	CONCEALED ROAD SIGNS		Issued: DEC 2003
			Revised: DEC 2006
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RECOMMENDED PRACTICES	PART	HIGHWAY SIGNS	
	SECTION	WARNING SIGNS	
	SUB-SECTION		

General

Intersections located in areas of substandard geometric conditions often have reduced sight distances and, as a result, may appear hidden to the approaching traffic.

Such hidden intersections may pose a hazard to the through and turning traffic, creating a potential for serious collisions (i.e., Left Turn Across Path, Angle or Rear End type of collisions).

When drivers need to be warned about a hidden and unexpected intersection, a Concealed Road sign is placed on the highway in advance of the intersection.

There are several types of Concealed Road signs. The selection of the most appropriate sign will depend on several factors, including the degree of hazard, travelling speed along the highway, and the configuration of the intersection.

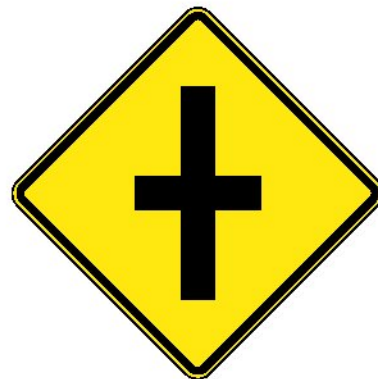
Standard

A standard Concealed Road sign (WA-11) consists of a black symbol on a yellow background. The symbol consists of black intersecting lines which represent the intersection layout and the intersecting angle of the crossing roadways.

The standard size of any sign in the Concealed Road sign series is **600 mm x 600 mm**.

The Concealed Road sign series includes five basic signs as described below:

- A *Four-leg Concealed Intersection* sign indicates that a four-leg Stop controlled intersection is located along the highway where the sign appears.



WA-11	600 mm x 600 mm	
Colour	Symbol and Border Background	Black Yellow
Sheeting	ASTM, Type III or IV	

- A *Three-Leg Concealed Intersection* sign indicates that a three-leg Stop or Yield controlled intersection is located along the highway where the sign appears.

There are two versions of the Three-leg Concealed Intersection sign. These two sign versions should be considered in the following situations:

- when a road approaches a highway from one side at a non-perpendicular angle



WA-12-R WA-12-L	600 mm x 600 mm R-right, L-left	
Colour	Symbol and Border Background	Black Yellow
Sheeting	ASTM, Type III or IV	

- A “T” intersection sign indicates that there is a “T” intersection ahead and the highway on which the intersection is located forms the stem of the letter “T”.



WA-13	600 mm x 600 mm	
Colour	Symbol and Border Background	Black Yellow
Sheeting	ASTM, Type III or IV	

- when a side road is perpendicular to a highway on which the sign appears.



WA-13-R WA-13-L	600 mm x 600 mm R-right, L-left	
Colour	Symbol and Border Background	Black Yellow
Sheeting	ASTM, Type III or IV	

- A “Y” Intersection sign indicates that there is a “Y” intersection ahead and the highway on which the intersection is located forms the stem of the letter “Y”.



WA-15	600 mm x 600 mm	
Colour	Symbol and Border Background	Black Yellow
Sheeting	ASTM, Type III or IV	

Guidelines for Use

In general, the Concealed Road signs are installed in advance of intersections which are concealed to the extent that a driver on the major road would not be adequately prepared for turning movements or cross street traffic.

This usually occurs when an intersection has sight distance restrictions due to horizontal or vertical alignment constraints (e.g., sharp horizontal curves) or other restricting conditions (e.g., dense development on both sides of the highway).

The Concealed Road sign should be considered when sight distances along the highway approaches are below the minimum stopping distance criteria as specified in the Highway Geometric Design Guide.

Private Driveways

Residential or other minor entrances should only be considered for a sign if the roadway conditions are particularly severe and the potential for a collision is high due to unusual operational conditions.

“T” and “Y” Intersections

A Concealed Intersection sign should not be used as a warning sign on the approach where the traffic is required to stop before entering the intersection. If the intersection conditions warrant an additional warning advance sign, a Stop Ahead sign (WB-1) must be used instead.

The “Y” Intersection sign should not be used at a “Y” intersection that is channelized by traffic islands, nor where junction signs or route markers are present.

Use of Signs in Urban Areas

Urban areas typically have lower driving speeds, street lighting and the spacing between intersections is usually smaller. Therefore, Concealed Road signs are not normally required in urban areas.

Guidelines For Placement

The Concealed Road sign should be placed a distance of 250 to 300 metres in advance of a hidden intersection. A sign should be installed in the direction of travel for which the intersection appears hidden.

The Concealed Road sign is installed on the right-hand side of the highway. On divided highways and one-way roadways with visibility problems, an additional sign should

be installed on the left-hand side of the roadway.

Safety Issues

It is important to realize that warning signs will not eliminate a hazard posed by a hidden intersection. Usually, a more detailed investigation is needed to determine if the existing conditions could be improved and a hazard removed or reduced.

Such assessment of site conditions will determine if other improvements may prove to be more cost effective as long-term solutions.

These improvements may include:

- improvements to sight distances
- geometric improvements
- roadway lighting.

Normally the type, extent and cost-effectiveness of these improvements are determined through a roadway assessment and an economic analysis.

References to Standards

Highway Geometric Design Guide	
Section D.4.2	Minimum Sight Triangle
Section B.2	Sight Distance