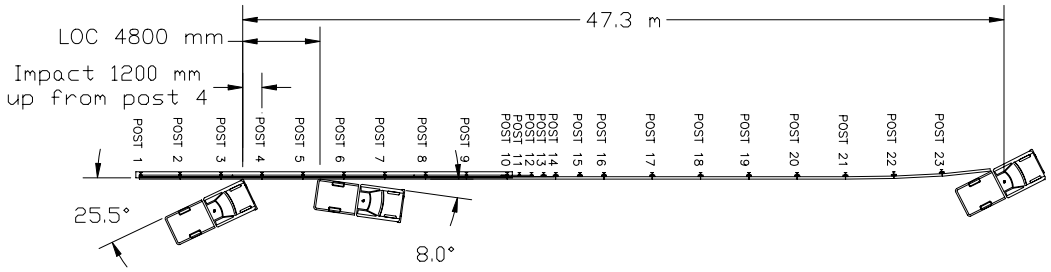
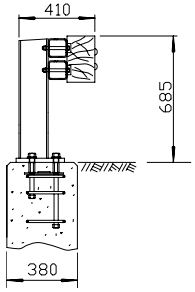
0.000 s

0.099 s

0.297 s

0.496 s





General Information

Test Agency	Texas Transportation Institute
Test No.	405181-21
Date	06/04/03

Test Article

Type	Bridge Rail
Name	Tubular Steel-Backed Timber Bridge Rail
Installation Length (m)	22.8 (bridge rail only; 53.1 m total)
Material or Key Elements	Steel Tube Backed Timber Rail Elements With Steel Posts
Soil Type and Condition	Concrete Footing, Dry

Test Vehicle

Type	Production
Designation	2000P
Model	1998 Chevrolet 2500 Pickup Truck
Mass (kg)	
Curb	2145
Test Inertial	2085
Dummy	77
Gross Static	2162

Impact Conditions

Speed (km/h)	99.6
Angle (deg)	25.5

Exit Conditions

Speed (km/h)	65.5
Angle (deg)	8.0

Occupant Risk Values

Impact Velocity (m/s)	
x-direction	5.6
y-direction	6.6
THIV (km/h)	29.9
Ridedown Accelerations (g's)	
x-direction	-8.5
y-direction	9.0
PHD (g's)	9.5
ASI	1.34
Max. 0.050-s Average (g's)	
x-direction	-8.2
y-direction	9.2
z-direction	-6.3

Test Article Deflections (m)

Dynamic	0.28
Permanent	0.05
Working Width	0.73

Vehicle Damage

Exterior	
VDS	11FL3
CDC	11FLEW3
Maximum Exterior	
Vehicle Crush (mm)	530
Interior	
OCDI	LF0102000
Max. Occupant Compartment	
Deformation (mm)	66

Post-Impact Behavior

(during 1.0 s after impact)	
Max. Yaw Angle (deg)	34.1
Max. Pitch Angle (deg)	-12.2
Max. Roll Angle (deg)	-37.3

Summary of results for test 405181-21, *NCHRP Report 350* test 3-11.