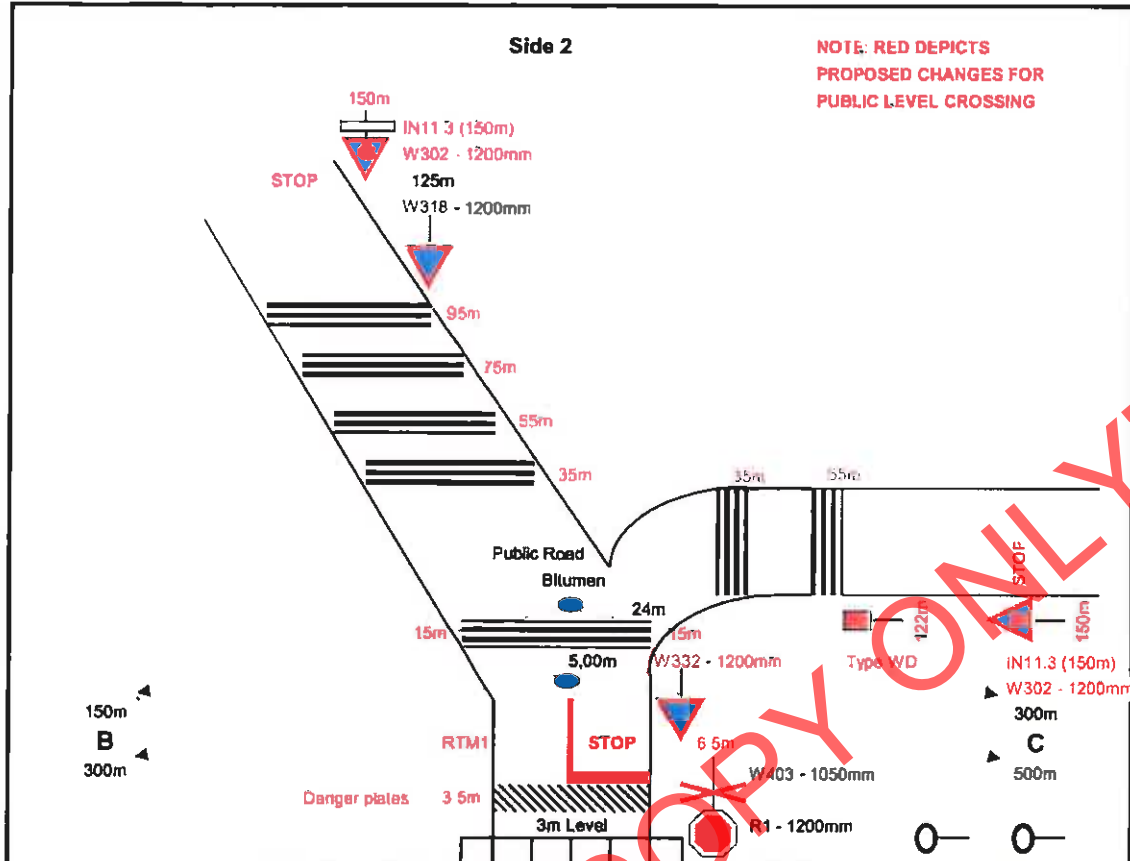


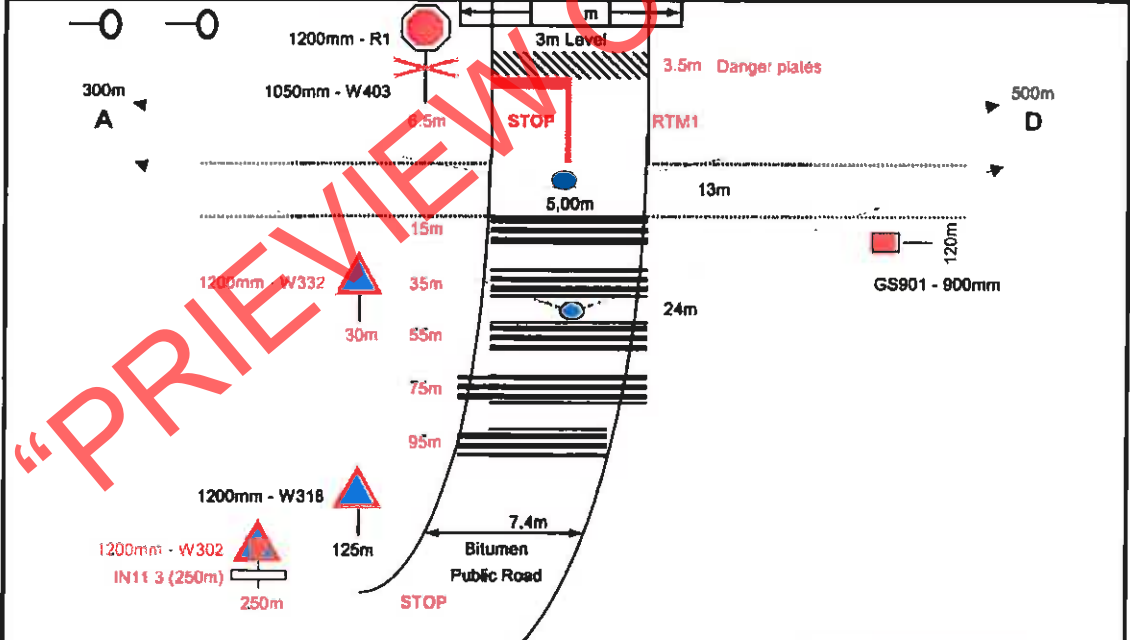
Side 2

NOTE: RED DEPICTS PROPOSED CHANGES FOR PUBLIC LEVEL CROSSING



Thabazimbi

Rustenburg



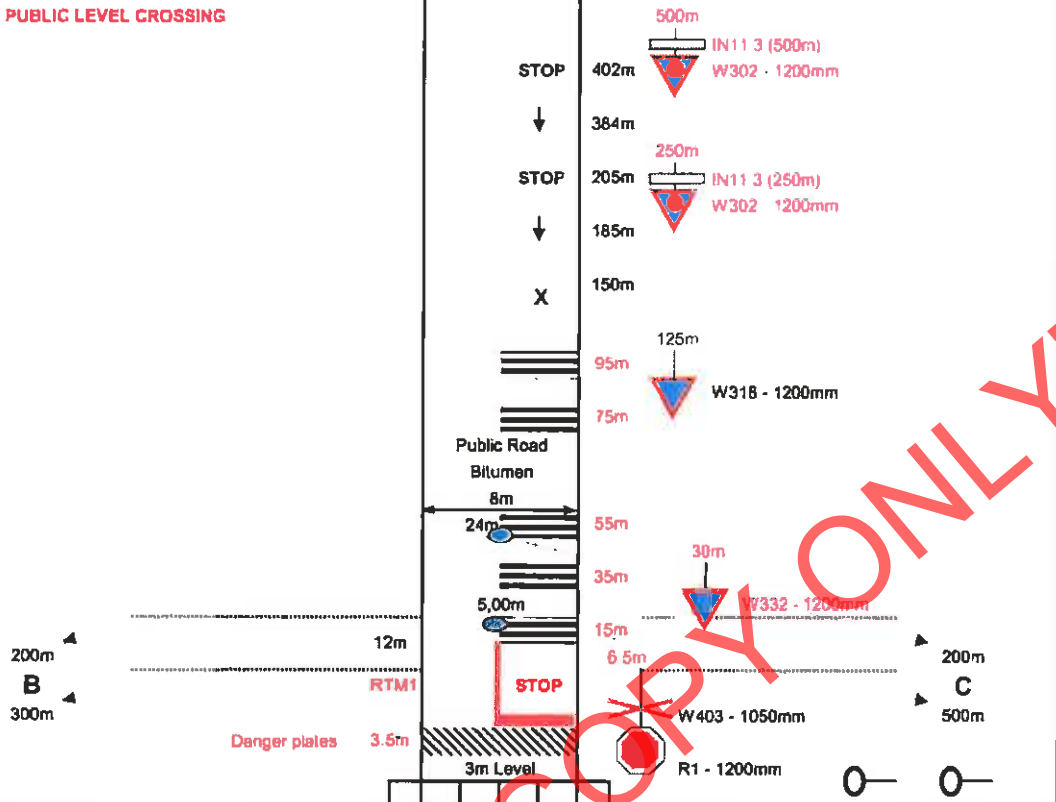
SIDE 1

Rustenburg - Thabazimbi
Public Level Crossing
176,425km

Line Code: C04-26
Train Speed = 70km/h Road Speed = 60km/h
Proposed by E. Khondowe on 2010-09-14

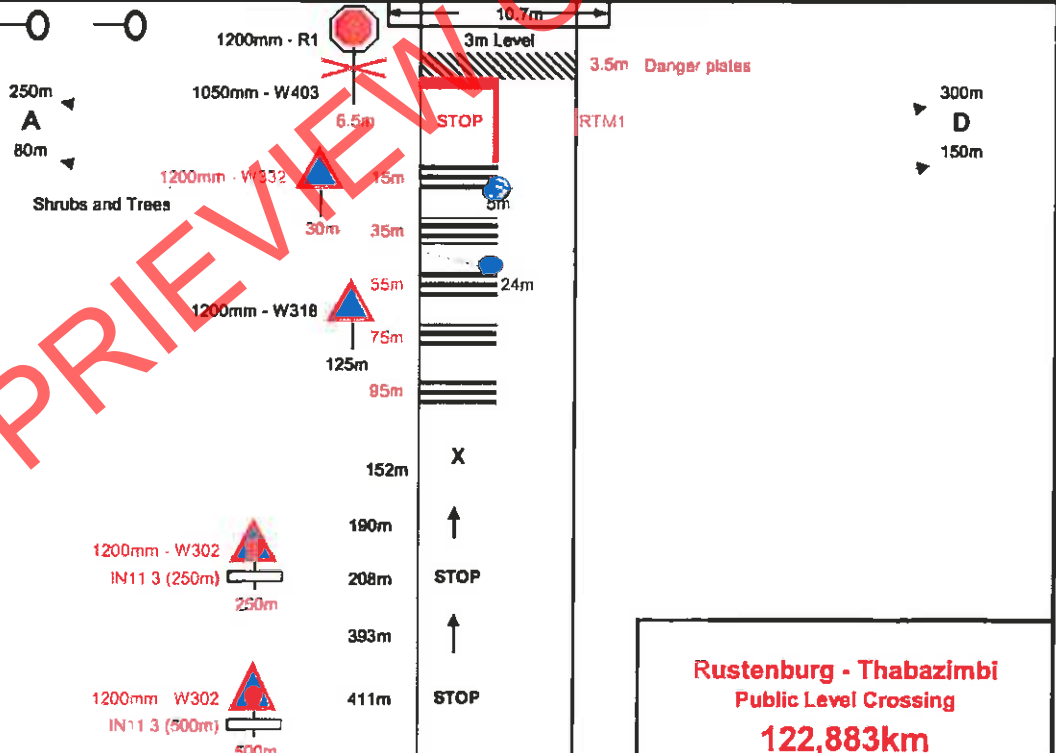
**NOTE: RED DEPICTS
PROPOSED CHANGES FOR
PUBLIC LEVEL CROSSING**

Side 2



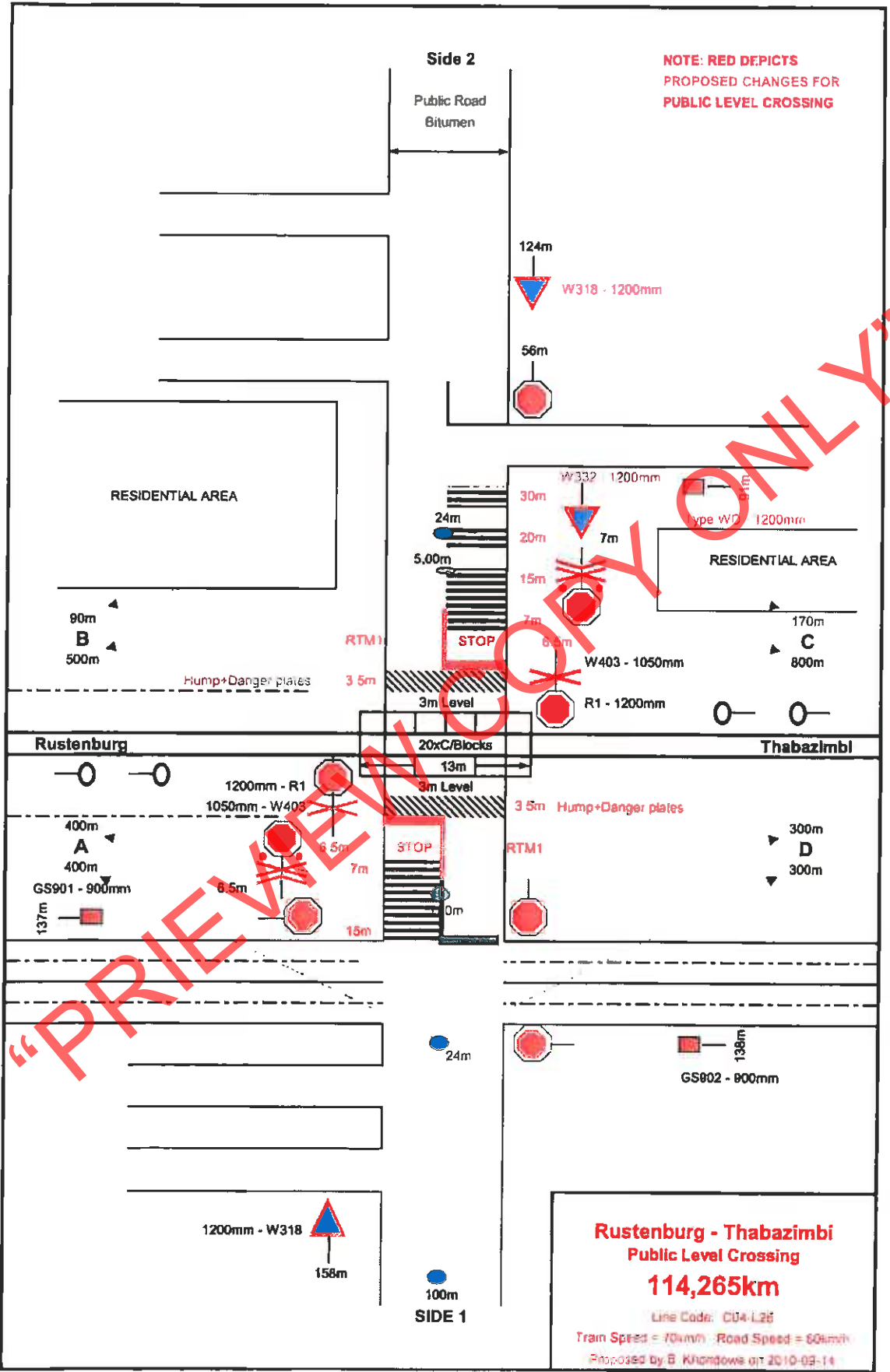
Thabazimbi

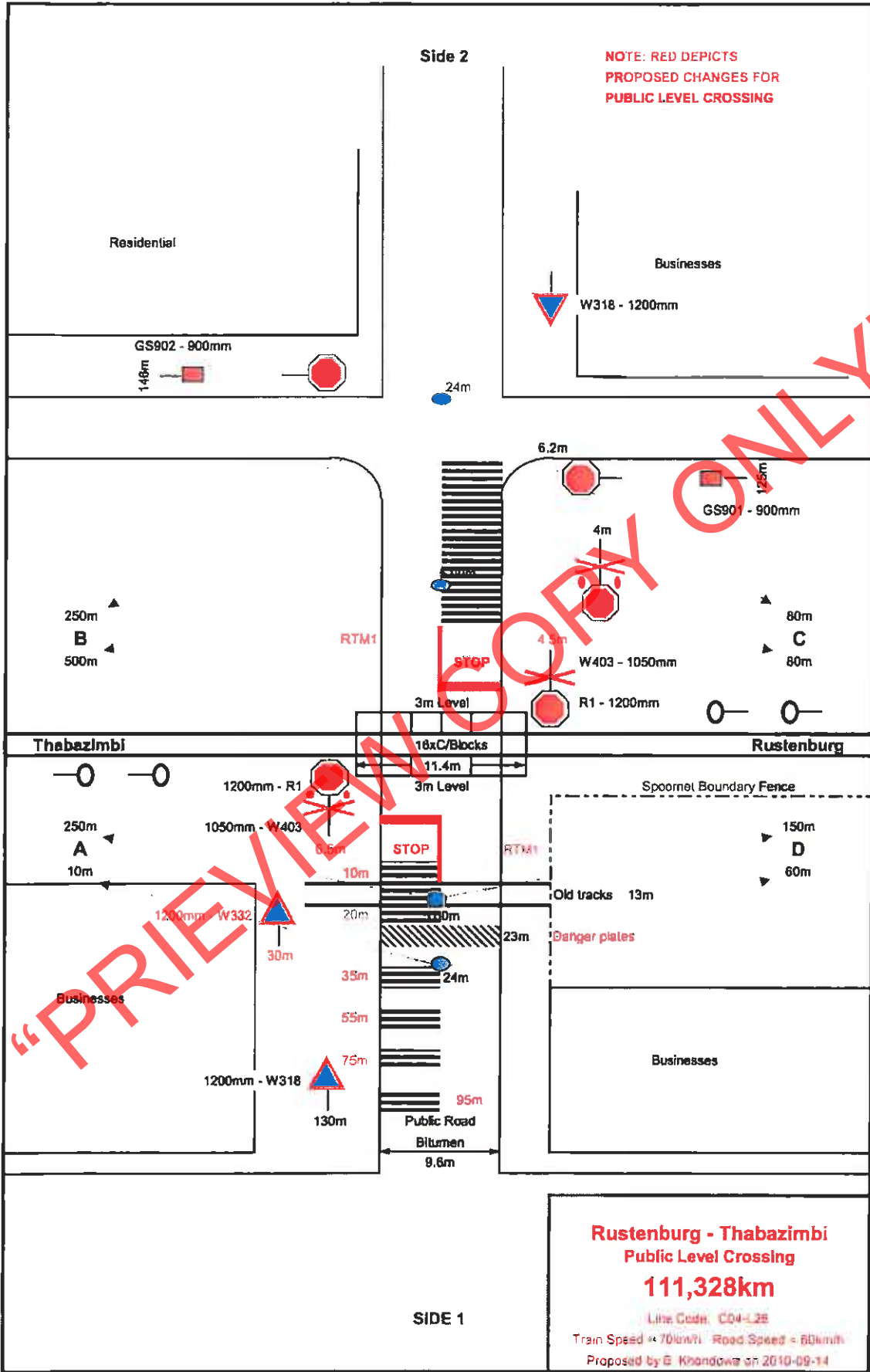
Rustenburg



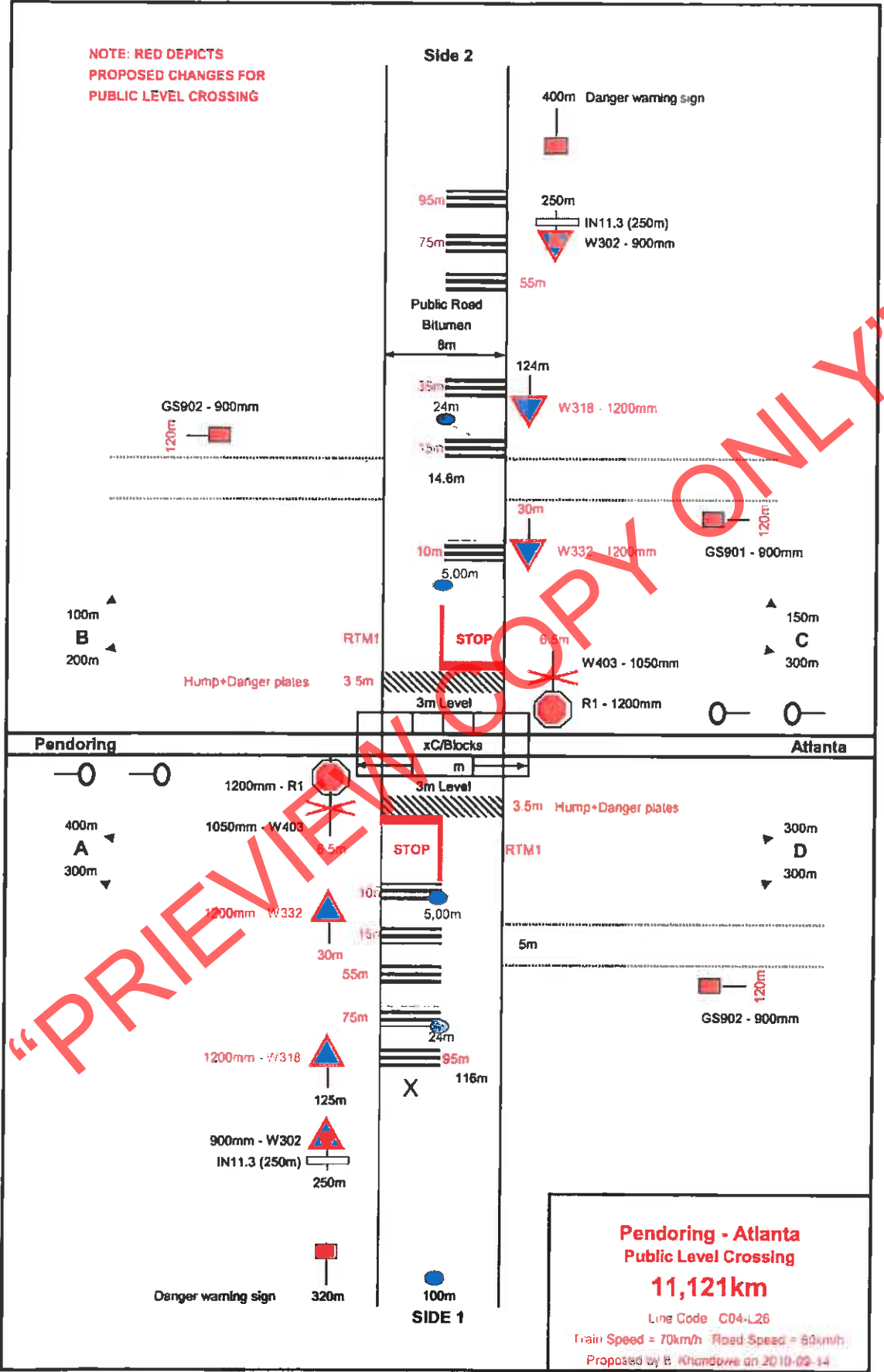
**Rustenburg - Thabazimbi
Public Level Crossing
122,883km**

Line Code C04-L26
Tram Speed = 70km/h Road Speed = 100km/h
Proposed by B. Khondowe on 2010-09-14



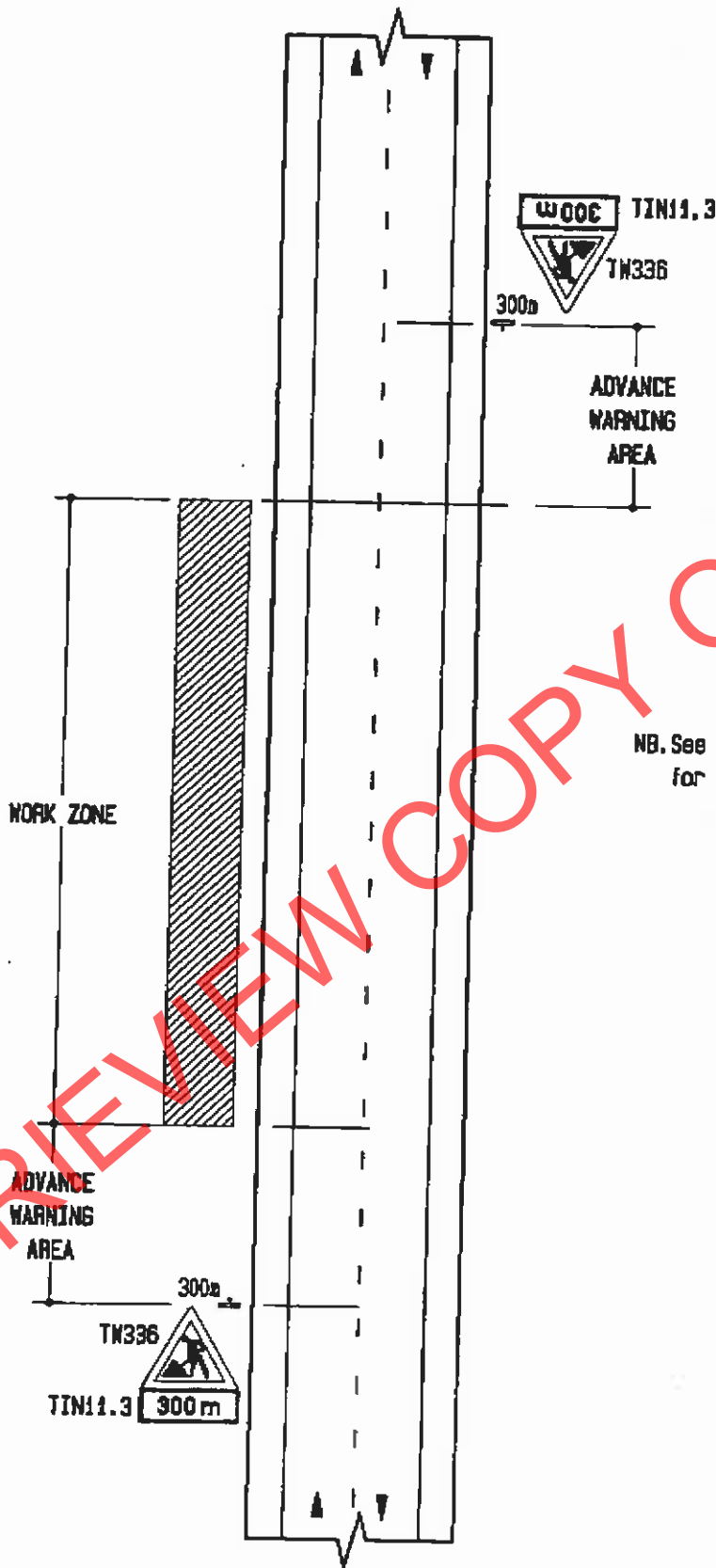


**NOTE: RED DEPICTS
PROPOSED CHANGES FOR
PUBLIC LEVEL CROSSING**



**Pendoring - Atlanta
Public Level Crossing
11,121km**

Line Code C04-L26
Train Speed = 70km/h Road Speed = 60km/h
Proposed by E. Khombove on 2010-02-14



NB. See Subsection 13.8.3 for Sign Sizes.

Fig. 13.32 Maintenance In Road Reserve (off the road)

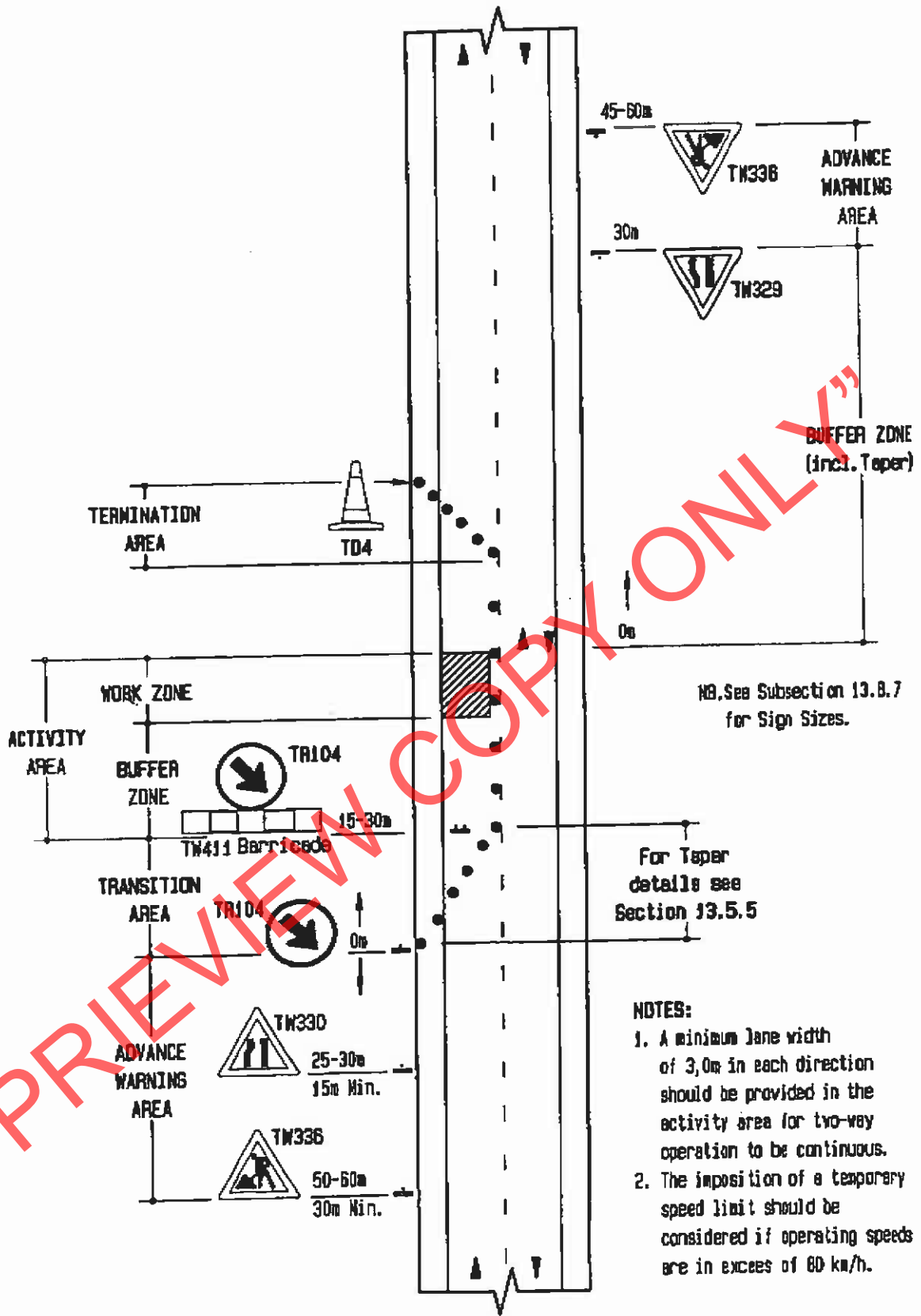
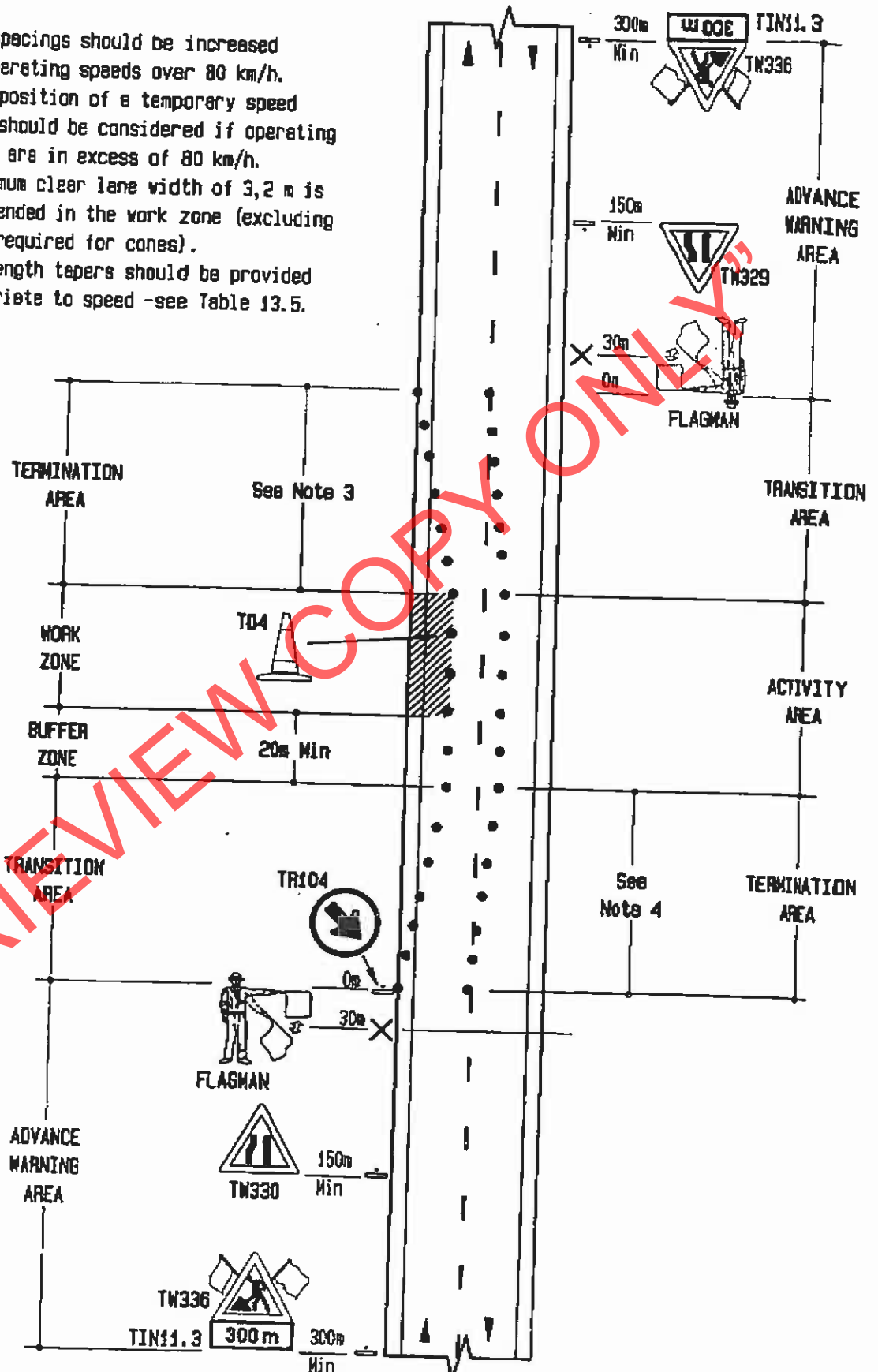


Fig. 13.36 Localised Small Work Site

SHORT TERM WORKS

NOTES:

1. Sign spacings should be increased for operating speeds over 80 km/h.
2. The imposition of a temporary speed limit should be considered if operating speeds are in excess of 80 km/h.
3. A minimum clear lane width of 3,2 m is recommended in the work zone (excluding space required for cones).
4. Full length tapers should be provided appropriate to speed -see Table 13.5.

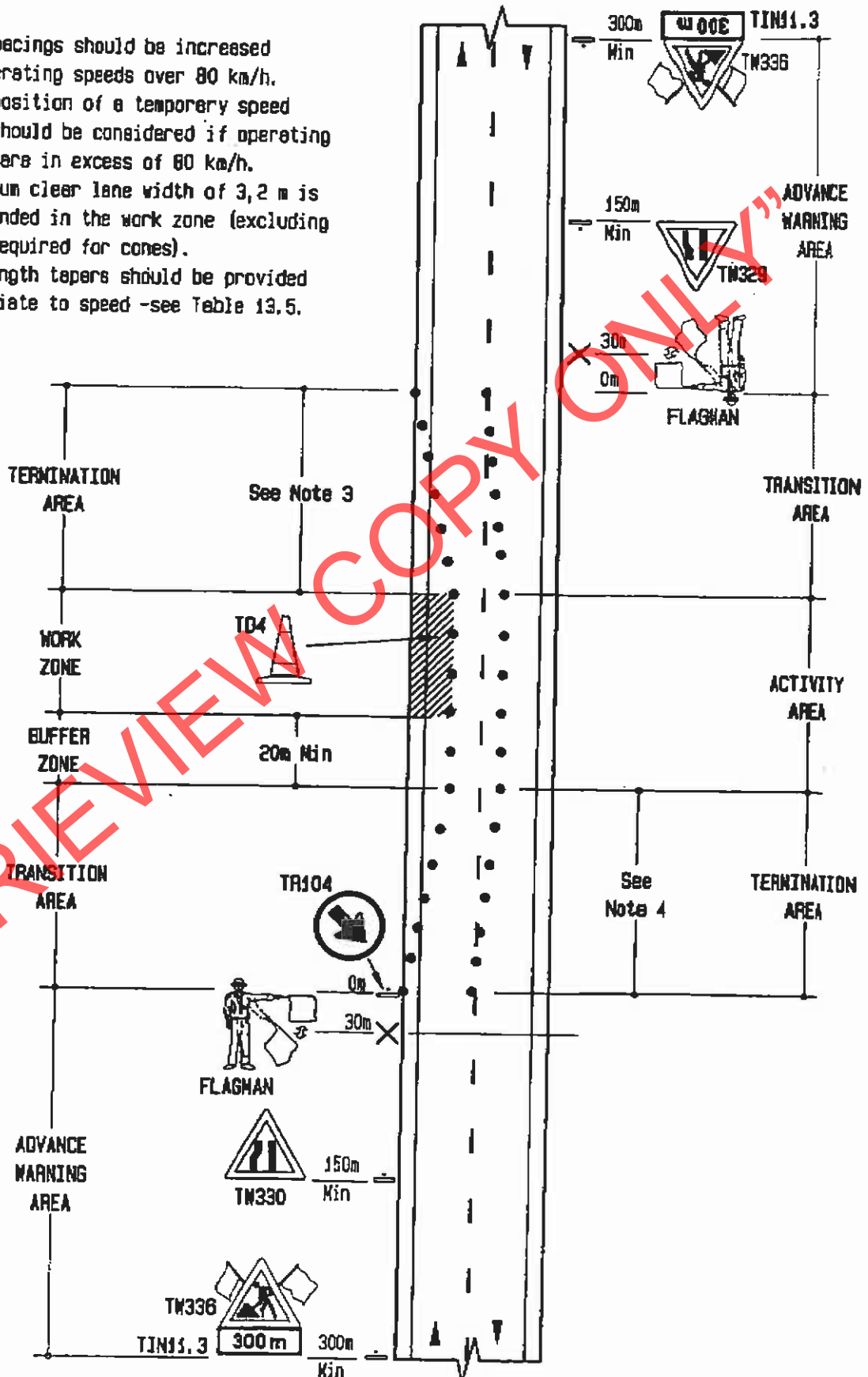


Detail 13.37.1 Partial Lane Closure

SHORT TERM WORKS

NOTES:

1. Sign spacings should be increased for operating speeds over 80 km/h.
2. The imposition of a temporary speed limit should be considered if operating speeds are in excess of 80 km/h.
3. A minimum clear lane width of 3,2 m is recommended in the work zone (excluding space required for cones).
4. Full length tapers should be provided appropriate to speed -see Table 13.5.



Detail 13.37.1 Partial Lane Closure

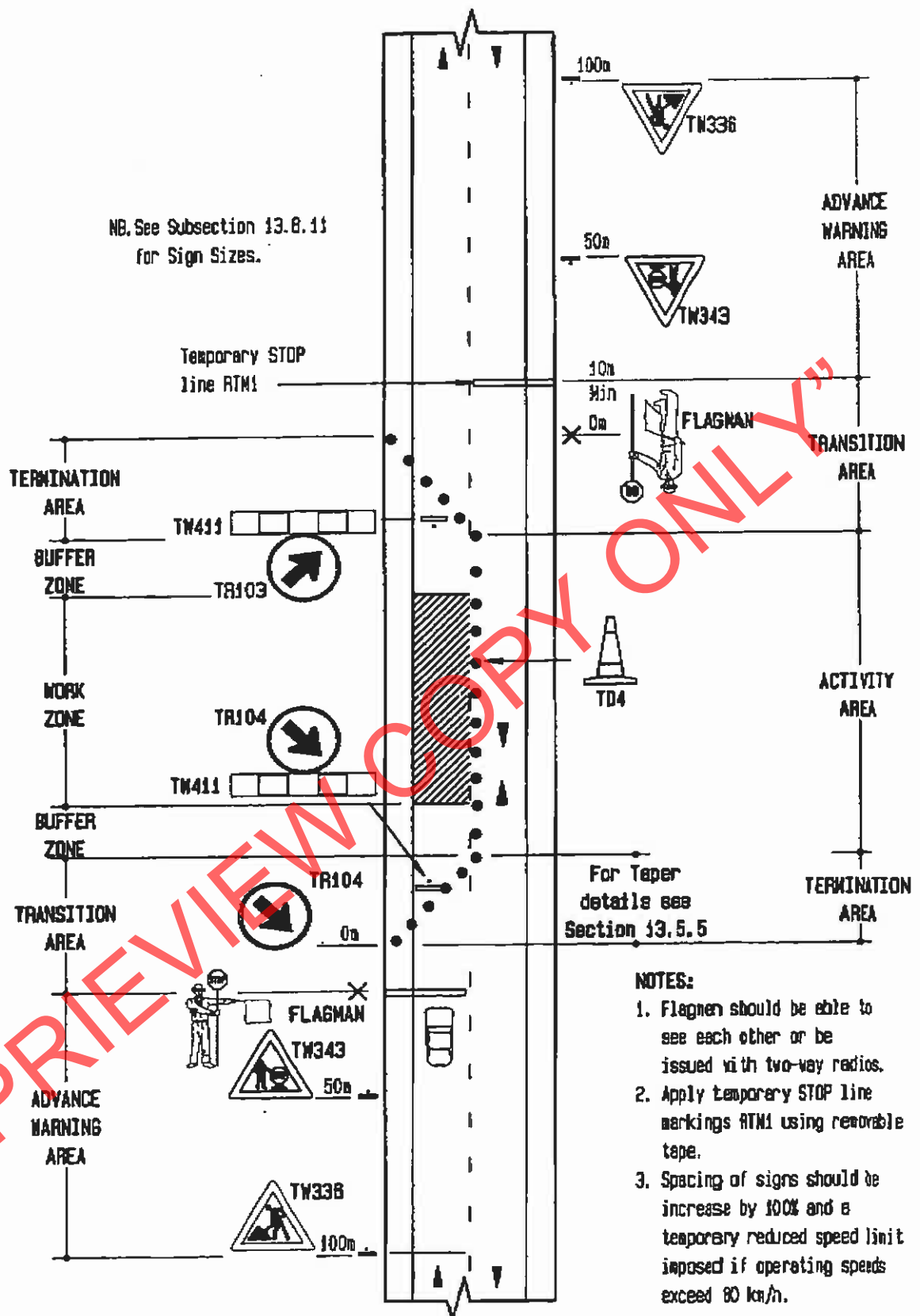


Fig. 13.40 STOP/RY-GO Traffic Control - Minor Works

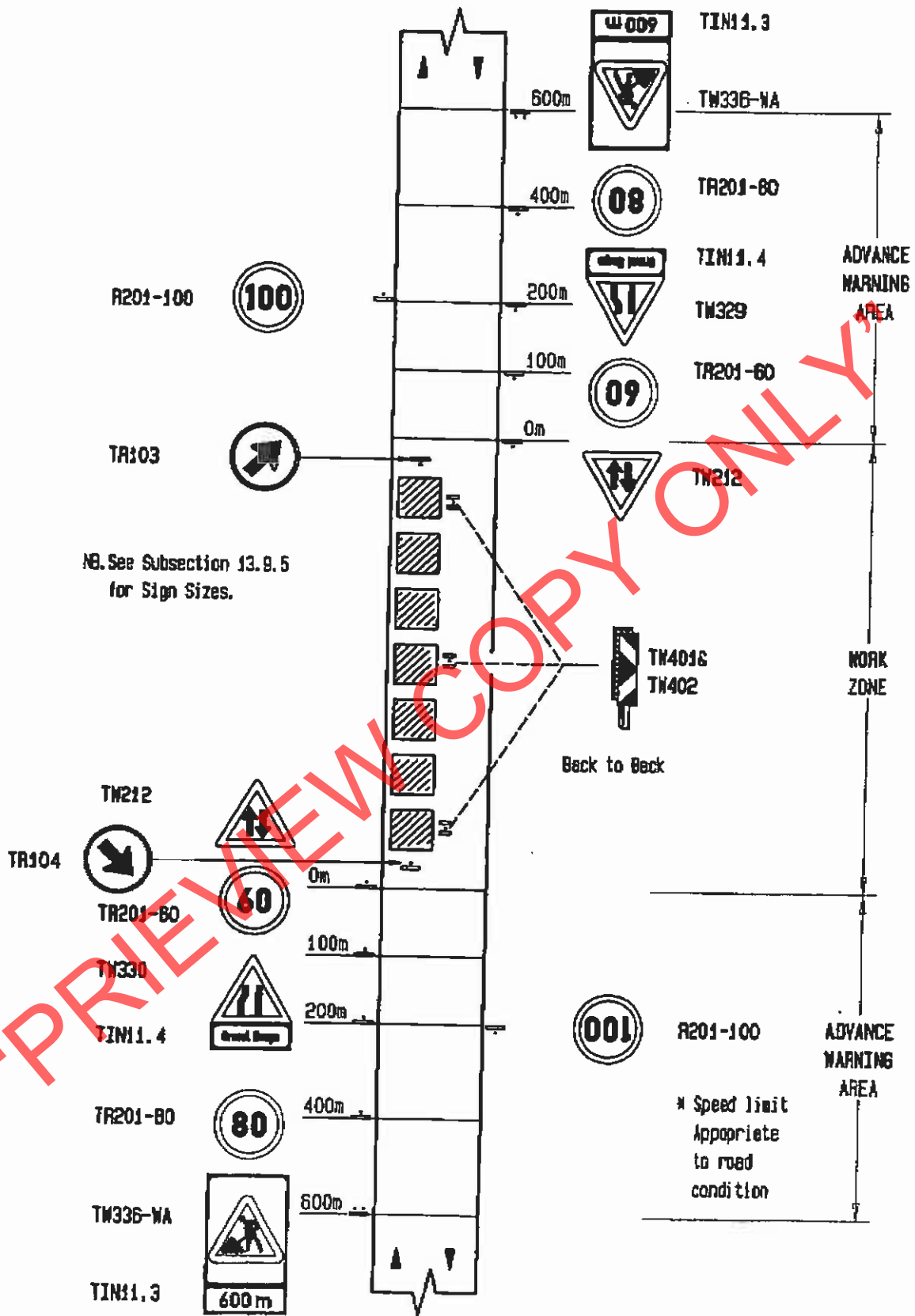


Fig. 13.46 Gravel Roads - Gravel Heaps

Refer Subsection 13.9.7
for Sign Sizes.

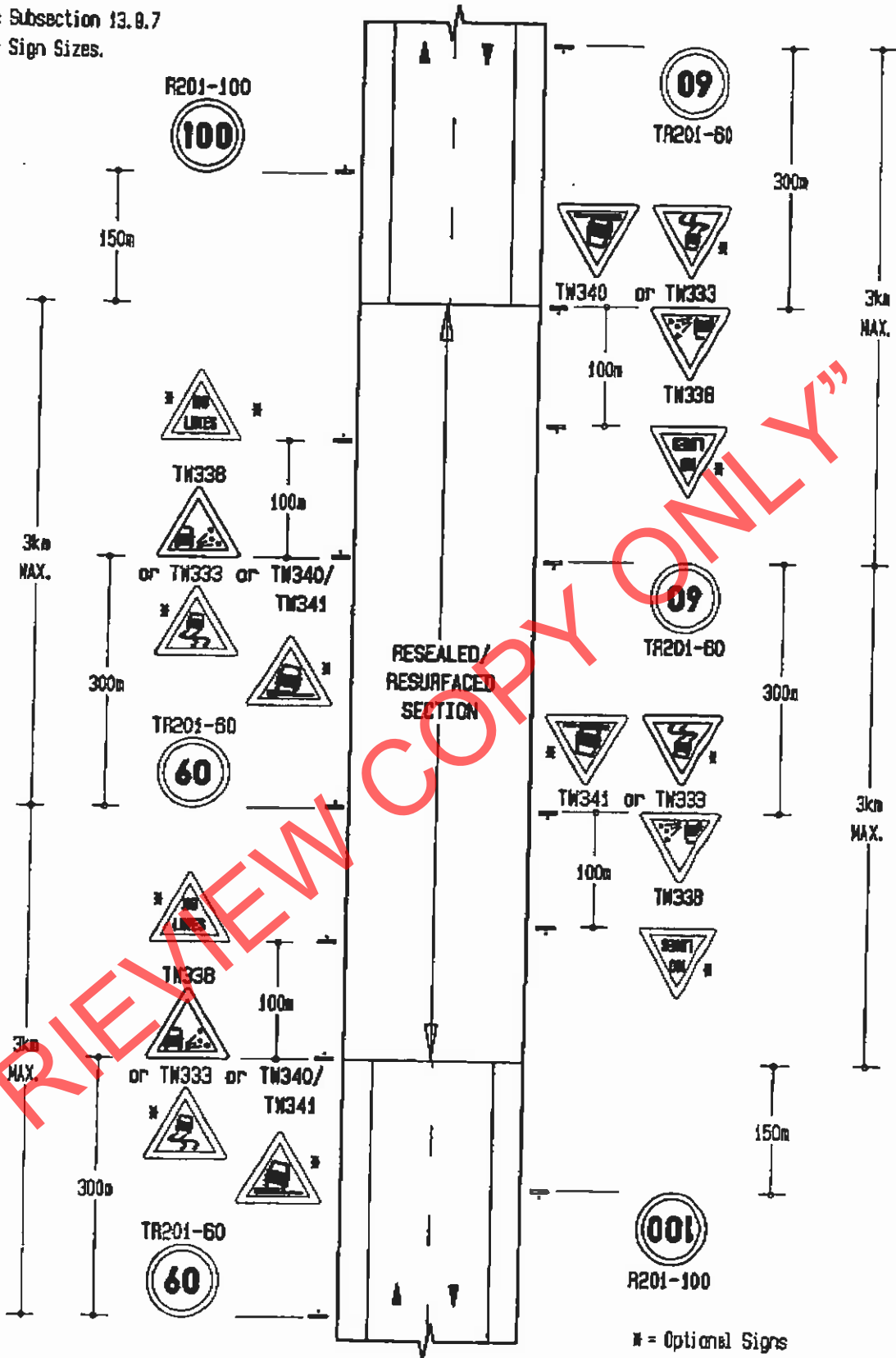


Fig. 13.48 Reseal/Resurfacing Work - Just Completed

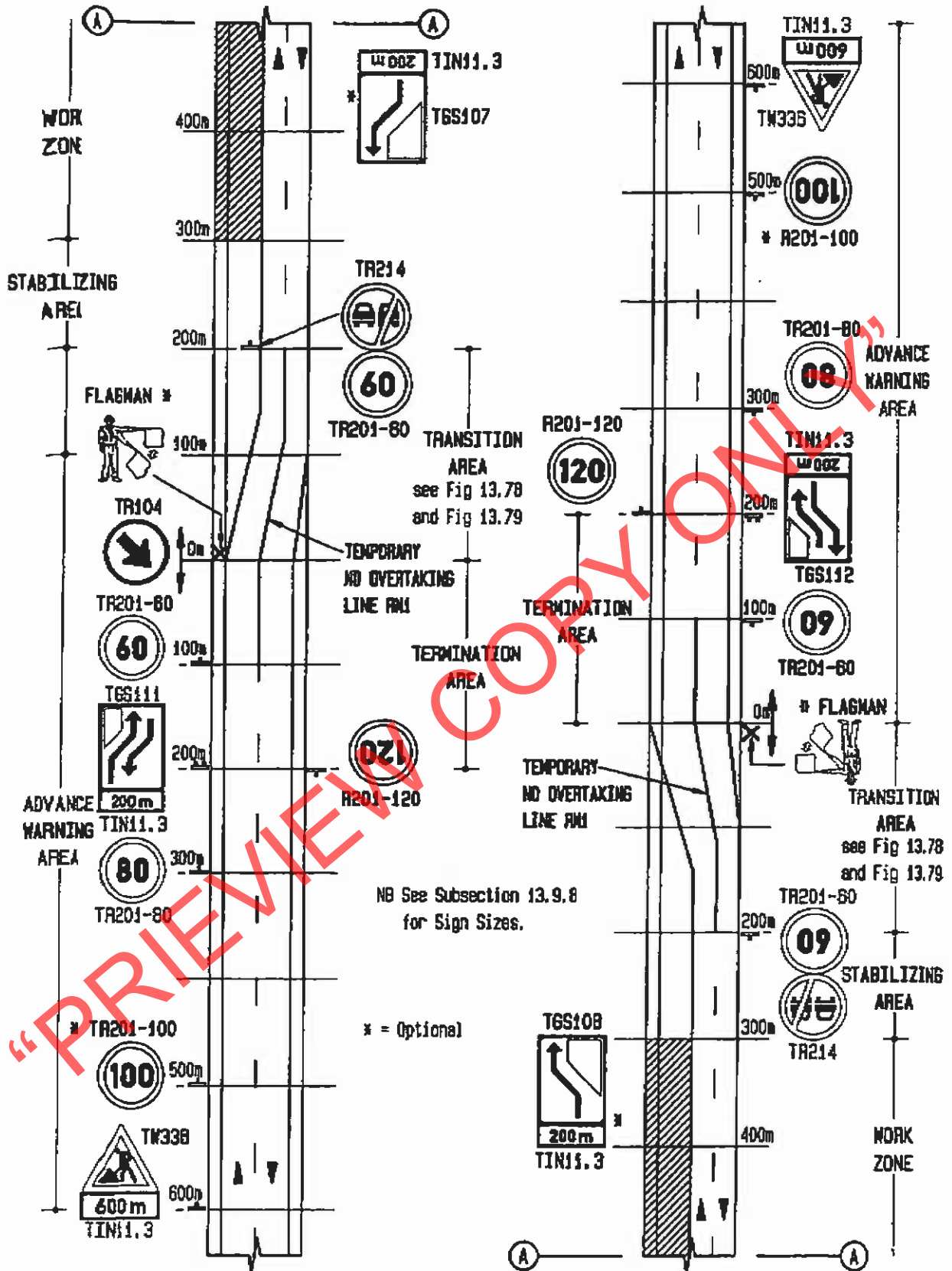


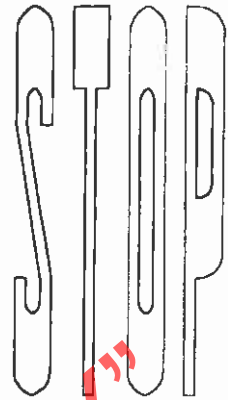
Fig. 13.49 Reduced Width Operation - 2-Way Traffic

NOTES:

- 1 For details of the use of letter markings to portray simple WORD MARKINGS see SARTSM VOL1, Chapter 7, page 7.4.9
- 2 STOP is the most commonly used WORD MARKING. As a typical example this word is detailed on pages 12.5.1 and 12.5.2
- 3 For normal applications word letters should be placed 300mm apart.
- 4 All letters are detailed at a scale of 1 in 50 for the 4.0m height on pages 12.5.3 to 12.5.7. These letters may be drawn on a grid background in the same way as the example on page 12.5.2 to facilitate the making of painting stencils. The detail on page 12.5.2 is drawn at a scale of 1 in 25 for a letter height of 5.5m.

COLOURS/KLEURE:

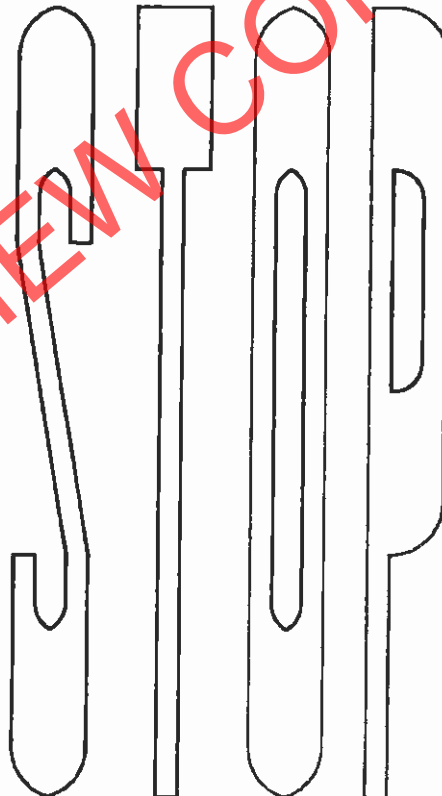
White or yellow
Wit of geel



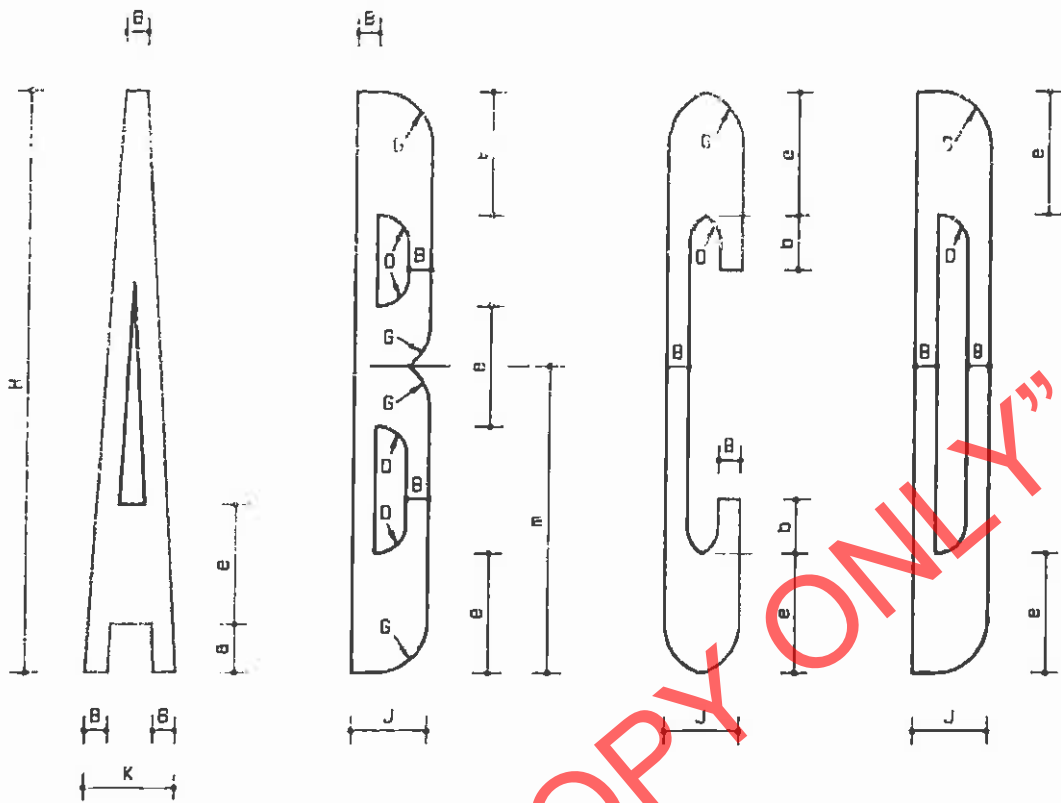
GM7

OPMERKINGS:

- 1 Vir detail van die gebruik van lettermerke om eenvoudige WOORDMERKE uit te beeld, sien SAHPVT VOL1, Hoofstuk 7, bladsy 7.4.9.
- 2 STOP is die mees gewone WOORDMERK wat gebruik word. As 'n tipiese voorbeeld, word hierdie woord op bladsye 12.5.1 en 12.5.2 gedetailleer.
- 3 Vir normale toepassings behoort letters 300mm uit mekaar geplaas te word.
- 4 Alle letters word op 'n skaal van 1 in 50 vir die 4.0m hoogte op bladsye 12.5.3 tot 12.5.7 gedetailleer. Hierdie letter mag op dieselfde manier as die voorbeeld op bladsy 12.5.2 geteken word, ten einde die maak van verfsjambione te vergemaklik. Die detail op bladsy 12.5.2 word op 'n skaal van 1 in 25 vir 'n letterhoogte van 5.5m geteken.

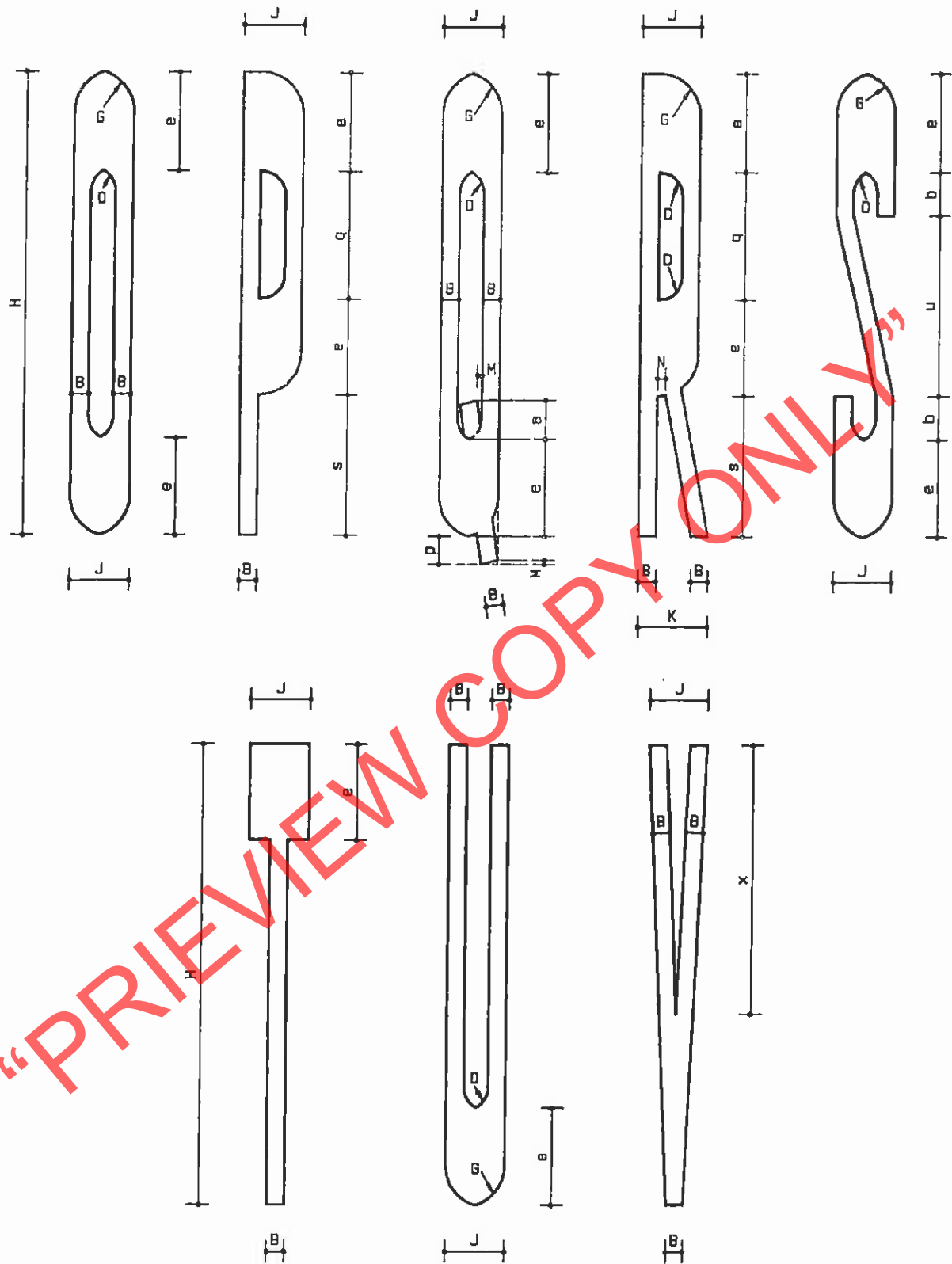


300 300 300

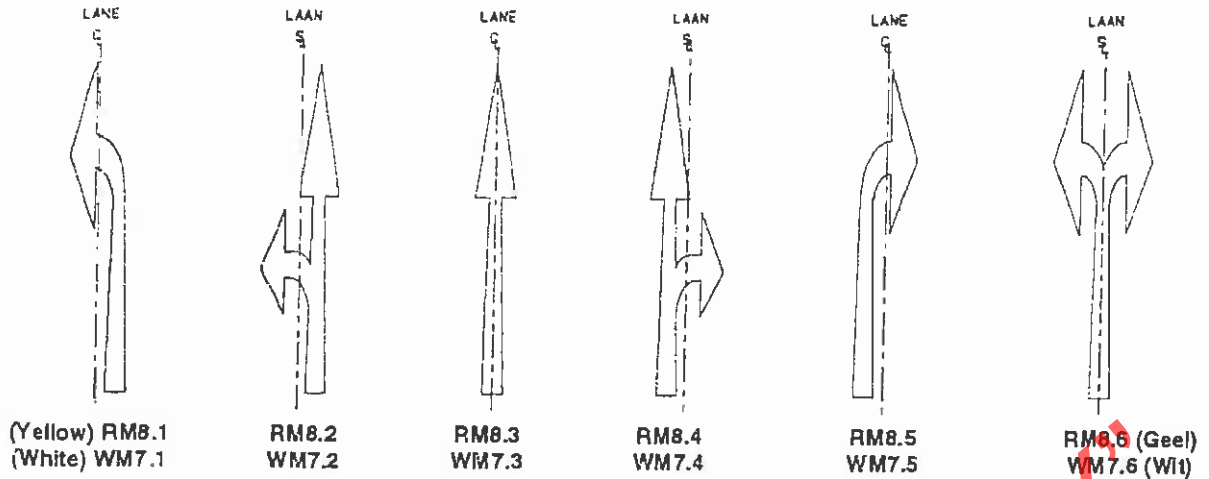


H	A	a	B	b	C	c	D	d	E	e	F	f	G	g	h	J	j	K	k	L	M
1250	100	150	150	120	180	155	200	195	230	260	250	275	355	310	405	510	465	610	535	585	40
2500	100	210	150	235	180	310	200	390	230	520	250	550	355	625	810	510	935	610	1070	1170	40
4000	100	335	150	375	180	500	200	625	230	835	250	870	355	1085	1290	510	1461	610	1710	1875	40
5500	100	460	150	515	180	685	200	860	230	1145	250	1205	355	1375	1775	510	2060	610	2350	2580	40
7500	100	630	150	710	180	935	200	1175	230	1560	250	1645	355	2050	2420	510	2760	610	3200	3520	40

H	m	N	n	c	p	q	i	s	f	u	v	w	w	ww	x	xx	y	yy	z	zz
1250	665	75	715	90	100	350	365	380	420	495	560	130	575	140	730	170	650	180	610	210
2500	1330	75	1430	185	155	705	730	755	835	990	1120	260	1150	285	1460	340	1300	365	1225	420
4000	2125	75	2290	285	250	1120	1165	1210	1335	1580	1790	415	1835	460	2330	540	2085	580	1955	665
5500	2920	75	3150	405	345	1550	1605	1660	1835	2180	2465	580	2520	630	3210	745	2900	805	2695	905
7500	3960	75	4300	550	470	2115	2190	2265	2765	2960	3360	790	3440	850	4370	1015	3955	1095	3670	1240



H	m	N	n	o	p	q	r	s	t	u	v	vv	w	ww	x	xx	y	yy	z	zz
1250	665	75	715	90	100	350	365	380	420	495	560	130	575	140	730	170	650	180	610	210
2500	1330	75	1430	185	155	705	730	755	835	990	1120	260	1150	285	1460	340	1300	365	1225	420
4000	2125	75	2290	285	250	1120	1165	1210	1335	1580	1790	415	1835	460	2330	540	2085	580	1955	665
5500	2920	75	3150	405	345	1550	1605	1660	1835	2180	2465	580	2520	630	3210	745	2900	805	2695	905
7500	3980	75	4300	550	470	2115	2190	2265	2765	2960	3360	790	3440	850	4370	1015	3955	1095	3670	1240



RM8 & WM7

COLOURS/KLEURE:

RM8
Yellow /Geel
WM7
White/Wit

NOTES:

- For details of use of road marking RM8 refer to SARTSM VOL1, Chapter 7, page 7.2.33 and for road marking WM7 to page 7.3.13.
- Dimensional details are given on pages 12.3.2 and 12.3.3. Values for all standard arrow lengths of all necessary dimensions are covered by two details on page 12.3.2. It should be noted that the arrow width does not vary with length. Alternative details are given on 12.3.3 for 5m long arrows on gridsquares. This detail can be redrawn for other sizes by retaining the 50mm grid width and by varying the 100mm grid length in proportion to arrow length eg. for a 4m arrow grid length should be 80mm.

OPMERKINGS:

- Vir detail van gebruik van padmerk RM8 verwys na SAHPVT VOL1, Hoofstuk 7, bladsy 7.2.33, en vir padmerk WM7 na bladsy 7.3.13
- Afmetingsdetail word op bladsye 12.3.2 en 12.3.3 verskaf. Waardes vir alle standaard pyl lengtes van alle nodige afmetings word deur twee details op bladsy 12.3.2 gedek. Daar behoort opgelet te word dat die pylbreedte nie saam met die lengte verander nie. Alternatiewe detail word op bladsy 12.3.3 vir 5m lang pylle op rooster-vierkante. Hierdie detail kan vir ander groottes oorgeleken word, deur die 50mm roosterbreedte te behou, en die 100mm roosterlengte in verhouding met die pyl langle te verander by vir 'n 4m pyl behoort die roosterlengte 80mm te wees.

Arrow area Pyl oppervlak	m ²			
a	RM8.1/RM8.5 WM7.1/WM7.5	RM8.2/RM8.4 WM7.2/WM7.4	RM8.3 WM7.3	RM8.6 WM7.6
2500	0.67	0.89	0.66	1.03
4000	1.14	1.43	1.06	1.68
5000	1.45	1.78	1.32	2.12
7500	2.23	2.66	1.98	3.20

MANDATORY DIRECTION ARROWS
MANDATORY DIRECTION ARROW AHEAD/
VERPLIGTENDE RIGTING PYLE
VERPLIGTENDE RIGTINGPYL VOOR

COLOURS/KLEURE:

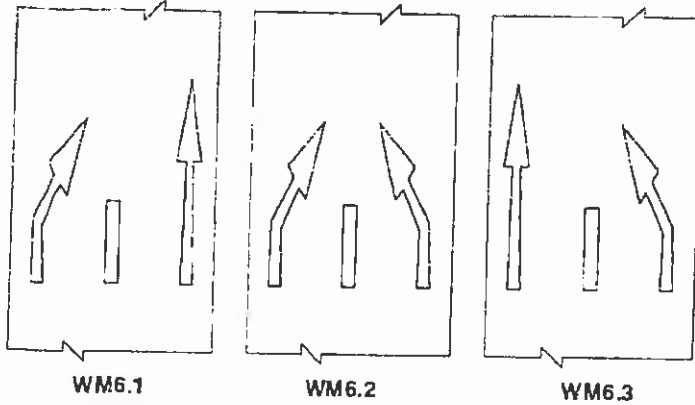
White/Wit

NOTES:

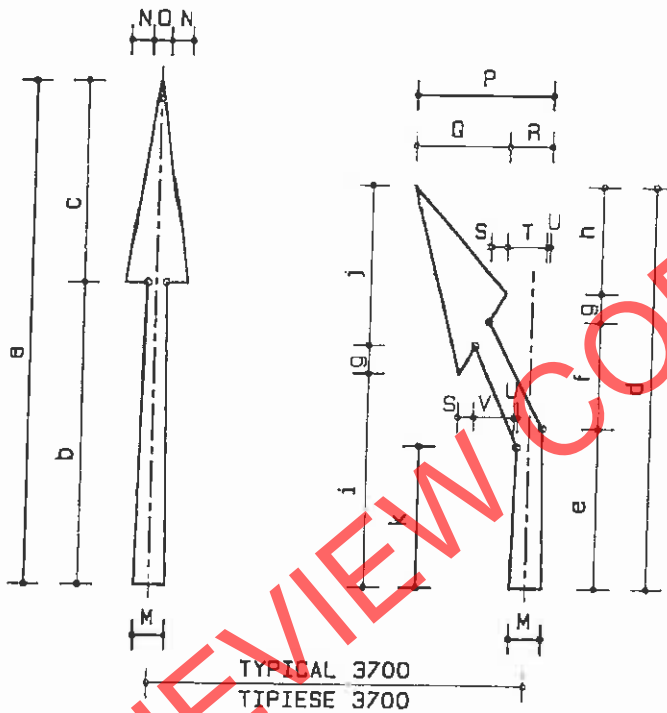
- For details of the use of road marking WM6 refer to SARTSM VOL1 Chapter 7, page 7 3.10
- Dimensional details are given on this page for a range of standard arrow lengths (the length refers to that of the longer of the two arrows) The detail on page 12 3 7 is for a 5m arrow and is drawn on grid squares to permit easy enlargement (See page 12 3 1 - note 2 also)

OPMERKINGS:

- Vir detail van die gebruik van padmerk WM6 verwys na SAHPVT VOL1, Hoofstuk 7 bladsy 7 3.10
- Afmetingsdetail word op hierdie bladsy vir 'n reeks standaard pylle ges verskat (die lengte verwys na die van die langer een van die twee pylle) Die detail op bladsy 12.3.7 is vir 'n 5m pyl en word op roostermerke geleken om vergroting te vergemaklik (Sien ook bladsy 12 3 1 - nota 2)



WM6



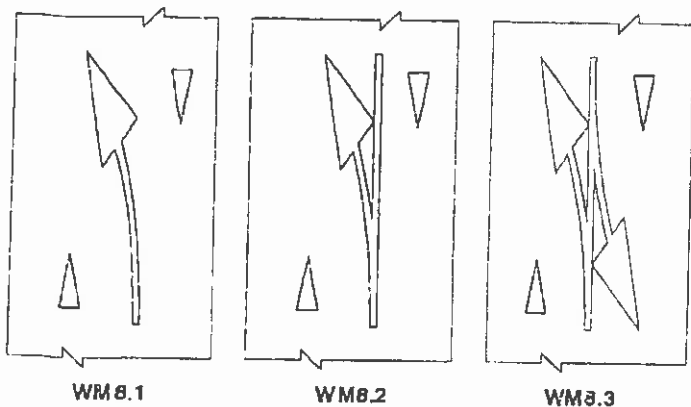
Arrow area Pyl oppervlak	m ²	
a	WM6.1/ WM6.3	WM6.2
4000	2.08	2.06
5000	2.61	2.58
7500	3.92	3.88
12000	6.56	6.20

DIMENSIONS/AFMETINGS (mm)

Operating speed Bedryfspoed	Typical applications Tipiese toepassings	a	b	c	d	e	f	g	h	i	j	k
30 - 40	City centre Middestad	4000	2400	1600	3200	1271	847	227	855	1696	1277	1126
50 - 60	Urban roads Stedelike paaie	5000	3000	2000	4000	1589	1058	284	1069	2120	1596	1407
70 - 90	Urban arterial roads/ Rural expressways Stedelike verkeeraar paaie/Plattelandsse snelweë	7500	4500	3000	6000	2384	1587	426	1603	3180	2394	2111
100 - 120	Rural roads and freeways Plattelandsse paaie en deurpaaie	12000	7200	4800	9600	3814	2539	681	2566	5089	3830	3377

ALL operating speeds and applications ALLE bedryfspoede en toepassings	M	N	O	P	Q	R	S	T	U	V
	300	210	180	1300	898	402	155	370	32	390

LANE REDUCTION ARROWS/
LAANVERMINDERINGSPLYE



WM8

COLOURS/KLEURE.

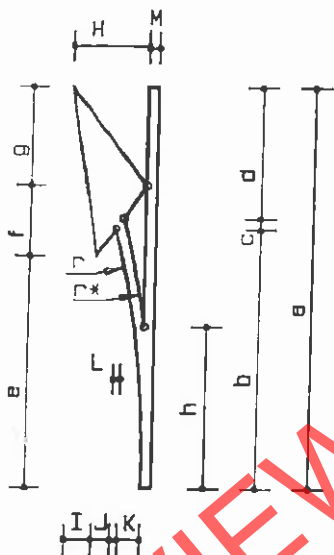
White/Wit

NOTES:

- 1 For details of the use of road marking WM8 refer to SARTSM VOL1, Chapter 7, page 7.3.14
- 2 Dimensional details are given for the urban and rural sizes of road marking WM8 which is matched to the length of DIVIDING LINE marking WM3

OPMERKINGS:

- 1 Vir detail van die gebruik van padmerk WM8 verwys na SAHPVT VOL1, Hoofstuk 7, bladsy 7.3.14
- 2 Afmetings detail word vir die stedelike en plattelandse padmerkgroottes verskaf wat aangepas word op die lengte van SKE:STREEP-merk WM3



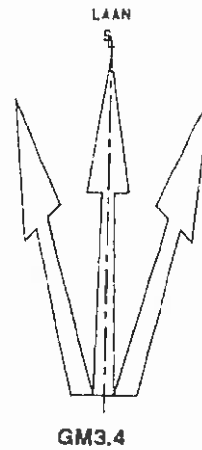
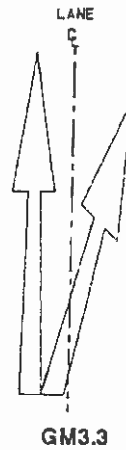
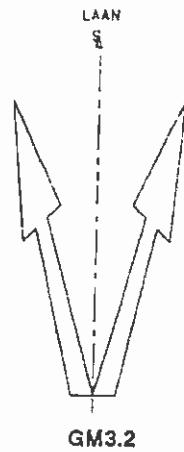
Arrow area Pyl oppervlak	m ²
a	Per arrow/ Elke pyl
3000	0.62
4000	0.82

DIMENSIONS/AFMETINGS (mm)

Typical applications Tipiese toepassings	a	b	c	d	e	f	g	h	r	r'
Urban Stedelik	3000	1941	83	976	1741	528	731	1206	5620	5820
Rural Plattelands	4000	2588	111	1301	2321	704	975	1608	9900	10000

ALL applications ALLE toepassings	H	I	J	K	L	M
	735	260	181	219	75	100 or 150

NO OVERTAKING LINE OR NO CROSSING LINE AHEAD/
VERBYSTEEKVERBODSTREEP OF OORSTEEKVERBODSTREEP VOOR



GM3

COLOURS/KLEURE:

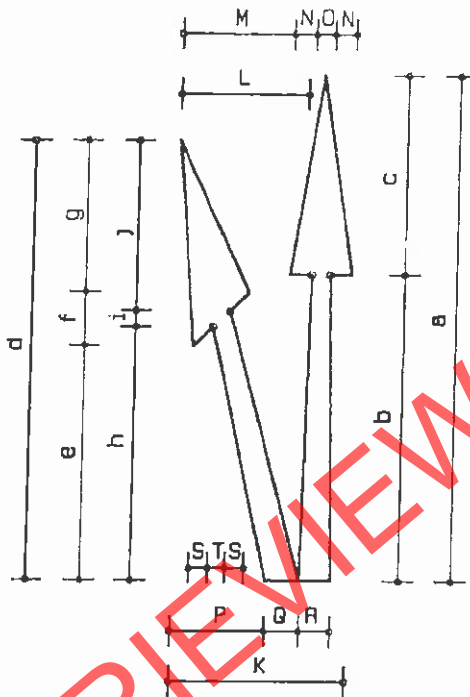
White/Wit

NOTES:

1 For details of the use of road marking GM3 refer to SARTSM VOL1, Chapter 7 page 7.4.5

OPMERKINGS:

1 Vir details van die gebruik van padmerk GM3 verwys na SAHPVT VOL1, Hoofstuk 7, bladsy 7.4.5



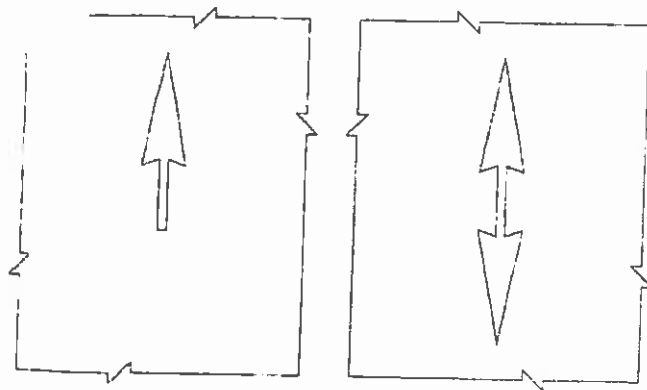
Arrow area Pyl oppervlak	m ²		
a	GM3.1/GM3.3	GM3.2	GM3.4
2500	1.30	1.27	1.93
4000	2.07	2.04	3.09
5000	2.59	2.55	3.87
7500	3.89	3.82	5.80

DIMENSIONS/AFMETINGS (mm)

Operating speed Bedryfspoed	km/h	Typical applications Tipiese toepassings	a	b	c	d	e	f	g	h	i	j
30 - 40		City centre Middestad	2500	1500	1000	2170	1141	268	761	1235	81	855
50 - 60		Urban Stedelik	4000	2400	1600	3472	1826	429	1218	1976	129	1367
70 - 90		Urban arterial/Rural expressway Stedelike verkeersaar/Plattelandse snelweg	5000	3000	2000	4340	2282	536	1522	2470	161	1709
100 - 120		Rural and freeways Plattelandse en deurpaaie	7500	4500	3000	6510	3423	804	2283	3705	242	2564

ALL operating speeds and applications ALLE bedryfspoede en toepassings	K	L	M	N	O	P	Q	R	S	T
	1700	1250	1100	210	180	921	329	300	188	161

BIFURCATION ARROWS/
VURKPYLE



GM4

COLOURS/KLEURE:

White/Wit

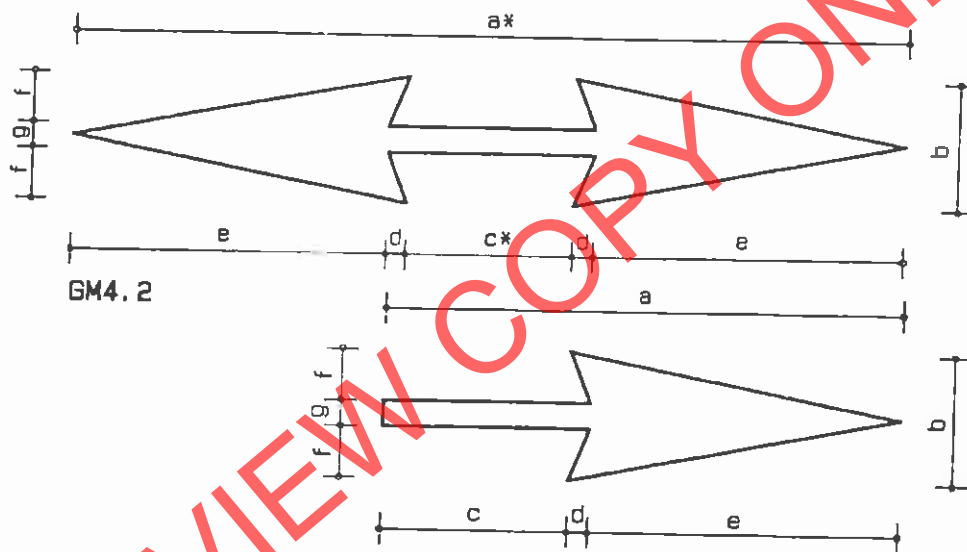
NOTES

1 For details of the use of road marking GM4 refer to SARTSM VOL 1, Chapter 7 page 7.4.6

OPMERKINGS:

1 Vir details van die gebruik van padmerk GM4 verwys na SAHPVT VOL 1 Hoofstuk 7 bladsy 7.4.6

Area Oppervlak m ²				
	1250	0.59	2000	1.05
GM4.1/	2500	1.17	4000	2.10
GM4.2(a*)	4000	1.88	6400	3.36
	5000	2.35	8000	4.20



DIMENSIONS/AFMETINGS (mm)

Operating speed Bedryfspoed	km/h	Typical applications Tipiese toepassings	a	a*	b	c	c*	d	e	f	g
30 - 40		City centre Middestad	1250	2000	1250	450	400	50	750	500	250
50 - 60		Urban Stedelik	2500	4000	1250	900	800	100	1500	500	250
70 - 90		Urban arterial/Rural expressway Stedelike verkeersaar/Piattelands snelweg	4000	6400	1250	1440	1280	160	2400	500	250
100 - 120		Rural and freeways Piattelands en deurpaaie	5000	8000	1250	1800	1600	200	3000	500	250

INFORMATION ARROWS/
INLIGTINGSPYLE



WM5

COLOURS/KLEURE:

White/Wit

NOTES:

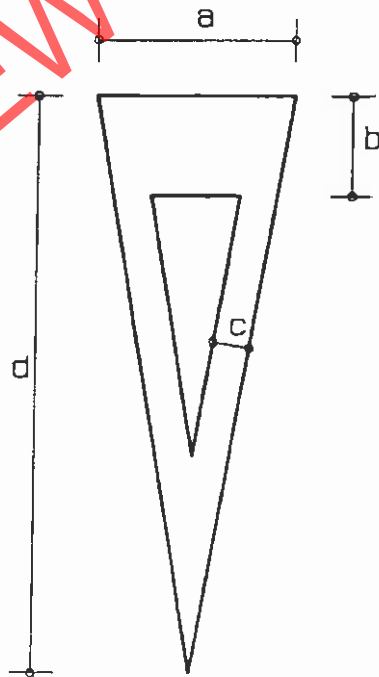
- 1 For details of use refer to SARTSM VOL1, Chapter 7, page 7.3 e
- 2 The symbol areas for the given values of width 'a' are
 - (a) for a = 450 - area = 0.2m²
 - (b) for a = 850 - area = 0.83m²
 - (c) for a = 1350 - area = 2.15m²

OPMERKINGS:

- 1 Vir detail van gebruik verwys na SAHPVT VOL1, Hoofstuk 7 bladsy 7.3 e.
- 2 Die simboolareas vir die gegewe waardes van breedte "a" is
 - (a) vir a = 450 - area = 0.2m²
 - (b) vir a = 850 - area = 0.83m²
 - (c) vir a = 1350 - area = 2.15m²

DIMENSIONS/AFMETINGS (mm)

Operating speed Bedryfspoed	km/h	Typical applications Tipiese toepassings	Distance from yield line Afstand vanaf toegeestreek	a	b	c	d
30 - 40		City centre Middestad	90m	450	250	100	1250
50 - 60		Urban Stedelik	120m	850	450	150	2500
70 - 120		Rural Plattelands	155m	1350	700	250	4000



YIELD CONTROL AHEAD/
TOEGEEBEHEER VOOR

Section 3.4 : SYMBOLIC - Advance Warning Signs

● = See Section 3.7 for variations appropriate to individual countries.





















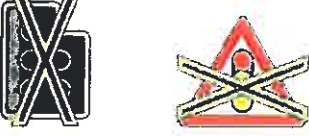






<p>W301</p> <p>TW301 References V1 3.4.1 V4 3.4.1</p> <p>Traffic Signals Ahead</p>	<p>W302</p> <p>TW302 References V1 3.4.1 V4 3.4.2</p> <p>Traffic Control "Stop" Ahead</p>	<p>W303</p> <p>TW303 References V1 3.4.2 V4 3.4.3</p> <p>Traffic Control "Yield" Ahead</p>	<p>TW304 References V1 3.4.2 V4 3.4.4</p> <p>Traffic Control Ahead</p>	<p>TW305 References V1 3.4.3 V4 3.4.5</p> <p>Scholar Patrol Ahead</p>
<p>W306 ●</p> <p>TW306 References V1 3.4.3 V4 3.4.6</p> <p>Pedestrian Crossing</p>	<p>W307 ●</p> <p>TW307 References V1 3.4.4 V4 3.4.7</p> <p>Pedestrians</p>	<p>W308 ●</p> <p>References V1 3.4.4 V4 3.4.8</p> <p>Children</p>	<p>W309 ●</p> <p>TW309 References V1 3.4.5 V4 3.4.9</p> <p>Cyclists</p>	<p>W310 ●</p> <p>TW310 References V1 3.4.5 V4 3.4.10</p> <p>Domestic Animals (Cattle)</p>
<p>W311 ●</p> <p>TW311 References V1 3.4.5 V4 3.4.11</p> <p>Domestic Animals (Horses)</p>	<p>W312 ●</p> <p>TW312 References V1 3.4.5 V4 3.4.12</p> <p>Domestic Animals (Sheep)</p>	<p>W313 ●</p> <p>References V1 3.4.6 V4 3.4.13</p> <p>Wild Animals Ahead</p>	<p>W314</p> <p>References V1 3.4.6 V4 3.4.14</p> <p>Gate</p>	<p>W315</p> <p>References V1 3.4.7 V4 3.4.15</p> <p>Motor Gate (Right)</p>
<p>W316</p> <p>References V1 3.4.7 V4 3.4.16</p> <p>Motor Gate (Left)</p>	<p>W317</p> <p>References V1 3.4.7 V4 3.4.17</p> <p>Motor Gate</p>	<p>W318 ●</p> <p>TW318 References V1 3.4.7 V4 3.4.18</p> <p>Railway Crossing</p>	<p>W319 ●</p> <p>References V1 3.4.8 V4 3.4.19</p> <p>Tunnel</p>	<p>W320</p> <p>TW320 References V1 3.4.8 V4 3.4.20</p> <p>Height Restricted</p>
<p>W321</p> <p>TW321 References V1 3.4.9 V4 3.4.21</p> <p>Length Restricted</p>	<p>W322</p> <p>TW322 References V1 3.4.10 V4 3.4.22</p> <p>Steep Descent</p>	<p>W323</p> <p>TW323 References V1 3.4.10 V4 3.4.23</p> <p>Steep Ascent</p>	<p>W324</p> <p>TW324 References V1 3.4.11 V4 3.4.24</p> <p>Slow Moving Heavy Vehicle</p>	<p>W325</p> <p>TW325 References V1 3.4.11 V4 3.4.25</p> <p>Gravel Road Begins</p>

● = See Section 3.7 for variations appropriate to individual countries

<p>W326</p>  <p>TW326</p>  <p>References V1 3.4.12 V4 3.4.26</p> <p>Narrow Bridge</p>	<p>W327</p>  <p>TW327</p>  <p>References V1 3.4.12 V4 3.4.27</p> <p>One Vehicle Width Structure</p>	<p>W328</p>  <p>TW328</p>  <p>References V1 3.4.13 V4 3.4.28</p> <p>Road Narrows Both Sides</p>	<p>W329</p>  <p>TW329</p>  <p>References V1 3.4.13 V4 3.4.29</p> <p>Road Narrows From Right Side Only</p>	<p>W330</p>  <p>TW330</p>  <p>References V1 3.4.13 V4 3.4.30</p> <p>Road Narrows From Left Side Only</p>
<p>W331</p>  <p>TW331</p>  <p>References V1 3.4.14 V4 3.4.31</p> <p>Uneven Roadway</p>	<p>W332</p>  <p>TW332</p>  <p>References V1 3.4.14 V4 3.4.32</p> <p>Speed Humps</p>	<p>W333</p>  <p>TW333</p>  <p>References V1 3.4.15 V4 3.4.33</p> <p>Slippery Road</p>	<p>W334</p>  <p>TW334</p>  <p>References V1 3.4.15 V4 3.4.34</p> <p>Falling Rocks (From Right)</p>	<p>W335</p>  <p>TW335</p>  <p>References V1 3.4.15 V4 3.4.35</p> <p>Falling Rocks (From Left)</p>
<p>TW336</p>  <p>References V1 3.4.18 V4 3.4.36</p> <p>Roadworks</p>	<p>TW337</p>  <p>References V1 3.4.17 V4 3.4.37</p> <p>Grader Working</p>	<p>TW338</p>  <p>References V1 3.4.17 V4 3.4.38</p> <p>Loose Stones</p>	<p>W339</p>  <p>TW339</p>  <p>References V1 3.4.18 V4 3.4.39</p> <p>General Warning</p>	<p>TW340</p>  <p>References V1 3.4.18 V4 3.4.40</p> <p>Surface Step (Right)</p>
<p>TW341</p>  <p>References V1 3.4.19 V4 3.4.41</p> <p>Surface Step (Left)</p>	<p>TW342</p>  <p>References V1 3.4.19 V4 3.4.42</p> <p>Soft Shoulder</p>	<p>TW343</p>  <p>References V1 3.4.20 V4 3.4.43</p> <p>"Stop/Go" Control Ahead</p>	<p>TW344</p>  <p>References V1 3.4.20 V4 3.4.44</p> <p>Construction Vehicles Crossing (From Left)</p>	<p>TW345</p>  <p>References V1 3.4.20 V4 3.4.45</p> <p>Construction Vehicles Crossing (From Right)</p>
<p>W346</p>  <p>TW346</p>  <p>References V1 3.4.21 V4 3.4.48</p> <p>Emergency Flashing Light</p>	<p>TW347</p>  <p>References V1 3.4.21 V4 3.4.47</p> <p>Temporary Police Flashing Light</p>	<p>W348</p>  <p>References V1 3.4.22 V4 3.4.48</p> <p>Jetty Edge or River Bank</p>	<p>W349</p>  <p>TW349</p>  <p>References V1 3.4.22 V4 3.4.49</p> <p>Crosswinds</p>	<p>W350</p>  <p>TW350</p>  <p>References V1 3.4.23 V4 3.4.50</p> <p>Drift</p>

Section 3.5 : HAZARD MARKER SIGNS

◉ = See Section 3.7 for variations appropriate to individual countries.

<p>W401</p>  <p>TW401</p>  <p>References V1 3.5.1 V4 3.5.1</p> <p>Danger Plate/ Delineator Plate</p>	<p>W402</p>  <p>TW402</p>  <p>References V1 3.5.1 V4 3.5.1</p> <p>Danger Plate/ Delineator Plate</p>	<p>W403</p>  <p>References V1 3.5.2 V4 3.5.2</p> <p>Railway Crossing</p>	<p>W404</p>  <p>References V1 3.5.2 V4 3.5.2</p> <p>Railway Crossing (more than one line)</p>
<p>W405</p>  <p>TW405</p>  <p>References V1 3.5.3 V4 3.5.3</p> <p>Sharp Curve Chevron (Single)</p>	<p>W406</p>  <p>TW406</p>  <p>References V1 3.5.3 V4 3.5.3</p> <p>Sharp Curve Chevron (Single)</p>	<p>W407</p>  <p>TW407</p>  <p>References V1 3.5.3 V4 3.5.4</p> <p>Sharp Curve Chevron (Triple)</p>	<p>W408</p>  <p>TW408</p>  <p>References V1 3.5.3 V4 3.5.4</p> <p>Sharp Curve Chevron (Triple)</p>
<p>W409</p>  <p>TW409</p>  <p>References V1 3.5.5 V4 3.5.5</p> <p>T-Junction Chevron</p>	<p>W410</p>  <p>TW410</p>  <p>References V1 3.5.8 V4 3.5.8</p> <p>Dead End / Road Closed Chevron</p>		
<p>W411</p>  <p>TW411</p>  <p>References V1 3.5.7 V4 3.5.7</p> <p>Boom/ Barricade</p>	<p>TW412</p>  <p>References V1 3.5.8 V4 3.5.8</p> <p>Traffic Signals Out of Order</p>		
<p>W413</p>  <p>TW413</p>  <p>References V1 3.5.8 V4 3.5.8</p> <p>Gore Plate</p>	<p>W414</p>  <p>TW414</p>  <p>References V1 3.5.8 V4 3.5.9</p> <p>Gore Chevron</p>	<p>W415</p>  <p>TW415</p>  <p>References V1 3.5.9 V4 3.5.11</p> <p>Overhead Danger Plate</p>	

Section 3.6 : COMBINATION - Advance Warning Signs

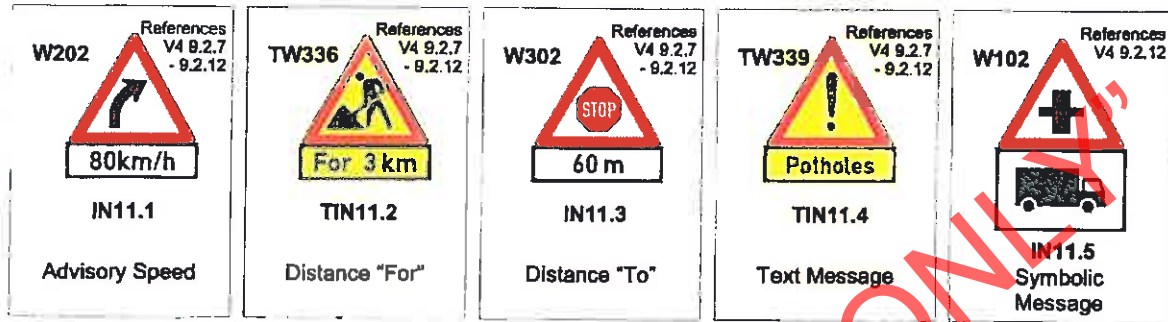
The effectiveness of advance warning signs may be enhanced by using them in combination with other road traffic signs such as :

(a) SUPPLEMENTARY PLATE information sign IN11;

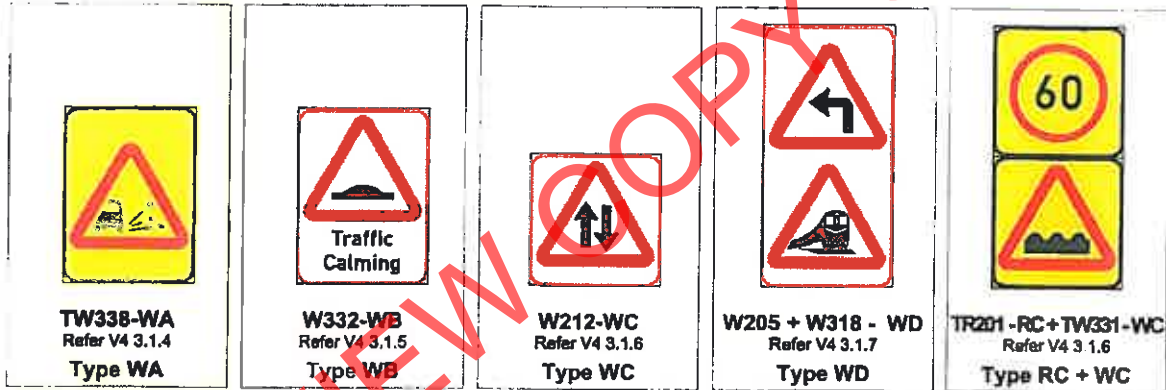
(b) HIGH VISIBILITY background signs;

(c) flashing yellow signals SS3; or combinations of several of these. Both permanent and temporary examples are shown.

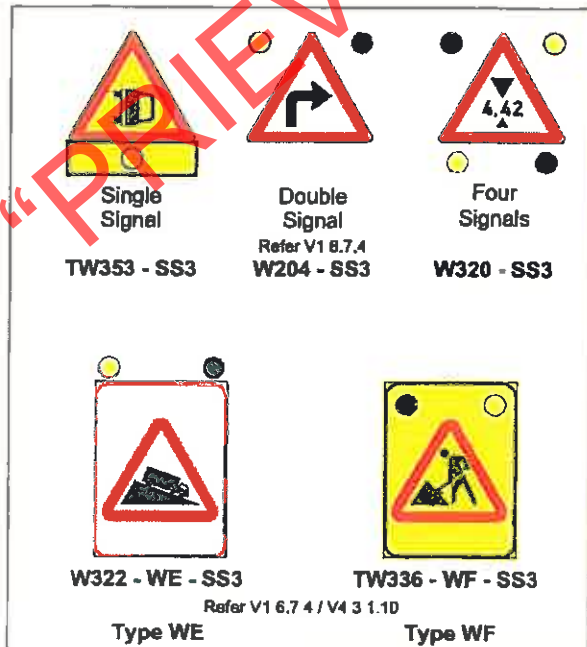
Advance Warning Signs with Supplementary Plates



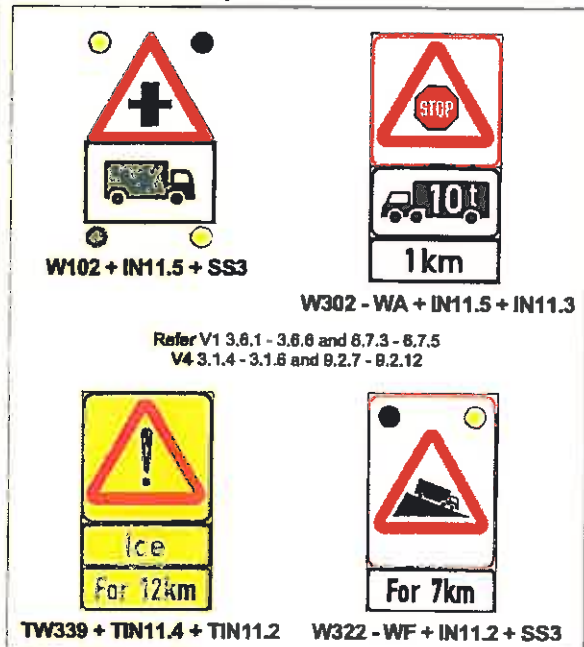
Advance Warning Signs in High Visibility Backgrounds



with Flashing Yellow Signals - SS3



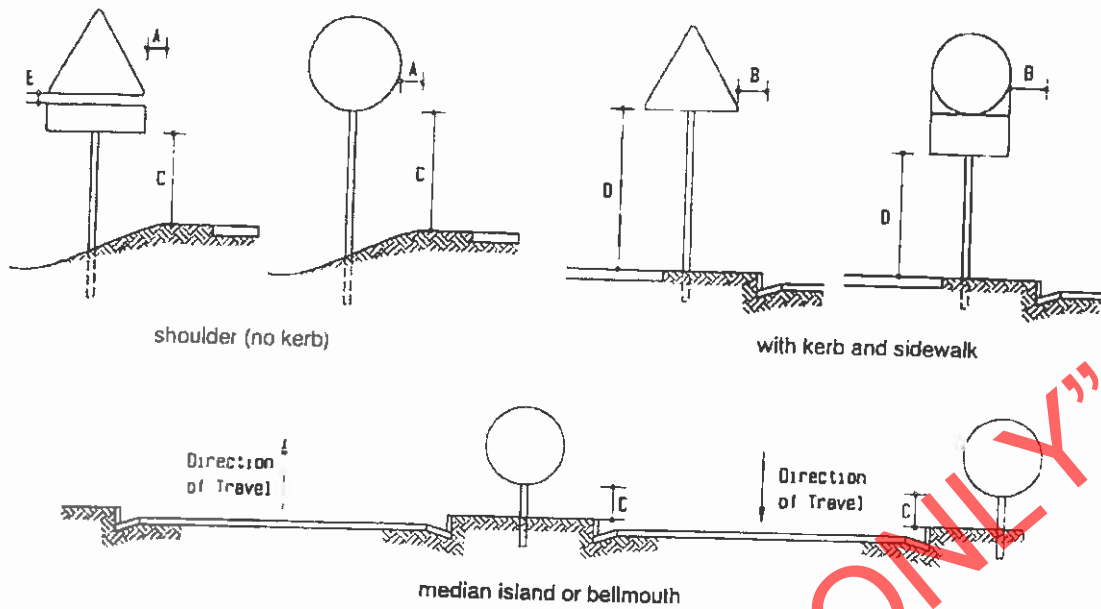
Multiple Combinations



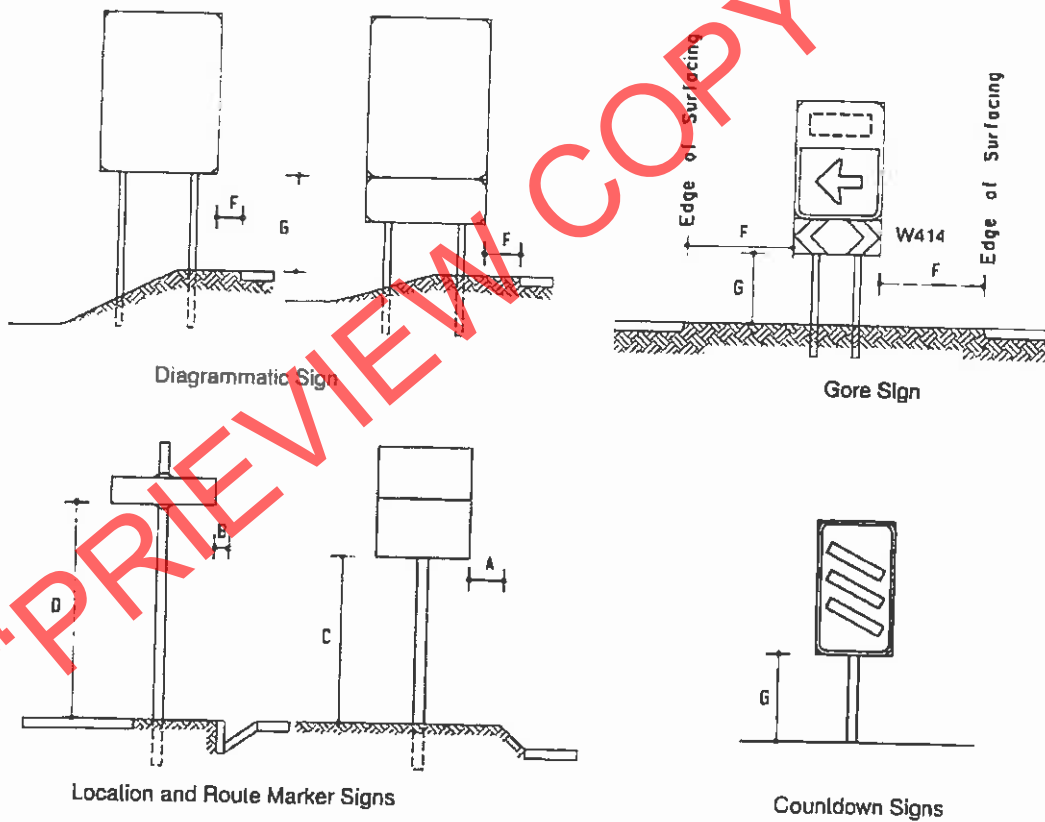
ANNEXURE E:

SIGN PLACEMENT

“PREVIEW COPY ONLY”



Detail 1.18.1 Regulatory and Warning Signs



Detail 1.18.2 Small to Medium Sized Guidance and Information Signs

Fig 1.18 Lateral and Vertical Positioning of Road Signs

Dimension	Minimum (mm)	Preferred (mm)	Maximum (mm)	Remarks
A	1200	1500	2000	See note (8)
B	500	750	-	See "R" and note (9)
C	600(300)	2100	2500	See note (10)
D	2100	2500	3000	See note (11)
E	0	0	200	See Chapter 3
F	600	1200	2000	
G	800	1200	1600	
H	-	-	6000	See note (12)
J	2000	4000	-	See note (13)
K	1600	2000	2400	See note (12) and (14)
L	750	-	-	
M	5200	5700	6200	
N	1000	1500	-	See "R" and note (9)
P	50	1000	-	
R	600	1500	-	See "B" , "N" and note (8)
T	1800	-	4200	See note (15)

NOTES

(Supplementary to Figures 1.17 and 1.18.)

- (1) The minimum size of DANGER PLATE signs W401 and W402 is 600 mm x 150 mm and the maximum size 1200 mm x 300 mm. The maximum size should be used on roads with an operating speed of 100 km/h or more at all bridge abutments, piers or parapets not protected by a guardrail. (Figure 1.17.)
- (2) A DANGER PLATE sign should not be used if it is likely to represent a greater hazard than the hazard it is intended to mark e.g. cross-drain/culvert ends. (Figure 1.17.)
- (3) Any dimension given in relation to guardrails presumes these are installed to correct safety standards (Figures 1.17 and 1.18.)
- (4) SHARP CURVE CHEVRON signs W405 and W406 should only be displayed in minimum sets of three, either as a connected set pointed in one direction, or as a spaced set (see Table 3.5), also pointing in one direction. (Figure 1.17.)
- (5) When SHARP CURVE CHEVRON signs are used on a long curve at least three signs must always be visible through vertical and horizontal curves. This requirement overrides any spacing recommendations given in Table 3.5. (Figure 1.17.)
- (6) In order to position SHARP CURVE CHEVRONS to best advantage on a long curve it is recommended that the first sign to be positioned should be placed on the approximate line of sight of drivers approaching on the tangent to the curve. Subsequent signs should then be spaced at a distance "S", backwards and forwards around the curve from this point (Table 3.5). For the purpose of such an exercise the value of the offset of the drivers' line of sight to the left of the road centre line can be assumed to be between 1200 mm and 1600 mm. (Figure 1.17.)
- (7) Temporary SHARP CURVE CHEVRON signs may be used as an alternative to DELINEATOR signs for greater impact, in a similar manner, at roadworks sites and detours.
- (8) Dimension "A" is measured from the shoulder break point (refer to Figure 1.18).
- (9) In an urban environment, where signs are commonly located behind a kerb, dimension "B" is suitable for small signs. Dimension "R" is more appropriate for larger signs such as DIRECTION signs. On higher speed urban or peri-urban roads dimension "N" may be used in preference to "R" or "B". (Figure 1.18.)
- (10) The range of mounting heights between 1500 mm and 2000 mm should be avoided for single pole mounted signs (Dimension "C") because there is a significant risk that, on impact by a motor car, the failure of a steel pole may result in such a sign penetrating the car windscreen. For a limited number

NOTES

CONSTRUCTION METHOD: SPEED HUMPS

1. Setting out of hump - see design before construction.
2. See code can to two days before construction.

ON CONSTRUCTION DAY:

1. Remove 600 mm asphalt strip.
2. Strip existing road signs and paint markings road markings.
3. Place asphalt in edge and compact with two passes without vibrator.
4. Place template - both sides of one lane at a time.
5. Press asphalt and raise it slightly higher than existing road surface.
6. Strip asphalt with straight edge (planned location is as long).
7. Remove templates and compact without vibrator (three passes).
8. Measure profile and re-set if necessary.
9. Final compaction with three to four passes with vibrator.
10. Paint speed hump the next day.

TRAFFIC SIGNS:

- 2.1 Only 40 headed bolts and nuts to be used on W and R unless (no brackets)

- 2.2 All signs must be according to the Road Traffic Signs Manual (60km/h zone)

- 2.3 All signs containing RT unless must have rounded edges

ROADMARKINGS:

All new road markings in thermoplastic

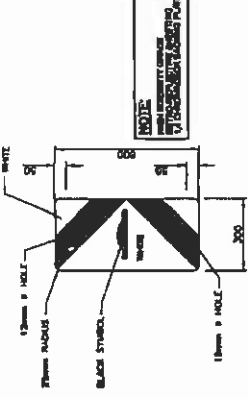
Code	Description	Scale	Notes
1.1	1.1	1:1	
1.2	1.2	1:1	
1.3	1.3	1:1	
1.4	1.4	1:1	

4. PLIABLE STRIPS

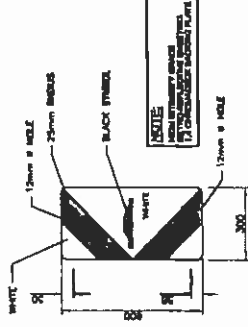
Installation of (three acrossumble edge * 120mm)

NOTE:

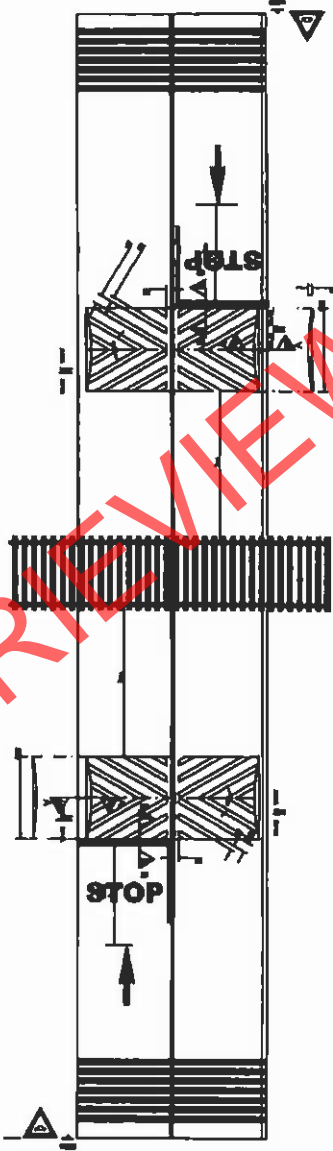
The Traffic Engineering and Operation section must be consulted to meet with the setting out of speed humps.



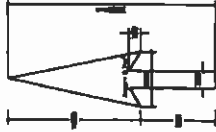
WARNING
DANGER PLATE SPEED HUMP (LEFT)
W416



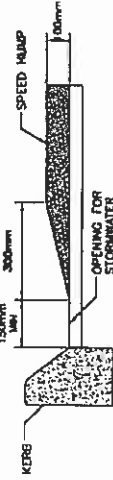
WARNING
DANGER PLATE SPEED HUMP (RIGHT)
W417



PLAN OF SPEED HUMPS



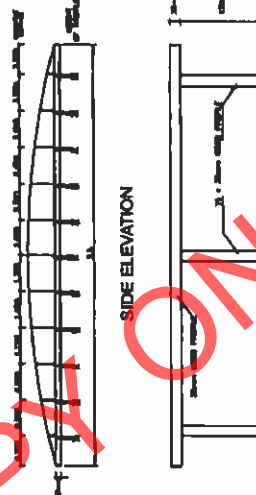
DETAIL OF SPEED HUMP ROAD MARKING



SECTION AA:
CONSTRUCTION DETAIL OF SPEED HUMPS
50/60 km/h



SECTION B-B:
CONSTRUCTION DETAIL OF SPEED HUMPS



SIDE ELEVATION

PLAN

TEMPLATE DETAIL FOR CONSTRUCTION OF SPEED HUMPS

NOT TO SCALE

TRANSPORT DEPOSIT
INFRASTRUCTURE MAINTENANCE

TRAFFIC CALMING MEASURES
TYPICAL SPEED HUMP AND ROADMARKINGS DETAIL

TRANSPORT DEPOSIT
INFRASTRUCTURE MAINTENANCE

TRANSPORT
freight rail

NO.	DATE	REVISION	BY

DATE: MARCH 2010
DRAWING NUMBER: KDS01
SHEET NUMBER: 1

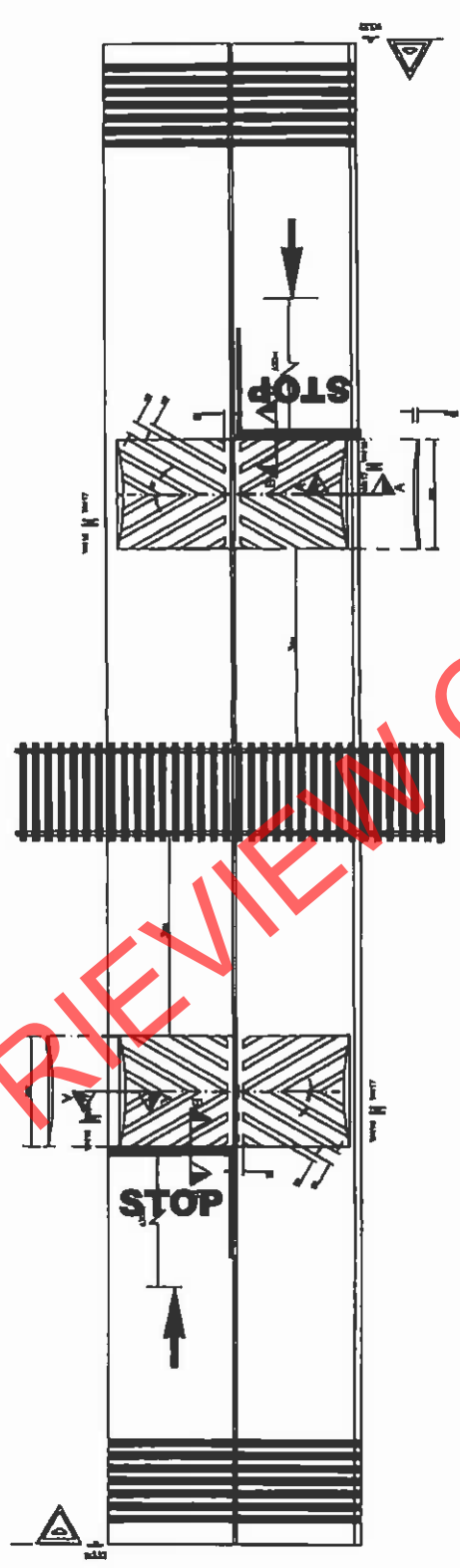
NOTES

- CONSTRUCTION METHOD: SPEED HUMP**
1. Build up of hump - low days before construction.
 2. Saw cuts one to two days before construction.
- ON CONSTRUCTION DAY:**
3. Remove 500 mm asphalt strip.
 4. Start erecting road signs and paint warning road marking.
 5. Place asphalt in strips and compact with two passes without vibration.
 6. Place tamper - both sides of one lane at a time.
 7. Place asphalt and roll on slightly higher than specified.
 8. Signs asphalt with asphalt edge (shown section 8 is long).
 9. Remove tamper and compact without vibration (first pass).
 10. Place tamper on both sides of one lane.
 11. Final compaction with three to four passes with vibrator.
 12. Paint speed hump the next day.
2. Traffic signs:
- 2.1. Only vehicular bolts and nuts to be used on W and R series (no Uni-locks)
 - 2.2. All signs must be according to the Road Traffic Signs Manual (current issue)
 - 2.3. All signs excluding R1 plates must have rounded edges
- 3. ROADWORKING:**
All rear road markings to be thermoplastic

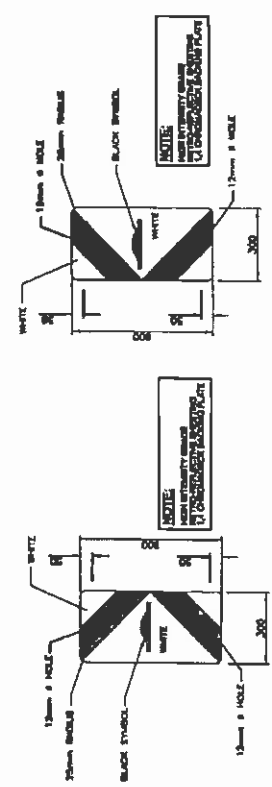
Author	Drawn	Checked	Scale
Date			

4. RUMBLE STRIPS
Installation of 10mm square rattle strips - 100mm

NOTE:
The Traffic Engineering and Condition section must always be consulted to assist with the building out of speed humps.



PLAN OF SPEED HUMP



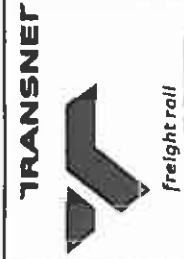
DANGER PLATE SPEEDHUMP (LEFT) W416 **DANGER PLATE SPEEDHUMP (RIGHT) W417**

NOT TO SCALE

DATE	MARCH 2010
DRAWING NUMBER	KDS01
SHEET NUMBER	2

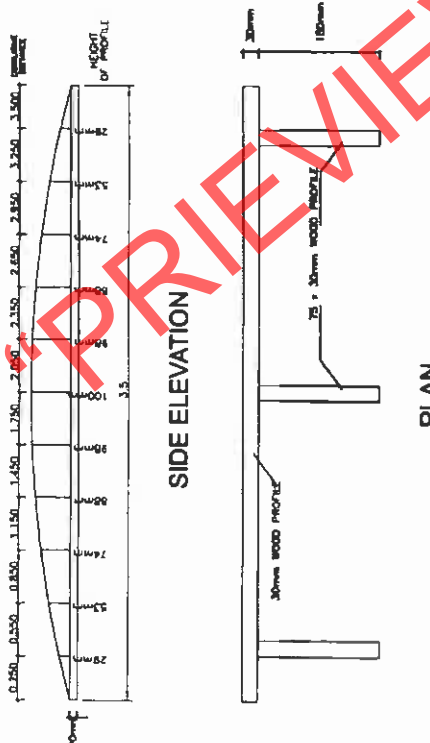
KOEDOESPOORT DEPOT INFRASTRUCTURE MAINTENANCE
TRAFFIC CALMING MEASURES
TYPICAL SPEED HUMP AND ROADMARKINGS DETAIL

TRANSNET FREIGHT RAIL
KOEDOESPOORT DEPOT INFRASTRUCTURE MAINTENANCE



NO.	DATE	REVISIONS

"PREVIEW COPY ONLY"



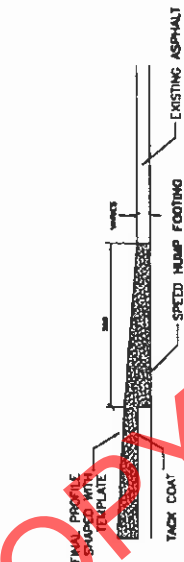
PLAN

TEMPLATE DETAIL FOR CONSTRUCTION OF SPEED HUMP

SECTION A-A:

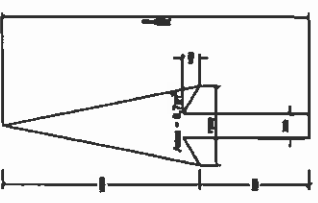
CONSTRUCTION DETAIL OF SPEED HUMP

50/60 Km/h



SECTION B-B:

CONSTRUCTION DETAIL OF SPEED HUMP



DETAIL OF SPEED HUMP ROAD MARKING

NOTES

- CONSTRUCTION METHODS: SPEED HUMPS**
- Building out of hump - low days before construction.
 - Speed hump to be laid before construction.
- ON CONSTRUCTION DAY:**
- Remove 100 mm asphalt surface.
 - Apply pre-paring coat and joint wearing bed paving.
 - Place asphalt in shape and compact with low pressure vibratory roller.
 - Place top-surface - both sides of one lane at a time.
 - Apply asphalt and raise to slightly higher than level.
 - Strip asphalt with straight edge (chevel) section (2 m long).
 - Remove top-surface and compact without roller (from left to right).
 - Repeat the procedure if necessary.
 - Final compaction with three to four passes with vibrator.
 - Paint speed hump the next day.
 - Traffic signs.

2.1 Only galvanized bolts and nuts to be used on W and R series (no U1-steel)

2.2 All signs must be according to the Road Traffic Signs Manuals (R2007:2008)

2.3 All signs excluding R1 series must have rounded edges

3. ROADMARKINGS:
All new road markings in thermoplastic

Code	Material	Color	Size	Application
W	White	White	20	Center line, edge line, etc.
R	Red	Red	20	Prohibitory signs
B	Blue	Blue	20	Informational signs
Y	Yellow	Yellow	20	Warning signs
G	Green	Green	20	Directional signs
BR	Brown	Brown	20	Archaeological sites
BL	Black	Black	20	Other signs

4. RULES STRIPS:
The width of a "turn across" curve strip is 100mm.

NOTE:
The Traffic Engineering and Direction section must always be consulted to assist with the setting out of tapered humps.

NOT TO SCALE

DATE	MARCH 2010
DRAWING NUMBER	KDS01
SHEET NUMBER	3

TRANSNET

 TRANSNET FREIGHT RAIL
 KOEDOESPOORT DEPOT
 INFRASTRUCTURE MAINTENANCE

TRAFFIC CALMING MEASURES
 TYPICAL SPEED HUMP AND ROADMARKINGS DETAIL

REV.	DATE	BY	CHECKED

DRIEFVIEW ONLY