



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN



(Version 3.00; Released August 2021)

FOR NCDOT PROJECTS

WBS Element: 50603.1.1 TIP/Proj No: HB-0039 County(ies): New Hanover Page 1 of 2

General Project Information

WBS Element:	50603.1.1	TIP Number:	HB-0039	Project Type:	Bridge Replacement	Date:	3/12/2024
NCDOT Contact:	Charles R. Smith, PE			Contractor / Designer:	Kaitlin Helms, EI		
Address:	1000 Birch Ridge Drive Raleigh, 27610			Address:	HDR 555 Fayetteville St. Suite 900 Raleigh, NC 27601		
	Phone:	919-707-6754			Phone:	919-232-6600	
	Email:	crsmith1@ncdot.gov			Email:	Kaitlin.Helms@hdrinc.com	
City/Town:	Wilmington			County(ies):	New Hanover		
River Basin(s):	Cape Fear			CAMA County?	Yes		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.66 miles	Surrounding Land Use:	Flat grass, Woods, high density residential, industrial					
Project Built-Up Area (ac.)	Proposed Project			Existing Site				
	22.2	ac.	14.7	ac.				
Typical Cross Section Description:	6 Lane Divided (22' median with barrier) with Curb & Gutter, Sidewalk, and Sidepath, 35 mph. 135 ft bridge width.			4' Lane Divided with Median Guardrail. 54 ft bridge width.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	94,900	Year:	2050	Existing:	60,900	Year:	2019

General Project Narrative:
(Description of Minimization of Water Quality Impacts)
 HB-0039 proposed to replace the Cape Fear Memorial Bridge, built in 1969. The bridge carries US17/US76/US421 across the Cape Fear River between New Hanover and Brunswick Counties with terminations in the City of Wilmington on the east and Eagle Island (New Hanover and Brunswick Counties) on the west. The existing bridge is a 4-lane steel center span vertical lift bridge. The proposed bridge would consist of 6-lane median divided facility with a barrier-separated multi-use path. The project is needed to accommodate local population increases and truck traffic for the Port of Wilmington. 3 design options are being considered: movable span with 65' vertical clearance, a fixed span with 135' vertical clearance, and a fixed span with 65' vertical clearance. This pSMP is for the impacts associated with the moveable span and the fixed span with 65' vertical clearance options (Alternative A and C).

The project spans from the US-74 interchange in Brunswick County to the intersection of US-17 with S. 5th St. in New Hanover County, a distance of approximately 1.9 miles.

Impact Minimization Efforts: Avoidance and minimization measures will be implemented throughout the project development process. When feasible, steepened slopes will be utilized to minimize wetland and stream impacts on Eagle Island, grass-lined ditches will be implemented to provide treatment for stormwater discharges, and retaining walls will be utilized in locations to limit impacts to the adjacent historic properties.



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General Project Information

Waterbody Information

Surface Water Body (1):	Northeast Cape Fear River		NCDWR Stream Index No.:	18-(71), 18-74-(61)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class SC		
	Supplemental Classification:		Swamp Waters (Sw)		
Other Stream Classification:					
Impairments:	mercury (Hg)	lead (Pb)	pH	dissolved oxygen (DO)	iron (Fe)
Aquatic T&E Species?	Yes	Comments:			
NRTR Stream ID:	Cape Fear River			Buffer Rules in Effect:	N/A
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	Yes	(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 (2):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?			Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?		(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):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?			Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?		(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)	
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Phone:	919-707-6754			Phone:	919-232-6600		
Email:	crsmith1@ncdot.gov			Email:	Kaitlin.Helms@hdrinc.com		
City/Town:	Wilmington			County(ies):	New Hanover		
River Basin(s):	Cape Fear			CAMA County?	Yes		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.66 miles	Surrounding Land Use:	Flat grass, Woods, high density residential, industrial					
Project Built-Up Area (ac.)	44.0 ac.		Proposed Project		Existing Site			
Typical Cross Section Description:	6 Lane Divided (22' median with barrier) with Curb & Gutter, Sidewalk, and Sidepath, 35 mph. 135 ft bridge width.			4' Lane Divided with Median Guardrail. 54 ft bridge width.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	94,900	Year:	2050	Existing:	60,900	Year:	2019

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	Supplemental Classification:		Swamp Waters (Sw)		
Other Stream Classification:					
Impairments:	mercury (Hg)		lead (Pb)	pH	dissolved oxygen (DO)
Aquatic T&E Species?	Yes	Comments:			
NRTR Stream ID:	Cape Fear River			Buffer Rules in Effect:	N/A
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	Yes	(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 (2):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?			Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?		(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)	
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Surface Water Body (3):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?			Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?		(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)	
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