

## Bridge Design Speed Study

Bridge # 000267 over Jones Creek on SR 1571 (Altamahaw Racetrack Rd)  
Alamance County  
WBS Element # 17BP.7.R.6



Document Prepared By:

HNTB North Carolina, P.C.  
343 E. Six Forks Rd  
Raleigh NC, 27609  
NC License No: C-1554

April 24, 2012

**Principal Investigator**

Andrew D. Klinksiek, EI

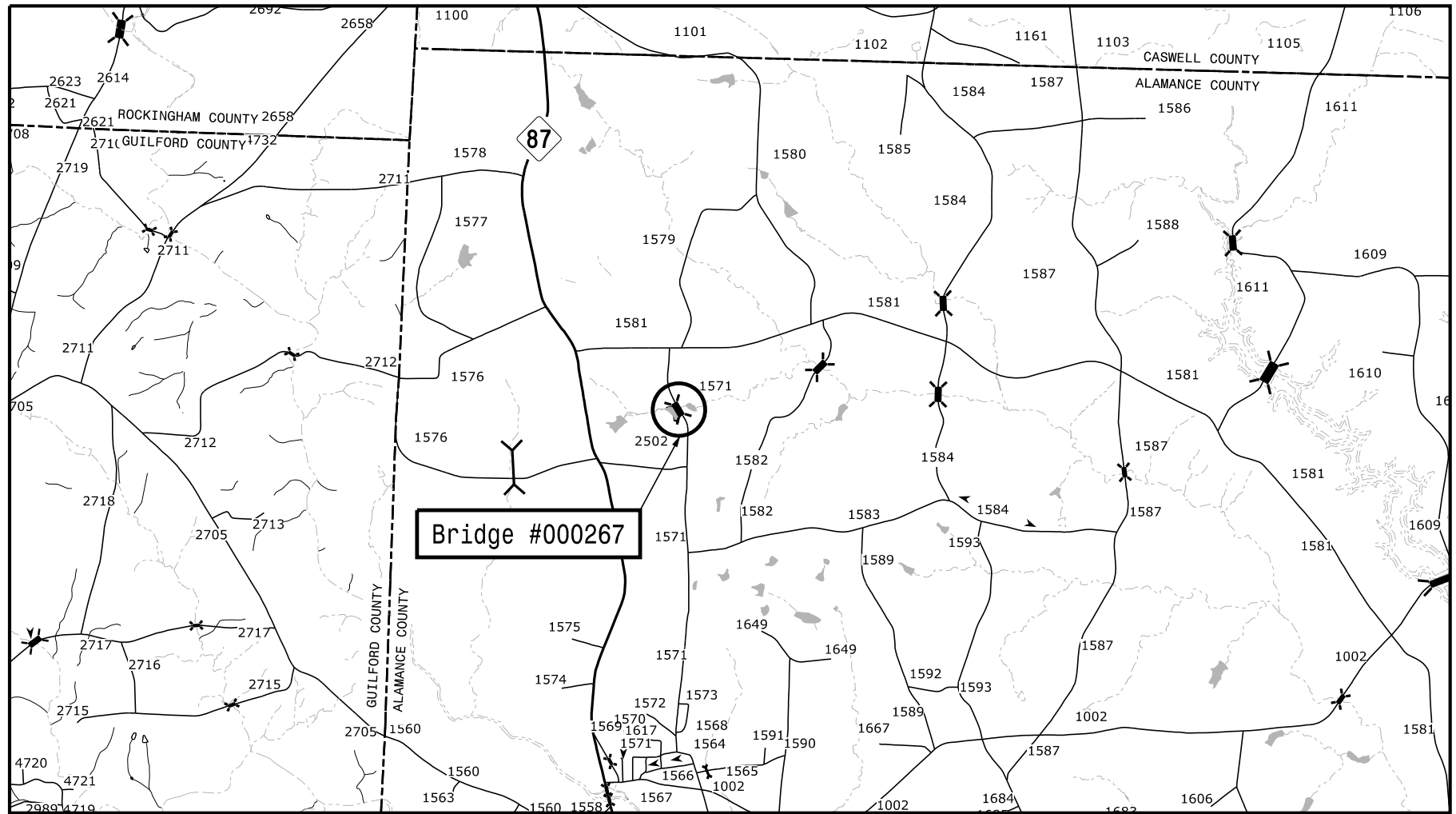
**Project Manager**

Bradley A. Reynolds, PE  
Project Manager



# Division 7 - Alamance County Design Build Year 2 Bridge Program

Bridge locations plotted based on coordinates provided by Bridge Management



| Division | County   | Structure Number | Structure Description              | Latitude   | Longitude   |
|----------|----------|------------------|------------------------------------|------------|-------------|
| 7        | Alamance | 000267           | Bridge #267 over branch on SR 1571 | 36.2175093 | -79.5024908 |



1"=5000'  
SCALE

**HNTB**

HNTB NORTH CAROLINA, P.C.  
343 E. Six Forks Road, Suite 200  
Raleigh, North Carolina 27609  
NC License No: C-1554

# Bridge and Approach Investigation Checklist

|             |                                                |
|-------------|------------------------------------------------|
| Project     | <u>17BP.7.R.6</u>                              |
| Description | <u>Bridge #267 over Jones Creek on SR 1571</u> |
| Route       | <u>SR 1571 (Altamahaw Racetrack Rd)</u>        |
| Division    | <u>7</u>                                       |
| County      | <u>Alamance</u>                                |

|                                                                             |                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Existing Speed Limit                                                        | <u>55</u> <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory                                                                                                                                                                                          |
| Reasonable & Comfortable Passenger Car Speed                                | <u>50-55 mph</u>                                                                                                                                                                                                                                                                 |
| Speed Data                                                                  | <u>Only 6 speed data points collected due to sparseness of traffic.</u><br><u>34 mph, 45 mph, 36 mph, 45 mph, 38 mph, 40 mph</u>                                                                                                                                                 |
| Ball Bank Speed Study                                                       | <u>Slight curve on north side of bridge ball banks at 8 degrees at 50 mph,</u><br><u>9 degrees at 55mph and 12 degrees at 60 mph.</u><br><u>Slight curve on south side of bridge ball banks at 10 degrees at 50 mph,</u><br><u>12 degrees at 55mph and 17 degrees at 60 mph.</u> |
| Warning Signs at Bridge                                                     | <u>W23-10 object markers, one located at each corner of the bridge.</u><br><u>Regulatory 21 ton/31 ton weight limit sign on each approach.</u><br><u>W5-2a Narrow Bridge on both approaches</u>                                                                                  |
| Roadside Development                                                        | <u>Rural Residential/Undeveloped</u>                                                                                                                                                                                                                                             |
| ADT History                                                                 | <u>240 vpd from 2009 NCDOT Traffic Survey Map</u><br><u>290 vpd from 2003 NCDOT Traffic Survey Map</u>                                                                                                                                                                           |
| Pedestrian/Bicycle Traffic                                                  | <u>No bike or ped traffic observed during investigation. Little bike or ped traffic is expected on SR 1571.</u>                                                                                                                                                                  |
| Bridge and Approach Digital Photos                                          | <u>See attached photos.</u>                                                                                                                                                                                                                                                      |
| Approach Lane Width                                                         | <u>18' over all pavement width with 9' lanes</u>                                                                                                                                                                                                                                 |
| Approach Shoulder Width: Shoulder Type                                      | <u>Varies from 8' to 9'±</u><br><u>Grass</u>                                                                                                                                                                                                                                     |
| Lane Width (existing bridge)                                                | <u>19.5' overall pavement width with 8.5' lanes</u>                                                                                                                                                                                                                              |
| Shoulder width (existing bridge)                                            | <u>1.5' /2'</u>                                                                                                                                                                                                                                                                  |
| Strategic Corridor / Thoroughfare Designation and Recommended Cross Section | <u>SR 1571 is classified as a local roadway, therefore it is recommended that the minimum cross section follow the NCDOT "R-R-R Guide" with a minimum of 10 foot lane widths and 3 foot shoulder widths (6 foot graded shoulder width where guardrail is to be installed).</u>   |
| Crash History and Safety Considerations                                     | <u>Two crashes have been reported in the vicinity of the bridge from 1/1/2002 to 12/31/2011 (10 years). One crash involved the vehicle hitting the bridge railing.</u>                                                                                                           |
| Comments                                                                    | <u>If the bridge lane widths are widened the approach speeds may be greater than the collected speed data.</u>                                                                                                                                                                   |

Reasonable Bridge Speed 55 mph



**County:** Alamance

**Description:** Bridge #267 over Jones Creek

**Route:** SR 1571

SR 1571 (Altamahaw Racetrack Rd) NB ±50' from Bridge #267

SR 1571 (Altamahaw Racetrack Rd) NB ±100' from Bridge #267



SR 1571 (Altamahaw Racetrack Rd) NB ±150' from Bridge #267



SR 1571 (Altamahaw Racetrack Rd) NB ±200' from Bridge #267





**County:** Alamance

**Description:** Bridge #267 over Jones Creek

**Route:** SR 1571

SR 1571 (Altamahaw Racetrack Rd) NB  $\pm 250'$  from Bridge #267



SR 1571 (Altamahaw Racetrack Rd) SB  $\pm 50'$  from Bridge #267



SR 1571 (Altamahaw Racetrack Rd) SB  $\pm 100'$  from Bridge #267



SR 1571 (Altamahaw Racetrack Rd) SB  $\pm 150'$  from Bridge #267





**County:** Alamance

**Description:** Bridge #267 over Jones Creek

**Route:** SR 1571

SR 1571 (Altamahaw Racetrack Rd) SB ±200' from Bridge #267



SR 1571 (Altamahaw Racetrack Rd) SB ±250' from Bridge #267



# **Bridge Approach Speed Crash Analysis Request**

Order # 41000018382

**500 feet on Both Sides of Bridge Number 267 on Secondary Route 1571 (Altamahaw Racetrack Road) over Branch in Alamance County**

Document Prepared By:

Safety Planning Group  
Traffic Safety Systems Management Unit  
Transportation Mobility and Safety Division  
North Carolina Department of Transportation

**Note:** The crash statistics have been generated and are available through North Carolina's Crash Database. This database provides an inventory of **reported** crashes on record that have occurred at this location. Please note that many traffic crashes go unreported for a variety of reasons, and this report simply provides a listing of all crashes on record that occurred within 0 feet of the section described above.

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Traffic Engineering Accident Analysis System  
Strip Analysis Report**

**Study Criteria Summary**

**County:** ALAMANCE      **City:** All and Rural  
**Date:** 01/01/2002    **to** 12/31/2011      **Study:** 41000018382  
**Location:** 500 feet on Both Sides of Bridge Number 267 on Secondary Route 1571 (Altamahaw Racetrack Road) over Branch

**Report Details**

| Acc No                                                                                                        | Crash ID  | Milepost | Date                | Accident Type           | Total Damage | Injuries |   |   |   | Condition |   |   | Road |    | Trfc Ctl |    |
|---------------------------------------------------------------------------------------------------------------|-----------|----------|---------------------|-------------------------|--------------|----------|---|---|---|-----------|---|---|------|----|----------|----|
|                                                                                                               |           |          |                     |                         |              | F        | A | B | C | R         | L | W | Ch   | Ci | Dv       | Op |
| 1                                                                                                             | 101610616 | 2.540    | 11/17/2005<br>19:00 | ANIMAL                  | \$ 1000      | 0        | 0 | 0 | 0 | 1         | 5 | 1 |      | 0  |          |    |
| <b>Unit 1 : 2      Alchl/Drgs: 0      Speed: 0 MPH    Dir: N      Veh Mnvr/Ped Actn: 16      Obj Strk: 17</b> |           |          |                     |                         |              |          |   |   |   |           |   |   |      |    |          |    |
| 2                                                                                                             | 102863876 | 2.569    | 05/15/2010<br>09:20 | RAN OFF ROAD -<br>RIGHT | \$ 11000     | 0        | 1 | 3 | 0 | 1         | 1 | 1 | 1    | 0  | 13       | 1  |
| <b>Unit 1 : 1      Alchl/Drgs: 0      Speed: 65 MPH    Dir: N      Veh Mnvr/Ped Actn: 4      Obj Strk: 50</b> |           |          |                     |                         |              |          |   |   |   |           |   |   |      |    |          |    |

**Legend for Report Details:**

- Acc No - Accident Number
- Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
- Condition: R - Road Surface, L - Ambient Light, W - Weather
- Rd Ch - Road Character
- Rd Ci - Roadway Contributing Circumstances
- Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
- Alchl/Drgs - Alcohol Drugs Suspected
- Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
- Obj Strk - Object Struck



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Traffic Engineering Accident Analysis System  
Strip Analysis Report

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**Summary Statistics**

**High Level Crash Summary**

| <b>Crash Type</b>                 | <b>Number of<br/>Crashes</b> | <b>Percent<br/>of Total</b> |
|-----------------------------------|------------------------------|-----------------------------|
| Total Crashes                     | 2                            | 100.00                      |
| Fatal Crashes                     | 0                            | 0.00                        |
| Non-Fatal Injury Crashes          | 1                            | 50.00                       |
| Total Injury Crashes              | 1                            | 50.00                       |
| Property Damage Only Crashes      | 1                            | 50.00                       |
| Night Crashes                     | 1                            | 50.00                       |
| Wet Crashes                       | 0                            | 0.00                        |
| Alcohol/Drugs Involvement Crashes | 0                            | 0.00                        |

**Crash Severity Summary**

| <b>Crash Type</b>            | <b>Number of<br/>Crashes</b> | <b>Percent<br/>of Total</b> |
|------------------------------|------------------------------|-----------------------------|
| Total Crashes                | 2                            | 100.00                      |
| Fatal Crashes                | 0                            | 0.00                        |
| Class A Crashes              | 1                            | 50.00                       |
| Class B Crashes              | 0                            | 0.00                        |
| Class C Crashes              | 0                            | 0.00                        |
| Property Damage Only Crashes | 1                            | 50.00                       |

**Vehicle Exposure Statistics**

Annual ADT = 310

Total Length = 0.192 (Miles)

0.309 (Kilometers)

Total Vehicle Exposure = 0.22 (MVMT)

0.35 (MVKMT)

| <b>Crash Rate</b>    | <b>Crashes Per 100 Million<br/>Vehicle Miles</b> | <b>Crashes Per 100 Million<br/>Vehicle Kilometers</b> |
|----------------------|--------------------------------------------------|-------------------------------------------------------|
| Total Crash Rate     | 920.10                                           | 571.73                                                |
| Fatal Crash Rate     | 0.00                                             | 0.00                                                  |
| Non Fatal Crash Rate | 460.05                                           | 285.86                                                |
| Night Crash Rate     | 460.05                                           | 285.86                                                |
| Wet Crash Rate       | 0.00                                             | 0.00                                                  |
| EPDO Rate            | 35792.01                                         | 22240.12                                              |

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Traffic Engineering Accident Analysis System  
Strip Analysis Report**

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**Miscellaneous Statistics**

|                                      |          |
|--------------------------------------|----------|
| Severity Index =                     | 38.90    |
| EPDO Crash Index =                   | 77.80    |
| Estimated Property Damage Total = \$ | 12000.00 |

**Accident Type Summary**

| <b>Accident Type</b> | <b>Number of<br/>Crashes</b> | <b>Percent<br/>of Total</b> |
|----------------------|------------------------------|-----------------------------|
| ANIMAL               | 1                            | 50.00                       |
| RAN OFF ROAD - RIGHT | 1                            | 50.00                       |

**Injury Summary**

| <b>Injury Type</b>       | <b>Number of<br/>Injuries</b> | <b>Percent<br/>of Total</b> |
|--------------------------|-------------------------------|-----------------------------|
| Fatal Injuries           | 0                             | 0.00                        |
| Class A Injuries         | 1                             | 25.00                       |
| Class B Injuries         | 3                             | 75.00                       |
| Class C Injuries         | 0                             | 0.00                        |
| Total Non-Fatal Injuries | 4                             | 100.00                      |
| Total Injuries           | 4                             | 100.00                      |



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**Monthly Summary**

| <b>Month</b> | <b>Number of<br/>Crashes</b> | <b>Percent<br/>of Total</b> |
|--------------|------------------------------|-----------------------------|
| Jan          | 0                            | 0.00                        |
| Feb          | 0                            | 0.00                        |
| Mar          | 0                            | 0.00                        |
| Apr          | 0                            | 0.00                        |
| May          | 1                            | 50.00                       |
| Jun          | 0                            | 0.00                        |
| Jul          | 0                            | 0.00                        |
| Aug          | 0                            | 0.00                        |
| Sep          | 0                            | 0.00                        |
| Oct          | 0                            | 0.00                        |
| Nov          | 1                            | 50.00                       |
| Dec          | 0                            | 0.00                        |

**Daily Summary**

| <b>Day</b> | <b>Number of<br/>Crashes</b> | <b>Percent<br/>of Total</b> |
|------------|------------------------------|-----------------------------|
| Mon        | 0                            | 0.00                        |
| Tue        | 0                            | 0.00                        |
| Wed        | 0                            | 0.00                        |
| Thu        | 1                            | 50.00                       |
| Fri        | 0                            | 0.00                        |
| Sat        | 1                            | 50.00                       |
| Sun        | 0                            | 0.00                        |

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Traffic Engineering Accident Analysis System  
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Hourly Summary

| Hour      | Number of<br>Crashes | Percent<br>of Total |
|-----------|----------------------|---------------------|
| 0000-0059 | 0                    | 0.00                |
| 0100-0159 | 0                    | 0.00                |
| 0200-0259 | 0                    | 0.00                |
| 0300-0359 | 0                    | 0.00                |
| 0400-0459 | 0                    | 0.00                |
| 0500-0559 | 0                    | 0.00                |
| 0600-0659 | 0                    | 0.00                |
| 0700-0759 | 0                    | 0.00                |
| 0800-0859 | 0                    | 0.00                |
| 0900-0959 | 1                    | 50.00               |
| 1000-1059 | 0                    | 0.00                |
| 1100-1159 | 0                    | 0.00                |
| 1200-1259 | 0                    | 0.00                |
| 1300-1359 | 0                    | 0.00                |
| 1400-1459 | 0                    | 0.00                |
| 1500-1559 | 0                    | 0.00                |
| 1600-1659 | 0                    | 0.00                |
| 1700-1759 | 0                    | 0.00                |
| 1800-1859 | 0                    | 0.00                |
| 1900-1959 | 1                    | 50.00               |
| 2000-2059 | 0                    | 0.00                |
| 2100-2159 | 0                    | 0.00                |
| 2200-2259 | 0                    | 0.00                |
| 2300-2359 | 0                    | 0.00                |

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**Light and Road Conditions Summary**

| Condition | Dry | Wet | Other | Total |
|-----------|-----|-----|-------|-------|
| Day       | 1   | 0   | 0     | 1     |
| Dark      | 1   | 0   | 0     | 1     |
| Other     | 0   | 0   | 0     | 0     |
| Total     | 2   | 0   | 0     | 2     |

**Object Struck Summary**

| Object Type      | Times Struck | Percent of Total |
|------------------|--------------|------------------|
| ANIMAL           | 1            | 50.00            |
| BRIDGE RAIL FACE | 1            | 50.00            |

**Vehicle Type Summary**

| Vehicle Type  | Number Involved | Percent of Total |
|---------------|-----------------|------------------|
| PASSENGER CAR | 1               | 50.00            |
| PICKUP        | 1               | 50.00            |



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**Yearly Totals Summary**

**Accident Totals**

| <b>Year</b> | <b>Total<br/>Accidents</b> | <b>Fatal<br/>Accidents</b> | <b>Injury<br/>Accidents</b> | <b>Property Damage<br/>Only Accidents</b> |
|-------------|----------------------------|----------------------------|-----------------------------|-------------------------------------------|
| 2002        | 0                          | 0                          | 0                           | 0                                         |
| 2003        | 0                          | 0                          | 0                           | 0                                         |
| 2004        | 0                          | 0                          | 0                           | 0                                         |
| 2005        | 1                          | 0                          | 0                           | 1                                         |
| 2006        | 0                          | 0                          | 0                           | 0                                         |
| 2007        | 0                          | 0                          | 0                           | 0                                         |
| 2008        | 0                          | 0                          | 0                           | 0                                         |
| 2009        | 0                          | 0                          | 0                           | 0                                         |
| 2010        | 1                          | 0                          | 1                           | 0                                         |
| 2011        | 0                          | 0                          | 0                           | 0                                         |
| Total       | 2                          | 0                          | 1                           | 1                                         |

**Injury Totals**

| <b>Year</b> | <b>Fatal Injuries</b> | <b>Class A, B,<br/>or C Injuries</b> |
|-------------|-----------------------|--------------------------------------|
| 2002        | 0                     | 0                                    |
| 2003        | 0                     | 0                                    |
| 2004        | 0                     | 0                                    |
| 2005        | 0                     | 0                                    |
| 2006        | 0                     | 0                                    |
| 2007        | 0                     | 0                                    |
| 2008        | 0                     | 0                                    |
| 2009        | 0                     | 0                                    |
| 2010        | 0                     | 4                                    |
| 2011        | 0                     | 0                                    |
| Total       | 0                     | 4                                    |

**Miscellaneous Totals**

| <b>Year</b> | <b>Property Damage</b> | <b>EPDO Index</b> |
|-------------|------------------------|-------------------|
| 2002        | \$ 0                   | 0.00              |
| 2003        | \$ 0                   | 0.00              |
| 2004        | \$ 0                   | 0.00              |
| 2005        | \$ 1000                | 1.00              |
| 2006        | \$ 0                   | 0.00              |

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| <b>Year</b>  | <b>Property Damage</b> | <b>EPDO Index</b> |
|--------------|------------------------|-------------------|
| 2007         | \$ 0                   | 0.00              |
| 2008         | \$ 0                   | 0.00              |
| 2009         | \$ 0                   | 0.00              |
| 2010         | \$ 11000               | 76.80             |
| 2011         | \$ 0                   | 0.00              |
| <b>Total</b> | <b>\$ 12000</b>        | <b>77.80</b>      |

**Type of Accident Totals**

| <b>Year</b>  | <b>Left Turn</b> | <b>Right Turn</b> | <b>Rear End</b> | <b>Run Off Road &amp;<br/>Fixed Object</b> | <b>Angle</b> | <b>Side Swipe</b> | <b>Other</b> |
|--------------|------------------|-------------------|-----------------|--------------------------------------------|--------------|-------------------|--------------|
| 2002         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| 2003         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| 2004         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| 2005         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 1            |
| 2006         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| 2007         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| 2008         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| 2009         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| 2010         | 0                | 0                 | 0               | 1                                          | 0            | 0                 | 0            |
| 2011         | 0                | 0                 | 0               | 0                                          | 0            | 0                 | 0            |
| <b>Total</b> | <b>0</b>         | <b>0</b>          | <b>0</b>        | <b>1</b>                                   | <b>0</b>     | <b>0</b>          | <b>1</b>     |

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Traffic Engineering Accident Analysis System  
Strip Analysis Report

**Strip Diagram**

| Features         | Milepost | Crash IDs |
|------------------|----------|-----------|
| BEGIN            | 2.470    |           |
|                  | 2.480    |           |
|                  | 2.490    |           |
|                  | 2.500    |           |
|                  | 2.510    |           |
|                  | 2.520    |           |
|                  | 2.530    |           |
|                  | 2.540    | 101610616 |
|                  | 2.550    |           |
|                  | 2.560    |           |
| Structure:000267 | 2.570    | 102863876 |
|                  | 2.580    |           |
|                  | 2.590    |           |
|                  | 2.600    |           |
|                  | 2.610    |           |
|                  | 2.620    |           |
|                  | 2.630    |           |
|                  | 2.640    |           |
|                  | 2.650    |           |
|                  | 2.660    |           |
| END              | 2.670    |           |

**North Carolina Department of Transportation  
Traffic Engineering Accident Analysis System  
Strip Analysis Report**

**Study Criteria**

| Study Name  | Log No.     | PH No. | TIP No. | K/A Cf. | B/C Cf. | ADT | ADT Route |
|-------------|-------------|--------|---------|---------|---------|-----|-----------|
| 41000018382 | 41000018382 |        |         | 76.8    | 8.4     | 310 | 40001571  |

| Request Date | Courier Service | Phone No. | Ext. | Fax No. |
|--------------|-----------------|-----------|------|---------|
| 03/06/2012   |                 |           |      |         |

| County   |      |      | Municipality  |      |            |            |            |       |
|----------|------|------|---------------|------|------------|------------|------------|-------|
| Name     | Code | Div. | Name          | Code | Y-Line Ft. | Begin Date | End Date   | Years |
| ALAMANCE | 0    | 7    | All and Rural |      | 0          | 01/01/2002 | 12/31/2011 | 10.00 |

| Location Text                                                                                              | Requestor                             |
|------------------------------------------------------------------------------------------------------------|---------------------------------------|
| 500 feet on Both Sides of Bridge Number 267 on Secondary Route 1571 (Altamahaw Racetrack Road) over Branch | Vickie L. Embry, P.E.<br>Triad Region |

| Included Accidents | Old MP | New MP | Type |
|--------------------|--------|--------|------|
| 102863876          | 2.5    | 2.569  | R    |

| Fiche Roads |          |
|-------------|----------|
| Name        | Code     |
| SR 1571     | 40001571 |
| ALTAMAHAW   | 50000554 |
| RACE TRACK  | 50025157 |
| CHEROKEE    | 50005834 |
| JONES       | 50015722 |

| Strip Road |          |          |        |       |            |
|------------|----------|----------|--------|-------|------------|
| Name       | Code     | Begin MP | End MP | Miles | Kilometers |
| SR 1571    | 40001571 | 2.474    | 2.666  | 0.192 | 0.309      |



**North Carolina Department of Transportation  
Traffic Engineering Accident Analysis System  
Fiche, Intersection, and Strip Reports Code Index**

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**T - Type of Accident Codes**

0 = UNKNOWN  
1 = RAN OFF ROAD - RIGHT  
2 = RAN OFF ROAD - LEFT  
3 = RAN OFF ROAD - STRAIGHT  
4 = JACKKNIFE  
5 = OVERTURN/ROLLOVER  
13 = OTHER NON-COLLISION  
14 = PEDESTRIAN  
15 = PEDALCYCLIST  
16 = RR TRAIN, ENGINE  
17 = ANIMAL  
18 = MOVABLE OBJECT  
19 = FIXED OBJECT  
20 = PARKED MOTOR VEHICLE  
21 = REAR END, SLOW OR STOP  
22 = REAR END, TURN  
23 = LEFT TURN, SAME ROADWAY  
24 = LEFT TURN, DIFFERENT ROADWAYS  
25 = RIGHT TURN, SAME ROADWAY  
26 = RIGHT TURN, DIFFERENT ROADWAYS  
27 = HEAD ON  
28 = SIDESWIPE, SAME DIRECTION  
29 = SIDESWIPE, OPPOSITE DIRECTION  
30 = ANGLE  
31 = BACKING UP  
32 = OTHER COLLISION WITH VEHICLE

**F - Road Feature Codes**

0 = NO SPECIAL FEATURE  
1 = BRIDGE  
2 = BRIDGE APPROACH  
3 = UNDERPASS  
4 = DRIVEWAY, PUBLIC  
5 = DRIVEWAY, PRIVATE  
6 = ALLEY INTERSECTION  
7 = FOUR-WAY INTERSECTION  
8 = T-INTERSECTION  
9 = Y-INTERSECTION  
10 = TRAFFIC CIRCLE/ROUNDBOUT  
11 = FIVE-POINT, OR MORE  
12 = RELATED TO INTERSECTION  
13 = NON-INTERSECTION MEDIAN CROSSING  
14 = END OR BEGINNING - DIVIDED HIGHWAY  
15 = OFF RAMP ENTRY  
16 = OFF RAMP PROPER  
17 = OFF RAMP TERMINAL ON CROSSROAD  
18 = MERGE LANE BETWEEN ON AND OFF RAMP  
19 = ON RAMP ENTRY  
20 = ON RAMP PROPER  
21 = ON RAMP TERMINAL ON CROSSROAD  
22 = RAILROAD CROSSING  
23 = TUNNEL  
24 = SHARED-USE PATHS OR TRAILS  
25 = OTHER

**R - Road Condition Codes**

1 = DRY  
2 = WET  
3 = WATER (STANDING, MOVING)  
4 = ICE  
5 = SNOW  
6 = SLUSH  
7 = SAND, MUD, DIRT, GRAVEL  
8 = FUEL, OIL  
9 = OTHER  
10 = UNKNOWN

**L - Light Condition Codes**

1 = DAYLIGHT  
2 = DUSK  
3 = DAWN  
4 = DARK - LIGHTED ROADWAY  
5 = DARK - ROADWAY NOT LIGHTED  
6 = DARK - UNKNOWN LIGHTING  
7 = OTHER  
8 = UNKNOWN

**W - Weather Condition Codes**

1 = CLEAR  
2 = CLOUDY  
3 = RAIN  
4 = SNOW  
5 = FOG, SMOG, SMOKE  
6 = SLEET, HAIL, FREEZING RAIN/DRIZZLE  
7 = SEVERE CROSSWINDS  
8 = BLOWING SAND, DIRT, SNOW  
9 = OTHER

**S - Accident Severity Codes**

K = FATAL  
A = A-LEVEL INJURY  
B = B-LEVEL INJURY  
C = C-LEVEL INJURY  
O = PROPERTY DAMAGE ONLY

**Ch - Road Character**

1 = STRAIGHT, LEVEL  
2 = STRAIGHT, HILLCREST  
3 = STRAIGHT, GRADE  
4 = STRAIGHT, BOTTOM (SAG)  
5 = CURVE, LEVEL  
6 = CURVE, HILLCREST  
7 = CURVE, GRADE  
8 = CURVE, BOTTOM (SAG)  
9 = OTHER

**Op - Traffic Control Operating**

1 = YES  
2 = NO  
3 = UNKNOWN

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**Veh Mnvr - Vehicle Maneuver Codes**

1 = STOPPED IN TRAVEL LANE  
2 = PARKED OUT OF TRAVEL LANES  
3 = PARKED IN TRAVEL LANES  
4 = GOING STRAIGHT AHEAD  
5 = CHANGING LANES OR MERGING  
6 = PASSING  
7 = MAKING RIGHT TURN  
8 = MAKING LEFT TURN  
9 = MAKING U-TURN  
10 = BACKING  
11 = SLOWING OR STOPPING  
12 = STARTING IN ROADWAY  
13 = PARKING  
14 = LEAVING PARKED POSITION  
15 = AVOIDING OBJECT IN ROAD

**Dv - Traffic Control Device**

0 = NO CONTROL PRESENT  
1 = STOP SIGN  
2 = YIELD SIGN  
3 = STOP AND GO SIGNAL  
4 = FLASHING SIGNAL WITH STOP SIGN  
5 = FLASHING SIGNAL WITHOUT STOP SIGN  
6 = RR GATE AND FLASHER  
7 = RR FLASHER  
8 = RR CROSSBUCKS ONLY  
9 = HUMAN CONTROL  
10 = WARNING SIGN  
11 = SCHOOL ZONE SIGNS  
12 = FLASHING STOP AND GO SIGNAL  
13 = DOUBLE YELLOW LINE, NO PASSING ZONE  
14 = OTHER

**Alchl/Drugs - Driver Alcohol/Drugs Suspected Status Codes**

0 = NO  
1 = YES - ALCOHOL, IMPAIRMENT SUSPECTED  
2 = YES - ALCOHOL, NO IMPAIRMENT DETECTED  
3 = YES - OTHER DRUGS, IMPAIRMENT SUSPECTED  
4 = YES - OTHER DRUGS, NO IMPAIRMENT DETECTED  
5 = YES - ALCOHOL AND OTHER DRUGS, IMPAIRMENT SUSPECTED  
6 = YES - ALCOHOL AND OTHER DRUGS, NO IMPAIRMENT DETECTED  
7 = UNKNOWN

**Ped Actn - Pedestrian Action Codes**

1 = ENTERING OR CROSSING SPECIFIED LOCATION  
2 = WALKING, RIDING, RUNNING/JOGGING WITH TRAFFIC  
3 = WALKING, RIDING, RUNNING/JOGGING AGAINST TRAFFIC  
4 = WORKING  
5 = PUSHING VEHICLE  
6 = APPROACHING OR LEAVING VEHICLE  
7 = PLAYING  
8 = STANDING  
9 = OTHER

**Ci - Roadway Contributing Circumstances**

0 = NONE (NO UNUSUAL CONDITIONS)  
1 = ROAD SURFACE CONDITION  
2 = DEBRIS  
3 = RUT, HOLES, BUMPS  
4 = WORK ZONE (CONSTRUCTION, MAINTENANCE, UTILITY)  
5 = WORN TRAVEL-POLISHED SURFACE  
6 = OBSTRUCTION IN ROADWAY  
7 = TRAFFIC CONTROL DEVICE INOPERATIVE, NOT VISIBLE OR MISSING  
8 = SHOULDERS LOW, SOFT OR HIGH  
9 = NO SHOULDERS  
10 = NON-HIGHWAY WORK  
11 = OTHER  
12 = UNKNOWN

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**Obj Strk - Object Struck Codes**

14 = PEDESTRIAN  
15 = PEDALCYCLIST  
17 = ANIMAL  
18 = MOVABLE OBJECT  
20 = PARKED MOTOR VEHICLE  
33 = TREE  
34 = UTILITY POLE  
35 = LUMINAIRE POLE NON-BREAKAWAY  
36 = LUMINAIRE POLE BREAKAWAY  
37 = OFFICIAL HIGHWAY SIGN NON-BREAKAWAY  
38 = OFFICIAL HIGHWAY SIGN BREAKAWAY  
39 = OVERHEAD SIGN SUPPORT  
40 = COMMERCIAL SIGN  
41 = GUARDRAIL END ON SHOULDER  
42 = GUARDRAIL FACE ON SHOULDER  
43 = GUARDRAIL END IN MEDIAN  
44 = GUARDRAIL FACE IN MEDIAN  
45 = SHOULDER BARRIER END  
46 = SHOULDER BARRIER FACE  
47 = MEDIAN BARRIER END  
48 = MEDIAN BARRIER FACE  
49 = BRIDGE RAIL END  
50 = BRIDGE RAIL FACE  
51 = OVERHEAD PART UNDERPASS  
52 = PIER ON SHOULDER OF UNDERPASS  
53 = PIER IN MEDIAN OF UNDERPASS  
54 = ABUTMENT OF UNDERPASS  
55 = TRAFFIC ISLAND CURB OR MEDIAN  
56 = CATCH BASIN OR CULVERT ON SHOULDER  
57 = CATCH BASIN OR CULVERT ON MEDIAN  
58 = DITCH  
59 = EMBANKMENT  
60 = MAILBOX  
61 = FENCE OR FENCE POST  
62 = CONTRUCTION BARRIER  
63 = CRASH CUSHION  
64 = OTHER FIXED OBJECT

**Unit # - Vehicle Style Codes**

1 = PASSENGER CAR  
2 = PICKUP  
3 = LIGHT TRUCK (MINI-VAN, PANEL)  
4 = SPORT UTILITY  
5 = VAN  
6 = COMMERCIAL BUS  
7 = SCHOOL BUS  
8 = ACTIVITY BUS  
9 = OTHER BUS  
10 = SINGLE UNIT TRUCK (2-AXLE, 6-TIRE)  
11 = SINGLE UNIT TRUCK (3 OR MORE AXLES)  
12 = TRUCK/TRAILER  
13 = TRUCK/TRACTOR  
14 = TRACTOR/SEMI-TRAILER  
15 = TRACTOR/DOULBES  
16 = UNKNOWN HEAVY TRUCK  
17 = TAXICAB  
18 = FARM EQUIPMENT  
19 = FARM TRACTOR  
20 = MOTORCYCLE  
21 = MOPED  
22 = MOTOR SCOOTER OR MOTOR BIKE  
23 = PEDALCYCLE  
24 = PEDESTRIAN  
25 = MOTOR HOME/RECREATIONAL VEHICLE  
26 = OTHER  
27 = ALL TERRAIN VEHICLE (ATV)  
28 = FIRETRUCK  
29 = EMS VEHICLE, AMBULANCE, RESCUE SQUAD  
30 = MILITARY  
31 = POLICE  
32 = UNKNOWN