



SOUTHERN
AFRICAN
DEVELOPMENT
COMMUNITY

TRAFFIC SIGNALS

SECTIONS

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CHAPTER 10

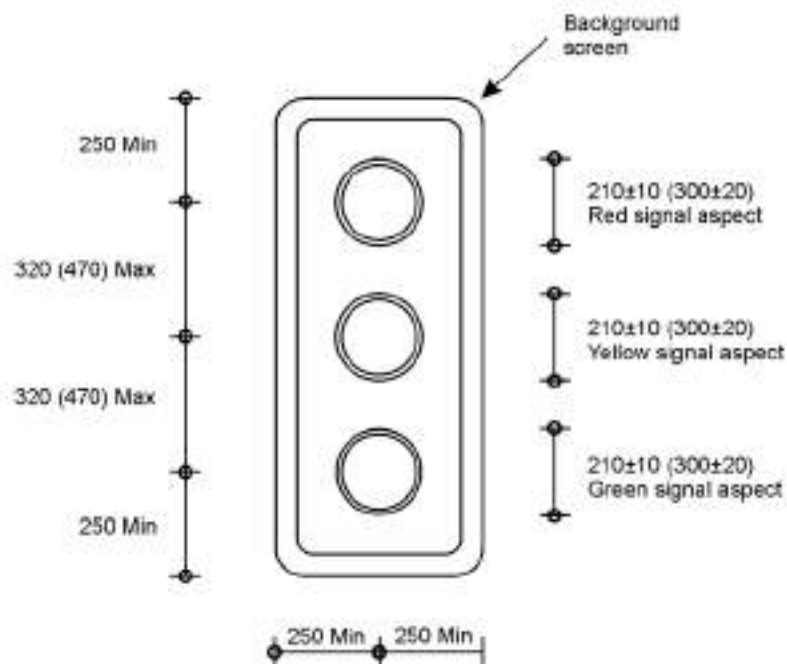
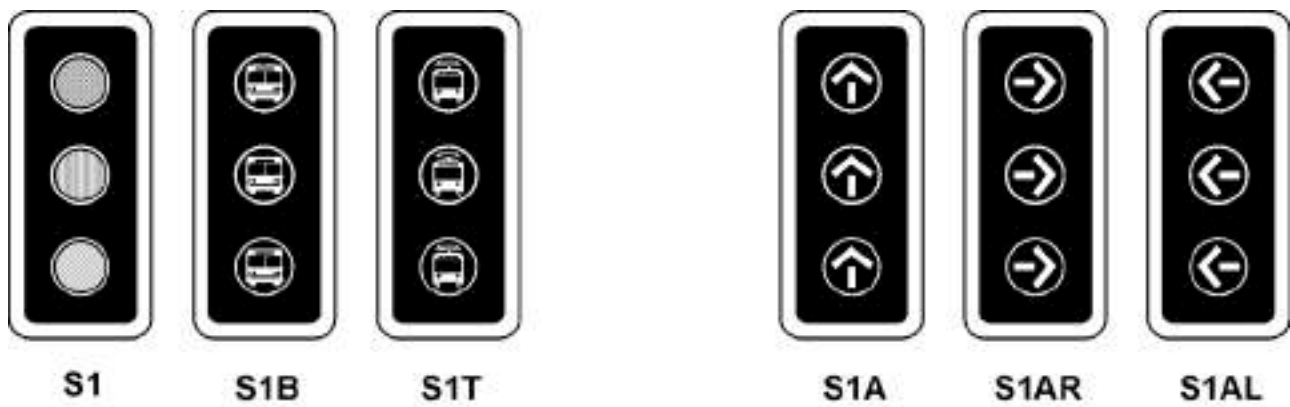
CHAPTER 10: TRAFFIC SIGNALS

10.1 INTRODUCTION

- 1 This chapter details the dimensions of traffic signal faces, the symbols used on individual aspects, and typical signal face background screens (backboards).
- 2 Many of the dimensions given are indicated with a tolerance to permit some latitude for variation and changes in the manufacturing process.
- 3 In terms of the objectives of the SADC Road Traffic Signs System to achieve the highest possible degree of harmonization of the system throughout the region, there are significant differences in traffic signals between the majority of member countries and South Africa. Due to the high investment in existing traffic signal infrastructure in South Africa and the SADC countries, it is considered financially and operationally impractical to achieve close harmonization of traffic signal practices. This, however, does not have a great effect on the dimensional details covered in this chapter.
- 4 Whilst differences between the SADC and RSA traffic signal systems exist, the use of the South African standard specification SANS 1459-2004: *Traffic lights*, is recommended.
- 5 Any temporary traffic signals manufactured for use at temporary traffic control sites, such as at roadworks, shall conform to the dimensions given for permanent traffic signal installations.

10.2 LENS COLOURS AND SYMBOLS

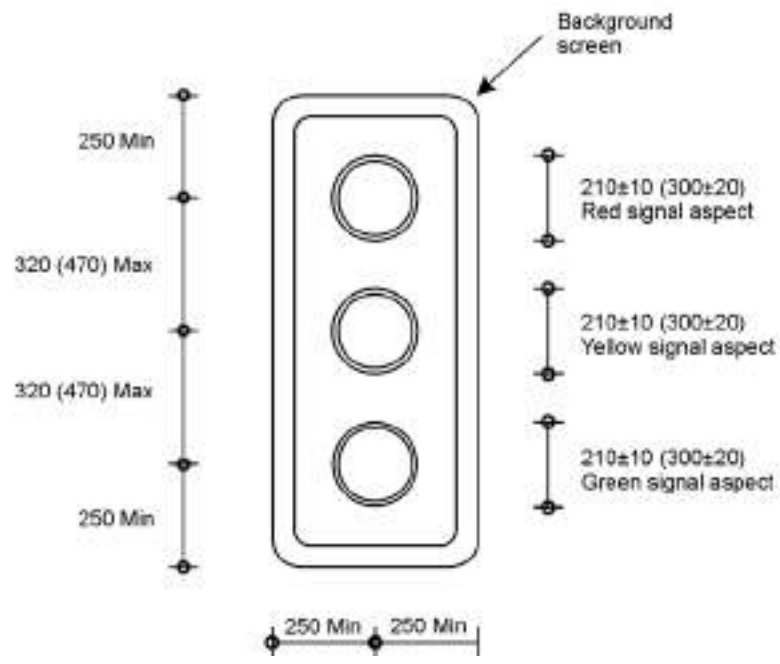
- 1 The colour of light emitted by an aspect lens shall be red, yellow or green in accordance with the chromaticity co-ordinates given in SANS - 1459. The boundaries of the area enclosed by these co-ordinates for red, yellow and green for traffic signal aspects are indicated on the chromaticity chart given in Figure 1.20 in Volume 1.
- 2 The colour "yellow" is referred to throughout this Manual and should be considered as synonymous with "amber" used in various other documents.
- 3 The RED MAN and GREEN MAN symbols for the pedestrian signal aspects have been altered to bring them in line with symbols used on new road traffic signs.



Notes:

- 1 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 See Volume 1, Chapter 6 and Volume 3 for standard applications.

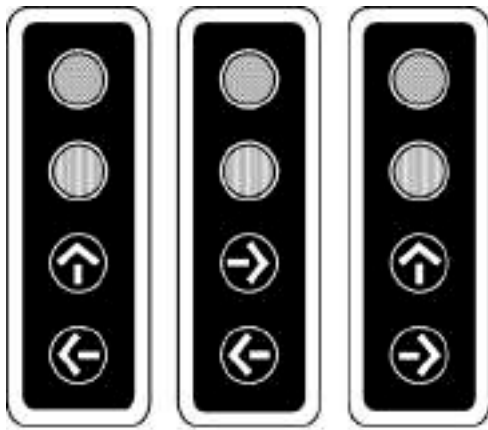
STANDARD TRAFFIC SIGNAL FACES S1, S1B, S1T, S1A, S1AR AND S1AL



Notes:

- 1 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 See Volume 1, Chapter 6 and Volume 3 for standard applications.

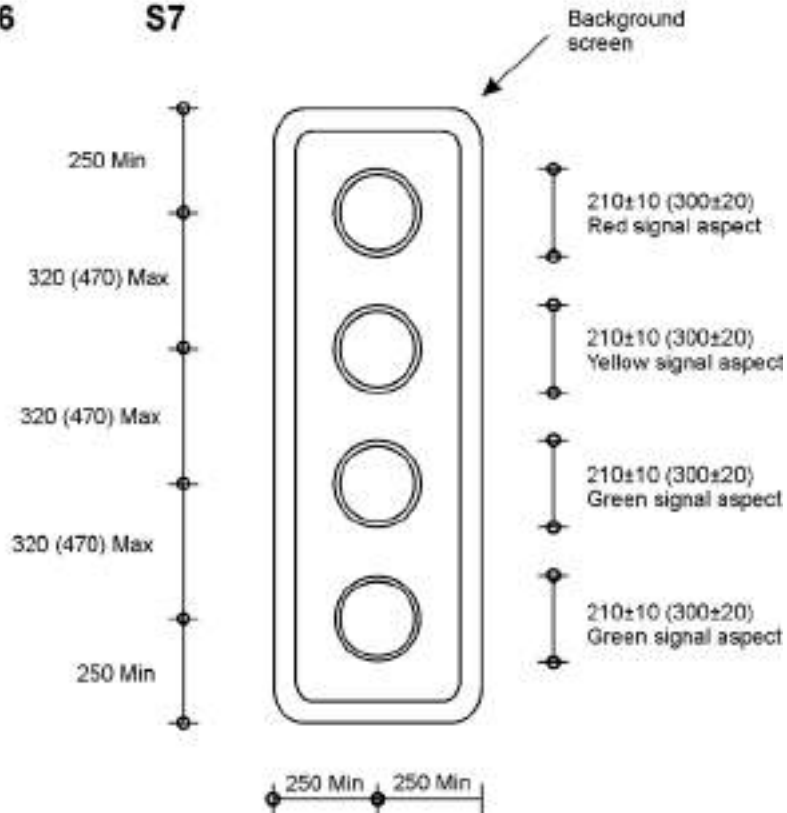
STANDARD TRAFFIC SIGNAL FACES S1R, S1L, S2, S3 AND S4



S5

S6

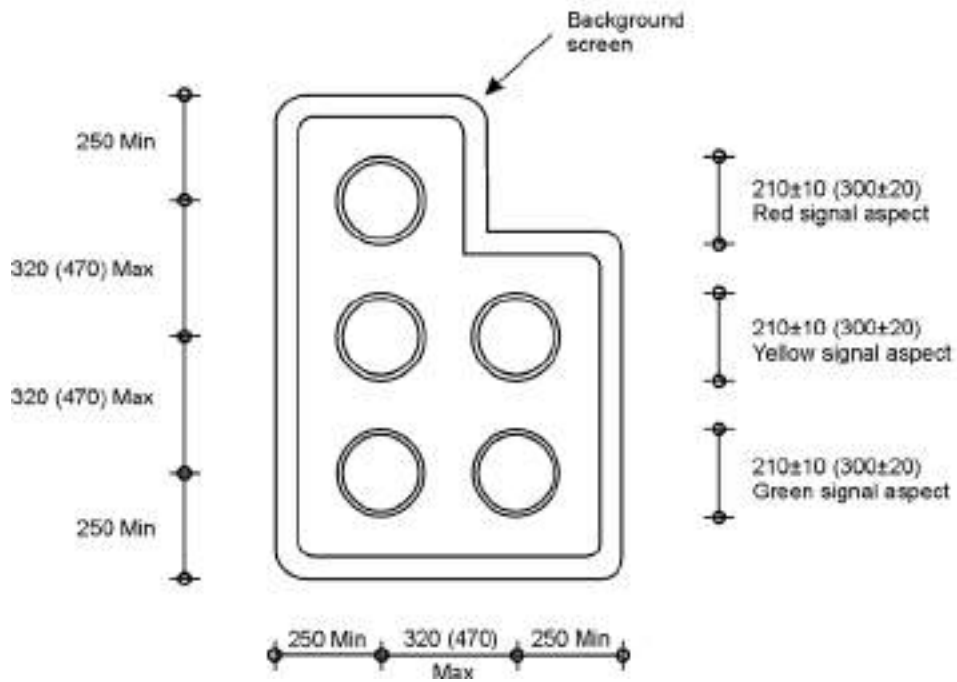
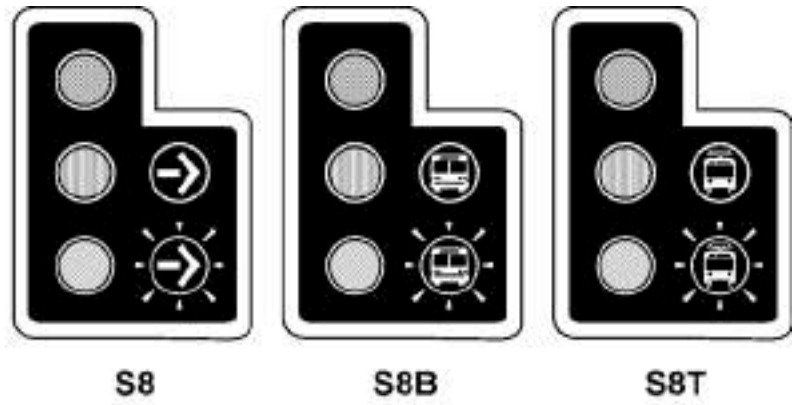
S7



Notes:

- 1 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 See Volume 1, Chapter 6 and Volume 3 for standard applications.

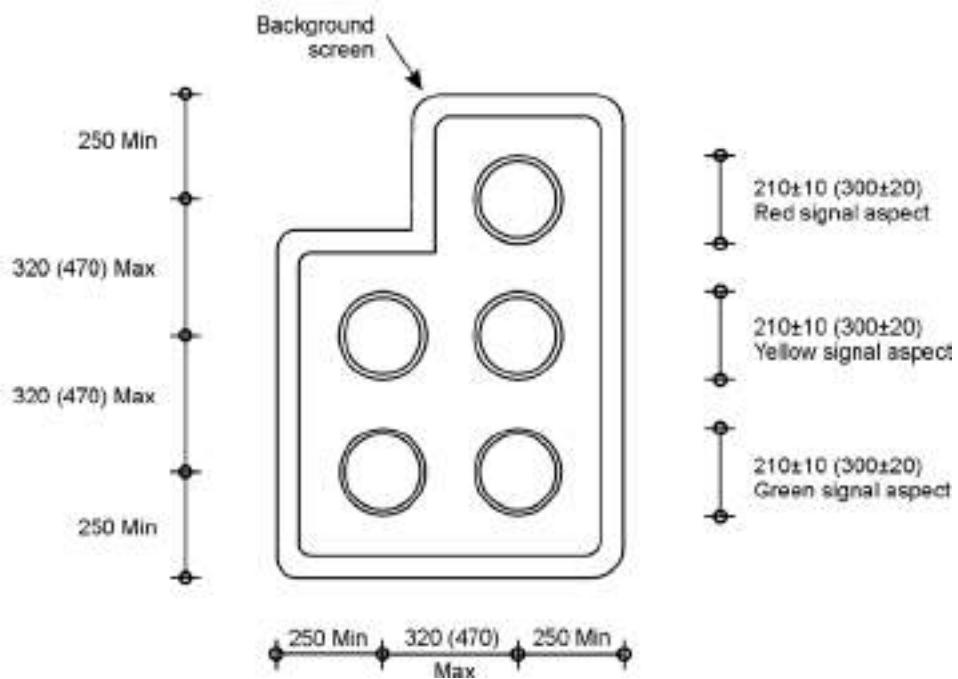
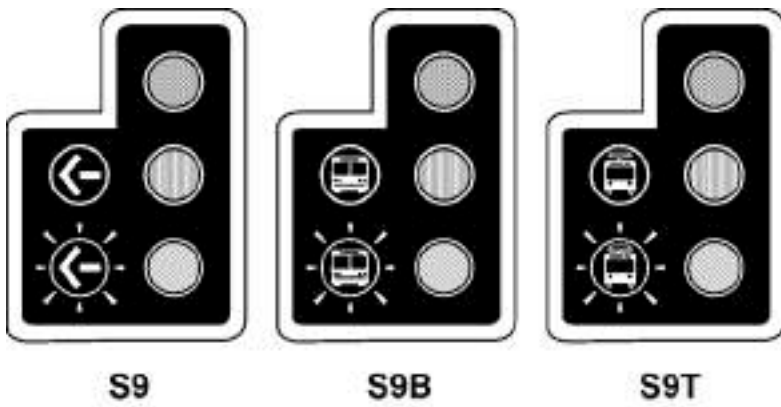
STANDARD TRAFFIC SIGNAL FACES S5, S6 AND S7



Notes:

- 1 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 See Volume 1, Chapter 6 and Volume 3 for standard applications.

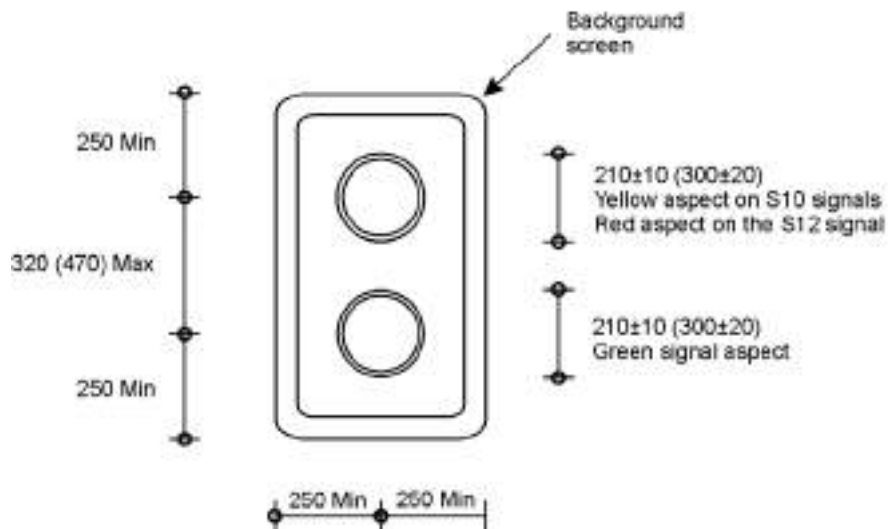
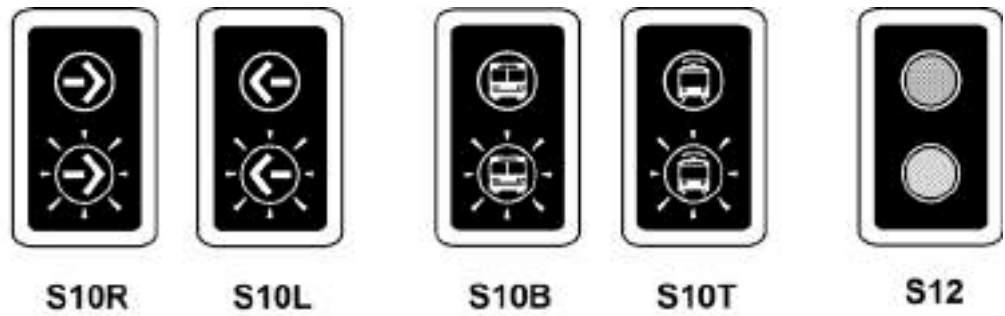
STANDARD TRAFFIC SIGNAL FACES S8, S8B AND S8T



Notes:

- 1 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 See Volume 1, Chapter 6 and Volume 3 for standard applications.

STANDARD TRAFFIC SIGNAL FACES S9, S9B AND S9T



Notes:

- 1 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 See Volume 1, Chapter 6 and Volume 3 for standard applications.

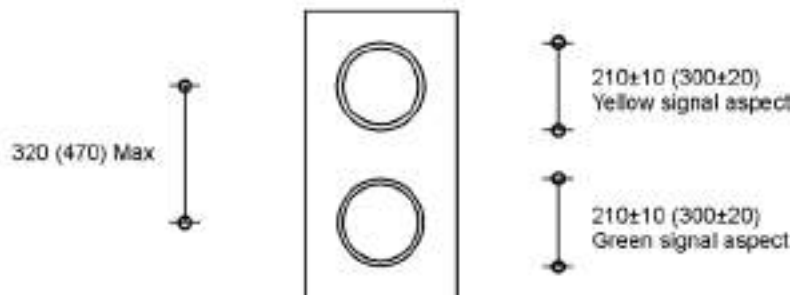
STANDARD TRAFFIC SIGNAL FACES S10R, S10L, S10B, S10T AND S12



S11P



S11C

**Notes:**

- 1 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 See Volume 1, Chapter 6 and Volume 3 for standard applications.

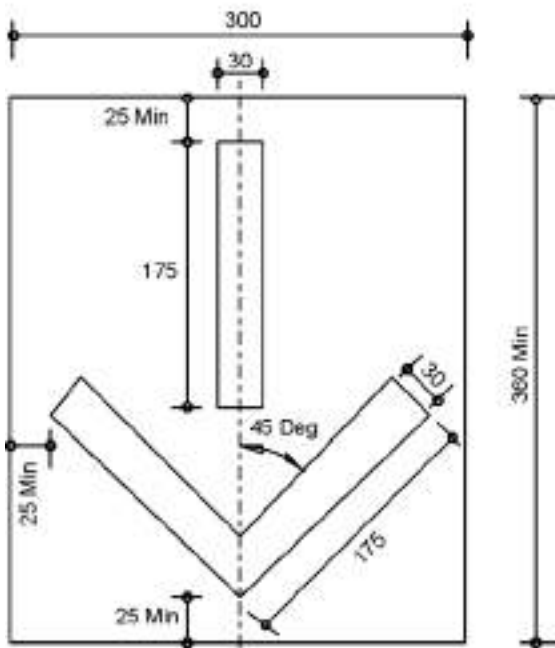
STANDARD TRAFFIC SIGNAL FACES S11P AND S11C



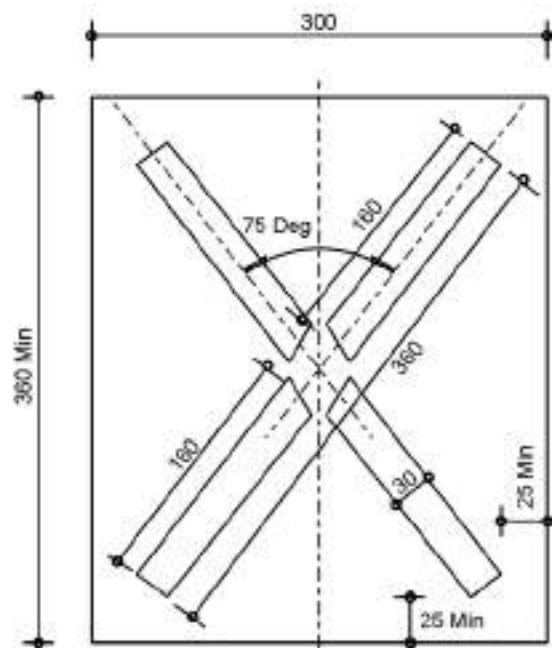
S16



S17



S16 Green arrow



S17 Red cross

Notes:

- 1 All dimensions are given in millimetres. Minimum dimensions should not be reduced.
- 2 Other dimensions should be considered as guidelines subject to the optical design of the signs. If a light source of high luminous intensity is used, the stroke width may be reduced to 25 mm.
- 3 If the sign is manufactured using variable message sign design techniques such as pixels, the dimensions should be considered as nominal dimensions (See Volume 1, Chapter 9).
- 4 See Volume 1, Chapter 6 and Volume 3 for standard applications.

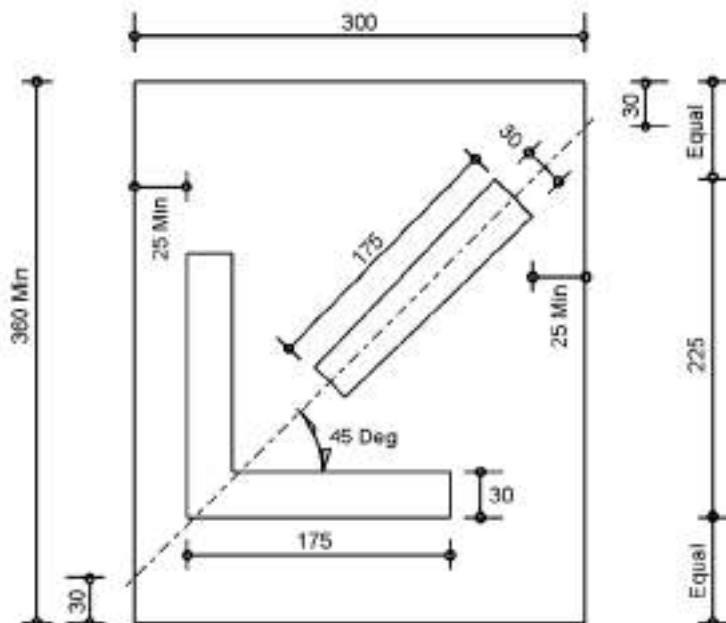
STANDARD TRAFFIC SIGNAL FACES S16 AND S17



S18



S19

**Notes:**

- 1 All dimensions are given in millimetres. Minimum dimensions should not be reduced.
- 2 Other dimensions should be considered as guidelines subject to the optical design of the signs. If a light source of high luminous intensity is used, the stroke width may be reduced to 25 mm.
- 3 If the sign is manufactured using variable message sign design techniques such as pixels, the dimensions should be considered as nominal dimensions (See Volume 1, Chapter 9).
- 4 See Volume 1, Chapter 6 and Volume 3 for standard applications.

STANDARD TRAFFIC SIGNAL FACES S18 AND S19



ST3

ST1

ST2

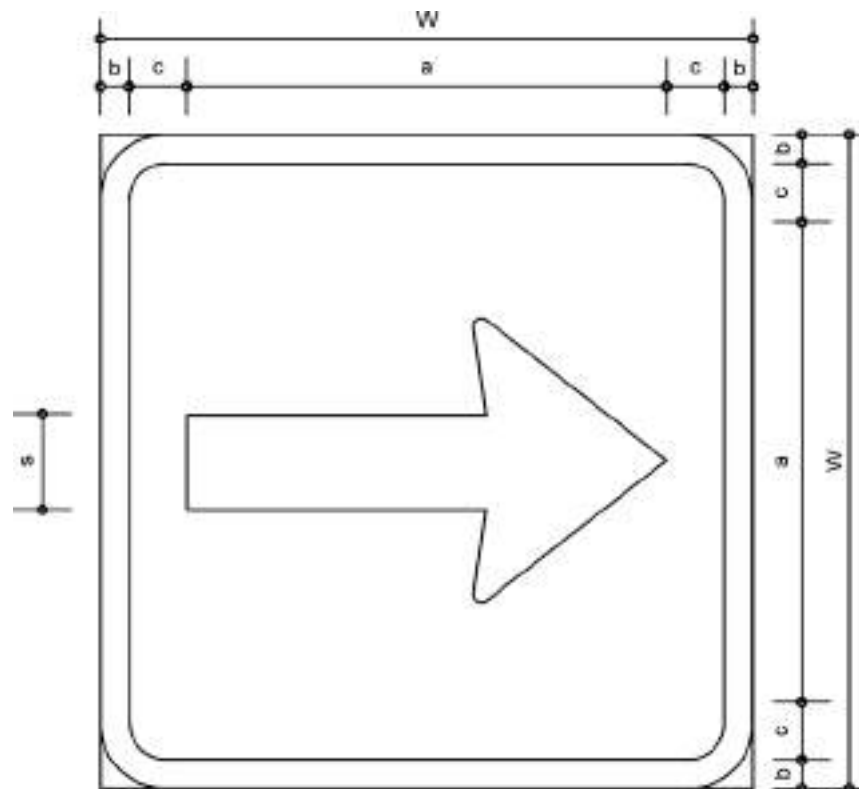
Dimensions for W = 500				
W = 500	s = 74	a = 368	b = 22	c = 44

$$s = \frac{W}{6,80}$$

$$a = \frac{W}{1,36}$$

$$b = \frac{W}{23}$$

$$c = \frac{W - a}{2} - b$$



COLOURS:
PERMANENT AND TEMPORARY

Border and symbol: Retroreflective white
Background: Matt black

Notes:

- 1 See Volume 1, Chapter 6 and Volume 3 for standard applications.
- 2 Use regulatory sign arrow Type "D" as detailed in Figure 2.20 on page 2.1.22.
- 3 The signs may only be installed above a traffic signal to which a background screen (backboard) is fitted.
- 4 The width and height of the sign should be equal to the width of the background screen.

STANDARD TRAFFIC SIGNAL ARROW SIGNS ST1, ST2 AND ST3



ST5



ST4

Dimensions for W = 500

W = 500	s = 66	a = 368	b = 22	c = 44	d = 92	e = 342	f = 57
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$$s = \frac{W}{7,62}$$

$$a = \frac{W}{1,36}$$

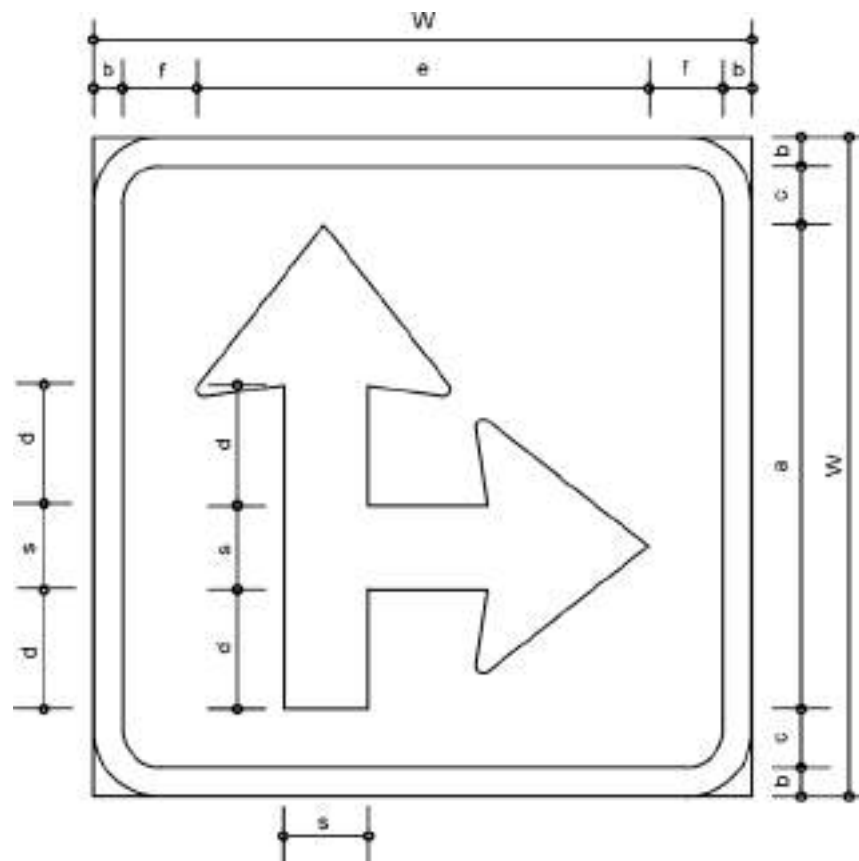
$$b = \frac{W}{23}$$

$$c = \frac{W - a}{2} - b$$

$$d = \frac{W}{5,44}$$

$$e = \frac{W}{1,46}$$

$$f = \frac{W - e}{2} - b$$



COLOURS:
PERMANENT AND TEMPORARY

Border and symbol: Retroreflective white
Background: Matt black

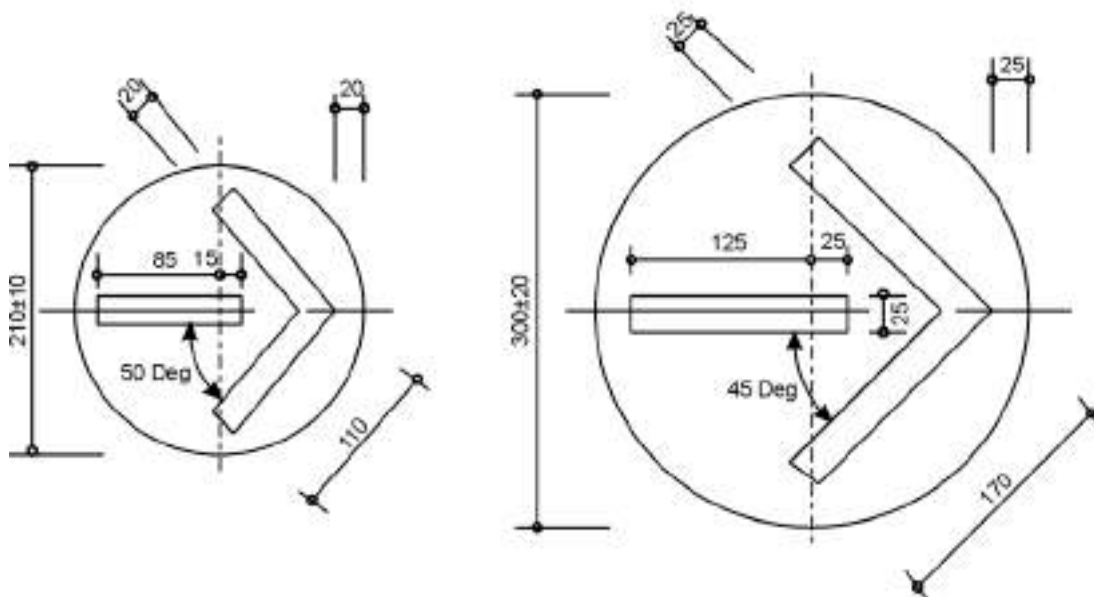
Notes:

- 1 See Volume 1, Chapter 6 and Volume 3 for standard applications.
- 2 Use regulatory sign arrow Type "D" as detailed in Figure 2.20 on page 2.1.22.
- 3 The signs may only be installed above a traffic signal to which a background screen (backboard) is fitted.
- 4 The width and height of the sign should be equal to the width of the background screen.

STANDARD TRAFFIC SIGNAL ARROW SIGN ST4 AND ST5



Arrows



Notes:

- 1 Dimensions are given in millimetres.
- 2 Unless otherwise indicated a tolerance of ± 5 percent shall be permissible in the dimensions shown.

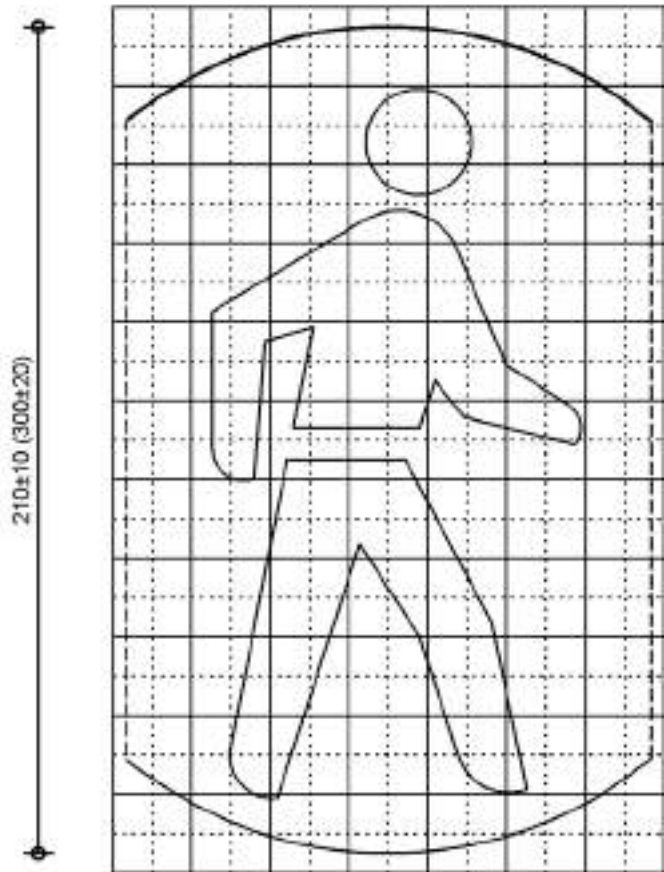
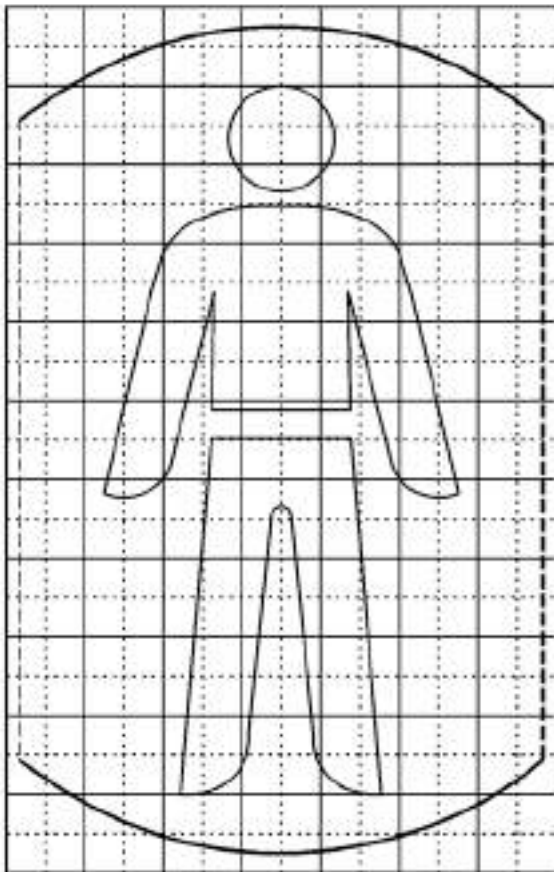
STANDARD ARROW SIGNS



RED
MAN



GREEN
MAN



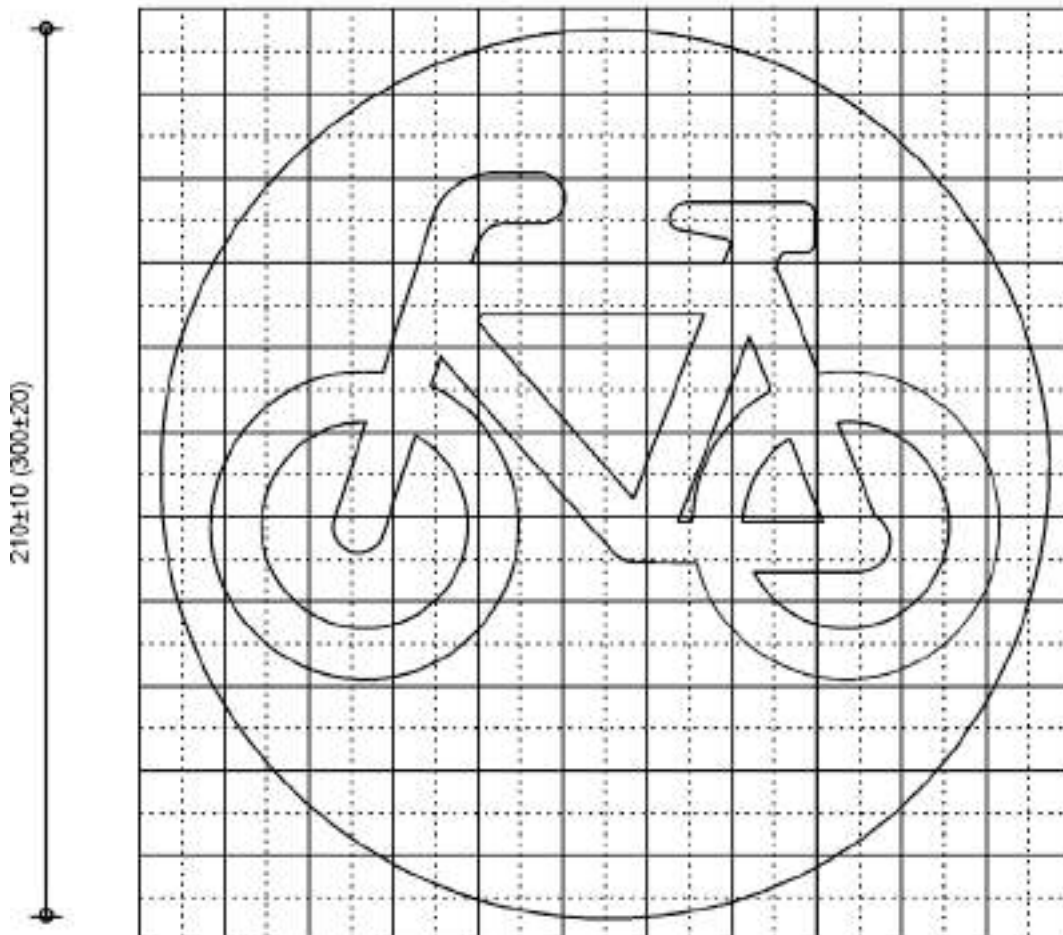
Notes:

- 1 Dimensions are given in millimetres.
- 2 To enlarge the symbols, increase the size of the squares to create either a 210 mm or 300 mm diameter aspect.

STANDARD PEDESTRIAN SYMBOLS



**PEDAL
CYCLIST**



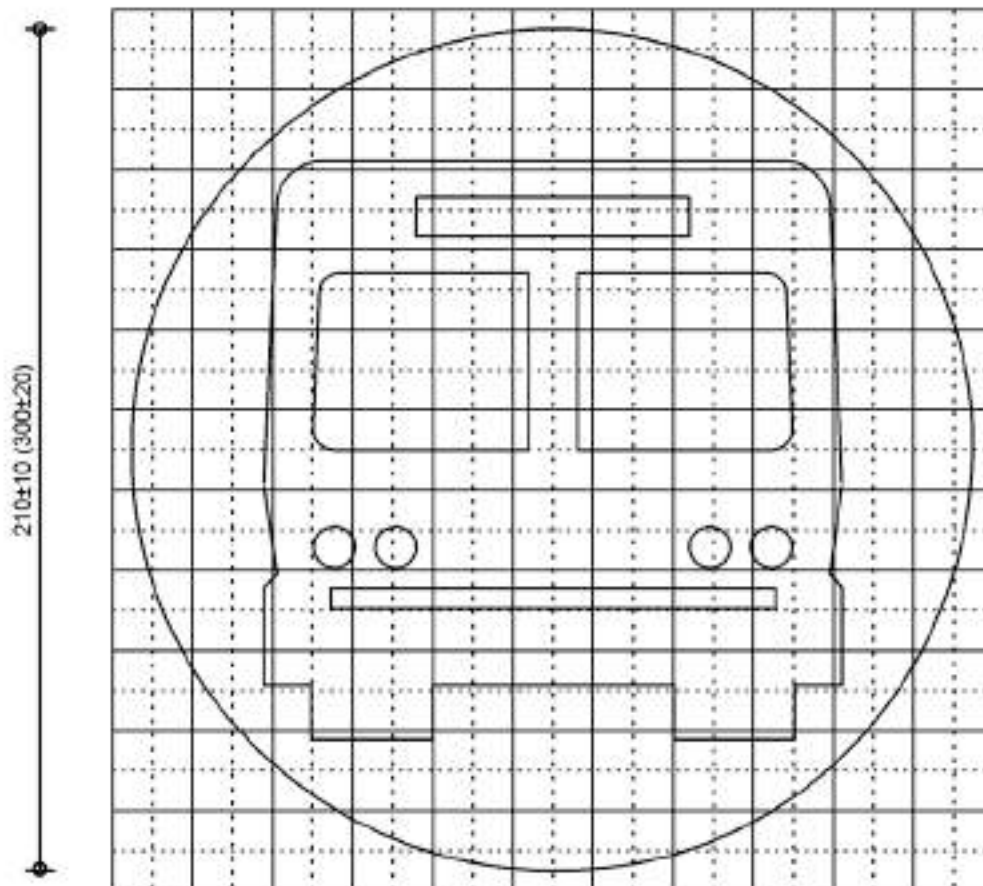
Notes:

- 1 Dimensions are given in millimetres.
- 2 To enlarge the symbols, increase the size of the squares to create either a 210 mm or 300 mm diameter aspect.

STANDARD BICYCLE SYMBOL



BUS

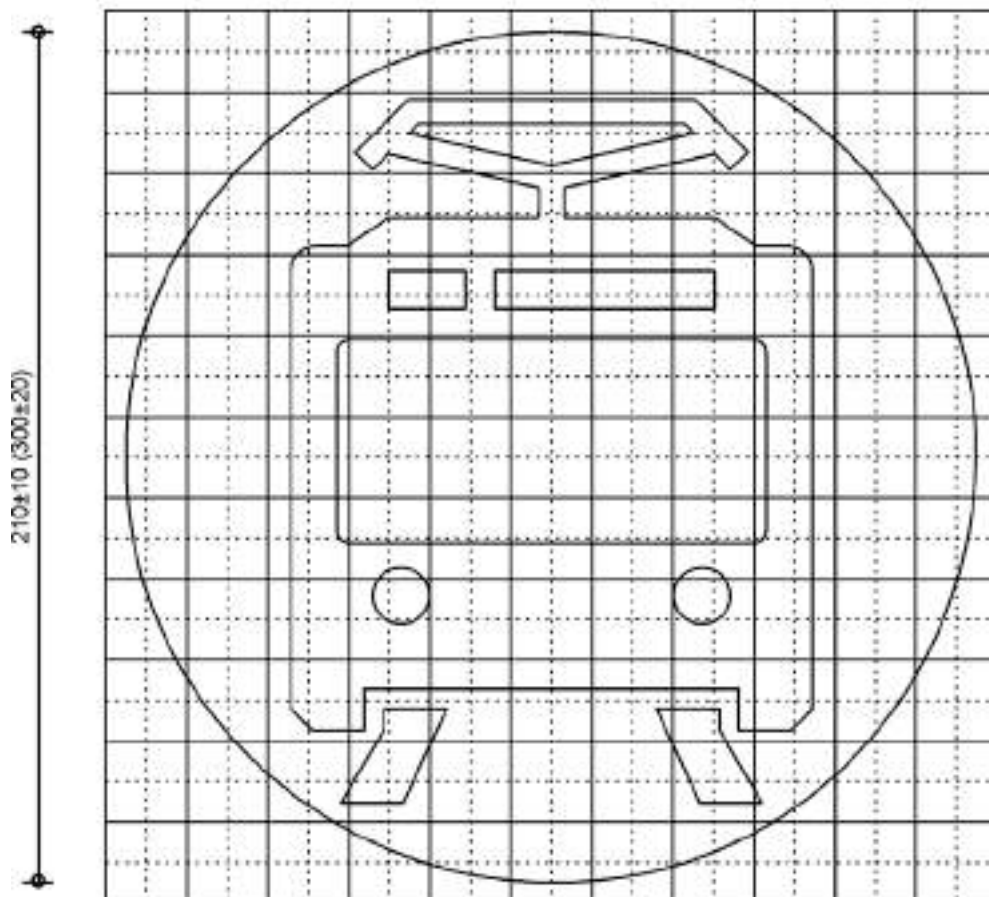
**Notes:**

- 1 Dimensions are given in millimetres.
- 2 To enlarge the symbols, increase the size of the squares to create either a 210 mm or 300 mm diameter aspect.

STANDARD BUS SYMBOL

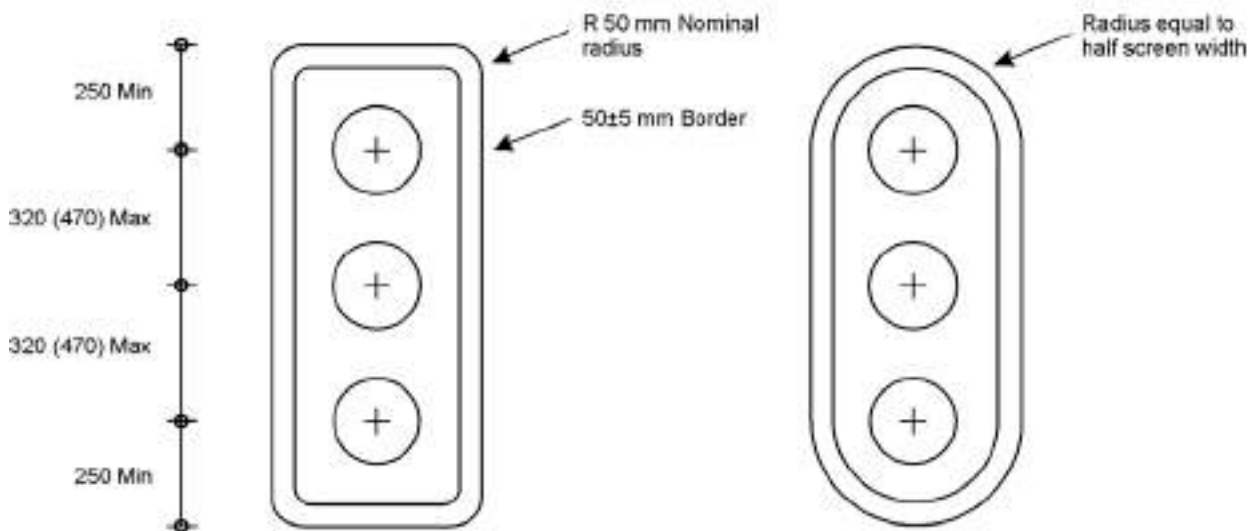
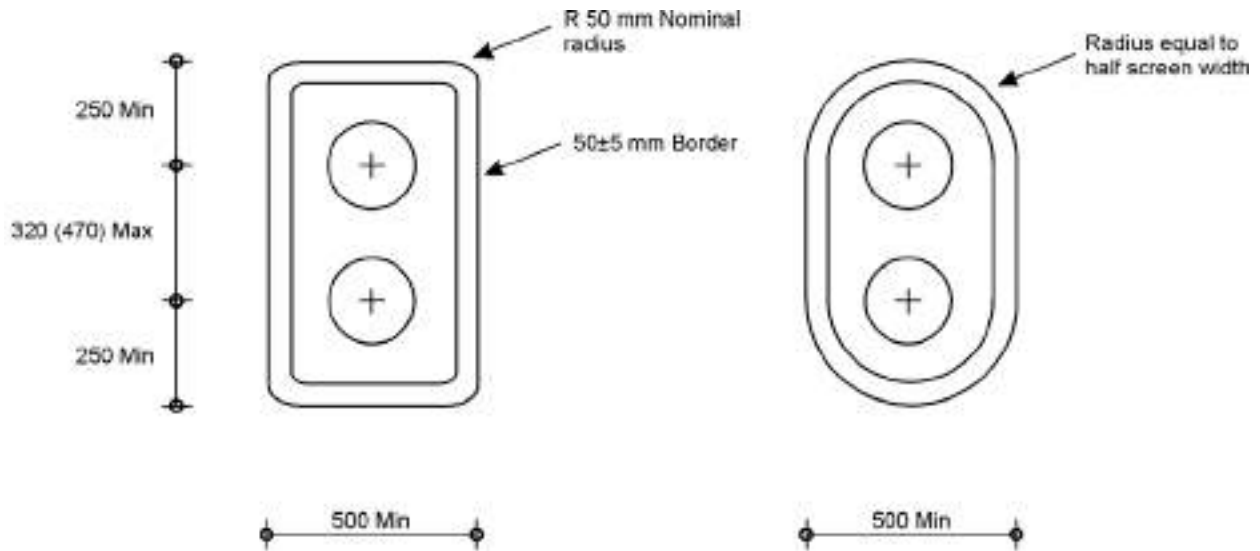


TRAM

**Notes:**

- 1 Dimensions are given in millimetres.
- 2 To enlarge the symbols, increase the size of the squares to create either a 210 mm or 300 mm diameter aspect.

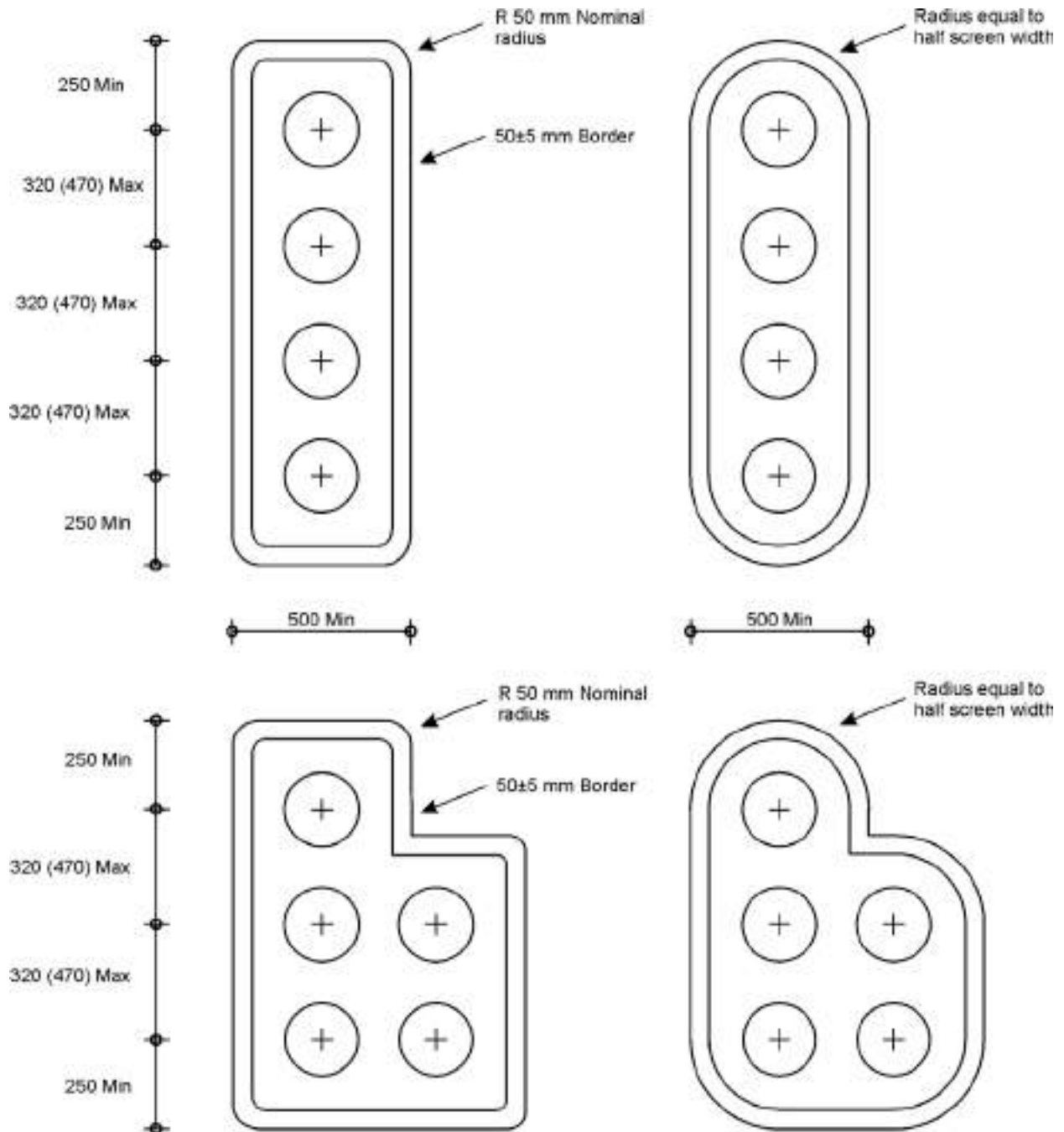
STANDARD TRAM SYMBOL



Notes:

- 1 All dimensions are in millimetres for 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 Background screens (backboards) shall be matt black on both sides.
- 3 The border shall be white on the front face only. The border may also be white retro-reflective.

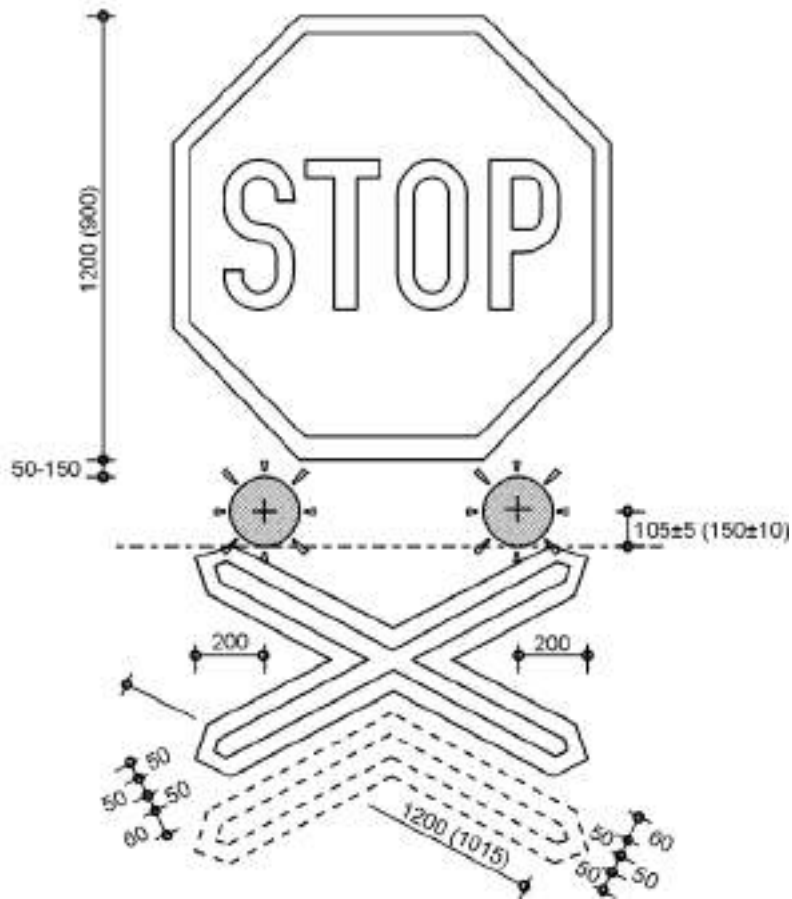
STANDARD BACKGROUND SCREENS FOR 2- AND 3-ASPECT SIGNAL FACES



Notes:

- 1 All dimensions are in millimetres for 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 2 Background screens (backboards) shall be matt black on both sides.
- 3 The border shall be white on the front face only. The border may also be white retro-reflective.

STANDARD BACKGROUND SCREENS FOR 4- AND 5-ASPECT SIGNAL FACES



COLOURS:

R1:

Background: Red retro-reflective
 Border & text: White retro-reflective

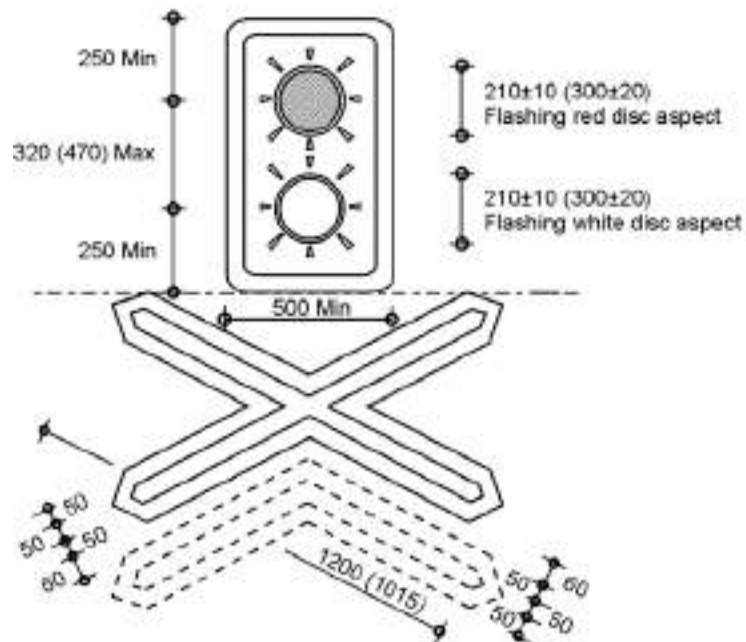
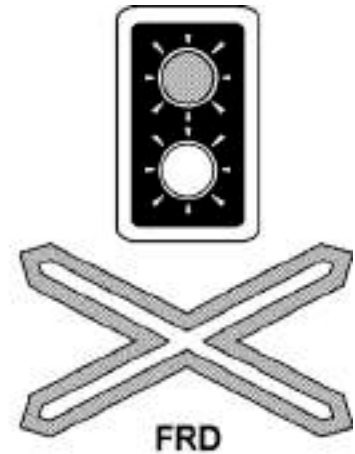
W304/W404:

Outer cross: Red retro-reflective
 Inner cross: White retro-reflective
 Signal: Red flashing disc (2)

Notes:

- 1 Used in the Recommended traffic signal system.
- 2 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 3 See Volume 1, Chapter 6 and Volume 3 for standard applications.
- 4 Signs W403 and W404 may be reduced to a diagonal length of 1015 mm for lower speed environments (non-arterial urban streets).

RAILWAY CROSSING SIGNAL/SIGN COMBINATION - FRD



Notes:

COLOURS:

Signal face:

Red flashing disc and

White flashing disc

W304/W404:

Outer cross: Red retro-reflective

Inner cross: White retro-reflective

Notes:

- 1 Use in the Alternative traffic signal system.
- 2 The dimensions given are in millimetres and apply when using 210 mm diameter aspects; where applicable, alternative dimensions for 300 mm diameter aspects are also given.
- 3 See Volume 1, Chapter 6 and Volume 3 for standard applications.
- 4 Signs W403 and W404 may be reduced to a diagonal length of 1015 mm for lower speed environments (non-arterial urban streets).

RAILWAY CROSSING SIGNAL/SIGN COMBINATION - FRD