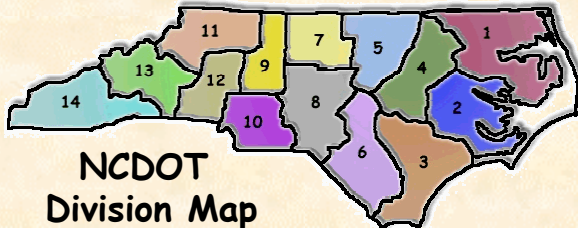


**NCDOT District Engineer's  
Office Contact List**

Div.	Dist.	Counties	Telephone
1	1	Camden, Currituck, Dare, Gates, Pasquotank, Perquimans	252-331-4737
	2	Bertie, Hertford, Northampton	252-332-4021
	3	Chowan, Hyde, Martin, Tyrrell, Washington	252-792-4568
2	1	Beaufort, Pitt	252-946-3689
	2	Carteret, Craven, Pamlico	252-514-4716
	3	Greene, Jones, Lenoir	252-527-0053
3	1	Onslow, Pender	910-346-2040
	2	Duplin, Sampson	910-592-6174
	3	Brunswick, New Hanover	910-251-2655
4	1	Edgecombe, Halifax	252-583-5861
	2	Nash, Wilson	252-459-2128
	3	Johnston, Wayne	919-731-7938
5	1	Wake	919-733-2814
	2	Durham, Granville, Person	919-560-6854
	3	Franklin, Vance, Warren	252-492-0111
6	1	Robeson	910-618-5546
	2	Cumberland, Harnett	910-486-1496
	3	Bladen, Columbus	910-642-3760
7	1	Alamance, Orange	336-570-6833
	2	Guilford	336-334-3161
	3	Caswell, Rockingham	336-634-5644
8	1	Chatham, Randolph	336-629-1423
	2	Hoke, Lee, Moore	910-944-7621
	3	Montgomery, Richmond, Scotland	910-582-7075
9	1	Davidson, Rowan	704-639-7560
	2	Davie, Forsyth, Stokes	336-703-6600
10	1	Cabarrus, Stanly	704-982-0104
	2	Mecklenburg	704-596-6900
	3	Anson, Union	704-289-1397
11	1	Alleghany, Surry, Yadkin	336-835-4241
	2	Avery, Caldwell, Watauga	828-265-5380
	3	Ashe, Wilkes	336-667-9117
12	1	Cleveland, Gaston	704-480-2802
	2	Alexander, Iredell	704-876-3947
	3	Catawba, Lincoln	828-466-5519
13	1	Burke, McDowell, Mitchell, Rutherford	828-652-3344
	2	Buncombe, Madison, Yancey	828-298-2741
14	1	Henderson, Polk, Transylvania	828-891-7911
	2	Haywood, Jackson, Swain	828-488-2131
	3	Cherokee, Clay, Graham, Macon	828-321-4105



**NC DMV-349 Collision Reports**

When completing a collision report form for a collision, it is essential that the "Location" information be collected as accurately as possible. All required data should be provided as outlined in the *Crash Report Instruction Manual* provided by the North Carolina Division of Motor Vehicles. Failure to provide **complete and accurate** information can result in inaccurate crash data which is likely to affect the identification of locations in need of safety improvements as well as project funding decisions.

It is also imperative that the investigating agency submit all completed reports to the North Carolina Division of Motor Vehicles within 10 days of the collision as required by North Carolina General Statute 10-166.1.

*Prepared by:*

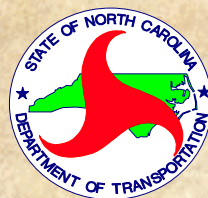
*The Traffic Safety Unit  
of the  
Traffic Engineering & Safety Systems Branch*

**North Carolina  
Department of Transportation**

P.O. Box 25201  
Raleigh, NC 27611-5201

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**March 2005**

*5,000 brochures were printed at a cost of \$0.20 each*

# Roadside Safety Devices

**Second  
Edition**



*Median Barriers*



*Shoulder Guardrail*



*Roadside Signs*

A Guide to Estimating  
Replacement Costs  
and Damages

## Overview

This reference guide has been produced by the North Carolina Department of Transportation (NCDOT) to provide law enforcement officials with a more accurate method of assessing actual damages and repair/replacement costs to roadside safety devices to be included on the DMV-349, North Carolina Collision Report form.

By providing a more accurate estimate of actual damages, law enforcement officials can greatly assist the NCDOT in its efforts to recuperate these costs from the appropriate parties.

*All costs included in this guide contain mobilization, traffic control and any other incidental costs associated with making the specified repairs.*

## General Notes

This reference guide provides general repair and/or replacement cost estimates for common roadside safety devices. However, if damage to a device listed in the guide exceeds or does not match any of the descriptions, please contact the appropriate NCDOT District Engineer†. Your county's District Engineer can also assign a repair or replacement cost for items not identified in this guide such as damage to a bridge, culvert, signal controller, etc.

## Disclaimer

This brochure is intended only as a reference guide to provide law enforcement and others with general pricing information for Roadside Safety Devices. Actual repair/replacement cost may vary based upon current pricing at the time of damage.

† To determine which NCDOT District Engineer to call, locate your county on the NCDOT Division Map on the other side of this guide. Cross reference the Division number from the map to the NCDOT District Engineer's Office Contact list. Locate your county and the appropriate District office.

## Median Barrier Systems

There are many different guardrail systems that can be utilized for median barrier protection. These include variations of single faced W-Beam guardrail,<sup>1</sup> double faced W-Beam guardrail<sup>2</sup> and cable guardrail<sup>3</sup>. Shown below are representative pictures of each type of median barrier along with cost estimates for repairing/replacing each type.

### Typical Median Barrier Examples



<sup>1</sup>Single Faced W-Beam

<sup>2</sup>Double Faced W-Beam

<sup>3</sup>Cable Guardrail

### Median Barrier Repair Costs

Barrier Type	Estimated Cost	Comments
<sup>1</sup> Single Faced W-Beam	\$900 / 25 ft. section	Must be replaced in increments of 25 foot sections (see cost table).
<sup>2</sup> Double Faced W-Beam	\$1,800 / 25 ft. section	Must be replaced in increments of 25 foot sections (see cost table).
<sup>3</sup> Cable Guardrail	\$125 / post	Count the total number of posts damaged and multiply by \$125.
Concrete Jersey Barrier	\$2,200 / hit	Cost figure to be used when repair work will be required.

### Median Barrier Cost Multiplier Table

(for Single & Double Faced W-Beam & Shoulder Guardrail)

# Sections	Est. Cost	# Sections	Est. Cost
1	\$900	6	\$5,400
2	\$1,800	7	\$6,300
3	\$2,700	8	\$7,200
4	\$3,600	9	\$8,100
5	\$4,500	10	\$9,000

- This table may be used for either single faced w-beam or shoulder guardrail.
- For double faced guardrail, count the number of damaged sections and double the cost in the above table.

## Shoulder Guardrail

For typical guardrail (normally located on the outside shoulders) the repair costs are as follows:

Device Type	Cost	Comments
Normal Shoulder Guardrail	\$900 / 25 ft. section	Must be replaced in increments of 25 foot sections (see cost table)

(See Median Barrier Cost Multiplier Table)

## Guardrail End Treatments & Crash Attenuators

Guardrail end treatments are located at both the beginning and the end of a section of guardrail and come in many different configurations. Crash attenuators are located at the approaches to bridges or other structures. Replacement costs range from \$1,500 to more than \$5,000 per end treatment. For the purposes of this guide, **\$4,000 per end treatment/attenuator will be used as an average cost.**

### End Treatment Examples



## Sign Replacement

Estimated replacement costs for roadway signs are given in the table below and include the cost for both the signs and the posts.

Description	Example	Cost
30"x30" regulatory signs w/ post	Stop sign on a secondary route	\$250 each
48"x48" regulatory signs w/ posts	Speed limit signs, merging signs on an Interstate route	\$375 each
Interstate guide signs w/ breakaway posts	Typically these signs are 150-200 sq. ft. or larger	\$7,000 each