



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.08; Released April 2018)

WBS Element: 35494.1.1 TIP No.: R-2511 County(ies): Beaufort Martin Page 1 of 3

General Project Information

WBS Element:	35494.1.1	TIP Number:	R-2511	Project Type:	Roadway Widening	Date:	6/28/2018
NCDOT Contact:	John S. Abel Jr.		Contractor / Designer:	RK&K: Brent Huskey, PE			
Address:	NCDOT - Highway Division 1 113 Airport Drive Suite 100 Edenton, NC 27932		Address:	900 Ridgefield Drive Suite 350 Raleigh, NC 27609			
	Phone:	252-482-7977		Phone:	919-878-9560		
	Email:	jabel@ncdot.gov		Email:	bhuskey@rkk.com		
City/Town:	Washington/Williamston		County(ies):	Beaufort	Martin		
River Basin(s):	Tar-Pamlico	Roanoke	CAMA County?	Yes	No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	10.62 miles	Surrounding Land Use:	Rural / Farmland/ Residential					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	105.0	ac.	49.0	ac.				
Typical Cross Section Description:	The proposed typical cross section of US 17 will be a four lane highway with (2)-12' lanes in each direction with 4' shoulders. For most of the project there will be a 46' median from edge of travel to edge of travel. Through out the project there will be various locations with bulbout turns.			The existing typical cross section for US 17 is a two lane highway with 12' lanes and 2' shoulders.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	14,284	Year:	2040	Existing:	9,164	Year:	2020
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>The widening of US 17 between Washington and Williamston will involve alignment improvement, adding lanes and drainage improvements. There are four major crossings on the project providing adequate cross sectional openings to allow water to travel under US 17 without impacting any structures adjacent to the project. The four major crossings consist of a set of dual bridges and three RCBCs. Drainage outfalls along the project have been analyzed to verify stability as well as outlet protection has been incorporated into the design for all proposed drainage improvements. Areas of the project around jurisdictional features have incorporated steeper side slopes of 3:1 to minimize impacts. Due to the water table being at the existing ground, there is a requirement by geotech for the entire length of the project on both sides of the highway, the ditch flow line has to be at least 5' below the edge of travel to allow the ground water to drain properly. The first half of the project is located in Beaufort county which is located in the Tar-Pamlico river basin. The Tar-Pamlico river basin adheres to buffer rules so there are buffer swales that run parallel to US 17 providing filtration before water enters jurisdictional streams. There are 17 sites on the project that have buffer filtration in the Tar-Pamlico river basin. The second half of the project is located in Martin county which is located in the Roanoke river basin. The Roanoke river basin does not adhere to buffer rules.</p>							

Waterbody Information

Surface Water Body (1):	UT Old Ford Swamp		NCDWR Stream Index No.:	28-103-14-1			
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C				
	Supplemental Classification:		Swamp Waters (Sw)		(NSW)		
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	None Provided		Buffer Rules in Effect:		Tar-Pamlico		
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)							



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WBS Element: 35494.1.1 **TIP No.:** R-2511 **County(ies):** Beaufort Martin **Page** 2 **of** 3

Additional Waterbody Information

Surface Water Body (2):	UT to Latham Creek		NCDWR Stream Index No.:	28-103-14-2	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		Swamp Waters (Sw)		(NSW)
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	None Provided		Buffer Rules in Effect:		Tar-Pamlico
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
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):	Gum Swamp		NCDWR Stream Index No.:	28-103-14-2-1	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		Swamp Waters (Sw)		(NSW)
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	None Provided		Buffer Rules in Effect:		Tar-Pamlico
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	
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)				

Surface Water Body (4):	Smithwick Creek		NCDWR Stream Index No.:	23-50-2	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	None Provided		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?	
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):	Jacks Swamp		NCDWR Stream Index No.:	23-50-2-1	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	None Provided		Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
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)				



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WBS Element: 35494.1.1

TIP No.: R-2511

County(ies): Beaufort Martin

Page 3 of 3

Swales

Sheet No.	Station & Coordinates (Road and Non Road Projects)	Surface Water Body	Base Width (ft)	Front Slope (H:1)	Back Slope (H:1)	Drainage Area (ac)	Recommended Treatm't Length (ft)	Actual Length (ft)	Longitudinal Slope (%)	Q2 (cfs)	V2 (fps)	Q10 (cfs)	V10 (fps)	Rock Checks Used	BMP Associated w/ Buffer Rules?
4	-L- 18+48 RT		4.0	3.0	3.0	1.5	145	248	1.39%	4.9	2.0	6.4	2.1	No	Yes
4	-L- 17+84 LT		4.0	3.0	3.0	2.2	216	220	1.00%	7.4	2.0	9.6	2.1	No	Yes
4	-L- 17+88 LT		4.0	3.0	3.0	5.3	534	562	0.53%	15.6	2.0	20.3	2.1	No	Yes
4-5	-L- 18+91 RT		4.0	3.0	3.0	4.2	419	459	0.66%	12.2	2.0	15.9	2.1	No	Yes
7	-L- 54+10 LT		4.0	3.0	3.0	1.9	189	210	1.19%	6.0	2.0	7.8	2.1	No	Yes
7	-L- 54+11 RT		4.0	3.0	3.0	1.3	125	536	1.51%	3.7	1.9	4.7	2.0	No	Yes
7	-Y2- 17+25 LT		4.0	3.0	3.0	0.9	88	225	2.19%	2.6	1.9	3.3	2.0	No	Yes
7	-L- 55+43 LT		4.0	3.0	3.0	6.6	662	43	0.49%	16.1	1.9	20.9	2.1	No	Yes
7-8	-L- 55+43 LT		4.0	3.0	3.0	0.7	73	307	1.00%	2.1	1.4	2.8	1.5	No	Yes
8	-L- 69+53 LT		4.0	3.0	3.0	4.9	492	1103	0.55%	14.4	1.9	18.7	2.1	No	Yes
8	-L- 68+84 RT		4.0	3.0	3.0	4.9	490	534	0.59%	14.3	2.0	18.6	2.1	No	Yes
8-9	-L- 68+88 RT		4.0	3.0	3.0	9.4	938	962	0.42%	22.8	2.0	29.6	2.1	No	Yes
8-9	-L- 69+59 LT		4.0	3.0	3.0	4.7	465	521	0.62%	13.6	2.0	17.6	2.1	No	Yes
10-11	-L- 98+50 RT		4.0	3.0	3.0	1.3	130	450	0.74%	3.8	1.5	4.9	1.6	No	Yes
11	-L- 98+94 RT		4.0	3.0	3.0	3.1	307	1006	0.52%	9.0	1.7	11.6	1.8	No	Yes
10-11	-L- 99+34 LT		4.0	3.0	3.0	3.2	321	615	0.63%	9.4	1.8	12.2	1.9	No	Yes
11	-L- 99+39 LT		4.0	3.0	3.0	2.4	237	651	0.82%	6.9	1.8	9.0	2.0	No	Yes

Additional Comments