

**Appendix E**  
**NCDOT June 2012 Construction Cost Estimate**



NC-DOT  
 Contract Standards and Development Unit  
 Preliminary Estimate Section

June 8, 2012

**Updated Prices**

Memo To: Harry Lucas  
 Engineer

From: Doug Lane  
 Preliminary Estimate Engineer

Subject: B-2500 (Long Bridge) Alternative Functional Design Construction Estimates, Dare County.

LONG BRIDGE

Description	Alternate A (18.5 Miles)	Alternate C (18.1 Miles)
Segment A	\$2,800,000	
Segment C		\$1,900,000
Strs & Dredging	\$796,000,000	\$794,000,000
Segment F	\$1,400,000	\$1,400,000
B-2500 Long Bridge (Conventional)	\$800,200,000	\$797,300,000
B-2500 Long Bridge (Design Build)	\$1,014,000,000	\$1,011,000,000

Note: Design Build Cost shown is an Average of the High and Low Range.









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Note: Design Build Cost shown is an Average of the High and Low Range.

North Carolina Department of Transportation  
Preliminary Estimate

TIP No. **B-2500** **Seg A** County: **DARE**  
 Route NC 12  
 From Oregon Inlet to Rodanthe - Curved Rodanthe Terminus (Segment A) **CONSTR. COST**  
 Approach Road **\$2,800,000**  
 Typical Section 2 Lane Shoulder

Priced By: Doug Lane 10/31/11 **Updated Prices Only**  
 Quantities By: Casey Woodall 10/8/03  
 Requested By: Victor Barbour, PE 10/28/11

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	1.5	Acre	\$ 30,000.00	\$ 45,000.00
			Earthwork	20,000	CY	\$ 15.00	\$ 300,000.00
			Pavement Removal	650	SY	\$ 5.00	\$ 3,250.00
			Drainage New Location	0.7	Miles	\$ 150,000.00	\$ 105,000.00
			Fine Grading	12,600	SY	\$ 3.00	\$ 37,800.00
			Pavement Widening	0	SY		\$ -
			New Pavement	11,000	SY	\$ 80.00	\$ 880,000.00
			Pavement Resurfacing	0	SY		\$ -
			5.0" Average Asphalt Wedging	3,600	SY	\$ 30.00	\$ 108,000.00
			Subgrade Stabilization	11,300	SY	\$ 7.00	\$ 79,100.00
			1'-6" Concrete Curb and Gutter	0	LF		\$ -
			2'-6" Concrete Curb and Gutter	0	LF		\$ -
			4" Concrete Sidewalk both sides	0	SY		\$ -
			7" Monolithic Islands	0	SY		\$ -
			Erosion Control	7	Acres	\$ 15,000.00	\$ 105,000.00
			New RR Signal with Gates	0	Each		\$ -
			Rubber Railroad Crossing	0	Each		\$ -
			Upgrade Traffic Signal	0	Each		\$ -
			Traffic Control	0.7	Miles	\$ 25,000.00	\$ 17,500.00
			Thermo and Markers	0.7	Miles	\$ 20,000.00	\$ 14,000.00
			<b>Utility Construction</b>				
			Relocate Existing Water Line	0	LF		\$ -
			Relocate Existing Sewer Line	0	LF		\$ -
			Misc. & Mob (15% Strs&Util)				
			Misc. & Mob (45% Functional)				\$ 762,350.00

Lgth 0.7 Miles Contract Cost ..... \$ 2,457,000.00  
E. & C. 15% ..... \$ 343,000.00  
Construction Cost ..... \$ 2,800,000.00

North Carolina Department of Transportation  
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TIP No. **B-2500** **Seg C** County: **DARE**  
 Route NC 12  
 From Oregon Inlet to Rodanthe - Intersection Rodanthe Terminus (Segment C) **CONSTR. COST**  
 Approach Road **\$1,900,000**  
 Typical Section 2 Lane Shoulder

Priced By: Doug Lane 10/31/11 **Updated Unit Prices Only**  
 Quantities By: Casey Woodall 10/8/03  
 Requested By: Victor Barbour, PE 10/28/11

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	0.5	Acre	\$ 30,000.00	\$ 15,000.00
							\$ -
			Earthwork	6,000	CY	\$ 20.00	\$ 120,000.00
			Pavement Removal	0	SY		\$ -
			Drainage New Location	0.40	Miles	\$ 150,000.00	\$ 60,000.00
			Fine Grading	8,600	SY	\$ 3.00	\$ 25,800.00
			Pavement Widening	4,500	SY	\$ 90.00	\$ 405,000.00
			New Pavement	2,900	SY	\$ 80.00	\$ 232,000.00
			Pavement Resurfacing	3,200	SY	\$ 15.00	\$ 48,000.00
			. "Average Asphalt Wedging	0	SY		\$ -
			Subgrade Stabilization	8,100	SY	\$ 7.00	\$ 56,700.00
			1'-6" Concrete Curb and Gutter	0	LF		\$ -
			2'-6" Concrete Curb and Gutter	0	LF		\$ -
			4" Concrete Sidewalk both sides	0	SY		\$ -
			7" Monolithic Islands	0	SY		\$ -
			Erosion Control	4.2	Acres	\$ 15,000.00	\$ 63,000.00
			New RR Signal with Gates	0	Each		\$ -
			Rubber Railroad Crossing	0	Each		\$ -
			New Traffic Signal (NC12 & Old NC12)	1	Each	\$ 90,000.00	\$ 90,000.00
			Traffic Control	0.4	Miles	\$ 35,000.00	\$ 14,000.00
			Thermo and Markers	0.4	Miles	\$ 20,000.00	\$ 8,000.00
			<b>Utility Construction</b>				
			Relocate Existing Water Line	0	LF		\$ -
			Relocate Existing Sewer Line	0	LF		\$ -
			Misc. & Mob (15% Strs&Util)				
			Misc. & Mob (45% Functional)				\$ 511,500.00

Lgth 0.4 Miles Contract Cost ..... \$ 1,649,000.00  
E. & C. 15% ..... \$ 251,000.00  
Construction Cost ..... \$ 1,900,000.00

North Carolina Department of Transportation  
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TIP No. **B-2500 Long Deep Water Alternative** **Alt A Strs**  
 Route **NC 12**  
 From **Replacement of Bridge #11 (Herbert C. Bonner Bridge)  
 with Curved Rodanthe Terminus (Segment A)**  
 Typical Section **Long Deep Water Alternative**

County: **DARE**

<b>CONSTR. COST</b>
<b>\$796,000,000</b>

Priced By: Doug Lane / Harry Lucas                      06/08/12    **Updated Unit Prices**  
 Quantities By: Casey Woodall                              10/14/03  
 Requested By: Victor Barbour, PE                         10/28/11

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Thermo and Markers	17.5	Miles	\$ 12,000.00	\$ 210,000.00
	1.3 Mi.		Southern Approach 40' x 6,575' (Const. From Work Bridge)	263,000	SF	\$ 125.00	\$ 32,875,000.00
	13.9 Mi.		Southern Approach 40' x 73,821' (Constr. From Barge)	2,952,840	SF	\$ 130.00	\$ 383,869,200.00
	0.5 Mi.		High Level & Channel 40' x 2,400'	96,000	SF	\$ 375.00	\$ 36,000,000.00
			<b>Bump Outs (6Ea x 12,000SF)</b>	72,000	SF	\$ 130.00	\$ 9,360,000.00
	1.8 Mi.		Northern Approach 40' x 9,475' (Constr. From Work Bridge)	379,000	SF	\$ 125.00	\$ 47,375,000.00
			<b>Temporary Access</b>				
			Work Bridges and Dredging	1	LS	\$ 120,000,000.00	\$ 120,000,000.00
			Misc. & Mob (10% Structure)	1	LS		\$ 62,968,800.00

Lgth 17.5 Miles	<b>Contract Cost</b> .....	\$ 692,658,000.00
	<b>E. &amp; C. 15%</b> .....	\$ 103,342,000.00
	<b>Construction Cost</b> .....	<b>\$ 796,000,000.00</b>

North Carolina Department of Transportation  
Preliminary Estimate

TIP No. **B-2500 Long Deep Water Alternative** **Alt C Strs**  
 Route **NC 12**  
 From **Replacement of Bridge #11 (Herbert C. Bonner Bridge)  
 with Intersection Rodanthe Terminus (Segment C)**  
 Typical Section **Long Deep Water Alternative**

County: **DARE**

<b>CONSTR. COST</b>
<b>\$794,000,000</b>

Priced By: Doug Lane / Harry Lucas                      6/8/12    **Updated Unit Prices**  
 Prepared By: Casey Woodall                                    10/14/03  
 Requested By: Victor Barbour, PE                            10/28/11

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Thermo and Markers	17.5	Miles	\$ 12,000.00	\$ 210,000.00
	1.2 Mi.		Southern Approach 40' x 6,300' (Const. From Work Bridge)	252,000	SF	\$ 125.00	\$ 31,500,000.00
	13.9 Mi.		Southern Approach 40' x 73,773' (Constr. From Barge)	2,950,920	SF	\$ 130.00	\$ 383,619,600.00
	0.5 Mi.		High Level & Channel 40' x 2,400'	96,000	SF	\$ 375.00	\$ 36,000,000.00
			<b>Bump Outs (6 Ea x 12,000 SF)</b>	<b>72,000</b>	<b>SF</b>	<b>\$ 130.00</b>	<b>\$ 9,360,000.00</b>
	1.8 Mi.		Northern Approach 40' x 9,475' (Constr. From Work Bridge)	379,000	SF	\$ 125.00	\$ 47,375,000.00
			<b>Temporary Access</b>				
			Work Bridges and Dredging	1	LS	\$ 120,000,000.00	\$ 120,000,000.00
			Misc. & Mob (10% Structure)	1	LS		\$ 62,806,400.00

Lgth **17.4 Miles**

<b>Contract Cost</b> .....	\$ 690,871,000.00
<b>E. &amp; C. 15%</b> .....	\$ 103,129,000.00
<b>Construction Cost</b> .....	<b>\$ 794,000,000.00</b>

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TIP No. **B-2500** **Seg F** County: **DARE**  
 Route NC 12  
 From Oregon Inlet to Rodanthe - Bodie Island Terminus (Segment F) **CONSTR. COST**  
 Typical Section 2 Lane Shoulder **\$1,400,000**

Priced By: Doug Lane 10/31/11 **Updated Unit Prices Only**  
 Quantities By: Casey Woodall 10/8/03  
 Requested By: Victor Barbour, PE 10/28/11

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	0.7	Acre	\$ 30,000.00	\$ 21,000.00
			Earthwork	17,000	CY	\$ 15.00	\$ 255,000.00
			Pavement Removal	2,000	SY	\$ 5.00	\$ 10,000.00
			Drainage New Location	0.30	Miles	\$ 150,000.00	\$ 45,000.00
			Fine Grading	5,300	SY	\$ 3.00	\$ 15,900.00
			Pavement Widening	0	SY		\$ -
			New Pavement	4,300	SY	\$ 80.00	\$ 344,000.00
			Pavement Resurfacing	3,000	SY	\$ 12.00	\$ 36,000.00
			"Average Asphalt Wedging	0	SY		\$ -
			Subgrade Stabilization	4,600	SY	\$ 7.00	\$ 32,200.00
			1'-6" Concrete Curb and Gutter	0	LF		\$ -
			2'-6" Concrete Curb and Gutter	0	LF		\$ -
			4" Concrete Sidewalk both sides	0	SY		\$ -
			7" Monolithic Islands	0	SY		\$ -
			Erosion Control	3.7	Acres	\$ 15,000.00	\$ 55,500.00
			New RR Signal with Gates	0	Each		\$ -
			Rubber Railroad Crossing	0	Each		\$ -
			Upgrade Traffic Signal	0	Each		\$ -
			Traffic Control	0.3	Miles	\$ 30,000.00	\$ 9,000.00
			Thermo and Markers	0.3	Miles	\$ 20,000.00	\$ 6,000.00
			<b>Utility Construction</b>				
			Relocate Existing Water Line	0	LF		\$ -
			Relocate Existing Sewer Line	0	LF		\$ -
			Misc. & Mob (15% Strs&Util)				
			Misc. & Mob (45% Functional)				\$ 373,400.00

Lgth 0.3 Miles Contract Cost ..... \$ 1,203,000.00  
E. & C. 15% ..... \$ 197,000.00  
Construction Cost ..... \$ 1,400,000.00