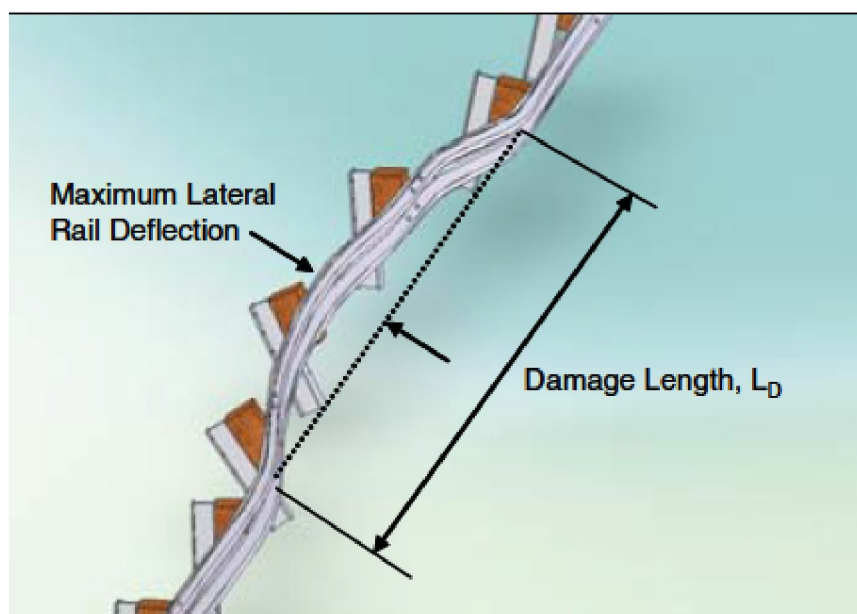
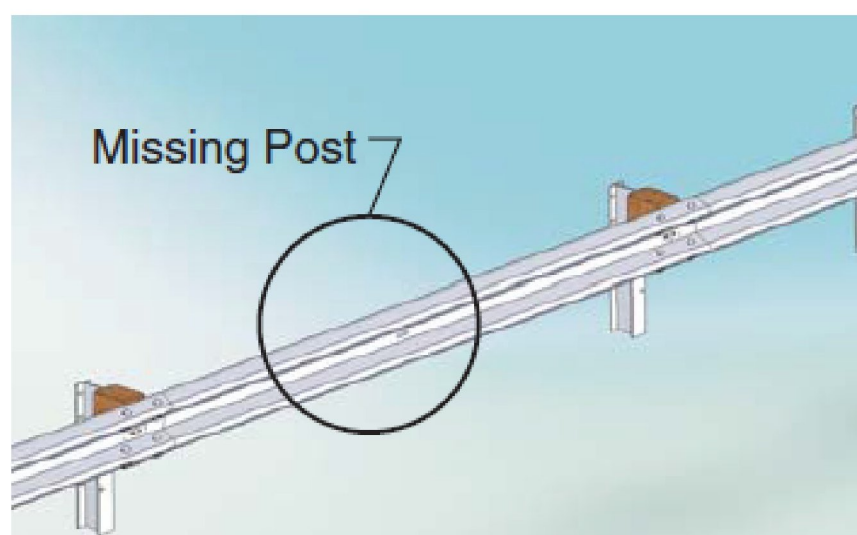
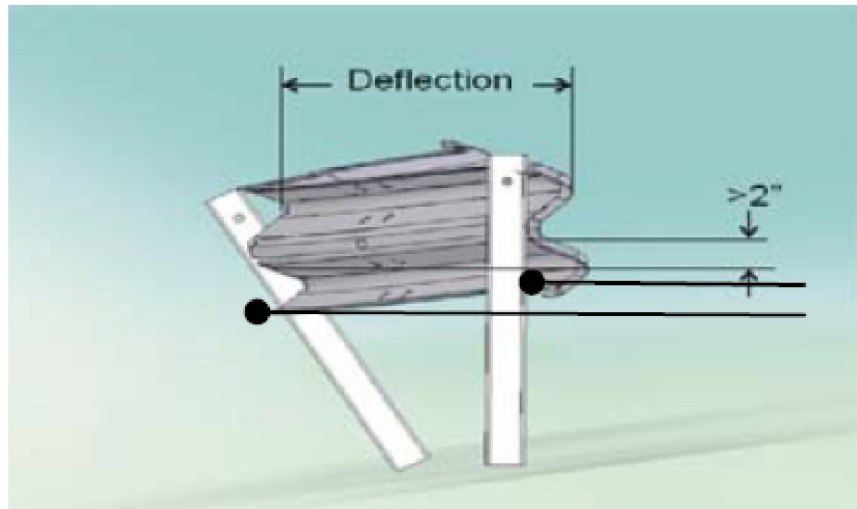
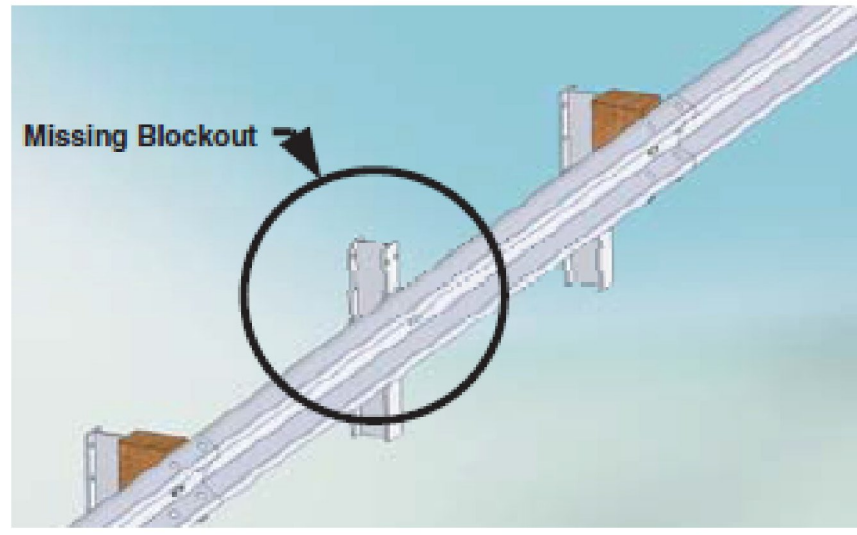
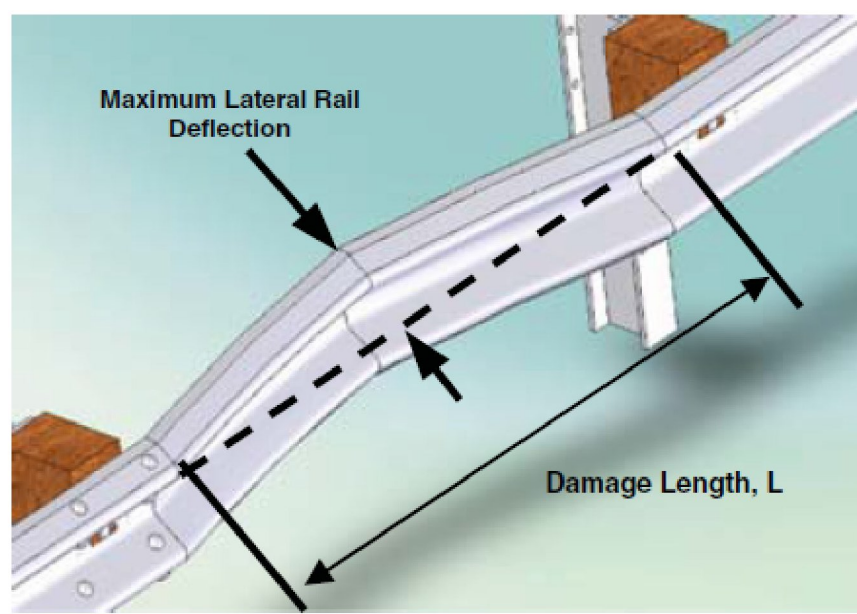
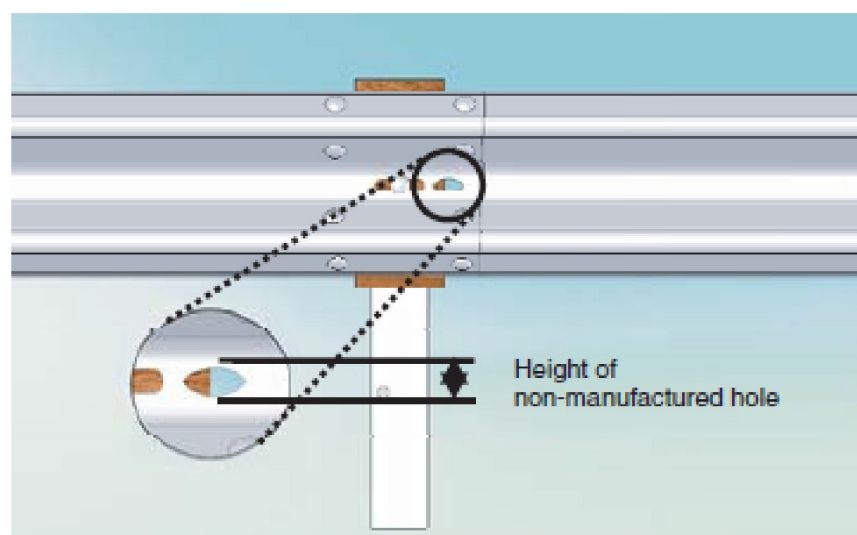
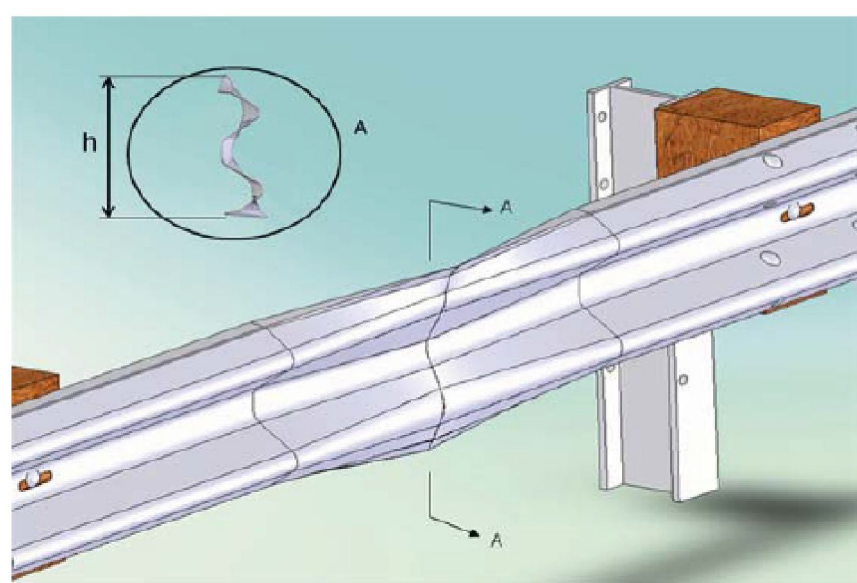

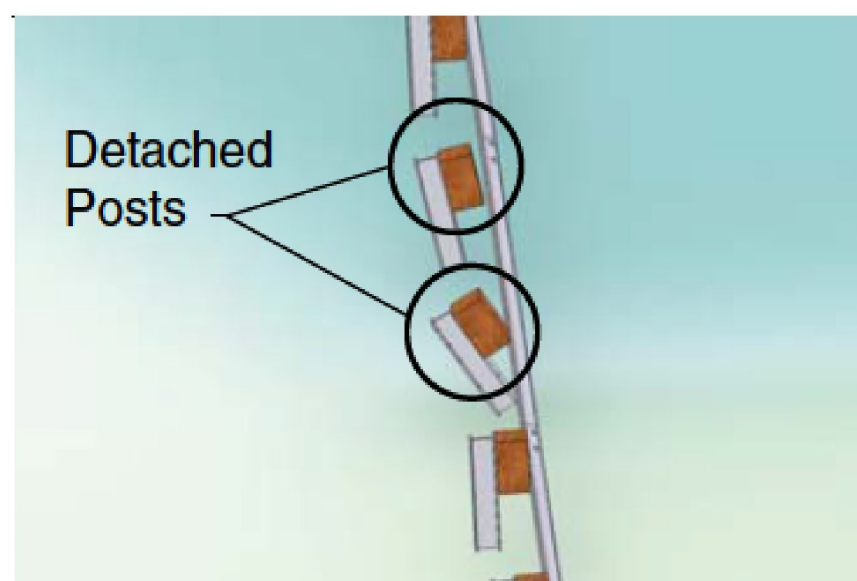


GUARDRAIL REPLACEMENT GUIDELINES

DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT	DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT	
POST AND RAIL DEFLECTION	ONE OR MORE OF THE FOLLOWING THRESHOLDS: <ul style="list-style-type: none"> MORE THAN 9 IN. LATERAL DEFLECTION ANYWHERE OVER A 25 FT LENGTH OF RAILTOP OF RAIL HEIGHT 2 OR MORE INCHES LOWER THAN ORIGINAL TOP OF RAIL HEIGHT 	HIGH		POST AND RAIL DEFLECTION	ONE OR MORE POSTS <ul style="list-style-type: none"> MISSING CRACKED ACROSS THE GRAIN BROKEN ROTTED WITH METAL TEARS 	HIGH		
	6-9 IN. LATERAL DEFLECTION ANYWHERE OVER A 25-FT LENGTH OF RAIL	MEDIUM			MISSING BLOCKOUT	ANY BLOCKOUTS <ul style="list-style-type: none"> MISSING CRACKED ACROSS THE GRAIN CRACKED FROM TOP OR BOTTOM OF BLOCK OUT ROTTED 	MEDIUM	
	LESS THAN 6 IN. OF LATERAL DEFLECTION OVER A 25-FT LENGTH OF RAIL	LOW	(WEAK POST W-BEAM SHOWN ONLY FOR CLARITY. EACH MEASUREMENT TAKE AT THE RAIL'S MIDDLE FOLD)			TWISTED BLOCKOUTS	ANY MISALIGNED BLOCKOUTS, TOP EDGE OF BLOCK 6 IN. OR MORE FROM BOTTOM EDGE NOTE: REPAIRS OF TWISTED BLOCKOUT ARE RELATIVELY QUICK AND INEXPENSIVE	LOW
RAIL DEFLECTION ONLY	6-9 IN. OF LATERAL DEFLECTION BETWEEN ANY TWO ADJACENT POSTS. NOTE: FOR DEFLECTION OVER 9 IN., USE POST/RAIL DEFLECTION GUIDELINES	MEDIUM		DAMAGE AT A RAIL SPLICE	MORE THAN 1 SPLICE BOLT: <ul style="list-style-type: none"> MISSING DAMAGED VISIBLY MISSING ANY UNDERLYING RAIL TORN THROUGH RAIL 	HIGH		
	LESS THAN 6 IN. OF LATERAL DEFLECTION BETWEEN ANY TWO ADJACENT POSTS	LOW			1 SPLICE BOLT: <ul style="list-style-type: none"> MISSING DAMAGED VISIBLY MISSING ANY UNDERLYING RAIL TORN THROUGH RAIL 	MEDIUM		
RAIL FLATTENING	ONE OR MORE OF THE FOLLOWING THRESHOLDS: <ul style="list-style-type: none"> RAIL CROSS SECTION HEIGHT MORE THAN 17 IN. (SUCH AS MAY OCCUR IF RAIL IS FLATTENED) RAIL CROSS SECTION HEIGHT LESS THAN 9 IN. (SUCH AS A DENT TO TOP EDGE) 	MEDIUM			<ul style="list-style-type: none"> MORE THAN 2 HOLES LESS THAN 1 IN. HEIGHT IN A 12.5-FT LENGTH OF RAIL ANY HOLES GREATER THAN 1 IN. IN HEIGHT ANY HOLE WHICH INTERSECTS EITHER THE TOP OR BOTTOM EDGE OF THE RAIL. 	HIGH		
	RAIL CROSS SECTION HEIGHT BETWEEN 9 AND 17 IN.	LOW				1-2 HOLES LESS THAN 1 IN. IN HEIGHT IN A 12.5-FT LENGTH OF RAIL		MEDIUM
POSTS SEPARATED FROM RAIL	<ul style="list-style-type: none"> 2 OR MORE POSTS WITH BLOCKOUT ATTACHED WITH POST/RAIL SEPARATION LESS THAN 3 IN. 1 OR MORE POSTS WITH POST/RAIL SEPARATION WHICH EXCEEDS 3 IN. 	MEDIUM		<p>NOTES:</p> <ol style="list-style-type: none"> THESE ARE GUIDELINES FOR THE EVALUATION OF EXISTING GUARDRAIL. THESE ARE GUIDELINES ONLY AND THE CONTRACTOR SHALL REPLACE GUARDRAIL AS DIRECTED BY THE ENGINEER. GUIDELINES ARE FROM THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 656, "CRITERIA FOR RESTORATION OF LONGITUDINAL BARRIERS", COPYRIGHT 2010. 				
	<ul style="list-style-type: none"> 1 POST, WITH BLOCKOUT ATTACHED, WITH POST/RAIL SEPARATION LESS THAN 3 IN. 	LOW	NOTE: 1. IF THE BLOCKOUT IS NOT FIRMLY ATTACHED TO THE POST. USE THE MISSING BLOCKOUT GUIDELINES. 2. DAMAGE SHOULD ALSO BE EVALUATED AGAINST POST/RAIL DEFLECTION GUIDELINES.					

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME: 16v148.dgn	PLOT DATE: 05-JUN-2017
PROJECT LEADER: B. KIPP	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
GUARDRAIL REPLACEMENT DETAIL SHEET 1	SHEET 11 OF 33