160.92'
T = 80.72'
R = 818.50'

-L-
PI Sta 119+02.62
Δ = 47° 38' 07.8" (LT)
D = 0° 52' 53.3"
L = 5,404.08'
T = 2,869.25'
R = 6,500.00'
SE = 0.025
RO = 150'

PATSY JONES
DB 748 PG 498

JOHNNY PEARCE
DB 2705 PG 775

CHRISTOPHER SCOTT
DB 1268 PG 466

CLYDE SNYDER
DB 1223 PG 264

JOHNNY PEARCE
DB 3011 PG 477

CECIL AUSLEY
DB 2006 PG 688

DETRICE JOHNSON
DB 3544 PG 730

ADRIANO ALVAREZ
DB 2199 PG 280

JUAN GONZALEZ
DB 2377 PG 712
PC# F PG 620A

DAVID FELDMANN
DB 3586 PG 623
PC# F PG 620A

HERMAN WOOD
DB 904 PG 981

HERMAN WOOD
DB 612 PG 58

JAMES BURGIN
DB 1880 PG 98
MB 2000 PG 565

TONY MABRY
DB 1417 PG 6
MB 2000 PG 279

-Y5B- POT Sta. 10+00.00

-Y5B- POT Sta. 12+15.00
BEGIN CONSTRUCTION

-Y5B- POT Sta. 13+19.00
END CONSTRUCTION

-Y5B- PC Sta. 12+39.08

-Y5B- PT Sta. 14+00.00

-Y5B-
OLD ENNIS RD
N 67° 11' 39.9" W

-L-
NC 55

MATCHLINE -L- STA 119+00 (SEE SHEET 11)

MATCHLINE -L- STA 133+00 (SEE SHEET 13)

10+00
120+00
125+00
130+00

RETAIN
REMOVE

SPECIAL CUT DITCH SEE DETAIL 25

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

STANDARD 'V' DITCH SEE DETAIL 37 EST. 40 TONS CL-B RIPRAP EST. 90 S.Y. GFD EST. 180 C.Y. DDE GRADE AT 2.7%

FALSE SUMP TO ELEV. 290.2' SEE DETAIL 14

FALSE SUMP TO ELEV. 286.7' SEE DETAIL 14

FALSE SUMP TO ELEV. 287.0' SEE DETAIL 14

FALSE SUMP TO ELEV. 285.4' SEE DETAIL 14

CLEAN WATER DIVERSION

ACCESS POINT

BEGIN FULL C/A
BEGIN WWF
+30
100' LT

END C/A
END WWF
+19.5
100' LT
125'

+88.97
144.09' LT
BEGIN C/A
+79.5
100' LT
+09.42
143.8' LT
+88.19
100' LT
+09.18
129.47' LT

+63.43
134.92' LT
+25
150' LT

+04.25
152.44' LT
+03.93
136.49' LT
END WWF
+59.56
136.49' LT

+23.82
151.77' LT
+24
136.77' LT
BEGIN WWF
+50
100' LT

+79.63
146.18' LT
+79.77
131.7' LT
END WWF
+80
90' LT
END
FULL C/A
+50
90' LT

+00.09
146.34' LT
+00.19
130.87' LT
BEGIN WWF
+00
90' LT

+14.28
118.35' LT

150' TAPER

END WWF
+91
90' LT
+14
113.35' LT
+44.64
110.99' LT
BEGIN WWF
+42.91
90' LT

+19.78(Y5B)
EX R/W
+73(L)
90' LT

+69 (Y5B)
44' LT
EX R/W

END WWF
+40.09
100' LT

+73(L)
100' LT

END C/A
END WWF
+20
100' RT

BEGIN C/A
BEGIN WWF
+80
100' RT

BEGIN
FULL C/A
+30
100' RT

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

+50
100' RT

RIPRAP PAD AT OUTLET
5 TONS CL-B RIPRAP
14 S.Y. GFD

+20
145' RT

END
FULL C/A
+50
100' RT

END WWF
+81.91
100' RT
+82.32
132.57' RT

BEGIN WWF
+01.60
100' RT
+01.92
132.41' RT

RIPRAP PAD AT OUTLET
3 TONS CL-B RIPRAP
10 S.Y. GFD

ACCESS POINT

END C/A
END WWF
+70
100' RT

BEGIN C/A
BEGIN WWF
+30
100' RT

RIPRAP PAD AT OUTLET
15 TONS CL-I RIPRAP
30 S.Y. GFD

+35
100' RT

SPECIAL LATERAL 'V' DITCH SEE DETAIL 38 EST. 20 C.Y. DDE

24" RCP-IV
18" RCP-IV
15" RCP-IV
48" RCP-IV (BURIED 0.8')
48" HW

TB 2GI
TB 2GI-A
1'-6" C&G
2'-9" C&G
4' PS

SEE SHEET 2B-3 FOR INTERSECTION DETAIL 9
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 38 FOR -Y5B- PROFILE

REVISIONS 5/14/99

3/5/2021

-L-
PI Sta 119+02.62
△ = 47° 38' 07.8" (LT)
D = 0° 52' 53.3"
L = 5,404.08'
T = 2,869.25'
R = 6,500.00'
SE = 0.025
RO = 150'

-Y5A-
PI Sta 11+59.64
△ = 23° 39' 39.9" (LT)
D = 10° 44' 58.8"
L = 220.11'
T = 111.65'
R = 533.00'
SE = 0.035
RO = 63'

PI Sta 13+90.74
△ = 1° 02' 29.9" (LT)
D = 1° 00' 00.0"
L = 104.16'
T = 52.08'
R = 5,729.58'
SE = EXIST
RO = EXIST

2022 ADT
2045 ADT

-Y5-
SR 1540
(MONTAGUE RD)

DHV = 12%
DIR = 65%
TTST = 1%
DUAL = 1%

500/600

-L-
NC 55

8650/12300 | 100/100 | 300/400 | 9100/14400

DHV = 9%
DIR = 60%
TTST = 1%
DUAL = 3%

400/300 | 600/2100

DHV = 9%
DIR = 60%
TTST = 3%
DUAL = 1%

1100/2500

-Y5A-
SR 1540
(ENNIS RD)

DHV = 12%
DIR = 65%
TTST = 1%
DUAL = 1%

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

JON SALSBURY
DB 2382 PG 966
PC# F PG 620A

JUAN GONZALEZ
DB 2377 PG 712
PC# F PG 620A

(104) DAVID FELDMANN
DB 3586 PG 623
PC# F PG 620A

(103) BENNIE MANGUM
DB 799 PG 611

(64) JOSEPH LIPSCOMB
DB 1903 PG 67

(65) WILLIAM HAWLEY
DB 1889 PG 108
MB 2016 PG 67

(66) WILLIAM HAWLEY
DB 1889 PG 108
MB 2016 PG 67

(67) DANIEL HONEYCUTT
DB 3182 PG 966

(62) TONY MABRY
DB 1417 PG 6
MB 2000 PG 279

(63) CHRISTY JORDAN
DB 3524 PG 729
MB 2000 PG 466

(105) STEPHEN YEO
DB 3359 PG 962
MB 2000 PG 466

LETESHA WYNN
DB 2136 PG 830
MB 2000 PG 466

BOBBY MABRY
DB 3404 PG 350
MB 2016 PG 25

SHIRLEY HAWLEY
DB 3184 PG 180

THOMAS NORMAN
DB 2175 PG 234

-Y5- SR 1540 (MONTAGUE RD) N 0° 58' 22.1" E

-Y5A- SR 1543 (ENNIS RD) N 47° 29' 43.8" W

MATCHLINE -L- STA 133+00 (SEE SHEET 12)

MATCHLINE -L- STA 146+50 (SEE SHEET 14)

BEGIN CONSTRUCTION
-Y5- POT Sta. 19+76.00

-L- POC Sta. 134+22.65 =
-Y5- POT Sta. 22+62.00
△ = 92° 05' 01.0"
-L- POC Sta. 135+19.00 =
-Y5A- POT Sta. 10+00.00
△ = 79° 51' 06.0"
N 22° 47' 34.0" W

-Y5A- PC Sta. 10+47.99

-Y5A- PT Sta. 12+68.10

N 46° 27' 13.9" W

-Y5A- PC Sta. 13+38.66

END CONSTRUCTION
-Y5A- POT Sta. 13+80.00
-Y5A- PT Sta. 14+42.82

-L- PT Sta. 144+37.45

150' TAPER (LT/RT)

160' TAPER (LT/RT)

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

20' RIPRAP PAD AT OUTLET
16 TONS CL-B RIPRAP
44 S.Y. GFD

STANDARD 'V' DITCH
SEE DETAIL 29
EST. 5 C.Y. DDE
APPROX. GRADE=3.6%

SPECIAL CUT 'V' DITCH
SEE DETAIL 30

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 14' PS

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

GRADE TO DRAIN APPROX. GRADE = 4.0%

GRADE TO DRAIN REMOVE ABANDONED DRIVEWAY

ACCESS POINT

RETAIN

REMOVE

20' DR

4' PS

30" RCP-IV

24" RCP-IV

15" RCP-IV

1'-6" C&G

2'-9" C&G

TB 2GI

TB 2GI-A

DI

S 84° 06' 40.8" W

SEE SHEET 2B-3 FOR INTERSECTION DETAILS 10 AND 11
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 35 FOR -Y5- PROFILE
SEE SHEET 38 FOR -Y5A- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

-L-
PI Sta 174+91.54
Δ = 48° 33' 46.5" (RT)
D = 1° 08' 45.3"
L = 4,237.91'
T = 2,255.64'
R = 5,000.00'
SE = 0.03
RO = 180°

66 WILLIAM HAWLEY
DB 1889 PG 108
MB 2016 PG 67

67 DANIEL HONEYCUTT
DB 3182 PG 966

68 SUNFLIGHT LLC
DB 1690 PG 178

69 STEVEN WICKER
DB 1889 PG 51
MB 2004 PG 81

70 NORDAN FARMS INC
DB 1690 PG 178

276.28' N 66°15'42" W
543.26' N 34°54'57" E
80.05' N 33°03'20" E
350.74' S 86°56'40" E
14.74' S 86°56'40" E
N 04°05'55" E 214.68'
N 45°43'35" E 999.13'

S 84° 06' 40.8" W
NC 55
-L-

150+00
155+00
160+00

BL-17
BL-18
BL-19

ACCESS POINT
BEGIN C/A
BEGIN WWF
+36
100' LT
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 17
BEGIN
FULL C/A
+80
100' LT
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1
END
FULL C/A
+35.9
110' LT
END C/A
END WWF
+94
110' LT
ACCESS POINT
BEGIN C/A
+54
110' LT
+60
127' LT
LATERAL 'V' DITCH
SEE DETAIL 10
EST. 80 C.Y. DDE
+50
127' LT
EST. 45 TONS CL-I RIPRAP ON BANKS
EST. 10 TONS COUNTERSUNK CL-I RIPRAP IN STREAM BED
SUPPLEMENT VOIDS W/
EST. 3 TONS CL-B RIPRAP
EST. 70 S.Y. GFD
SEE DETAIL 46
BEGIN WWF
+15
100' LT
110'
150' TAPER (LT/RT)
+33
66" RCP-IV
(1.0' BURIED)
66" HW
REMOVE
TB 2GI-A
TB 2GI
15" RCP-IV
2'-9" C&G
1'-6" C&G
4' PS
SPECIAL CUT 'V' DITCH
SEE DETAIL 21
CLEAN WATER DIVERSION
SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL 16
END C/A
END WWF
+70
110' RT
BEGIN C/A
BEGIN WWF
+30
100' RT
+40
122' RT
+25
100' RT
+85
100' RT
+94
132' RT
+50
110' RT
BEGIN
FULL C/A
+80
100' RT
SEDIMENT CONTROL BASIN
+48
140' RT
END
FULL C/A
+35.9
110' RT
+40
188' RT
+23
205' RT
-L- PC Sta. 152+35.90

CULTIVATED
POND
WOODS
ISFD
GR
12" WD

MATCHLINE -L- STA 146+50 (SEE SHEET 13)
MATCHLINE -L- STA 160+50 (SEE SHEET 15)

SEE SHEET 2B-4 FOR INTERSECTION DETAIL 12
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 30 FOR -L- PROFILE

3/5/2021

5/14/99

REVISIONS

3/5/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

-L-
PI Sta 174+91.54
Δ = 48° 33' 46.5" (RT)
D = 1° 08' 45.3"
L = 4,237.91'
T = 2,255.64'
R = 5,000.00'
SE = 0.03
RO = 180'

-Y6-
PI Sta 18+72.92
Δ = 34° 30' 26.8" (RT)
D = 4° 51' 20.1"
L = 710.68'
T = 366.48'
R = 1,180.00'
SE = 0.03
RO = 57'

-DRW2-
PI Sta 10+97.77
Δ = 14° 20' 15.0" (LT)
D = 114° 35' 29.6"
L = 12.51'
T = 6.29'
R = 50.00'

-DRW2- POT Sta. 11+60.00
END CONSTRUCTION
-DRW2- POT Sta. 11+27.00
-DRW2- PT Sta. 11+03.99
-DRW2- PC Sta. 10+91.48

-L- POC Sta. 165+57.98 =
-Y6- POC Sta. 16+56.11
Δ = 79° 51' 06.0"

-Y6- PC Sta. 15+06.43

BEGIN CONSTRUCTION
-Y6- POT Sta. 13+41.00

-L- POC Sta. 172+45.00 =
-DRW2- POT Sta. 10+00.00
Δ = 90°

-Y6A-
PI Sta 11+14.65
Δ = 17° 58' 04.9" (LT)
D = 10° 44' 58.8"
L = 167.15'
T = 84.27'
R = 533.00'

PI Sta 12+60.46
Δ = 3° 00' 14.6" (LT)
D = 2° 23' 14.4"
L = 125.83'
T = 62.93'
R = 2,400.00'

PI Sta 17+43.01
Δ = 4° 20' 23.7" (LT)
D = 2° 29' 59.3"
L = 173.61'
T = 86.85'
R = 2,292.00'
SE = 0.04
RO = 16'

-Y6A- PT Sta. 13+23.36
-Y6A- PC Sta. 16+56.17
BEGIN CONSTRUCTION
-Y6A- POC Sta. 16+66.00
-Y6A- PCC Sta. 11+97.53
END CONSTRUCTION
-Y6A- POC Sta. 11+17.00
-Y6A- PC Sta. 10+30.38
N 64° 28' 35.4" W
-Y6A- POT Sta. 10+00.00 =
-Y6- POC Sta. 18+85.00
Δ = 95° 26' 10.0"
END CONSTRUCTION
-Y6A- POC Sta. 18+19.00
-Y6A- PT Sta. 18+29.78
N 89° 47' 18.6" W
TERMINAL END SECTION
STANDARD 'V' DITCH
SEE DETAIL 29
EST. 35 C.Y. DDE
APPROX. GRADE = 2.0%

-Y6- PT Sta. 22+17.11
END CONSTRUCTION
-Y6- POT Sta. 22+44.00
N 46° 38' 51.9" E

-L- STA 160+50 (SEE SHEET 14)
-L- STA 174+00 (SEE SHEET 16)
MATCHLINE

-Y6- SR 1542 (OLD BUIES CREEK RD) N 12° 08' 31.1" E
-Y6A- GARDNER RD N 85° 26' 54.9" W
S 2° 47' 41.0" W
S 17° 08' 02.0" W

SUNFLIGHT LLC DB 1690 PG 178 (72)
SUNFLIGHT LLC DB 1690 PG 178 (68)
SUNFLIGHT LLC DB 1690 PG 178 (73)
JAMIE MASON DB 2721PG 84 (71)
NORDAN FARMS INC DB 1690 PG 178 (70)
CONNIE ADAMS DB 950 PG 790 (106)
GILBERT RITTER DB 1183 PG 808 (107)
DOUGLAS WILLIAMS DB 2663 PG 491 (74)
CONNIE RITTER DB 1857 PG 257
SUNNY DEAN DB 3502 PG 424 MB 2015 PG 249
RICHARD MILLER DB 3415 PG 856 MB 2004 PG 428
CHRISTIAN CRUZ DB 3447 PG 522

2022 ADT / 2045 ADT	-Y6- SR 1542 (OLD BUIES CREEK RD)	DHV = 10%, DIR = 60%, TTST = 1%, DUAL = 3%
3900 / 3800		
-L- NC 55 BYPASS: 9100 / 14400	600 / 700	2800 / 2200 — 11700 / 18200 -L- NC 55 BYPASS
DHV = 9%, DIR = 60%, TTST = 1%, DUAL = 3%	500 / 200	900 / 2500 — DHV = 9%, DIR = 60%, TTST = 1%, DUAL = 3%
		1900 / 3600 — -Y6- SR 1542 (OLD BUIES CREEK RD) — DHV = 10%, DIR = 60%, TTST = 1%, DUAL = 3%

SEE SHEET 2B-4 FOR INTERSECTION DETAIL 13
SEE SHEET 2B-6 FOR INTERSECTION DETAIL 20
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 35 FOR -Y6- PROFILE
SEE SHEET 38 FOR -Y6A- PROFILE
SEE SHEET 40 FOR -DRW2- PROFILE

REVISIONS 5/14/99

-L-
PI Sta 174+91.54
Δ = 48° 33' 46.5" (RT)
D = 1° 08' 45.3"
L = 4,237.91'
T = 2,255.64'
R = 5,000.00'
SE = 0.03
RO = 180'

-DRW3-
PI Sta 10+85.01
Δ = 13° 30' 27.9" (LT)
D = 76° 23' 39.7"
L = 17.68'
T = 8.88'
R = 75.00'

-DRW4-
PI Sta 11+10.26
Δ = 81° 00' 13.3" (RT)
D = 286° 28' 44.0"
L = 28.28'
T = 17.08'
R = 20.00'

-DRW5-
PI Sta 10+84.78
Δ = 15° 06' 47.6" (RT)
D = 114° 35' 29.6"
L = 13.19'
T = 6.63'
R = 50.00'

QUANTITY ESTIMATE
(TOTAL FOR ENTIRE CULVERT)

CLASS-I RIPRAP	110 TONS
CLASS-B RIPRAP	3 TONS
GEOTEXTILE	170 S.Y.
EXCAVATION	
CULVERT	150 CY
CHANNEL	10 CY

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

(76) WILLIAM TYSON
DB 1446 PG 986

REALIGN AND WIDEN EXISTING DITCH TO PROPERTY LINE
MATCH EXISTING DITCH INVERT ELEVATIONS
SEE DETAIL 63
EST 10 CY DDE

175+00

20' RIPRAP PAD AT OUTLET
20 TONS CL-B RIPRAP
45 S.Y. GFD

+24 170' LT BEGIN FULL C/A +17 100' LT

BEGIN WWF +28 102.52' LT

-L- POC Sta.174+00.00 =
-DRW3- POT Sta. 10+00.00
Δ = 90°

+98 145' LT

(78) DAVID GARDNER
DB 1085 PG 714

-L- POC Sta.176+83.00 =
-DRW4- POT Sta. 10+00.00
Δ = 90°

END FULL C/A +92 115' LT

END C/A END WWF +56 115' LT

ACCESS POINT

LATERAL 2' BASE DITCH
SEE DETAIL 34
EST. 60 C.Y. DDE
DITCH TO BE EXCAVATED AFTER POND HAS BEEN FILLED

BEGIN C/A BEGIN WWF +16 115' LT

GRADE TO DRAIN (FILL)

180+00

+72 235' LT

+27 115' LT 235'

FILL POND TO ELEV. 250.0' AT THIS SIDE
FILL TO ELEV. 249.0' AT OPPOSITE SIDE
GRADE AT APPROX. 1.2% TO DRAIN
(SEE GRADE TO DRAIN ARROWS)
EST. 1030 C.Y. BACKFILL

+10 115' LT 177'

TDE

(80) DAVID GARDNER
DB 1085 PG 714
MB 2003 PG 1243

END WWF +50 113.79' LT 130'

BEGIN WWF +70 112.82' LT

(82) JAMES ALLEN
DB 3355 PG 413

TYPICAL OUTLET IMPROVEMENTS SEE DETAIL 68 & QUANTITIES IN TABLE ABOVE

PROPOSED SINGLE GATE, 47" HIGH, 12' WIDE, 12' OPENING STA 182+00 TO 182+12 LT

+43 110' LT

+78.5 112.44' LT

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

SPECIAL LATERAL 'V' DITCH
C SEE DETAIL 1

185+00

(84) JEREMY SKOLOZYNSKI
DB 3258 PG 306
PC# C PG 118D

-L- POC Sta.186+21.00 =
-DRW5- POT Sta. 10+00.00
Δ = 90°

(85) MICHAEL ANTHONY
DB 1286 PG 579
PC# F PG 26B

END C/A END WWF 110' LT

BEGIN C/A +53 110' LT

END C/A +25 100' LT

+27.92 115.35' LT
+29.50 100' LT
+47.36 117.48' LT
+49.22 100' LT

BEGIN C/A BEGIN WWF +85 100' LT

ACCESS POINT

PUE

PIPE FLAREOUT SEE DETAIL 55

ACCESS POINT

SPECIAL LATERAL 2' BASE DITCH SEE DETAIL 16

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

CAT-I

5' x 7' RCBC (1.0' BURIED)

10' PS

GREU TL-3

REMOVE

20' DR

4' PS

2'-9" C&G

1'-6" C&G

TB 2GI

15" RCP-IV

-L- NC 55

MATCHLINE -L- STA 174+00 (SEE SHEET 15)

N 18° 54' 36.2" E

-DRW3- PC Sta. 10+76.13

N 22° 06' 28.5" E

G.T.D

-DRW3- PT Sta. 10+93.81

SPECIAL CUT 'V' DITCH SEE DETAIL 21

ACCESS POINT

PUE

BEGIN WWF +00 100' RT

+64.58(L) EX R/W REMOVE & BACKFILL TO DRAIN

BEGIN FULL C/A +17 100' RT

END FULL C/A END WWF +50 100' RT

BEGIN C/A +10 100' RT

END C/A +97 100' RT

BEGIN C/A +57 100' RT

+82.32 118.57' RT

+80 130.31' RT

PIPE FLAREOUT SEE DETAIL 55

(79) DAVID ADAMS
DB 1635 PG 609

-DRW4- PC Sta. 10+93.18

-DRW4- PT Sta. 11+21.46

S 76° 53' 18.3" E

END CONSTRUCTION

-DRW4- POT Sta. 11+32.83

-DRW4- POT Sta. 11+38.28

(77) JERRY GREGORY
DB 1684 PG 453
MB 2000 PG 477

(75) RAFAEL CERVANTES
DB 3403 PG 599
MB 2000 PG 477

+96(L) 230' RT

+11 (L) 250' RT

-Y6A- POT Sta. 19+06.00

N 5° 24' 08.4" E

END CONSTRUCTION

-DRW3- POT Sta. 12+38.00

-DRW3- POT Sta. 12+50.00

CLINTON ADAMS
DB 1291 PG 300
MB 2003 PG 1071

(81) CLINTON ADAMS
DB 528 PG 185

SPECIAL CUT 'V' DITCH SEE DETAIL 21

REMOVE GREU TL-3

CAT-I

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

FALSE SUMP SEE DETAIL 7

2GI-D

BEGIN WWF +78 100' RT

+74.16 122.57' RT

END WWF +70 100' RT

RIPRAP PAD AT OUTLET
2 TONS CL-B RIPRAP
7 S.Y. GFD

+10 119.98' RT

END WWF +56

TYPICAL INLET IMPROVEMENTS 100' RT SEE DETAIL 67 & QUANTITIES IN TABLE ABOVE
GRADE CHANNEL AT 1.0%

BEGIN WWF +84 100' RT

+66.79 117.67' RT

+74 144' RT

+43 100' RT

SEDIMENT CONTROL BASIN

-DRW5- PC Sta. 10+78.15

+91 163' RT

+85.06 128.89' RT

END C/A END WWF +91 130' RT

-DRW5- PT Sta. 10+91.33

END CONSTRUCTION

-DRW5- POT Sta. 11+07.00

-DRW5- POT Sta. 11+30.00

ACCESS POINT

PUE

BEGIN WWF +74.94 130' RT

+76.67 144.31' RT

BERM 'V' DITCH SEE DETAIL 3

BEGIN C/A +51 130' RT

+54.32 130' RT

+56.2 146.55' RT

N 32° 54' 14.5" E

18" CSP W/ELBOWS

B.D.O. (1614)

N 48° 01' 02.1" E

MATCHLINE -L- STA 188+00 (SEE SHEET 17)

(83) RICHARD HALL
DB 982 PG 219

SEE SHEET 2B-4 FOR INTERSECTION DETAIL 14
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 40 FOR -DRW3- PROFILE
SEE SHEET 40 FOR -DRW4- PROFILE
SEE SHEET 40 FOR -DRW5- PROFILE

3/5/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

-L-
PI Sta 174+91.54
Δ = 48° 33' 46.5" (RT)
D = 1° 08' 45.3"
L = 4,237.91'
T = 2,255.64'
R = 5,000.00'
SE = 0.03
RO = 180'

-Y7B-
PI Sta 16+25.89
Δ = 1° 09' 04.6" (RT)
D = 1° 00' 00.0"
L = 115.13'
T = 57.57'
R = 5,729.58'

-Y7B-
PI Sta 21+35.08
Δ = 4° 46' 36.2" (RT)
D = 4° 05' 33.2"
L = 116.72'
T = 58.39'
R = 1,400.00'

-Y7B-
PI Sta 22+70.46
Δ = 19° 26' 04.1" (RT)
D = 12° 43' 56.6"
L = 152.64'
T = 77.06'
R = 450.00'

-Y7B- PT Sta. 16+83.45
BEGIN CONSTRUCTION -Y7B- POT Sta. 18+00.00
END CONSTRUCTION -Y7B- POT Sta. 19+00.00
-Y7B- PC Sta. 20+76.69
-Y7B- PCC Sta. 21+93.41
REMOVE EXIST GUARDRAIL
-Y7B- PT Sta. 23+46.04
-L- POC Sta.189+65.00 = -DRW6- POT Sta. 10+00.00 Δ = 90°
-L- POT Sta.195+87.00 = -DRW7- POT Sta. 10+00.00 Δ = 90°
-DRW6- PC Sta. 10+75.53
-DRW6- PT Sta. 10+83.80
-DRW6- POT Sta. 11+30.00
END CONSTRUCTION -DRW6- POT Sta. 11+07.00
-L- PT Sta. 194+73.82
-DRW7- PC Sta. 11+02.43
-DRW7- PT Sta. 11+30.76
-DRW7- POT Sta. 11+97.96
END CONSTRUCTION -DRW7- POT Sta. 11+45.00
-L- STA 196+44 LT
S 85° 16' 23.4" E
N 47° 19' 32.7" W
N 42° 40' 27.3" E
N 36° 50' 37.1" E
N 27° 22' 17.1" E
N 38° 28' 29.2" W
-Y7B- ACCESS ROAD 3
NC 55
MATCHLINE -L- STA 188+00 (SEE SHEET 16)
MATCHLINE -L- STA 202+00 (SEE SHEET 18)

(85) EVERETT BLAKE
DB 1327 PG 119
PC* F PG 26B

(86) EVERETT BLAKE
DB 1327 PG 119
PC* F PG 26B

(87) KBNK HOLDINGS LLC
DB 2441PG 803
MB 2004 PG 1274

(88) WILLIAM ARMENTROUT
DB 1061PG 509
PC* F PG 26B

(89) ROBERT COHEN
DB 2725 PG 684
MB 2004 PG 688

(90) CLAY GARDNER
DB 2983 PG 694
MB 2005 PG 923

(116) GORDAN SARTIN
DB 2321PG 153
MB 2005 PG 923

(83) RICHARD HALL
DB 982 PG 219

GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 2.0-4.0%
BEGIN C/A +04 100' LT; +19.97 125.5' LT; +20.55 100' LT; +39.47 126' LT; +40.12 100' LT
END C/A +82 100' LT
END C/A END WWF +44 100' LT
BEGIN C/A +42 100' LT
GRADE TO DRAIN SEE CROSS SECTIONS APPROX GRADE = 4.0%
BEGIN WWF +40 100' LT
ACCESS POINT
STANDARD 'V' DITCH SEE DETAIL 29 EST. 35 C.Y. DDE APPROX. GRADE=4.3%
REMOVE
RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD
+76 EX R/W 142' LT
END WWF +76 100' LT
+18 EX R/W 148' LT
BEGIN WWF +10 100' LT
+73.82 100' LT
TOE PROTECTION SEE DETAIL 18 EST. 118 TONS. CL-I RIPRAP EST. 280 S.Y. GFD
TDE
RETAIN
REMOVE CMAP W/WEIR WALL
+40 55' RT
+18 EX R/W
+00 (Y7B) EX R/W 55' RT
TERMINAL END SECTION
+76(Y7B) EX R/W
+26(Y7B) EX R/W
+48.19 EX R/W
RETAIN
+50 70' LT
SEE TYPICAL SECTION P2
GRADE TO DRAIN (FILL)
END WWF +81 100' LT
BEGIN WWF +50 100' LT
+99 117' LT
SPECIAL LATERAL 'V' DITCH SEE DETAIL 1
CLEAN WATER DIVERSION
TYPICAL OUTLET IMPROVEMENTS SEE DETAIL 60 QUANTITIES IN TABLE ABOVE
END 2'-9" C&G TRANSITION TO 1'-6" C&G -L- STA 196+44 LT SEE DETAIL SHEET 2A-1
7' x 7' RCBC (1.0' BURIED)
GREU TL-3
10' PS
4' PS
20' DR
20' CONC DR
2'-9" C&G
1'-6" C&G
15" RCP-IV
TB 2GI
FALSE SUMP SEE DETAIL 8
MIN DEPTH 2GI-A SEE DETAIL 840d17 SHEET 2C-1
REMOVE
B.D.O.
15" CSP W/ELBOWS
2GI
SPECIAL CUT 'V' DITCH SEE DETAIL 25
BERM 'V' DITCH SEE DETAIL 3
BERM 'V' DITCH SEE DETAIL 35
END C/A END WWF +40 130' RT
BEGIN C/A +00 130' RT
BEGIN WWF +46.66 130' RT
+46.82 137.29' RT
+26.26 137.82' RT
+26.09 130' RT
+26.43 124.51' RT
+00 130' RT
+37 100' RT
END WWF +25 100' RT 118.96' 134'
+73.82 100' RT 116.38' 134'
GRADE TO DRAIN PROTECT INLET W/CL-B RIPRAP EST. 9 TONS EST. 30 S.Y. GFD
SPECIAL LATERAL 'V' DITCH SEE DETAIL 33
+74 133' RT
+64 111.06' RT
END C/A +54 100' RT
MIN DEPTH 2GI-A SEE DETAIL 840d17 SHEET 2C-1
BEGIN C/A BEGIN WWF +14 100' RT
ACCESS POINT
+07.27 108.5' RT
RIPRAP PAD AT OUTLET 8 TONS CL-B RIPRAP 21 S.Y. GFD
END WWF +40 100' RT 120'
TOE PROTECTION SEE DETAIL 12 EST. 40 TONS CL-B RIPRAP EST. 100 S.Y. GFD
LATERAL 3' BASE DITCH SEE DETAIL 39 EST. 63 TONS CL-I RIPRAP EST. 160 S.Y. GFD
+19.89 120' RT
+21 140' RT
+00 235' RT
+10 120' RT
BEGIN WWF +65 100' RT 120'
SEE TYPICAL SECTION P1
GRADE TO DRAIN (FILL)
+53.5 331' RT
+22 262' RT
+99 289' RT
+54 434' RT
TYPICAL INLET IMPROVEMENTS SEE DETAIL 61 QUANTITIES IN TABLE ABOVE
GRADE CULVERT ENTRANCE TO DRAIN W/ 7' BASE DITCH & 2:1 SIDE SLOPES (SEE DETAIL TYPICAL SECTION P1) START ELEVATION = APPROX. 252.0' END ELEV. = APPROX. 251.2' APPROX. GRADE = 0.3%
THIS POND WASN'T LOCATED,WERE ASKED TO LEAVE BY THE PROPERTY OWNER AND TOLD NOT TO GET BACK ON HER PROPERTY.

QUANTITY ESTIMATE

GEOTEXTILE	900 S.Y.
CLASS-II RIPRAP	
CULVERT	110 TONS
CLASS-I RIPRAP	
CHANNEL BANKS	395 TONS
CHANNEL BED-COUNTERSUNK	22 TONS
CLASS-B RIPRAP	
CHANNEL BED-COUNTERSUNK	4 TONS
EXCAVATION	
CULVERT	80 CY
CHANNEL	1050 CY
FILL IN POND (EXCLUDING RDY FILL)	3100 CY
NET	2050 CY FILL

-DRW6-
PI Sta 10+79.67
Δ = 9° 28' 20.0" (LT)
D = 114° 35' 29.6"
L = 8.27'
T = 4.14'
R = 50.00'

-DRW7-
PI Sta 11+19.56
Δ = 81° 08' 56.5" (LT)
D = 286° 28' 44.0"
L = 28.33'
T = 17.13'
R = 20.00'

SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7B- PROFILE
SEE SHEET 40 FOR -DRW6- PROFILE
SEE SHEET 41 FOR -DRW7- PROFILE

3/5/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCHLINE (SEE SHEET 22)

MATCHLINE (SEE SHEET 23)

MATCHLINE -L- STA 202+00 (SEE SHEET 17)

MATCHLINE -L- STA 216+00 (SEE SHEET 19)

205+00

210+00

215+00

(90) CLAY GARDNER
DB 2983 PG 694
MB 2005 PG 923

(91) CLAY GARDNER
DB 3363 PG 296

(92) REBECCA PARTIN
DB 693 PG 508

REBECCA PARTIN
DB 693 PG 508

CULTIVATED

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

+50 100' LT WWF

MIN DEPTH 2GI-A SEE DETAIL 840d17 SHEET 2C-1

4' PS

100'

1'-6" C&G

12' 12' 15' 15' 12' 12'

36" RCP-LV

SPECIAL LATERAL 4' BASE DITCH SEE DETAIL 31

B.D.O.

BERM 2' BASE DITCH SEE DETAIL 40 EST. 20 TONS CL-B RIPRAP EST. 55 S.Y. GFD

+50 115' LT

CLEAN WATER DIVERSION

18" CSP W/ELBOWS

24"

2GI-A

FALSE SUMP SEE DETAIL 8

BERM 2' BASE DITCH SEE DETAIL 41 EST. 50 TONS CL-B RIPRAP EST. 135 S.Y. GFD

24" CSP W/ELBOWS

BERM 2' BASE DITCH SEE DETAIL 40 EST. 140 TONS CL-B RIPRAP EST. 380 S.Y. GFD

+66 154' LT

+10 130' LT

-Y7C- ACCESS ROAD 4 EXIST

+00(Y7C) EX R/W

RETAIN

BEGIN CONSTRUCTION -Y7C- POT Sta. 14+95.00

END CONSTRUCTION -Y7C- POT Sta. 15+95.00

TERMINAL END SECTION -Y7C- PC Sta. 18+01.16

GRADE TO DRAIN +30 120' LT

TOE PROTECTION SEE DETAIL 12 EST. 35 S.Y. PSRM

N 3° 28' 35.5" W

-L- N 47° 19' 32.7" W NC 55

RIPRAP PAD AT OUTLET 15 TONS CL-I RIPRAP 30 S.Y. GFD

FLARE CUT DITCH OUT TO TIE TO EXIST. DITCH

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

ACCESS POINT

PUE

END C/A END WWF +40 100' RT

BEGIN C/A BEGIN WWF +00 100' RT

+22.31 120' RT

+65.7 100' RT

+45.98 120' RT

END C/A END WWF +77(L) 100' RT

BEGIN C/A BEGIN WWF +37(L) 100' RT

TDE

+85 309' RT

+33 451' RT

+69 415' RT

-Y7C- PT Sta. 19+24.42

N 3° 42' 43.0" W

OLD MATTHEWS MILL POND RD

-Y7C-
PI Sta 11+43.06
△ = 69° 34' 34.1" (LT)
D = 37° 12' 18.2"
L = 187.01'
T = 106.99'
R = 154.00'
SE = NC
RO = NONE

SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7C- PROFILE

3/5/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

REVISIONS 5/14/99

3/5/2021

-L-

PIs Sta 223+65.74	PI Sta 251+52.68
Θs = 1° 50' 53.7"	Δ = 72° 05' 05.6" (RT)
Ls = 240.00'	D = 1° 32' 24.8"
LT = 160.01'	L = 4,680.20'
ST = 80.01'	T = 2,706.95'
	R = 3,720.00'
	SE = 0.04

MATCHLINE (SEE SHEET 23)

MATCHLINE (SEE SHEET 24)

MATCHLINE -L- STA 216+00 (SEE SHEET 18)

MATCHLINE -L- STA 230+00 (SEE SHEET 20)

220+00

225+00

20+00

CULTIVATED

WOODS

(92) REBECCA PARTIN
DB 693 PG 508

(93) CUTTS CHAPEL FWB CHURCH
DB 2124 PG 562
MB 2002 PG 139

(94) DEBORAH MATTHEWS
DB 903 PG 584

(95)

(113) WALLACE DUNCAN
DB 1615 PG 136
MB 2002 PG 431

NUNEZ CONCRETE INC
DB 2433 PG 335
MB 2006 PG 892

+15 100' LT

RIPRAP PAD AT OUTLET
8 TONS CL-B RIPRAP
21 S.Y. GFD

WWF

1914

BEGIN FULL C/A +54 100' LT

+05.73 100' LT

END FULL C/A +45 100' LT

+45.73 100' LT

300' TAPER

200' TAPER (LT/RT)

+59 100' LT

+50 100' LT

+86 117' LT

SEDIMENT CONTROL BASIN

END WWF +84 111.69' LT 128'

BEGIN WWF +14 115' LT 128'

PDE

+47 100' LT

1908

54" RCP-IV

RIPRAP PAD AT OUTLET
33 TONS CL-I RIPRAP
62 S.Y. GFD

4' PS

1'-6" C&G

30" RCP

N 47° 19' 32.7" W

-L- NC 55

15" RCP-IV

DI

TB 2GI

2'-9" C&G

1903

1902

1909

1901

1906

30" RCP-IV

TB 2GI-A

1907

REMOVE & BACKFILL

GRADE TO DRAIN

1913

1915

CLEAN WATER DIVERSION

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

+90(L) 100' RT

+61.66(L) 130' RT

+79(Y7C) EX R/W

+46 130' RT

BEGIN FULL C/A +54 100' RT

+49 155' RT

+44 187' RT

END FULL C/A +45 110' RT

+52 139' RT

+45.73 110' RT

+48 110' RT

+00 115' RT

+48 110' RT

RIPRAP PAD AT OUTLET
EST. 3 TONS CL-B RIPRAP
EST. 10 S.Y. GFD

150' TAPER (LT/RT)

HW

TOE PROTECTION
SEE DETAIL 12
EST. 100 TONS CL-B RIPRAP
EST. 280 S.Y. GFD

END CONSTRUCTION
-Y7C- POT Sta. 20+84.00

BEGIN CONSTRUCTION
-Y7C- POT Sta. 19+84.00
TERMINAL END SECTION

RETAIN EXIST. ROADWAY EMBANKMENT TO ACT AS FALSE SUMP DURING HIGH FLOW

-Y7C- POT Sta. 24+67.00

-L- TS Sta. 222+05.73

-L- SC Sta. 224+45.73

BL-27

BL-28

BY4-108

OLD MATTHEWS MILL POND RD

N 3° 42' 43.0" W

Century Link Copper

Comcast Fiber

Duke Energy Progress

Charter Fiber

Zayo Fiber

Sprint Fiber

Qwest Communications

Matthews Mill Pond Road Sewer

Garnett Co Depot Public Utilities, C. Pipe

EXIST. R/W

ISBKD

ISFD

CONC

48" CMP

48" CHL

48" SPLIT RAIL

16" CONC

6" CONC

EOI

REBECCA PARTIN
DB 693 PG 508

★ TRAFFIC SIGNAL
SEE SHEET 2B-4 FOR INTERSECTION DETAIL 15
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 39 FOR -Y7C- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

-L-
PI Sta 251+52.68
Δ = 72° 05' 05.6" (RT)
D = 1° 32' 24.8"
L = 4,680.20'
T = 2,706.95'
R = 3,720.00'
SE = 0.04

-Y7-
PI Sta 25+89.10
Δ = 3° 31' 49.8" (RT)
D = 0° 55' 26.9"
L = 382.04'
T = 191.08'
R = 6,200.00'

-Y7-
PI Sta 29+75.19
Δ = 19° 19' 39.1" (RT)
D = 5° 00' 00.0"
L = 386.55'
T = 195.13'
R = 1145.92'
SE = 0.055
RO = 132'

MATCHLINE -Y7- STA 29+50 (SEE SHEET 24)

MATCHLINE -L- STA 230+00 (SEE SHEET 19)

MATCHLINE -L- STA 242+00 (SEE SHEET 21)

30+00 | 235+00 | 240+00 | 35+00

(97) HUGH SURLES DB 1107 PG 399

(98) ROY GARDNER DB 814 PG 991

(112) DILLARD ENTERPRISES INC DB 875 PG 308

(95) WILBERT AMERSON DB 3190 PG 648 MB 2014 PG 323

(94) DEBORAH MATTHEWS DB 903 PG 584

(113) WALLACE DUNCAN DB 1615 PG 136 MB 2002 PG 431

(114) RDD LLC DB 1612 PG 643 MB 2006 PG 892

(115) LAMCO CUSTOM BUILDERS LLC DB 3549 PG 267

(96) LAMCO CUSTOM BUILDERS LLC DB 3549 PG 267

NUNEZ CONCRETE INC DB 2433 PG 335 MB 2006 PG 892

-Y7- POC STA 30+17.00 = -DRW8- POT Sta. 10+00.00 △ = 90°

-Y7- PT Sta. 31+66.61

-DRW8- POT Sta. 11+50.00

END CONSTRUCTION -DRW8- POT STA 10+75.00 S 53° 50' 34.8" E

-L- POC Sta. 232+91.08 = -Y7- POT Sta. 33+00.44 △ = 103° 54' 18.0"

-DRW10- POT Sta. 10+00.00 = -Y7- POT STA 34+65.00 △ = 90°

-DRW10- POT Sta. 11+30.00

END CONSTRUCTION -DRW10- POT Sta. 10+92.00

-L- POT Sta. 10+00.00

END CONSTRUCTION -Y7- POT Sta. 37+65.00

300' RT TURN TAPER

150' TAPER (LT/RT)

100' RT TURN TAPER

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1

SPECIAL CUT 'V' DITCH SEE DETAIL 21

PROTECT INLET W/ 5 TONS CL-B RIPRAP EST. 15 S.Y. GFD

ACCESS POINT

REMOVE

TB 2GI-A 2'-9" C&G

2'-9" C&G

1'-6" C&G

30" RCP-IV

4' PS

NC 55

NC 210

-L- NC 55 BYPASS

-Y7- NC 210

2022 ADT / 2045 ADT	DHV	DIR	TTST	DUAL
-Y7- NC 210	8%	55%	2%	4%
17600 / 24300				
-L- NC 55 BYPASS	9%	60%	1%	3%
11700 / 18200				
-L- NC 55 BYPASS	9%	60%	1%	3%
7500 / 11500				
15900 / 27100				
-L- NC 55 BYPASS	9%	60%	1%	3%
3600 / 2500				
1000 / 1600				
1400 / 1500				
9000 / 13400	8%	55%	2%	4%
-Y7- NC 210				

★ TRAFFIC SIGNAL
SEE SHEET 2B-5 FOR INTERSECTION DETAIL 16
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 33 FOR -L- PROFILE
SEE SHEETS 35 & 36 FOR -Y7- PROFILE
SEE SHEET 41 FOR -DRW8- PROFILE
SEE SHEET 41 FOR -DRW10- PROFILE

3/5/2021

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

REVISIONS 5/14/99

3/5/2021

-L-
PI Sta 251+52.68
Δ = 72° 05' 05.6" (RT)
D = 1° 32' 24.8"
L = 4,680.20'
T = 2,706.95'
R = 3,720.00'
SE = 0.04

245+00 250+00 255+00

END TIP PROJECT R-5705A
BEGIN TIP PROJECT R-5705B (BY OTHERS)
-L- POC Sta. 246+00.00 (BK)(R-5705A)
-L- POC Sta. 246+00.00 (AH)(R-5705B)

MATCHLINE -L- STA 242+00 (SEE SHEET 20)

98 ROY GARDNER DB 814 PG 991

TIE PROPOSED 15" RCP-IV TO PROPOSED CB 0404 ON R-5705B (BY OTHERS)

END PROPOSED R/W TIP PROJECT R-5705A
BEGIN PROPOSED R/W TIP PROJECT R-5705B
EX P/L 100' RT

END PROPOSED R/W TIP PROJECT R-5705A
BEGIN PROPOSED R/W TIP PROJECT R-5705B
EX P/L 111.85' RT

END CONSTRUCTION
-L- POC Sta. 255+42.82

SEE SHEET 2B-5 FOR INTERSECTION DETAIL I7
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 33 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS
5/14/99

3/5/2021

NAD 83/NA 2011

-Y7A-
PI Sta 35+36.87
Δ = 79° 29' 31.6" (LT)
D = 2° 29' 28.0"
L = 3,191.02'
T = 1,912.62'
R = 2,300.00'
SE = 0.05
RO = 135'

-Y7B-
PI Sta 16+25.89
Δ = 1° 09' 04.6" (RT)
D = 1° 00' 00.0"
L = 115.13'
T = 57.57'
R = 5,729.58'

PI Sta 21+35.08
Δ = 4° 46' 36.2" (RT)
D = 4° 05' 33.2"
L = 116.72'
T = 58.39'
R = 1,400.00'

PI Sta 22+70.46
Δ = 19° 26' 04.1" (RT)
D = 12° 43' 56.6"
L = 152.64'
T = 77.06'
R = 450.00'

15+00

20+00

(117) DAVID GARDER
DB 3103 PG 553

DAVID GARDNER
DB 1085 PG 174
PC*1 PG 253

WOODS

-Y7A- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y7A- POT Sta. 14+60.00

-Y7A- PC Sta. 16+24.24

-Y7A- POC Sta.19+53.77 =
-Y7B- POT Sta. 10+00.00
Δ = 77°37'34".0"

CULTIVATED

MATCHLINE -Y7A- STA 24+00 (SEE SHEET 23)

RIPRAP PAD AT OUTLET
3 TONS CL-B RIPRAP
10 S.Y. GFD

+24.24 50' LT 27' TYP

150' TAPER

+80.17 50' LT
+13.66 70.45' LT

PUE

+26.68 50' LT

SPECIAL LATERAL 'V' DITCH SEE DETAIL 42

+80 EX R/W

+12 50' LT

+00 55' LT

IRRIGATION SYSTEM

Century Link, Copper

Harnett Co Dept Public Utilities, 4", PVC

MATTHEWS MILL POND RD 18' BST

N 0° 35' 22.4" W

-Y7A- MATTHEWS MILL POND RD

EXIST 18' RCP

65.93'

REMOVE 20' DR

REMOVE

RETAIN

+60 EX R/W

+44.53 37.68' RT
+15.82 65.15' RT
+44.52 44.2' RT
+25.97 79.73' RT
+35.74 72.85' RT
+36.01 84.79' RT

+56 84.11' RT

+56.78 68.64' RT

FALSE SUMP SEE DETAIL 45

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

+24.24 45' RT

210' TAPER

+34.24

+00 45' RT

+06.82(Y7A) 60.97' RT

+73(Y7B) EX R/W

TOE PROTECTION SEE DETAIL 12 EST. 23 TONS CL-B RIPRAP EST. 70 S.Y. GFD

+71.22(Y7A) 65.25' RT

TOE PROTECTION SEE DETAIL 12 EST. 12 TONS CL-B RIPRAP EST. 35 S.Y. GFD

R5705-AZ32

FALSE SUMP SEE DETAIL 14

TIE TO EXIST. DITCH SEE CROSS SECTION 20+50 -Y7A- RT.

RIPRAP PAD AT OUTLET 2 TONS CL-B RIPRAP 7 S.Y. GFD

PUE

EXIST

END CONSTRUCTION
-Y7B- POT Sta.11+75.00

-Y7B- ACCESS ROAD 3

S 86° 25' 28.0" E

EXIST R/W

-Y7B- PC Sta. 15+68.33

BL-26

15+00

MATCHLINE (SEE SHEET 18)

TRACY PERRY
DB 802 PG 325

S 88°33'58" W 199.49'
N 88°33'58" E 200.01'
S 00°21'08" E 140.00'
S 88°31'16" W 1046.10'

(116) GORDAN SARTIN
DB 2321 PG 153
MB 2005 PG 923

(119) GORDON SARTIN
DB 568 PG 60
MB 2005 PG 923

S 88°34'59" W 193.07'
N 88°34'59" E 194.89'
N 03°11'58" W 140.00'

(90) CLAY GARDNER
DB 2983 PG 694
MB 2005 PG 923

SEE SHEET 2B-6 FOR INTERSECTION DETAIL 21
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 36 FOR -Y7A- PROFILE
SEE SHEET 39 FOR -Y7B- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS 5/14/99

3/5/2021

-Y7A-
PI Sta 35+36.87
△ = 79° 29' 31.6" (LT)
D = 2° 29' 28.0"
L = 3,191.02'
T = 1,912.62'
R = 2,300.00'
SE = 0.05
RO = 135'

-Y7C-
PI Sta 11+43.06
△ = 69° 34' 34.1" (LT)
D = 37° 12' 18.2"
L = 187.01'
T = 106.99'
R = 154.00'
SE = NC
RO = NONE

-DRWII-
PI Sta 10+42.22
△ = 59° 00' 00.0" (LT)
D = 114° 35' 29.6"
L = 51.49'
T = 28.29'
R = 50.00'

NAD 83/NA 2011

25+00 30+00 35+00

(117) DAVID GARDER
DB 3103 PG 553

(92) REBECCA PARTIN
DB 693 PG 508

(90) CLAY GARDNER
DB 2983 PG 694
MB 2005 PG 923

(118) LYMAN GREGORY
DB 408 PG 607

(92) REBECCA PARTIN
DB 693 PG 508

MATCHLINE -Y7A- STA 24+00 (SEE SHEET 22)

MATCHLINE -Y7A- STA 37+50 (SEE SHEET 24)

MATCHLINE (SEE SHEET 18)

MATCHLINE (SEE SHEET 18)

MATCHLINE (SEE SHEET 19)

-Y7A- POC Sta. 25+60.00 =
-Y7C- POT Sta. 10+00.00
△ = 90°

N 66° 05' 58.6" E

-Y7C- PC Sta. 10+36.08

S 34° 39' 38.4" E

-DRWII- PC Sta. 10+13.93

-DRWII- PT Sta. 10+65.42

-Y7C- POC Sta. 10+65.00 =
-DRWII- POT Sta. 10+00.00
△ = 90°

N 86° 20' 21.6" E

-DRWII- POT Sta. 11+20.00
END CONSTRUCTION
-DRWII- POT Sta. 11+05.00

-Y7C- PT Sta. 12+23.09

END CONSTRUCTION
-Y7C- POT Sta. 12+99.57

-Y7C- ACCESS ROAD 4
N 3° 28' 35.5" W

-Y7A- MATTHEWS MILL POND RD

SPECIAL CUT DITCH SEE DETAIL 44

SPECIAL LATERAL 'V' DITCH SEE DETAIL 22

LATERAL 'V' DITCH SEE DETAIL 43
EST. 5 C.Y. DDE
EST. 39 TONS CL-B RIPRAP
EST. 150 S.Y. GFD

LATERAL 'V' DITCH
EST. 5 C.Y. DDE
SEE DETAIL 38

RIPRAP PAD AT OUTLET
20 TONS CL-I RIPRAP
39 S.Y. GFD

SEDIMENT CONTROL BASIN

42" RCP-IV

CLEAN WATER DIVERSION

GRADE TO DRAIN SEE CROSS SECTION

+08 50' LT
+00 55' LT
+38 55' LT
+66 79' LT
+45 98' LT
+00 55' LT
+20 45' LT
+15(Y7A) 55' RT
+85 85' RT
+13(Y7C) EX R/W
+93 85' RT
+75 55' RT
+77 85' RT
+54 45' RT
+09 75' RT
+49 76' RT
+80.93(Y7C) 42.33' RT
+29.66(Y7C) 48.42' RT
+99.57(Y7C) 41.93' RT
+99.31(Y7C) EX R/W

CULTIVATED
WOODS
ISBKD
ISFD

R5705-AZ33=BY4

SEE SHEET 2B-6 FOR INTERSECTION DETAIL 22
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 36 FOR -Y7A- PROFILE
SEE SHEET 39 FOR -Y7C- PROFILE
SEE SHEET 41 FOR -DRWII- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-5705A	24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

REVISIONS 5/14/99

3/5/2021

-Y7-
PI Sta 25+89.10
△ = 3° 31' 49.8" (RT)
D = 0° 55' 26.9"
L = 382.04'
T = 191.08'
R = 6,200.00'

PI Sta 29+75.19
△ = 19° 19' 39.1" (RT)
D = 5° 00' 00.0"
L = 386.55'
T = 195.13'
R = 1,145.92'
SE = 0.055
RO = 132'

-Y7A-
PI Sta 35+36.87
△ = 79° 29' 31.6" (LT)
D = 2° 29' 28.0"
L = 3,191.02'
T = 1,912.62'
R = 2,300.00'
SE = 0.05
RO = 135'

20+00 | 25+00 | 30+00 | 35+00 | 40+00 | 45+00 | 50+00

JAMES JOHNSON
DB 2386 PG 596
MB 2008 PG 100

JAMES JOHNSON
DB 1969 PG 136
MB 2014 PG 66

(92) REBECCA PARTIN
DB 693 PG 508

(108) NC DUMPSTER LLC
DB 3337 PG 30

(109) PATSY MCLEAN
DB 1231PG 527

KENNETH EDWARDS
DB 3551PG 561
MB 2004 PG 738

(110) NCD CONTRACTING LLC
DB 3427 PG 571

(111) ROBERT SURLES
DB 537 PG 126

(112) DILLARD ENTERPRISES INC
DB 875 PG 308

(97) HUGH SURLES
DB 1107 PG 399

BEGIN CONSTRUCTION
-Y7- POT Sta. 21+88.45

-Y7- PC Sta. 23+98.02

-Y7A- POT Sta. 50+32.00

-Y7A- POC Sta. 46+74.10 =
-Y7- POC Sta. 24+34.87
△ = 82° 18' 53.0"

-Y7A- PT Sta. 48+15.26

-Y7A- SR 1440 (JAMES NORRIS RD) N 80° 04' 54.0" W

END CONSTRUCTION
-Y7A- POC Sta. 47+90.00

-Y7A- STA 37+50 (SEE SHEET 23)

MATCHLINE -Y7A-

MATCHLINE (SEE SHEET 19)

MATCHLINE (SEE SHEET 19)

MATCHLINE -Y7- STA 29+50 (SEE SHEET 20)

-Y7A- MATTHEWS MILL POND RD

-Y7- NC 210

JAMES NORRIS RD

RETAIN

RETAIN SYSTEM

LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 8 TONS CL-B RIPRAP
EST. 17 S.Y. GFD

CL-II RIPRAP ON BANKS
CL-II RIPRAP IN STREAM BED
SUPPLEMENT WITH CL-I RIPRAP AS CONTRACTOR DEEMS NECESSARY
EST. 35 TONS CL-II RIPRAP
EST. 80 S.Y. GFD
SEE DETAIL 47

LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 10 C.Y. DDE
EST. 14 TONS CL-B RIPRAP
EST. 40 S.Y. GFD.

LATERAL 'V' DITCH
EST. 80 C.Y. DDE
SEE DETAIL 38

SPECIAL CUT DITCH
SEE DETAIL 44

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

LATERAL 'V' DITCH
EST. 100 C.Y. DDE
SEE DETAIL 38

SEDIMENT CONTROL BASIN

72" RCP-IV (1.0' BURIED)

CLEAN WATER DIVERSION

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22

LATERAL 'V' DITCH
SEE DETAIL 43
EST. 90 C.Y. DDE
EST. 30 TONS CL-B RIPRAP
EST. 70 S.Y. GFD

LATERAL 8' BASE DITCH
SEE DETAIL 65
EST. 30 C.Y. DDE
EST. 50 TONS CL-B RIPRAP
EST. 120 S.Y. GFD

CHANNEL CHANGE
SEE DETAIL 15
EST. 190 C.Y. DDE
EST. 130 TONS CL-I RIPRAP
ON BANKS ONLY
EST. 310 S.Y. GFD

TOE PROTECTION
SEE DETAIL 12
EST. 30 TONS CL-B RIPRAP
EST 90 S.Y. GFD

RIPRAP PAD AT OUTLET
15 TONS CL-I RIPRAP
30 S.Y. GFD

REMOVE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 4
EST. 65 TONS CL-B RIPRAP
EST. 165 S.Y. GFD

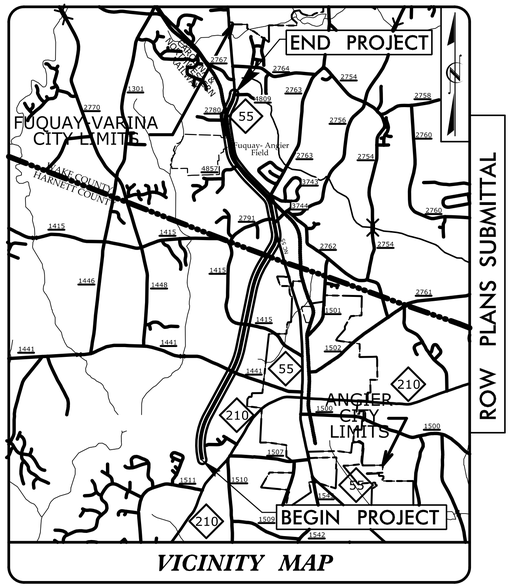
STANDARD 3' BASE DITCH
SEE DETAIL 49
EST. 60 C.Y. DDE
EST. 35 TONS CL-B RIPRAP
EST. 95 S.Y. GFD
(GRADE AT APPROX. 10%)

SEE SHEET 2B-6 FOR INTERSECTION DETAIL 23
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 35 FOR -Y7- PROFILE
SEE SHEET 37 FOR -Y7A- PROFILE

09/08/49

TIP PROJECT: R–5705B

See Sheet 1A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HARNETT & WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R–5705B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
46377.1.3		PE
46377.2.2		ROW
46377.2.6		UTILITIES

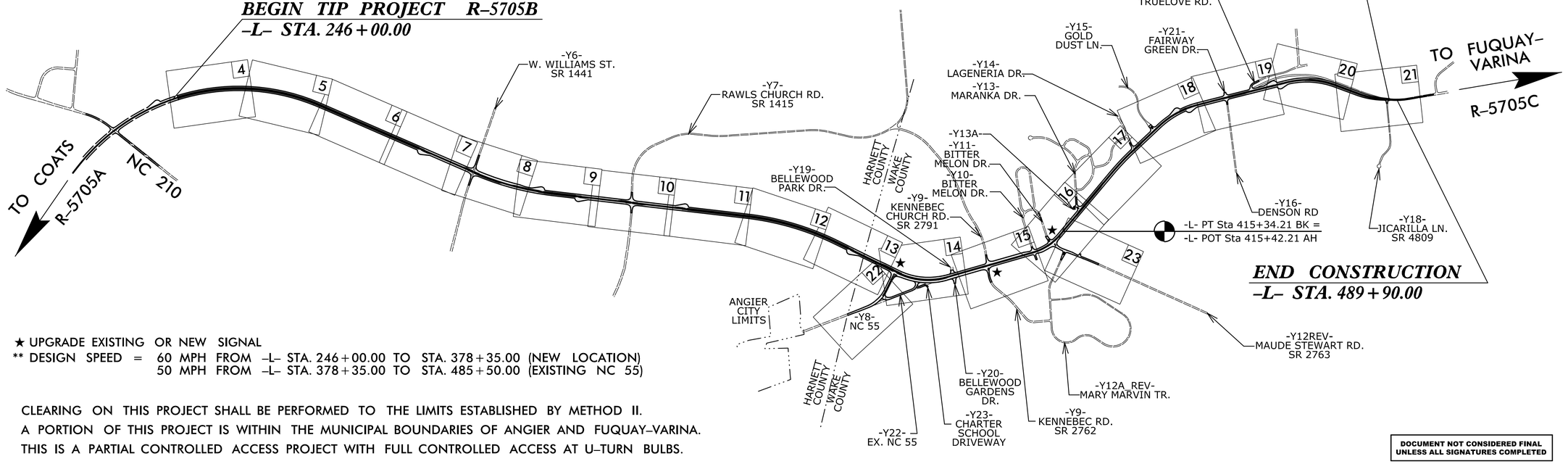
LOCATION: NC 55 FROM NC 210 TO SR 4809 (JICARILLA LANE)

TYPE OF WORK: PAVING, GRADING, DRAINAGE, SIGNALS & CULVERT

NAD 83/NA 2011

BEGIN TIP PROJECT R–5705B
–L– STA. 246 + 00.00

END TIP PROJECT R–5705B
–L– STA. 485 + 57.00



END CONSTRUCTION
–L– STA. 489 + 90.00

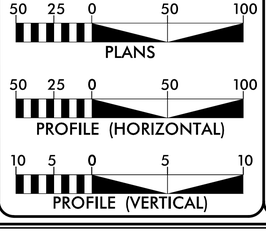
★ UPGRADE EXISTING OR NEW SIGNAL
** DESIGN SPEED = 60 MPH FROM –L– STA. 246 + 00.00 TO STA. 378 + 35.00 (NEW LOCATION)
50 MPH FROM –L– STA. 378 + 35.00 TO STA. 485 + 50.00 (EXISTING NC 55)

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF ANGIER AND FUQUAY–VARINA.
THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH FULL CONTROLLED ACCESS AT U–TURN BULBS.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2022 = 30,200
ADT 2045 = 44,200
K = 9 %
D = 60 %
T = 4 % *
**V = 50 & 60 MPH
* TTST = 1% DUAL 3%
FUNC CLASS = MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT R–5705B = 4.536 MILES
TOTAL LENGTH PROJECT = 4.536 MILES

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

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 3, 2021

LETTING DATE:
OCTOBER 18, 2022

TOMMY REGISTER, P.E.
PROJECT ENGINEER

NICOLE M. HACKLER, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

12/2/2021
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_tsh.dgn
User:bevans

12/2/2016

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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

BOUNDARIES AND PROPERTY:

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

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Secondary Horiz and Vert Control Point
- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Exist Permanent Easement Pin and Cap
- New Permanent Easement Pin and Cap
- Vertical Benchmark
- Existing Right of Way Marker
- Existing Right of Way Line
- New Right of Way Line — RW
- New Right of Way Line with Pin and Cap — RW
- New Right of Way Line with Concrete or Granite R/W Marker — RW
- New Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- New Control of Access — CA
- Existing Easement Line — E
- New Temporary Construction Easement — E
- New Temporary Drainage Easement — TDE
- New Permanent Drainage Easement — PDE
- New Permanent Drainage / Utility Easement — DUE
- New Permanent Utility Easement — PUE
- New Temporary Utility Easement — TUE
- New Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

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

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	4
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

DETAIL H
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 6:1, D, 6:1, Natural Ground
Min. D= 1.0 Ft.

–L– STA. 246+83 RT

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, d, D, 2:1, b, 1':1ft., Fill Slope
GEOTEXTILE, B
*When B is < 6.0'
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
Type of Liner= CLASS 'B' Rip–Rap

FROM STA.252+00 TO STA.253+16–L– LT.

DETAIL AD
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow, 20:1, 10:1, 2', 0.5' Min. 2.0' Max.
S=Ditch Slope
℄ Proposed Ditch
GI elc.

FROM STA.247+64 RT.

DETAIL K
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, d, D, 2:1, b, 1':1ft., Fill Slope
GEOTEXTILE, B
*When B is < 6.0'
Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 5.0 Ft.
Type of Liner= Class 'I' Rip–Rap

FROM –L– STA. 254+16 TO STA. 255+50 RT

DETAIL U
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, b, 1':1ft., Fill Slope
GEOTEXTILE, B
*When B is < 6.0'
Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 10.0 Ft.
Type of Liner= Class 'I' Rip–Rap

FROM –L– STA. 253+67 TO STA. 254+18 RT

DETAIL 'AE'
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground
Min. D=1.5 Ft.
B=3.0 Ft.

–L– STA. 247+50 TO 249+85 LT

DETAIL L
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 6:1 or Flatter, D, 6:1, Front Ditch Slope
Min. D= 1.0 Ft.

FROM –L– STA. 255+50 TO STA. 256+00 RT

DETAIL 'B'
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, Natural Ground
Min. D=1.5 Ft.
B=4.0 Ft.

–L– STA. 254+25 RT

DETAIL 'Y'
VAR. WIDTH BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, Natural Ground
Min. D=1.5 Ft. to 0 Ft.
B=2.0 Ft. to 8.0 Ft.

–L– STA. 255+38 TO 255+65 LT

DETAIL P
SPECIAL CUT DITCH w/HINGE
(Not to Scale)

Natural Ground, VARIABLE, 4:1, D, 6:1 or Flatter, Front Ditch Slope
6.0'
Min. D= 1.5 Ft.

FROM –L– STA. 247+00 TO STA. 247+50 RT

NAD 83/NA 2011

END TIP PROJECT R–5705A
BEGIN TIP PROJECT R–5705B
–L– STA. 246+00.00

3' STANDARD BASE DITCH
SEE DETAIL 'AE'
S=1.3%
L=325'
EST. 475 CY DDE

SEE NCDOT TIP PROJECT R–5705A FOR RIGHT OF WAY PURCHASED UNDER NCDOT TIP PROJECT R–5705A

END PROPOSED R/W TIP PROJECT R–5705A
BEGIN PROPOSED R/W TIP PROJECT R–5705B
℄
100' LT

CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

DRAIN POND

BEGIN FENCE (WW) +00

PROPOSED 15" RCP COMING FROM CB#2104 (R–5705A) DESIGNED BY OTHERS

TB 2GI

15" RCP–IV

24" RCP–IV

2'–9" C&G

1'–6" C&G

GREU TL–3

CAT–1

8:1

CB 0404

CB 0406

CB 0408

CB 0410

CB 0412

CB 0414

CB 0416

CB 0418

0402

0404

0406

0408

0410

0412

0413

0414

0416

0418

0419

0420

0421

0422

BL–33

–L–

PI Sta 251+52.68
Δ = 72° 05' 05.6" (RT)
D = 1° 32' 24.8"
L = 4,680.20'
T = 2,706.95'
R = 3,720.00'
SE= 0.04
RO = 240'

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'

END FENCE (WW) +25

BEGIN FENCE (WW) +85

CLASS 'I' RIP RAP

VAR. WIDTH BASE DITCH
SEE DETAIL 'Y'
L=36'
S=1.4%

+92
100'
123' E

+94
150'

CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

+32
100'

END FENCE (WW) +65.00 100' LT

BEGIN FENCE (WW) +25.00 100' LT

ACCESS POINT

N 17°29'10" E
431.56'

WOODS

200
ROBERTA WOOLARD
DB 586 PG 209

650.94'
S 10°47'40" E

208' R/W WIDTH

MATCHLINE SHEET 5
–L– STA. 259+00.00

BURY PIPE 1.0' F
HW

LOW POINT
–L– STA. 253+70.00
EL. 283.75'

4.0' LATERAL BASE DITCH
SEE DETAIL U
CLASS 'I' RIP RAP

4.0' LAT. BASE DITCH
SEE DETAIL K
CLASS 'I' RIP RAP
EST. 350 TONS
GEOTEXTILE
EST. 410 SY

STANDARD BASE DITCH
SEE DETAIL B

SPECIAL CUT DITCH
SEE DETAIL L

END PROPOSED R/W TIP PROJECT R–5705A
BEGIN PROPOSED R/W TIP PROJECT R–5705B
℄
111.85' RT

+15.00
100' RT

+65.00
100' RT
END FENCE (WW)

+25.00
100' RT
BEGIN FENCE (WW)

201
WILLIAM WHEELER
DB 3438 PG 741

N 16°48'18" E
402.56'

FALSE SUMP
SEE DETAIL 'AD'

SPECIAL CUT DITCH w/HINGE
SEE DETAIL P

STANDARD 'V' DITCH
SEE DETAIL H
EST. DDE 5 CY
L= 63'
S= 5.9%

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

SEE NCDOT TIP PROJECT R–5705A FOR RIGHT OF WAY PURCHASED UNDER NCDOT TIP PROJECT R–5705A

ROY GARDNER
DB 814 PG 991

CULTIVATED

WOODS

PUE

SOIL

S 10°45'20" E
886.63'

S 10°09'46" E
52.98'

ROBERT PHELPS
DB 1368 PG 48

JESUS GARCIA
DB 2299 PG 755

JAMES JOHNSON
DB 2310 PG 997

CLARENCE LYON
DB 2979 PG 572

ISFD

1" CONC

206.46'
N 22°34'07" W

N 17°58'04" E
123.58'

90.00'
S 17°08'56" E

S 17°08'56" E
26.05'

N 17°58'04" E
115.50'

N 28°33'15" E
118.84' MEAS

S 89°46'59" E
159.86'

S 89°46'59" E
159.86'

S 89°46'59" E
105.59'

SEE SHEET 24 FOR –L– PROFILE

3/3/2021
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_04.dgn
User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	5
R/W 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

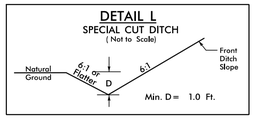
REVISIONS

7-19-2021 PARCEL 203 HAS BEEN SUBDIVIDED. REVISED PROPERTY LINES, OWNERS, DEED BOOK DATA AND EASEMENTS FOR PARCELS 203 & 203A.
10-19-2021 ADDED PARCEL NUMBER 203A (DBE)
REVISED PROPERTY OWNER & DEED BOOK DATA FOR PARCEL 202 (DBE)

8/17/99

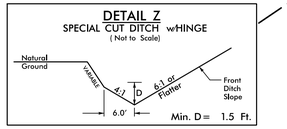
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10/19/2021
User: Evans

DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 272+50 TO STA. 273+50 LT

DETAIL Z
SPECIAL CUT DITCH wHINGE
(Not to Scale)



FROM –L– STA. 259+00 TO STA. 261+00 LT

NAD 83/NA 2011

MATCHLINE SHEET 4
–L– STA. 259+00.00

MATCHLINE SHEET 6
–L– STA. 273+00.00

260 265 270

200
ROBERTA WOOLARD
DB 586 PG 209

201
WILLIAM WHEELER
DB 3438 PG 741

202
LEOTERRA HONEYCUTT OAKS, LLC
DB 3882 PG 703

203
RONALD E WHEELER (TIC)
& REDDIN ADAMS WHEELER (TIC)
DB 3566 PG 722

203A
REDDIN ADAM WHEELER
& MEGHAN JORDAN ERICKSON
DB 3566 PG 722

Century Link, Copper
Soil
WOODS
CULTIVATED
POND
N 46°32'20" E 140.00'
N 02°29'05" W 996.60' (TOTAL)
BL-35
BL-34
–L–
–L– CS Sta. 271+25.93

CL 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY
+00.00 100' LT
+75.00 100' LT
+00.00 110' LT
SPECIAL CUT DITCH W/HINGE SEE DETAIL Z

CLASS 'B' RIP RAP EST. 1 TON GEOTEXTILE EST. 5 CY

END FENCE (WW) +89.00 100' LT
BEGIN FENCE (WW) +49.00 100' LT
ACCESS POINT

END FENCE (WW) +15.00 100' LT
BEGIN FENCE (WW) +75.00 100' LT
+25.93 100' LT
ACCESS POINT
SPECIAL CUT DITCH SEE DETAIL L

END FENCE (WW) +89.00 100' RT
BEGIN FENCE (WW) +49.00 100' RT
+38 100'
ACCESS POINT

+35.00 100' RT END FENCE (WW)
+95.00 100' RT BEGIN FENCE (WW)
+25.93 100' RT

HIGH POINT –L– STA. 267+14.61 ELEV. = 313.09'

+00 100'
+24.66 149'
+28 144'
+35 120'
+33 124'
+67 142'
+57 159'

60' TYP
200' RW WIDTH
12' MED
2'-9" C&G
1'-6" C&G
15" RCP-IV
CB
501 502 503 504 508

N 02°29'05" W 35'
S 77°44'05" W 100.00'
N 12°00'55" E 100.00'
6:1 6:1 3.50 62.20

–L–
PIs Sta 272+05.94
Θs = 1° 50' 53.7"
Ls = 240.00'
LT = 160.01'
ST = 80.01'

SEE SHEET 24 FOR –L– PROFILE

8/17/99

REVISIONS

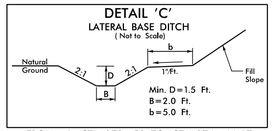
7-19-2021 REVISED PROPERTY LINES,OWNER & DEED BOOK DATA FOR PARCELS 203 & 205.ADDED PARCEL NUMBER 205A.(DBE)
10-19-2021 REVISED PROPERTY OWNER FOR PARCEL 205.RENUMBERED PARCEL 205A TO PARCEL 202.(DBE)

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

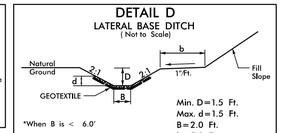
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL 'C'
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 273+50 TO STA. 274+44 LT.
FROM –L– STA. 282+00 TO STA. 283+58 LT.

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

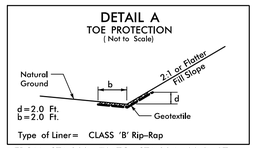


*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap

FROM –L– STA. 281+72 TO STA.283+89 RT
FROM –L– STA. 283+92 TO STA. 287+00 RT

CULTIVATED

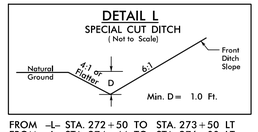
DETAIL A
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS 'B' Rip-Rap

FROM STA.283+70 TO STA.284+00–L– LT.

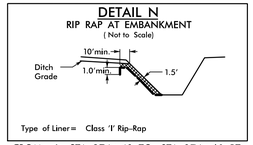
DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 272+50 TO STA. 273+50 LT
FROM –L– STA. 274+44 TO STA. 276+00 LT
FROM –L– STA. 274+00 TO STA. 274+60 RT
FROM –L– STA. 274+79 TO STA. 275+50 RT

CULTIVATED

DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 274+40 TO STA. 274+60 RT
FROM –L– STA. 275+00 TO STA. 275+50 RT

NAD 83/NA 2011

MATCHLINE SHEET 5
–L– STA. 273+00.00

MATCHLINE SHEET 7
–L– STA. 287+00.00

POND

N 10°01'59" W 390.69'

275

280

285

R5705-AZ34

Century 2 Link Copper

203
RONALD E WHEELER (TIC)
& REDDIN ADAMS WHEELER (TIC)
DB 3566 PG 722

204
BARBARA ENNIS
DB 2235 PG 534
MB 2006 PG 182

205
LEOTERRA HONEYCUTT LLC
DB 3882 PG 713
MB 2020 PG 367

202
LEOTERRA HONEYCUTT OAKS LLC
DB 3882 PG 703
MB 2020 PG 367

206
JERRY SMITH
DB 3087 PG 394
MB 2013 PG 63

BEGIN SBG 282+00 LT. AND 281+71 RT.
END SBG 286+60 LT. AND 286+35 RT.

S 09°03'09" W 832.69'

S 11°10'39" E 230.48'

LATERAL BASE DITCH SEE DETAIL G
CLASS 'B' RIP RAP
EST. 2 TONS LOW POINT
GEOTEXTILE –L– STA. 274+45.04
EST. 7 SY ELEV. = 306.82'

SPECIAL CUT DITCH SEE DETAIL L
+65.93 100' LT

CLASS 'I' RIP RAP

END FENCE (WW) +05.00 100' LT

SPECIAL CUT DITCH SEE DETAIL L

BEGIN FENCE (WW) +65.00 100' LT

ACCESS POINT

END FENCE (WW) +00.00 100' LT

BEGIN FENCE (WW) +60.00 100' LT

CLASS 'I' RIP RAP

2.0' LATERAL BASE DITCH SEE DETAIL 'C'

CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY
+34 112.33'

+44 140'

+70.00 135' LT

TOE PROTECTION SEE DETAIL 'A'

+80 118.26' 135'

+66 128'

+00.00 100' LT

+66 100'

0602 0603 0607 0609 0610 0614 0616

15" CSP

ROD AND LUG CONNECTORS W/ELBOWS

CAT–1

GREU TL–

15" RCP–IV

2GI

CULTIVATED

–L–
N 28°27'20.3" E

50' TRANSITION CURB

2'–9" C&G

1'–6" C&G

200' R/W WIDTH

30' MED.

12' 12'

02 01 00

+15.93

0601 0604 0605 0606 0608 0611

HW

RIP RAP AT EMBANKMENT SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL L

+65.93 100' RT

+89.00 100' RT

+00.00 115' RT

+35.00 100' RT END FENCE (WW)

+95.00 100' RT BEGIN FENCE (WW)

+45 100' +58.00 100' RT

END FENCE (WW) +72

BEGIN FENCE (WW) +92

+15 126'

PUE

2.0' LATERAL BASE DITCH SEE DETAIL 'D' CLASS 'B' RIP RAP

BURY PIPE 0.8'

+68.00 129' RT

+67 150'

+00.00 117' RT

+90 138'

2.0' LATERAL BASE DITCH SEE DETAIL 'D' CLASS 'B' RIP RAP

+00.00 –L– ST Sta. 273+65.93

N 10°03'56" W 38.28'

N 79°09'56" W 281.22'

S 11°07'07" W 80.00'

N 78°52'53" W 39.27' 25' R

S 11°07'07" W 350.00'

S 78°52'53" E 39.27' 25' R

S 11°07'07" W 60.00'

S 78°52'53" E 39.27' 25' R

S 69°23'39" E 163.20'

S 69°23'39" E 216.45'

S 69°23'39" E 216.45'

S 69°23'39" E 216.45'

N 69°23'39" W 216.45'

N 69°23'39" W 216.45'

N 69°23'39" W 216.45'

N 69°23'39" W 216.45'

S 20°36'21" W 60.00'

N 20°36'21" E 60.00'

S 20°36'21" W 60.00'

N 20°36'21" E 60.00'

CULTIVATED

SEE SHEET 25 FOR –L– PROFILE

10/19/2021
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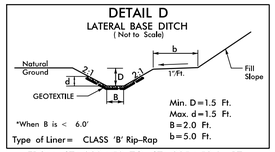
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	7
R/W 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

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



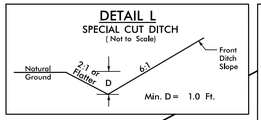
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

*When B is < 6.0'

Type of Liner= CLASS 'B' Rip-Rap

FROM STA.290+50 TO STA.295+58–L– RT.
FROM STA.290+00 TO STA.293+50–L– LT.
FROM STA.299+50 TO STA.301+17–L– LT.

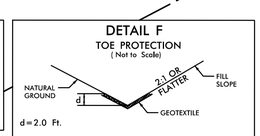
DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.

FROM –L– STA. 287+00 TO STA. 287+50 RT

DETAIL F
TOE PROTECTION
(Not to Scale)



d=2.0 Ft.

Type of Liner= CLASS I Rip-Rap

FROM –L– STA. 297+70 TO STA. 299+50 RT

NAD 83/NA 2011

MATCHLINE SHEET 6
–L– STA. 287+00.00

MATCHLINE SHEET 8
–L– STA. 300+00.00

290 295 300

CULTIVATED

S 00°45'15" W 101.40'

S 78°49'55" E 216.10'

204
BARBARA ENNIS
DB 2235 PG 534
MB 2006 PG 182

207
BARRY DOYLE
DB 737 PG 829
MB 21PG 18

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

END FENCE (WW) +10.00 100' LT
BEGIN FENCE (WW) +70.00 100' LT
END FENCE (WW) +28.00 100' LT
BEGIN FENCE (WW) +88.00 100' LT

ACCESS POINT

BEGIN SBG 291+66 LT. AND 290+70 RT.
END SBG 301+16 LT. AND 301+00 RT.

206
JERRY SMITH
DB 3087 PG 394
MB 2013 PG 63

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 SY

+44 150' LT
+46 119.64' 129'
+60.00 137' LT
+50.00 127' LT
+65.00 115' LT

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
+17.00 100' LT

2' LATERAL BASE DITCH
SEE DETAIL D
CLASS 'I' RIP RAP +70.00 174' LT

271.00' S 20°45' 45" W

N 87°24'45" W 376.80'

ROD AND LUG CONNECTORS W/ELBOWS

15" CSP

WOODS

0705 0706 0707 0708 0710

2GI

15" RCP-IV

N 28° 27' 20.3" E

–L–

200' R/W WIDTH

1'-6" C&G

4'R

100' TAPER

+90.70

+67.70 27.00' OFF.

65' R

GREU TL-3

0700 0701 0702 0703 0704

S 78°49'55" E 183.38'

HIGH POINT
–L– STA. 287+79.61
ELEV. = 320.74'

SPECIAL CUT DITCH
SEE DETAIL L

+50.00 100' RT
+65 120'
+10.00 100' RT
END FENCE (WW)
+70.00 100' RT
BEGIN FENCE (WW)
+17.00 100' RT
+12 120'

206
JERRY SMITH
DB 3087 PG 394
MB 2013 PG 63

+60.00 165' RT
+58 187'
+83 159'

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'

180'

+50.00 123' RT

BURY PIPE 0.8'

0716 0717 0718

+73.00 138' RT
WOODS

208
WILLIAM FARMER
DB 1214 PG 551

+50.00 130' RT
TOE PROTECTION
SEE DETAIL 'F'

+35.00 100' RT
END FENCE (WW)
+90 158'
+95.00 100' RT
BEGIN FENCE (WW)
+73 120'

839.03' S 0°22'06" E

BL-38

CULTIVATED

CHALYBEATE SPRINGS OFF RD NC
DB 685 PG 947

931.79' S 0°38'16" E

BL-37

POND

S 01°41'11" E 86.51'
S 38°58'16" E 38.39'

SEE SHEET 25 FOR –L– PROFILE

3/3/2021
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_07.dgn
User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	8
R/W 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

8/17/99

REVISIONS

10-19-2021 COMBINED PROPERTY LINES FOR PARCELS 212,213,214 & 215 INTO PARCEL 212,DELETED PARCEL NUMBERS 213,214 & 215.(DBE)

10/19/2021
K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_ps08.dgn
User:Reyons

DETAIL A
TOE PROTECTION
(Not to Scale)

Natural Ground, 2:1 or Flatter Fill Slope, b, d, Geotextile
d=2.0 Ft.
b=2.0 Ft.
Type of Liner= CL 'I' Rip-Rap
FROM STA.311+50 TO STA.312+60 LT
FROM STA.311+50 TO STA.312+50 RT

DETAIL P
SPECIAL CUT DITCH w/HINGE
(Not to Scale)

Natural Ground, Hinge, 4:1, D, 6:1 or Flatter, Front Ditch Slope, 6.0'
Min. D= 1.5 Ft.
FROM -L- STA. 303+50 TO STA. 306+00 RT
FROM -L- STA. 307+50 TO STA. 309+00 RT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, b, 1'Ft., Fill Slope, B
Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
FROM -L- STA. 300+68 TO STA. 302+50 RT

DETAIL I
FALSE SUMP
(Not to Scale)

0.5' Min. 1.0' Max., Outside Ditch Traffic Flow, 20:1, 10:1, 2', GI etc., S=Ditch Slope, ℄ Proposed Ditch
-L- STA.311+13 LT

DETAIL AC
FALSE SUMP
(Not to Scale)

0.5' Min. 1.0' Max., Outside Ditch Traffic Flow, 10:1, 20:1, 2.0', GI etc., S=Ditch Slope, ℄ Proposed Ditch
FROM STA.311+13 RT.

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, d, GEOTEXTILE, D, 2:1, b, 1'Ft., Fill Slope, B
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap
FROM STA.299+50 TO STA.301+17-L- LT.

NAD 83/NA 2011

BY6-111
-Y6- POT. Sta. 10+00.00

-Y6- STA. 12+25.00
BEGIN CONST.
BARRY DOYLE
DB 737 PG 829
207

BEGIN SBG 291+66 LT. AND 290+70 RT.
END SBG 301+16 LT. AND 301+00 RT.

REMOVE HW 24" RCP -Y6- +90 EX. R/W 57'
CLASS 'B' RIP RAP EST. 3 TONS GEOTEXTILE 11 SY
2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP
JB W/MH
END FENCE (WW) +80.00 EX. R/W
RECIE FARMER DB 407 PG 480 +15.00 125' LT
WOODS
ROD AND LUG CONNECTORS W/ELBOWS
GREU TL-3
180'-60'-180' R
15" RCP-IV
2GI 0802
100' TAPER
ISBKD 1'-6" C&G
TB2GI 1'-6" C&G GR
TYP CAT-1
CULTIVATED
BEGIN FENCE (WW) +74.00 100' RT
PUE
+63 120'
+91.38 109'
-Y6- +71.98 70'
-L- STA. 302+93.79
-Y6- STA. 15+46.05 END FENCE (WW)
LAURA DICKENS DB 485 PG 202 210
JERRY SMITH DB 755 PG 458 211
JERRY SMITH DB 3139 PG 53
3SBFD
-Y6- STA. 18+00.00
END CONST.
-Y6- POT Sta. 19+42.34

-L- PC Sta. 303+16.42
S 66°12'57.8" E
Century Link, Copper
Town of Angier, 8" PVC
SR 1441 (W. WILLIAMS ST.)
ISFD
BK B
BARRY DOYLE DB 737 PG 829 207
N 01°18'41" E 968.00'
S 01°15'45" E 249.01'
12' WD
2.0% R/W TO F/F
TRANSITION
CONC 20' DR. +85 EX. R/W
ISBKD 60'
2SBKG
20' DR. 14" BST
+80.00 BEGIN EX. R/W FENCE (WW)
+85 50'
+13.44 63'
+79.30 109.26'
+90.00 100' LT
+18.90
+08 112'
+33 121'
WOODS
CULTIVATED
LINWOOD MATTHEWS DB 617 PG 770 DB 918 PG 720 DB 1253 PG 191 212
ANNUAL AVERAGE DAILY TRAFFIC (Vehicles per Day)
SR 1441
W. WILLIAMS ST.
4600 9500
2100 4100
400 500
16000 25700
800 400
14900 24300
800 400
2300 3600
2022 2042
END FENCE (WW) +55.00 100' LT
BEGIN FENCE (WW) +15.00 100' LT
+30.80 106'
TOE PROTECTION SEE DETAIL 'A'
ROD AND LUG
ACCESS POINT
ELBOWS
18" CSP
2GI 0828 FS
CAT-1
BL-41
FALSE SUMP SEE DETAIL
96.63'
100' TAPER
1'-6" C&G
2'-9" C&G
CB
-L-
BL-39=BY6
SPECIAL CUT DITCH W/HINGE SEE DETAIL P
CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY
+73.06 81'
-Y6- +80 80.47'
-Y6- +71.08 65'
LINWOOD MATTHEWS DB 617 PG 770 DB 918 PG 720 DB 1253 PG 191 212
FALSE SUMP SEE DETAIL AC
CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY
SPECIAL CUT DITCH W/HINGE SEE DETAIL P
+59 100'
+25.00 100' RT
TOE PROTECTION SEE DETAIL 'A'
END FENCE (WW) +67
BEGIN FENCE (WW) +87
S 01°43'29" W 200.00'
+00 203'
S 01°43'29" W 50.00'
S 88°56'31" E 100.00'
N 01°43'29" E 50.00'
S 88°56'31" E 100.00'
SUSAN CHRISCOE DB 3075 PG 893
BL-40
216
SUSAN CHRISCOE WB 12E PG 114
S 01°43'29" W 779.69'
WOODS
CULTIVATED
-L-
PI Sta 310+55.64
△ = 16° 49' 11.4" (LT)
D = 1° 08' 45.3"
L = 1,467.81'
T = 739.22'
R = 5,000.00'
SE = 03
RO = 180'

MATCHLINE SHEET 7
-L- STA. 300+00.00

MATCHLINE SHEET 9
-L- STA. 312+00.00

SEE SHEETS 25 THRU 26 FOR -L- PROFILE
SEE SHEET 33 FOR -Y6- PROFILE

8/17/99

REVISIONS

10-19-2021 RENUMBERED PARCEL 215 TO 212.(DBE)

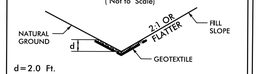
10/18/2021
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User:Revons

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	9
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

DETAIL F
TOE PROTECTION
(Not to Scale)

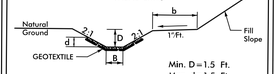


d=2.0 Ft.

Type of Liner= CLASS I Rip-Rap

FROM –L– STA. 311+50 TO STA. 312+60 LT
FROM –L– STA. 311+50 TO STA. 312+50 RT

DETAIL G
LATERAL BASE DITCH
(Not to Scale)



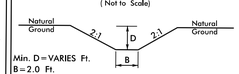
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

*When B is < 6.0'

Type of Liner= CLASS 'I' Rip-Rap

FROM –L– STA. 312+69 TO STA. 317+00 RT
FROM –L– STA. 313+82 TO STA. 317+50 LT

DETAIL 'X'
STANDARD BASE DITCH
(Not to Scale)



Min. D=VARIES Ft.
B=2.0 Ft.

–L– STA. 312+61 LT
FROM –L– STA. 312+56 TO STA. 312+74 RT

–L–
PI Sta 310+55.64
Δ = 16° 49' 11.4" (LT)
D = 1° 08' 45.3"
L = 1,467.81'
T = 739.22'
R = 5,000.00'
SE = 03
RO = 180'

BEGIN SBG 311+87 LT. AND END SBG 315+75 LT.

NAD 83/NA 2011

WOODS

CULTIVATED

212
LINWOOD MATTHEWS
DB 617 PG 770
DB 918 PG 720
DB 1253 PG 191

218
ANN BLALOCK
WB 93E PG 169

325

320

315

CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 10 SY

+50.00 152' LT

2' STANDARD BASE DITCH
SEE DETAIL 'X'
EST. DDE= 25 CY
L= 53'
S= 1.9%

+55.00 174' LT

CLASS 'B' RIP RAP
EST. 2 TONS

+00 172.05'

+00 181'

2' LAT. BASE DITCH
SEE DETAIL G
CLASS 'I' RIP RAP
EST. 500 TONS
GEOTEXTILE
EST. 610 SY

+84.00 160' LT

+68 175'

218
ANN BLALOCK
WB 93E PG 169
–L– PT Sta. 317+84.22

TOE PROTECTION
SEE DETAIL 'A'

ROD AND LUG ELBOWS

18" CSP

ROD AND LUG CONNECTORS W/ELBOWS

+47 END FENCE (WW)

100' TAPER

+75 BEGIN FENCE (WW)

180'

+77.00 100' LT

+84.22 100' LT

END FENCE (WW) +80.00 100' LT

BEGIN FENCE (WW) +40.00 100' LT

+75.00 100' LT

+00 125'

+61.00 100' LT

+55 100'

+00.00 100' LT

ACCESS POINT

100.00'

BL-43

MATCHLINE SHEET 8
–L– STA. 312+00.00

+80.00 27.00' OFF.

65'R

60' TYP

4'R

1'-6" C&G

2'-9" C&G

CB

15" RCP-IV

TB2GI

2GI

AT-1

CAT-1

+24

+71 END FENCE (WW)
TOE PROTECTION
SEE DETAIL 'A'

+99 BEGIN FENCE (WW)

ELBOWS
ROD AND LUG

PUE

2' LAT. BASE DITCH
SEE DETAIL G
CLASS 'I' RIP RAP
EST. 550 TONS
GEOTEXTILE
EST. 700 SY

LOW POINT
–L– STA. 316+14.21
ELEV. = 267.71'

+05.00 100' RT
END FENCE (WW)
+26

BEGIN FENCE (WW)
+46

+77.00 100' RT

+84.22 100' RT
END FENCE (WW)

+44.23 100' RT
BEGIN FENCE (WW)

+30 100'

+75.00 100' RT

+83.75 107'

+55.00 164' RT

+05 157'

+61.00 100' RT

+61 110'

+90 100'

CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 10 SY

+55.00 160' RT

+45 164'

+17.00 152' RT

+80.00 165' RT

2' STANDARD BASE DITCH
SEE DETAIL 'X'
EST. DDE=10 CY
L= 20'
S= 1.0%

216
SUSAN CHRISCOE
DB 3075 PG 893

217
DANNY HONEYCUTT
DB 3127 PG 706
MB 2008 PG 171

BL-42

BL-44

N 11° 38' 08.9" E
–L–

N 30°39'57" E
1938.62'

N 27°13'48" W
91.76'

S 70°04'58" W
30.05'

N 69°43'23" W
57.63'

S 59°52'57" W
29.71'

S 30°16'07" E
118.58'

N 62°34'40" W
64.05'

S 27°25'20" W
56.29'

S 27°13'54" E
151.84'

8:1

3:1

2:1

1'-6" C&G

2'-9" C&G

15" RCP-IV

4'R

TB2GI

CB

50' TRANSITION CURB

54.22' M.D.

200' RW WIDTH

12' 12' 01 02 03

5.5' 3' 2'R +16.06

12' 15' 12' 12'

100' TAPER

+97.13

+71.93 27.00' OFF.

180'

CULTIVATED

ANN BLALOCK
WB 93E PG 169

218

217
DANNY HONEYCUTT
DB 3127 PG 706
MB 2008 PG 171

SEE SHEET 26 FOR –L– PROFILE

MATCHLINE SHEET 10
–L– STA. 326+00.00

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

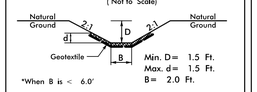
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

REVISIONS
8/17/99
7-19-2021 REVISED PUE ON PARCEL 218.(DBE)

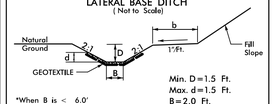
12/14/2021
K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_10.dgn
User: revans

DETAIL Q
STANDARD BASE DITCH
(Not to Scale)



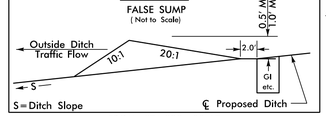
Type of Liner= Class 'I' Rip-Rap
FROM –L– STA. 326+29 TO STA. 326+50 LT

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



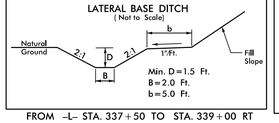
Type of Liner= CLASS 'B' Rip-Rap
FROM –L– STA. 328+10 TO STA. 331+50 RT

DETAIL AC
FALSE SUMP
(Not to Scale)



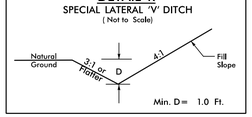
FROM STA.329+00 LT.

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



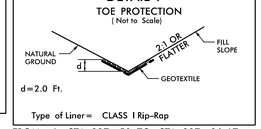
FROM –L– STA. 337+50 TO STA. 339+00 RT

DETAIL R
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



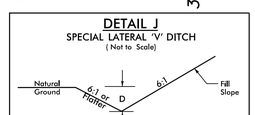
FROM –Y7– STA. 11+00 TO STA. 12+25 LT
FROM –Y7– STA. 14+00 TO STA. 16+00 LT
FROM –Y7– STA. 11+00 TO STA. 11+75 RT
FROM –Y7– STA. 14+00 TO STA. 16+00 RT

DETAIL F
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS I Rip-Rap
FROM –L– STA. 337+50 TO STA. 337+96 LT

DETAIL J
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM –L– STA. 339+00 TO STA. 339+50 RT
FROM –L– STA. 331+50 TO STA. 332+00 RT

–Y7– PI Sta 148+0.22
Δ = 4° 05' 16.8" (RT)
D = 1° 15' 00.7"
L = 326.99'
T = 163.57'
R = 4,583.00'

–Y7– POT Sta. 10+00.00

–Y7– STA. 10+80.00
BEGIN CONST.

–Y7– STA. 13+16.00

–L– STA. 332+45.75

–Y7– STA. 15+00.00
END GRADE

–Y7– STA. 16+00.00
END CONST.

–Y7– PT Sta. 16+43.65

BOBBY ELKINS
DB 2488 PG 543
MB 2008 PG 126

SUNFLIGHT LLC
DB 2724 PG 826
219

ANN BLALOCK
WB 93E PG 169
218

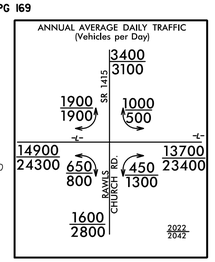
R5705-AZ36 = BY7

BL-45

MATCHLINE SHEET 9
–L– STA. 326+00.00

MATCHLINE SHEET 11
–L– STA. 339+50.00

ANNUAL AVERAGE DAILY TRAFFIC
(Vehicles per Day)



SEE SHEETS 26 & 27 FOR –L– PROFILE
SEE SHEET 33 FOR –Y7– PROFILE

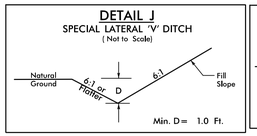
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

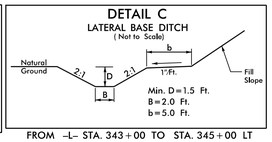
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL J
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



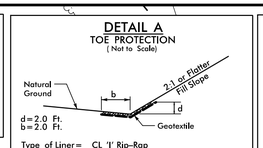
FROM –L– STA. 343+00 TO STA. 343+50 RT
FROM –L– STA. 342+50 TO STA. 343+00 LT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



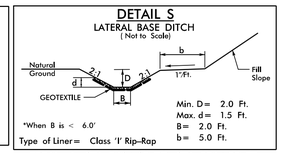
FROM –L– STA. 343+00 TO STA. 345+00 LT

DETAIL A
TOE PROTECTION
(Not to Scale)



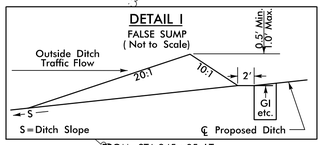
Type of Liner= CL 'I' Rip-Rap
FROM STA.346+50 TO STA.348+50 LT

DETAIL S
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Type of Liner= Class 'I' Rip-Rap
FROM –L– STA. 346+68 TO STA. 354+00 RT
FROM –L– STA. 343+50 TO STA. 346+65 RT

DETAIL I
FALSE SUMP
(Not to Scale)



FROM STA.345+05 LT.

NAD 83/NA 2011

CULTIVATED

BL-47

BL-48

BL-49

BL-46

N 89°50'56" W 293.84'

WOODS

340

345

350

BEGIN SBG 344+92 LT. AND 344+34 RT.
END SBG 348+35 LT. AND 350+63 RT.

TDE

+11
289'

219
SUNFLIGHT LLC
DB 2724 PG 826

220
DWIGHT STEPHENSON
DB 2179 PG 585

BEGIN FENCE (WW)
+25.00
100' LT

END FENCE (WW)
+65.00
100' LT

ACCESS POINT

180'

+16.00
150' LT

+67.00
100' LT

+40.00
100' LT

SPECIAL LAT. 'V' DITCH
SEE DETAIL J

2' LATERAL BASE DITCH
SEE DETAIL C

+80.00
100' LT

FALSE SUMP
SEE DETAIL I

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 SY

+05
120.13'

+57.00
162' LT

CL 'I' RIP RAP
+45
135.77'

+58
167'

+82
100'
125'

+65.00
100' LT

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

END FENCE (WW)
+75.00
100' LT

BEGIN FENCE (WW)
+35.00
100' LT

ACCESS POINT

TOE PROTECTION
SEE DETAIL A

GREU TL-3

+18.34
27.00' OFF.

65'R

100' TAPER

200' R/W WIDTH

1'-6" C&G

4'R

5.5'R

+93.13

2.8
+74.21

–L–

N 11° 38' 08.9" E

+27.90

60' TYP

50' TRANSITION CURB

2'-9" C&G

30' MED.

2GI

CSPH

1106
ELBOW

15" RCP-IV

1105

CAT-1

1107

1100

BURY PIPE 1.0'

HW

+00
100'

+25.00
100' RT

+50
120'

LOW POINT
–L– STA. 342+52.27
ELEV. = 293.61'

SPECIAL LAT. 'V' DITCH
SEE DETAIL J

+13
100'

+40.00
100' RT

+49.00
100' RT

+85
129'

+90
129'

PUE

2' LATERAL BASE DITCH
DETAIL S
CLASS 'I' RIP RAP
EST. 535 TONS
GEOTEXTILE
EST. 650 SY

+73.00
146' RT

+73
167'

+51.00
117' RT
END FENCE (WW)

+35.00
100' RT
BEGIN FENCE (WW)

+88
130'

+17
100'

2' LATERAL BASE DITCH
DETAIL S
CLASS 'I' RIP RAP
EST. 960 TONS
GEOTEXTILE
EST. 1,195 SY

MATCHLINE SHEET 10
–L– STA. 339+50.00

MATCHLINE SHEET 12
–L– STA. 353+50.00

SEE SHEET 27 FOR –L– PROFILE

3/3/2021
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_11.dgn
User:bevans

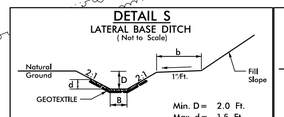
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	12
R/W 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

DETAIL S
LATERAL BASE DITCH
(Not to Scale)

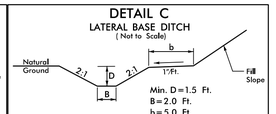


Min. D= 2.0 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
b= 5.0 Ft.

*When B is < 6.0'
Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 346+68 TO STA. 354+00 RT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

FROM –L– STA. 362+00 TO STA. 365+50 RT

NAD 83/NA 2011

360
355
365

220
DWIGHT STEPHENSON
DB 2179 PG 585

221
ROBERTA WOOLARD
DB 1275 PG 306

N. 89°45'42" W.
1283.55'

+67.90 100' LT
+80 100'
+30 120'
+00 118'
+70 100'
+40.00 100' LT
+72.30 156' LT
CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 11 SY

HIGH POINT
–L– STA. 363+43.33
ELEV. = 329.12'

END FENCE (WW) +90.00 100' LT
BEGIN FENCE (WW) +50.00 100' LT
ACCESS POINT

MATCHLINE SHEET 11
–L– STA. 353+50.00

MATCHLINE SHEET 13
–L– STA. 367+50.00

CULTIVATED
15" RCP-IV
CB
1201
1202
1203
1204
1205
1206
1207
200' R/W WIDTH
30' MED.
12' 12'
24" RCP-IV
2'-9" C&G
1'-6" C&G
03
00
2' LATERAL BASE DITCH SEE DETAIL S
2' LATERAL BASE DITCH SEE DETAIL C
+71 100'
+78 114'
+94 100'
+50.00 100' RT END FENCE (WW)
+10.00 100' RT BEGIN FENCE (WW)
BL-51
BL-50
BM#17
+67.90 100' RT
–L– PC Sta. 353+67.90

–L–
PI Sta 362+25.78
Δ = 19° 28' 17.8" (RT)
D = 1° 08' 45.3"
L = 1,699.22'
T = 857.88'
R = 5,000.00'
SE = 0.3
R0 = 180'

SEE SHEET 27 THRU 28 FOR –L– PROFILE

3/3/2021
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_12.dgn
User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	13
R/W 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

10-19-2021 REVISED ACCESS POINT FOR PARCEL 222 TO BE 100' WIDE.(DBE)

8/17/99

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, b, 1':Ft., Fill Slope, B

Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

FROM –L– STA. 375+50 TO STA. 377+17 RT
FROM –L– STA. 370+50 TO STA. 372+07 RT
FROM –L– STA. 372+10 TO STA. 373+00 RT
FROM –L– STA. 380+00 TO STA. 381+50 RT

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, b, 1':Ft., Fill Slope, GEOTEXTILE, d, B

Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap

FROM –L– STA. 377+28 TO STA. 380+00 RT
FROM –L– STA. 370+00 TO STA. 372+39 LT.

DETAIL J
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 6:1 or Flatter, D, 6:1, Fill Slope

Min. D= 1.0 Ft.

FROM –L– STA. 375+00 TO STA. 375+50 RT

DETAIL AB
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, Natural Ground, B

Min. D= 2.0 Ft.
B= 5.0 Ft.

–L– STA. 376+07 LT

MATCHLINE SHEET 12
–L– STA. 367+50.00

MATCHLINE SHEET 14
–L– STA. 381+50.00

TOP=295.04'
TOP=301.39'
TOP=308.67'
TOP=316.31'
TOP=318.67'
TOP=324.67'
TOP=330.15'
TOP=331.67'
TOP=335.67'
TOP=339.67'
TOP=343.67'

30' EASEMENT
WAKE COUNTY
HARNETT COUNTY
HARNETT COUNTY
WAKE COUNTY

N 89°48'20"E 360.73'
S 0°21'52" W 116.33'
N 89°48'20"E 212.12'
N 89°50'42"E 365.72'
N 02°38'52" E 482.03'
N 02°28'00" E 728.00'
N 31°06'26.7" E
N 00°04'39" E 345.80'

NAD 83/NA 2011

370
375
380

221
ROBERTA WOOLARD
DB 1275 PG 306

222
RICHARD BULLOCK
DB 8191PG 168

223
RUTH PETREA
DB 13020 PG 154

CULTIVATED
WOODS

2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP 116'
+88 CLASS 'I' RIP RAP 128'
+08 120.73'
+37.00 125' LT
+00.00 100' LT
+03 105.28'
END FENCE (WW) +07.12 100' LT
BEGIN FENCE (WW) +67.12 100' LT
ACCESS POINT
60' TYP
15" CSP
ROD AND LUG CONNECTORS W/ELBOWS
STANDARD BASE DITCH SEE DETAIL AB
LOW POINT –L– STA. 375+72.22 ELEV. = 313.42'
+48.00 100' LT
+86 100'
+88 117'
+09 117'
+20 100'
TDE
CLASS 'I' RIP RAP EST. 40 TONS GEOTEXTILE EST. 75 SY
BEGIN 2'-6" C&G +57.06
END FENCE (WW) +40.00 100' LT
150' MEDIAN TRANSITION
8:1 TAPER
15" RCP-IV
2'-6" C&G
1'-6" C&G
CB
200' R/W WIDTH
35' MED.
12' 14'
BURY PIPE 1.0'
ALT. PIPE
HW
BL-52
BL-53
2' LATERAL BASE DITCH SEE DETAIL C
–L– PT Sta. 370+67.12
+62 108'
+82 100'
+37.00 100' RT
+67.12 100' RT
+32.13 136'
+42.00 164' RT
+48.00 100' RT
+83 136'
+09 120'
SPECIAL LAT. 'V' DITCH SEE DETAIL J
END FENCE (WW) +06
BEGIN FENCE (WW) +26
2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP EST. 215 TONS GEOTEXTILE EST. 530 SY
+40.00 100' RT
+30.00 100' RT
+30 120'
2' LATERAL BASE DITCH SEE DETAIL C CLASS 'B' RIP RAP EST. 3 TON GEOTEXTILE EST. 10 SY
24" HDPE
+58.94 27.00' OFF.
65' R
4' R
5.5'
2.8'
3'
1'-6" C&G
2'-6" C&G
50' TYP
1302 1303 1304 1305 1306 1307 1308 1309 1310 1312 1313 1314 1315 1316 1317 1318

SEE SHEET 28 FOR –L– PROFILE

10/19/2021
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User:Revons

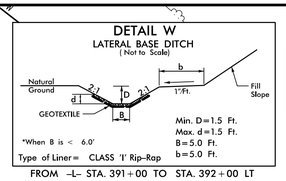
PROJECT REFERENCE NO.	SHEET NO.
R-5705B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

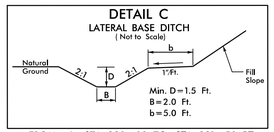
NAD 83/NA 2011

DETAIL W
LATERAL BASE DITCH
(Not to Scale)



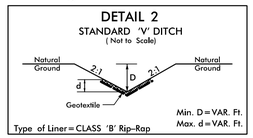
*When B is < 6.0'
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=5.0 Ft.
b=5.0 Ft.
Type of Liner= CLASS 'I' Rip-Rap
FROM –L– STA. 391+00 TO STA. 392+00 LT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
FROM –L– STA. 380+00 TO STA. 381+50 RT
FROM –Y8– STA. 12+92 TO STA. 13+00 RT

DETAIL 2
STANDARD 'V' DITCH
(Not to Scale)

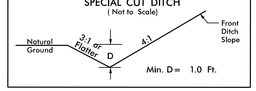


Min. D=VAR. Ft.
Max. d=VAR. Ft.
Type of Liner=CLASS 'B' Rip-Rap
FROM STA. 17+00 –Y22– LT.

–Y19–
PI Sta 10+95.22
Δ = 22° 07' 54.7" (LT)
D = 22° 55' 05.9"
L = 96.57'
T = 48.89'
R = 250.00'

–L–
PI Sta 387+98.92
Δ = 42° 06' 28.1" (LT)
D = 4° 35' 01.2"
L = 918.65'
T = 481.18'
R = 1,250.00'
SE = 04
RO = 200'

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.
FROM –Y22– STA. 11+00 TO STA. 12+30 RT
FROM –Y22– STA. 14+63 TO STA. 16+50 RT.

ANNUAL AVERAGE DAILY TRAFFIC
(Vehicles per Day)

13700 / 23400	NC 55	28800 / 42200	
400 / 1100		15500 / 19900	
16000 / 21000			2022 / 2042

REVISIONS

5-20-2021 DELETED PARCEL NUMBER 305. UPDATED SURVEYS AND ADDED PARCEL NUMBERS AND PROPERTY OWNER DATA FOR PARCELS 305A,305B,305C & 305D.
7-16-2021 REVISED EASEMENTS ON PARCELS 304,305A,305B,305C,305D,306 & 307. REMOVED PUE FROM PARCEL 308.
9-1-2021 REMOVED C/A FENCE FROM –L– STA.389+00 RT TO THE END OF THE SHEET.(DBE)
10-19-2021 ADDED DESIGN FOR –Y22– AND –Y23–. REVISED R/W AND EASEMENTS ON PARCELS 223 & 303. REVISED –L– MEDIAN TO ALLOW A LEFTOVER AND U-TURN AT –Y20–.REVISED DESIGN ALONG –Y8–(DBE)
11-15-2021 REVISED PROPERTY OWNER & DEED BOOK DATA FOR PARCEL 304.(DBE)
REVISED DESIGN FOR –Y8– AND MEDIAN DESIGN FOR –L–. REVISED R/W AND EASEMENTS ON PARCELS 223 & 303. UPDATED WETLANDS ON PARCEL 223.(DBE)

MATCHLINE SHEET 13
–L– STA. 381+50.00

MATCHLINE SHEET 22
–Y8– STA. 13+00.00

MATCHLINE SHEET 15
–L– STA. 395+00.00

–L– STA. 382+59.43
–Y8– STA. 10+00.00

–L– PC Sta. 383+17.74

–Y22– POT Sta. 18+29.53=
–L– POC Sta. 386+93.18

–Y22– PT Sta. 17+46.09

–Y19– POT Sta. 10+00.00

–Y19– PC Sta. 10+46.33

–Y19– STA. 11+00.00
BEGIN CONST.

–Y19– PT Sta. 11+42.90

–L– PT Sta. 392+36.39 N 78° 59' 58.5" E

–Y19– POT Sta. 12+00.00 =
–L– POT Sta. 393+50.42

–Y20– POT Sta. 12+00.00

–Y20– POT Sta. 10+00.00 =
–L– POT Sta. 393+67.05

–Y20– STA. 11+48.00
END CONST.

–Y23– POT Sta. 10+00.00=
–Y22– POC Sta. 16+94.67

–Y23– PC Sta. 15+89.05

–Y23– PC Sta. 10+23.52

–Y23– PT Sta. 10+75.75

–Y23– PT Sta. 12+33.87

–Y23– STA. 12+33.87
END CONST.

–Y23– POT Sta. 12+62.62

–Y23– PC Sta. 11+55.00

–Y23–	–Y23–	–Y22–
PI Sta 10+51.42	PI Sta 12+05.34	PI Sta 16+75.62
Δ = 49° 52' 31.1" (LT)	Δ = 90° 22' 50.2" (RT)	Δ = 59° 59' 06.9" (LT)
D = 95° 29' 34.7"	D = 114° 35' 29.6"	D = 38° 11' 49.9"
L = 52.23'	L = 78.87'	L = 157.04'
T = 27.90'	T = 50.33'	T = 86.58'
R = 60.00'	R = 50.00'	R = 150.00'

★ NEW SIGNAL

SEE SHEETS 28 THRU 29 FOR –L– PROFILE
SEE SHEET 33 FOR –Y8– PROFILE
SEE SHEET 37 FOR –Y19–, –Y20–, –Y22– & –Y23– PROFILES

308 BELLEWOOD HOMEOWNERS ASSOC. INC
DB 17585 PG 811
PB BM2019 PG 1565-1569

KRYSTAL LAUREN MOORE
DB 17941 PG 2460
PB BM2019 PG 1565-1569

LENNAR CAROLINAS LLC
DB 17584 PG 186
PB BM2019 PG 1565-1569

MICHAEL LANCE REESE
DB 17928 PG 1579
PB BM2019 PG 1565-1569

LACEY JO BAYALIT
DB 17944 PG 960
PB BM2019 PG 1565-1569

223 RUTH PETREA
DB 13020 PG 154

305A SUMMER DISALVO & JUSTIN DISALVO
DB 18088 PG 1683

305B PETER CAMPBELL
DB 18043 PG 1250

305C NATASSIA SANTANA & JOEL J. GOMEZ
DB 18047 PG 2563

305D PROPERTY OF CRAIG & EVANS
DB 18067 PG 1866

306 DAVID ALEXANDER BERNAL
DB 17938 PG 1209
PB BM2019 PG 1984-1989

307 BELLEWOOD HOMEOWNERS ASSOCIATION, INC.
DB 17672 PG 600

304 BELLEWOOD HOMEOWNERS ASSOCIATION, INC.
DB 17672 PG 600

303 CAROLINA CHARTER ACADEMY HOLDINGS LLC
DB 18395 PG 1880
PB 2018 PG1240

BELLEWOOD HOMEOWNERS ASSOC. INC
DB 17585 PG 811
PB BM2019 PG 1565-1569

PROPOSED DITCH CLEAN-OUT
LENGTH= +/-240'
EXCAVATION= +/-78cu.yds
TO ELEV= 324.0

5' LAT. BASE DITCH
SEE DETAIL W
CLASS 'I' RIP RAP
EST. 250 TONS
GEOTEXTILE
EST. 200 SY

300' MEDIAN TRANSITION

STANDARD V DITCH
SEE DETAIL 2
DDE- 5cu.yds
FF- 9sq.yds
RIP RAP- 7 TONS

SPECIAL CUT DITCH
SEE DETAIL 1

SPECIAL CUT DITCH
SEE DETAIL 1
where is the existing gas line to tie into?

N 16° 06' 58.6" W
N 76° 06' 05.4" W
N 16° 20' 15.8" W
N 74° 02' 34.4" E
N 33° 32' 15.2" E
S 58° 53' 33.7" E
S 89° 37' 24.3" E
N 11° 00' 01.8" W

W:\5-15-2021\R-5705B\Roadway\Proj\R5705B_Rdy_ps1_14.dgn
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8/17/99

REVISIONS

7-19-2021 REVISED EASEMENTS ON PARCELS 232,234,236,237,238,239,240,241 & 242. REMOVED PUE FROM PARCELS 233 & 308.
UPDATED SURVEY ON PARCEL 240 TO SHOW GARAGE.REMOVED C/A FENCE FROM ENTIRE SHEET.(JDBE)
10-19-2021 REVISED PROPERTY OWNER & DEED BOOK DATA FOR PARCELS 233,236,243 & 304.ADDED 'DO NOT DISTURB GRAVESITE' NOTE TO PARCEL 234.(DBE)

10/19/2021
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PROJECT REFERENCE NO.	SHEET NO.
R-5705B	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

ANNUAL AVERAGE DAILY TRAFFIC (Vehicles per Day)
2100 / 4200
1000 / 850
800 / 2900
28900 / 42200
1550 / 1250
28300 / 44200
1200 / 1100
3100 / 2900
2022 / 2042
SR 2791
SR 2792

NAD 83/NA 2011

MATCHLINE SHEET 14 –L– STA. 395+00.00

MATCHLINE SHEET 16 –L– STA. 408+00.00

–Y9– STA. 9+64.00 BEGIN CONST.

–Y9– PT Sta. 10+15.96

–L– STA. 400+00.01 –Y9– STA. 12+15.32

–L– PC Sta. 403+02.62

–Y9– STA. 15+25.00 END CONST.

–Y9– PC Sta. 12+58.03

–Y9– PT Sta. 13+49.27

–Y9– PC Sta. 13+99.88

–Y9– PT Sta. 16+80.36

–EY9– POT STA. 22+84.76

–L DRV1– PI Sta. 407+20

–L DRV1–POT Sta. 9+95.44

–L DRV1–POT Sta. 12+25.99

BEGIN RETAINING WALL w/HANDRAIL 49.50' RT

LENNAR CAROLINAS LLC
DB 17584 PG 186
PB BM2019 PG 1565-1569

BELLEWOOD HOMEOWNERS ASSOC. INC
DB 17585 PG 811
PB BM2019 PG 1565-1569

308

233 BRUNO PERALTA RANGEL AND WIFE, MARIA JANET PERALTA DB 18536 PG 236

234 KENNEBEC BAPTIST CHURCH DB 3923 PG 244

232 KENNETH LAWRENCE DB 6763 PG 744

236 NEAL EICHHORN DB 17780 PG 2095

237 QUALITY OIL CO LLC DB 14570 PG 345 MB 2011 PG 1073

238 ALBERMARLE PROPERTIES LLC DB 12113 PG 1247 MB 2004 PG 2343

239 LEIGH BALANCE DB 14638 PG 2228 MB 2011 PG 1073

240 REBECCA MCDONALD DB 4911 PG 578

241 GEORGE KANESHIRO DB 14228 PG 1263 MB 2006 PG 1734

242 BYRD PROPERTIES OF ANGIER LLC MB 2011 PG 535 AI DB 13635 PG 117

243 MOHLER INVESTMENTS, LLC DB 17569 PG 1018

304 BELLEWOOD HOMEOWNERS ASSOCIATION, INC. DB 17672 PG 600

DAVID SMITH WILL 169-E MB 1997 PG 473

DEBORAH MOORE DB 7419 PG 140 MB 2017 PG 777

JASON EMERSON DB 8891 PG 523 MB 2001 PG 673

DB 3136 PG 424 CHARLES PRICE MB 1983 PG 640

VIOLET MCCARTNEY HEIRS

MARY UPCHURCH DB 3112 PG 767

CECIL PRICE DB 5036 PG 437 MB 1983 PG 640

REMOVE EXISTING SIGNAL

SEE SHEET 29 FOR –L– PROFILE
SEE SHEET 32 FOR –L–DRV1– PROFILE
SEE SHEET 34 FOR –Y9– PROFILE

–L–	–Y9–		
PI Sta 405+97.57	PI Sta 8+87.62	PI Sta 13+03.66	PI Sta 15+35.75
Δ = 3° 22' 43.8" (LT)	Δ = 10° 17' 43.8" (RT)	Δ = 2° 36' 50.2" (LT)	Δ = 40° 13' 39.7" (LT)
D = 0° 34' 22.6"	D = 4° 00' 00.0"	D = 2° 51' 53.2"	D = 15° 26' 37.0"
L = 589.72'	L = 257.39'	L = 91.24'	L = 260.48'
T = 294.94'	T = 129.04'	T = 45.63'	T = 135.87'
R = 10,000.00'	R = 1,432.39'	R = 2,000.00'	R = 371.00'
SE = NC			

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	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

6-23-2021 REVISED DESIGN FOR –Y12 REV– ALONG WITH R/W AND EASEMENTS FOR PARCELS 244,246 & 251.(DBE)
7-19-2021 REVISED EASEMENTS ON PARCELS 242,244,245 & 250.REMOVED C/A FENCE FROM ENTIRE SHEET.(DBE)
10-19-2021 REVISED PROPERTY OWNER & DEED BOOK DATA FOR PARCELS 243,245 & 255. ADDED "DO NOT DISTURB SIGN" NOTES TO PARCEL 245.(DBE)

8/17/99

ANNUAL AVERAGE DAILY TRAFFIC (Vehicles per Day)

	500 / 800	
200 / 400	BITTER MELON ROAD	250 / 300
28300 / 44200	SR 2763	25700 / 37200
3250 / 7650		600 / 800
3900 / 8600	2022 / 2042	

NAD 83/NA 2011

CHRISTOPHER M. MURPHY AND SPOUSE, TABITHA L. MURPHY DB 17405 PG 1935

MATCHLINE SHEET 15
–L– STA. 408+00.00

MOHLER INVESTMENTS, LLC DB 17569 PG 1018

KDC CAPITAL, LLC DB 17610 PG 2151

SUSAN HARMITH DB 9825 PG 388 MB 2005 PG 2248

MARY CHANCE DB 10338 PG 2828 MB 2005 PG 2248

RICHARD MESTLER DB 16168, PG 1503 MB 2005 PG 2248

GILBERT ARNOLD DB 16317 PG 149 MB 2010 PG 431

VIRGINIA EDWARDS MB 2005 PG 2248 DB 15663 PG 343

BYRD PROPERTIES DB 5658 PG 814

BERYL ROAD PROPERTIES LLC DB 13860 PG 198 MB 2006 PG 1754

ROBERT PEELE DB 16139 PG 1326 MB 2007 PG 487

NC PROPERTY NETWORK INC DB 16217 PG 1180 MB 2008 PG 2308

RUDINE BODDIE DB 16782 PG 1365 MB 2008 PG 2308

JOHNSONS LANDING HOMEOWNERS ASSOC INC DB 16581 PG 1977 MB 2005 PG 347

IHG INVESTMENT DB 15757 PG 489 MB 2010 PG 431

KENNEBEC FLYING CLUB DB 10991 PG 2406 MB 2004 PG 1049

JAMES CLARKE DB 16530 PG 1783 MB 2007 PG 2731

JOSEPH SCUNZIANO DB 14846 PG 280 MB 2007 PG 2731

CHRISTOPHER M. MURPHY AND SPOUSE, TABITHA L. MURPHY DB 17405 PG 1935

–Y10– STA. 14+50.00
BEGIN CONST.

–L– STA. 408+77.03
–Y10– STA. 15+39.60
POT Sta. 10+00.00

–Y11– PC Sta. 13+27.04

–Y11– STA. 13+50.00
BEGIN CONST.

–Y11– PT Sta. 14+30.38

–L– STA. 412+35.12
–Y11– STA. 14+88.12

–Y13– POT Sta. 10+00.00

–Y13– STA. 10+40.00
BEGIN CONST.

–Y13– PC Sta. 11+55.51

–Y13– STA. 12+03.37
–Y13A– STA. 10+00.00

–Y13A– PC Sta. 10+44.43

–Y13A– PT Sta. 10+81.61

–Y13A– POT Sta. 11+17.49

–L– PCC Sta. 408+92.34

–L_DRV2– PT Sta. 12+17.98

–L_DRV2– PC Sta. 10+37.57

–L_DRV2– PRC Sta. 11+27.78

–L_DRV2– POT Sta. 12+72.34

–L– STA. 408+72
END RETAINING WALL
OFFSET 49.50'

–Y12– STA. 9+84.16

–L– STA. 412+30.54

–Y12_REV– PC Sta. 10+08.44

–Y12_REV– PT Sta. 11+67.86

–L– STA. 412+57.05

–Y12_REV– STA. 10+00.00

–L– PT Sta 415+34.21 BK =
–L– POT Sta 415+42.21 AH

MATCHLINE SHEET 23
–Y12_REV– STA. 12+07.69

MATCHLINE SHEET 17
–L– STA. 422+00.00

–Y13– PT Sta. 12+59.50
N 55° 40' 51.1" E
–L– STA. 420+32.37
–Y13– STA. 13+10.60

DO NOT DISTURB SIGNS

DO NOT DISTURB CURB OR PARKING LOT

DO NOT DISTURB RUNWAY LIGHTS

Century Link, Copper

Century Link, Fiber

Spectrum, FO

Hotwire Communications, FO

Town of Angier

PSNC 4" Plastic

Spectrum Communications, FO

–Y12–	–Y12_REV–
PI Sta 11+80.56	PI Sta 10+90.08
Δ = 14° 33' 28.7" (LT)	Δ = 30° 26' 50.5" (LT)
D = 10° 25' 02.7"	D = 19° 05' 54.9"
L = 139.75'	L = 159.42'
T = 70.25'	T = 81.64'
R = 550.00'	R = 300.00'

–L_DRV2–	
PI Sta 10+83.46	PI Sta 11+73.66
Δ = 25° 50' 31.0" (RT)	Δ = 25° 50' 31.0" (LT)
D = 28° 38' 52.4"	D = 28° 38' 52.4"
L = 90.21'	L = 90.21'
T = 45.88'	T = 45.88'
R = 200.00'	R = 200.00'

–L–		–Y11–	–Y13–	–Y13A–
PI Sta 405+97.57	PI Sta 412+21.15	PI Sta 13+79.23	PI Sta 12+09.32	PI Sta 10+65.88
Δ = 3° 22' 43.8" (LT)	Δ = 30° 38' 48.7" (LT)	Δ = 19° 44' 16.9" (LT)	Δ = 36° 19' 57.2" (LT)	Δ = 71° 07' 09.5" (LT)
D = 0° 34' 22.6"	D = 4° 46' 28.7"	D = 19° 05' 54.9"	D = 34° 56' 11.2"	D = 190° 59' 09.4"
L = 589.72'	L = 641.87'	L = 103.35'	L = 104.00'	L = 37.24'
T = 294.94'	T = 328.81'	T = 52.19'	T = 53.81'	T = 21.45'
R = 10,000.00'	R = 1,200.00'	R = 300.00'	R = 164.00'	R = 30.00'
SE = NC	SE = 04			
	R0 = 200'			

★ UPGRADE EXISTING OR NEW SIGNAL

SEE SHEETS 29 THRU 30 FOR –L– PROFILE
SEE SHEET 32 FOR –L–DRV2– PROFILE
SEE SHEET 34 FOR –Y10– & –Y11– PROFILES
SEE SHEET 35 FOR –Y12–, –Y13–, & –Y13A– PROFILES

10/18/2021
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_16.dgn
User:Revone

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	17
R/W 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/NA 2011

REVISIONS

7-19-2021 REMOVED C/A FENCE FROM ENTIRE SHEET.(DBE)
10-19-2021 REVISED PROPERTY OWNER & DEED BOOK DATA FOR PARCEL 255.(DBE)

8/17/99

MATCHLINE SHEET 16
-L- STA. 422+00.00

MATCHLINE SHEET 18
-L- STA. 436+00.00

-Y14- POT Sta. 10+00.00

-Y14- STA. 11+15.00
BEGIN CONST.

-Y14- PC Sta. 11+21.15

-Y14- PT Sta. 12+02.39

-L- PC Sta. 429+29.71

-L- PT Sta. 434+79.55

-L- STA. 435+18.61
-Y14- STA. 12+70.61

R5705-AZ16

R5705-AZ17

BL-59

-L-	-Y14-
PI Sta 432+04.95	PI Sta 11+62.05
Δ = 6° 48' 15.4" (RT)	Δ = 16° 16' 29.0" (LT)
D = 1° 14' 15.0"	D = 20° 02' 00.6"
L = 549.85'	L = 81.24'
T = 275.25'	T = 40.89'
R = 4,630.00'	R = 286.00'
SE = 02	
RO = 100'	

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 35 FOR -Y13- & -Y14- PROFILES

10/19/2021
12:08:21
User:Revans
I:\projects\r-5705b\roadway\proj\R5705B_Rdy_psh_17.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	18
R/W 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

7-9-2021 REMOVED C/A FENCE FROM ENTIRE SHEET.(DBE)

8/17/99

NAD 83/NA 2011

277 PULTE HOME COMPANY
DB 16984 PG 2790
MB 2011 PG 422

273 BETHEL CHURCH INC
DB 10629 PG 1277

274 JEFFREY ZDENEK
DB 11414 PG 697
MB 1995 PG 174

JAMES HARTE
DB 16398 PG 2540

276

277

272 CHRISTOPHER LEE GRAINGER
DB 15448 PG 1736
MB 1994 PG 1865

271 MITCHELL HAM
DB 16708 PG 1894
MB 1994 PG 1865

PHILLIP BROWN
DB 15421 PG 1588
MB 2008 PG 1060

MICHAEL QUINTILONE
DB 16405 PG 949
MB 2006 PG 1060

270

251 KENNEBEC FLYING CLUB
DB 10991 PG 2406
MB 2004 PG 1049

275 KENNEBEC FLYING CLUB
DB 12789 PG 2611
MB 1994 PG 1856

-Y15- POT Sta. 10+00.00

-Y15- STA. 11+50.00
BEGIN CONST.

-L- STA. 440+25.90
-Y15- STA. 12+75.00

-L- PC Sta. 441+49.51

-L- PT Sta. 449+60.45

MATCHLINE SHEET 17
-L- STA. A36+00.00

MATCHLINE SHEET 19
-L- STA. 450+00.00

HIGH POINT
-L- STA. 437+35.59
ELEV. = 352.74'

LOW POINT
-L- STA. 444+94.65
ELEV. = 345.00'

Century Link, FO
Spirit Communications, FO

N 36°29'50" W 316.70'

N 52°07'16" E 1614.18'

N 38°13'18" W 618.23'

N 37°41'52" W 349.19'

N 37°42'03" W

N 36°29'50" W 261.72'

N 75°39'59" E 37.26'

S 15°07'04" E 118.36'

S 15°07'11" E 116.77'

S 75°54'28" W 188.51'

S 75°54'28" W 192.80'

S 51°58'01" W 17.79'

S 02°48'08" E 187.86'

S 79°00'08" W 210.34'

N 79°00'08" E 210.34'

N 02°48'08" W 210.34'

N 02°50'03" W

N 36°29'50" W 316.70'

N 52°07'16" E 1614.18'

N 38°13'18" W 618.23'

N 37°41'52" W 349.19'

N 37°42'03" W

N 36°29'50" W 261.72'

N 75°39'59" E 37.26'

S 15°07'04" E 118.36'

S 15°07'11" E 116.77'

S 75°54'28" W 188.51'

S 75°54'28" W 192.80'

S 51°58'01" W 17.79'

S 02°48'08" E 187.86'

S 79°00'08" W 210.34'

N 79°00'08" E 210.34'

N 02°48'08" W 210.34'

N 02°50'03" W

-L-
PI Sta 445+63.89
Δ = 29° 02' 22.4" (RT)
D = 3° 34' 51.6"
L = 810.94'
T = 414.38'
R = 1,600.00'
SE = 04
RO = 200'

SEE SHEETS 30 THRU 31 FOR -L- PROFILE
SEE SHEETS 36 FOR -Y15- PROFILE

K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_18.dgn
12/14/2021
User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	19
R/W 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/NA 2011

REVISIONS
7-19-2021 REMOVED C/A FENCE FROM ENTIRE SHEET.(DBE)

8/17/99

MATCHLINE SHEET 18
–L– STA. 450+00.00

MATCHLINE SHEET 20
–L– STA. 464+00.00

JAMES HARTE
DB 16298 PG 2540

PULTE HOME COMPANY
DB 16984 PG 2790
MB 2011 PG 422

WARREN BROOKS

GIDEON BURNETT
DB 16868 PG 1805
MB 1976 PG 330

BENJAMIN DICKENS
DB 15685 PG 675

THOMAS TRUELOVE
DB 1961 PG 1058
MB 8002 PG 2441.3'

HARTELAND LLC
DB 15559 PG 213
MB 2000 PG 479

KENNEBEC FLYING CLUB
DB 12789 PG 2611
MB 1994 PG 1856

A E SAUNDERS
MB 1989 PG 544

–Y21– STA. 10+05.00
BEGIN CONST.
–Y21– POT Sta. 11+00.00 =
–L– POT Sta. 454+87.65

–Y21– POT Sta. 10+00.00

–Y17– STA. 10+75.00
BEGIN ROAD CONST.

–Y17– PC Sta. 11+77.92

–Y17– STA. 9+44.62
BEGIN DRAINAGE

–Y17– PT Sta. 10+00.00

–Y17– PT Sta. 13+13.38

–L– STA. 454+92.43
–Y16– STA. 10+00.00

–Y16– STA. 11+25.00
END CONST.

–Y16– POT Sta. 11+96.72

–L– STA. 459+58.88
–Y17– STA. 13+44.09

PROPOSED DITCH CLEAN-OUT
LENGTH = 35 LF
EXCAVATION = 3 cu yds

–L–	–Y17–	–Y17–
PI Sta 445+63.89	PI Sta 12+58.34	PI Sta 8+95.42
Δ = 29° 02' 22.4" (RT)	Δ = 77° 36' 35.0" (LT)	Δ = 12° 35' 58.8" (LT)
D = 3° 34' 51.6"	D = 57° 17' 44.8"	D = 5° 59' 58.4"
L = 810.94'	L = 135.45'	L = 210.01'
T = 414.38'	T = 80.42'	T = 105.43'
R = 1,600.00'	R = 100.00'	R = 955.00'
SE = 04		
R0 = 200'		

SEE SHEET 31 FOR –L– PROFILE
SEE SHEET 36 FOR –Y16 & –Y17– PROFILES
SEE SHEET 37 FOR –Y21– PROFILE

12/14/2021
K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy.pshl_19.dgn
User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	20
R/W 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
8/17/99
7-19-2021 REVISED PUE ON PARCEL 286. REMOVED C/A FENCE FROM ENTIRE SHEET.(DBE)

12/14/2021
K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_20.dgn
User:breyons

DETAIL 'AG'
TOE PROTECTION
(Not to Scale)

Natural Ground; b; 2:1 or Flatter Fill Slope; d; Geotextile

d = 3.0 Ft.
b = 3.0 Ft.

Type of Liner = CL 'I' Rip-Rap

FROM -L- STA. 472+00 TO 473+00 LT

NAD 83/NA 2011

-Y17- PC Sta. 7+89.99

-Y17- POT Sta. 7+75.00

-L- PC Sta. 466+19.13

-L- PT Sta. 475+23.62

MATCHLINE SHEET 19
-L- STA 464+00.00

MATCHLINE SHEET 21
-L- STA. 477+50.00

THOMAS TRUELOVE
DB 11307 PG 1058
MB 2002 PG 211
285

MARK HORSFIELD
DB 17056 PG 2755
MB 1997 PG 1258

WILLIAM BANISTER
DB 17081PG 1561
410

RACHEL TURNER
DB 3229 PG 262

PRENTICE MCLEAN
DB 16904 PG 2492
MB 1983 PG 1382
288

ANS TRUST THE
DB 15463 PG 1242
289

JACK SEARCY
DB 1744 PG 405
286

HARTELAND LLC
DB 15559 PG 213
MB 2000 PG 479
282

JACK SEARCY
DB 2475 PG 142
286

JACK SEARCY
DB 1744 PG 405
286

JACK SEARCY
DB 2798 PG 346

A E SAUNDERS
MB 1989 PG 544
279

GLENN POND
DB 15271PG 1414
MB 1990 PG 464
290

-L-
PI Sta 470+85.59
Δ = 34° 32' 56.7" (RT)
D = 3° 49' 11.0"
L = 904.49'
T = 466.47'
R = 1,500.00'
SE = 04
RO = 200'

HIGH POINT
-L- STA. 473+94.02
ELEV. = 375.14'

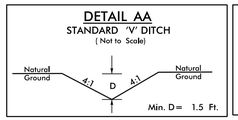
SEE SHEETS 31 THRU 32 FOR -L- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

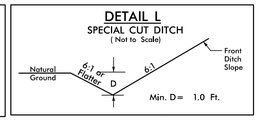
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL AA
STANDARD 'V' DITCH
(Not to Scale)



FROM –L– STA. 485+50 TO STA. 486+80 LT

DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 482+00 TO STA. 485+00 LT

NAD 83/NA 2011

8/17/99

REVISIONS

7-19-2021 REMOVED C/A FENCE FROM ENTIRE SHEET.(DBE)

MATCHLINE SHEET 20
–L– STA. 477+50.00

ANS TRUST THE
DB 15463 PG 1242
289

292
ANS TRUST THE
DB 15463 PG 1242
MB 1997 PG 217

ALESSANDRO BIANCO
DB 16667 PG 561
MB 2016 PG 361
294

SHIREY JO BAIRD
DB 4976 PG 589
MB 2016 PG 361
297

290
GLENN POND
DB 15271 PG 1414
MB 1990 PG 464

291
DANA HALEY
DB 8060 PG 312

293
DONALD HESTER
DB 5150 PG 389
MB 2005 PG 372

BRYAN ZIMMERMAN
DB 11490 PG 1062
MB 2005 PG 372
295

R5705-AZ18

296
JIMMIE HANKS
DB 4890 PG 294
MB 1986 PG 56

LISA WILSHIRE
DB 14923 PG 1237
MB 1986 PG 56

CLAYTON FAMILY LLC
DB 13908 PG 1871
MB 2009 PG 1003

PEGGY WATERS
DB 8568 PG 1614

CITIMORTGAGE INC
DB 14649 PG 300

–L– PC Sta. 480+20.81

–L– PT Sta. 485+54.32

END TIP PROJECT R-5705B
–L– STA. 485+57.00

–L– POT Sta. 486+80.31

–L– STA. 486+90.00
END CONSTRUCTION

–L– PT Sta. 489+35.98

510.13' ROADWAY TRANSITION (LT/RT)
(USE 1500' RADIUS CURVES FOR PROPOSED EOT)

LOW POINT
–L– STA. 482+50.00
ELEV. = 367.62'

HIGH POINT
–L– STA. 483+40.41
ELEV. = 367.85'

SPECIAL CUT DITCH
SEE DETAIL L

STANDARD 'V' DITCH
SEE DETAIL AA

CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

REMOVE

RETAIN

CULTIVATED

–L–
PI Sta 482+90.42 Δ = 20° 22' 43.0" (LT) D = 3° 49' 11.0" L = 533.51' T = 269.60' R = 1,500.00' SE = 04 RO = 200'
PI Sta 488+08.47 Δ = 9° 59' 32.3" (LT) D = 3° 54' 30.0" L = 255.67' T = 128.16' R = 1,465.99'

SEE SHEET 32 FOR –L– PROFILE
SEE SHEET 36 FOR –Y18– PROFILE

12/14/2021
K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_21.dgn
User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

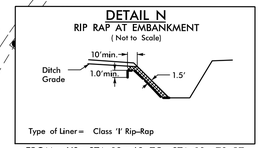
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

REVISIONS

7-19-2021 ADDED OWNER,DEED BOOK DATA AND PARCEL NUMBER TO PARCEL 309.(DBE)
12-8-2021 ADDED DESIGN FOR -Y22-, REVISED R/W AND EASEMENTS ON PARCELS 223,230,231 & 303.(DBE)
8/17/99 UPDATED WETLANDS ON PARCELS -Y8-

12/16/2021
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_22.dgn
User:bevans

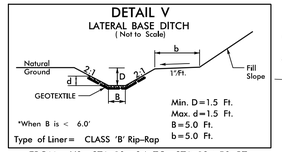
DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner = Class 'I' Rip-Rap

FROM -Y8- STA. 13+62 TO STA. 13+78 RT

DETAIL V
LATERAL BASE DITCH
(Not to Scale)



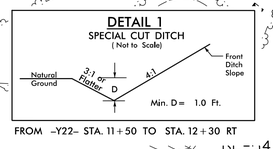
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 5.0 Ft.
b = 5.0 Ft.

*When B is < 6.0'

Type of Liner = CLASS 'B' Rip-Rap

FROM -Y8- STA. 13+84 TO STA. 18+50 RT

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



Min. D = 1.0 Ft.

FROM -Y22- STA. 11+50 TO STA. 12+30 RT

OCEAN 3 LLC
DB 2430 PG 397

LINDERMAN PROPERTIES LLC
DB 3329 PG 971
MB 2016 PG 135

RICHARD BULLOCK
DB 8191 PG 168

NANCY GILES
DB 1018 PG 831

MICKEY BARBOUR
DB 16870 PG 1325
MB 2017 PG 287

RICHARD BULLOCK
MB 2017 PG 287

STUART MATTHEWS
DB 2459 PG 81

RUTH PETREA
DB 13020 PG 154

RANDY SMITH
DB 5189 PG 84

RICHARD DWIGHT BULLOCK
DB 17155 PG 2388
MB 2017 PG 287

RICHARD BULLOCK
DB 15410 PG 1000

SUNNI SKYS LLC
DB 13623 PG 2473

CAROLINA CHARTER ACADEMY HOLDINGS LLC
DB 18395 PG 1880
PB 2018 PG 2240

-Y8- STA. 22+38.00
END CONST.

-Y8- POT Sta. 23+14.08

-Y8- PT Sta. 18+36.50

-Y8- PC Sta. 13+88.55

400' UNIFORM TRANSITION (RIGHT LANE DROP)

-Y8- POC Sta. 15+27.66=
-Y22- POT Sta. 10+00.00

-Y22- PC Sta. 10+16.41

-Y22- PT Sta. 11+48.42

N 44° 23' 30.6" E

R5705-AZ14 = BY8

BY8-114

MATCHLINE SHEET 13
-Y8- STA. 22+00.00

MATCHLINE SHEET 14
-Y22- STA. 13+10.00

-Y8-	-Y22-
PI Sta 16+23.54	PI Sta 10+89.32
Δ = 42° 46' 34.8" (RT)	Δ = 60° 30' 29.1" (LT)
D = 9° 32' 57.5"	D = 45° 50' 11.8"
L = 447.95'	L = 132.01'
T = 234.99'	T = 72.91'
R = 600.00'	R = 125.00'
SE = 04	
RO = 160'	

SEE SHEET 33 FOR -Y8- PROFILE
SEE SHEET 37 FOR -Y22- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	23
R/W 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
8/17/99
6-23-2021 REVISED DESIGN FOR -Y12_REV- AND -Y12A_REV- ALONG WITH R/W AND EASEMENTS FOR PARCELS 246,247,248,249,251 & 301.(DBE)

NAD 83/NA 2011

MATCHLINE SHEET 16
-Y12_REV- STA. 12+07.69

-Y12_REV- PC Sta. 15+81.47

-Y12_REV- PT Sta. 12+50.05

-Y12_REV- STA. 12+94.64
-Y12A_REV- 10+00.00

-Y12_REV- STA. 19+47.60
END CONST.

-Y12- POT Sta. 20+96.76

-Y12A_REV- STA. 11+88.00
END CONST.

-Y12A_REV- POT Sta. 12+56.07

-Y12_REV- PC Sta. 16+57.50

-Y12_REV- PT Sta. 19+09.66

-Y12_REV- POT Sta. 19+47.60

-Y12- PT Sta. 19+41.10

UNIFORM TRANSITION

100' TAPER

37.95' TAPER

DO NOT DISTURB RUNWAY LIGHTS

DO NOT DISTURB FENCE

KENNEBEC FLYING CLUB
DB 1099I PG 2406
MB 2004 PG 1049

BOBBY TERRY
DB 16685 PG 561
MB 1981 PG 574

ANGELA MITCHELL
DB 8297 PG 1736
MB 1981 PG 975

CLASS I RIP RAP
EST. 9 TONS
GEOTEXTILE- 10sy

RUDINE BODDIE
DB 16782 PG 1368
MB 2008 PG 2308

DANIEL POOLE
DB 3389 PG 926
MB 1984 PG 262

MICHAEL MARSH
DB 3811 PG 915
MB 1984 PG 262

JOHN JANKENS
DB 3939 PG 110
MB 1984 PG 262

RANDY GRIMES
DB 3247 PG 26
MB 1984 PG 262

BY12-117

SR 2763 MAUDE STEWART RD

-Y12-	
PI Sta 11+80.56	PI Sta 17+61.34
△ = 14° 33' 28.7" (LT)	△ = 3° 26' 03.2" (RT)
D = 10° 25' 02.7"	D = 0° 57' 17.7"
L = 139.75'	L = 359.63'
T = 70.25'	T = 179.87'
R = 550.00'	R = 6,000.00'

-Y12_REV-
PI Sta 17+83.59
△ = 1° 26' 41.0" (RT)
D = 0° 34' 22.6"
L = 252.15'
T = 126.08'
R = 10,000.00'

SEE SHEET 35 FOR -Y12_REV- & -Y12A_REV- PROFILES

6/23/2021
R:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_23.dgn
User:eyons