

**Section 1160**

1 **1150-3 CONSTRUCTION METHODS**

2 Provide the service of properly equipped and qualified flaggers (see *Roadway Standard*  
3 *Drawings* No. 1150.01) at locations and times for such period as necessary for the control and  
4 protection of vehicular and pedestrian traffic. Anyone who controls traffic is required to be  
5 qualified. Qualification consists of each flagger receiving proper training in the set-up and  
6 techniques of safely and competently performing a flagging operation. Qualification of  
7 flaggers is to be done by an NCDOT approved training agency or other approved training  
8 provider. For a complete listing of these, see the Work Zone Traffic Control’s webpage.

9 Prior to beginning work on the project, a Qualification Statement that all flaggers used on the  
10 project have been properly trained through an NCDOT approved training resource shall be  
11 provided to the Engineer.

12 Use flagging methods that comply with the guidelines in the MUTCD.

13 **1150-4 MEASUREMENT AND PAYMENT**

14 Flagging conducted for the convenience of the Contractor’s operations is not compensated.  
15 The Department will pay for flaggers, including those used at Y-lines that are used in  
16 conjunction with a lane closure. Flaggers used for operations not involving a lane closure will  
17 be incidental to that operation and no payment will be made. Flaggers used for hauling  
18 operations, where the only need for a lane closure is due to the hauling operation, will be  
19 incidental to that operation and no payment will be made.

20 Any flagger used for less than one hour will be incidental to that operation.

21 *Flagger (Day)* will be measured and paid as the actual number of days that each flagger is  
22 satisfactorily provided and accepted by the Engineer during the life of the project. On any  
23 calendar day that more than one flagger is used, the quantity to be paid on that calendar day  
24 will be the maximum number of flaggers used at one time in that calendar day.

25 *Flagger (Hour)* will be measured and paid as the actual number of hours that each flagger is  
26 satisfactorily provided and accepted by the Engineer during the life of the project.

27 Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Flagger	Day
Flagger	Hour

28 **SECTION 1160**  
29 **TEMPORARY CRASH CUSHIONS**

30 **1160-1 DESCRIPTION**

31 Furnish, install, maintain, reset and remove temporary crash cushions.

32 **1160-2 MATERIALS**

33 Refer to Division 10.

<b>Item</b>	<b>Section</b>
Temporary Crash Cushions	1089-8

34 Use temporary crash cushions that meet NCHRP 350 Test Level II or III for transportation  
35 management devices and are on the NCDOT Approved Product List.

36 Historical performance of the temporary crash cushions will help determine the future use of  
37 the material by the Department. Poor performance of temporary crash cushions at any site,  
38 whether or not related to a specific contract, may be grounds for non-acceptance of a product  
39 on any project under contract.

1     **1160-3 CONSTRUCTION METHODS**

2     Before use, furnish the Engineer detailed brochures, specifications and other manufacturer's  
3     data that completely describe the performance criteria, installation and instructions for the  
4     crash cushion. Ensure that the crash cushion is rated for at least the same speed as the facility  
5     on which it will be used.

6     The Contractor may provide a portable base for installation. When a portable base is used,  
7     provide one that is designed or approved by the manufacturer of the temporary crash cushion.

8     Install temporary crash cushions in accordance with the manufacturer's specifications.

9     Use temporary crash cushions that have a yellow reflective end treatment to delineate the  
10    approach end of the crash cushion to oncoming traffic.

11    Repair any pavement damaged by the installation or removal of a temporary crash cushion.

12    Repair or replace within 24 hours any temporary crash cushion that becomes crushed or  
13    otherwise damaged to the point that it will not perform its intended purpose. Suspend all  
14    construction activities until the temporary crash cushion is repaired or replaced. Provide safe  
15    control of traffic until the temporary crash cushion has been repaired or replaced using  
16    approved methods.

17    **1160-4 MEASUREMENT AND PAYMENT**

18    *Temporary Crash Cushions* will be measured and paid as the actual number of crash cushions  
19    furnished, satisfactorily installed and accepted by the Engineer.

20    *Reset Temporary Crash Cushions* will be measured and paid as the actual number of crash  
21    cushion relocations as directed.

22    Repair or replace damaged temporary crash cushions at no cost to the Department. Repair or  
23    replace damaged pavement at no cost to the Department.

24    Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Temporary Crash Cushion	Each
Reset Temporary Crash Cushion	Each

25

**SECTION 1165**

26

**TRUCK MOUNTED ATTENUATORS**

27    **1165-1 DESCRIPTION**

28    Furnish, install, operate, maintain and relocate truck mounted attenuators (TMA).

29    **1165-2 MATERIALS**

30    Refer to Division 10.

<b>Item</b>	<b>Section</b>
Truck Mounted Attenuators	1089-9

31    Use TMAs that meet NCHRP 350 Test Level II or III for transportation management devices  
32    and are on the NCDOT Approved Product List.

33    Historical performance of the TMA will help determine the future use of the material by the  
34    Department, even if the TMA has been approved. Poor performance of TMA at any site,  
35    whether or not related to a specific contract, may be grounds for non-acceptance of a product  
36    on any project under contract.