

MAINTENANCE PLANNING GUIDELINES		2006																																																
ACTIVITY: Pipe Culvert Repairs (R319)	ACTION: Install Pipe Liners (LF)																																																	
MAJOR & MINOR																																																		
DEFINITION: The time and expenses incurred from removing and replacing pipe culverts. Includes time and expenses incurred for installing a new lining in an existing culvert.																																																		
PURPOSE: To install new pipe liners in existing pipe culverts.																																																		
SCHEDULING: As needed.	<table border="1" style="width: 100%; text-align: center;"> <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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RECOMMENDED EQUIPMENT:	RECOMMENDED PROCEDURE:																																																	
<ul style="list-style-type: none"> • Trucks • Backhoe • Loader • Mudjack or Concrete Mixer • Traffic Control Equipment; reference the (See EPG 616.23 Traffic Control for Field Operations) 	<ol style="list-style-type: none"> 1. Consult district Design on size and placement of pipe liner. 2. Call Dig Rite and MoDOT to check for utilities. 3. Place traffic control devices as needed. 4. Clean out ditch, if necessary, to make room for liner. 5. Insert liner. 6. Form upstream and downstream ends and mudjack between liner and existing pipe. 7. Grade and reshape shoulder, as necessary. 8. Seed and mulch, as necessary 9. Clean work area. 10. Remove traffic control devices. 																																																	
RECOMMENDED MATERIAL:																																																		
<ul style="list-style-type: none"> • Pipe Liner • Slurry Mix • Portland Cement • Agricultural Lime • Water 																																																		
SAFETY: Call before you dig to locate utilities (1-800-DIG-RITE). Watch out for “pinch points.” Wear all appropriate PPE. Refer to the Safety Policies, Rules & Regulations – Employee Handbook.																																																		
OTHER CONSIDERATIONS: Use appropriate size liner for application. Follow manufacture’s instructions on installation.																																																		
REFERENCES: Missouri Standard Specifications for Highway Construction Section 735.																																																		

R319 – Install Pipe Liners



(1) Rusted Out Pipe Invert



(2) Pipe Liner Installation



(3) Pipe Liner Installation



(4) Pipe Liner Installation



(5) Pipe Liner Installation



(6) Pipe Liner Installation



(7) Pipe Liner Installation



(8) Pipe Liner Installation



(9) Pipe Liner Installation



(10) Grouting Pipe Liner to Culvert End



(11) Grouted Pipe Liner



(12) Finished Product