

October 19, 1998

**ACCEPTABLE WORK ZONE TRAFFIC CONTROL DEVICES
NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350
REQUIREMENTS**

1. GENERAL:

This specification provides the requirements for implementation of the National Cooperative Highway Research Program Report 350 criteria for all work zone traffic control devices used and placed into operation on or adjacent to the roadways within work zones in the state of South Carolina.

The Federal Highway Administration formally adopted National Cooperative Highway Research Program Report 350, entitled "Recommended Procedures for the Safety Performance Evaluation of Highway Features", in 1993. This document outlines the effective dates for the new requirements of work zone traffic control devices in South Carolina.

2. PERFORMANCE:

All work zone traffic control devices shall maintain performance levels as required by the Standard Specifications, the special provisions, all supplemental specifications, the manufacturer's requirements and specifications, and the SCMUTCD. A reduction of the performance levels of these traffic control devices in order to meet the requirements of the NCHRP Report 350 is unacceptable. Any reduction of the required performance levels will disqualify a device for use on or adjacent to the roadways within work zones in the state of South Carolina.

3. REQUIREMENTS:

All work zone traffic control devices acceptable for use in South Carolina are compiled on a list entitled, "Approved Work Zone Traffic Control Devices". This list is available from the Director of Traffic Engineering upon request. Only those devices contained on this list may be used.

To be eligible for inclusion on the approved list, the manufacturer shall submit a self certification of NCHRP Report 350 compliance for Category I devices to the Director of Traffic Engineering. Category II, III, and IV devices require acceptance letters, issued by the Office of Engineering of the Federal Highway Administration, for inclusion on the approved list.

The Department reserves the right, as granted by the FHWA, to reject the design of a traffic control device or place limitations on its use. Manufacturer's certification or FHWA acceptance does not constitute or imply that the device is acceptable for use in South Carolina. The Department may reject or restrict the use of any traffic control device based on the following:

- A. a differing interpretation of the test results.
- B. insufficient test results, may require additional testing.
- C. insufficient field data, may require in-service evaluation.

The Contractor shall provide, install, and use only those work zone traffic control devices included on the approved list in effect at time of the contract award. However, the Department retains the right to delete devices from or add devices to this list without providing prior notice to the Contractor.

All work zone traffic control devices are categorized according to their functions and weight. There are four categories. The NCHRP Report 350 requires specific tests for each category. The traffic control devices within each category shall pass the designated test requirements to achieve approval for use.

SUPPLEMENTAL SPECIFICATIONS

Category I contains small and lightweight channelizing and delineating traffic control devices which includes plastic cones, portable plastic drums, and tubular markers without attachments such as signs or warning lights. Warning lights will no longer be attached to portable plastic drums. The typical traffic control standard drawings will reflect this update as of the next issuance of revised drawings in late 1999. Therefore, the requirement for warning lights supplementing the portable plastic drums as shown on the current typical traffic control standard drawings will be nullified.

Category II includes traffic control devices that are not expected to produce significant vehicular velocity changes to impacting vehicles. Acceptable devices in this category shall not be capable of penetrating a windshield or causing vehicular instability during a crash. Portable sign stands mounted with signs, Types I, II, and III barricades, vertical panels, intrusion alarms, and other work zone traffic control devices that weigh 100 pounds (45 kg) or less are included in this category.

Category III includes traffic control devices that are expected to cause significant vehicular velocity changes to impacting vehicles. These devices weigh more than 100 pounds (45 kg). Portable temporary barriers, portable terminal impact attenuators, truck mounted attenuators, fixed sign supports, and other work zone traffic control devices that do not meet the definitions of Category I or II are included in this category.

Category IV includes advance warning arrow panels, changeable message signs, portable traffic signals, and portable lighting equipment.

All work zone traffic control devices are categorized into one of four categories. Each category has an implementation date and specific conditions as follows:

CATEGORY	DEVICES	DATE	STATUS
WORK ZONE CATEGORY I	ALL DEVICES LISTED UNDER CATEGORY I	01-OCT-98	ALL NEW DEVICES SHALL COMPLY WITH NCHRP REPORT 350 GUIDELINES ON ALL PROJECTS LET TO CONTRACT AFTER OCTOBER 1, 1998. A CONTRACTOR MAY CONTINUE TO USE AN EXISTING INVENTORY OF DEVICES IN SATISFACTORY CONDITION UNTIL OCTOBER 1, 2000.
		01-OCT-00	ALL DEVICES SHALL COMPLY WITH NCHRP REPORT 350 GUIDELINES ON ALL PROJECTS LET TO CONTRACT AFTER OCTOBER 1, 2000.
WORK ZONE CATEGORY II	DEVICES WITH MASSES OF 100 lbs. (45 kg) OR LESS	01-OCT-00	ALL DEVICES SHALL COMPLY WITH NCHRP REPORT 350 GUIDELINES ON ALL PROJECTS LET TO CONTRACT AFTER OCTOBER 1, 2000.

SUPPLEMENTAL SPECIFICATIONS			
WORK ZONE CATEGORY III	DEVICES WITH MASSES GREATER THAN 100 lbs. (45 kg), EXCLUDING ATTENUATORS AND TEMPORARY CONCRETE BARRIER WALLS	01-OCT-02	ALL DEVICES SHALL COMPLY WITH NCHRP REPORT 350 GUIDELINES ON ALL PROJECTS LET TO CONTRACT AFTER OCTOBER 1, 2002.
	TRUCK MOUNTED ATTENUATORS & PORTABLE TERMINAL IMPACT ATTENUATORS	01-OCT-98	ALL NEW DEVICES SHALL COMPLY WITH NCHRP REPORT 350 GUIDELINES ON ALL PROJECTS LET TO CONTRACT AFTER OCTOBER 1, 1998.
		01-OCT-00	ALL DEVICES SHALL COMPLY WITH NCHRP REPORT 350 GUIDELINES ON ALL PROJECTS LET TO CONTRACT AFTER OCTOBER 1, 2000.
	TEMPORARY CONCRETE BARRIER WALLS	01-OCT-98	EXISTING TEMPORARY CONCRETE BARRIER WALLS IN COMPLIANCE WITH THE "STANDARD DRAWINGS FOR HIGHWAY CONSTRUCTION", DRAWING NO. 805-14 AND DRAWING NO. 805-14A, SHALL REMAIN ACCEPTABLE FOR USE UNTIL OCTOBER 1, 2002.
		01-OCT-02	ALL TEMPORARY CONCRETE BARRIER WALLS SHALL COMPLY WITH NCHRP REPORT 350 GUIDELINES ON ALL PROJECTS LET TO CONTRACT AFTER OCTOBER 1, 2002.
WORK ZONE CATEGORY IV	ALL DEVICES LISTED UNDER CATEGORY IV		DELAYED. DATE OF IMPLEMENTATION WILL BE ANNOUNCED BY OCTOBER 1, 2000.

4. FIELD INSTALLATIONS:

The Contractor shall install all work zone traffic control devices as required by the plans, the "Standard Drawings For Road Construction", the special provisions, all supplemental specifications, the manufacturer's requirements and specifications, the SCMUTCD, and the Engineer. Revisions to the field installation requirements in order to circumvent the requirements of the NCHRP Report 350 is unacceptable. Any such revisions to the field installations will disqualify a device for use on or adjacent to the roadways within work zones in the state of South Carolina.

5. RESPONSIBILITY:

The Contractor shall ensure all traffic control devices meet the requirements of these departmental specifications. The Contractor is responsible for complying with all requirements as directed by these specifications.