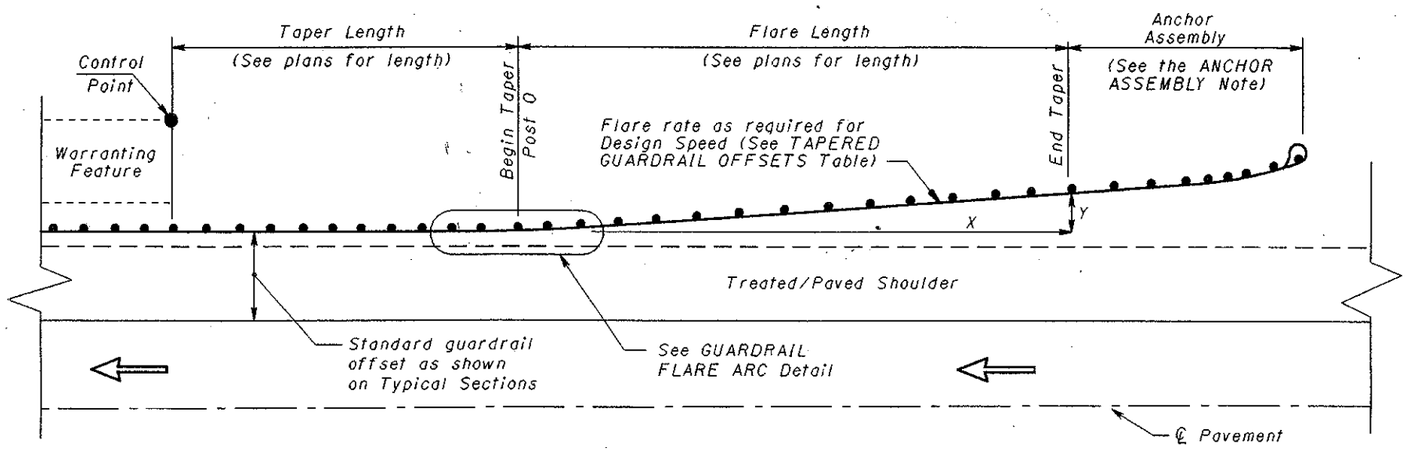


STANDARD GUARDRAIL FLARE
(Plan View)

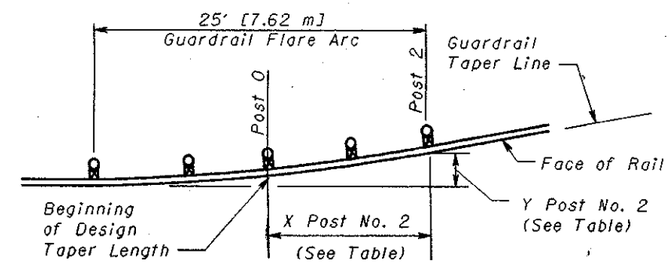
NOTES

STANDARD GUARDRAIL FLARE: Construct the flare shown here when indicated in the construction plans and in conjunction with **SCD GR-5.2.**

FLARE RATES AND OFFSET SPEEDS: Use the Design Speed shown on the plans to determine flare rates and offsets. Where a Design Speed is not shown or available, use the legal posted speed limit.

ANCHOR ASSEMBLY: Use a Type B-98 Anchor Assembly with standard guardrail flares unless otherwise specified. The Type A can be used, with restrictions. See **Location & Design Manual, Volume 1,** Section 603.

CONTROL POINT: The point shown designates the extent of the hazard being protected and is shown for design use only.



GUARDRAIL FLARE ARC DETAIL

TAPERED GUARDRAIL OFFSETS (Feet)

Post No.	Flare Length	45 MPH or less 10:1 Taper		50 MPH 11:1 Taper		55 MPH 12:1 Taper		60 MPH 13:1 Taper		65 MPH 14:1 Taper		70 MPH 15:1 Taper	
		X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
0		0	0.3	0	0.3	0	0.3	0	0.2	0	0.2	0	0.2
2		12.4	1.3	12.5	1.1	12.5	1.0	12.5	1.0	12.5	0.9	12.5	0.8
4	25	24.9	2.5	24.9	2.3	24.9	2.1	24.9	1.9	24.9	1.8	24.9	1.7
6		37.3	3.7	37.3	3.4	37.4	3.1	37.4	2.9	37.4	2.7	37.4	2.5
8	50	49.8	5.0	49.8	4.5	49.8	4.1	49.9	3.8	49.9	3.6	49.9	3.3
10		62.2	6.2	62.2	5.7	62.3	5.2	62.3	4.8	62.3	4.5	62.4	4.2
12	75	74.6	7.5	74.7	6.8	74.7	6.2	74.8	5.7	74.8	5.3	74.8	5.0
14		87.1	8.7	87.1	7.9	87.2	7.3	87.2	6.7	87.3	6.2	87.3	5.8
16	100	99.5	9.9	99.6	9.1	99.7	8.3	99.7	7.7	99.7	7.1	99.8	6.7
18		111.9	11.2	112.0	10.2	112.1	9.3	112.2	8.6	112.2	8.0	112.3	7.5
20	125	124.4	12.4	124.5	11.3	124.6	10.4	124.7	9.5	124.7	8.9	124.7	8.3
22		136.8	13.7	136.9	12.5	137.0	11.4	137.1	10.5	137.1	9.8	137.2	9.1
24	150	149.3	14.9	149.4	13.6	149.5	12.5	149.6	11.5	149.6	10.7	149.7	10.0
26		161.7	16.2	161.8	14.7	161.9	13.5	162.0	12.5	162.1	11.6	162.1	10.8
28	175	174.1	17.4	174.3	15.8	174.4	14.5	174.5	13.4	174.6	12.5	174.6	11.6
30		186.6	18.7	186.7	17.0	186.9	15.6	186.9	14.4	187.0	13.4	187.1	12.5
32	200	199.0	19.9	199.2	18.1	199.3	16.6	199.4	15.3	199.5	14.3	199.6	13.3

All "X" dimensions shown are from the centerline of Post 0 to the centerline of the indicated post along the standard guardrail offset line extended.

All "Y" dimensions shown are from the standard guardrail offset line extended to the face of rail at the post indicated.

TAPERED GUARDRAIL OFFSETS (Meters)

Post No.	Flare Length	70 km/h or less 10:1 Taper		80 km/h 11:1 Taper		90 km/h 12:1 Taper		100 km/h 13:1 Taper		110 km/h 14:1 Taper		120 km/h 15:1 Taper	
		X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
0		0	0.09	0	0.09	0	0.08	0	0.07	0	0.07	0	0.06
2		3.79	0.38	3.80	0.35	3.80	0.32	3.80	0.29	3.80	0.27	3.80	0.25
4	7.62	7.58	0.76	7.59	0.69	7.59	0.64	7.60	0.59	7.60	0.54	7.60	0.51
6		11.37	1.14	11.38	1.04	11.39	0.95	11.40	0.88	11.40	0.82	11.40	0.76
8	15.24	15.16	1.52	15.18	1.39	15.19	1.27	15.19	1.17	15.20	1.09	15.21	1.02
10		18.95	1.91	18.97	1.73	18.98	1.59	18.99	1.47	19.00	1.36	19.01	1.27
12	22.86	22.75	2.29	22.77	2.08	22.78	1.91	22.79	1.76	22.80	1.63	22.81	1.52
14		26.54	2.67	26.56	2.42	26.58	2.22	26.59	2.05	26.60	1.91	26.61	1.78
16	30.48	30.33	3.05	30.35	2.77	30.37	2.54	30.39	2.34	30.40	2.18	30.41	2.03
18		34.12	3.43	34.15	3.12	34.17	2.86	34.19	2.64	34.20	2.45	34.21	2.29
20	38.10	37.91	3.81	37.94	3.46	37.97	3.18	37.99	2.93	38.00	2.72	38.02	2.54
22		41.70	4.19	41.74	3.81	41.76	3.49	41.79	3.22	41.80	2.99	41.82	2.79
24	45.72	45.49	4.57	45.53	4.16	45.56	3.81	45.58	3.52	45.60	3.27	45.62	3.05
26		49.28	4.95	49.32	4.50	49.36	4.13	49.38	3.81	49.40	3.54	49.42	3.30
28	53.34	53.07	5.33	53.12	4.85	53.15	4.45	53.18	4.10	53.20	3.81	53.22	3.56
30		56.86	5.72	56.91	5.20	56.95	4.76	56.98	4.40	57.00	4.08	57.02	3.81
32	60.96	60.65	6.10	60.71	5.54	60.75	5.08	60.78	4.69	60.80	4.35	60.82	4.06

All "X" dimensions shown are from the centerline of Post 0 to the centerline of the indicated post along the standard guardrail offset line extended.

All "Y" dimensions shown are from the standard guardrail offset line extended to the face of rail at the post indicated.

THIS DRAWING REPLACES GR-5.1M DATED 4-21-95.

OHIO DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN ENGINEER
4-18-03
DATE

STDS. ENGR.
D. Focke

All metric dimensions (in brackets [ ]) are in millimeters unless otherwise noted.

ROADWAY ENGINEERING SERVICES

STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL FLARE DETAILS

NUMBER
GR-5.1

1/1