

<b>MAINTENANCE PLANNING GUIDELINES</b>		2006																																																
<p><b>ACTIVITY:</b> Roadway &amp; Bridge Safety Features (R227)</p> <p style="text-align: center;"><b>MAJOR &amp; MINOR</b></p>	<p><b>ACTION:</b> Guardrails</p>																																																	
<p><b>DEFINITION:</b> The time and expenses incurred for installing and maintaining fences along the roadway, guardrails and end treatments, guard cable, impact attenuator devices for roadside obstacles; and all cost to maintain concrete traffic barriers, sidewalks and bicycle paths and raised pavement markers.</p>																																																		
<p><b>PURPOSE:</b> The maintenance of guardrail, guard cable, and other similar restraining devices.</p>																																																		
<p><b>SCHEDULING:</b> Priorities as follows for repairs:</p> <ol style="list-style-type: none"> <li>1. Devices located in medians or protecting fixed objects.</li> <li>2. Located outside of, but adjacent to travel lanes.</li> <li>3. Primary function for access control.</li> <li>4. Primary function related to appearance only.</li> </ol>	<table border="1" style="margin: auto;"> <tr> <td>J</td><td>F</td><td>M</td><td>A</td><td>M</td><td>J</td><td>J</td><td>A</td><td>S</td><td>O</td><td>N</td><td>D</td> </tr> <tr> <td>A</td><td>E</td><td>A</td><td>P</td><td>A</td><td>U</td><td>U</td><td>U</td><td>E</td><td>C</td><td>O</td><td>E</td> </tr> <tr> <td>N</td><td>B</td><td>R</td><td>R</td><td>Y</td><td>N</td><td>L</td><td>G</td><td>P</td><td>T</td><td>V</td><td>C</td> </tr> <tr style="background-color: black;"> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>		J	F	M	A	M	J	J	A	S	O	N	D	A	E	A	P	A	U	U	U	E	C	O	E	N	B	R	R	Y	N	L	G	P	T	V	C												
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<p><b>RECOMMENDED EQUIPMENT:</b></p> <ul style="list-style-type: none"> <li>• Truck</li> <li>• Trailer</li> <li>• Boom Truck</li> <li>• Auger Truck</li> <li>• Pulling Jack</li> <li>• Cutting Torch</li> <li>• Protective Truck</li> <li>• Traffic Control Equipment; (See <a href="#">EPG 616.23 Traffic Control for Field Operations</a>)</li> </ul>	<p><b>RECOMMENDED PROCEDURE:</b></p> <ol style="list-style-type: none"> <li>1. Place traffic control devices as needed.</li> <li>2. Remove damaged sections.</li> <li>3. Pull stringline for alignment and drive steel rods at post locations to control post spacing. Vertical alignment may be improved by looping string around top of rods for adjustment.</li> <li>4. Drive new posts and attach rail or cable.</li> <li>5. Clean up work area.</li> <li>6. Remove traffic control devices.</li> </ol>																																																	
<p><b>RECOMMENDED MATERIAL:</b></p> <ul style="list-style-type: none"> <li>• Guardrail Posts</li> <li>• Panels &amp; Hardware</li> <li>• Guardcable</li> <li>• Posts &amp; Hardware</li> <li>• Proper End Treatment</li> </ul>																																																		
<p><b>SAFETY:</b> Use extreme care when dismantling damaged guardrail because sections may be under stress causing unexpected actions. Wear all appropriate PPE. Refer to <a href="#">Safety Policies, Rules &amp; Regulations-Employee Handbook</a>.</p>																																																		
<p><b>OTHER CONSIDERATIONS:</b> Install proper crashworthy end treatments based on current standards.</p>																																																		
<p><b>REFERENCES:</b> Missouri Standard Specifications for Highway Construction; Section <a href="#">606</a></p>																																																		