

PROCEDURE FOR USING TABLES FOR STANDARDS WSP-1 AND STP-1:

1. SELECT MINIMUM MOUNTING HEIGHT TO BE USED (5'-0" OR 7'-0").
2. DECIDE ON NUMBER OF POSTS TO BE USED (SINGLE, TWO OR THREE).
3. CALCULATE THE AREA OF EACH SIGN PANEL ($A_1, A_2, A_3, \dots A_n$).
4. CALCULATE THE CENTROIDAL DISTANCE FOR EACH SIGN PANEL ($H_1, H_2, H_3, \dots H_n$).

- A_1 = AREA OF SIGN PANEL 1
- A_2 = AREA OF SIGN PANEL 2
- A_3 = AREA OF SIGN PANEL 3
- H_1 = CENTROIDAL DISTANCE FROM SIGN PANEL 1 TO GROUND LINE THROUGH REFERENCE POINT
- H_2 = CENTROIDAL DISTANCE FROM SIGN PANEL 2 TO GROUND LINE THROUGH REFERENCE POINT
- H_3 = CENTROIDAL DISTANCE FROM SIGN PANEL 3 TO GROUND LINE THROUGH REFERENCE POINT

THE CENTROIDAL DISTANCE IS THE VERTICAL DISTANCE FROM THE REFERENCE POINT ON THE GROUND LINE TO THE CENTER OF EACH SIGN PANEL.

5. CALCULATE THE CENTROIDAL DISTANCE (H) FOR THE ENTIRE SIGN PANEL GROUP:

$$H = \frac{(A_1 \times H_1 + A_2 \times H_2 + A_3 \times H_3 + \dots A_n \times H_n)}{(A_1 + A_2 + A_3 + \dots A_n)}$$

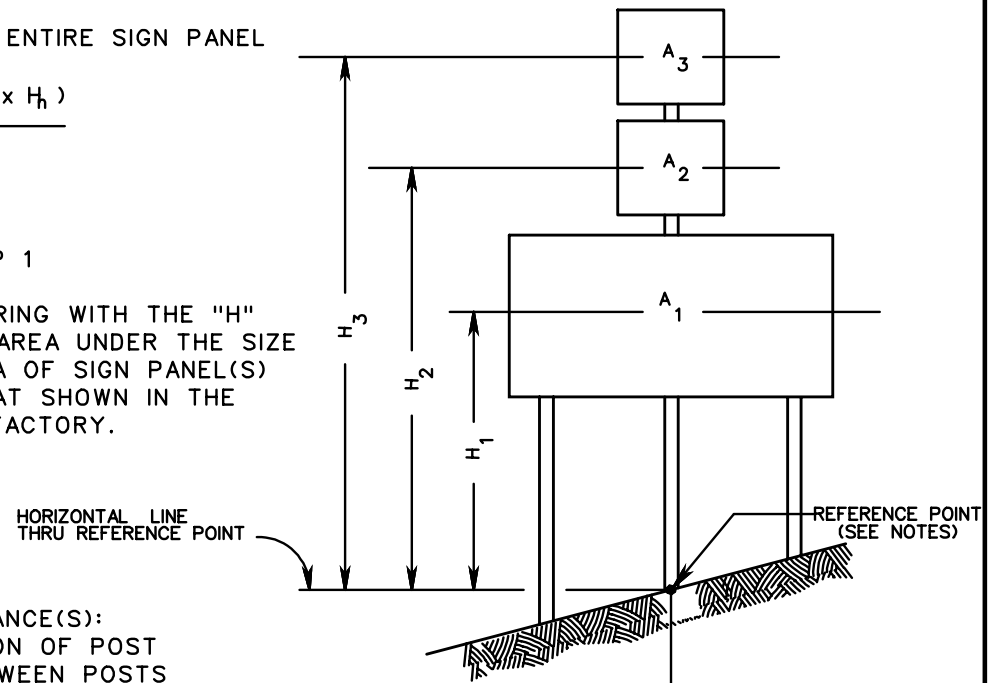
6. ENTER THE APPROPRIATE TABLE BASED ON:

THE MINIMUM MOUNTING HEIGHT SELECTED IN STEP 1

PICK THE POST SIZE(S) TO BE REVIEWED, AND ENTERING WITH THE "H" VALUE CALCULATED IN STEP 5, READ THE MAXIMUM AREA UNDER THE SIZE OF POSTS SELECTED IN STEP 3. IF THE TOTAL AREA OF SIGN PANEL(S) TO BE SUPPORTED IS LESS THAN OR EQUAL TO THAT SHOWN IN THE TABLE(S), THE SIZE OF THE POST(S) WILL BE SATISFACTORY.

NOTES:

- REFERENCE POINT FOR CALCULATING CENTROIDAL DISTANCE(S):
- FOR SINGLE POST: ON GROUND LINE AT INTERSECTION OF POST
 - FOR TWO-POSTS: ON GROUND LINE, HALF-WAY BETWEEN POSTS
 - FOR THREE POSTS: ON GROUND LINE AT INTERSECTION OF CENTER POST



SPECIFICATION REFERENCE
701

**PROCEDURES FOR CALCULATING CENTROID
AND TOTAL SQUARE FOOTAGE OF SIGN PANEL**

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT	
ROAD AND BRIDGE STANDARDS	
REVISION DATE	SHEET 1 OF 1
1319.10	