

Reflectors mounted

per manufacturer's

specifications

Flexible, fiber

reinforced

composite

Mount reflectors on aluminum or

apply directly to flexible post

REFLECTIVE SHEETING

FLEXIBLE, SELF ERECTING OR YIELDING; WHITE

UNLESS OTHERWISE NOTED

POST "F" DETAIL

or self-plugging aluminum rivet with domed head or aluminum theft proof bolt and nut to attach reflector $^{13}/_{16}$ " \pm $^{1}/_{16}$ to the post. (Monodirectional)

For "R" Post

RIGID STEEL OR ALUMINUM

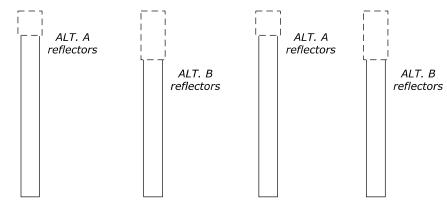
(ALL HOLES 1/4" DIAMETER)

POST "R" DETAIL

 $2\frac{1}{16}$ " $\pm \frac{1}{16}$ "

/₁₆" Diameter aluminum bolt when reflectors are used on both sides of the post (Bi-directional)

 $\frac{3}{16}$ " Diameter pull-through



MONODIRECTIONAL "R" or "F" Posts

IDAHO TYPE 1

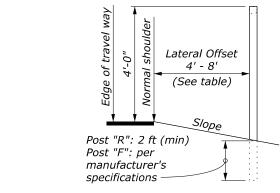
MONODIRECTIONAL "R" or "F" Posts

BI-DIRECTIONAL BI-DIRECTIONAL "R" or "F" Posts

"R" or "F" Posts

IDAHO TYPE 2 IDAHO TYPE 3 IDAHO TYPE 4

DELINEATORS

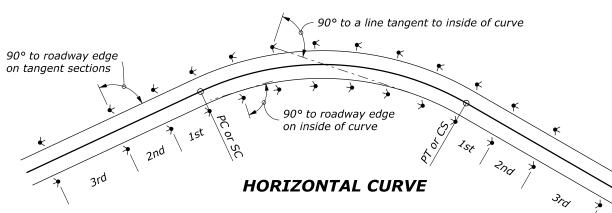


LATERAL PLACEMENT TABLE		
SLOPE	OFFSET	
1V:4H	4'-0" to 6'-0"	
1V:6H or flatter	6'-0" to 8'-0"	
Curb Section	6'-0"	

NOTE:

- 1. Where delineators are used only on curves, place three delineators outside the curve limits.
- 2. Place Type 3 delineators on the left side of two-way roadways at extreme curves with radii less than 984 feet to the right. They may also be installed where it is not possible or practical to install and maintain right-hand delineation on both sides.
- 3. If horizontal and vertical curves are combined, use the more restrictive spacing.
- 4. Where delineators are used on tangents, space the delineators at 528 feet. Begin the tangent spacing beyond the spacing requirements for horizontal and vertical curves.
- 5. Delineator reflector colors are shown in the plans. Delineator type includes the post type, for example: Type 1R or Type 3F, etc.
- 6. When the contract does not provide for the construction of the ultimate pavement, allow for the thickness of base and pavement to be placed later when establishing the elevation of the traffic delineators.
- 7. Vary the post spacing up to $\frac{1}{8}$ of the spacing shown to clear driveways, cross roads, intersections or ramps. Eliminate the post if the variation is exceeded.

TYPICAL INSTALLATION



Optional tapered end

	HORIZONTAL CURVES					
CURVE	SPACING (ON EACH SIC	E OF ROADV	VAY (FEET)		
RADIUS	ON CURVE	BEYON	ID SC, CS, PC	C or PT		
(FEET)	ON CORVE	1st SPACE 2nd SPACE 3rd SPACE				
≥ 6000	300	300 528 528 528				
1450 - 5999	150	<i>150 300 528 528</i>				
480 - 1449	100	200	300	528		
240 - 479	<i>75</i>	150 225 528				
< 240	50	100	150	300		

1st 1st	\ !
VERTICAL CURVE	2nd 3rd 4th 5th

		CREST V	ERTICAL C	CURVES		
		SPACING O	N EACH SID	E OF ROADW	'AY IN FEET	
κ	ON CURVE		BEY	OND VPC or	VPT	
	ON CORVE	1st SPACE	2nd SPACE	3rd SPACE	4th SPACE	5th SPACE
≥ 550	528	528	528	528	528	528
400 - 549	300	528	528	528	528	528
200 - 399	200	300	528	528	528	528
100 - 199	100	150	200	300	528	528
50 - 99	<i>75</i>	100	150	200	300	528
< 50	50	<i>75</i>	100	150	200	300

L = Length of vertical curve in feet A = Algebraic grade change in %

Edge of travel way	4'-0"	Normal shoulder	- Install delineator post flush with outside face of guardrail post

TYPICAL INSTALLATION WITH **BEAM TYPE GUARD RAIL**

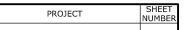
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF FEDERAL LANDS HIGHWAY

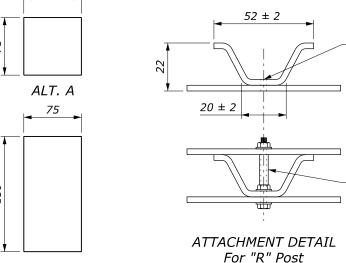
WFLHD DETAIL

IDAHO DELINEATORS

DETAIL APPROVED FOR USE 9/2009	DETAIL
REVISED:	W633-50

NO SCALE





ALT. B Mount reflectors on aluminum or

apply directly to flexible post

REFLECTIVE SHEETING

FLEXIBLE, SELF ERECTING OR YIELDING; WHITE

UNLESS OTHERWISE NOTED

POST "F" DETAIL

Reflectors mounted

per manufacturer's

specifications

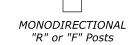
Flexible, fiber

reinforced

composite

5 mm diameter pull-through or self-plugging aluminum rivet with domed head or aluminum theft proof bolt and nut to attach reflector to the post. (Monodirectional)

5 mm diameter aluminum bolt when reflectors are used on both sides of the post (Bi-directional)



IDAHO TYPE 1

ALT. A

reflectors

MONODIRECTIONAL "R" or "F" Posts

BI-DIRECTIONAL BI-DIRECTIONAL "R" or "F" Posts

"R" or "F" Posts

IDAHO TYPE 2 IDAHO TYPE 3 IDAHO TYPE 4

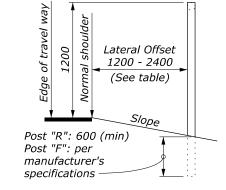
ALT. A

reflectors

DELINEATORS

ALT. B

reflectors



SLOPE OFFSET 1V:4H 1200 to 1800 1V:6H or flatter 1800 to 2400 Curb Section 1800			
1V:4H 1200 to 1800 1V:6H or flatter 1800 to 2400	LATERAL PLACEMENT TABLE		
1V:6H or flatter 1800 to 2400	SLOPE	OFFSET	
	1V:4H	1200 to 1800	
Curb Section 1800	1V:6H or flatter	1800 to 2400	
	Curb Section	1800	

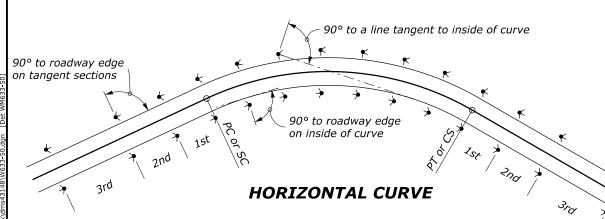
NOTE:

ALT. B

reflectors

- 1. Where delineators are used only on curves, place three delineators outside the curve limits.
- 2. Place Type 3 delineators on the left side of two-way roadways at extreme curves with radii less than 300 m to the right. They may also be installed where it is not possible or practical to install and maintain right-hand delineation on both sides.
- 3. If horizontal and vertical curves are combined, use the more restrictive spacing.
- 4. Where delineators are used on tangents, space the delineators at 160 meters. Begin the tangent spacing beyond the spacing requirements for horizontal and vertical curves.
- 5. Delineator reflector colors are shown in the plans. Delineator type includes the post type, for example: Type 1R or Type 3F, etc.
- 6. When the contract does not provide for the construction of the ultimate pavement, allow for the thickness of base and pavement to be placed later when establishing the elevation of the traffic delineators.
- 7. Vary the post spacing up to $\frac{1}{8}$ of the spacing shown to clear driveways, cross roads, intersections or ramps. Eliminate the post if the variation is exceeded.
- 8. Furnish hardware in the metric sizes shown. Equivalent US Customary sizes may be used when metric sizes are unavailable.
- 9. Dimensions without units are millimeters.

TYPICAL INSTALLATION



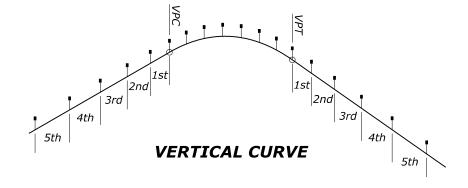
RIGID STEEL OR ALUMINUM

(ALL HOLES 6.5 mm DIAMETER)

POST "R" DETAIL

Optional tapered end

HORIZONTAL CURVES				
CURVE	URVE SPACING ON EACH SIDE OF ROADWAY (m)			WAY (m)
RADIUS	ON CURVE	BEYON	ID SC, CS, PC	C or PT
(METERS)	ON CORVE	1st SPACE	2nd SPACE	3rd SPACE
≥ 1900	90 160 160 160			
450 - 1899	45 90 160 160			
150 - 449	30	60	90	160
<i>75 - 149</i>	25	45	70	160
< 75	15	30	45	90



	CREST VERTICAL CURVES					
	,	SPACING ON	EACH SIDE	OF ROADWA	Y IN METERS	3
K	ON CURVE		BEY	OND VPC or	VPT	
	ON CORVE	1st SPACE	2nd SPACE	3rd SPACE	4th SPACE	5th SPACE
≥ 165	160	160	160	160	160	160
120 - 164	90	160	160	160	160	160
60 - 119	60	90	160	160	160	160
30 - 59	30	45	60	90	160	160
15 - 29	25	30	45	60	90	160
< 15	15	25	30	45	60	90

L = Length of vertical curve in meters A = Algebraic grade change in %

Edge of travel way	Normal shoulder	Install delineator post flush with outside face of guardrail post

TYPICAL INSTALLATION WITH **BEAM TYPE GUARD RAIL**

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION OFFICE OF FEDERAL LANDS HIGHWAY
WFLHD METRIC DETAIL

IDAHO DELINEATORS

DETAIL APPROVED FOR USE 9/2009	DETAIL
REVISED:	WM633-50

NO SCALE