

## DETERMINING WARRANTS FOR ROADSIDE BARRIERS

<u>Typical Fixed and Hazardous Objects Within The Clear Zone</u>	<u>Guardrail Required</u>	
	YES	NO
1. Sign Support (ground mounted): (A) Post of breakaway design (a)		X
(B) Post not meeting breakaway criteria (b)(c)(d)	X	
2. Lighting/Signal Poles and Towers (A) Breakaway design		X
(B) Not meeting breakaway design (b)(c)(g)(h)	X	
3. Bridge parapet ends, piers and abutments at underpasses	X	
4. Retaining walls and culvert headwalls	X	
5. Trees with a diameter of 4 inches or greater (e)	X	
6. Utility Poles (f)		X
7. Above ground utilities (telephone pedestals, etc.) (i)	X	
8. Rough rock cuts and large boulders	X	
9. Streams or permanent bodies of water more than 2 feet deep (h)	X	
<p>NOTES</p> <p>(a) Multiple post installations where the spacing between posts is less than the minimum spacing required for breakaway shall be replaced or shielded by guardrail.</p> <p>(b) Every effort should be made to convert non-breakaway to breakaway.</p> <p>(c) Where these devices exist and cannot be converted to breakaway, relocated or removed, the choice of guardrail should be in accordance with the deflection shown in Table I-3-2.</p> <p>(d) Wood posts larger than 6" x 8" nominal size do not meet the breakaway requirements even if drilled.</p> <p>(e) Every effort should be made to remove the tree rather than shield it with guardrail.</p> <p>(f) Guardrail will not normally be used to shield a line of utility poles. However, where guardrails are used in front of utility poles for other reasons, the choice of guardrail should be in accordance with the deflection shown in Table I-3-2.</p> <p>(g) Pedestal poles, except for those used for power supply should be converted to breakaway standards where possible.</p> <p>(h) A field review and evaluation should be made to determine if guardrail is suitable for protecting motorists from these roadside hazards.</p> <p>(i) Consideration should be given to placing utilities underground.</p>		

**TABLE I-3-1**