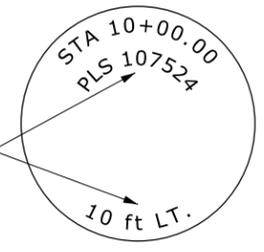


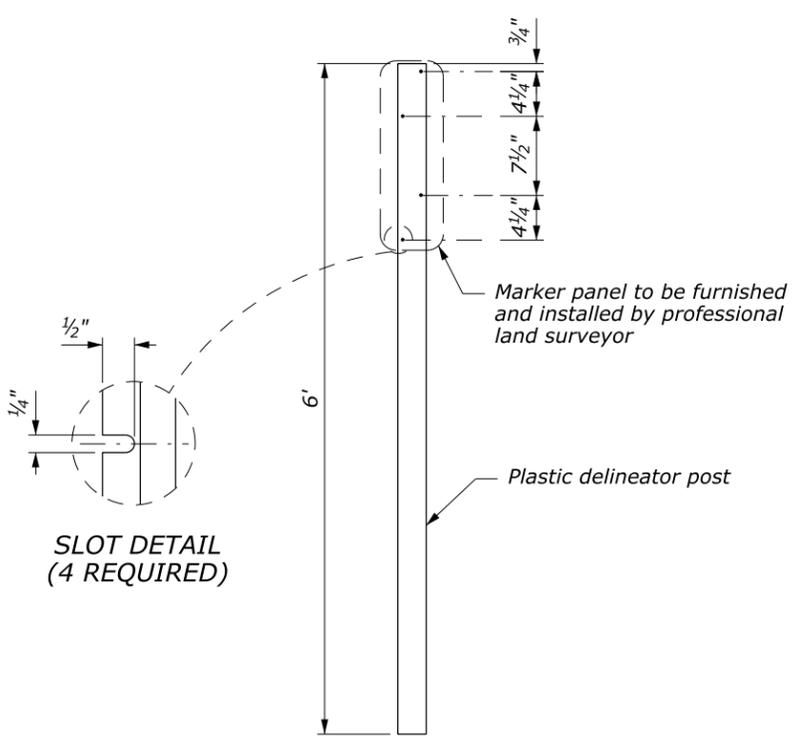
**TYPICAL SECTION  
RIGHT-OF-WAY MONUMENTATION**



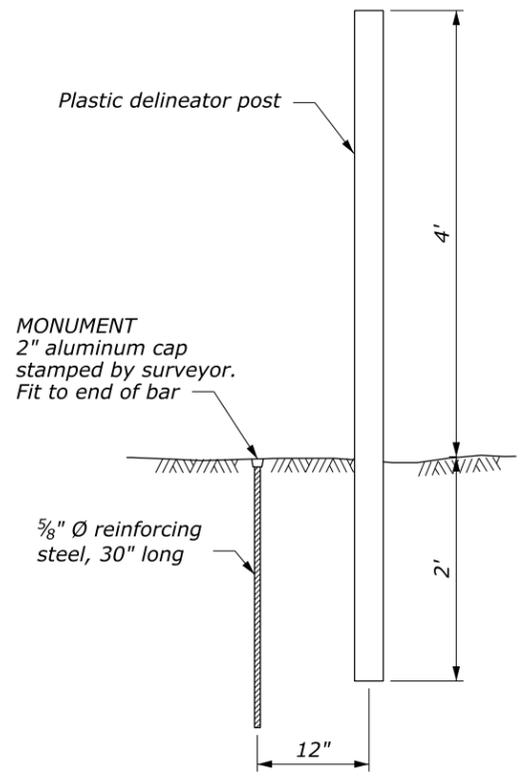
**CAP DETAIL**

**NOTE:**

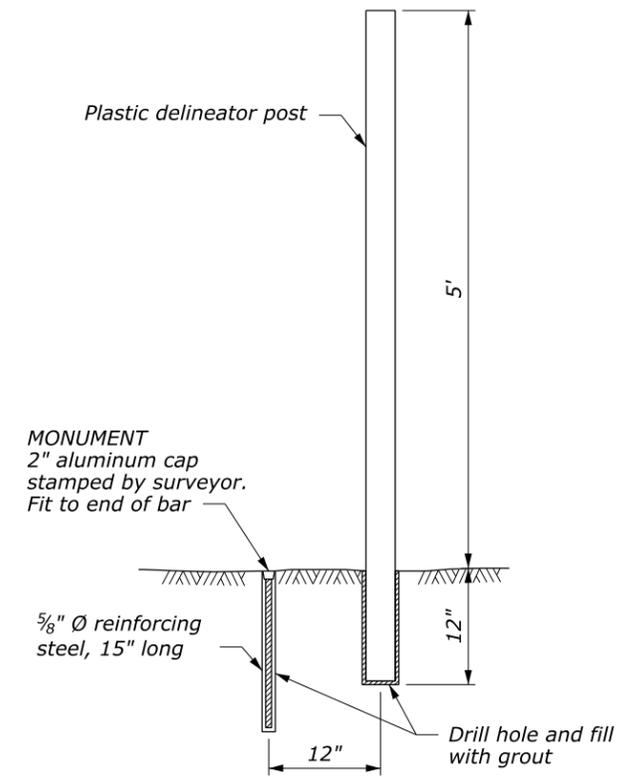
1. **Right-of-Way Witness Post:**  
Set a 6 foot long flexible plastic post. Right-of-Way witness posts should be brown, green or other suitable colors to match surroundings. Attach a "Survey Marker Witness" plaque to the post. Station, offset and PLS date of survey should be permanently attached to the front of the post facing the designed alignment.
2. Witness post to be used when Right-of-Way witness post assembly is required.
3. Set monuments using a professional land surveyor according to the requirements of the state code.
4. Station and distances based on Right-of-Way centerline.
5. Install markers so that the center of the cap is not more than 1/2" from the point established.



**RIGHT-OF-WAY WITNESS POST  
ASSEMBLY DETAIL**



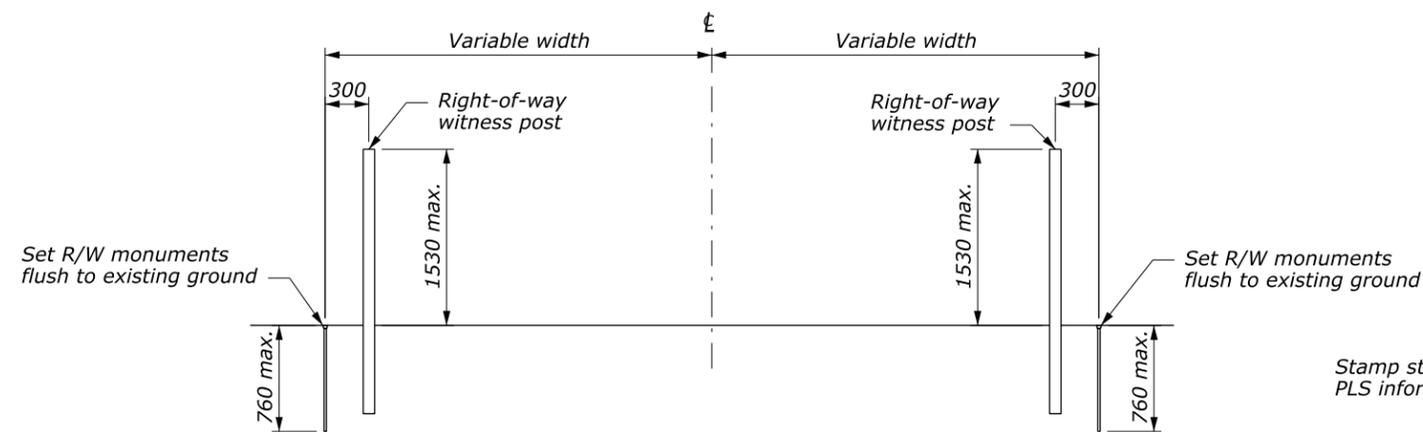
**RIGHT-OF-WAY MONUMENT  
AND WITNESS POST  
EARTH INSTALLATION**



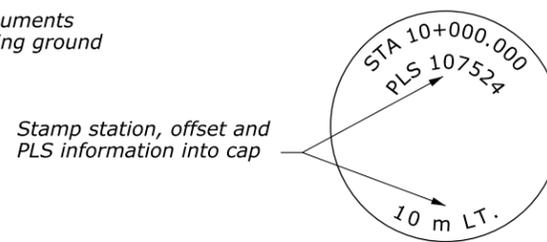
**RIGHT-OF-WAY MONUMENT  
AND WITNESS POST  
SOLID ROCK INSTALLATION**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
<b>RIGHT-OF-WAY MONUMENTATION</b>	
DETAIL APPROVED FOR USE 5/2003 REVISED: 12/2006 11/2007 11/2014	DETAIL W621-1



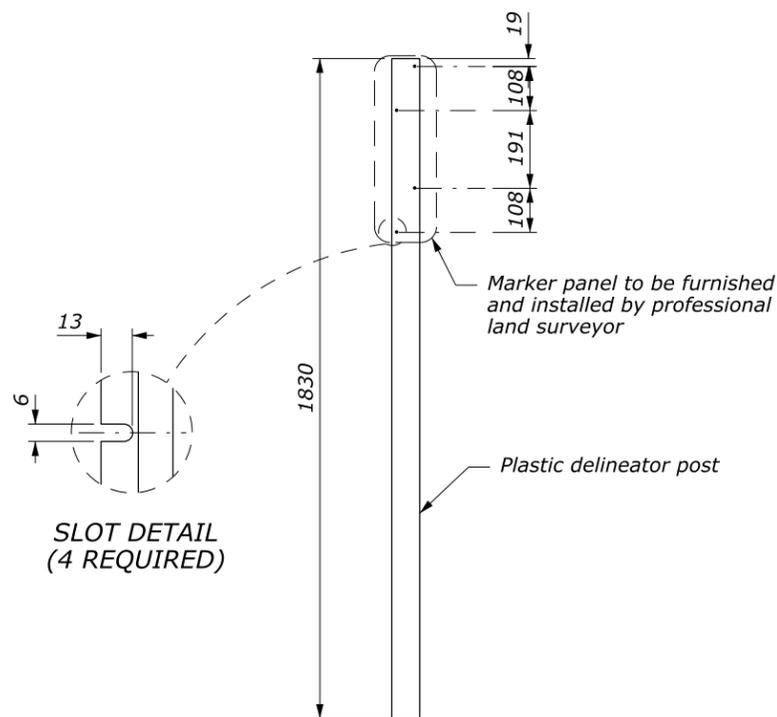
**TYPICAL SECTION  
RIGHT-OF-WAY MONUMENTATION**



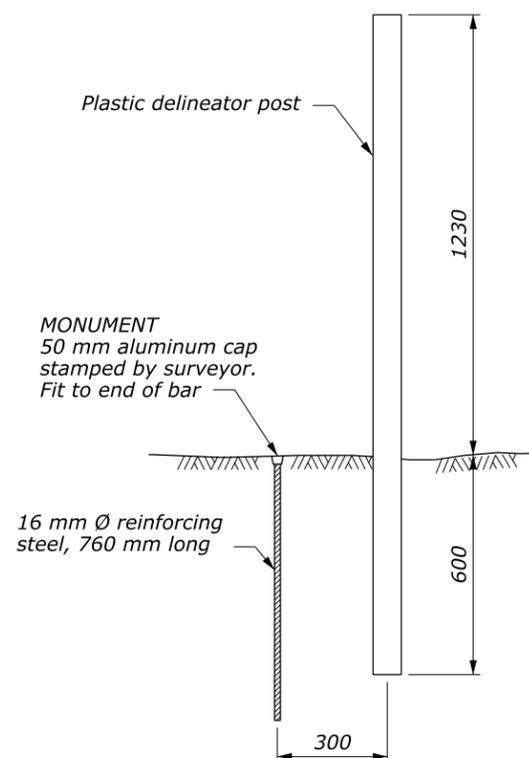
**CAP DETAIL**

**NOTE:**

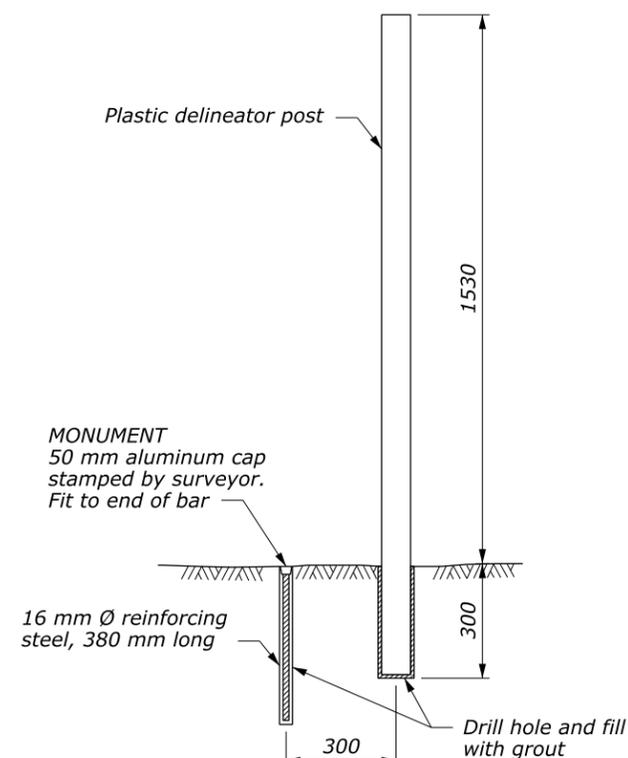
1. **Right-of-Way Witness Post:**  
Set a 1830 mm long flexible plastic post. Right-of-Way witness posts should be brown, green or other suitable colors to match surroundings. Attach a "Survey Marker Witness" plaque to the post. Station, offset and PLS date of survey should be permanently attached to the front of the post facing the designed alignment.
2. Witness post to be used when Right-of-Way witness post assembly is required.
3. Set monuments using a professional land surveyor according to the requirements of the state code.
4. Station and distances based on Right-of-Way centerline.
5. Install markers so that the center of the cap is not more than 13 mm from the point established.
6. Dimensions without units are millimeters.



**RIGHT-OF-WAY WITNESS POST  
ASSEMBLY DETAIL**



**RIGHT-OF-WAY MONUMENT  
AND WITNESS POST  
EARTH INSTALLATION**

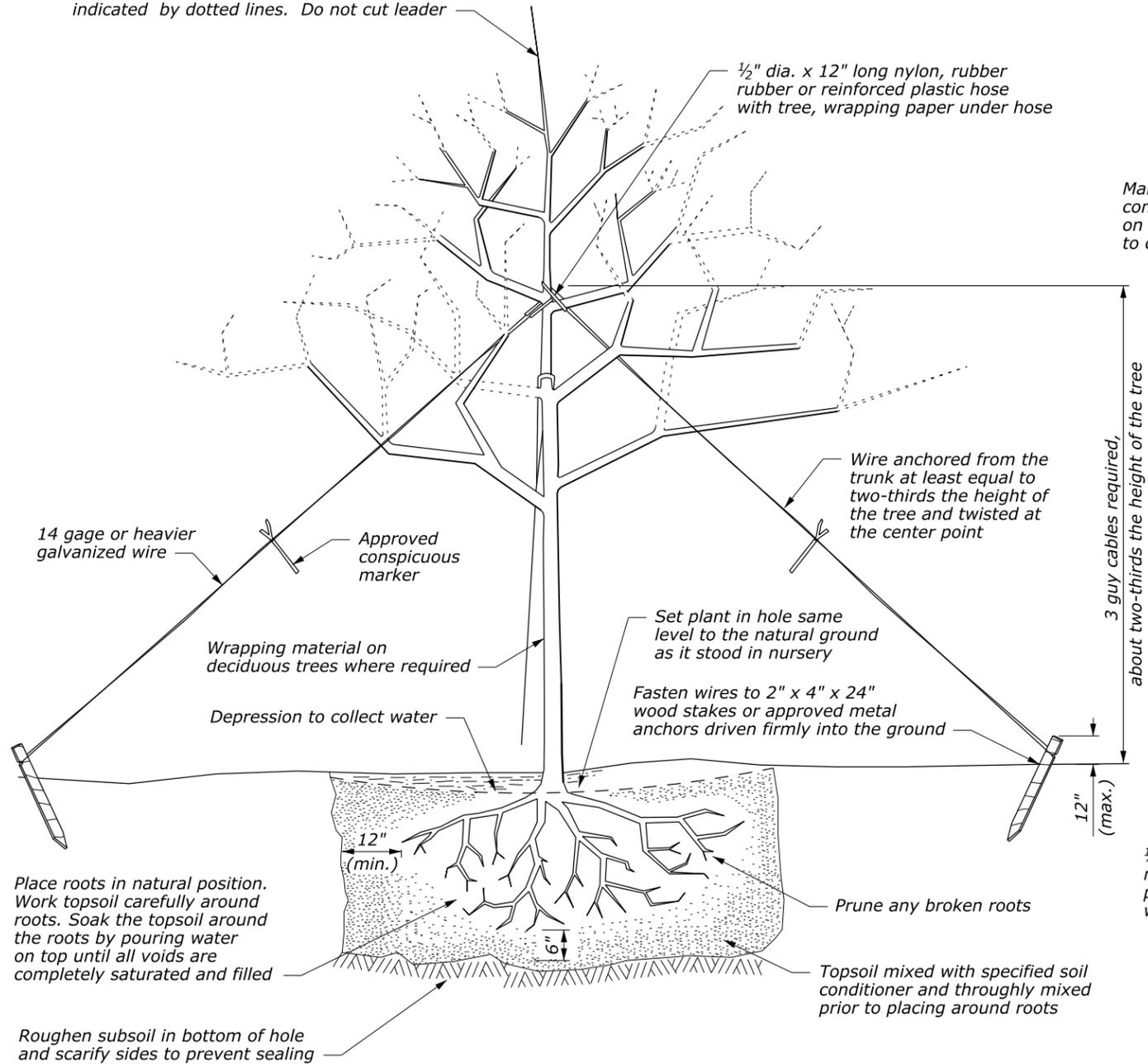


**RIGHT-OF-WAY MONUMENT  
AND WITNESS POST  
SOLID ROCK INSTALLATION**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>RIGHT-OF-WAY MONUMENTATION</b>	
DETAIL APPROVED FOR USE 5/2003 REVISED: 12/2006 11/2007 11/2014	DETAIL WM621-1

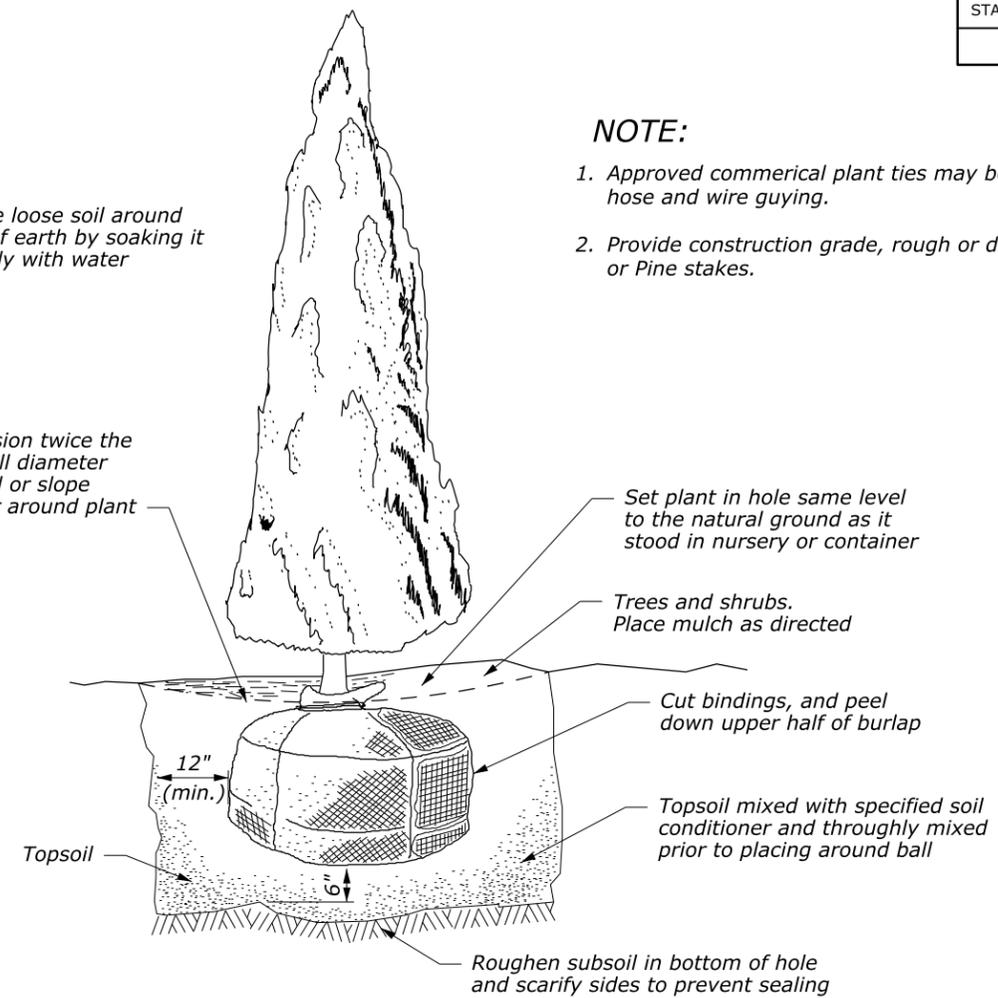
For bare root trees and shrubs, prune branches about 1/3 for nursery stock and about 1/2 for collected material as indicated by dotted lines. Do not cut leader



**METHOD OF PLANTING BARE ROOT TREES AND SHRUBS AND METHOD OF GUYING DECIDUOUS TREES OVER 12' AND CONIFERS OVER 4'**

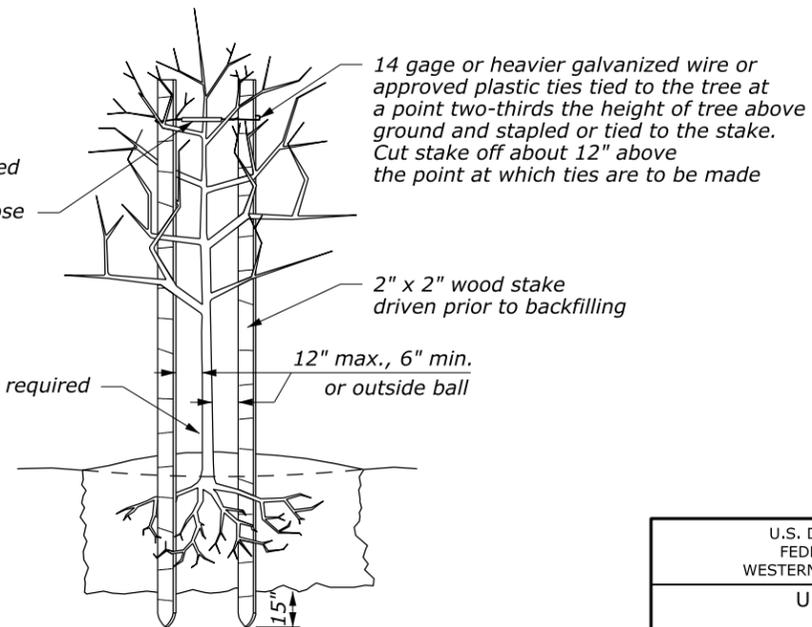
Settle the loose soil around the ball of earth by soaking it thoroughly with water

Make a depression twice the container or ball diameter on level ground or slope to collect water around plant



**METHOD OF PLANTING CONTAINER OR BALLED AND BURLAPPED TREES AND SHRUBS**

1/2" dia. 12" long nylon, rubber or reinforced plastic hose with tree, wrapping paper under hose



**METHOD OF STAKING DECIDUOUS TREES UNDER 12'**

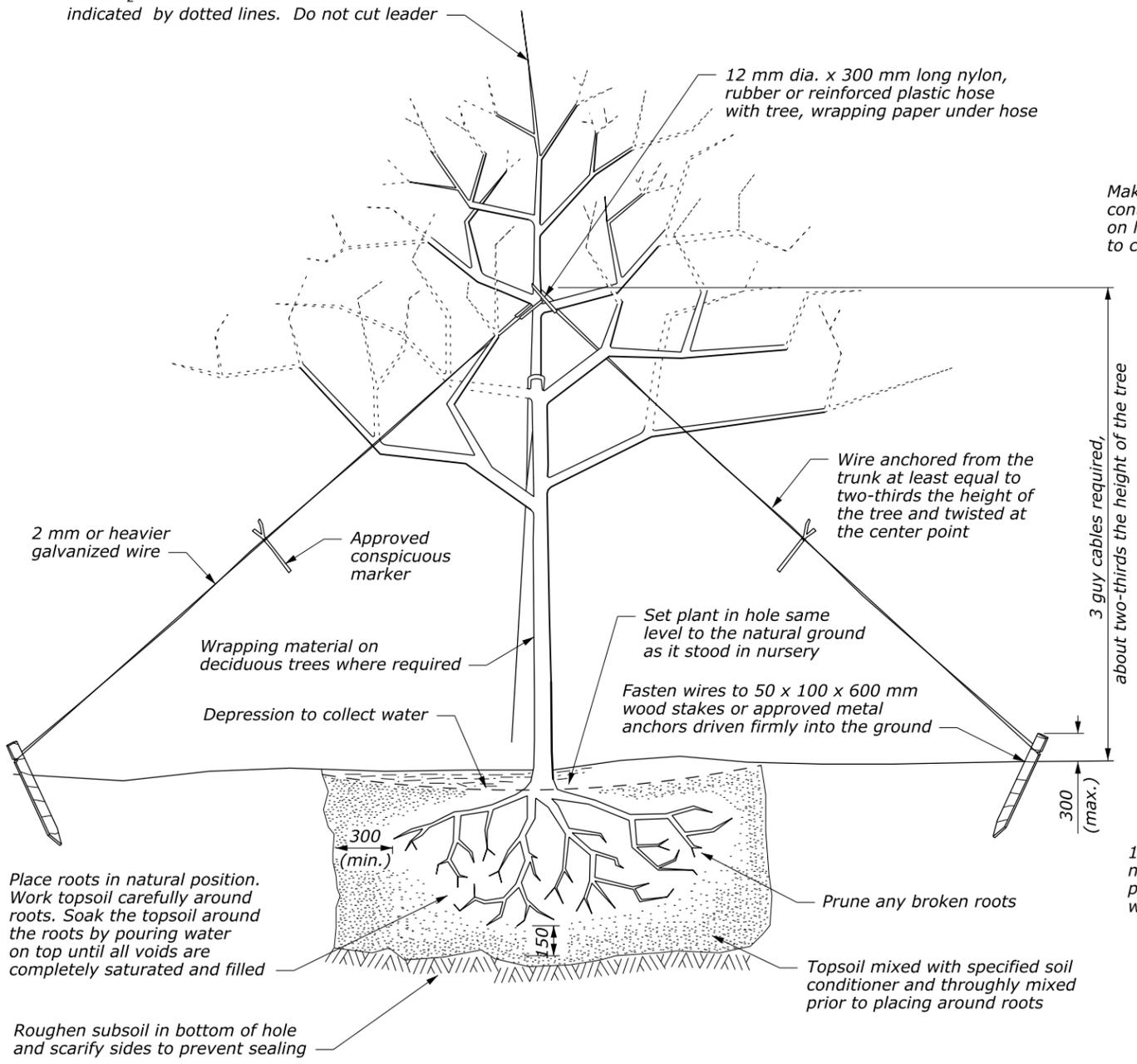
**NOTE:**

1. Approved commercial plant ties may be used in lieu of hose and wire guying.
2. Provide construction grade, rough or dressed Douglas Fir or Pine stakes.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
<b>TREES AND SHRUBS PLANTING METHODS</b>	
DETAIL APPROVED FOR USE 12/2006	DETAIL
REVISED:	W626-1

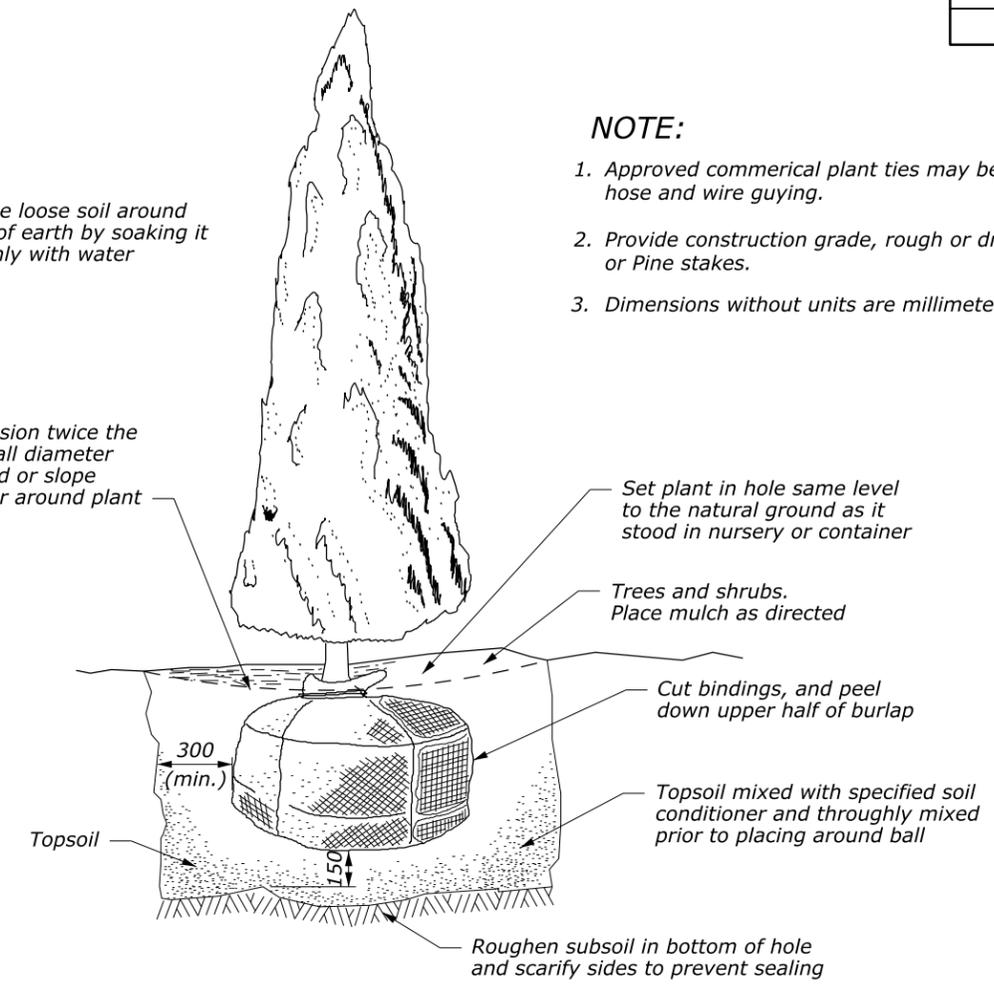
For bare root trees and shrubs, prune branches about  $\frac{1}{3}$  for nursery stock and about  $\frac{1}{2}$  for collected material as indicated by dotted lines. Do not cut leader



**METHOD OF PLANTING BARE ROOT TREES AND SHRUBS AND METHOD OF GUYING DECIDUOUS TREES OVER 3.6 m AND CONIFERS OVER 1.2 m**

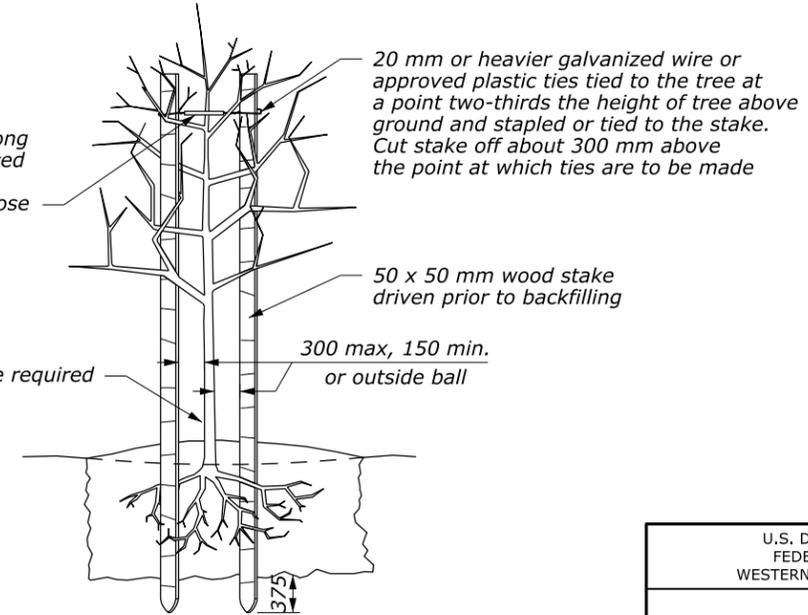
Settle the loose soil around the ball of earth by soaking it thoroughly with water

Make a depression twice the container or ball diameter on level ground or slope to collect water around plant



**METHOD OF PLANTING CONTAINER OR BALLED AND BURLAPPED TREES AND SHRUBS**

12 mm dia. x 300 mm long nylon, rubber or reinforced plastic hose with tree, wrapping paper under hose



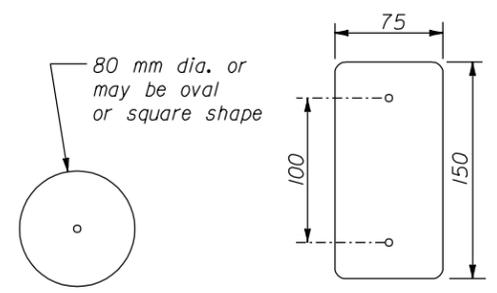
**METHOD OF STAKING DECIDUOUS TREES UNDER 3.6 m**

**NOTE:**

1. Approved commercial plant ties may be used in lieu of hose and wire guying.
2. Provide construction grade, rough or dressed Douglas Fir or Pine stakes.
3. Dimensions without units are millimeters.

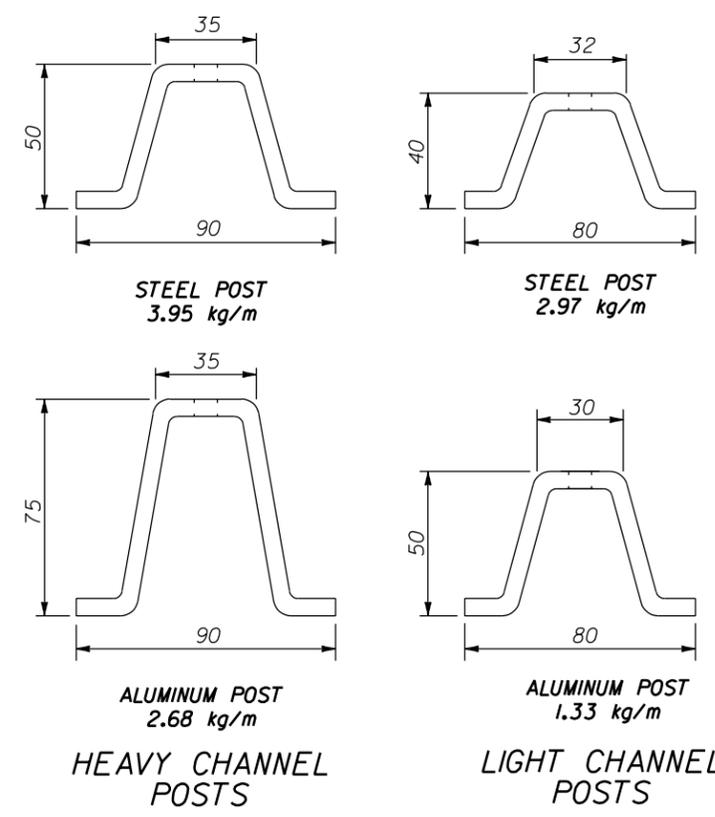
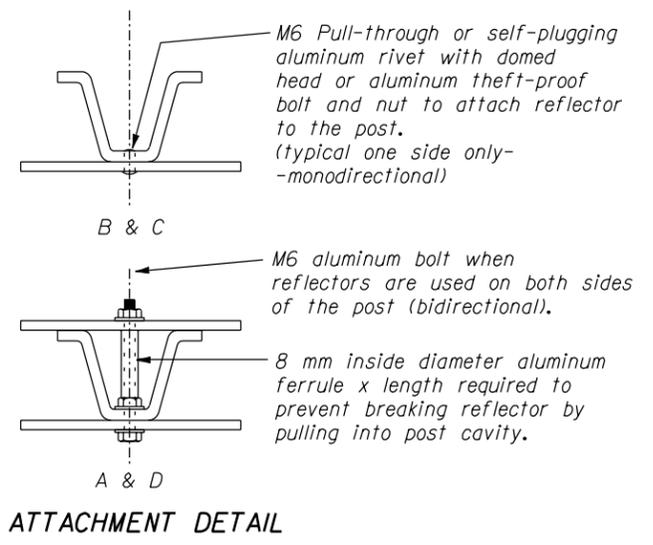
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>TREES AND SHRUBS PLANTING METHODS</b>	
DETAIL APPROVED FOR USE 12/2006	DETAIL
REVISED:	WM626-1



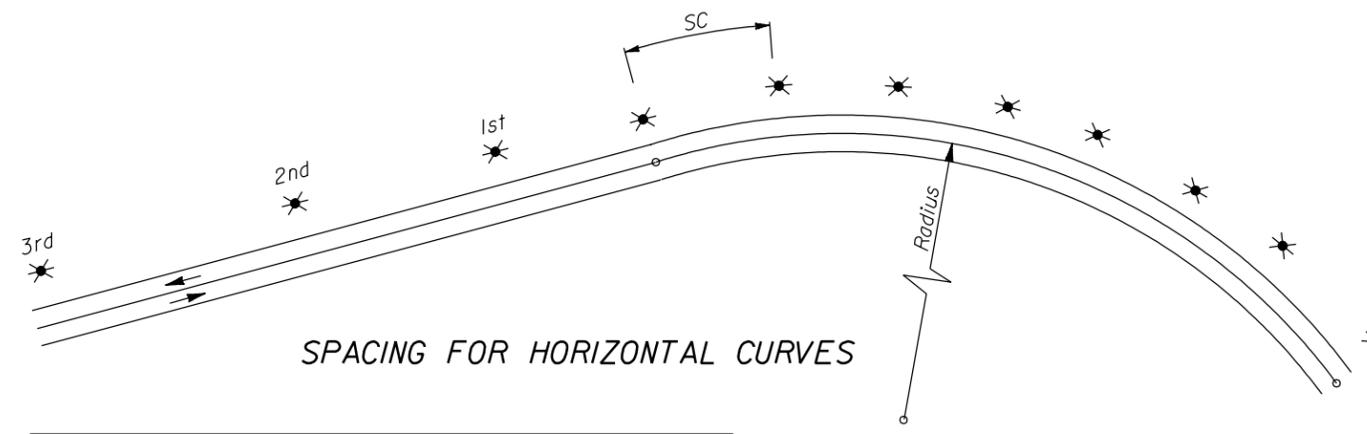
**REFLECTOR DETAILS**

DELINEATION MARKER REFLECTOR		
TYPE	COLOR OF REFLECTOR	REFLECTORIZED
A	White	Front & Rear
B	White	Front
C	Yellow	Front
D	Yellow	Front & Rear



**NOTE:**

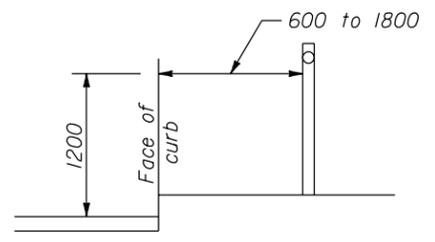
- Dimensions not labeled are in millimeters.
- Vary the post spacing up to 1/8 of the spacing to clear driveways, cross roads, intersections or ramps. Eliminate the post if the variation is exceeded.
- Dimensions of channel posts shown indicate general design only and may vary slightly among the manufacturers.
- Rectangular 75 x 150 mm reflectors may be used in lieu of double disk if required.
- Offset delineators 600 mm unless otherwise shown.
- Delineator reflector colors shall be as shown on the plans.
- Spacing on tangents should be 150 m±. Maximum spacing is 160 m.
- 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.
- On two way roads, stagger markers on opposite sides of the road.
- Furnish hardware in the metric sizes shown. Equivalent imperial sizes may be used when metric sizes are not available.



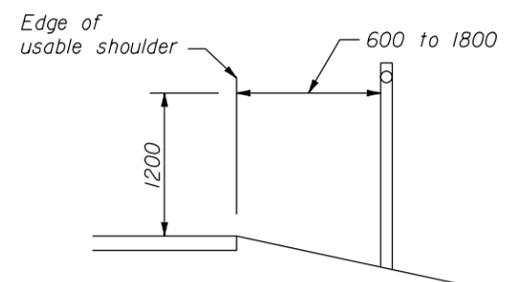
**SPACING FOR HORIZONTAL CURVES**

RADIUS OF CURVE IN METERS	HORIZONTAL CURVES			
	SPACING ON EACH SIDE OF ROADWAY IN METERS			
	ON CURVE *	IN ADVANCE OF & BEYOND CURVE		
		1st SPACE	2nd SPACE	3rd SPACE
3000	90	90	90	90
1500	64	90	90	90
1200	57	90	90	90
900	49	90	90	90
600	40	80	90	90
300	28	56	84	90
270	26	52	78	90
240	25	50	75	90
210	23	46	69	90
180	22	44	66	90
150	19	38	57	90
120	17	34	51	90
90	14	28	42	84
75	13	26	39	78
60	11	22	33	66
45	9	18	27	54
30	6	12	18	36
25	6	12	18	36

\* Spacing for specific radii not shown may be interpolated from the formula: Spacing = 1.65 √R-15. The minimum spacing should be 6 m and not exceed 90 m.

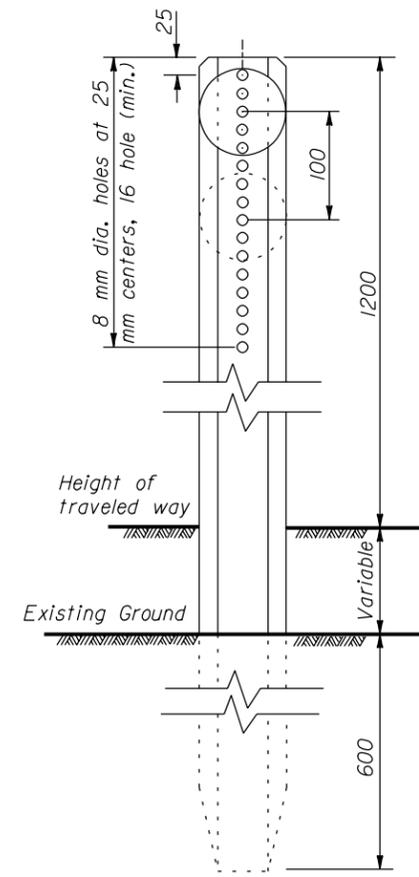


**WITH CURB**

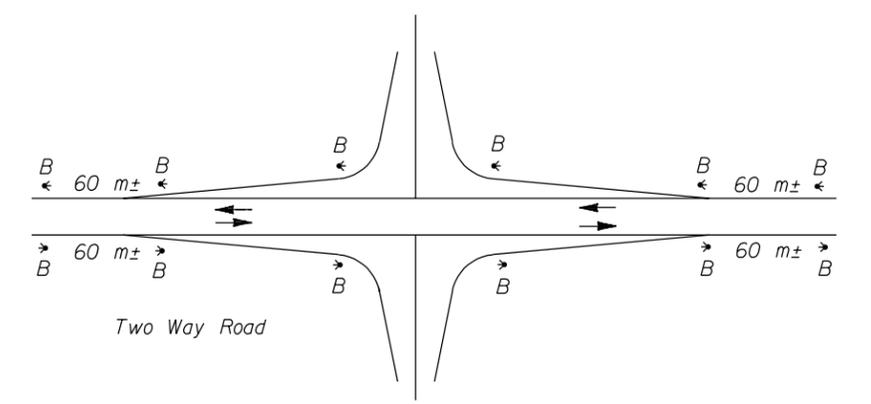


**WITHOUT CURB**

**TYPICAL INSTALLATION**



**POST DETAIL**



**ROAD INTERSECTIONS**

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 WESTERN FEDERAL LANDS HIGHWAY DIVISION

**METRIC DETAIL**

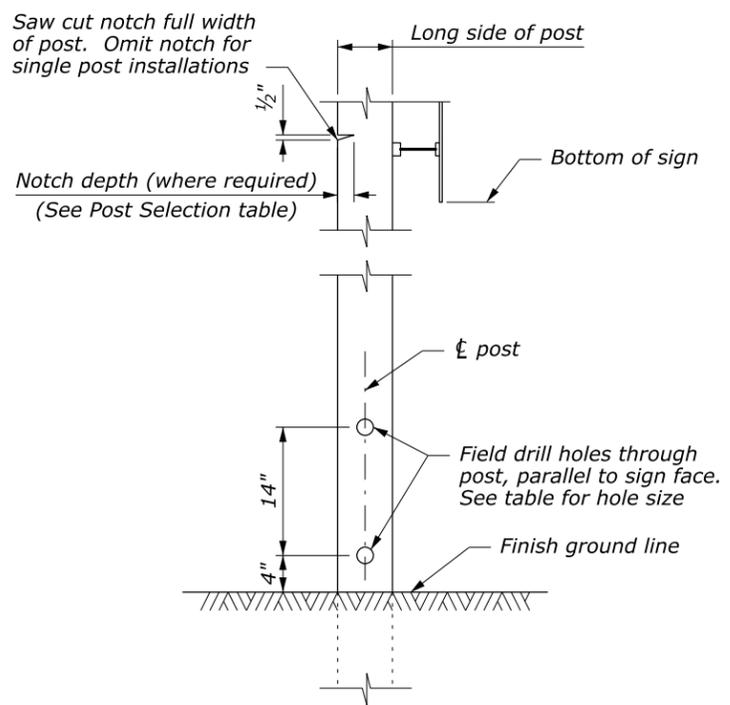
**TRAFFIC DELINEATORS  
 ALASKA PROJECTS**

DETAIL APPROVED FOR USE 3/1996

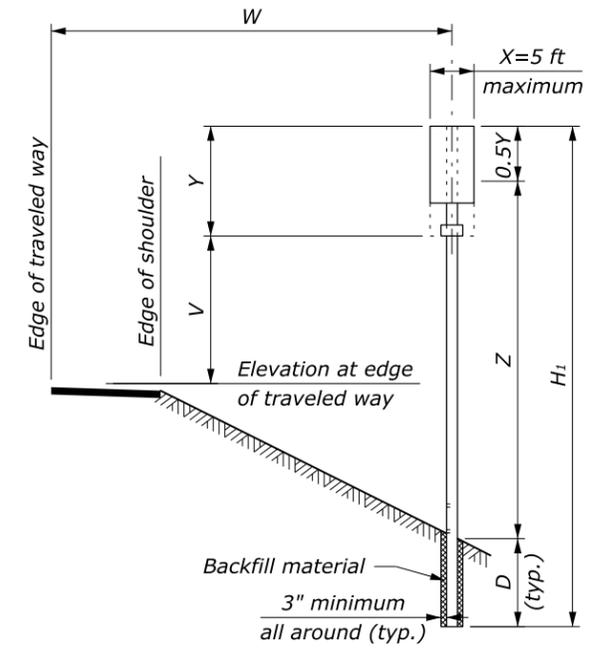
REVISIONS:

DETAIL  
**WM633-1**

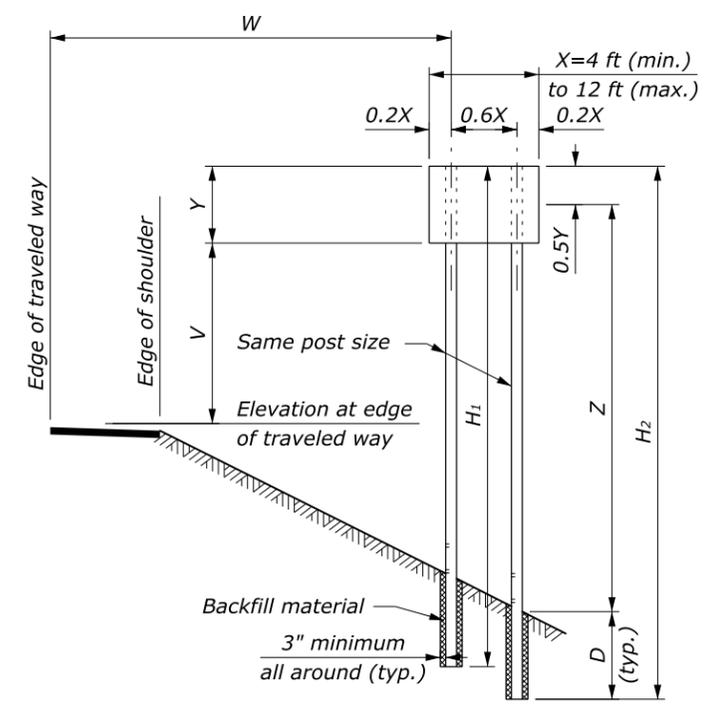
NO SCALE



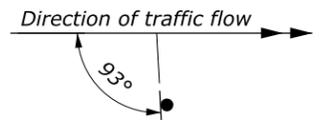
**POST DETAIL**



**SINGLE POST SIGNS**



**TWO POST SIGNS**



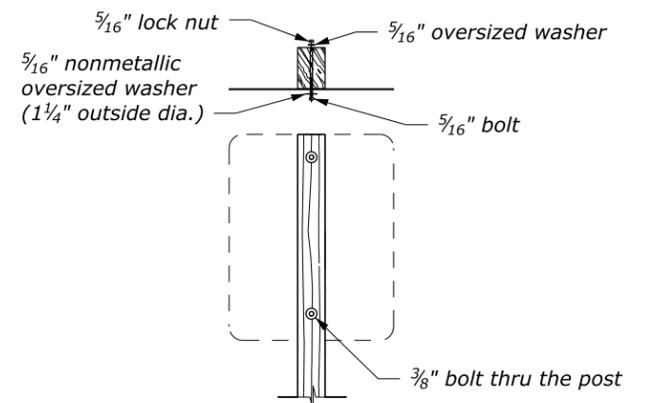
**SIGN INSTALLATION ANGLE**  
For all retroreflectorized signs where  $W > 25'$

MINIMUM DISTANCE TO SIGN		
Location	Lateral Offset (W)	Mounting Height (V)
Rural Districts	6 ft	5 ft
Business or Residence Districts	2 ft from curb	7 ft

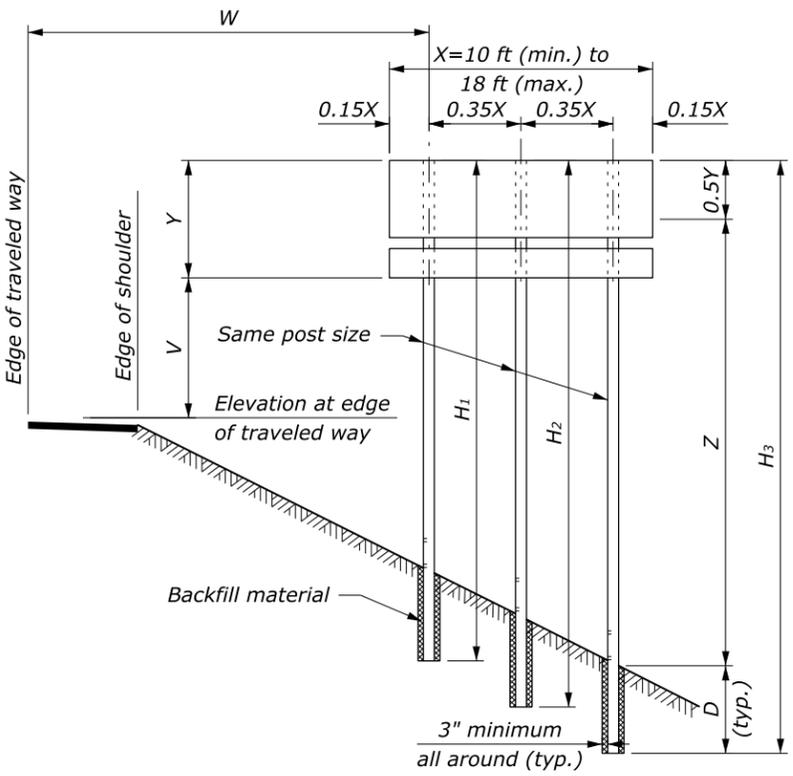
V may be reduced by 1 foot in rural districts for a secondary sign mounted below another sign.

**NOTE:**

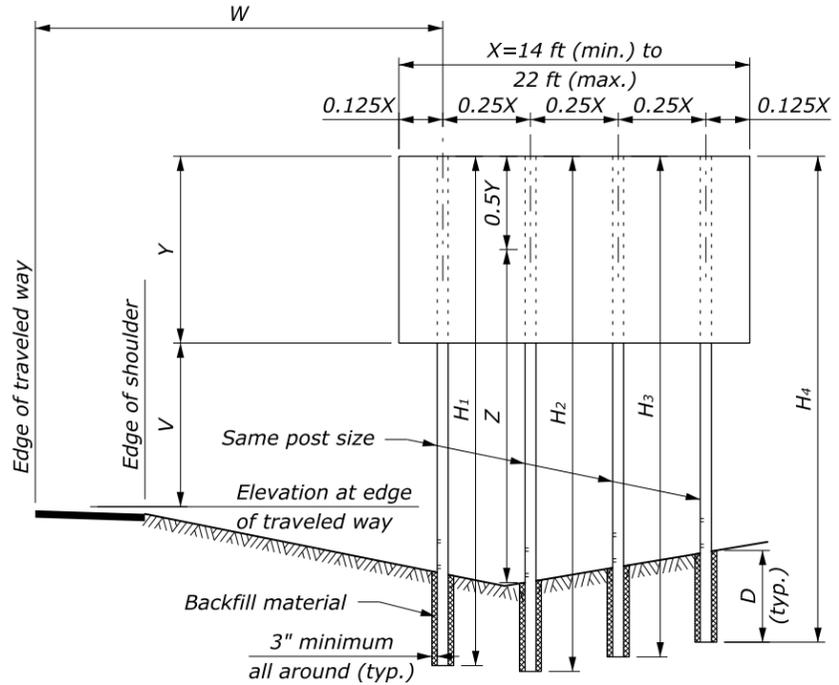
- Traffic barrier protection is required for all posts larger than 6" x 8" when located within the clear zone or if the post is vulnerable to being struck when placed outside the clear zone.
- H<sub>1</sub> thru H<sub>4</sub> indicate overall post length. Select post lengths to fit field conditions.
- D is the minimum post embedment depth for average soil conditions. See Wood Post Selection Table below.
- Z is the height from ground line to mid-height of sign at the longest post.
- For the purpose of post selection X and Y are as follows:
  - Single sign, or back to back signs: X and Y are the overall dimensions of the signs.
  - Multiple sign installations: X and Y are the dimensions of a rectangle enclosing all the signs.



**TYPICAL MOUNTING FOR SIGNS WITHOUT ANGLES**



**THREE POST SIGNS**



**FOUR POST SIGNS**

WOOD POST SELECTION TABLE						
POST SIZE (inch)	NUMBER OF POSTS				D	Notch depth and hole diameter
	1	2	3	4		
4 x 4	80	155	235	310	3'-0"	-
4 x 6	180	385	545	725	4'-0"	1 3/4"
6 x 6	235	475	710	950	4'-0"	1 3/4"
6 x 8	300	850	1280	1700	4'-0"	2 1/2"
6 x 10	385	1180	1170	2360	5'-0"	-
8 x 10	575	1610	2410	3215	5'-0"	-
8 x 12	775	2310	3465	4620	6'-0"	-

Values shown are the maximum permitted. If the product of XYZ exceeds the limit for the largest post, use steel post installation.

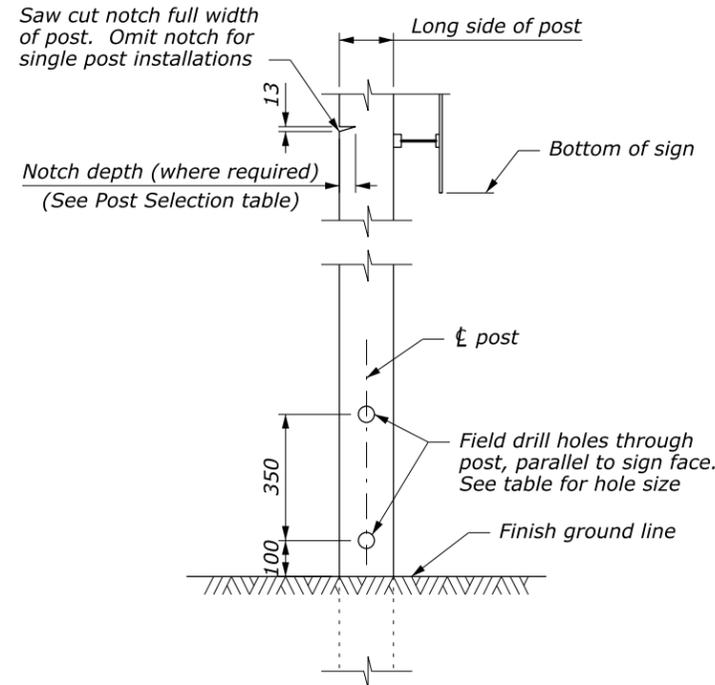
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL  
**PERMANENT SIGN INSTALLATION WOOD POSTS**

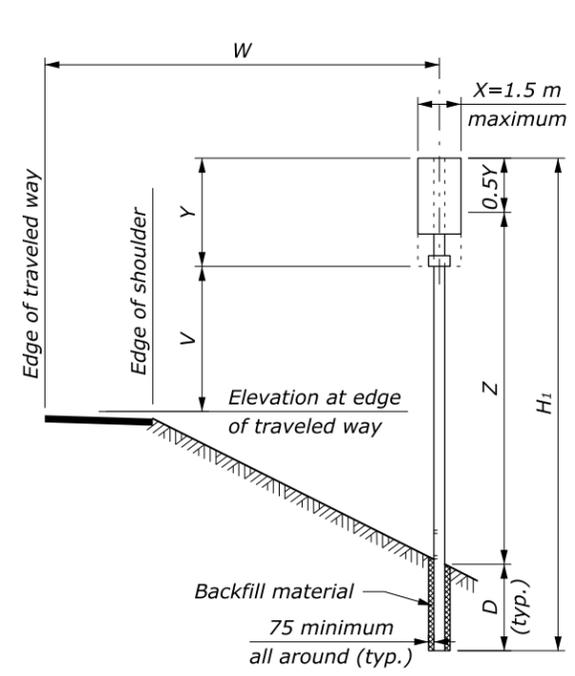
DETAIL APPROVED FOR USE 10/2009  
REVISOR: \_\_\_\_\_

DETAIL W633-7

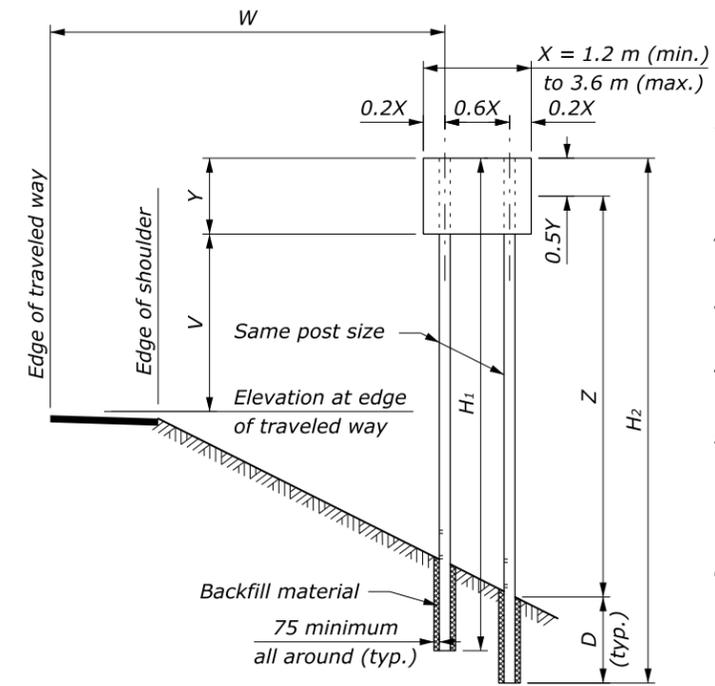
NO SCALE



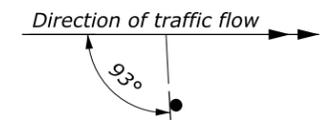
**POST DETAIL**



**SINGLE POST SIGNS**



**TWO POST SIGNS**

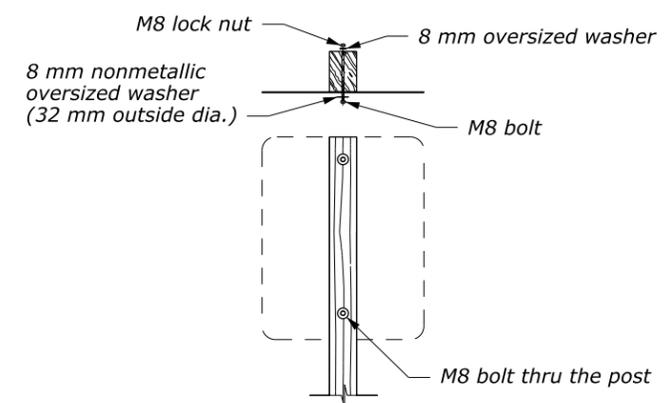


**SIGN INSTALLATION ANGLE**  
For all retroreflectorized signs where  $W > 7.5$  m

MINIMUM DISTANCE TO SIGN		
Location	Lateral Offset (W)	Mounting Height (V)
Rural Districts	1.8 m	1.5 m
Business or Residence Districts	0.6 m from curb	2.1 m

V may be reduced by 0.3 m in rural districts for a secondary sign mounted below another sign.

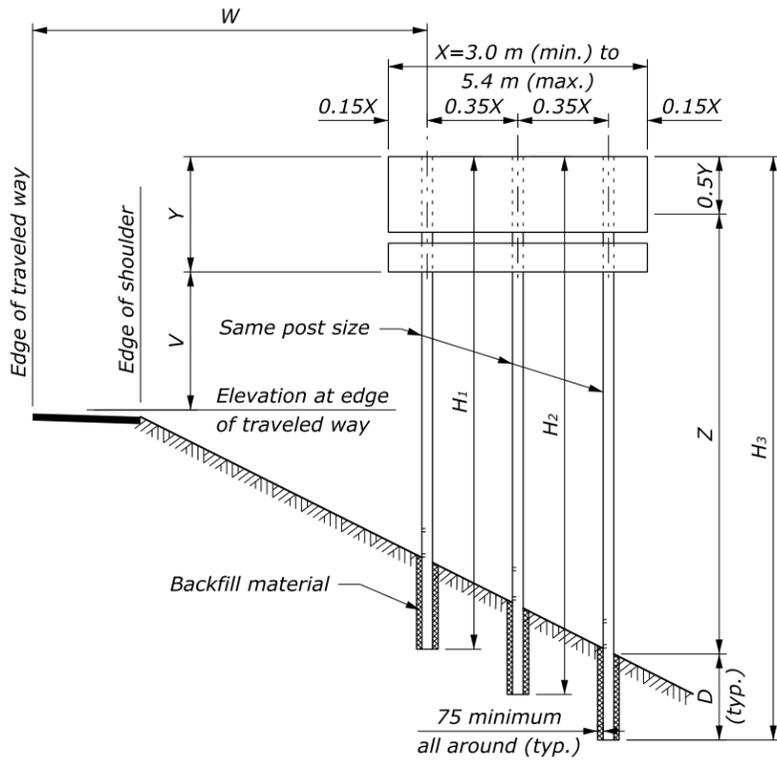
- NOTE:**
- Traffic barrier protection is required for all posts larger than 150 x 200 mm when located within the clear zone or if the post is vulnerable to being struck when placed outside the clear zone.
  - $H_1$  thru  $H_4$  indicate overall post length. Select post lengths to fit field conditions.
  - D is the minimum post embedment depth for average soil conditions. See Wood Post Selection Table below.
  - Z is the height from ground line to mid-height of sign at the longest post.
  - For the purpose of post selection X and Y are as follows:
    - Single sign, or back to back signs: X and Y are the overall dimensions of the signs.
    - Multiple sign installations: X and Y are the dimensions of a rectangle enclosing all the signs.
  - Dimensions without units are millimeters.



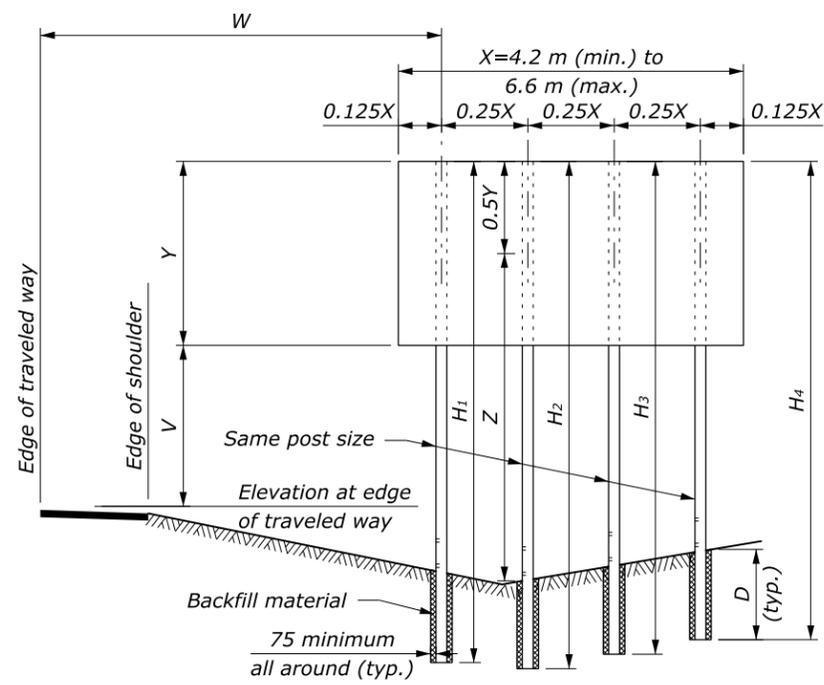
**TYPICAL MOUNTING FOR SIGNS WITHOUT ANGLES**

POST SIZE (mm)	NUMBER OF POSTS				D (m)	Notch depth and hole diameter
	1	2	3	4		
	Product of X-Y-Z (m <sup>3</sup> )					
100 x 100	2.2	4.3	6.6	18.7	0.9	-
100 x 150	5.0	10.8	15.3	20.3	1.2	45 mm
150 x 150	6.6	13.3	19.9	26.6	1.2	45 mm
150 x 200	8.4	23.8	35.8	47.6	1.2	65 mm
150 x 250	10.8	33.0	49.6	66.1	1.5	-
200 x 250	16.1	45.1	67.5	90.0	1.5	-
200 x 300	21.7	64.7	97.0	129.4	1.8	-

Values shown are the maximum permitted. If the product of XYZ exceeds the limit for the largest post, use steel post installation.



**THREE POST SIGNS**



**FOUR POST SIGNS**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

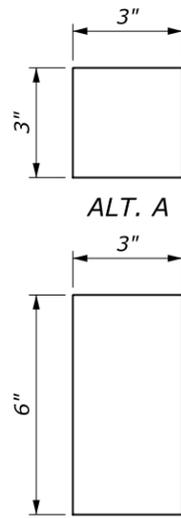
METRIC DETAIL

**PERMANENT SIGN INSTALLATION WOOD POSTS**

DETAIL APPROVED FOR USE 10/2009

REVISOR: \_\_\_\_\_

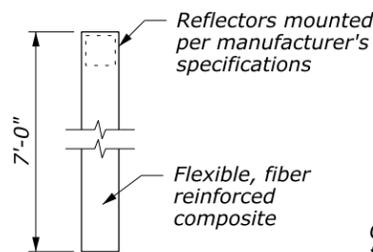
DETAIL WM633-7



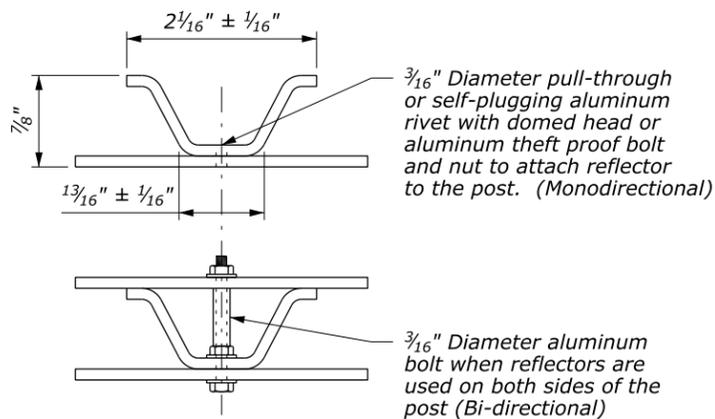
ALT. B

Mount reflectors on aluminum or apply directly to flexible post

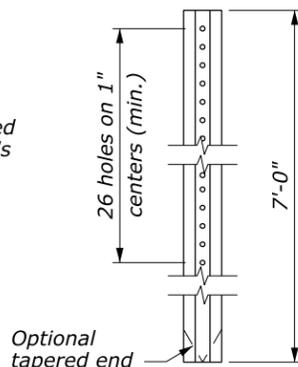
**REFLECTIVE SHEETING**



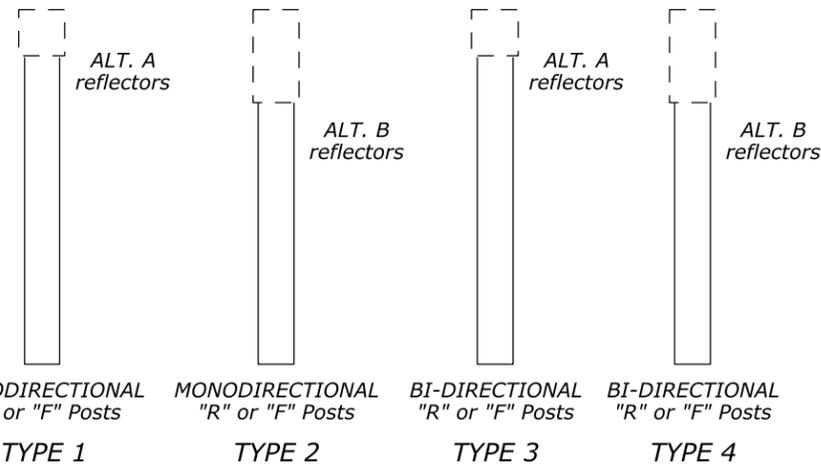
FLEXIBLE, SELF ERECTING OR YIELDING; WHITE UNLESS OTHERWISE NOTED  
**POST "F" DETAIL**



**ATTACHMENT DETAIL For "R" Post**



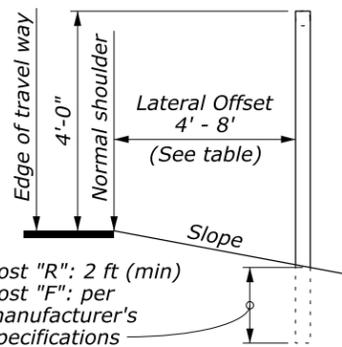
RIGID STEEL OR ALUMINUM (ALL HOLES 1/4" DIAMETER)  
**POST "R" DETAIL**



**DELINEATORS**

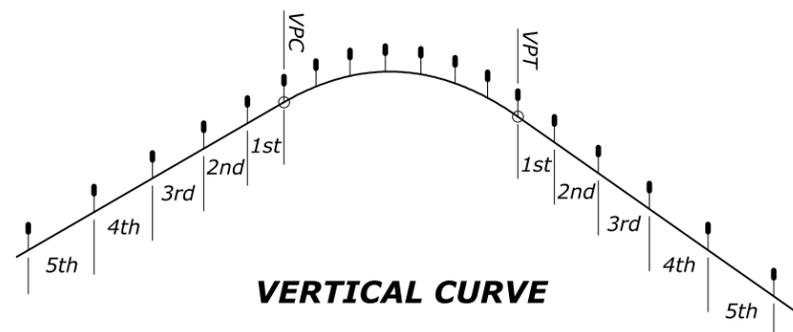
**NOTE:**

- Where delineators are used only on curves, place three delineators outside the curve limits.
- 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.
- If horizontal and vertical curves are combined, use the more restrictive spacing.
- 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.
- Delineator reflector colors are shown in the plans. Delineator type includes the post type, for example: Type 1R or Type 3F, etc.
- 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.
- Vary the post spacing up to 1/8 of the spacing shown to clear driveways, cross roads, intersections or ramps. Eliminate the post if the variation is exceeded.

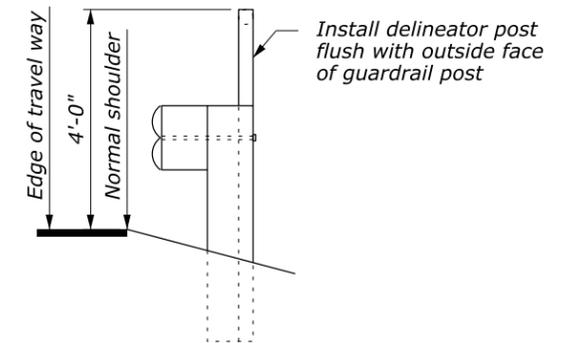


LATERAL PLACEMENT TABLE	
SLOPE	OFFSET
1V:4H	4'-0" to 6'-0"
1V:6H or flatter	6'-0" to 8'-0"
Curb Section	6'-0"

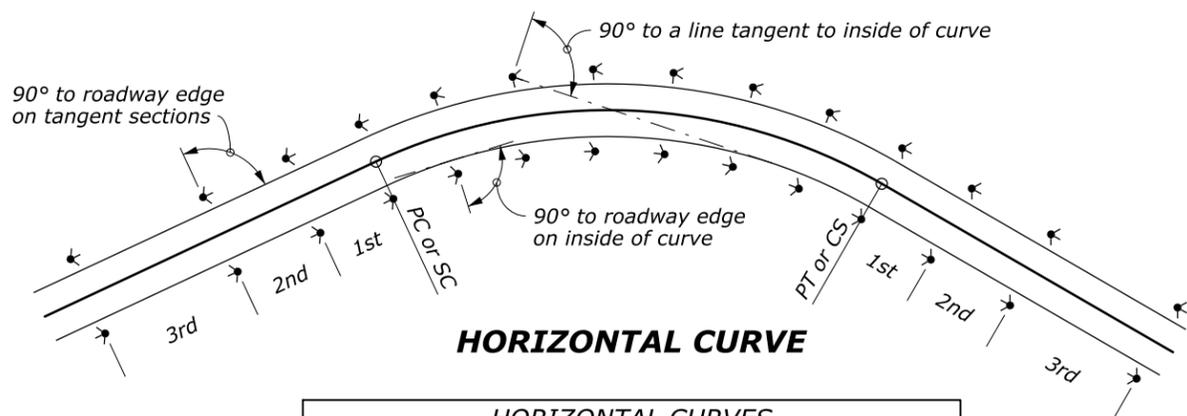
**TYPICAL INSTALLATION**



**VERTICAL CURVE**



**TYPICAL INSTALLATION WITH BEAM TYPE GUARD RAIL**



**HORIZONTAL CURVE**

HORIZONTAL CURVES				
CURVE RADIUS (FEET)	SPACING ON EACH SIDE OF ROADWAY (FEET)			
	ON CURVE	BEYOND SC, CS, PC or PT		
		1st SPACE	2nd SPACE	3rd SPACE
≥ 6000	300	528	528	528
1450 - 5999	150	300	528	528
480 - 1449	100	200	300	528
240 - 479	75	150	225	528
< 240	50	100	150	300

CREST VERTICAL CURVES						
K	SPACING ON EACH SIDE OF ROADWAY IN FEET					
	ON CURVE	BEYOND VPC or VPT				
		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	75	100	150	200	300	528
< 50	50	75	100	150	200	300

$K = \frac{L}{A}$  where  $L$  = Length of vertical curve in feet  
 $A$  = Algebraic grade change in %

NO SCALE

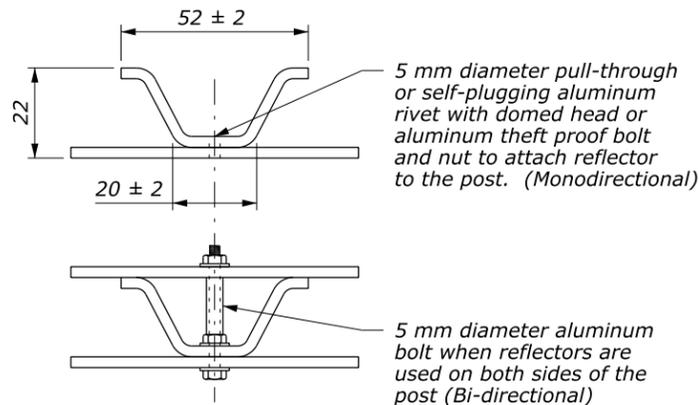
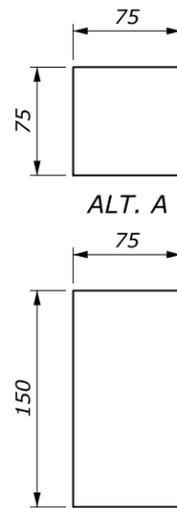
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

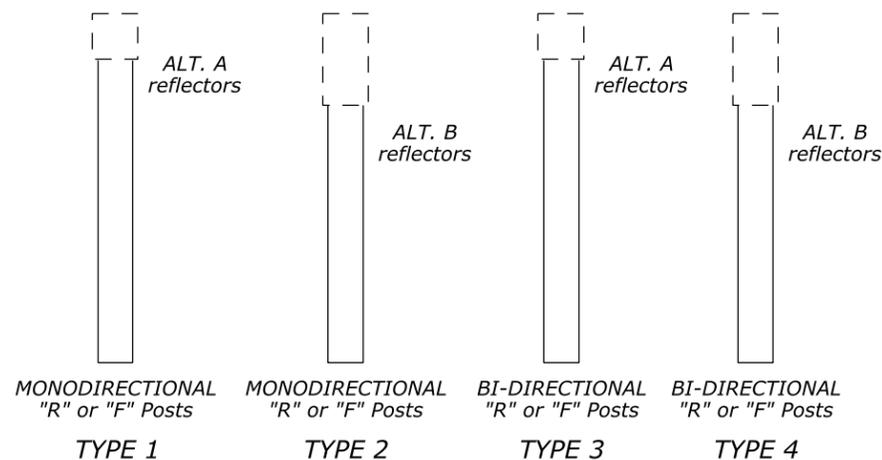
**IDAHO  
DELINEATORS**

DETAIL APPROVED FOR USE 9/2009  
REVISED:

DETAIL  
W633-50



ATTACHMENT DETAIL For "R" Post

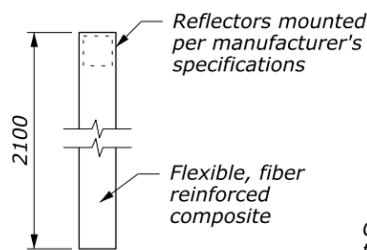


**DELINEATORS**

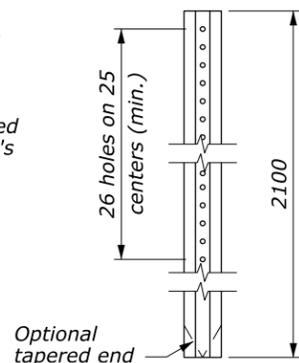
**NOTE:**

- Where delineators are used only on curves, place three delineators outside the curve limits.
- 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.
- If horizontal and vertical curves are combined, use the more restrictive spacing.
- 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.
- Delineator reflector colors are shown in the plans. Delineator type includes the post type, for example: Type 1R or Type 3F, etc.
- 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.
- Vary the post spacing up to 1/8 of the spacing shown to clear driveways, cross roads, intersections or ramps. Eliminate the post if the variation is exceeded.
- Furnish hardware in the metric sizes shown. Equivalent US Customary sizes may be used when metric sizes are unavailable.
- Dimensions without units are millimeters.

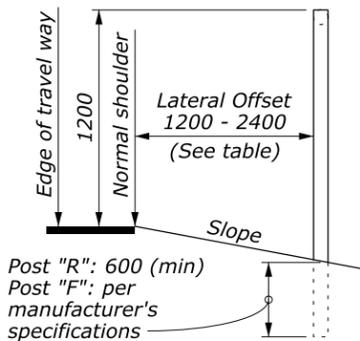
**REFLECTIVE SHEETING**



FLEXIBLE, SELF ERECTING OR YIELDING; WHITE UNLESS OTHERWISE NOTED  
**POST "F" DETAIL**

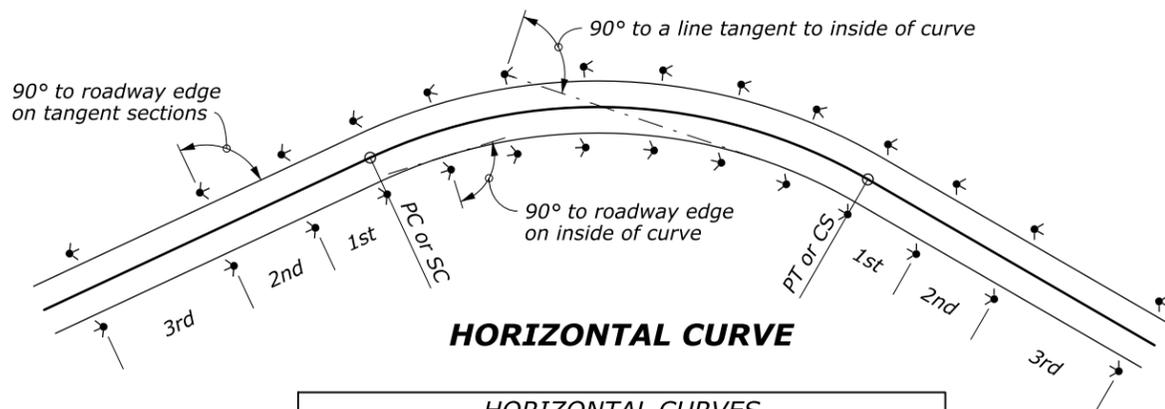


RIGID STEEL OR ALUMINUM (ALL HOLES 6.5 mm DIAMETER)  
**POST "R" DETAIL**



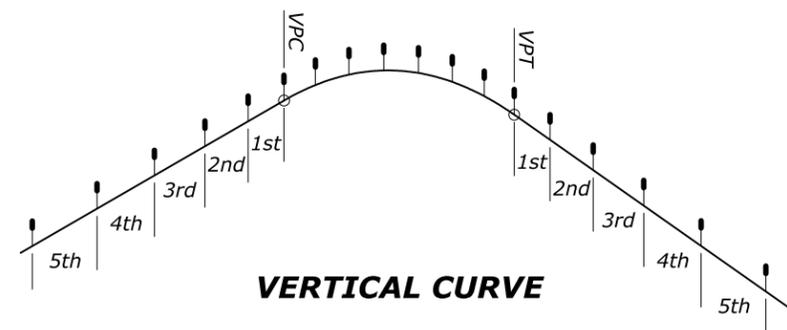
**TYPICAL INSTALLATION**

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



**HORIZONTAL CURVE**

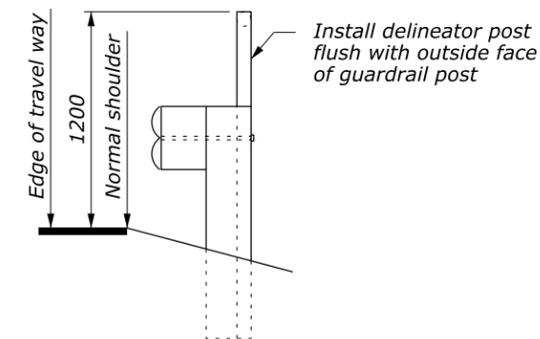
HORIZONTAL CURVES				
CURVE RADIUS (METERS)	SPACING ON EACH SIDE OF ROADWAY (m)			
	ON CURVE	BEYOND SC, CS, PC or PT		
		1st SPACE	2nd SPACE	3rd SPACE
≥ 1900	90	160	160	160
450 - 1899	45	90	160	160
150 - 449	30	60	90	160
75 - 149	25	45	70	160
< 75	15	30	45	90



**VERTICAL CURVE**

CREST VERTICAL CURVES						
K	SPACING ON EACH SIDE OF ROADWAY IN METERS					
	ON CURVE	BEYOND VPC or VPT				
		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

$K = L/A$  where  $L$  = Length of vertical curve in meters  
 $A$  = Algebraic grade change in %



**TYPICAL INSTALLATION WITH BEAM TYPE GUARD RAIL**

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

METRIC DETAIL

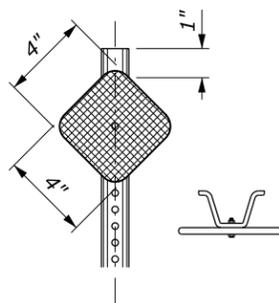
**IDAHO DELINEATORS**

DETAIL APPROVED FOR USE 9/2009

REVISID: \_\_\_\_\_

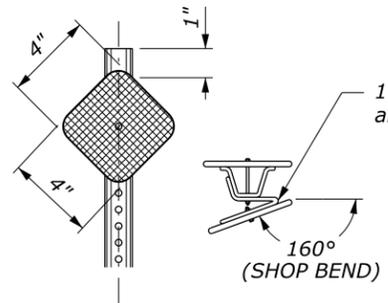
DETAIL WM633-50

NO SCALE



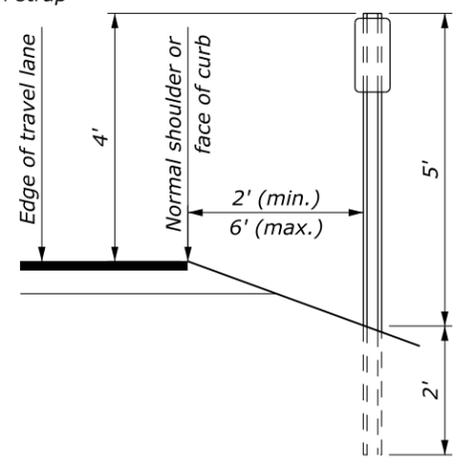
**DESIGN A**  
(WHITE)

Use for delineation on tangents and on curves with  $R > 1500'$ .

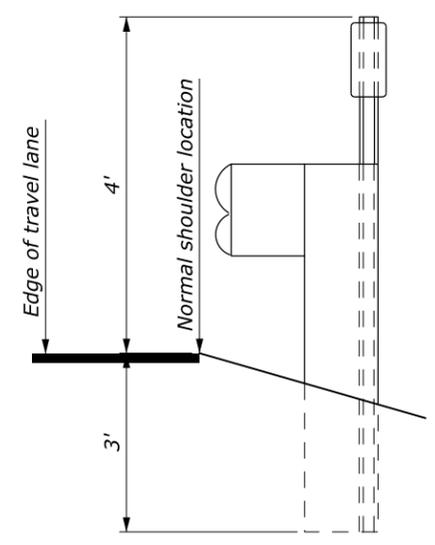


**DESIGN C**  
(WHITE)

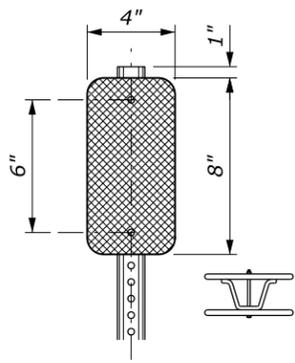
Use on curves with  $R \leq 575'$



**TYPICAL INSTALLATION**

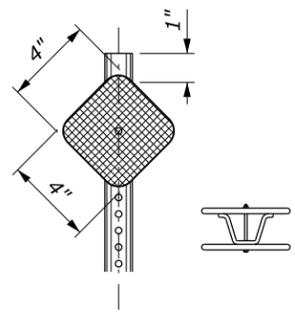


**TYPICAL INSTALLATION WITH BEAM TYPE GUARD RAIL**



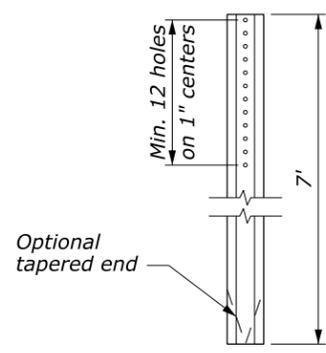
**DESIGN D**  
(YELLOW)

Use at approaches with Stop or Yield signs.



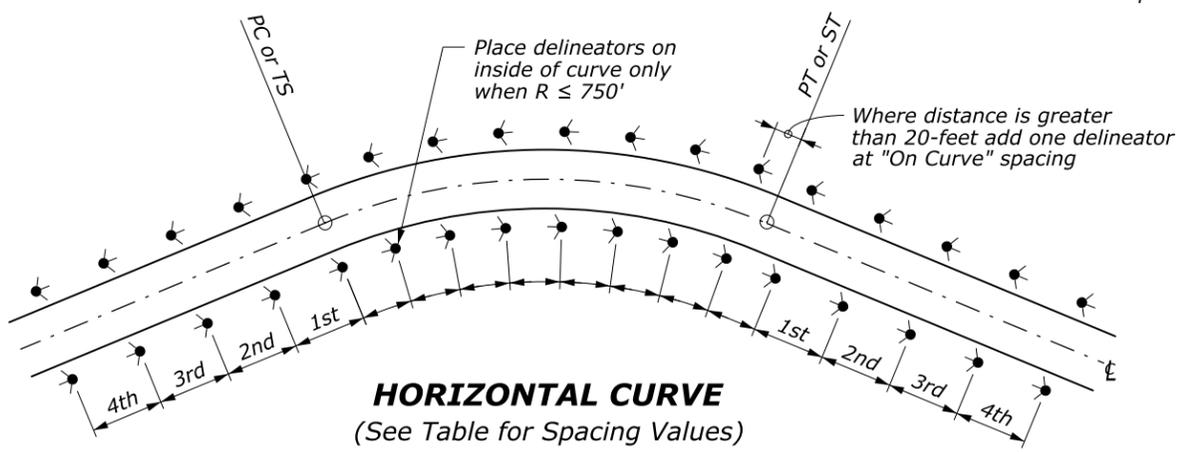
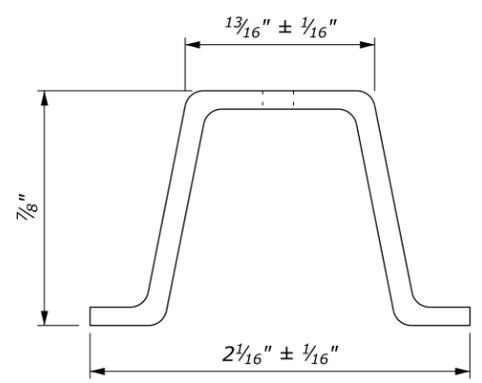
**DESIGN F**  
(WHITE)

Use for curves with  $R > 575'$  and  $R \leq 1500'$ .

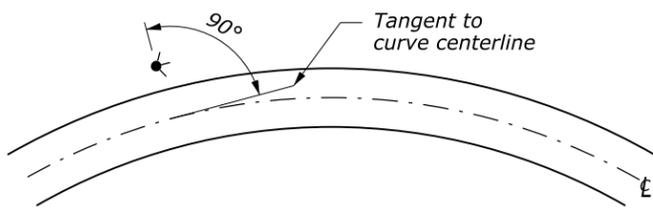


**DELINEATOR POST DETAILS**

Rigid Steel or Aluminum



**HORIZONTAL CURVE**  
(See Table for Spacing Values)



**SIGN INSTALLATION ANGLE**

RADIUS (ft)	SPACING ON CURVE (ft)	SPACING IN ADVANCE OF & BEYOND CURVE (ft)			
		1st SPACE	2nd SPACE	3rd SPACE	4th SPACE
$\geq 5700$	300	400	400	400	400
3000 to < 5700	225	400	400	400	400
2000 to < 3000	160	320	400	400	400
1500 to < 2000	130	260	400	400	400
1000 to < 1500	110	220	330	400	400
700 to < 1000	90	185	275	400	400
500 to < 700	75	150	230	300	400
300 to < 500	60	125	185	300	400
< 300	45	90	140	275	400

**NOTE:**

- When the contract does not include the final surfacing, allow for the thickness of the final pavement structure when establishing the elevation of the traffic delineators.
- Place delineators at a constant clearance distance from the edge of pavement except where guardrail or other obstructions interfere. Align delineators with the inside edge of obstruction. Install delineators located behind beam guardrail so that the delineator post is adjacent to the trailing edge of the nearest guardrail post. (See typical installation with beam type guardrail).
- When a delineator falls within a cross road or approach, the delineator may be moved in either direction a distance not to exceed one quarter of the normal spacing. Eliminate the post if this allowance is exceeded.
- Mount delineators on metal posts with  $3/16"$  cadmium plated bolt(s). Drill or punch a minimum of twelve  $3/8"$  diameter holes on 1-inch centers from the top of the post.  $3/8"$  square holes may be used with large-headed bolt or an appropriate washer. Jam threads after tightening the nut to prevent removal.
- All delineator reflectors have  $3/4"$  corner radii.
- Manufacture posts from flanged U-channel sections of steel meeting the requirements of ASTM A 36 and weighing not less than 1.25 pounds per foot or aluminum meeting the requirements of ASTM B 221, Alloy 6061-T6, with a minimum thickness of 0.125 inches. After fabrication galvanize steel posts in accordance with ASTM A 123.
- When a route has a current ADT of 900 or greater, continuously delineate the roadway along the shoulder by means of post mounted reflectors. Spacing on tangent sections is 400 feet.

NO SCALE

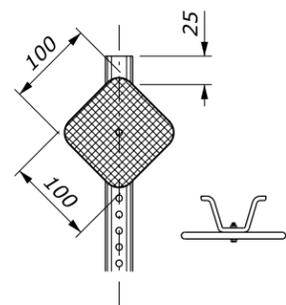
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

**MONTANA**  
**DELINEATORS**

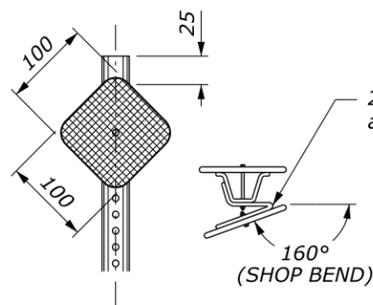
DETAIL APPROVED FOR USE 11/2006  
REVISSED: 1/2008

DETAIL  
W633-60



**DESIGN A**  
(WHITE)

Use for delineation on tangents and on curves with  $R > 450$  m.

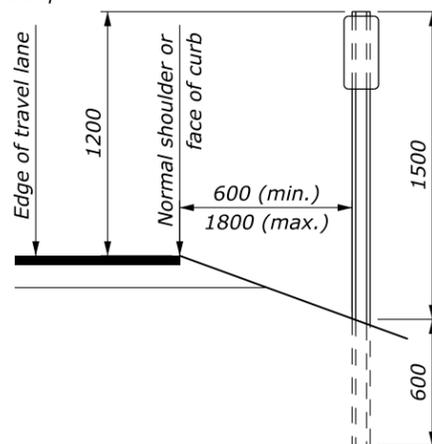


**DESIGN C**  
(WHITE)

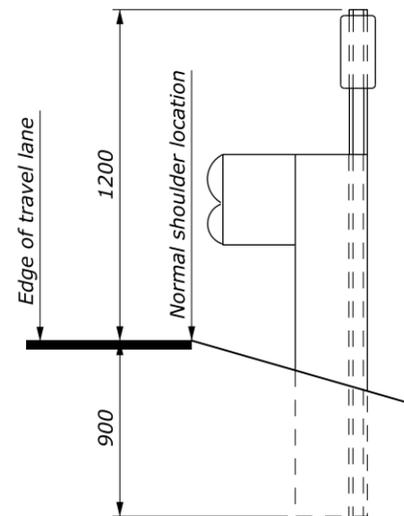
Use on curves with  $R \leq 170$  m

25 x 1.6 x 135 aluminum strap

160° (SHOP BEND)



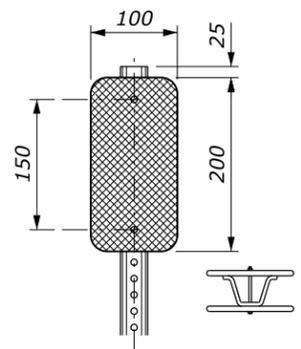
**TYPICAL INSTALLATION**



**TYPICAL INSTALLATION WITH BEAM TYPE GUARD RAIL**

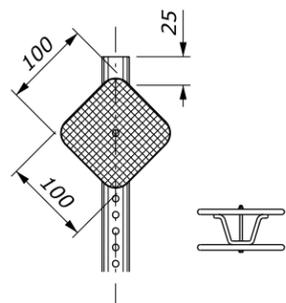
**NOTE:**

- When the contract does not include the final surfacing, allow for the thickness of the final pavement structure when establishing the elevation of the traffic delineators.
- Place delineators at a constant clearance distance from the edge of pavement except where guardrail or other obstructions interfere. Align delineators with the inside edge of obstruction. Install delineators located behind beam guardrail so that the delineator post is adjacent to the trailing edge of the nearest guardrail post. (See typical installation with beam type guardrail).
- When a delineator falls within a cross road or approach, the delineator may be moved in either direction a distance not to exceed one quarter of the normal spacing. Eliminate the post if this allowance is exceeded.
- Mount delineators on metal posts with M5 cadmium plated bolt(s). Drill or punch a minimum of twelve 9.5 mm diameter holes on 25 mm centers from the top of the post. 9.5 mm square holes may be used with large-headed bolt or an appropriate washer. Jam threads after tightening the nut to prevent removal.
- All delineator reflectors have 20 mm corner radii.
- Manufacture posts from flanged U-channel sections of steel meeting the requirements of ASTM A 36 and weighing not less than 1.86 kilograms per meter or aluminum meeting the requirements of ASTM B 221, Alloy 6061-T6, with a minimum thickness of 3.2 mm. After fabrication galvanize steel posts in accordance with ASTM A 123.
- When a route has a current ADT of 900 or greater, continuously delineate the roadway along the shoulder by means of post mounted reflectors. Spacing on tangent sections is 120 meters.
- Furnish hardware in the metric sizes shown. Equivalent US Customary sizes may be used when metric sizes are not available.
- Dimensions without units are millimeters.



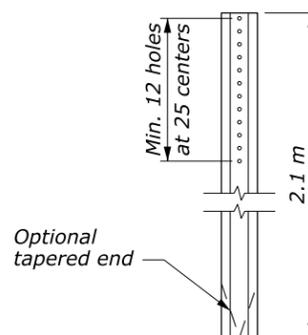
**DESIGN D**  
(YELLOW)

Use at approaches with Stop or Yield signs.

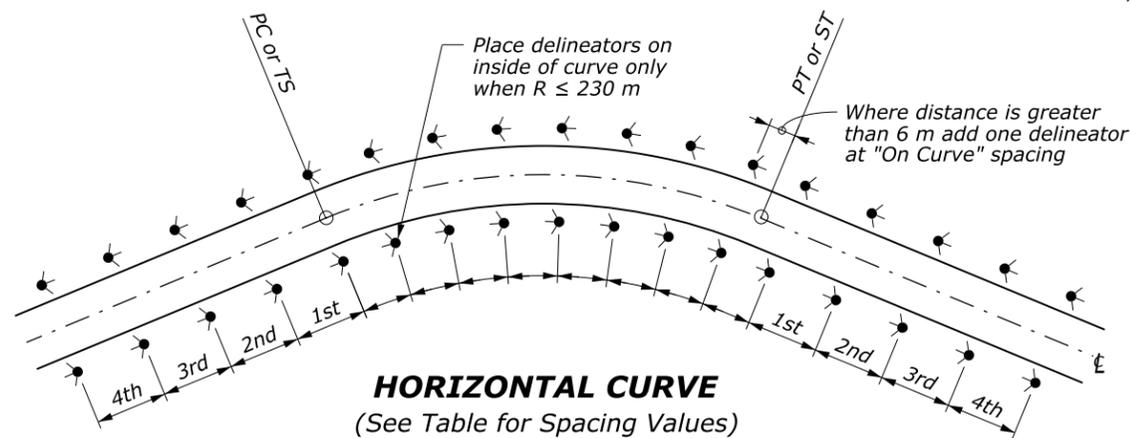
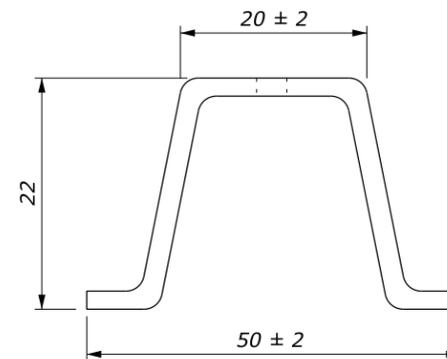


**DESIGN F**  
(WHITE)

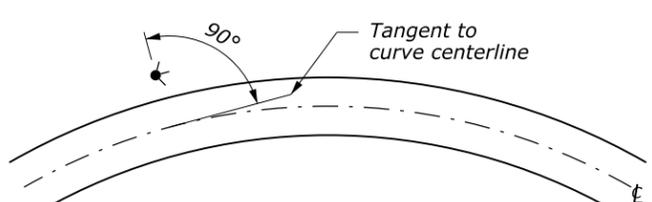
Use for curves with  $R > 170$  m and  $R \leq 450$  m.



**DELINEATOR POST DETAILS**  
Rigid Steel or Aluminum



**HORIZONTAL CURVE**  
(See Table for Spacing Values)



**SIGN INSTALLATION ANGLE**

RADIUS (m)	SPACING ON CURVE (m)	SPACING IN ADVANCE OF & BEYOND CURVE (m)			
		1st SPACE	2nd SPACE	3rd SPACE	4th SPACE
≥ 1750	90	120	120	120	120
900 to < 1750	65	120	120	120	120
600 to < 900	50	95	120	120	120
450 to < 600	40	75	120	120	120
300 to < 450	35	65	100	120	120
200 to < 300	25	55	80	120	120
150 to < 200	20	45	70	90	120
100 to < 150	20	35	55	90	120
< 100	15	25	40	80	120

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

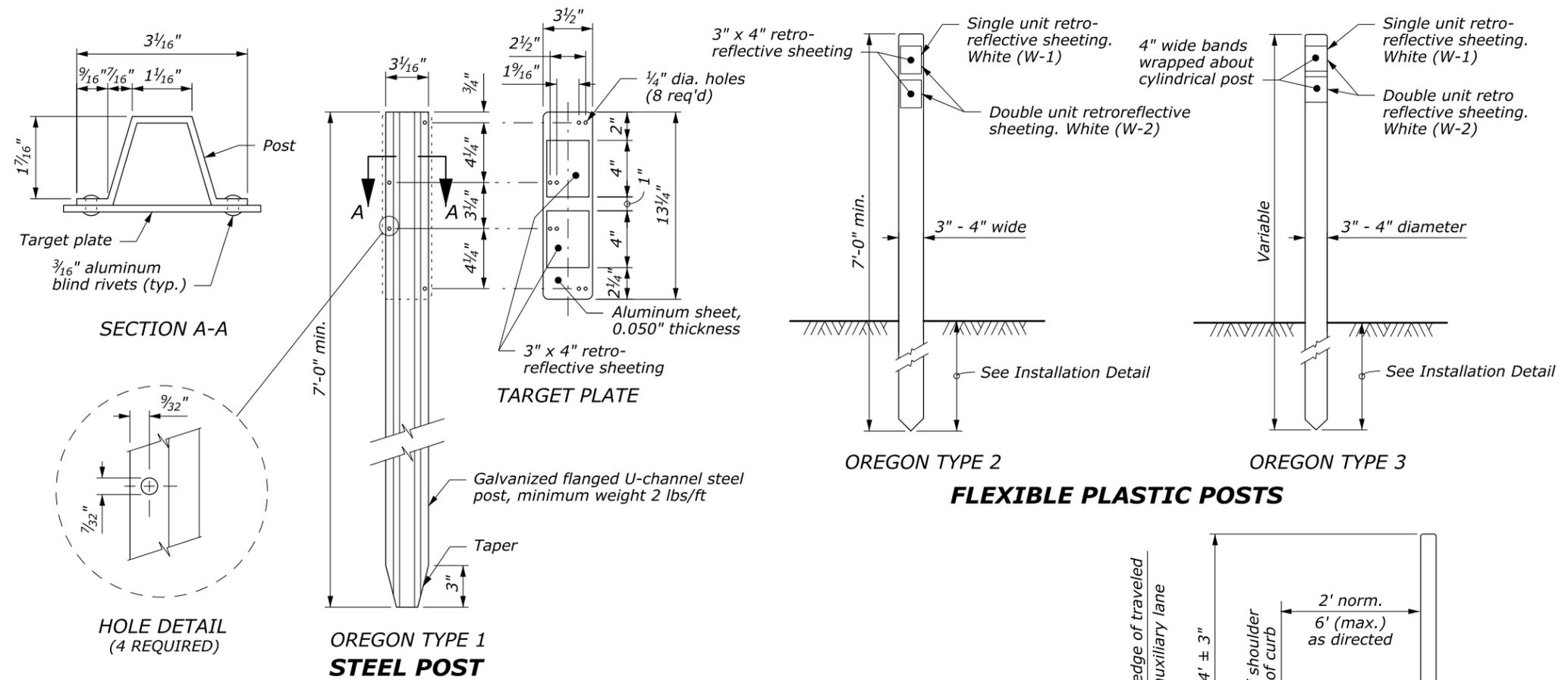
METRIC DETAIL

**MONTANA**  
**DELINEATORS**

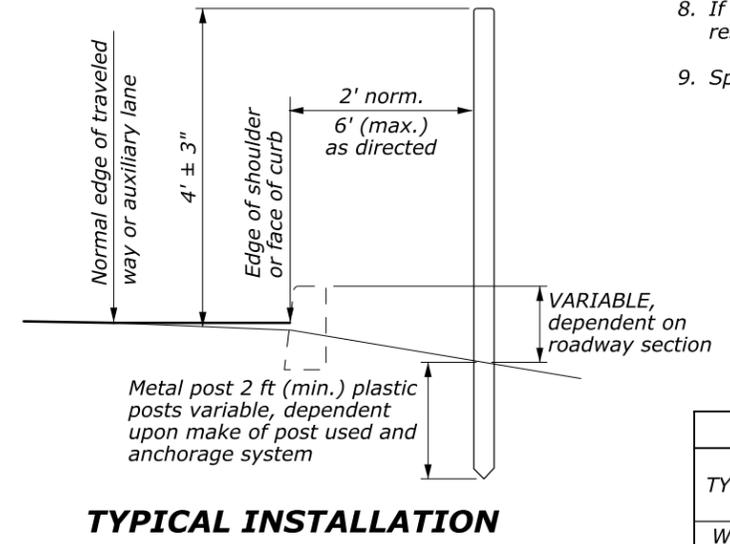
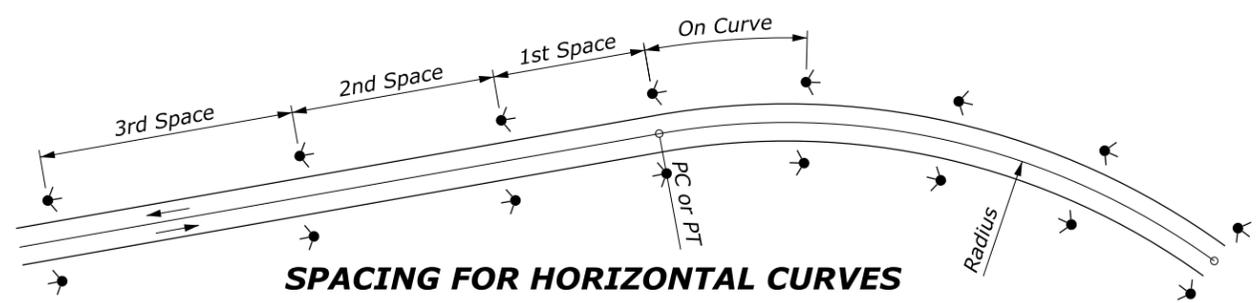
DETAIL APPROVED FOR USE 11/2006  
REVISD: 1/2008

DETAIL  
WM633-60

NO SCALE

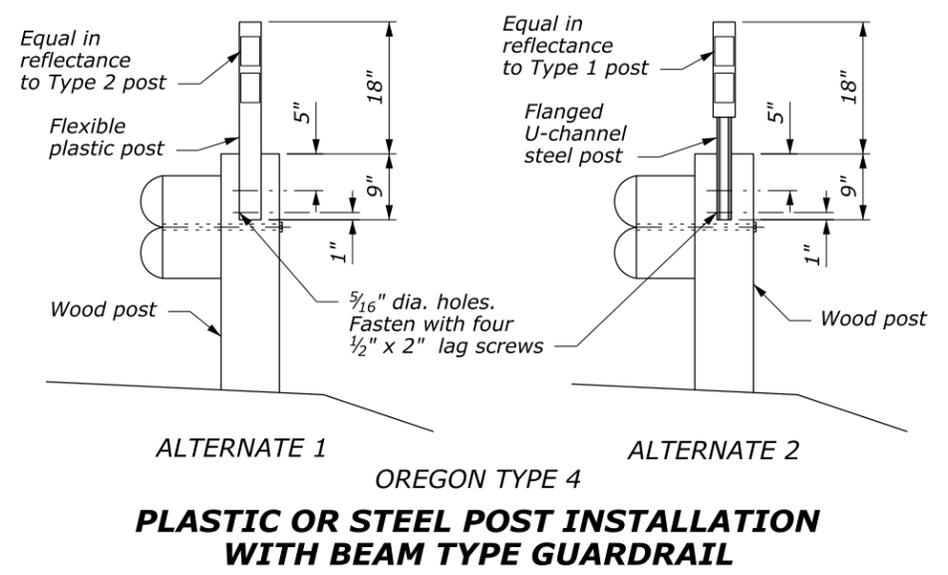


- NOTE:**
1. Place delineators nearly opposite each other on horizontal curves.
  2. Install all delineators with reflectors facing adjacent on-coming traffic.
  3. Install delineators behind the rail at guardrail locations.
  4. Offset delineators a minimum distance of 4 feet in areas of heavy snow removal operations.
  5. On roads with less than 500 ADT, use delineators only for situations such as sharp vertical or horizontal curves, or other undesirable geometrics exist.
  6. Vary the post spacing up to 1/4 of the spacing shown to clear driveways, cross roads, intersections or ramps. Eliminate the post if the variation is exceeded.
  7. 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.
  8. If horizontal and vertical curves are combined, use the more restrictive spacing.
  9. Spacing shall be measured along the shoulder or face of curb.



REFLECTOR DETAILS			
TYPE	REFLECTOR & TARGET/ POST COLOR	NUMBER OF REFLECTORS	USAGE AND SPACING
W-1	White	1	Max. tangent spacing: 400' each side
			Intersections (tapers and widening): 100'
			See Horizontal Curves table for variations
W-2	White	2	Intersection Radius: 3 min. @ 50'
			Lane Reduction: 3 min @ 100'

HORIZONTAL CURVES				
RADIUS OF CURVE	SPACING ON EACH SIDE OF ROADWAY IN FEET			
	ON CURVE	IN ADVANCE OF & BEYOND CURVE		
		1st SPACE	2nd SPACE	3rd SPACE
≥ 5800	300	300	300	300
2900 to < 5800	230	300	300	300
2000 to < 2900	160	300	300	300
1500 to < 2000	130	260	300	300
1200 to < 1500	110	220	300	300
960 to < 1200	100	200	300	300
820 to < 960	90	180	270	300
640 to < 820	80	160	240	300
480 to < 640	70	140	210	300
340 to < 480	60	120	180	300
250 to < 340	50	100	150	300
170 to < 250	40	80	120	240
110 to < 170	30	60	90	180
≤ 110	20	40	60	120



U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

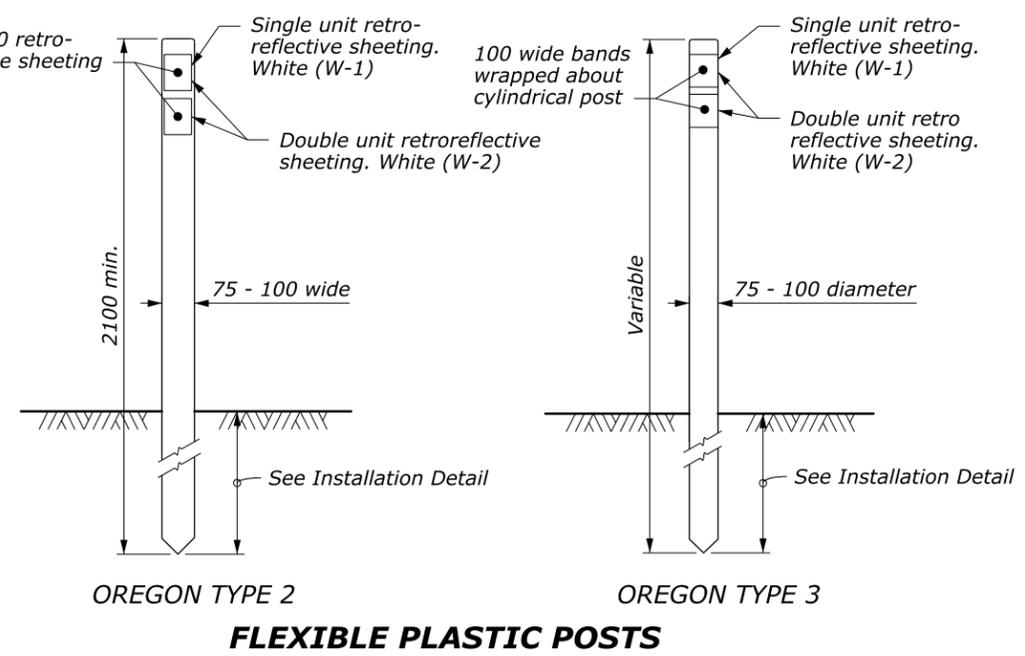
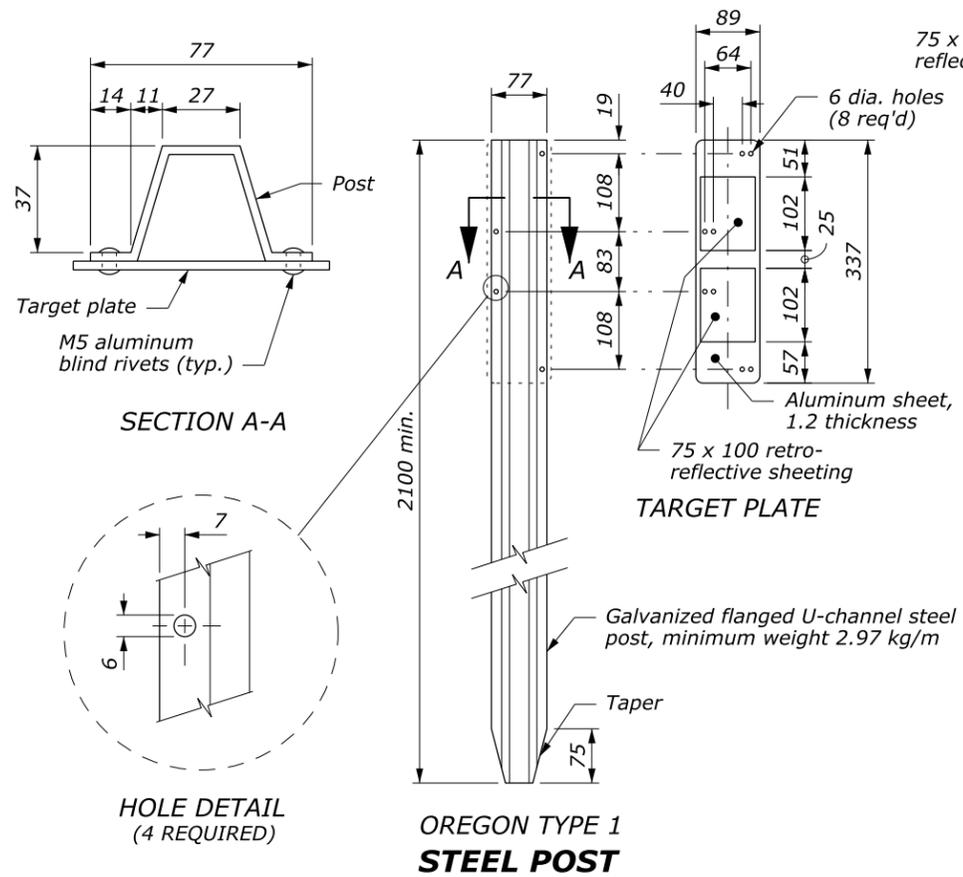
**OREGON DELINEATORS**

DETAIL APPROVED FOR USE --/---

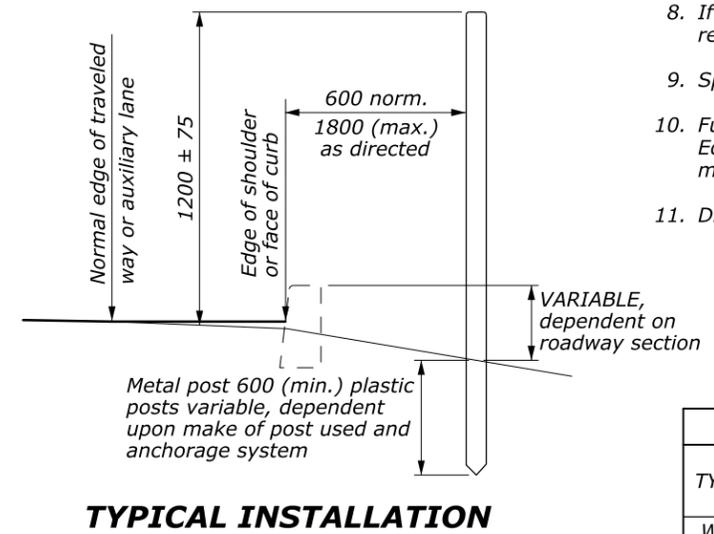
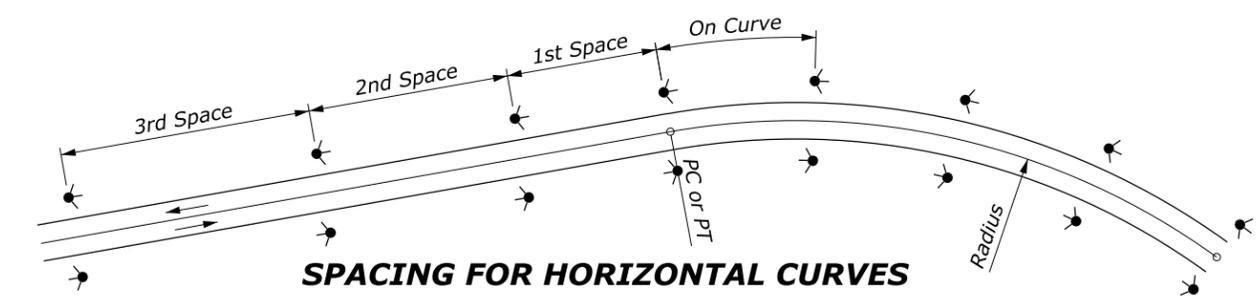
REVISOR: DRAFT: 11/2014

DETAIL W633-70

NO SCALE

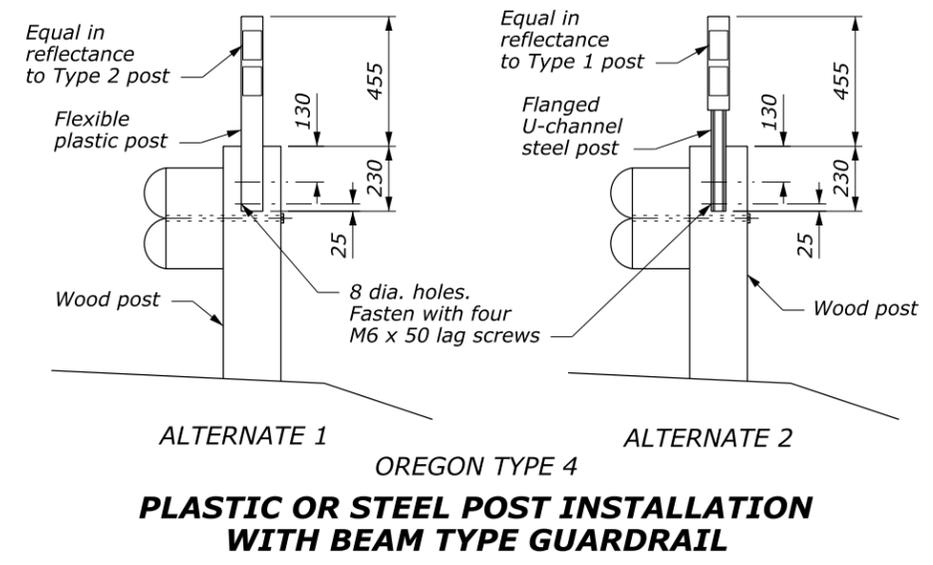


- NOTE:**
1. Place delineators nearly opposite each other on horizontal curves.
  2. Install all delineators with reflectors facing adjacent on-coming traffic.
  3. Install delineators behind the rail at guardrail locations.
  4. Offset delineators a minimum distance of 1.2 m in areas of heavy snow removal operations.
  5. On roads with less than 500 ADT, use delineators only for situations such as sharp vertical or horizontal curves, or other undesirable geometrics exist.
  6. Vary the post spacing up to 1/4 of the spacing shown to clear driveways, cross roads, intersections or ramps. Eliminate the post if the variation is exceeded.
  7. 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.
  8. If horizontal and vertical curves are combined, use the more restrictive spacing.
  9. Spacing shall be measured along the shoulder or face of curb.
  10. Furnish hardware in the metric sizes shown. Equivalent US Customary sizes may be used when metric sizes are unavailable.
  11. Dimensions without units are millimeters.



REFLECTOR DETAILS			
TYPE	REFLECTOR & TARGET/ POST COLOR	NUMBER OF REFLECTORS	USAGE AND SPACING
W-1	White	1	Max. tangent spacing: 120 m each side
			Intersections (tapers and widening): 30 m
			See Horizontal Curves table for variations
W-2	White	2	Intersection Radius: 3 min. @ 15 m
			Lane Reduction: 3 min @ 30 m

HORIZONTAL CURVES				
RADIUS OF CURVE	SPACING ON EACH SIDE OF ROADWAY IN METERS			
	ON CURVE	IN ADVANCE OF & BEYOND CURVE		
		1st SPACE	2nd SPACE	3rd SPACE
≥ 1750	90	90	90	90
875 to < 1750	70	90	90	90
585 to < 875	50	90	90	90
440 to < 585	40	80	90	90
350 to < 440	35	70	90	90
295 to < 350	30	60	90	90
250 to < 295	30	55	85	90
195 to < 250	25	50	75	90
145 to < 195	20	45	65	90
105 to < 145	20	35	55	90
75 to < 105	15	30	45	90
50 to < 75	10	25	35	75
32 to < 50	10	20	30	55
≤ 32	5	15	20	40



NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION

METRIC DETAIL

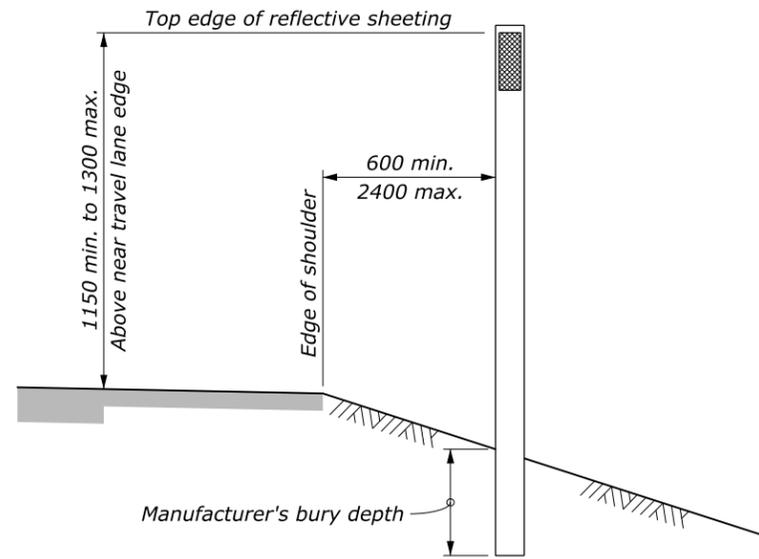
**OREGON  
DELINEATORS**

DETAIL APPROVED FOR USE --/----

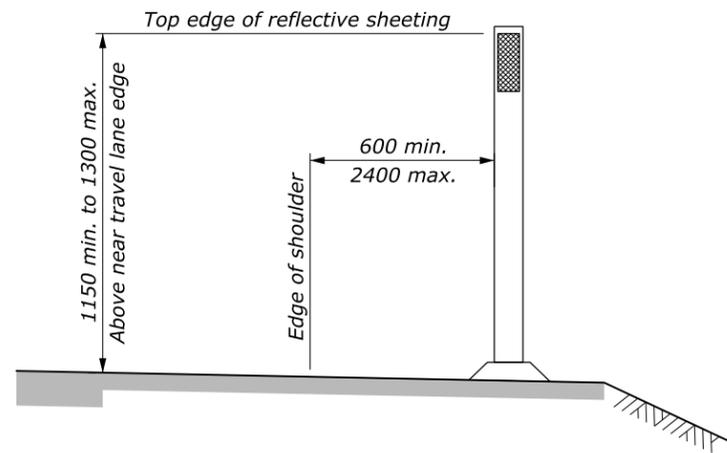
REVISID: DRAFT: 11/2014

DETAIL WM633-70

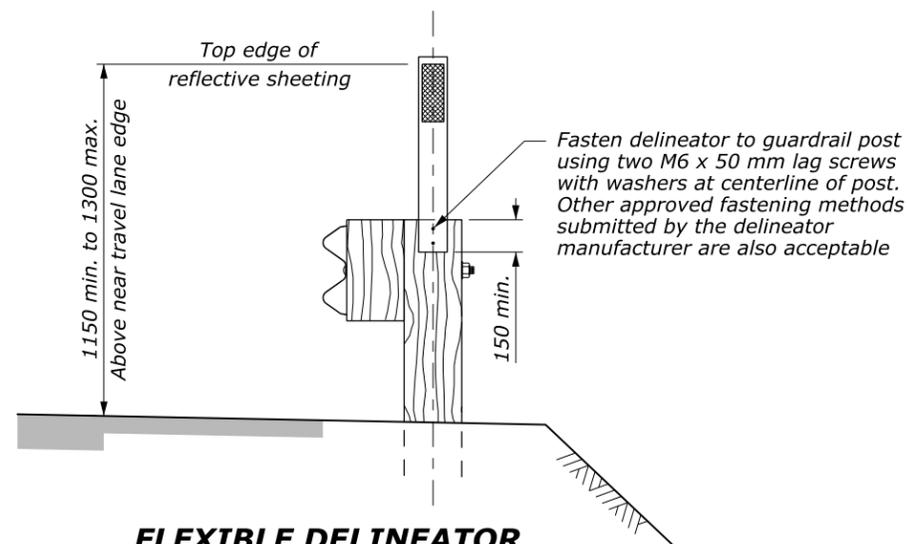




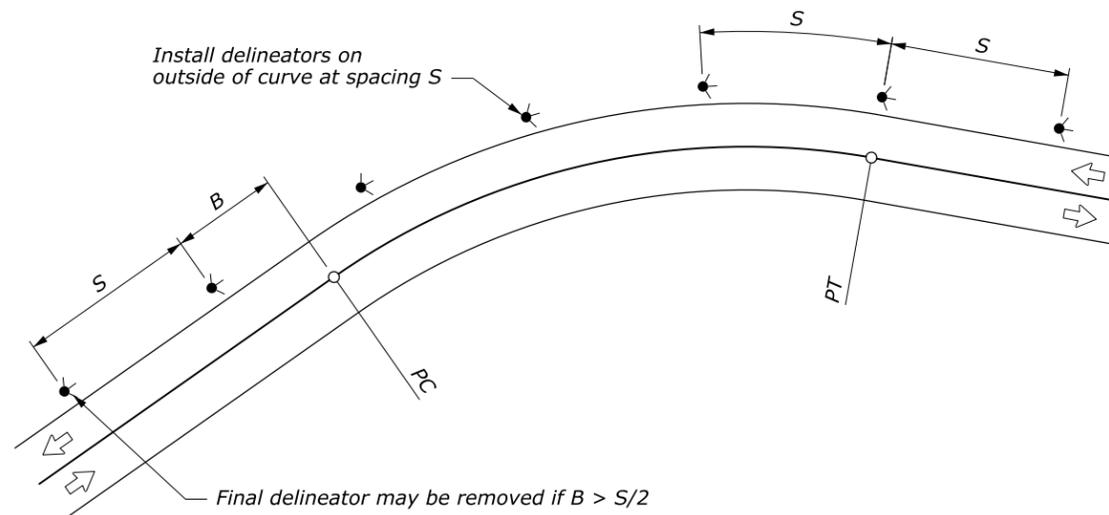
**FLEXIBLE DELINEATOR**  
GROUND MOUNTED



**FLEXIBLE DELINEATOR**  
SURFACE MOUNTED



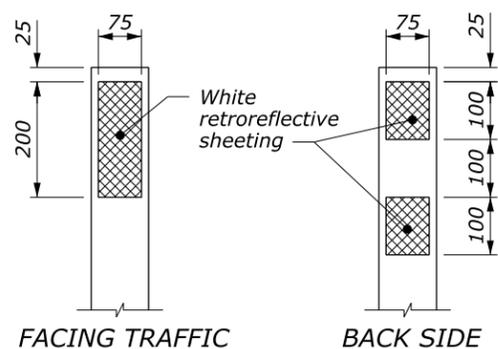
**FLEXIBLE DELINEATOR**  
GUARDRAIL MOUNTED OPTION  
(Use only with wood guardrail posts)



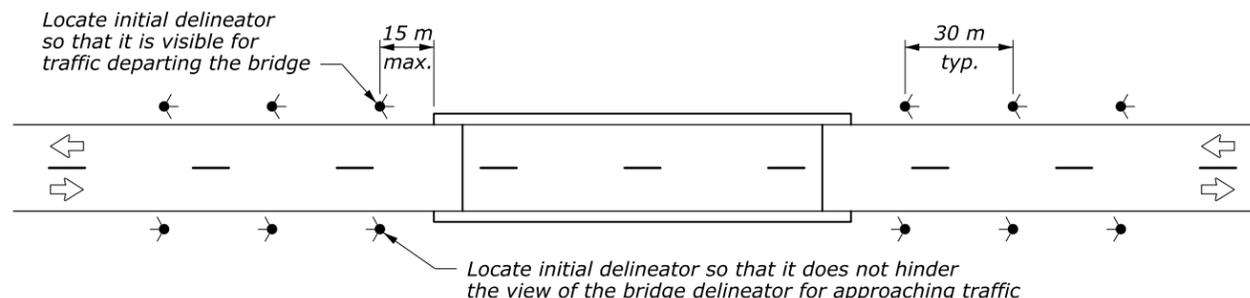
**PLACEMENT ON HORIZONTAL CURVES**

DELINEATOR SPACING ON HORIZONTAL CURVES	
CURVE RADIUS (m)	SPACING (S) (m)
15	6
35	8
55	11
75	13
95	15
125	18
155	20
185	22
215	24
245	26
275	27
305	29

Spacing for a specific curve may be interpolated from the table, or calculated using the formula:  
 $Spacing = 1.7 \sqrt{R-15}$   
 The minimum spacing should be 6 meters.  
 Curve spacing should not exceed 90 meters.



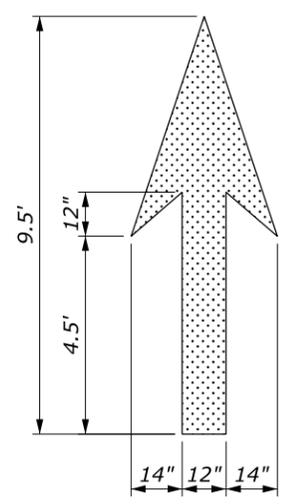
**REFLECTIVE SHEETING DETAIL**



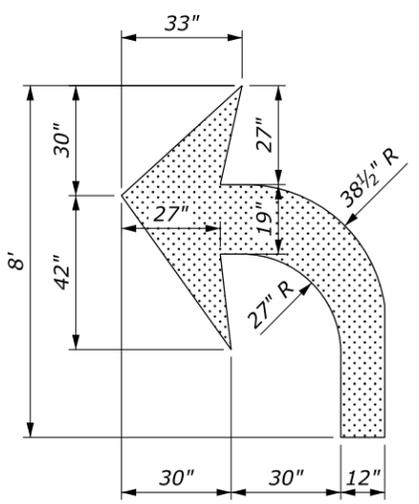
**PLACEMENT AT BRIDGE APPROACHES**

NO SCALE

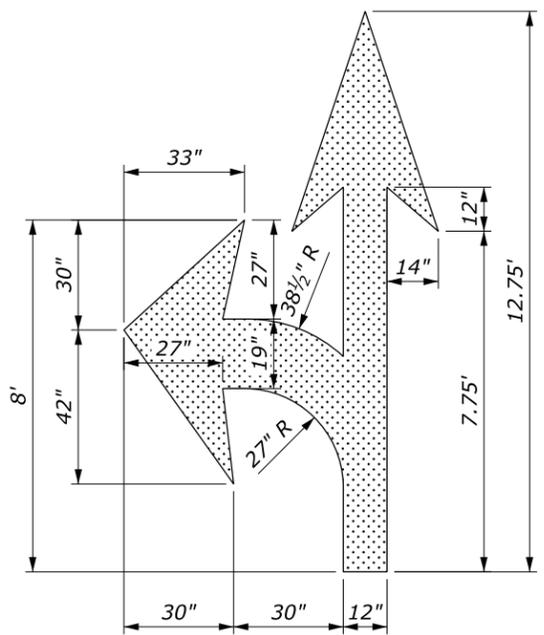
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>WASHINGTON DELINEATORS</b>	
DETAIL APPROVED FOR USE 1/2008	DETAIL
REVISED:	WM633-80



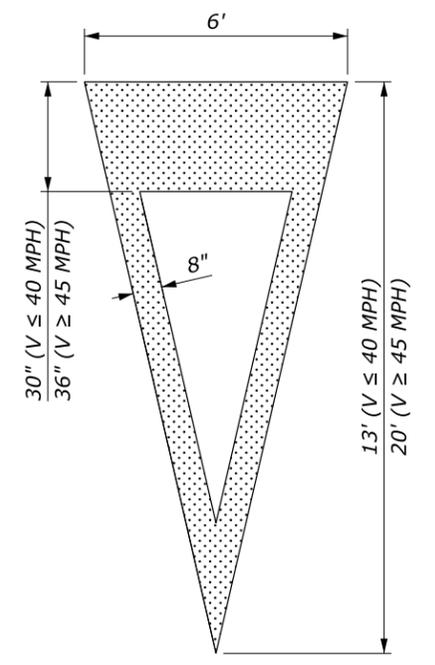
**THROUGH LANE-USE ARROW**



**TURN LANE-USE ARROW**



**TURN AND THROUGH LANE-USE ARROW**

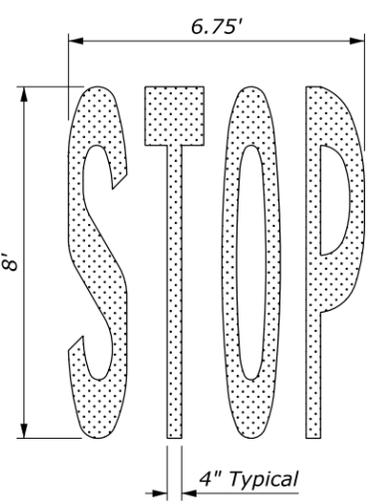


**YIELD AHEAD TRIANGLE SYMBOL**

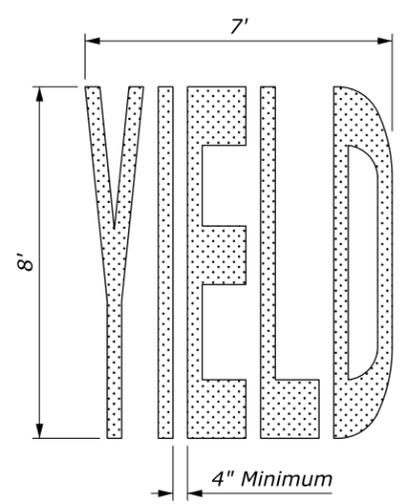
**NOTE:**

1. Place pavement word and symbol markings in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), current edition.
2. All letters, numerals and symbols shall conform with the "Standard Highway Signs", current edition.
3. The Accessibility Parking Space marking only includes the accessibility symbol unless a border is indicated in the Striping Plans.

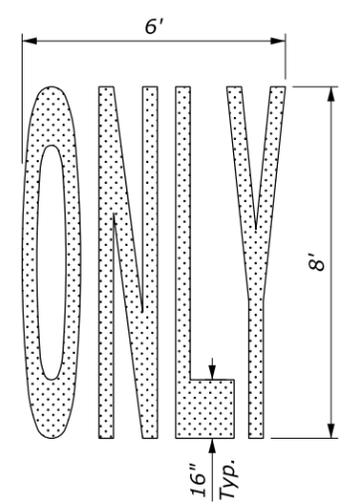
PAVEMENT MARKING AREAS	
TYPE	SQFT
Through Lane-Use Arrow	12
Turn Lane-Use Arrow	16
Turn and Through Lane-Use Arrow	26
Yield Ahead Triangle (V ≤ 40 MPH)	26
Yield Ahead Triangle (V ≥ 45 MPH)	37
Accessibility Marking (symbol only)	2
Accessibility Marking w/ border (White)	5
Accessibility Marking w/ border (Blue)	9
AHEAD Word Marking	30
ONLY Word Marking	21
SCHOOL Word Marking	33
STOP Word Marking	22
YIELD Word Marking	24



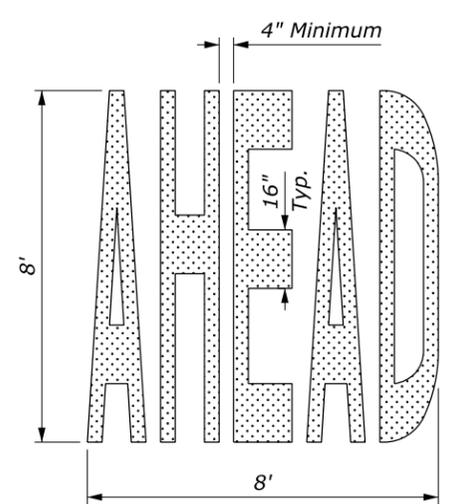
**"STOP" WORD MARKING**



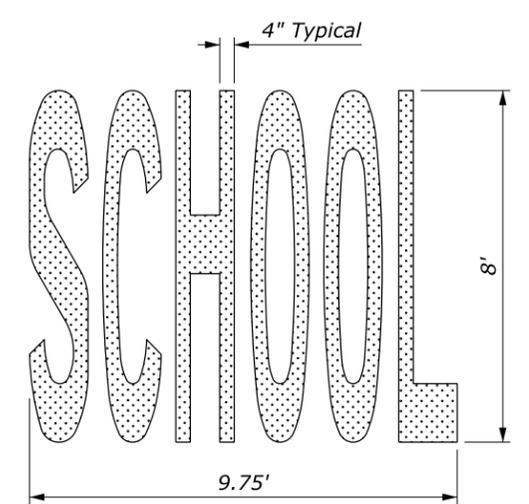
**"YIELD" WORD MARKING**



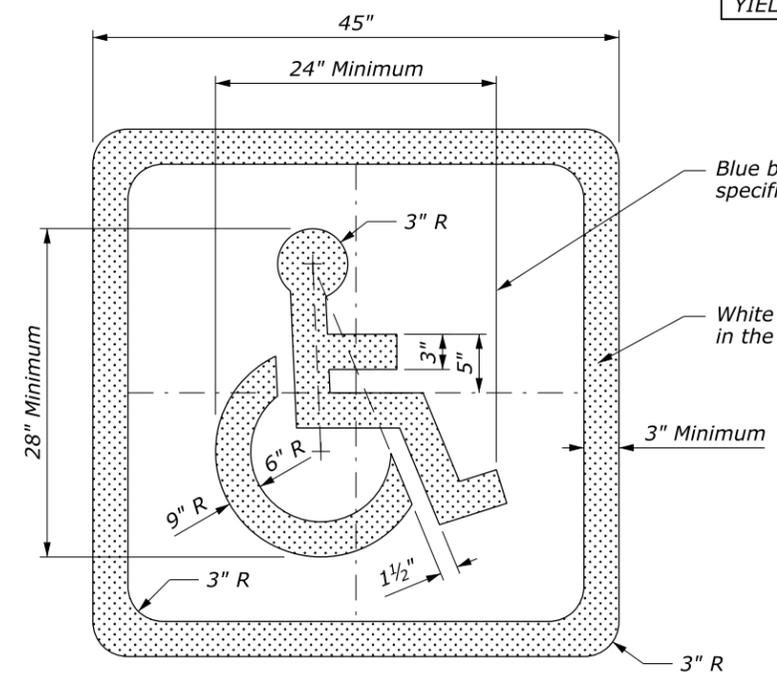
**"ONLY" WORD MARKING**



**"AHEAD" WORD MARKING**



**"SCHOOL" WORD MARKING**



**ACCESSIBILITY PARKING SPACE MARKING**

Blue background when border specified in the Striping Plans

White border when specified in the Striping Plans

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 WESTERN FEDERAL LANDS HIGHWAY DIVISION

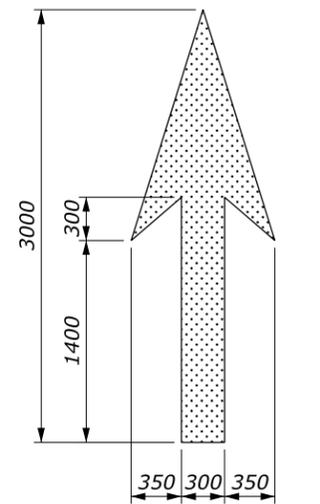
U.S. CUSTOMARY DETAIL

**PAVEMENT MARKINGS  
 SYMBOLS AND WORDS**

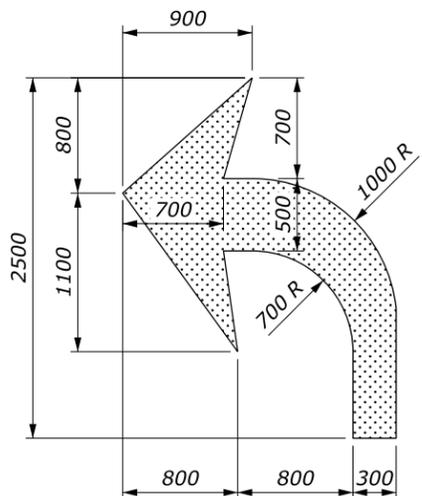
DETAIL APPROVED FOR USE 3/2003  
 REVISIONS: 11/2006 10/2007

DETAIL  
 W634-1

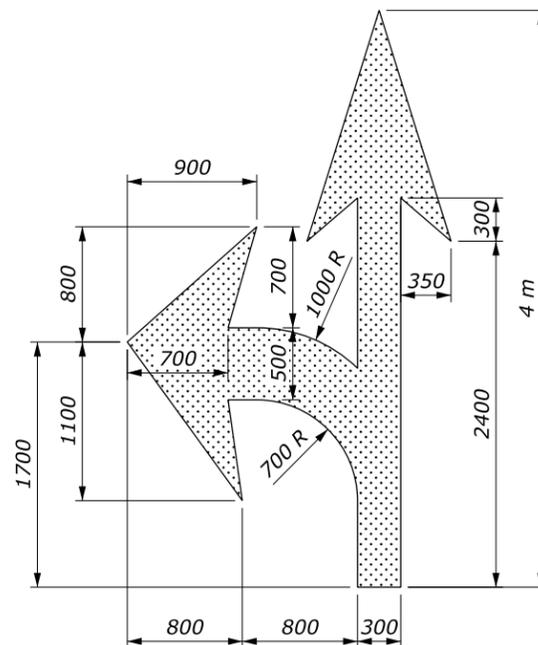
NO SCALE



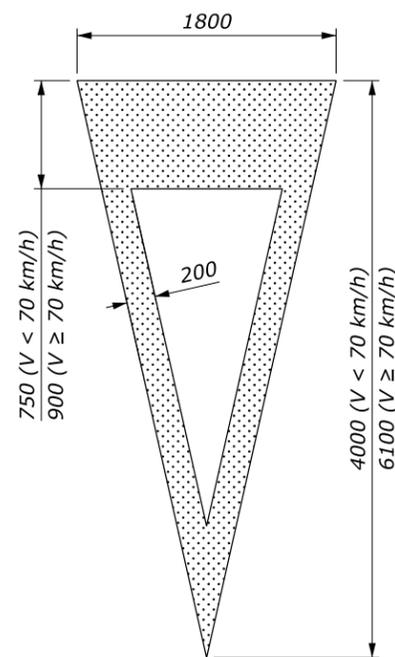
**THROUGH LANE-USE ARROW**



**TURN LANE-USE ARROW**



**TURN AND THROUGH LANE-USE ARROW**

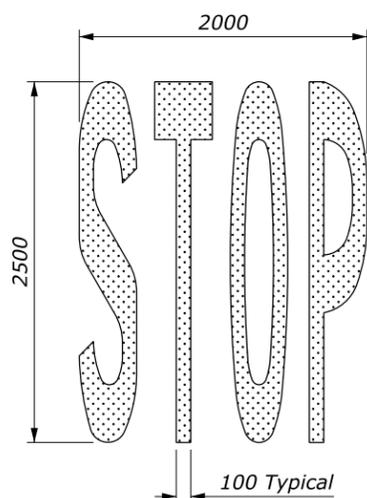


**YIELD AHEAD TRIANGLE SYMBOL**

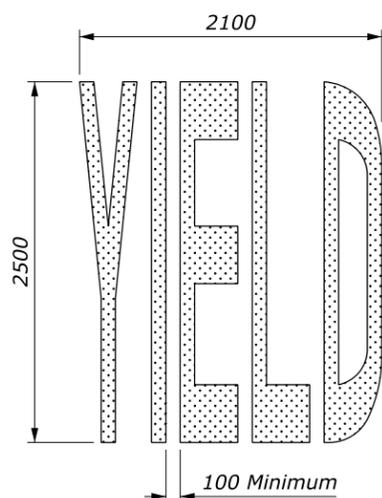
**NOTE:**

1. Place pavement word and symbol markings in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), current edition.
2. All letters, numerals and symbols shall conform with the "Standard Highway Signs", current edition.
3. The Accessibility Parking Space marking only includes the accessibility symbol unless a border is indicated in the Striping Plans.
4. Dimensions without units are millimeters.

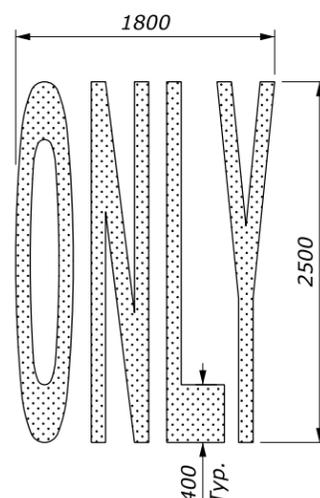
<b>PAVEMENT MARKING AREAS</b>	
TYPE	m <sup>2</sup>
Through Lane-Use Arrow	1.1
Turn Lane-Use Arrow	1.5
Turn and Through Lane-Use Arrow	2.5
Yield Ahead Triangle (V < 70 km/h)	2.4
Yield Ahead Triangle (V ≥ 70 km/h)	3.3
Accessibility Marking (symbol only)	0.1
Accessibility Marking w/ border (White)	0.5
Accessibility Marking w/ border (Blue)	0.8
AHEAD Word Marking	2.8
ONLY Word Marking	2.0
SCHOOL Word Marking	3.1
STOP Word Marking	2.0
YIELD Word Marking	2.2



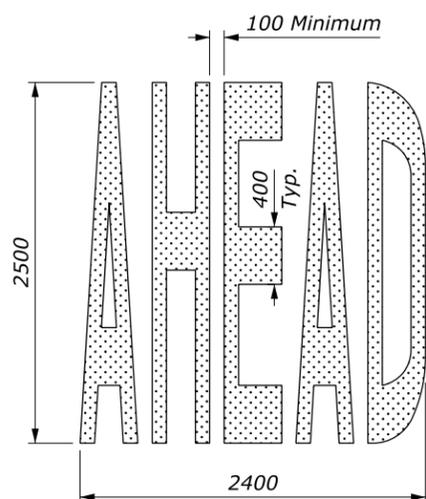
**"STOP" WORD MARKING**



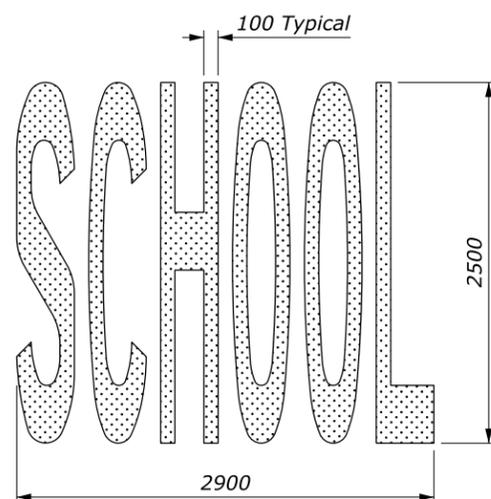
**"YIELD" WORD MARKING**



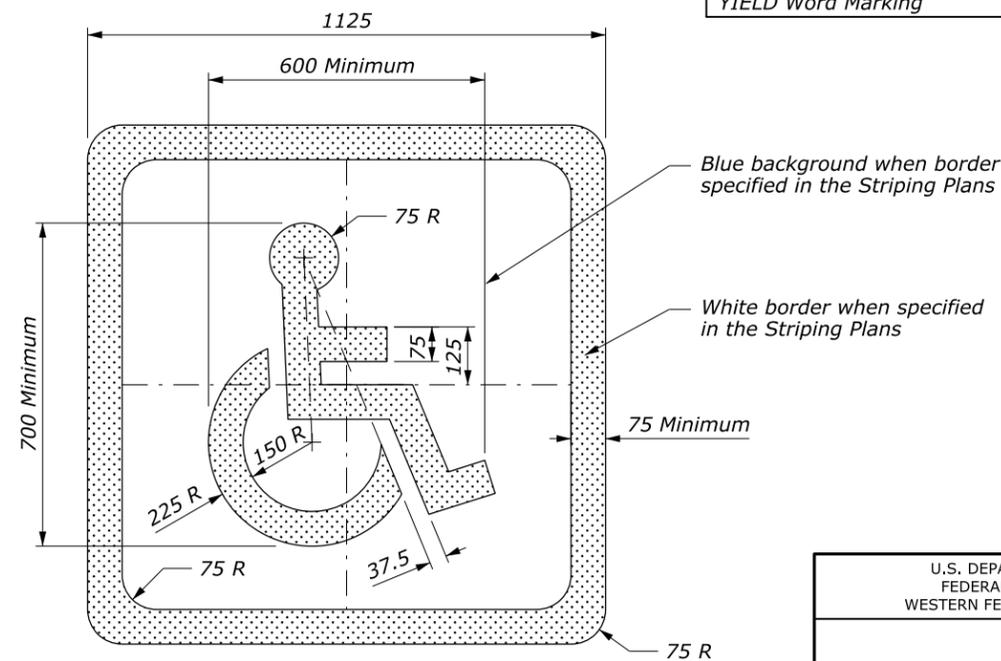
**"ONLY" WORD MARKING**



**"AHEAD" WORD MARKING**



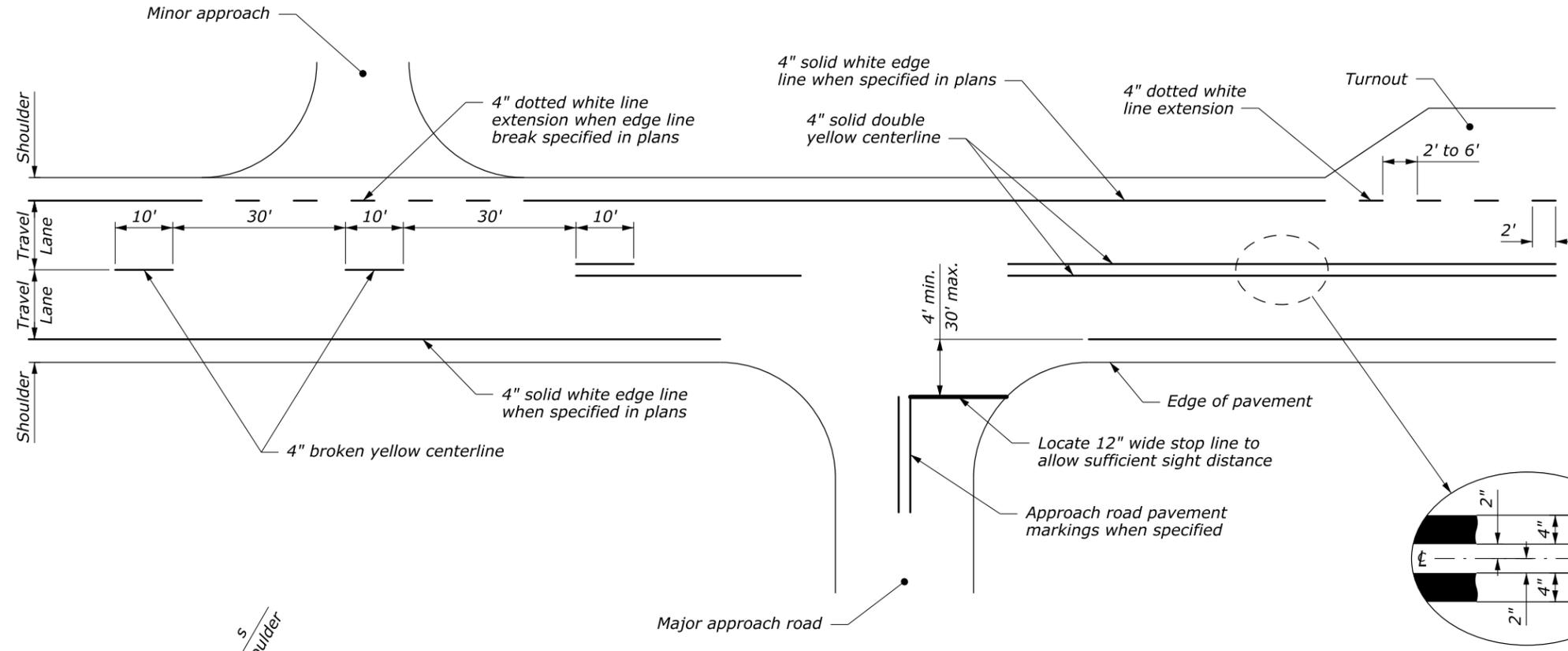
**"SCHOOL" WORD MARKING**



**ACCESSIBILITY PARKING SPACE MARKING**

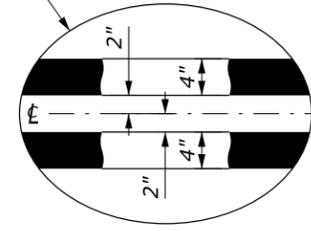
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>PAVEMENT MARKINGS SYMBOLS AND WORDS</b>	
DETAIL APPROVED FOR USE 12/2000	DETAIL
REVISED: 3/2003 11/2006 10/2007	WM634-1



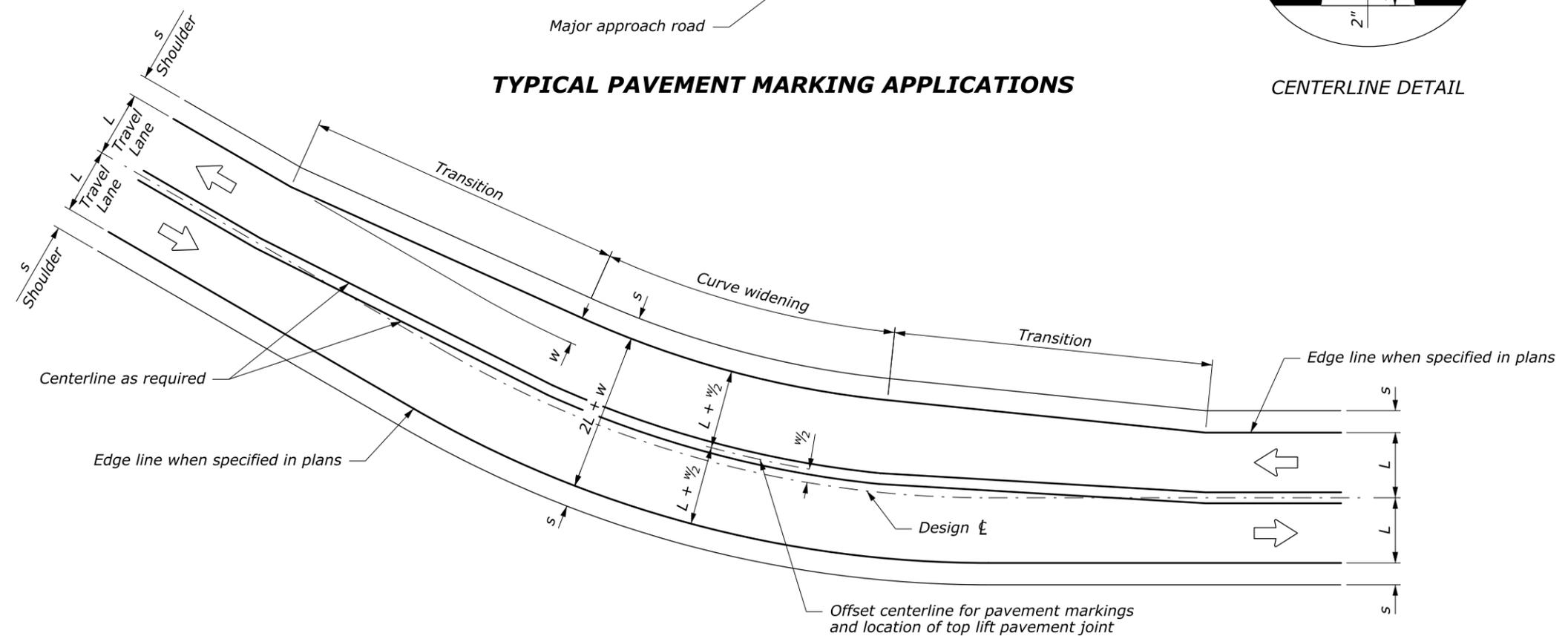
**NOTE:**

1. Place edge line pavement markings at asphalt/concrete curb interface when curb is present.
2. Paint centerline pavement markings on curves with curve widening "w" to achieve equal lane widths within the roadway. Maintain a constant shoulder width "s" throughout the curve widening area. See staking details for curve widening transition locations.
3. Typical pavement marking widths are shown. Use wider pavement markings when specified on the plans or when required by the maintaining agency.



**TYPICAL PAVEMENT MARKING APPLICATIONS**

CENTERLINE DETAIL

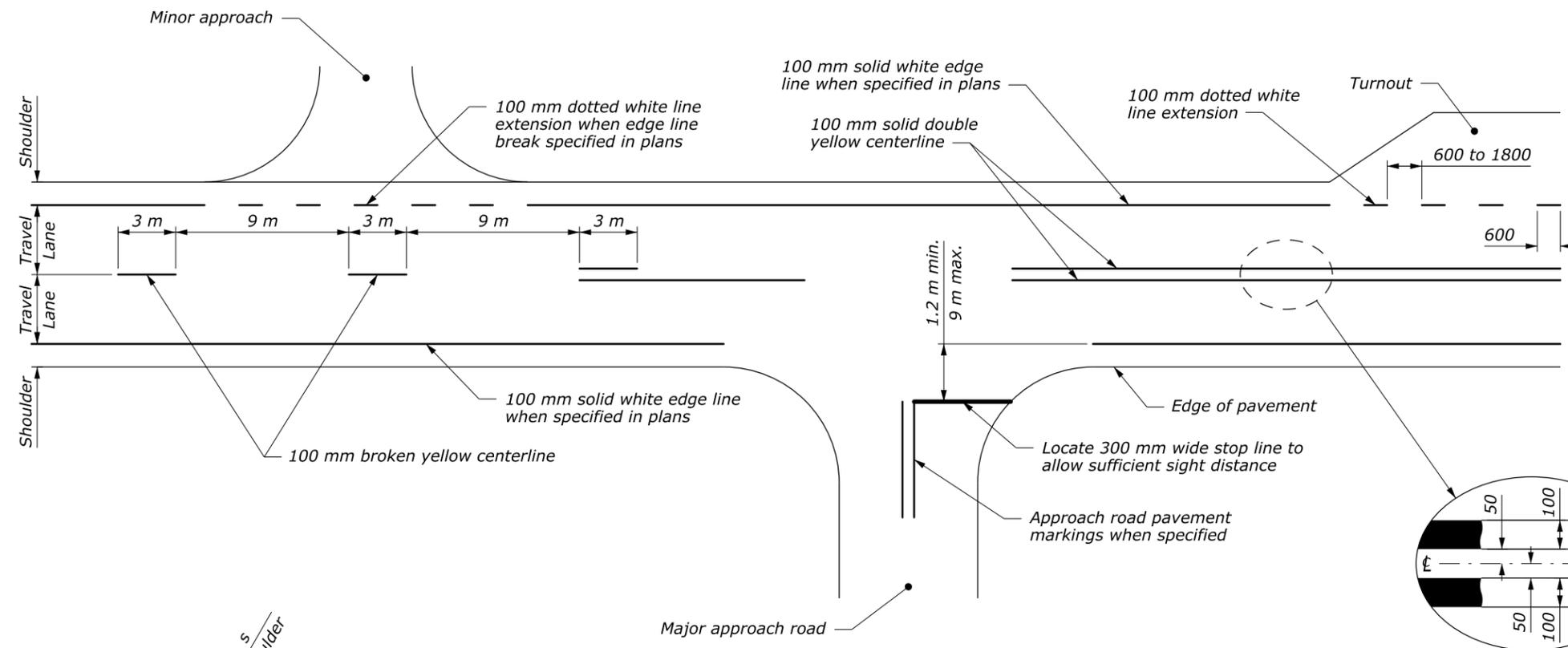


**CENTERLINE MODIFICATION FOR CURVES WITH WIDENING APPLIED ON INSIDE**

See Note 2 for treatment of curves when widening "w" is split equally on both sides of centerline

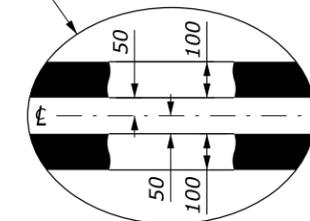
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
<b>LINEAR PAVEMENT MARKINGS</b>	
DETAIL APPROVED FOR USE 10/2007 REVISED: 10/2012	DETAIL W634-2



**NOTE:**

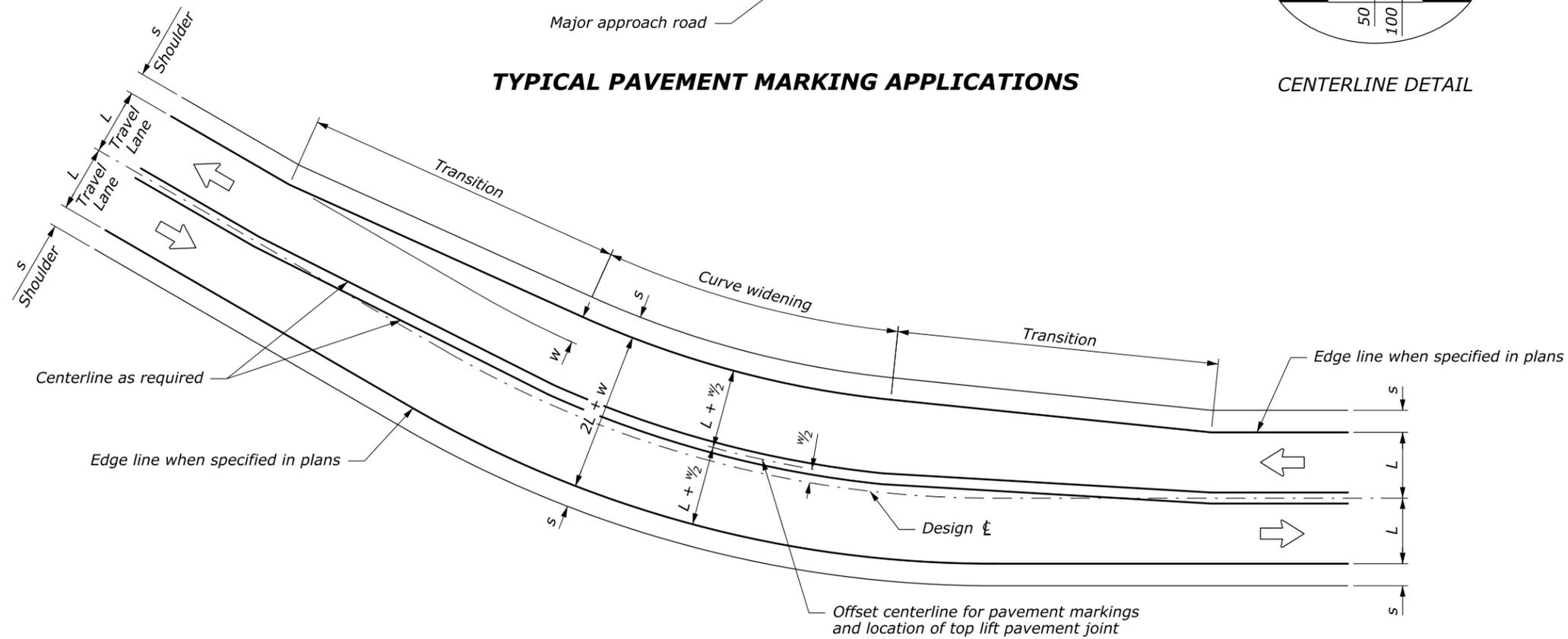
1. Place edge line pavement markings at asphalt/concrete curb interface when curb is present.
2. Paint centerline pavement markings on curves with curve widening "w" to achieve equal lane widths within the roadway. Maintain a constant shoulder width "s" throughout the curve widening area. See staking details for curve widening transition locations.
3. Typical pavement marking widths are shown. Use wider pavement markings when specified on the plans or when required by the maintaining agency.
4. Dimensions without units are millimeters



Increase spacing between parallel lines when specified in the plans or when required by the maintaining agency

**TYPICAL PAVEMENT MARKING APPLICATIONS**

CENTERLINE DETAIL

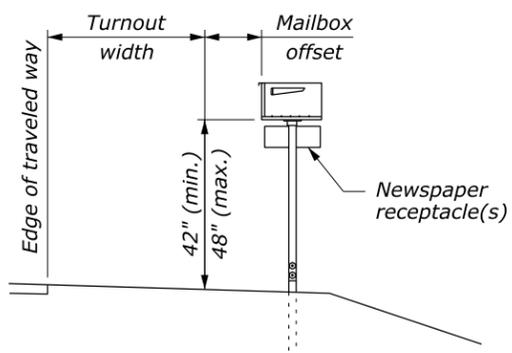


**CENTERLINE MODIFICATION FOR CURVES WITH WIDENING APPLIED ON INSIDE**

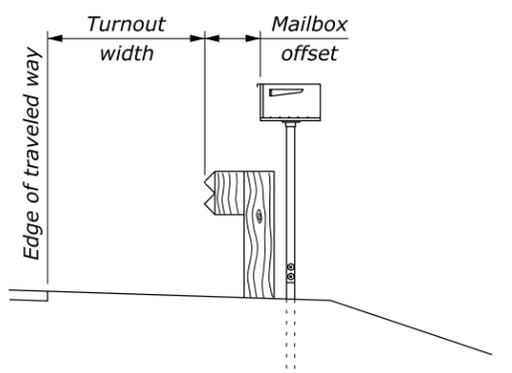
See Note 2 for treatment of curves when widening "w" is split equally on both sides of centerline

NO SCALE

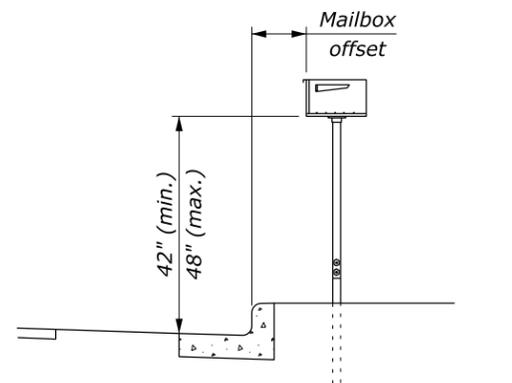
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>LINEAR PAVEMENT MARKINGS</b>	
DETAIL APPROVED FOR USE 10/2007	DETAIL
REVISED: 10/2012	WM634-2



**MAILBOX TURNOUT**



**GUARDRAIL AREAS**



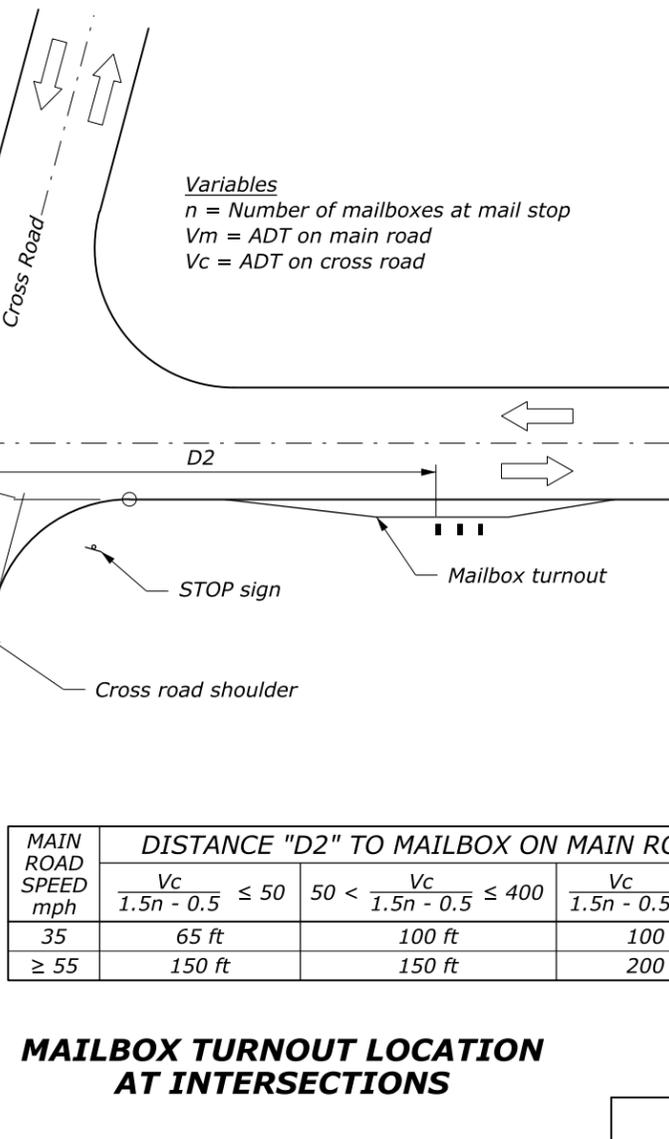
**RESIDENTIAL AREA WITH CURB**

**TYPICAL MAILBOX LOCATIONS**

MAIN ROAD SPEED mph	DISTANCE "D1" TO MAILBOX ON MAIN ROAD	
	$n \times Vc \times Vm \leq 4000$	$n \times Vc \times Vm > 4000$
35	65 ft	200 ft
$\geq 55$	65 ft	295 ft

	DISTANCE TO MAILBOX ON CROSS ROAD	
	PREFERRED	MINIMUM
D3	100 ft	65 ft
D4	150 ft	100 ft

SPEED mph	TAPER	
	T1	T2
$\leq 40$	4:1	2.5:1
$> 40$	20:1	12:1

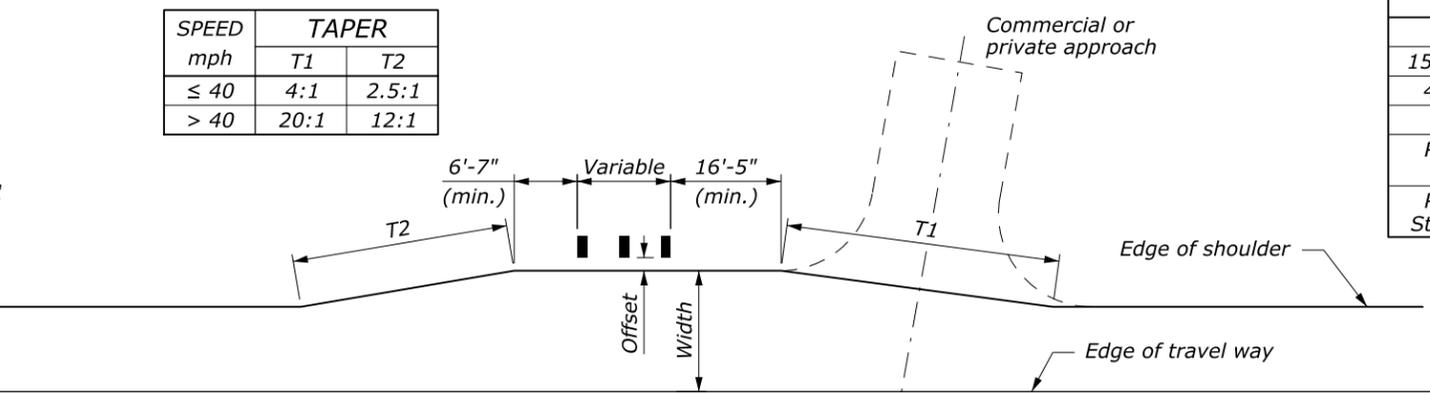


**Variables**  
 $n$  = Number of mailboxes at mail stop  
 $Vm$  = ADT on main road  
 $Vc$  = ADT on cross road

MAIN ROAD SPEED mph	DISTANCE "D2" TO MAILBOX ON MAIN ROAD		
	$\frac{Vc}{1.5n - 0.5} \leq 50$	$50 < \frac{Vc}{1.5n - 0.5} \leq 400$	$\frac{Vc}{1.5n - 0.5} > 400$
35	65 ft	100 ft	100 ft
$\geq 55$	150 ft	150 ft	200 ft

**MAILBOX TURNOUT LOCATION AT INTERSECTIONS**

MAIN ROAD ADT	TURNOUT WIDTH		MAILBOX OFFSET	
	PREFERRED	MINIMUM	PREFERRED	MINIMUM
$> 10,000$	$> 12'$	8'	6" to 8"	0
1500 - 10,000	12'	8'	6" to 8"	0
400 - 1500	10'	8'	6" to 8"	0
$< 400$	8'	6'	6" to 8"	6"
Residential Street	6'	0	6" to 8"	6"
Residential Street w/curb	Not applicable		8" to 12"	6"



**DIRECTION OF TRAVEL**

**MAILBOX TURNOUT**

**NOTE:**

1. Move mailbox turnout so that it does not overlap the intersection curve radii.
2. Do not skew mailbox turnouts, however, the adjacent approach may be skewed as shown. Blend the approach radius from the roadway shoulder to the turnout shoulder as shown in the Mailbox Turnout Detail. Place mail boxes on the far side of approach road entrances unless the minimum distances cannot be obtained.
3. The set back and required support also apply to mailbox receptacles. When the newspaper receptacles and mailboxes are mounted in combinations, mount the newspaper receptacle below the bottom surface of the mailbox.
4. Use the same pavement structure for mailbox turnouts as the adjacent roadway section.
5. Mailbox supports shall conform to the requirements of the AASHTO Manual for Assessing Safety Hardware (MASH) or NCHRP Report 350.
6. Posts may be 4" x 4" or 4" diameter wood posts or 1.5" to 2" diameter standard steel or aluminum pipe posts embedded not more than 24" in the ground.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 WESTERN FEDERAL LANDS HIGHWAY DIVISION

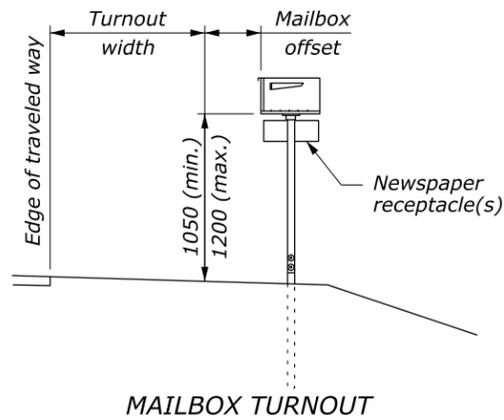
U.S. CUSTOMARY DETAIL

**MAILBOX TURNOUT AND INSTALLATION**

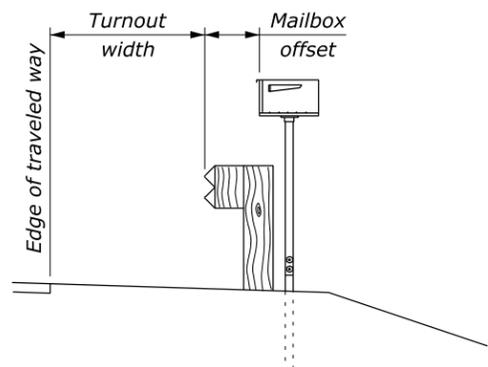
DETAIL APPROVED FOR USE --/---

REVISID: DRAFT: 11/2014

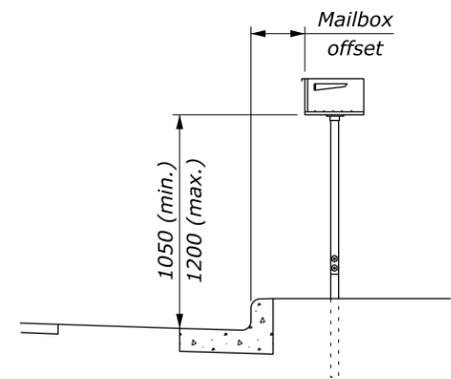
DETAIL W646-1



**MAILBOX TURNOUT**



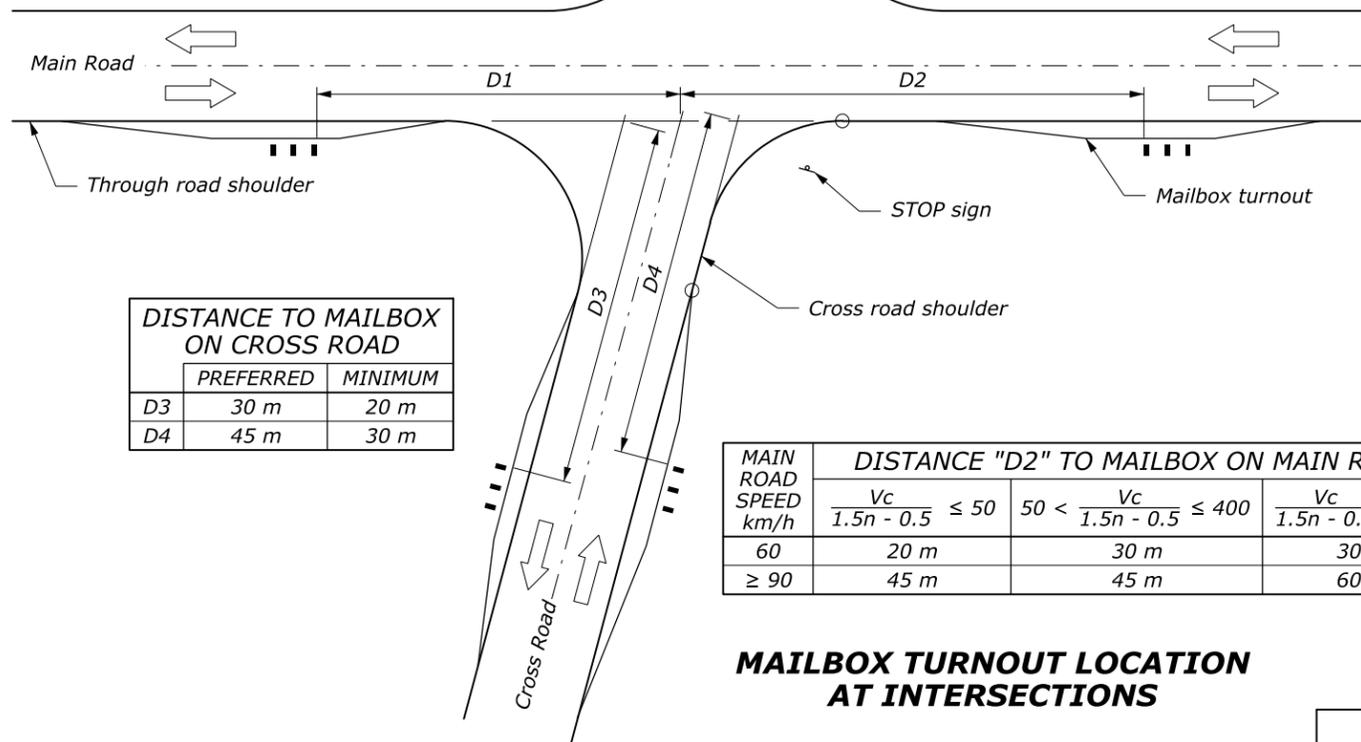
**GUARDRAIL AREAS**



**RESIDENTIAL AREA WITH CURB**

**TYPICAL MAILBOX LOCATIONS**

MAIN ROAD SPEED km/h	DISTANCE "D1" TO MAILBOX ON MAIN ROAD	
	$n \times Vc \times Vm \leq 4000$	$n \times Vc \times Vm > 4000$
60	20 m	60 m
$\geq 90$	20 m	90 m

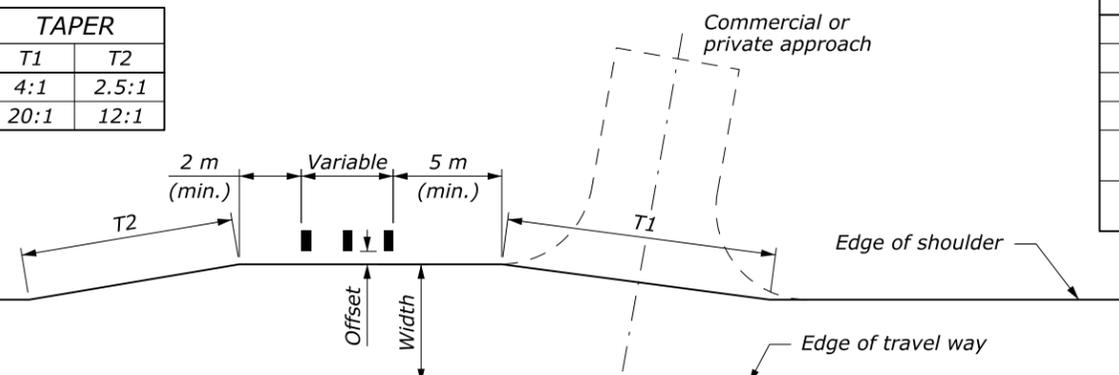


	DISTANCE TO MAILBOX ON CROSS ROAD	
	PREFERRED	MINIMUM
D3	30 m	20 m
D4	45 m	30 m

MAIN ROAD SPEED km/h	DISTANCE "D2" TO MAILBOX ON MAIN ROAD		
	$\frac{Vc}{1.5n - 0.5} \leq 50$	$50 < \frac{Vc}{1.5n - 0.5} \leq 400$	$\frac{Vc}{1.5n - 0.5} > 400$
60	20 m	30 m	30 m
$\geq 90$	45 m	45 m	60 m

**MAILBOX TURNOUT LOCATION AT INTERSECTIONS**

SPEED km/h	TAPER	
	T1	T2
< 70	4:1	2.5:1
$\geq 70$	20:1	12:1



← DIRECTION OF TRAVEL

**MAILBOX TURNOUT**

**Variables**  
 $n$  = Number of mailboxes at mail stop  
 $Vm$  = ADT on main road  
 $Vc$  = ADT on cross road

**NOTE:**

1. Move mailbox turnout so that it does not overlap the intersection curve radii.
2. Do not skew mailbox turnouts, however, the adjacent approach may be skewed as shown. Blend the approach radius from the roadway shoulder to the turnout shoulder as shown in the Mailbox Turnout Detail. Place mail boxes on the far side of approach road entrances unless the minimum distances cannot be obtained.
3. The set back and required support also apply to mailbox receptacles. When the newspaper receptacles and mailboxes are mounted in combinations, mount the newspaper receptacle below the bottom surface of the mailbox.
4. Use the same pavement structure for mailbox turnouts as the adjacent roadway section.
5. Mailbox supports shall conform to the requirements of the AASHTO Manual for Assessing Safety Hardware (MASH) or NCHRP Report 350.
6. Posts may be 100 mm x 100 mm or 100 mm diameter wood posts or 38 mm to 50 mm diameter standard steel or aluminum pipe posts embedded not more than 600 mm in the ground.
7. Dimensions without units are millimeters.

**TURNOUT DIMENSION TABLE**

MAIN ROAD ADT	TURNOUT WIDTH		MAILBOX OFFSET	
	PREFERRED	MINIMUM	PREFERRED	MINIMUM
> 10,000	> 3.6 m	2.4 m	150 to 200	0
1500 - 10,000	3.6 m	2.4 m	150 to 200	0
400 - 1500	3.0 m	2.4 m	150 to 200	0
< 400	2.4 m	1.8 m	150 to 200	150
Residential Street	1.8 m	0	150 to 200	150
Residential Street w/curb	Not applicable		200 to 305	150

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 WESTERN FEDERAL LANDS HIGHWAY DIVISION

METRIC DETAIL

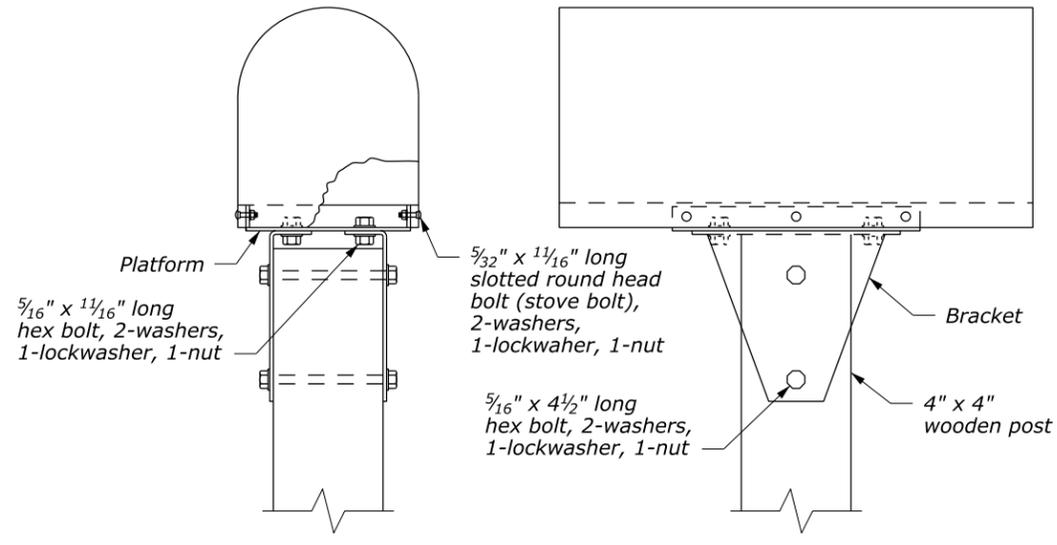
**MAILBOX TURNOUT AND INSTALLATION**

DETAIL APPROVED FOR USE --/----

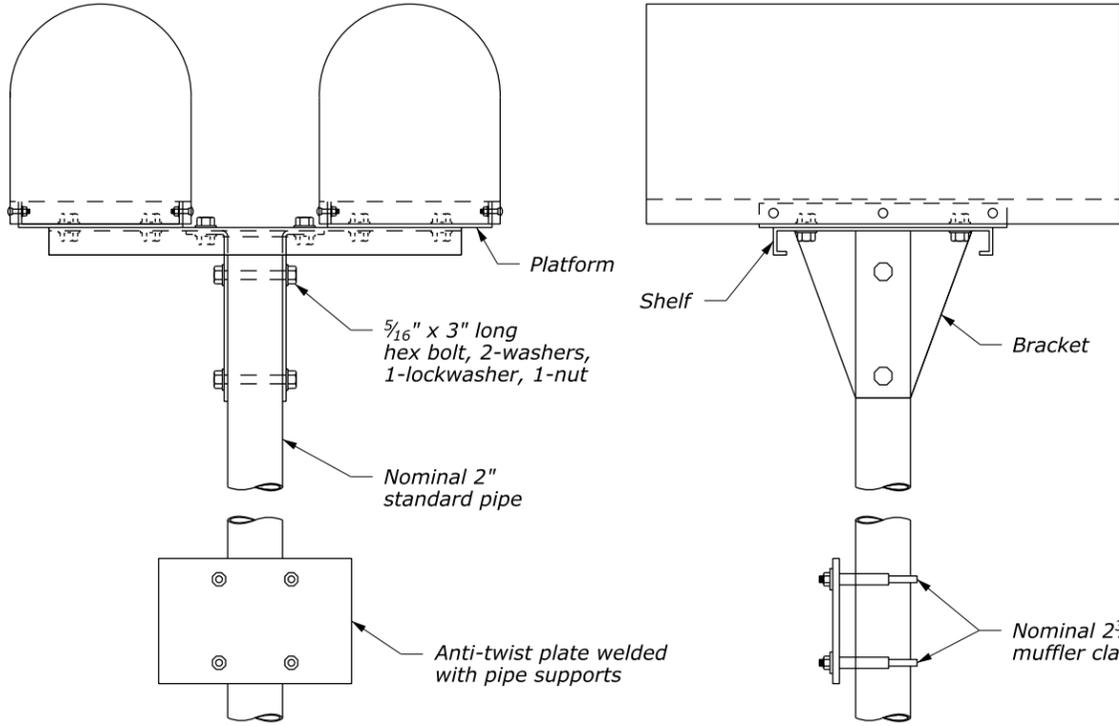
REVISED:  
 DRAFT: 11/2014

DETAIL  
 WM646-1

NO SCALE

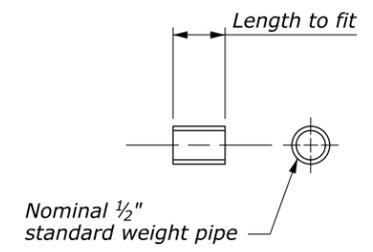


**SINGLE MAILBOX INSTALLATION**

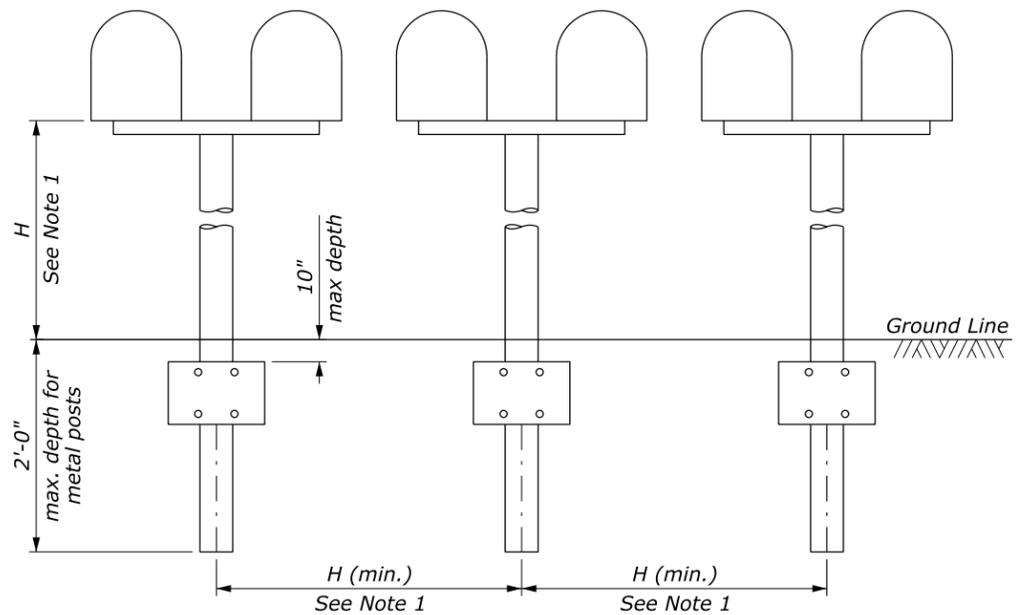


**DOUBLE MAILBOX INSTALLATION**

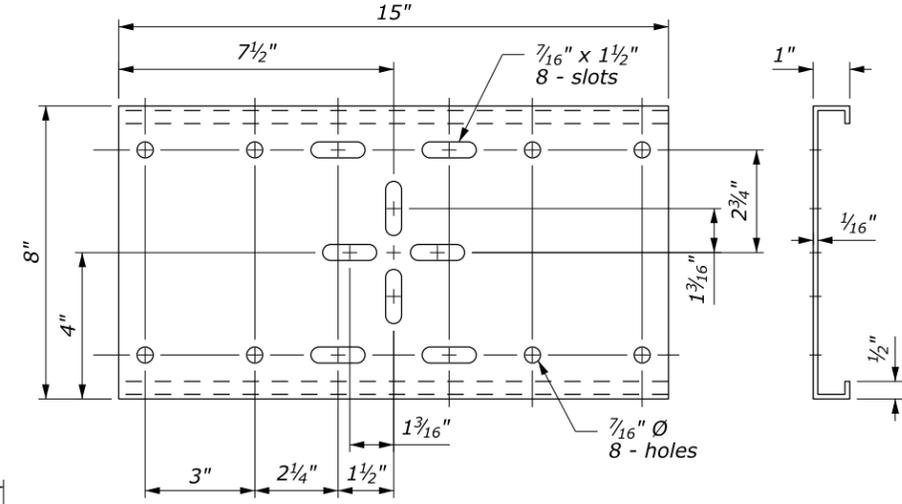
**NOTE:**  
 1. Spacing between multiple mailboxes and height of mailbox above ground level are as established by the U.S. Postal Service. H is usually 3'-4" to 4'-0".



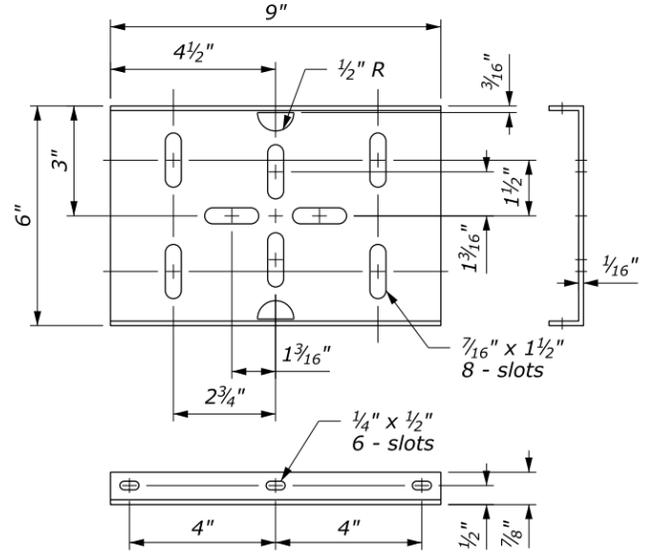
**SPACER**



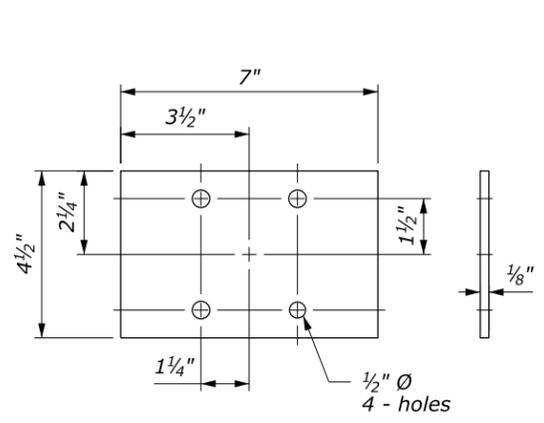
**SPACING FOR MULTIPLE INSTALLATION**



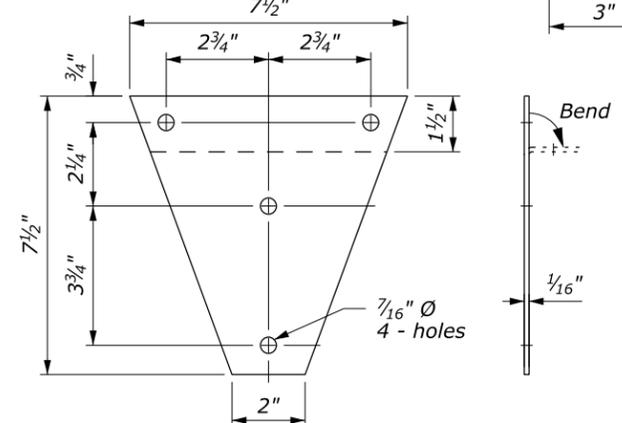
**SHELF**



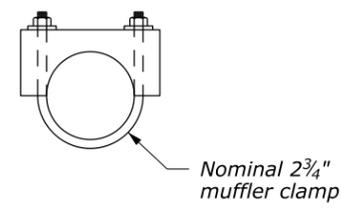
**PLATFORM**



**ANTI-TWIST PLATE**



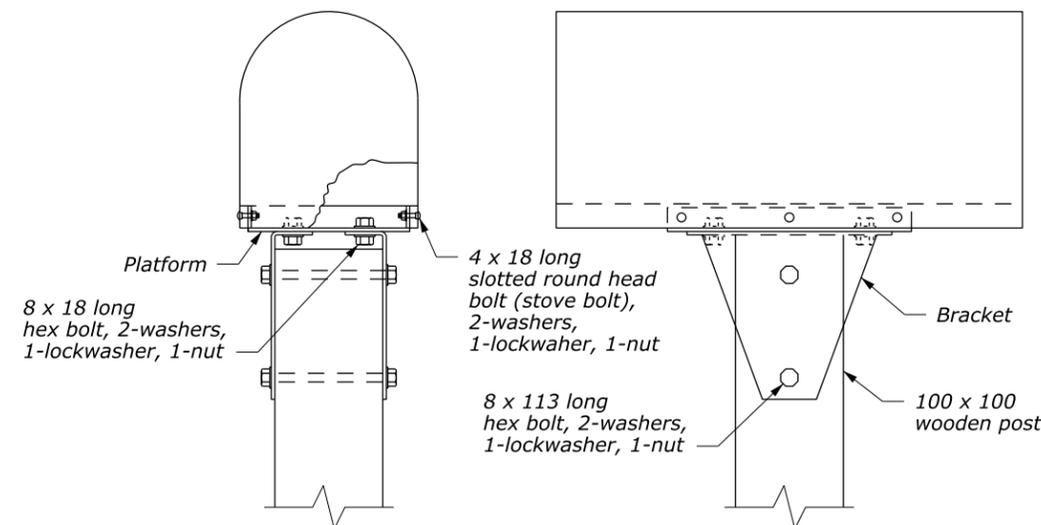
**BRACKET**



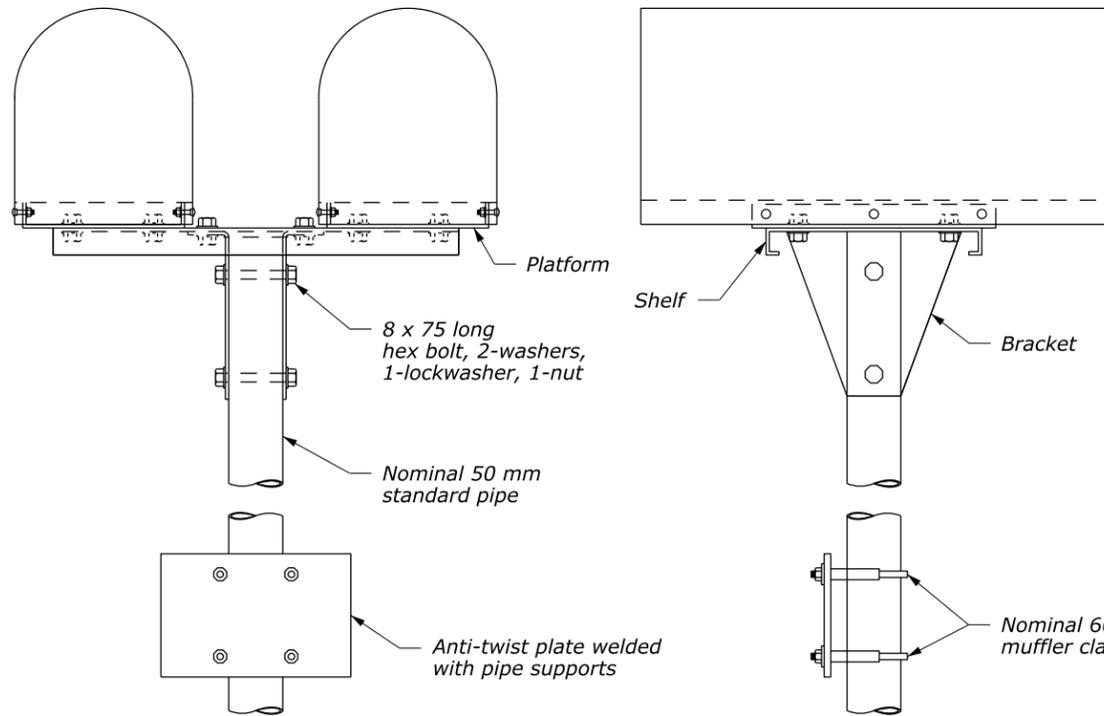
**CLAMP**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
<b>MAILBOX ASSEMBLY SERIES A</b>	
DETAIL APPROVED FOR USE --/---	DETAIL W646-2
REVISED: DRAFT: 11/2014	



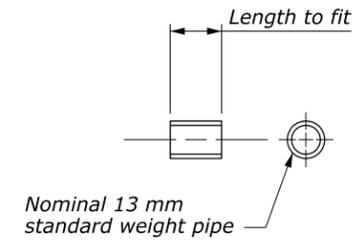
**SINGLE MAILBOX INSTALLATION**



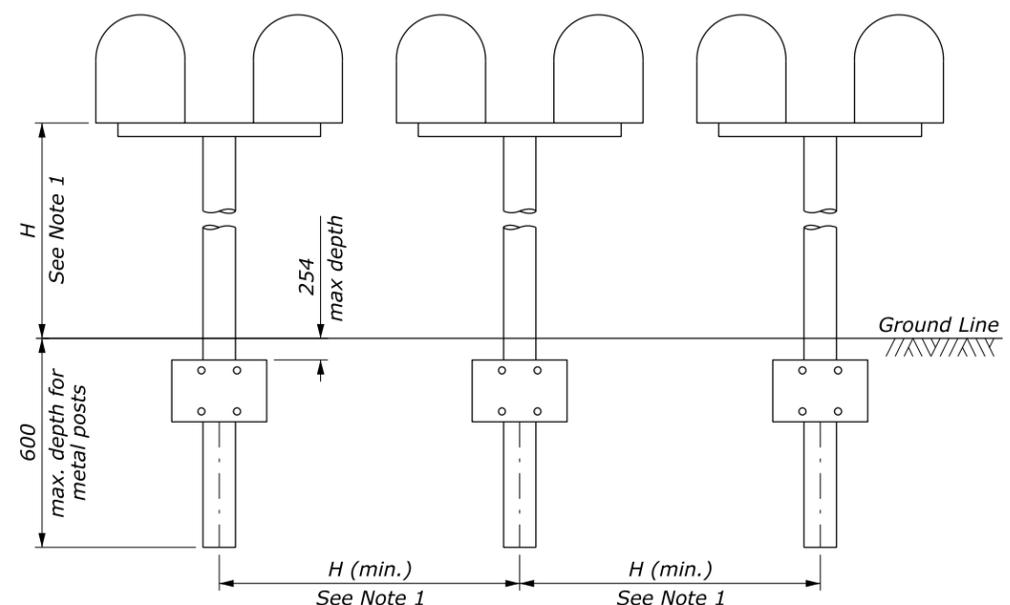
**DOUBLE MAILBOX INSTALLATION**

**NOTE:**

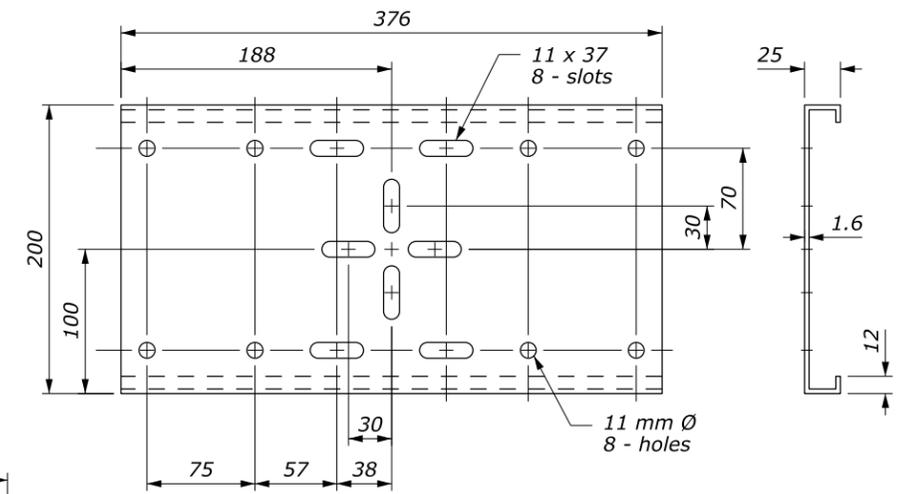
- Spacing between multiple mailboxes and height of mailbox above ground level are as established by the U.S. Postal Service. H is usually 1.0 m to 1.2 m.
- Dimensions without units are millimeters.



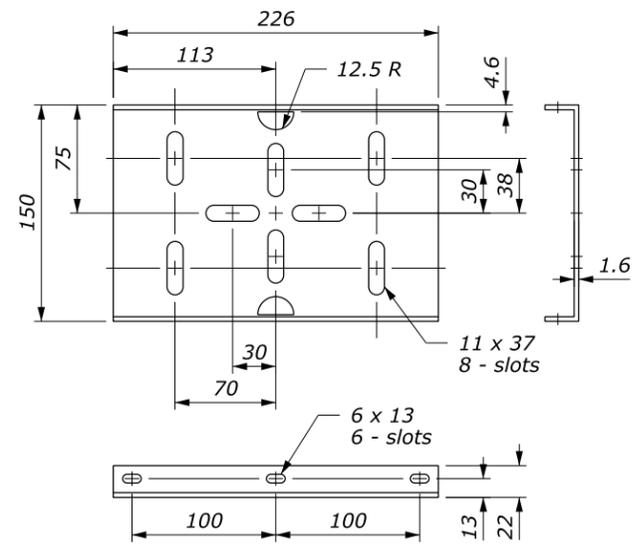
**SPACER**



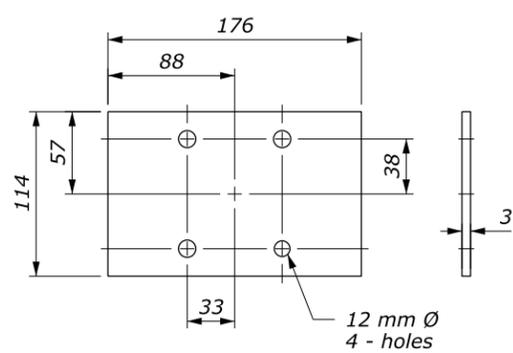
**SPACING FOR MULTIPLE INSTALLATION**



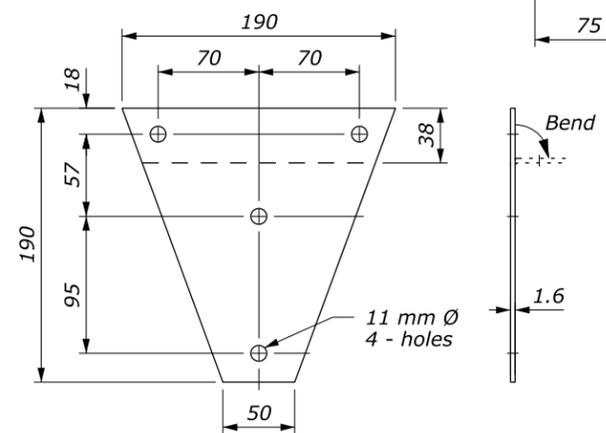
**SHELF**



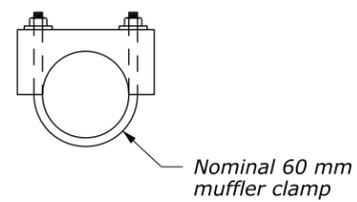
**PLATFORM**



**ANTI-TWIST PLATE**



**BRACKET**



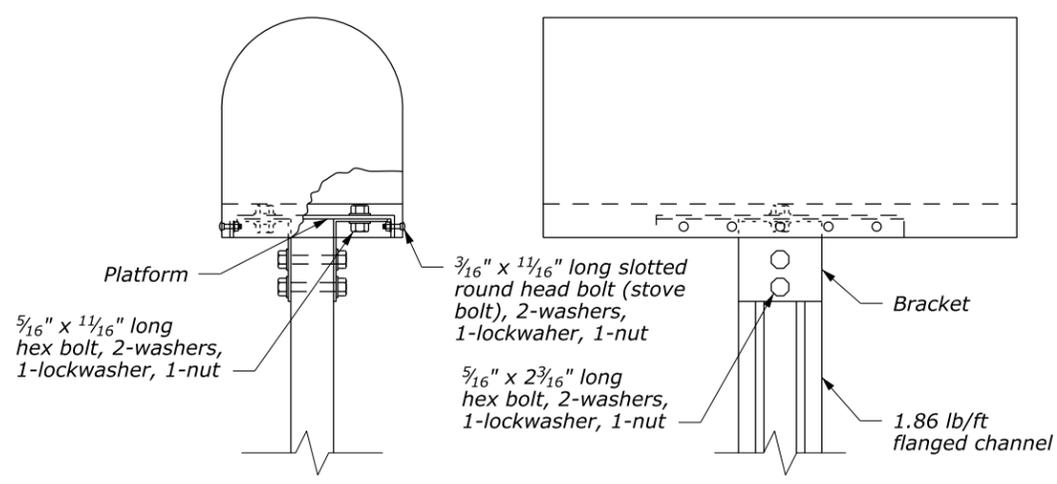
**CLAMP**

NO SCALE

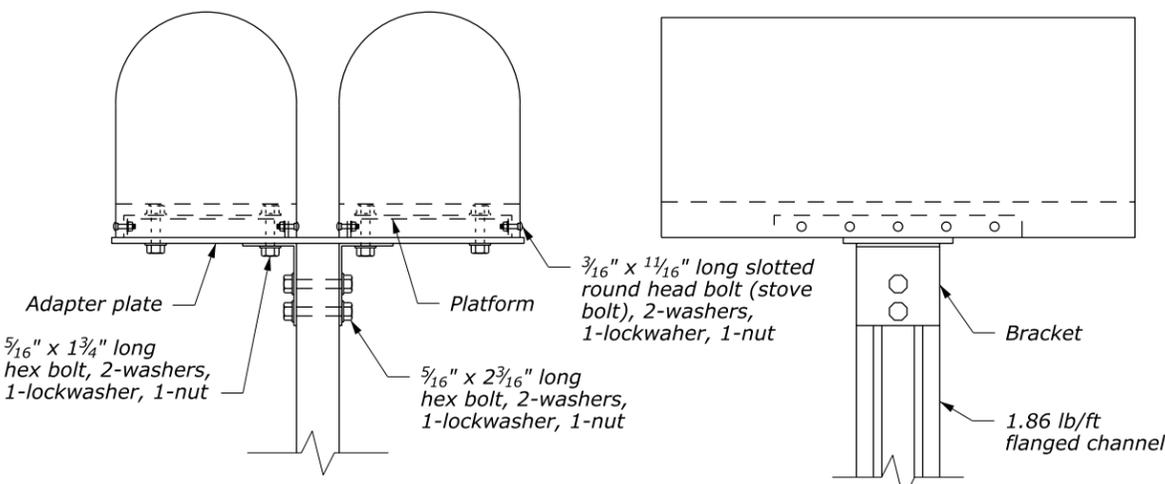
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>MAILBOX ASSEMBLY SERIES A</b>	
REVISOR: DRAFT: 11/2014	DETAIL APPROVED FOR USE --/---- DETAIL WM646-2

**NOTE:**

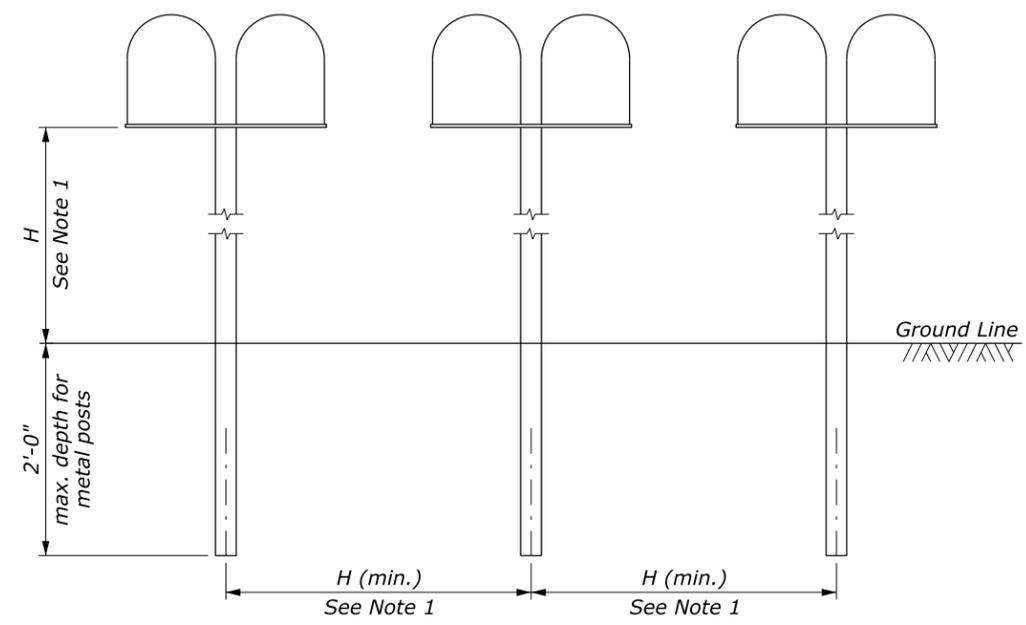
1. Spacing between multiple mailboxes and height of mailbox above ground level are as established by the U.S. Postal Service. H is usually 3'-4" to 4'-0".



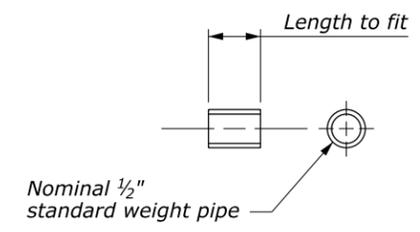
**SINGLE MAILBOX INSTALLATION**



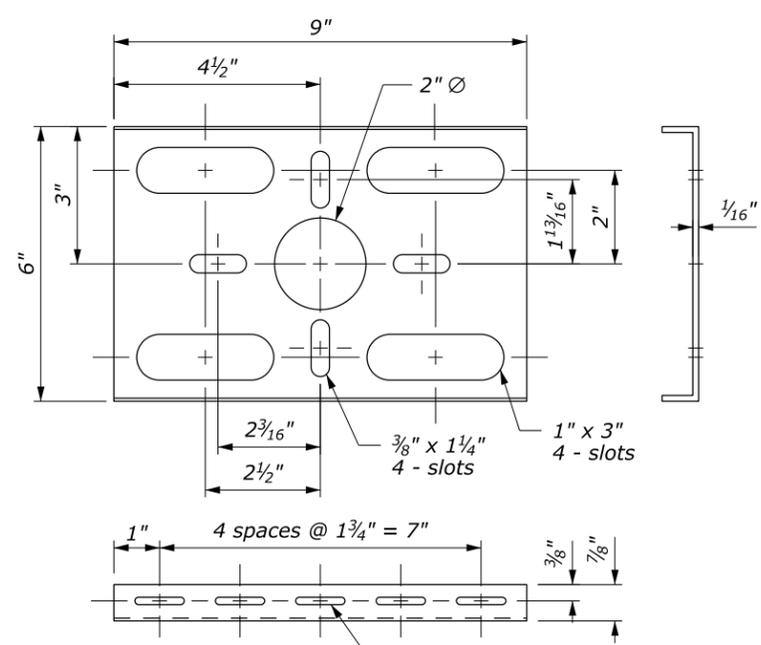
**DOUBLE MAILBOX INSTALLATION**



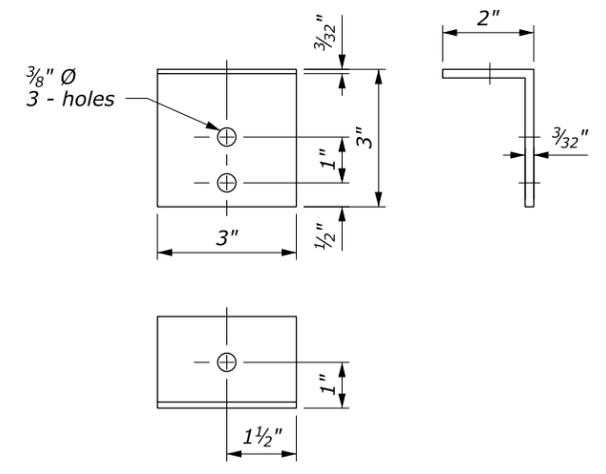
**SPACING FOR MULTIPLE INSTALLATION**



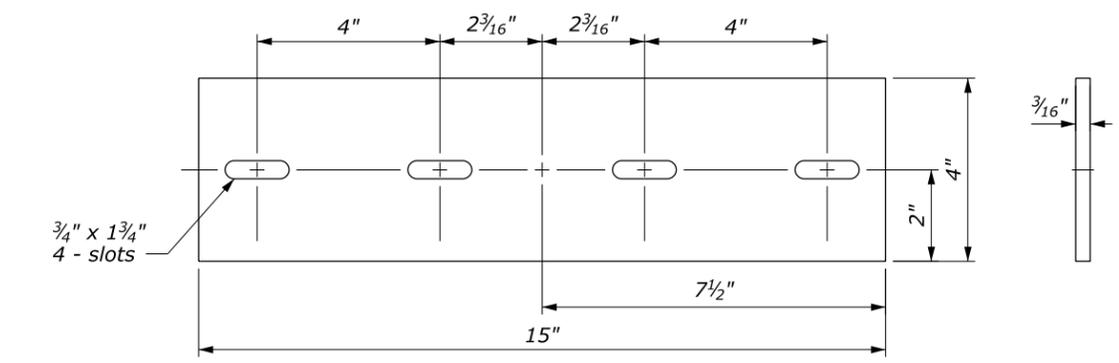
**SPACER**



**PLATFORM**



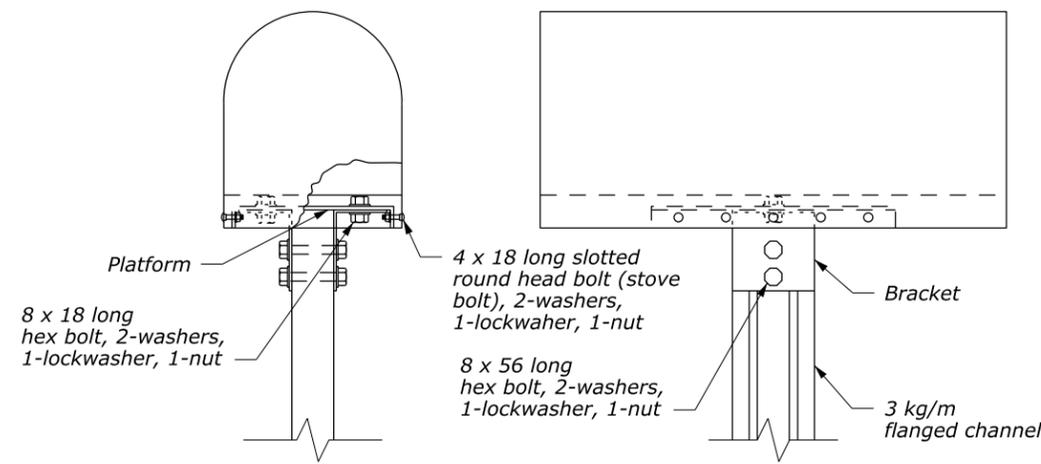
**BRACKET**



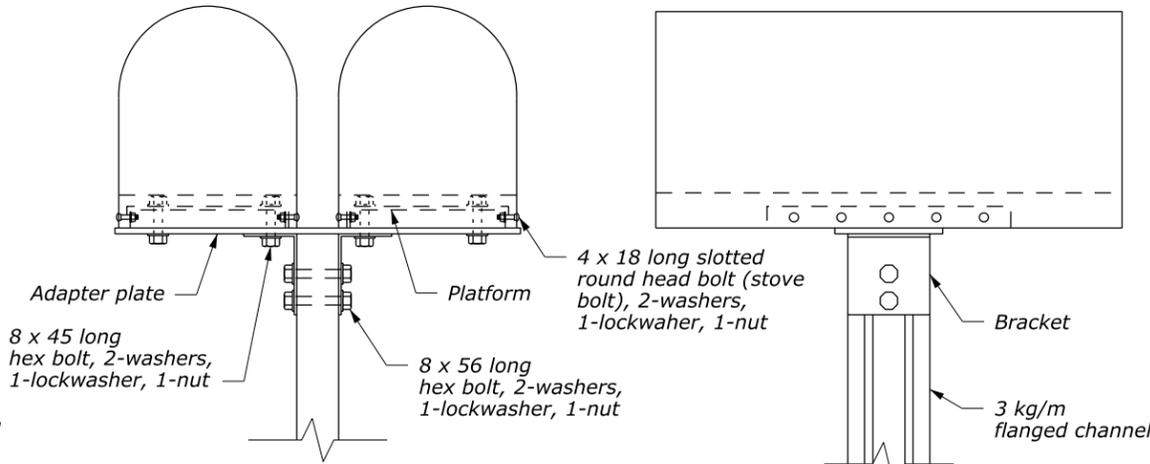
**ADAPTER PLATE**

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
<b>MAILBOX ASSEMBLY SERIES B</b>	
DETAIL APPROVED FOR USE --/---	DETAIL W646-3
REVISED: DRAFT: 11/2014	

NO SCALE



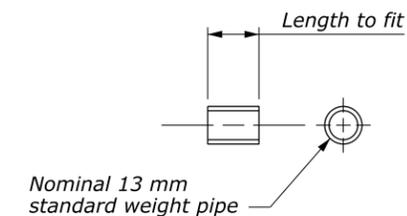
**SINGLE MAILBOX INSTALLATION**



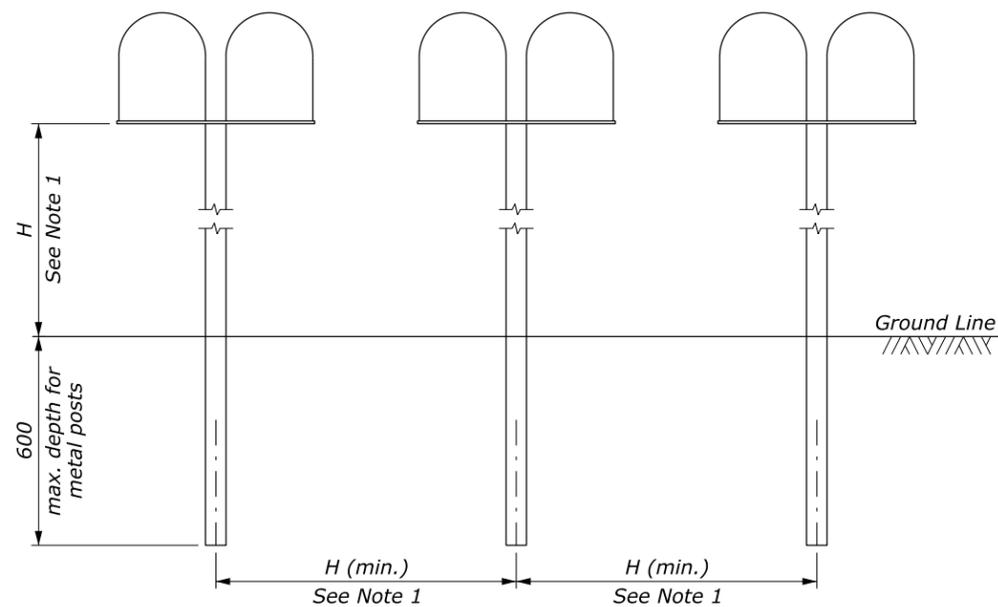
**DOUBLE MAILBOX INSTALLATION**

**NOTE:**

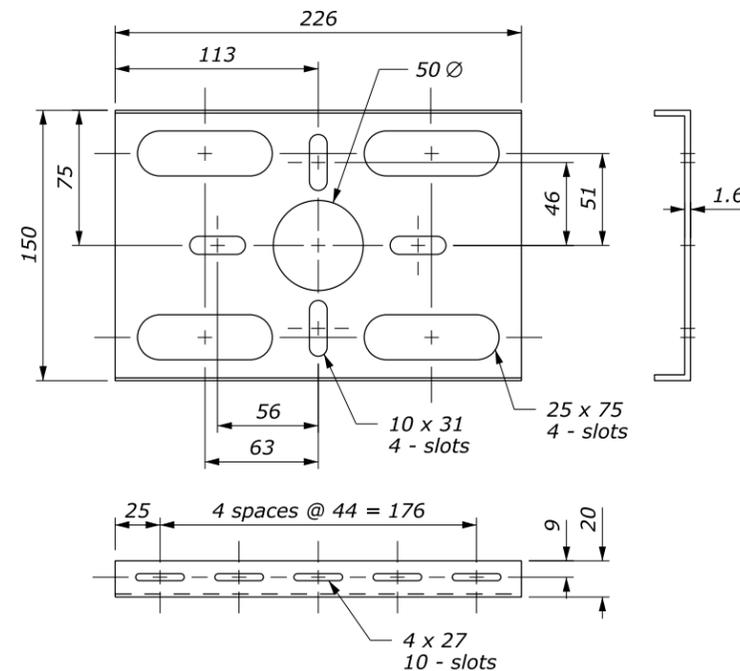
1. Spacing between multiple mailboxes and height of mailbox above ground level are as established by the the U.S. Postal Service. H is usually 1.0 m to 1.2 m.
2. Dimensions without units are millimeters.



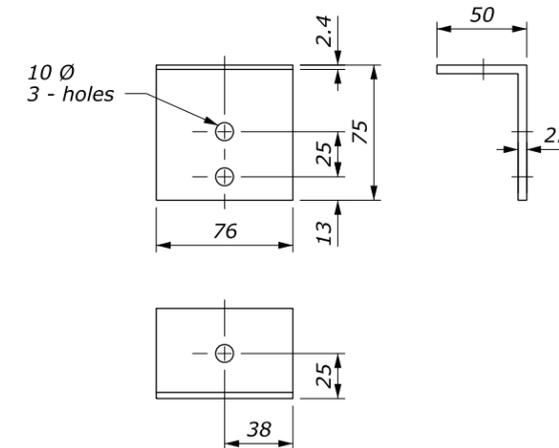
**SPACER**



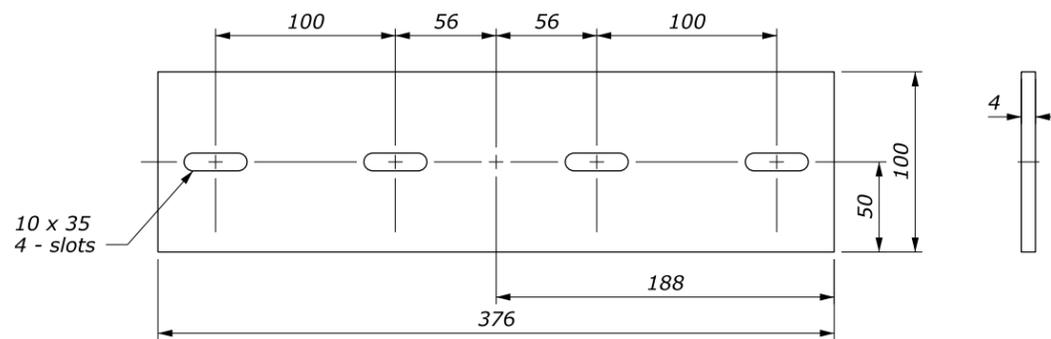
**SPACING FOR MULTIPLE INSTALLATION**



**PLATFORM**



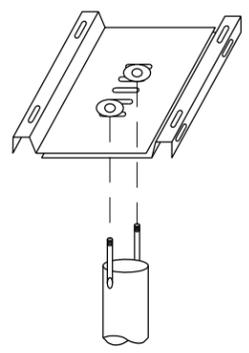
**BRACKET**



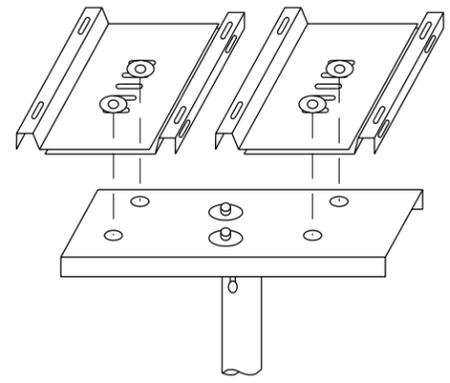
**ADAPTER PLATE**

NO SCALE

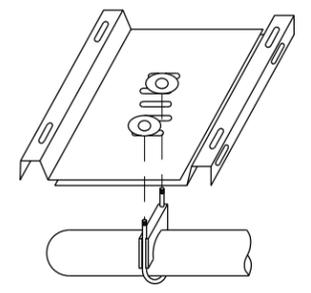
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>MAILBOX ASSEMBLY SERIES B</b>	
REVISID: DRAFT: 11/2014	DETAIL APPROVED FOR USE --/---- DETAIL WM646-3



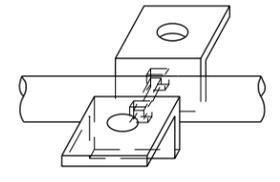
**SINGLE MAILBOX MOUNT**



**DOUBLE MAILBOX MOUNT**



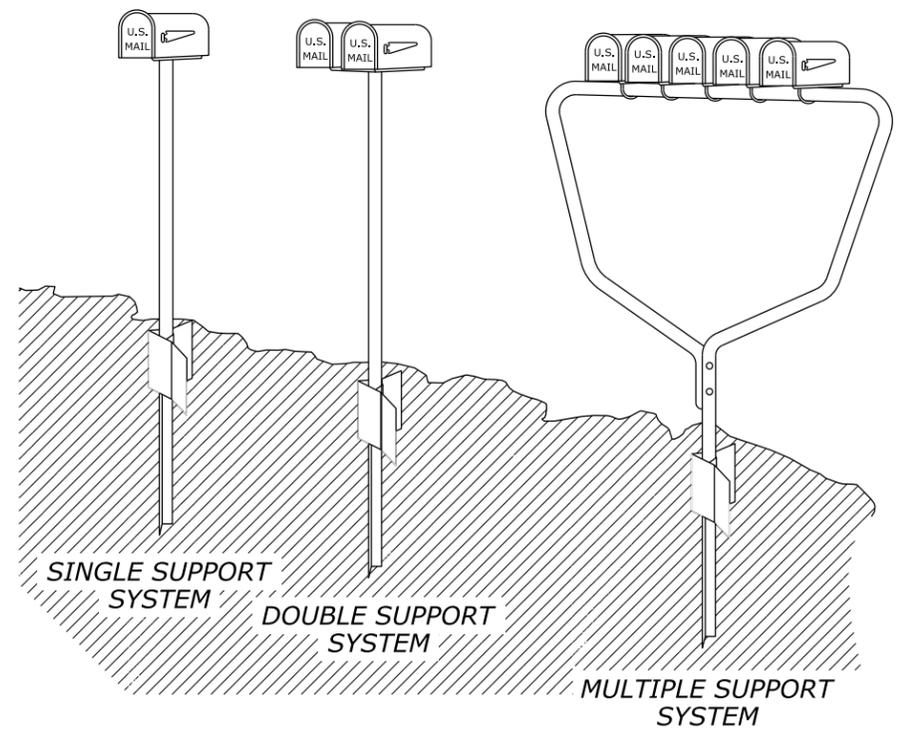
**MULTIPLE MAILBOX MOUNT**



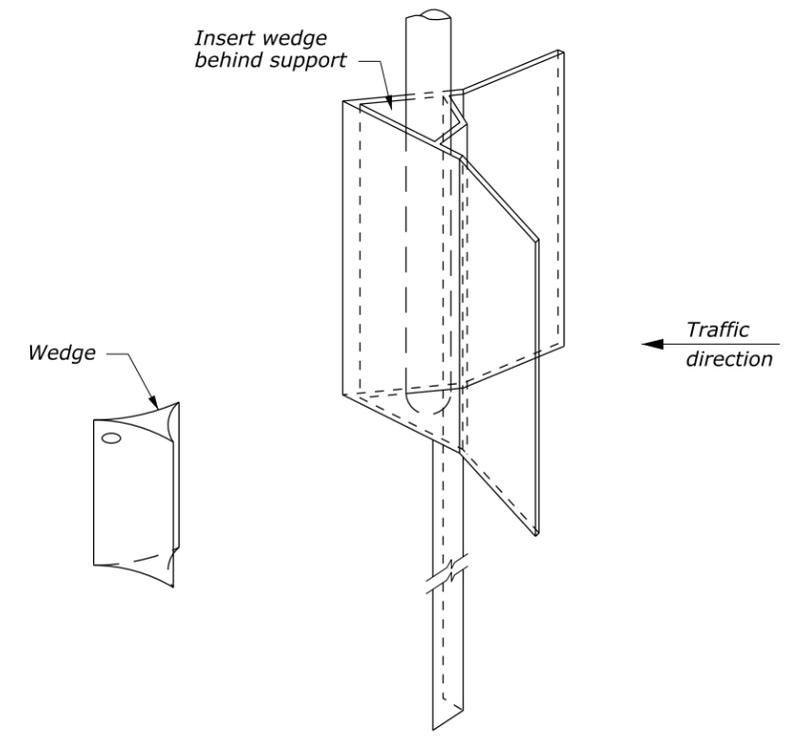
**BRACKET MOUNT ALTERNATIVE**

**NOTE:**

1. Opposite orientation with wedge on traffic approach side of post is allowable but not preferred.
2. Support frame and foundation are proprietary products commercially available.



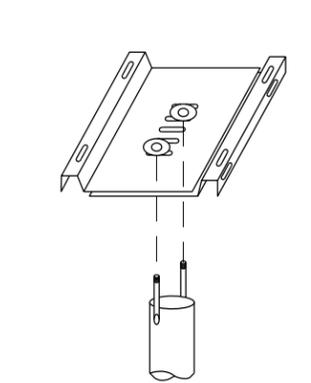
**MAILBOX SUPPORT SYSTEM**



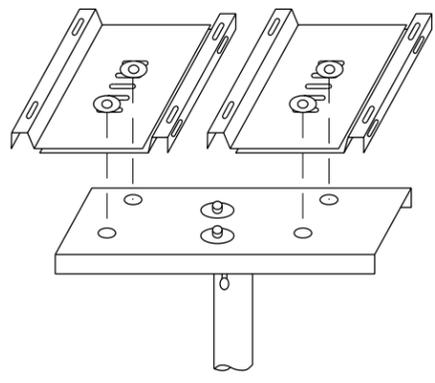
**SUPPORT FRAME**

NO SCALE

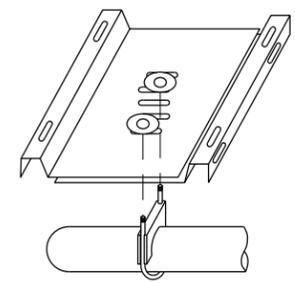
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
<b>MAILBOX ASSEMBLY SERIES C</b>	
DETAIL APPROVED FOR USE --/---	DETAIL
REVISED: DRAFT: 11/2014	W646-4



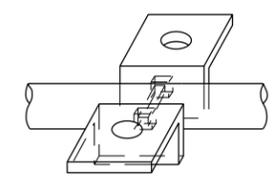
**SINGLE MAILBOX MOUNT**



**DOUBLE MAILBOX MOUNT**



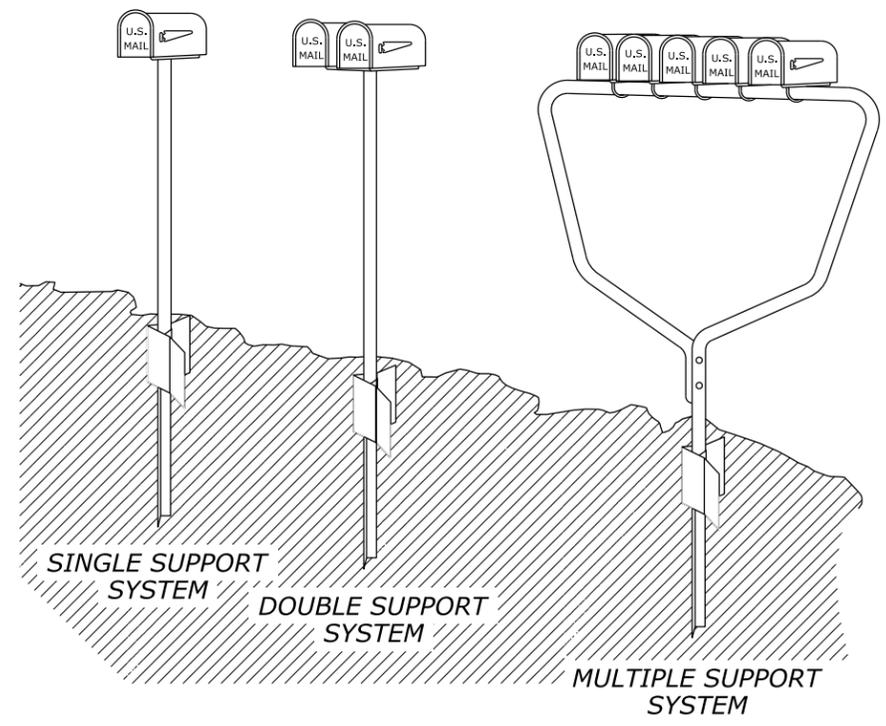
**MULTIPLE MAILBOX MOUNT**



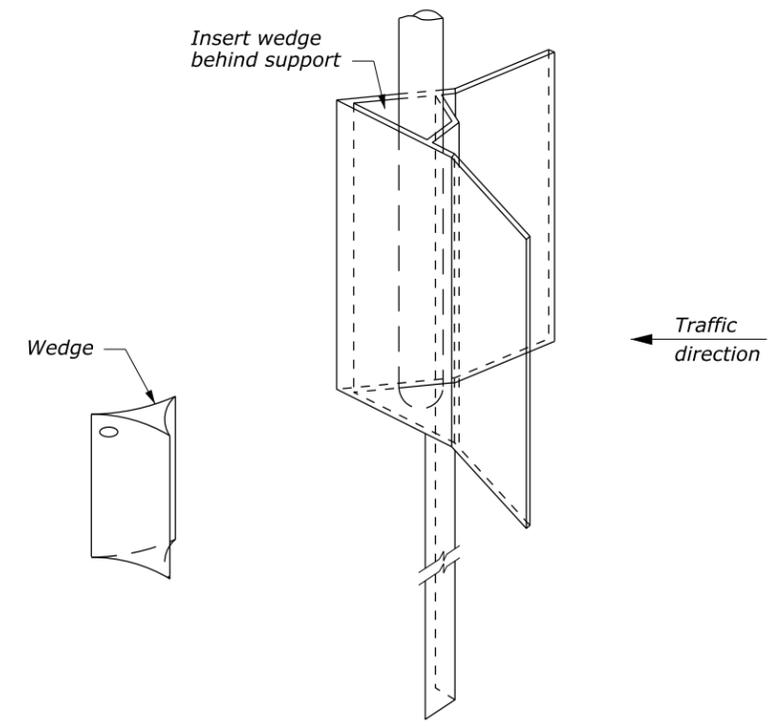
**BRACKET MOUNT ALTERNATIVE**

**NOTE:**

1. Opposite orientation with wedge on traffic approach side of post is allowable but not preferred.
2. Support frame and foundation are proprietary products commercially available.



**MAILBOX SUPPORT SYSTEM**



**SUPPORT FRAME**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
<b>MAILBOX ASSEMBLY SERIES C</b>	
DETAIL APPROVED FOR USE --/----	DETAIL
REVISED: DRAFT: 11/2014	WM646-4