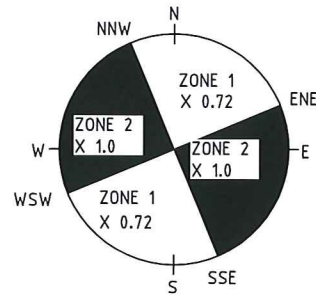
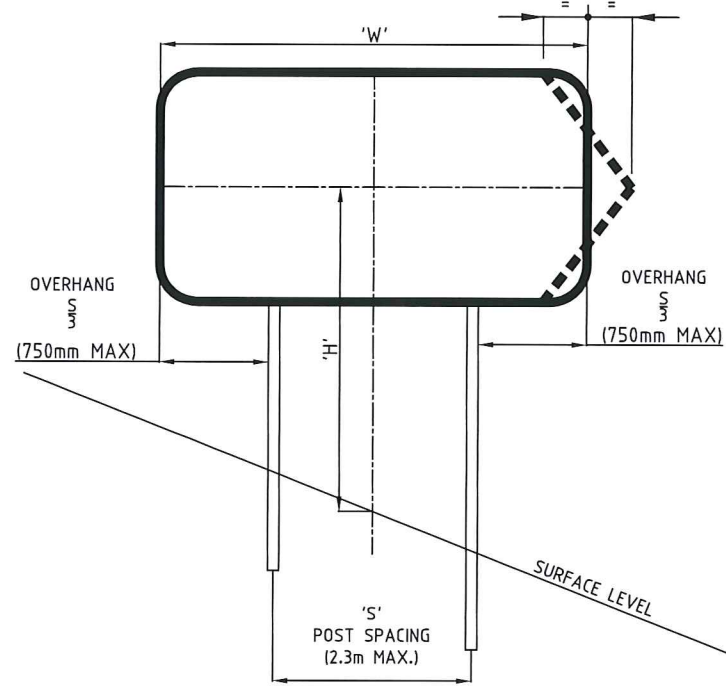


POST SIZING PROCEDURE

1. CALCULATE SIGN BLADE AREA (m²).
2. CALCULATE HEIGHT ('H') IN METRES FROM FINISHED SURFACE LEVEL TO THE CENTRE OF THE AREA OF BLADE.
3. MULTIPLY THE SIGN BLADE AREA (m²) BY THE HEIGHT TO THE CENTRE OF AREA (H) TO OBTAIN THE MOMENT.
4. DETERMINE THE SIGN FACE DIRECTION AND USING THE BLADE ORIENTATION FACTOR COMPASS MULTIPLY THE MOMENT BY THE ORIENTATION FACTOR (1 OR 0.72) TO OBTAIN THE FACTORED MOMENT.
5. DETERMINE THE NUMBER OF POSTS REQUIRED (MAX. SPAN OF BLADE BETWEEN POSTS 2.3m - MAX BLADE OVERHANG 0.75m).
6. DIVIDE THE FACTORED MOMENT BY THE NUMBER OF POSTS TO OBTAIN THE DESIGN MOMENT OF EACH POST.
7. LOOK UP IN THE TABLE OPPOSITE FOR THE MOMENT WHICH IS GREATER BUT NEAREST TO THE CALCULATED MOMENT PER POST. THIS IS THE REQUIRED POST OUTSIDE DIAMETER, WALL THICKNESS, STEEL GRADE AND FOOTING SIZE REQUIRED.



BLADE ORIENTATION FACTOR



POST SPACING 'S'
 (2 POSTS) = W/1.66
 (3 POSTS) = W/2.66
 (4 POSTS) = W/3.66
 (5 POSTS) = W/4.66
 OVERHANG (POST TO BLADE EDGE) = S/3

DIMENSIONAL DETAILS

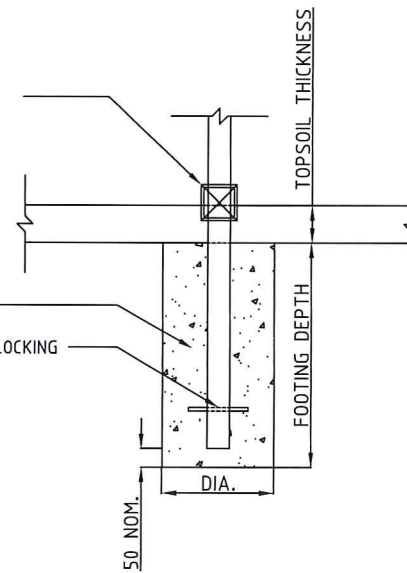
STEEL POSTS CONSIDERED AS FRANGIBLE

OPERATING SPEED, km/h	MAX. MOMENT kNm
<60	7.90
60 TO 80	3.95
>80	3.01

IF THE POST REQUIRES A GREATER DESIGN MOMENT THEN A FRANGIBLE POST SHALL BE USED. FRANGIBLE POST SYSTEMS SHALL BE TO THE APPROVAL OF THE ROAD AUTHORITY. AN APPROVED FRANGIBLE POST SYSTEM IS DETAILED AT http://www.tmr.qld.gov.au/~media/business-and-industry/technical-standards-and-publications/standard-drawings-roads-manual/standard-drawings-roads-manual-part-8/sdrm_1365.pdf

REFER SPECIFICATION FOR POST MOUNTING REQUIREMENTS

20 MPa CONCRETE
 PROVIDE 10mm DIA. GALV. LOCKING PIN (FOR SINGLE POST SIGN ASSEMBLIES ONLY)



FOOTING DETAILS

NOTES

1. DESIGN WIND PRESSURE = 1 KPa
2. MAXIMUM SPACING OF POSTS <= 2.3m., REFER SPECIFICATION FOR STIFFENER DETAILS. ENSURE CORRECT STEEL GRADE IS USED.
3. ALL POSTS ARE TO BE GALVANISED.
4. FOOTING DEPTH IS EMBEDMENT LENGTH INTO SOIL STRENGTH CATEGORY TABULATED. DISREGARD LOOSE TOPSOIL AND FILL WHEN MEASURING FOOTING DEPTH.
5. UNLESS OTHERWISE DIRECTED, POSTS ARE TO BE CENTRED ALONG THE LOWER EDGE OF ALL SIGN BLADES.

Moment kNm	Outside Dia. (mm) OD	Wall Thickness (mm) OD	Steel Grade	Footing Diameter	Footing Depth (mm) and Soil Condition		
					Poor	Medium	Sound
2.44	60.3	2.3	350	300 Ø	700	600	450
2.61 *	60.3	3.6	250	300 Ø	750	600	450
3.01	60.3	2.9	350	300 Ø	800	600	500
3.16	60.3	4.5	250	300 Ø	800	700	500
3.95	76.1	2.3	350	300 Ø	900	750	600
4.26 *	76.1	3.6	250	300 Ø	950	750	600
5.20 *	76.1	4.5	250	300 Ø	1050	800	650
5.36	76.1	3.2	350	300 Ø	1050	800	650
6.10	88.9	2.6	350	300 Ø	1100	850	700
6.49 *	88.9	4.0	250	300 Ø	1150	900	700
7.41	88.9	3.2	350	300 Ø	1250	950	750
7.93	88.9	5.0	250	300 Ø	1250	1000	750
8.58	101.6	4.0	250	450 Ø	1100	850	650
10.50	101.6	5.0	250	450 Ø	1200	950	750
12.20	114.3	4.5	250	450 Ø	1300	1000	800
14.40	114.3	5.4	250	450 Ø	1300	1100	800
20.40	139.7	5.0	250	450 Ø	1650	1300	1050
28.80	165.1	5.0	250	600 Ø	2000	1550	1250
31.00	165.1	5.4	250	600 Ø	2100	1650	1300

* NON ECONOMIC SECTION - WHERE POSSIBLE - USE THE NEXT LISTED SECTION OF HIGHER CAPACITY.
 NB: AVAILABILITY OF POST MATERIAL VARIES FROM TIME TO TIME - CHECK BEFORE SPECIFYING

SOIL DEFINITIONS:

- POOR: SOFT CLAY, SILT, POORLY COMPACTED SOILS, LOCATIONS WHICH MAY BE SATURATED FOR PART OF THE YEAR.
- MEDIUM: COMPACTED MEDIUM PLASTICITY CLAY, WELL BONDED SANDY SOIL, BONDED SAND AND GRAVEL WITH REASONABLE SURFACE WATER DRAINAGE.
- SOUND: HARD LOW PLASTICITY CLAY, WELL COMPACTED ROCKY SOIL, WELL BONDED SAND AND GRAVEL WITH GOOD SURFACE AND SUBSURFACE WATER DRAINAGE.

NOTE: THESE VALUES ARE A GUIDE ONLY - SOIL CONDITIONS FOR EACH FOOTING ARE TO BE ASSESSED BY SUITABLY QUALIFIED PERSONNEL.

POST SIZING CALCULATION METHODOLOGY

SIGN TYPE / NO.	SIGN BLADE AREA (m ²)	HEIGHT 'H' m (FROM GROUND TO CENTRE OF BLADE)	UN-FACTORED MOMENT	ORIENTATION FACTOR	FACTORED MOMENT	NO. OF POSTS	MOMENT PER POST	POST SIZE (OD) GRADE & WALL THICKNESS	FOOTING DIAMETER AND DEPTH

NOTE

ALL DIMENSIONS SHOWN ARE IN MM UNLESS SHOWN OTHERWISE

ACT GOVERNMENT

DESIGN STANDARD URBAN INFRASTRUCTURE

Authorised: DIRECTOR, ROADS ACT TONY GILL

Drawn: MARTIN GORDON Date: 23/06/2011

Project Engineer: FRED IHEGIE / SNEZANA DIMITROVSKA Date: 23/06/2011

SIGNPOST AND FOOTING DETAILS

Scale: NTS Date: 23 JUNE 2011

AutoCAD File: DS9-15.DWG

Latest Revision Details: A DS9 UPDATE

Drawing No: DS9-15 Revision: A