	<p><i>Chapter</i></p> <p>SIGNING & PAVEMENT MARKINGS</p>
	<p><i>Subject</i></p> <p>Signing</p>

GENERAL:

Plans will be prepared for new sign installations and pavement markings for interstates, parkways, and other high-volume, limited-access roads that include interchanges. When applicable, signing plans will also be included for the portion of all crossroads affected by new construction and/or improvements. Striping plans will be developed for projects that deviate from the exhibits in the *Manual on Uniform Traffic Control Devices (MUTCD)* and the *Traffic Operations Manual*.

Signing plans may also be required on other projects. Central Office Highway Design should be consulted when the project team believes signing plans are needed.

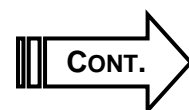
Signing and marking shall be performed in accordance with the *Manual on Uniform Traffic Control Devices (MUTCD)* and the *Traffic Operations Manual*.

SIGNING PLANS:

The project manager should contact the Division of Highway Design Branch Manager for Roadway Design Engineering to determine whether the signing plans for the project can be prepared by the Division of Highway Design or should be prepared by the consultant and reviewed by the Division of Highway Design. If the signing plans are to be developed by the consultant, a preliminary meeting with the Division of Highway Design will be held to determine the necessary signing involved in the project. The decision to utilize the consultant should be made prior to negotiating Phase II design.

Signing plans shall be completed to a conceptual stage in time for delivery to the project team prior to the joint inspection in order that right-of-way and utility needs may be accommodated. All signing plans prepared by consultants will have two reviews—conceptual plans prior to joint inspection and final plans prior to the project letting. The final signing plans shall be submitted with check prints for roadway plan review.

Completed signing plans will contain the necessary quantities sheets, standard detail sheets, plan sheets, and sign detail sheets. Panel signs shall be numbered P-1 through P-XX, and Sheeting signs shall be numbered S-1 through S-XX (see **Exhibits 1200-01, 1200-02, and 1200-03**).



SIGN LOCATION: The locations of signs shall comply with the *Manual on Uniform Traffic Control Devices*, *Roadside Design Guide*, and the *Traffic Operations Manual*.

SIGN SUPPORTS: All sign supports that must be located in the clear zone shall be of “breakaway” design or shall be protected by crashworthy barriers. When possible, coordinate the placement of signs with the guardrail already determined to be needed for the project. The design for these “breakaway” supports or crashworthy barriers shall comply with the *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals* and the *Roadside Design Guide*. New installations of these “breakaway” design supports shall be omnidirectional breakaway and be based on the AASHTO 2001 wind design load recommendations.

The structural design of sign supports shall be coordinated with the Division of Structural Design through the signing function of the Division of Highway Design.

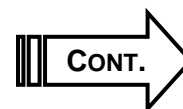
SIGN REPAIR & REPLACEMENT: Maintenance of panel signs will be administered through the Division of Highway Design. Work orders (including plans and/or sign design sheets when needed) will be issued by the Division of Highway Design upon receipt of a request from the District Traffic Engineer. This request shall include all pertinent information and photographs of the sign, supports, and existing bases (**See Exhibit 1200-04**). When the work is completed, the District Traffic Engineer shall inspect the repairs/replacements and advise the Division of Highway Design so that any invoices may be processed.

ADDITIONAL OR SUPPLEMENTAL SIGNS:

When requested by the Division of Traffic Operations, plans for additional or supplemental signing will be prepared by the Division of Highway Design or by the project consultant, when applicable.

PLANS FOR PAVEMENT MARKINGS:

Plans for pavement markings (including striping) shall be developed by the project team and/or the consultant for purposes of quantities. In instances where markings are considered to be complex, the Division of Highway Design will assist and review the plans or, when requested, may provide the necessary plans. It will be the responsibility of the project manager to recommend the appropriate roles of the Division of Highway Design and the consultant, when applicable. Plans shall be delivered to the project team prior to the joint inspection to allow a concurrent review of pavement marking and signing plans.



**PAVEMENT
MARKERS:**

Raised pavement markers will typically not be shown on the striping plans but will be designated by note on the plans. However, for projects or portions of projects where the pavement markers' placement is complex, the Division of Highway Design will review, assist, or develop plans. The Type V markers, and the use of Type IV-A markers on bridge decks, shall be included on projects for roads that are identified on the Raised Pavement Marker System as defined by the *Traffic Operations Manual*.

For those projects not identified on the Raised Pavement Marker System and where the project team has identified the need for markers, the project team will forward the request to the Division of Traffic Operations to add that section of roadway to the Raised Pavement Marker System. Pavement markers shall also be included on typical sections with flush medians or a continuous left-turn lane/two-way left-turn lane (CLTL/TWLTL). Proper spacing and arrangement shall adhere to the KYTC *Standard Drawings* for permanently installed pavement markers.



COUNTY OF	ITEM NO.	SHEET NO.

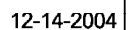
GENERAL NOTES

[illegible][illegible]

GENERAL SIGN INFORMATION					LETTER SPACING / INFORMATION				
P...									
SIGN NUMBER					S-	SP			
QUANTITY					S-	SPACE			
HEIGHT					S-	SP			
WIDTH					S-	SPACE			
AREA (SQ. FT.)					S-	SP			
BORDER WIDTH					S-	SPACE			
BORDER RADIUS					S-	SP			
PANEL COLOR					S-	SPACE			
LEGEND/BORDER COLOR					S-	SPACE			
STATION(S)					S-	SPACE			
PANEL MATERIAL					S-	SPACE			
LEGEND MATERIAL					S-	SPACE			
PANEL STYLE					S-	SPACE			
SYMBOL(S)					S-	SPACE			
X					S-	SPACE			
Y					S-	SPACE			
WIDTH					S-	SPACE			
HEIGHT					S-	SPACE			

origin

[illegible]



EXAMPLE STANDARD SHEETING SIGNS DETAIL SHEET

SHEETING SIGNS DETAIL SHEET												
COUNTY OF		ITEM NO.	SHEET NO.									
SIGN DIVISION (KENTUCKY NUMBER)	SIZES IN INCHES HORIZ. VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION		SIDE OF TRAVELING ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)	SIGN DIVISION (KENTUCKY NUMBER)	SIZES IN INCHES HORIZ. VERT.	
\$---										\$---		
\$---										\$---		
\$---										\$---		
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SPECIAL NOTES:
1. THE COLORS SHALL BE AS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS".

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAY DESIGN
DIVISION OF HIGHWAY DESIGN

TC 61-513E
09/04

SIGN MAINTENANCE CHECKLIST

District _____ County _____ Road Name _____

Mile Point _____ or Location Description _____
(Preferred) (ie. 800 ft. south of Exit 42 Gore sign)

Direction of Travel _____ Side of Roadway _____
(ie. Southbound) (ie. "On the right side of the road, behind guard rail" or "on the left in the median...no guard rail")

Sign Message and/or Legend

Draw Sketch(s) of sign here.

Sign Dimensions	Horizontal	Vertical	Letter Sizes & Series (if known)
Panel 1			
Panel 2			
Exit Panel			
Other Panels			

Sign Condition and Damage(s)

Beam Descriptions

Material	Flange Width	Distance From Ground To Top Of Sign

Beam Condition and/or Damage		Concrete Base & Stud Condition
(ie. Twisted / Bent / Broken / Missing) (Label each beam on pictures)		(Chipped / Cracked / Below Ground)
Beam #1		
Beam #2		
Beam #3		

Does the sign and concrete bases require complete replacement?

Is there an acceptable location within 10 - 25 ft. of it's current location?

Attach Pictures - Sign Front & Back Beams - Conc. Bases - Surrounding Area / Close ups of all damaged areas