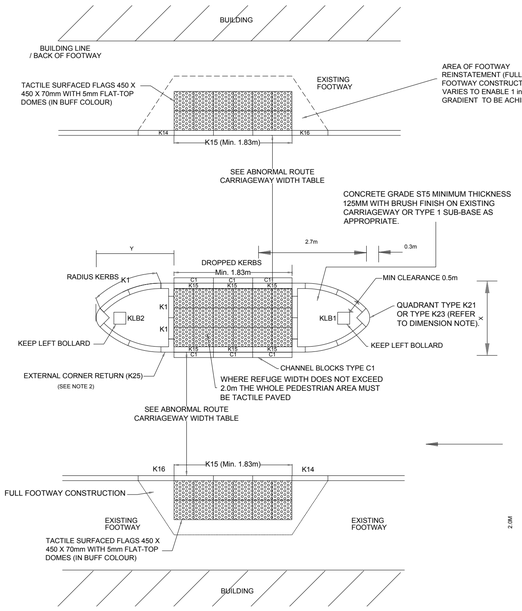
TYPICAL PEDESTRIAN REFUGE DETAIL



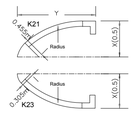
MINIMUM LANE CARRIAGEWAY WIDTH

TYPE OF ROAD	Desirable minimum carriageway lane width on both sides with 0.5m set back of street furniture (m)
RESIDENTIAL ROUTE	2.75 to 3.1m
MINOR ROUTE	2.75 to 3.1m
MAJOR/TRUNK ROUTE	4.1 to 4.3m
NATIONAL ABNORMAL ROUTE	=>4.3m

NOTE

1. A TRAFFIC LANE OF MINIMUM WIDTH 4.0m IS REQUIRED TO PERMIT SAFE OVERTAKING THE CYCLIST AT CENTRAL ISLAND. IF THE APPROACH TO THE NARROWED SECTION IS NOT STRAIGHT OR SIGNIFICANT NUMBERS OF HGVS OR BUSES ARE EXPECTED, THIS MINIMUM SHOULD BE INCREASED.

ON A WIDE LOAD ROUTE IF A WIDTH OF =>4.3M CANNOT BE ACHIEVED FLEXI BOLLARDS WITH A KNUCKLE JOINT TO THE BASE MUST BE USED



'X' PEDESTRAIN ISLAND WIDTH TO BE SPECIFIED IN THE CONTRACT

DIMENSIONS

THE DIMENSIONS OF THE ISLAND SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE.

ISLAND TYPE	TAPER DIMENSIONS AND KERBS			
	Quadrant	X	Kerbs	Y
1/1	K23	1.84m	2½ x 2.4 radius	2.09m
1/2	K21	2.05m	2½ x 2.4 radius	2.13m
1/3	K23	2.19m	3 x 3.0 radius	2.52m
1/4	K21	2.40m	3 x 3.0 radius	2.56m
1/5	K23	3.07m	4 x 4.5 radius	3.58m
1/6	K21	3.28m	4 x 4.5 radius	3.62m
1/7	K23	3.95m	5½ x 6.0 radius	4.64m
1/8	K21	4.16m	5½ x 6.0 radius	4.68m
2/1	K23	1.50m	2 x 1.8 radius	1.69m
2/2	K21	1.70m	2 x 1.8 radius	1.74m
3/1	K23	1.02m	1½ x 1m radius	1.10
3/2	K21	1.23m	1½ x 1m radius	1.15

NOTES
ALL RADIUS KERBS ARE HB2
125MM X 255MM
125MM X 150MM (DROPPED KERBS)

NOTES

1. THE FINISHED UPSTAND OF KERBS TO THE OUTSIDE OF THE PEDESTRIAN REFUGE ISLANDS SHALL BE 100MM OR 125MM, EXCEPT THE KERBS TYPE K15, WHICH SHALL FLUSH WITH CARRIAGEWAY SURFACE.

INCLUDED IN THE WORKS.
CHANNEL BLOCKS SHALL NOT BE PROVIDED IF CARRIAGEWAY SURFACING IS NOT

2. WHERE THE USE OF EXTERNAL RETURN KERBS TYPE K25 IS NOT APPROPRIATE DUE TO THE LONGFALL AND CROSSFALL OF THE CARRIAGEWAY, K1 KERBS SHALL BE USED, MITRED TO SUIT.
3. BOLLARDS SHALL BE AS SPECIFIED IN APPENDIX 12/1 AND SHALL CONFORM TO CLAUSE 1210.
4. FIXING OF BOLLARDS SHALL BE AS SHOWN ABOVE.
5. CENTRE REFUGE BEACON SHOULD ONLY BE CONSIDERED AFTER CONSULTATION WITH THE CASUALTY REDUCTION UNIT AND STREET LIGHTING UNIT. IF REQUIRED IT SHALL BE AS SPECIFIED IN APPENDIX 12/4 AND SHALL CONFORM TO CLAUSE 1214.
6. THE PEDESTRIAN REFUGE ISLANDS MUST BE A MINIMUM OF 1500mm IN WIDTH TO BE ABLE TO CATER FOR WHEELCHAIR USERS, BUT PREFERABLY 2000mm IN WIDTH.

PEDESTRIAN DROPPED CROSSING (1 DROPPER + N CENTRES = PC/N)

CONTROLLED PEDESTRIAN CROSSING

UNCONTROLLED PEDESTRIAN CROSSING

VEHICULAR DROPPED CROSSING (1 DROPPER + N CENTRES = VC/N)

SECTION A-A

SECTION A-A WITH CHANNEL BLOCK TYPE C1

SECTION B-B

SECTION C-C

NOTE

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. WHERE THE SUFFIX "V" IS INCLUDED GRADE C25/30 CONCRETE SHALL BE USED IN FOUNDATIONS AND BACKING. ALL OTHER INSITU CONCRETE SHALL BE CLASS C8/10 OR ST2
3. CENTRE KERBS TO BE HALF KERB LENGTH WHEN LAID TO RADII LESS THAN 15 METRES.
4. NUMBER OF CENTRE KERBS WILL VARY.
5. K15 KERBS TO BE SET FLUSH TO CHANNEL BLOCKS EXCEPT WHERE BACKFALL TO FOOTWAY IS UNAVOIDABLE IF SO SET K15 KERBS 6mm ABOVE CHANNEL BLOCKS FOR DRAINAGE PURPOSES
6. CHANNEL BLOCKS SHALL NOT BE PROVIDED IF CARRIAGEWAY SURFACING IS NOT INCLUDED IN THE WORKS.

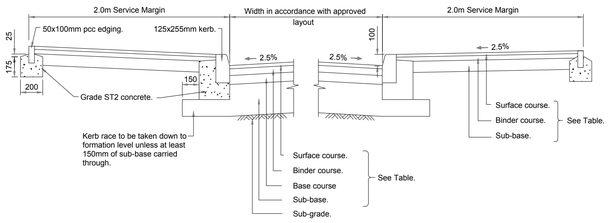
FOOTWAY TIE-IN DETAIL

CARRIAGEWAY TIE-IN DETAIL

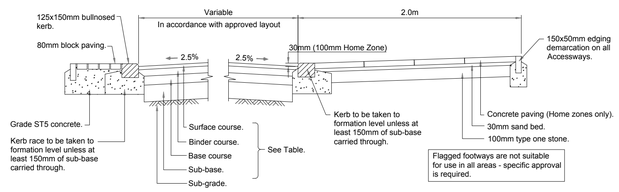
1. Unless stated otherwise all dimensions are in millimetres.

THIS DETAIL SHOWS NEW TO NEW & NEW TO EXISTING, TRADITIONAL ESTATE ROAD TO AN EXISTING TRADITIONAL ESTATE ROAD TIE-IN DETAILS

FOR ANY OTHER CATEGORY OF ROAD, A BESPOKE TIE-IN DETAIL IS REQUIRED



LOCAL RESIDENTIAL STREET, CONNECTOR STREETS AND INDUSTRIAL ROADS. TYPICAL CROSS SECTION.



SHADED SURFACE AND HOME ZONE STANDARD TYPICAL DETAIL

Alternative footway construction - Home Zones and Conservation Areas.

Standard 80mm concrete block paviours.

Flags or small unit paving - (Not suitable for footway vehicular crossings or other area vulnerable to vehicular traffic).

PAVEMENT DESIGN

ROAD LAYER	MATERIAL	MATERIAL CHOICES	LOCAL RESIDENTIAL STREET (msa- 3-) in mm	CONNECTOR STREET (msa- 4.5-) in mm	INDUSTRIAL ROAD (msa- 11)- in mm
SURFACE COURSE	10mm stone mastic asphalt surface course SMA 10 surf 40 /60	SMA, Thin Surface Course Systems, AC, HRA	50	50	50
BINDER COURSE	0 /20, AC 20 HDM bin 40 /60	AC (DBM 50, HDM 50), HRA	60	60	60
BASE COURSE	0 /32, AC 32 HDM base 40 /60	AC	130	150	170

msa - Traffic in Million Standard Axles for 40 year period.
1. Total Asphalt thickness depends on the traffic (msa)
2. The total Asphalt thickness for Key routes and New roads shall be designed using actual / forecast traffic (msa) using DMRB Standards
3. All longitudinal joints in all layers shall be situated outside wheel track zones, refer MCHW Cl 903.21.
4. The joints in different pavement layers should not coincide. Transverse joints shall have an overlap not wider than 300mm. The longitudinal joint overlap width may be extended to a maximum of 500mm. Refer MCHW Cl 920.10.

PAVEMENT FOUNDATION DESIGN

	SUBBASE ON CAPPING			SUBBASE ONLY
CBR%	CAPPING (mm) + SUB-BASE (mm)			SUB-BASE (mm)
<2.5	Ground improvement will need to be consideredto improve the subgrade CBR			
2.5	430	250		420
3	380	230		370
4	320	220	OR	320
5-15	260 - 160	200		280 - 210
>15	150	200*		200*

*Minimum required type 1 subbase thickness to achieve 450mm (from the designed final surface) of non-frost susceptible material

FOOTWAY AND CYCLEWAY PAVEMENT DESIGN

TYPE	CBR	SUB-BASE (mm)	BASE (mm) AC 32 dense base 100 / 150	BINDER COURSE (mm) AC 20 dense bin 100 /150	SURFACE COURSE (mm) AC 6 dense surf 100 /150 or 15/10F HRA Surf 100/150
Pedestrian only Footway / Cycleway or Footpath	≥ 2.5%	100	0	50	20
Vehicular Footway Crossing or Light-Vehicle footways / cycleways	≥ 2.5%	225	0	50	20
Heavy-vehicle footways / cycleways	≥ 2.5%	320	90	0	25
	≥ 2.5% & ≤ 4%	210	90	0	25

General Notes

- This drawing should not be scaled for setting out purposes.
- This drawing shows the detailed design only and is subject to Local Authority approval.
- This drawing is based upon a topographical / ordnance survey provided by others.
- This drawing is to be read in conjunction with all other relevant drawings.
- Any conflict between the details shown on this drawing and those of any other related drawings should be noted to the engineer prior to construction on site.
- All dimensions are in millimetres unless otherwise stated.

Construction Notes

- All levels to be confirmed on site prior to commencement of any works.
- Any existing utility covers retained are to be adjusted to suit proposed levels – cover class to be upgraded if required.
- Any existing utility covers that are damaged will require renewing and resetting.
- Gullies located in shared use surfaces must have suitable pedestrian and cyclist friendly covers. The openings in gully gratings must not align with cyclists anticipated wheel tracks.
- Any soft areas will require excavating until firm ground is found and backfilling with a 6F2 material and to be compacted in 150mm layers.
- Proposals assume a CBR of 2% – CBR tests to be undertaken by others for actual values and construction altered to suit.

Kerbing Notes

- Suitable transition kerbs shall be used at all changes in kerb face.
- For radii of 12m or less – kerbs of the appropraite radius shall be used. For radii 12m and above – straight kerbs 600mm long shall be used.
- The length of any kerb shall not be less than 450mm.

PARAGON HIGHWAYS

PROJECT TITLE
CROSSLEY LANE, DALTON

DRAWING TITLE
SECTION 278 – STANDARD DETAILS

DRAWING NUMBER

ORIGINATOR	PROJECT	VOL.	TYPE	ROLE	NUMBER
PRGN –	937 –	HGN –	DR –	CH –	0007 B

CLIENT
CREST NICHOLSON YORKSHIRE

SCALE	SIZE	DRAWN	CHECKED	AUTHORISED	DATE
NTS	A1	AH	LO	AH	NOV 24

PARAGON HIGHWAYS
PEACH HOUSE WEST, THE WALLED GARDEN
NOSTELL ESTATE YARD
WAKEFIELD WF4 1AB

01924 291536
MAIL@PARAGONHIGHWAYS.COM

COPYRIGHT © 2024 PAUL HOWARTH HIGHWAY CONSULTANTS LTD T/A PARAGON HIGHWAYS