



ODYSSEY

DEVELOPING JOURNEYS

KINGFISHER GROVE, WOKINGHAM

**ESTATE ROADS AND ACCESS
SPECIFICATION**



Kingfisher Grove, Wokingham

**ESTATE ROADS AND ACCESS SPECIFICATION
ON BEHALF OF SOVERIGN**

Prepared by

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December 2025

**DOCUMENT CONTROL SHEET**

Project Name Kingfisher Grove, Wokingham

Project No. 23-117

Rev	Issue Purpose	Author	Checked	Reviewed	Approved	Date
-	Issue to client	BJ	BO	BJ	BC	31/10/25
A	Issue to client	BJ	BO	BJ	GG	18/11/25
B	Issue to client	BJ	BO	BJ	GG	05/12/25



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1.0 INTRODUCTION

1.1 *Preamble*

1.1.1 This specification document supports the discharge of Condition 07 of the Outline Planning Consent and the S106 Estate Roads Specification for the Kingfisher Grove residential development in Wokingham.

1.1.2 Condition 07 states *“Prior to the commencement of development, full details of the construction of the access, including levels, widths, construction materials, depths of construction, surface water drainage, boundary treatment, landscaping and lighting shall be submitted to and approved in writing by the local planning authority. Each dwelling shall not be occupied until the vehicle access to serve that dwelling has been constructed in accordance with the approved details to road base level and the final wearing course will be provided within 3 months of occupation, unless otherwise agreed in writing by the local planning authority.”*

1.1.3 *“Prior to Commencement of Development to pay to the Council the Estate Roads Inspection Fee and to submit to the council for its approval in writing (such approval not to be unreasonably withheld or delayed) a Detailed Specification in respect of the Estate Roads which sets out the construction of the Estate Roads which must be to a durable and serviceable standard.”*

1.1.4 It defines the technical parameters and materials to be applied in the design and construction of the estate road access and associated works, ensuring compliance with Wokingham Borough Council (WBC) Design Guide and Specification for Adoptable Roads.

1.2 *Accompanying Drawings*

1.2.1 The following drawings prepared by Odyssey Consult Ltd accompany this specification are shown in **Table 1-1** below.

**Table 1-1: Accompanying Drawings**

Drawing Number	Drawing Title
23-117-100	Site Access Constraints Layout
23-117-101	Site Location Plan
23-117-102	Site Access Clearance Layout
23-117-103	Site Access General Arrangement
23-117-104	Site Access Construction Make-up
23-117-105	Site Access Signage and White Lining
23-117-106	Site Access Engineering Layout
23-117-107	Site Access Long Sections
23-117-108	Site Access Construction Details

1.3 3. Design Standards and References

1.3.1 The estate access and road design has been developed in accordance with the following documents and standards:

- Wokingham Borough Council Design Guide and Specification for Adoptable Roads
- Wokingham Borough Council Highways Design Guide for Developers
- Design Manual for Roads and Bridges (DMRB)
- Specification for Highway Works (SHW)
- Manual for Streets (MfS1 & MfS2)
- CIRIA SuDS Manual (C753)

1.4 Estate Access Layout

1.4.1 The proposed estate access is designed to serve the development in accordance with WBC's visibility and geometry requirements.

1.4.2 The access ties into the existing highway with a **6.0m wide carriageway** and **2.0m wide footways** on both sides.

1.4.3 Visibility splays of **2.4m x 43m** are provided in each direction and have been demonstrated to be achievable within the adopted highway or within the applicant's control.

1.4.4 Vehicle tracking confirms that a large refuse vehicle can enter and exit the site in forward gear.



1.5 Construction Specification

1.5.1 The construction make-up for the access and estate roads follows WBC and SHW standards. The proposed typical construction details are as follows:

- **Carriageway:** 40mm SMA Surface Course, 60mm Binder Course, 150mm Type 1 Sub-base
- **Footways:** 25mm AC10 Surf, 50mm Binder, 100mm Type 1 Sub-base
- **Shared surfaces:** As per WBC specification for light vehicular loading areas
- **Kerbs:** HB2 for carriageway, 50mm splayed kerb to crossings, bullnose kerbs for internal radii

1.6 Drainage and Levels

1.6.1 Surface water drainage has been designed to capture and convey runoff from the access and estate roads to the approved site drainage network, ensuring discharge does not exceed greenfield rates.

1.6.2 Levels are designed to direct flows towards kerb lines and the proposed gullies located to the north of the access junction.

1.6.3 All pipework and manholes conform to *Sewers for Adoption 7th Edition* and WBC drainage requirements.

1.7 Materials and Finishes

1.7.1 Surfacing materials have been selected to ensure long-term durability and low maintenance.

1.7.2 Tactile paving is provided at pedestrian crossing points, and block paving is limited to private drives.

1.7.3 Footways are asphalt surfaced with concrete edgings, and grass verges are topsoiled and seeded.

1.8 Lighting and Street Furniture

1.8.1 Street lighting design is to be undertaken by others and coordinated with WBC prior to installation.



1.8.2 Ducts for electrical and communication services are to be installed in advance of final surfacing.

1.8.3 Signage and road markings are provided as shown on Odyssey **Drawing 23-117-105**.

1.9 *Compliance Statement*

1.9.1 This specification confirms that the estate road and access works at Kingfisher Grove comply with the standards and guidance set by WBC and SHW.

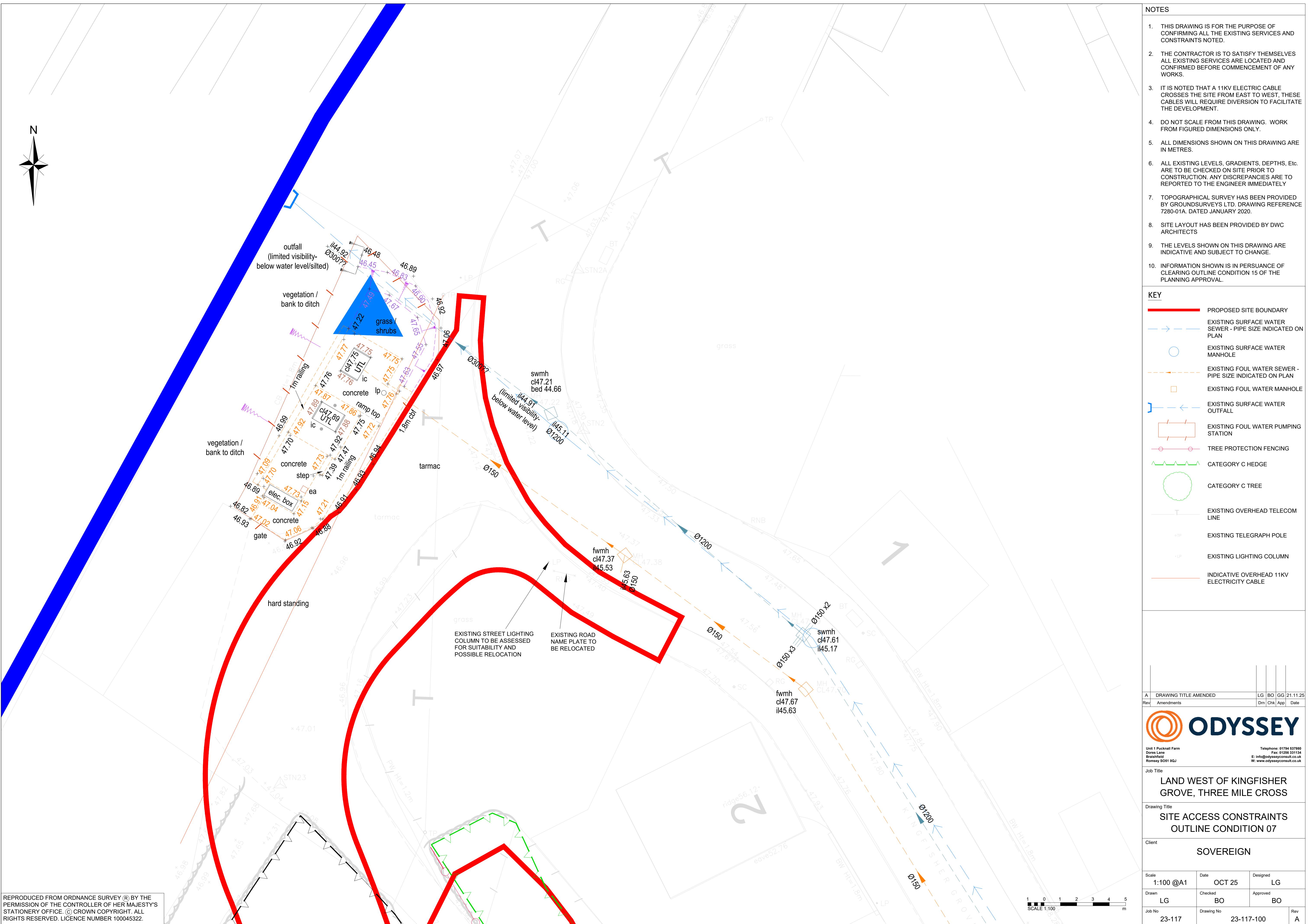
1.9.2 All materials and construction methods will ensure durability, serviceability, and maintainability suitable for long-term adoption.

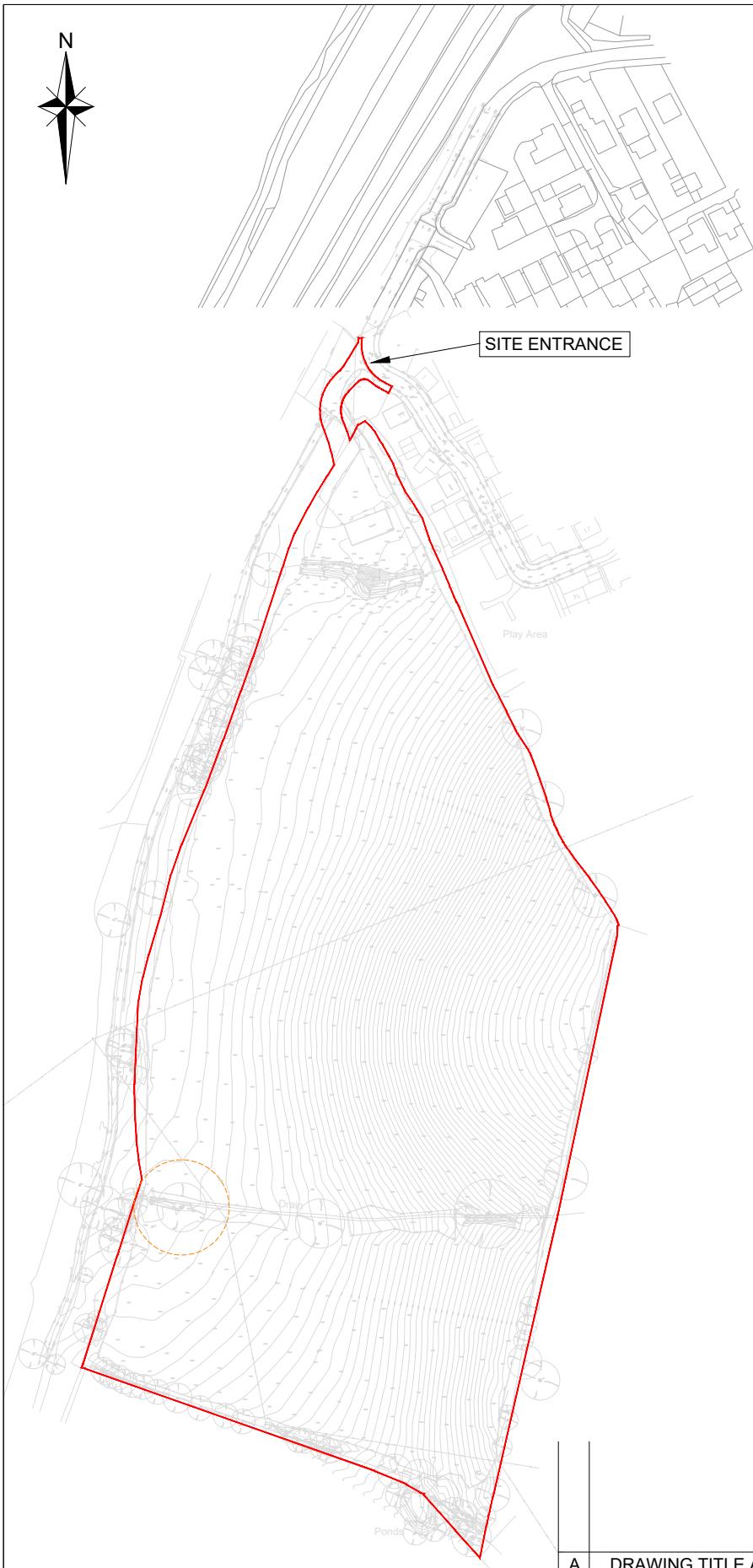


2.0 CONCLUSION

2.1.1 This document, read alongside **Odyssey Drawings 23-117-100 to 108**, provides the full technical basis for the discharge of **Condition 07 (Access Construction)** and the **S106 Estate Roads Specification**. The proposed works ensure safe and adoptable access in accordance with WBC standards.

DRAWINGS

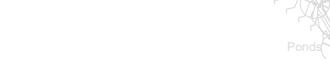


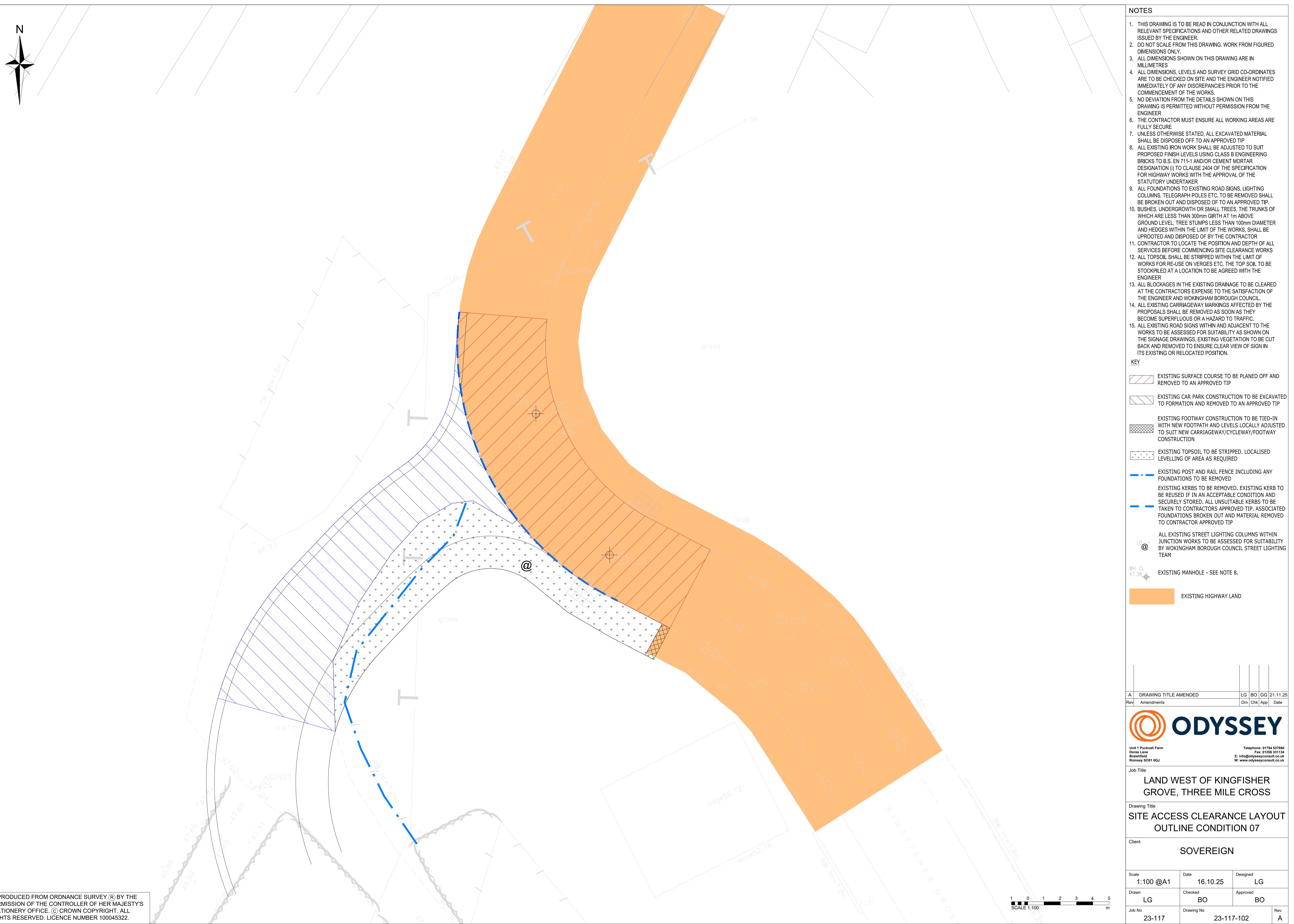


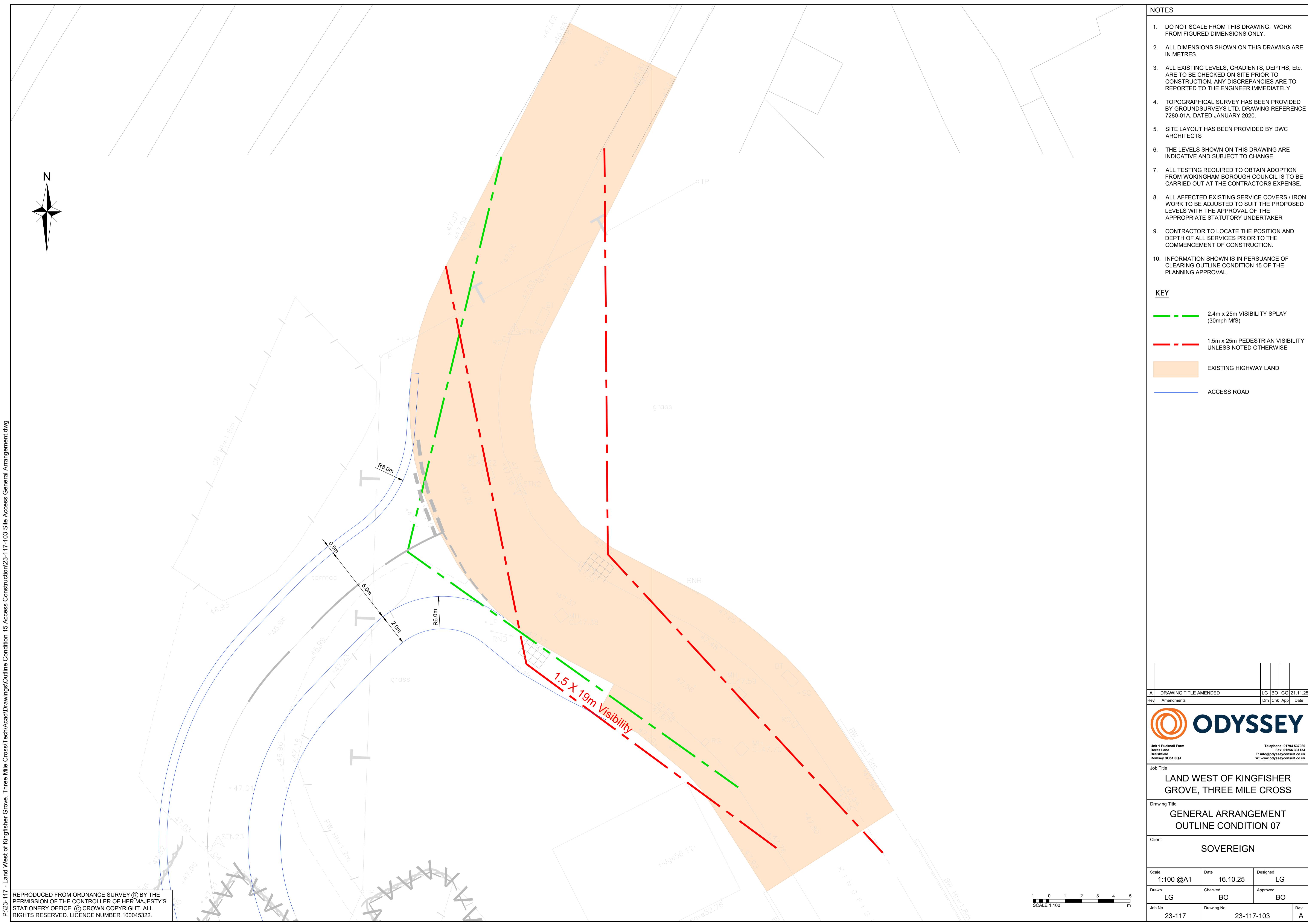
1. DO NOT SCALE FROM THIS DRAWING.
WORK FROM FIGURED DIMENSIONS
ONLY.
2. ALL DIMENSIONS SHOWN ON THIS
DRAWING ARE IN METRES.
3. ALL EXISTING LEVELS, GRADIENTS,
DEPTHs, Etc. ARE TO BE CHECKED ON
SITE PRIOR TO CONSTRUCTION. ANY
DISCREPANCIES ARE TO BE REPORTED
TO THE ENGINEER IMMEDIATELY
4. TOPOGRAPHICAL SURVEY HAS BEEN
PROVIDED BY GROUNDSURVEYS LTD.
DRAWING REFERENCE 7280-01A.
DATED JANUARY 2020.
5. INFORMATION SHOWN IS IN
PERSUANCE OF CLEARING OUTLINE
CONDITION 07 OF THE PLANNING
APPROVAL.

KEY

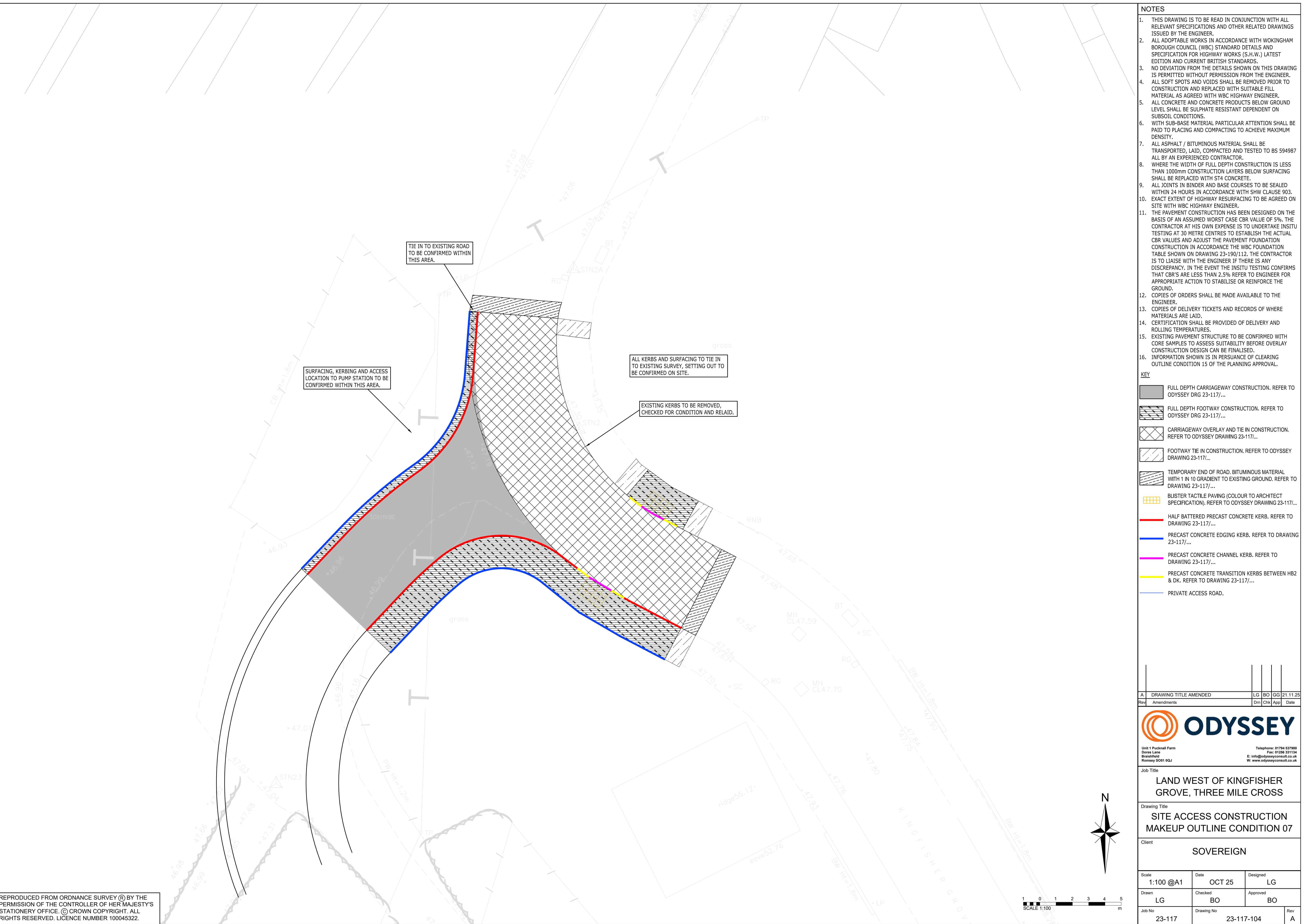
PROPOSED SITE BOUNDARY

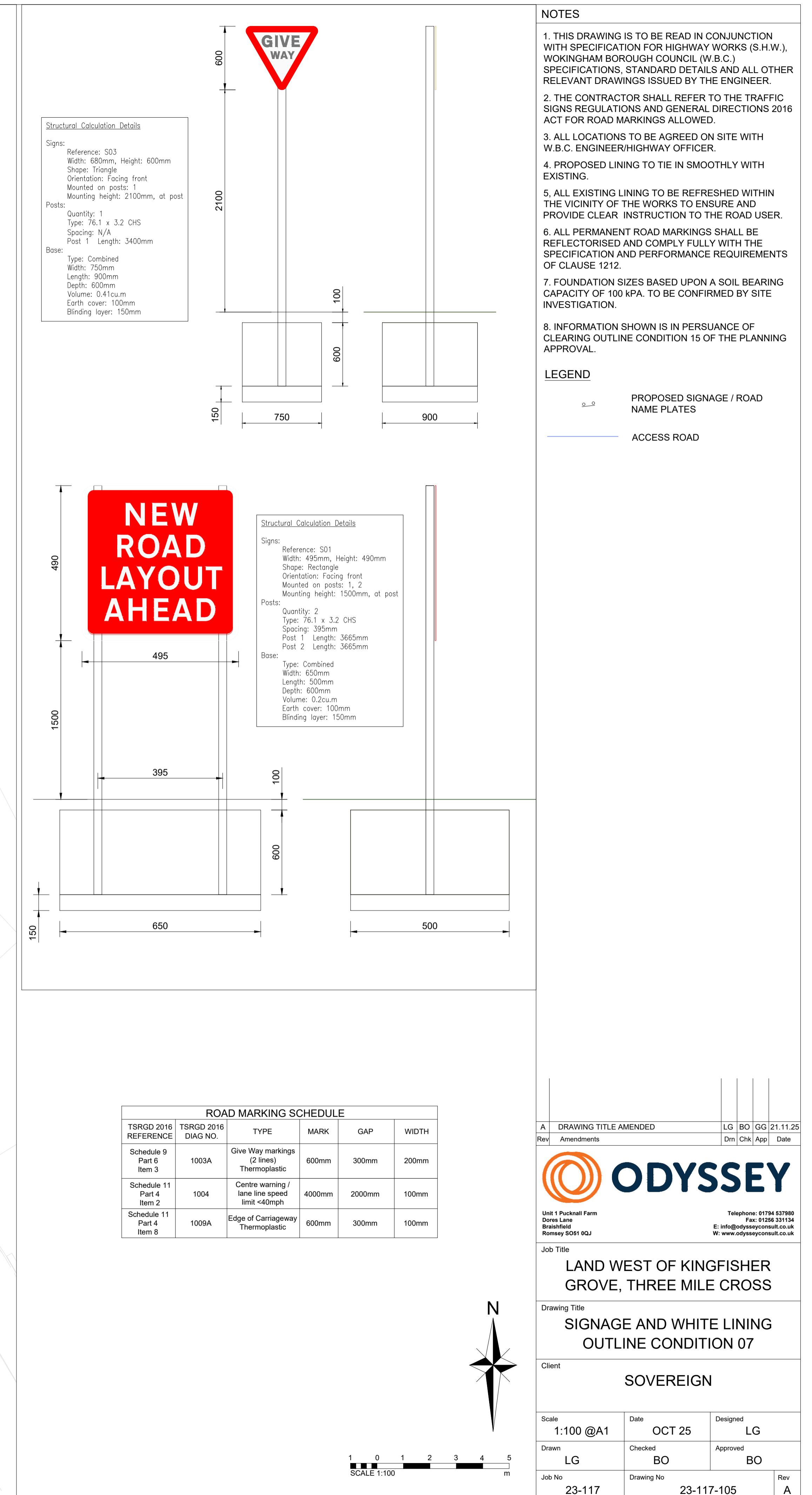
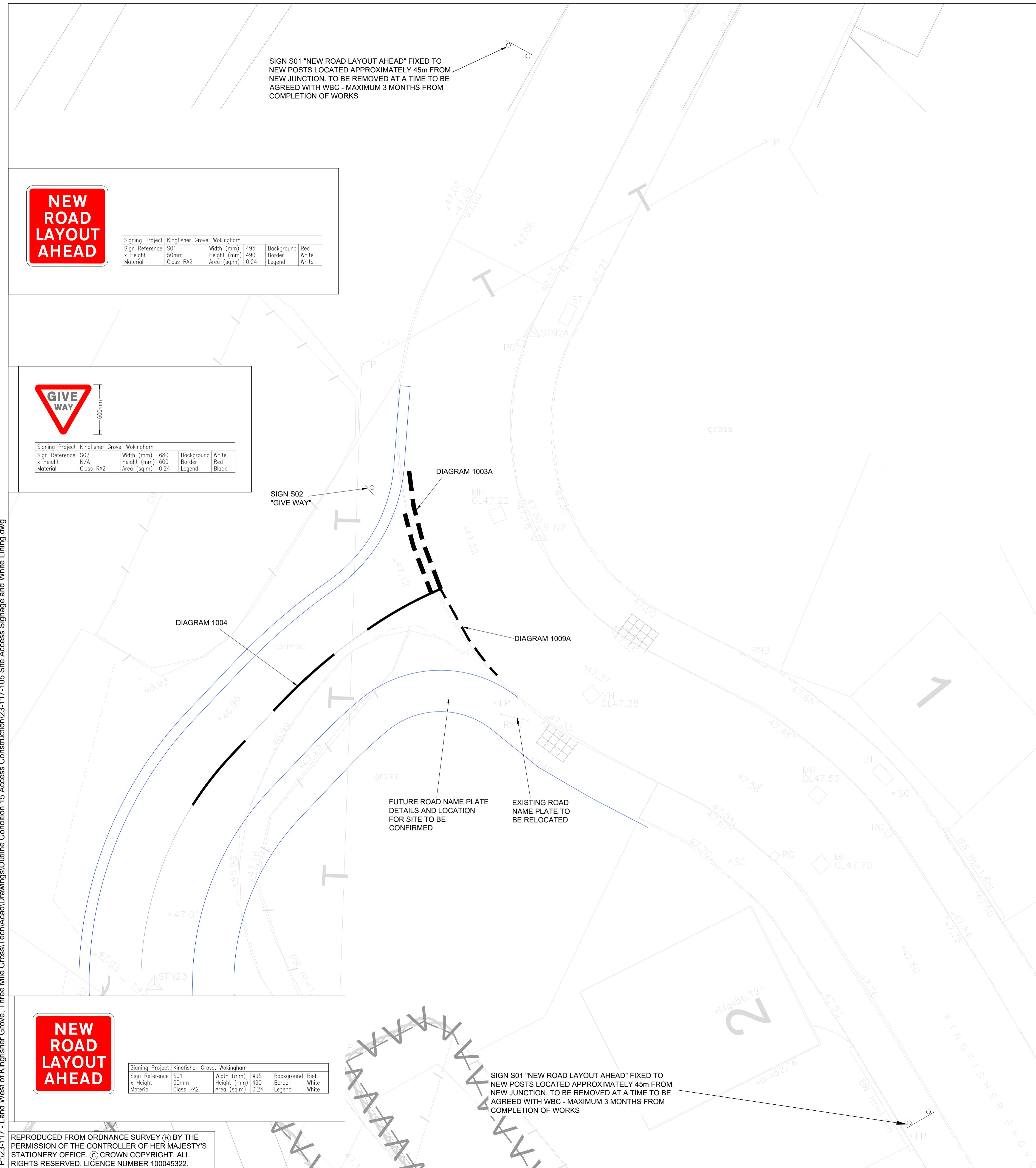
										
		A	DRAWING TITLE AMENDED			LG	BO	GG	21.11.25	
		Rev	Amendments			Drn	Chk	App	Date	
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		Drawing Title	LOCATION PLAN		Drawn	LG	Checked	BO	Approved	BO
Unit 1 Pucknall Farm Dores Lane Braishfield Romsey SO51 0QJ		Client	SOVEREIGN		Job No	23-117			Drawing No	23-117-101
									Rev	A
Telephone: 01794 537980 Fax: 01256 331134										
E: info@odysseyconsult.co.uk W: www.odysseyconsult.co.uk										

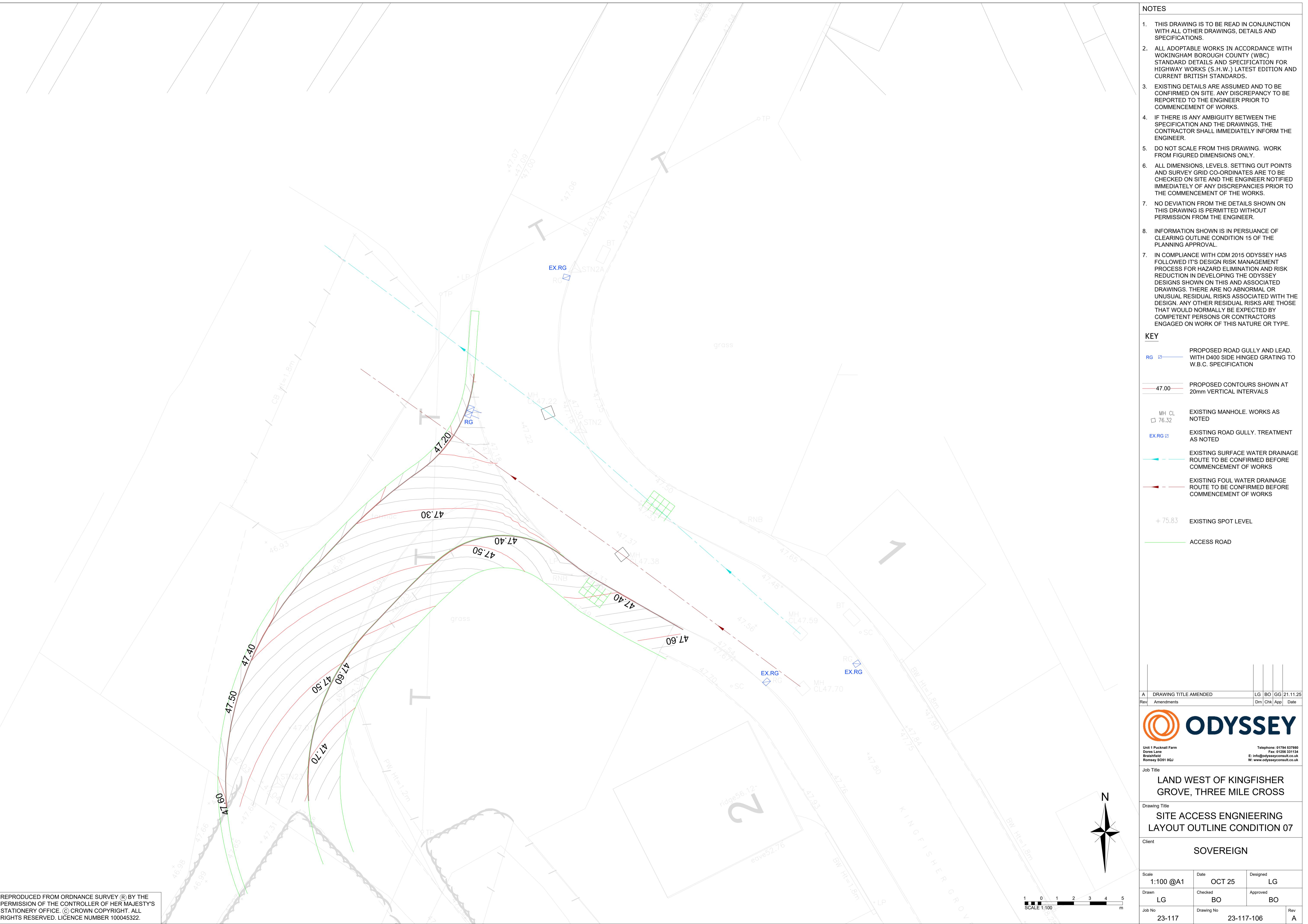




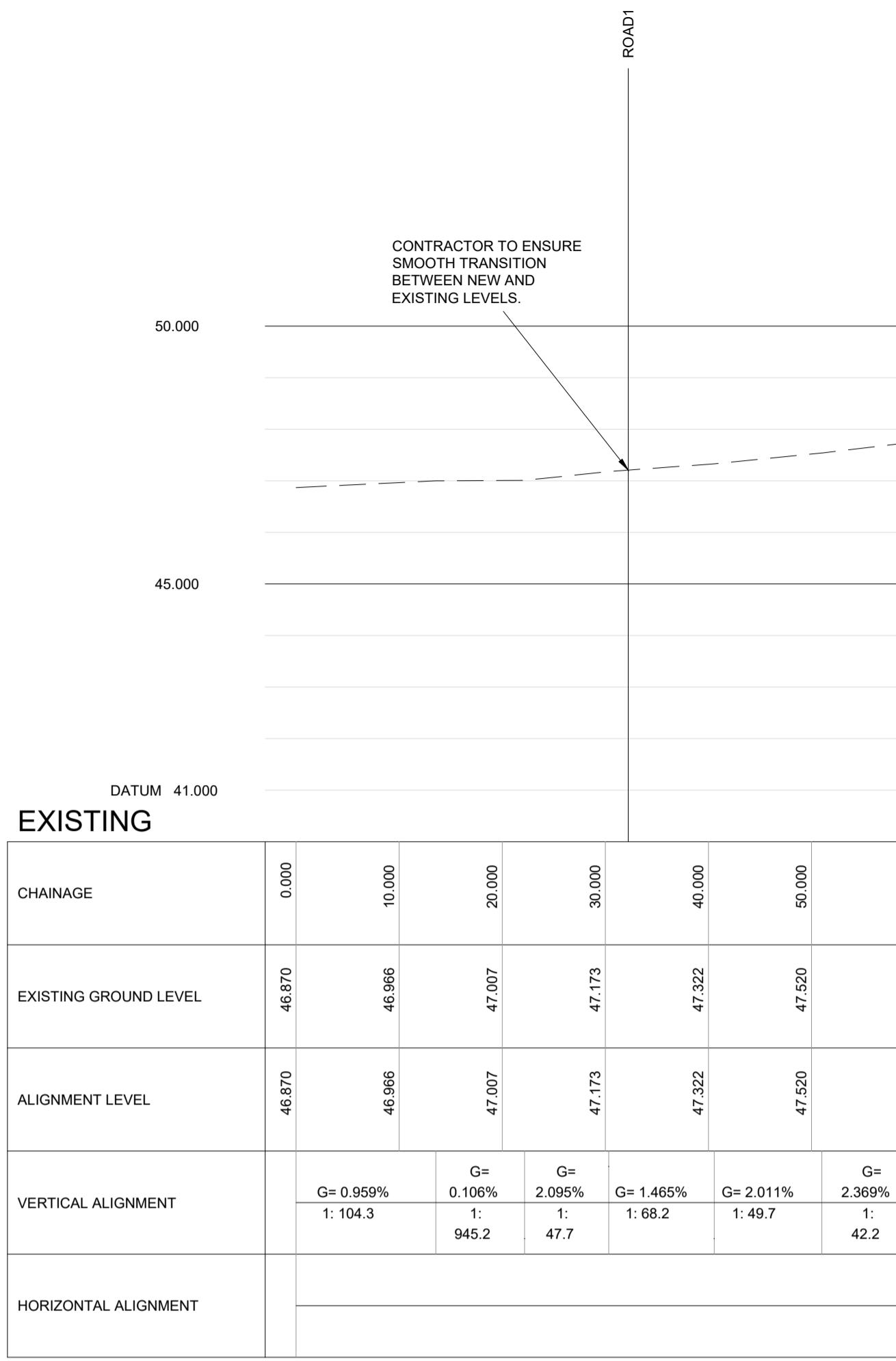
P:123-117
REPRODUCED FROM ORDNANCE SURVEY ® BY THE
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STATIONERY OFFICE. © CROWN COPYRIGHT. ALL
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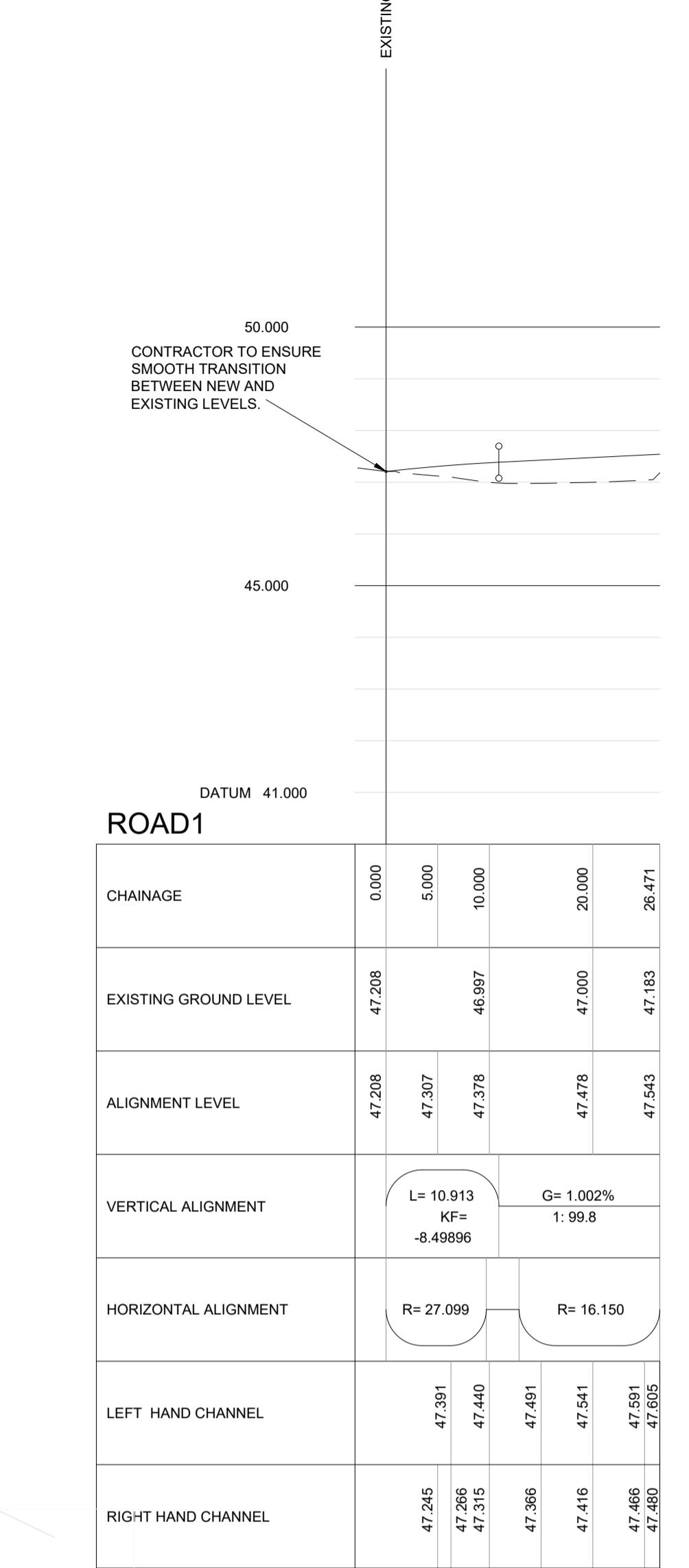




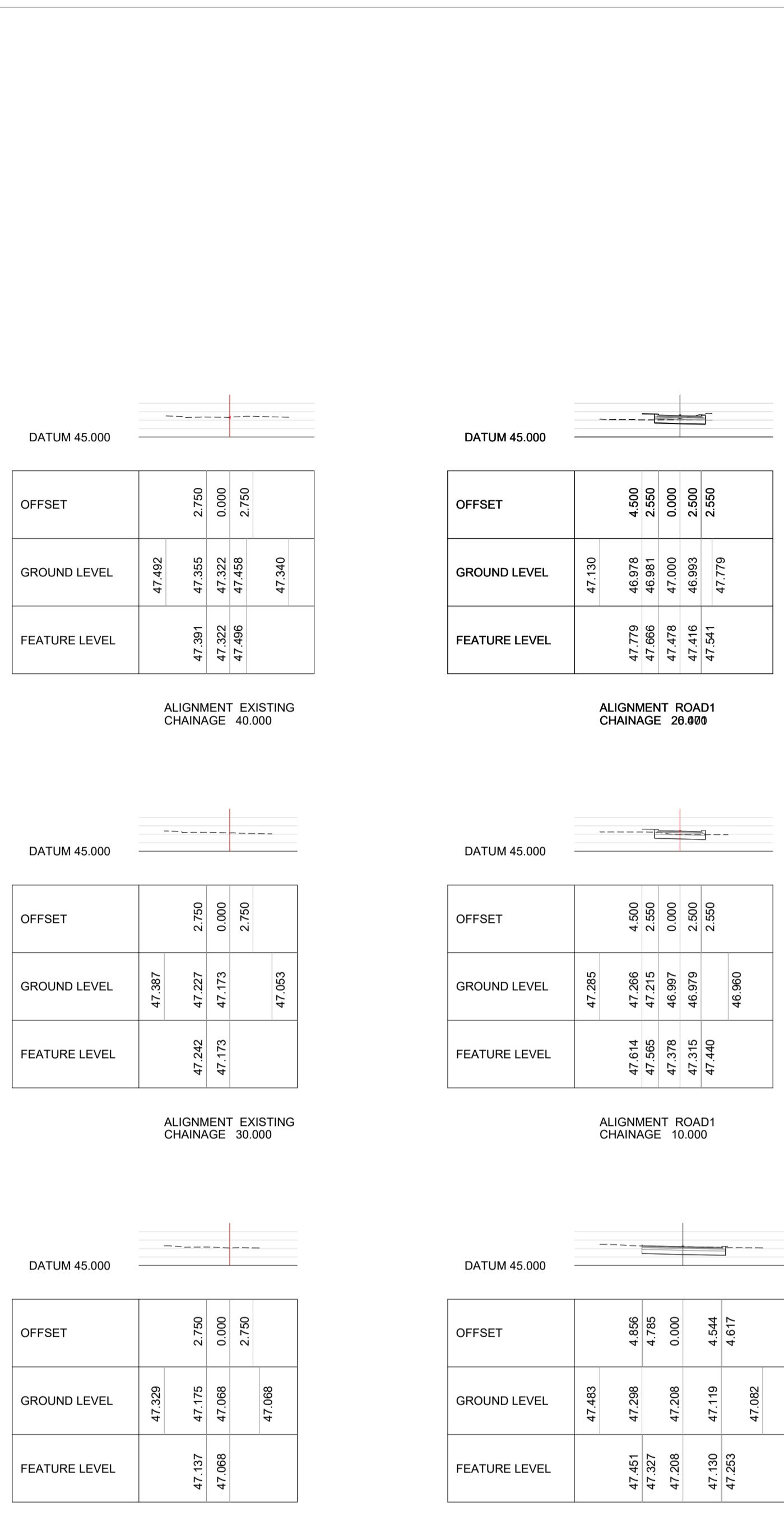
NOTES			
1.	THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, DETAILS AND SPECIFICATIONS.		
2.	ALL ADOPTABLE WORKS IN ACCORDANCE WITH WOKINGHAM BOROUGH COUNTY (WBC) STANDARD DETAILS AND SPECIFICATION FOR HIGHWAY WORKS (S.H.W.) LATEST EDITION AND CURRENT BRITISH STANDARDS.		
3.	EXISTING DETAILS ARE ASSUMED AND TO BE CONFIRMED ON SITE. ANY DISCREPANCY TO BE REPORTED TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORKS.		
4.	IF THERE IS ANY AMBIGUITY BETWEEN THE SPECIFICATION AND THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER.		
5.	DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.		
6.	ALL DIMENSIONS, LEVELS, SETTING OUT POINTS AND SURVEY GRID CO-ORDINATES ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF THE WORKS.		
7.	NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS PERMITTED WITHOUT PERMISSION FROM THE ENGINEER.		
8.	INFORMATION SHOWN IS IN PERSUASION OF CLEARING OUTLINE CONDITION 15 OF THE PLANNING APPROVAL.		
9.	IN COMPLIANCE WITH CDM 2015 ODYSSEY HAS FOLLOWED ITS DESIGN RISK MANAGEMENT PROCESS FOR HAZARD ELIMINATION AND RISK REDUCTION IN DEVELOPING THE ODYSSEY DESIGNS SHOWN ON THIS AND ASSOCIATED DRAWINGS. THERE ARE NO ABNORMAL OR UNUSUAL RESIDUAL RISKS ASSOCIATED WITH THE DESIGN. ANY OTHER RESIDUAL RISKS ARE THOSE THAT WOULD NORMALLY BE EXPECTED BY COMPETENT PERSONS OR CONTRACTORS ENGAGED ON WORK OF THIS NATURE OR TYPE.		
KEY			
RG	PROPOSED ROAD GULLY AND LEAD WITH D400 SIDE HINGED GRATING TO W.B.C. SPECIFICATION		
47.00	PROPOSED CONTOURS SHOWN AT 20mm VERTICAL INTERVALS		
MH CL 76.32	EXISTING MANHOLE. WORKS AS NOTED		
EX.RG	EXISTING ROAD GULLY, TREATMENT AS NOTED		
RG	EXISTING SURFACE WATER DRAINAGE ROUTE TO BE CONFIRMED BEFORE COMMENCEMENT OF WORKS		
RG	EXISTING FOUL WATER DRAINAGE ROUTE TO BE CONFIRMED BEFORE COMMENCEMENT OF WORKS		
+ 75.83	EXISTING SPOT LEVEL		
Access Road	ACCESS ROAD		
A DRAWING TITLE AMENDED LG BO GG 21.11.25			
Rev	Amendments	Dra Chk App	Date
Unit 1 Pickalls Farm Dove Lane Brailfield Romsey SO51 8QJ			
Telephone: 01794 537880 Fax: 01794 531154 E: info@odysseyconsult.co.uk W: www.odysseyconsult.co.uk			
Job Title LAND WEST OF KINGFISHER GROVE, THREE MILE CROSS			
Drawing Title SITE ACCESS ENGINEERING LAYOUT OUTLINE CONDITION 07			
Client SOVEREIGN			
Scale	Date	Designed	
1:100 @A1	OCT 25	LG	
Drawn	Checked	Approved	
LG	BO	BO	
Job No	Drawing No		
23-117	23-117-106	Rev	A



SCALE 1:500 HORIZONTAL, 1:100 VERTICAL



SCALE 1:500 HORIZONTAL, 1:100 VERTICAL



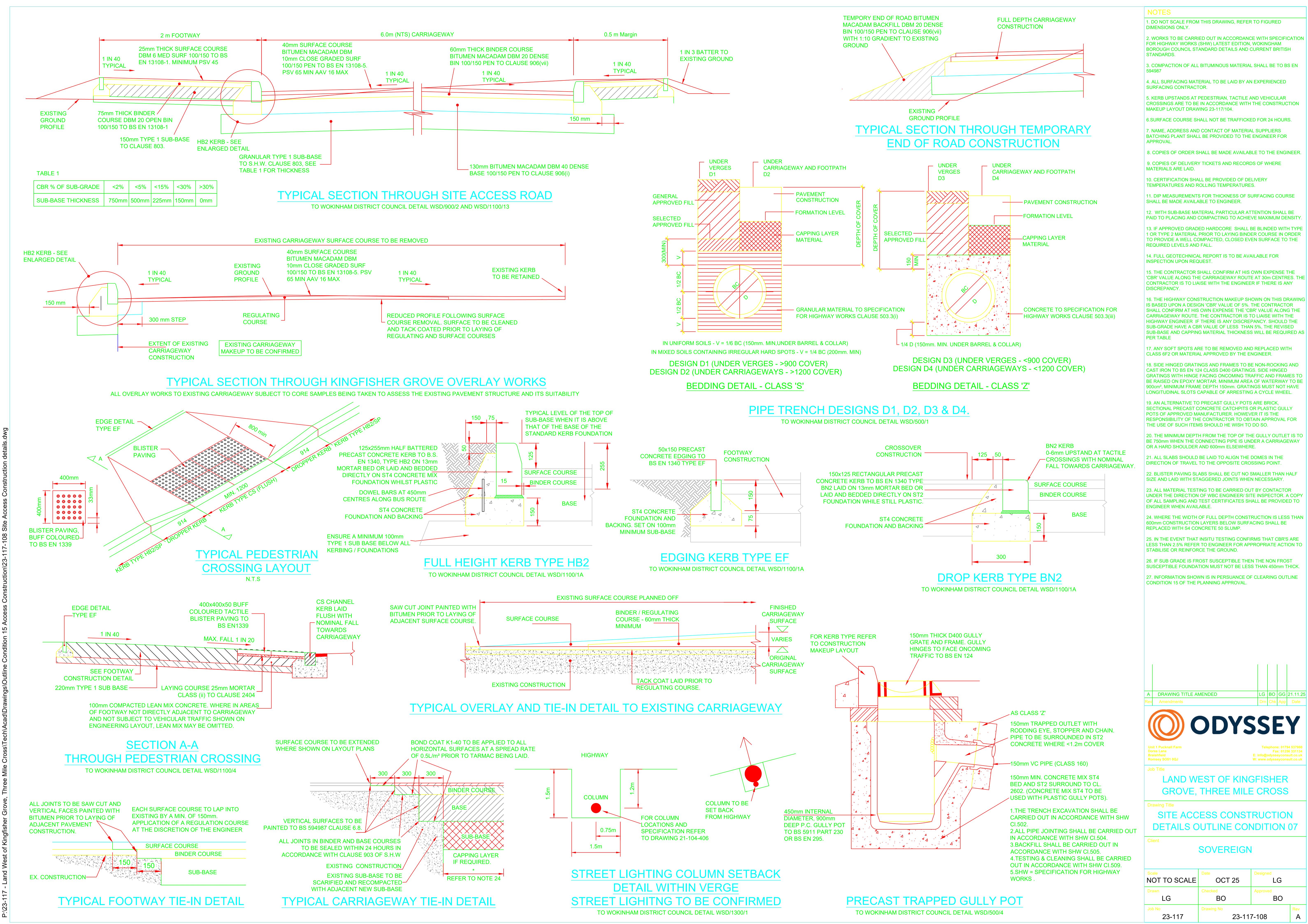
NOTES

- DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METRES.
- ALL EXISTING LEVELS, GRADIENTS, DEPTHS, Etc. ARE TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
- TOPOGRAPHICAL SURVEY HAS BEEN PROVIDED BY GROUNDSURVEYS LTD. DRAWING REFERENCE 7280-01A, DATED JANUARY 2020.
- SITE LAYOUT HAS BEEN PROVIDED BY DWC ARCHITECTS
- INFORMATION SHOWN IS IN PURSUANCE OF CLEARING OUTLINE CONDITION 15 OF THE PLANNING APPROVAL.

KEY


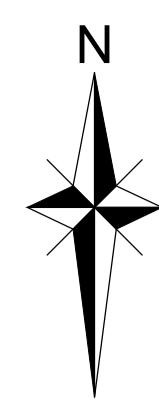
— Existing Ground Profile
— Proposed Alignment Profile

A	DRAWING TITLE AMENDED	LG	BO	GC	21.11.25
Rev	Amendments	Dra	Chk	App	Date
ODYSSEY					
Unit 1 Pickalls Farm Dove Lane Brailsfield Romsey SO51 8QJ					
Telephone: 01794 537886 Fax: 01264 331134 E: info@odysseyconsult.co.uk W: www.odysseyconsult.co.uk					
Job Title					
LAND WEST OF KINGFISHER GROVE, THREE MILE CROSS					
Drawing Title					
SITE ACCESS HIGHWAY SECTIONS OUTLINE CONDITION 07					
Client					
SOVEREIGN					
Scale	Date	Designed			
1:500 @A1	OCT 25	LG			
Drawn	Checked	Approved			
LG	BO	BO			
Job No	Drawing No	Rev			
23-117	23-117-107	A			



APPENDIX A

SECTION 38 ADOPTION PLAN



APPENDIX B

WBC HIGHWAYS DEVELOPMENT DESIGN STANDARD DETAILS

1. Do not scale from this drawing. Use only written dimensions.
2. All dimensions are in millimetres unless stated otherwise.
3. This drawing is to be read in conjunction with and checked against all other WBC Standard Detail drawings, Highways Design Guide, British Standards and all other relevant guidance. In the event of conflict with solid guidance, the standard will prevail.
4. Appointed WBC Highway Engineer to be present during inspections/CBR testing.
5. All kerbs to BS EN 1340:2003.
6. All concrete within ground to AC-4 with design sulphate class of D5-4.

CONSTRUCTION NOTES:

1. See Highways Design Guide Table A1 for details on carriageway dimensions according to street hierarchy.
2. Edge kerbs shall be provided on all free edges of paved areas not covered by a kerb or boundary wall.
3. Footway or highway verge shall fall at 1:40 towards the carriageway unless otherwise approved by appointed WBC Engineer.
4. Vertical alignment of back edging shall be maintained at crossing points and the crossing shall be treated as a new footway level.
5. All soft spots and organic material must be removed before construction.
6. An approved residual weedkiller which does not contain atrazine or simazine must be applied to all verges.
7. Verge areas shall have a 150mm covering of topsoil spread 25mm above top of kerb or boundary wall. A 150mm wall shall be needed in accordance with the specification.
8. Existing verges adjacent to new kerbs must be resurfaced and seeded.
9. If Bittern grasses are not laid immediately after one another, a Bond Coat shall be applied.
10. Top coat to be applied to kerb-faces and ironworks prior to bituminous surface course being laid.

11. The aggregate in surface course material shall have a maximum polished stone value of 60 and a maximum aggregate abrasion value of 14.

12. Gravel aggregate will not be permitted in surface course material.

13. Limestone aggregate will not be permitted in surface course material or binder course material which is to be trafficked.

14. Topsoil shall not be used in the top 150mm below base course level unless permitted by WBC.

15. Use of recycled/reclaimed aggregate material is not permitted unless approved by appointed WBC Engineer.

16. Levels of ironworks and apparatus to be adjusted accordingly prior to the laying of base course. If ironworks and apparatus layers are placed prior to raising, 300mm trimback is required; cut to be made with diamond saw. If cracking or failure occurs, the cut position is to be removed and the base replaced.

17. For the purpose of reinstatement/repair or tie-ins, material used will typically be that of existing. Departure subject to discretion of approving/supervising WBC engineer.

18. If a public highway or private land behind the highway to drain surface water away from the highway, the owner must install a linear channel drain within the extents of their land and the drain connected to a suitable outfall.

19. Any existing Highway Authority or Statutory Undertaker serving land within the area of the plot or plots shall be re-levelled and strengthened and replaced with appropriate load bearing cover. Existing Highway Authority or Statutory Undertaker will be responsible for the same unless shall be required where necessary.

20. The Highway Authority reserves the right to require Applicants to relocate any Highway Authority or Statutory Undertaker services and chambers (including guilles) within the carriageway should these be located immediately in front of ramps.

21. See WBC Highways Design Guide Table A1 'Carriageway widths' for carriageway widths according to street hierarchy.

22. See WBC Highways Design Guide Table A1 'Parking' for parking bay (including inset bay) widths according to street hierarchy.

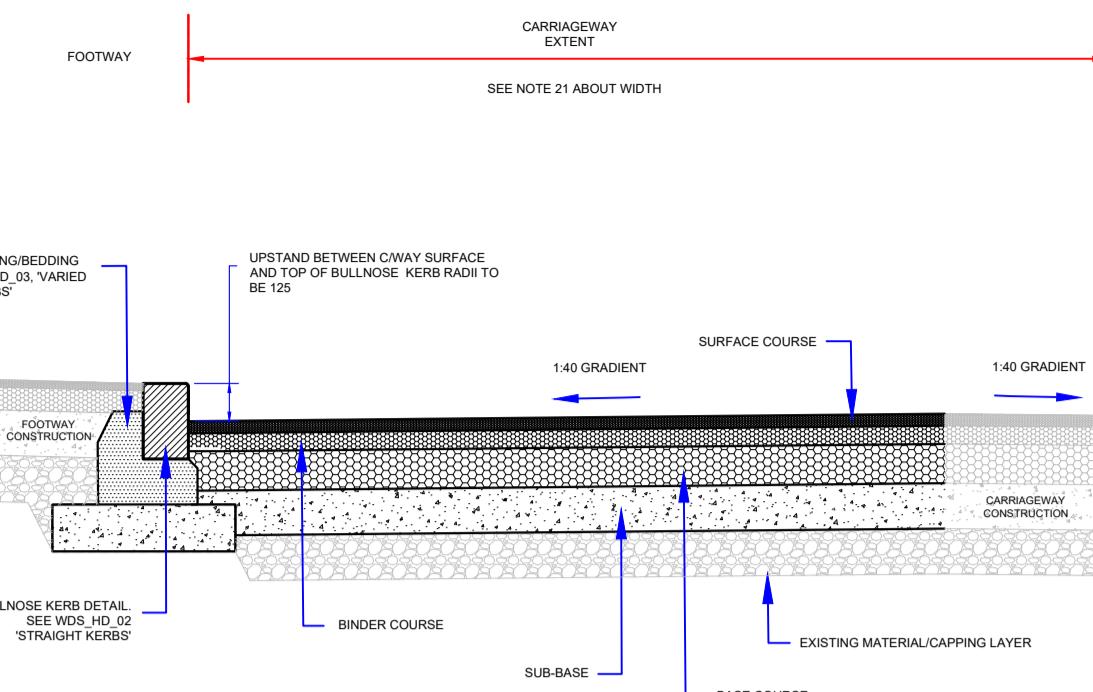
23. See WBC Highways Design guide Table A1 'Footway, Cycleway, Verge & Margins' for footway widths according to street hierarchy.

24. Ramp extent is the width of the footway with a max gradient of 1:20.

25. Plateau width to be ≥ 45% of the total Footway width providing maximum ramp gradient of 1:20.

26. If it is not possible to provide private drives to drain surface water away from the highway, the owner must install a linear channel drain within the boundary and connected to a suitable outfall.

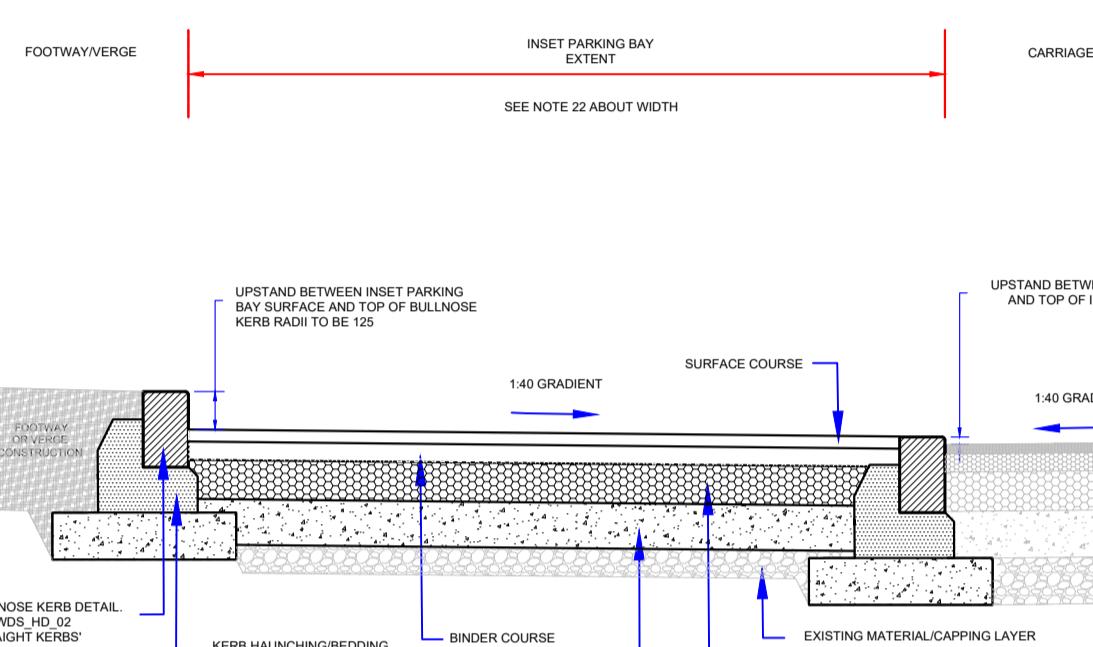
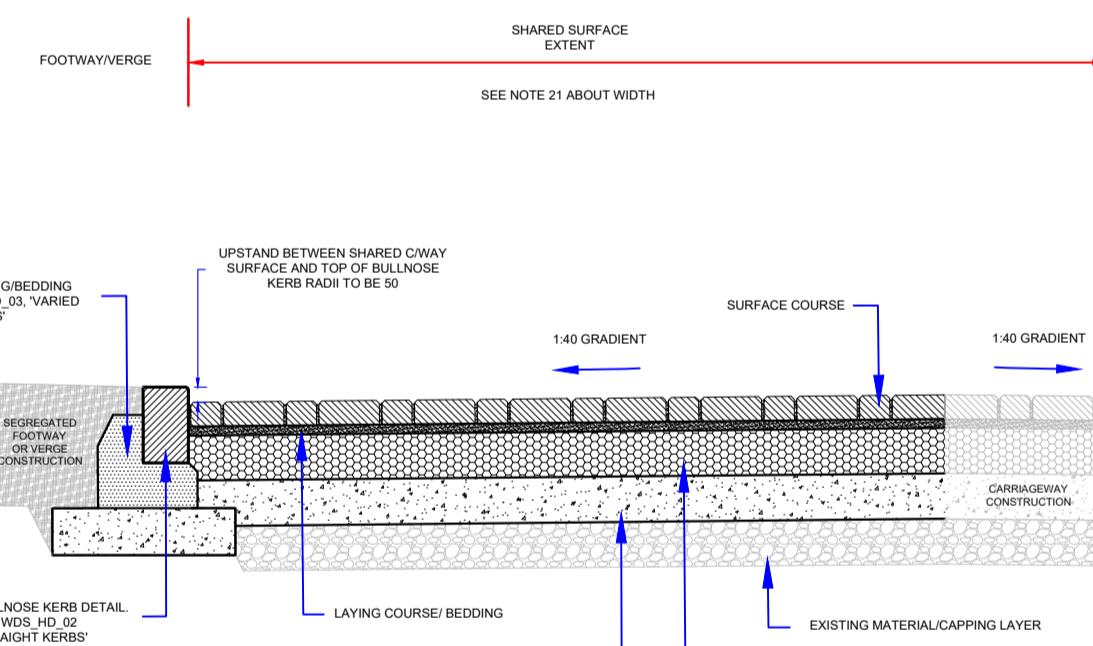
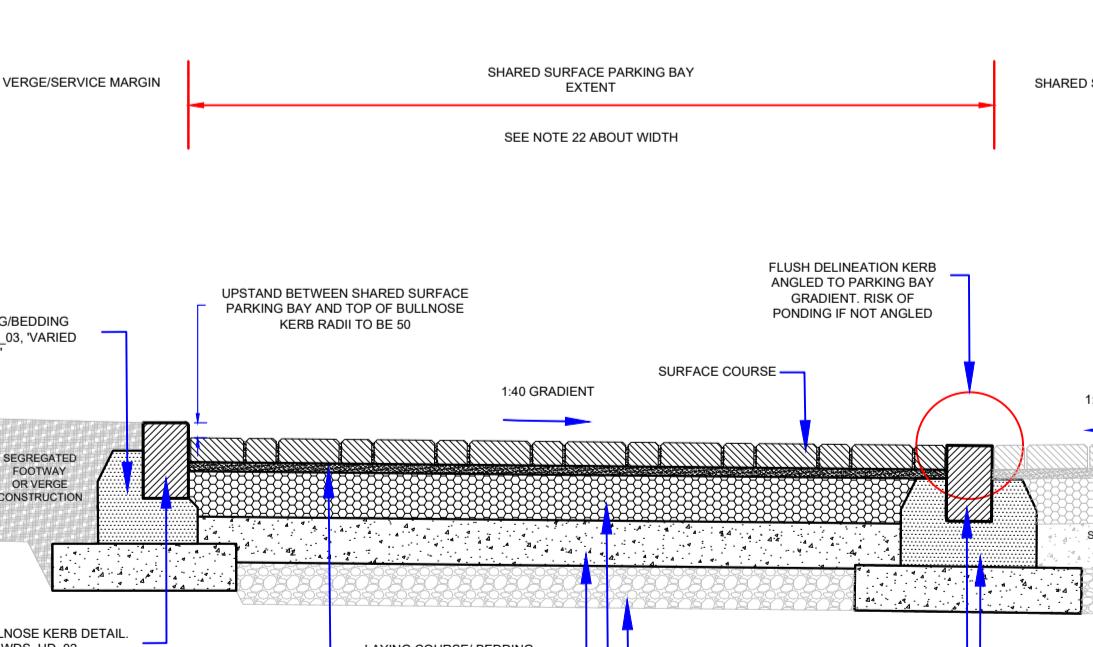
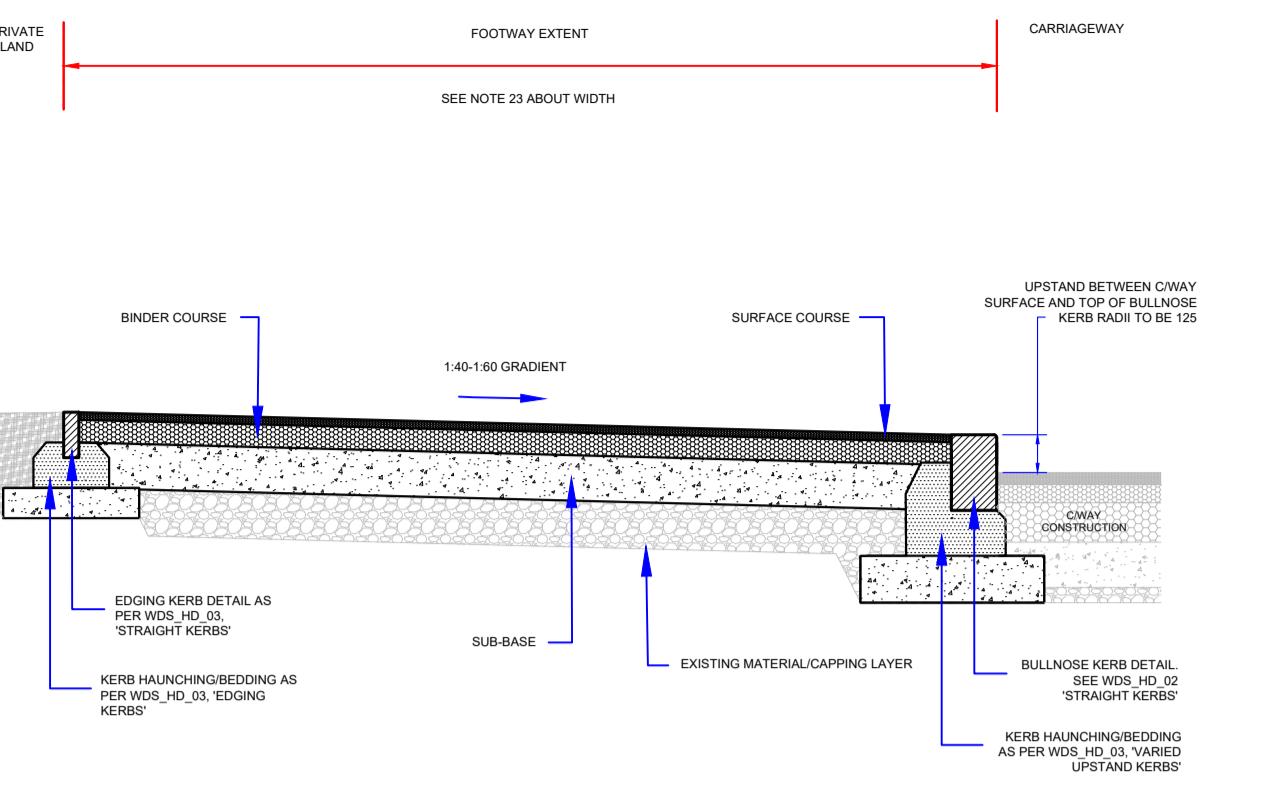
27. Overbanding is not to be used on the public highway unless it features anti-skid properties and is approved including conforming to British Standards for antiskid BS EN 1423:2012.



TARMACADAM CARRIAGeway		
COURSE	SPECIFICATION	THICKNESS
SURFACE	HOT ROLLED ASPHALT 30/14F + PCC 14/20, PEN 40/60, MIN PSV 63, MAX AAV 14.	40
BINDER	CLOSE GRADED AC10, PEN 100/150, MIN PSV 60, MAX AAV 14	40
BASE	CLOSE GRADED AC20, PEN 40/60.	60
SUB-BASE	CLOSE GRADED AC32, PEN 40/60.	130
SUB-BASE	DIT TYPE 1	SEE TABLE NOTE 3
CAPPING	CLASS 6F1 OR 6F2 GRANULAR CAPPING MATERIAL	SEE TABLE NOTE 4

TABLE NOTES

1. SEE NOTE 9 FOR DETAILS ON BOND COATS BETWEEN LAYERS.
2. SUB-BASE REQUIREMENTS TO BE DETERMINED BY CBR TEST.
3. CARRIAGEWAY CAPPING REQUIREMENTS TO BE DETERMINED BY CBR TEST.
4. CBR TEST TO BE CARRIED OUT BY THE CONTRACTOR AT 20-30m INTERVALS AND RESULTS REPORTED TO THE HIGHWAY AUTHORITY/ENGINEER.

TARMACADAM CARRIAGeway
SEE TABLE FOR CONSTRUCTION DETAILSTARMACADAM CARRIAGeway (INSET PARKING BAYS)
SEE TABLE FOR CONSTRUCTION DETAILSSHARED SURFACE ZONE
SEE TABLE FOR CONSTRUCTION DETAILSSHARED SURFACE ZONE (INSET PARKING BAYS)
SEE TABLE FOR CONSTRUCTION DETAILS

TARMACADAM (FLEXIBLE) FOOTWAY/CYCLEWAY		
COURSE	SPECIFICATION	THICKNESS
SURFACE	CLOSE GRADED AC6, PEN 100/150.	25
BINDER	CLOSE GRADED AC20, PEN 40/60.	75
SUB-BASE	DIT TYPE 1	SEE TABLE NOTE 2

TABLE NOTES

1. SEE NOTE 9 FOR DETAILS ON BOND COATS BETWEEN LAYERS.
2. SUB-BASE REQUIREMENTS TO BE DETERMINED BY CBR TEST.
3. CARRIAGEWAY CAPPING REQUIREMENTS TO BE DETERMINED BY CBR TEST.
4. CBR TEST TO BE CARRIED OUT BY THE CONTRACTOR AT 20-30m INTERVALS AND RESULTS REPORTED TO THE HIGHWAY AUTHORITY/ENGINEER.

MODULAR PAVING (RIGID) FOOTWAY

COURSE	SPECIFICATION	THICKNESS
SURFACE	DEPENDENT ON LOCATION. SEE TABLE NOTES 1.	SEE TABLE NOTE 1
LAYING	COURSE SHARP SAND. SEE TABLE NOTES 2.	30-50
SUB-BASE	DIT TYPE 1	SEE TABLE NOTE 3

TABLE NOTES

1. RIGID CONSTRUCTION ONLY APPLICABLE TO TOWN CENTRES AND OTHER PUBLIC REALM LOCATIONS. SEE HIGHWAYS DESIGN GUIDE TABLE A2 PAGE 52 'FOOTWAY AND PAVED AREA' FOR APPROVED MATERIALS.
2. TO BE TREATED WITH APPROVED ACTIVE PRE AND POST EMERGENCE RESIDUAL WEED KILLER.
3. SUB-BASE REQUIREMENTS TO BE DETERMINED BY CBR TEST.
4. CARRIAGEWAY CAPPING REQUIREMENTS TO BE DETERMINED BY CBR TEST.
5. CBR TEST TO BE CARRIED OUT BY THE CONTRACTOR AT 20-30m INTERVALS AND RESULTS REPORTED TO THE HIGHWAY AUTHORITY/ENGINEER.

VEHICULAR CROSSOVERS

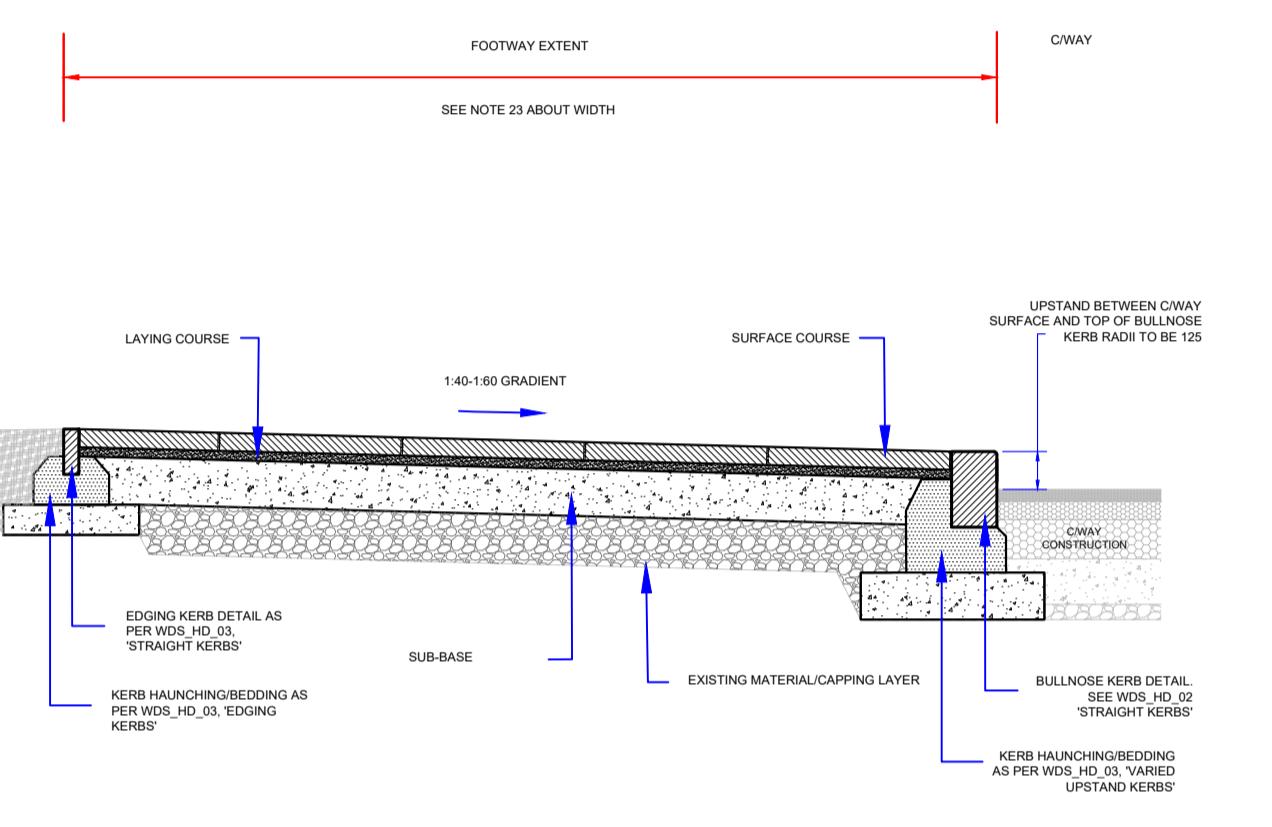
COURSE	SPECIFICATION	THICKNESS
SURFACE	CLOSE GRADED AC6, PEN 100/150.	25
BINDER	CLOSE GRADED AC20, PEN 40/60.	75
SUB-BASE	DIT TYPE 1.	SEE TABLE NOTE 2

TABLE NOTES

1. SEE NOTE 9 FOR DETAILS ON BOND COATS BETWEEN LAYERS.
2. SUB-BASE REQUIREMENTS TO BE DETERMINED BY CBR TEST.
3. CBR TEST TO BE CARRIED OUT BY THE CONTRACTOR AND RESULTS REPORTED TO THE HIGHWAY AUTHORITY/ENGINEER.

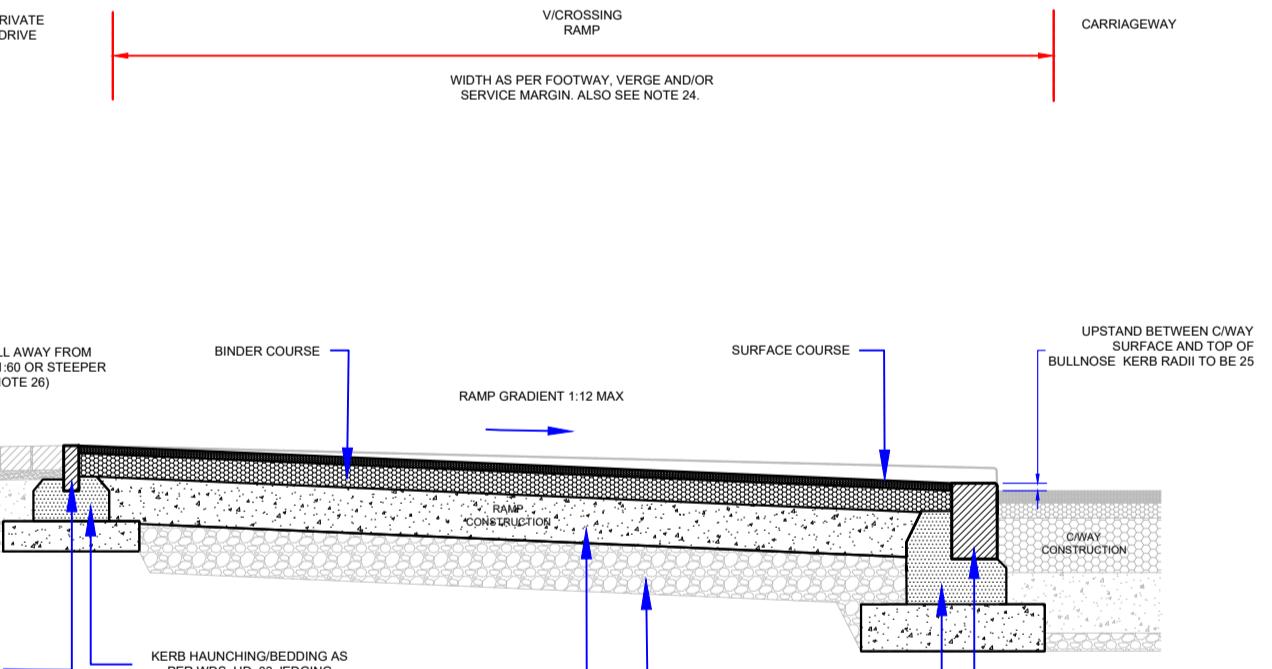
TARMACADAM FOOTWAY/CYCLEWAY

SEE TABLE FOR CONSTRUCTION DETAILS

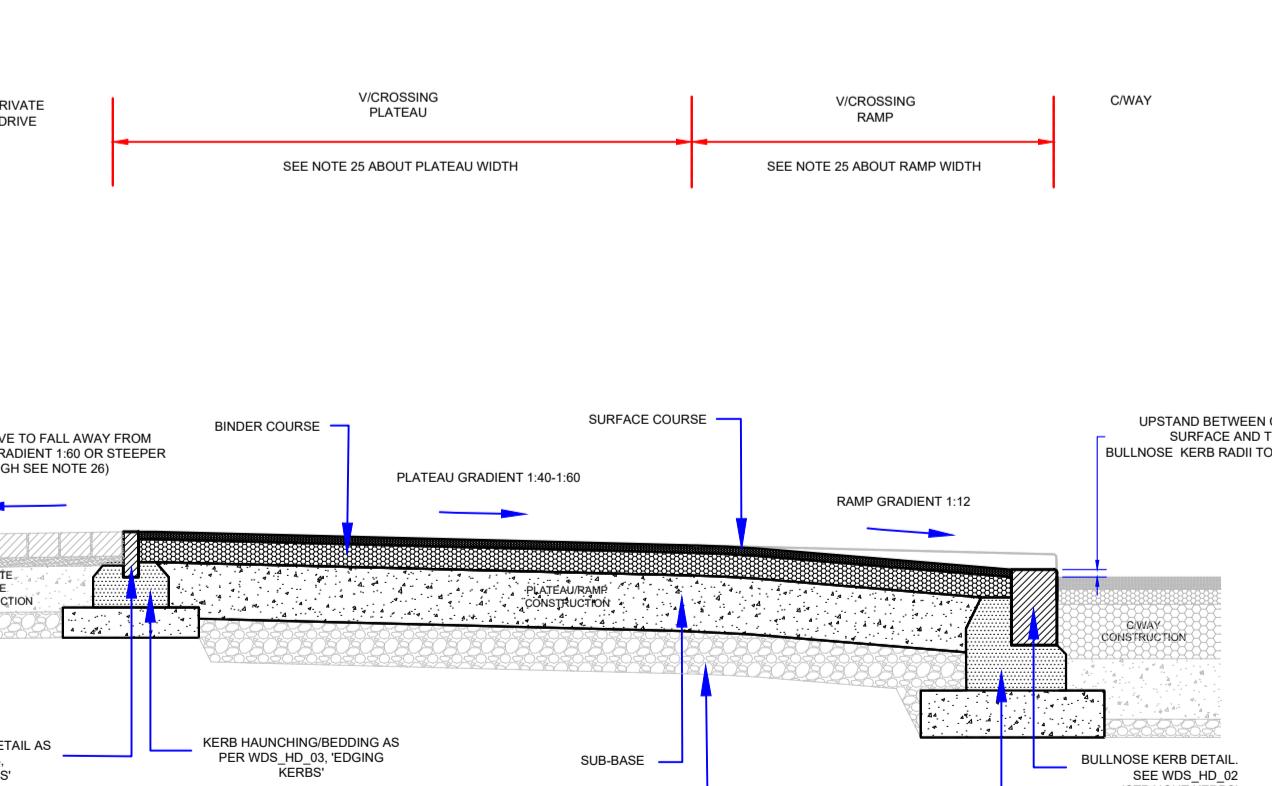


MODULAR PAVING FOOTWAY

SEE TABLE FOR CONSTRUCTION DETAILS

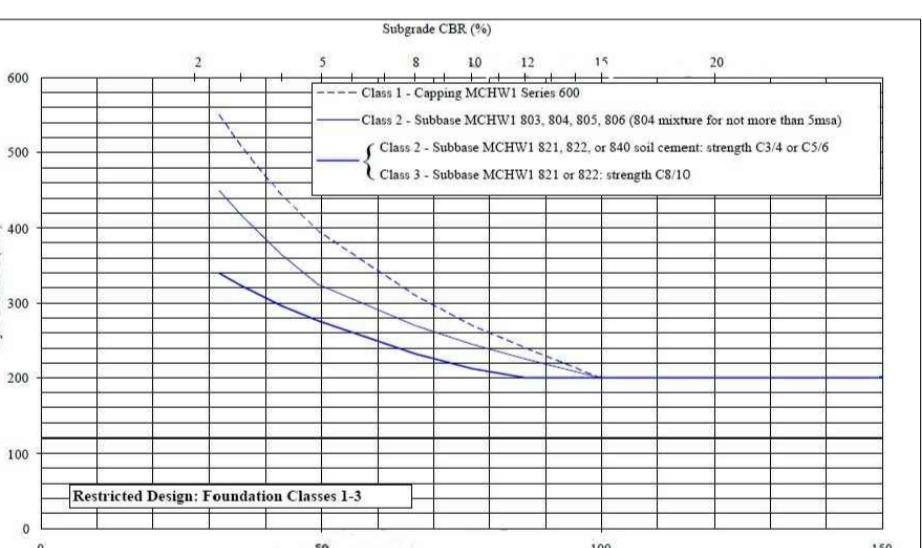


VEHICULAR CROSSING (TYPE 1)

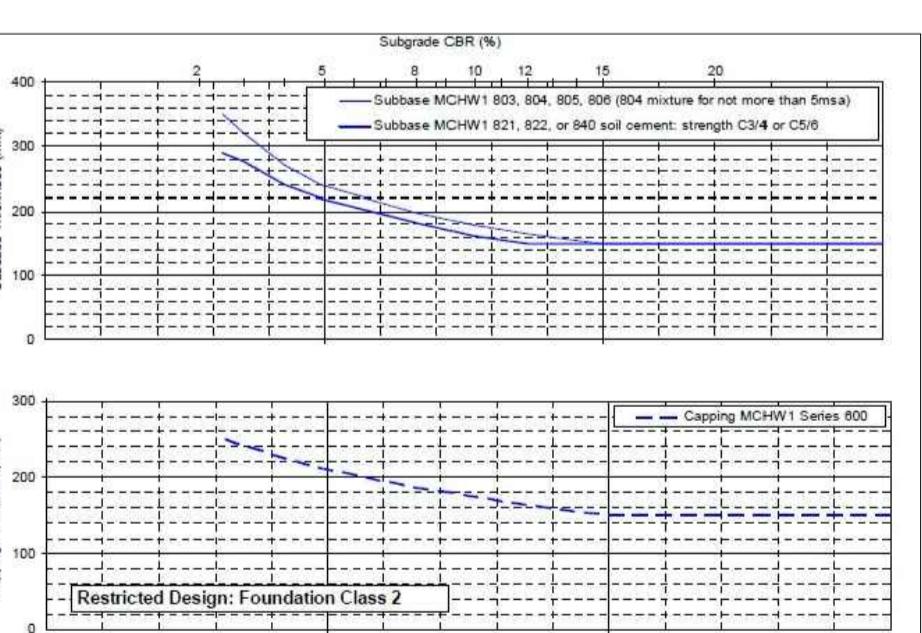


VEHICULAR CROSSING (TYPE 2 & 3)

SEE TABLE FOR CONSTRUCTION DETAILS



CARRIAGEWAY SUB-BASE OR CAPPING ONLY



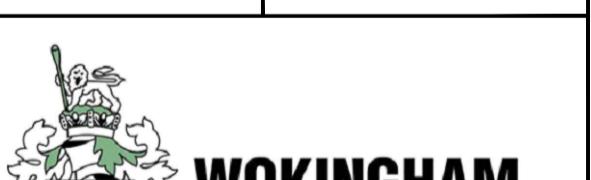
CARRIAGEWAY SUB-BASE ON CAPPING

CBR (%)	Subbase on Capping (mm)	Subbase Only (mm)
≤ 2.5	350	250
2.6 - 2.9	320	400
3.0 - 3.9	270	320
4.0 - 4.9	220	360
5.0 - 5.9	240	320
6.0 - 7.9	210	300
8.0 - 9.9	200	270
10.0 - 11.9	180	250
12.0 - 14.9	170	230
15.0 - 17.9	150	200

(figures used in the table above have been extracted from figures 3.1 and 3.2 of IAN 73/06 Rev 1)

17/07/2020 A

Date Approved Revision



Project
WOKINGHAM BOROUGH COUNCIL
HIGHWAYS DEVELOPMENT
DESIGN STANDARD PLANS

STANDARD DETAILS
SHEET 1 OF 4

NOT TO SCALE

Drawn SL

Designed WBC

Drawing No. WDS_HD_01 Rev. A

Checked - Approved -

Date Drawn 16/07/2020 Date Approved 17/07/2020

NOTES

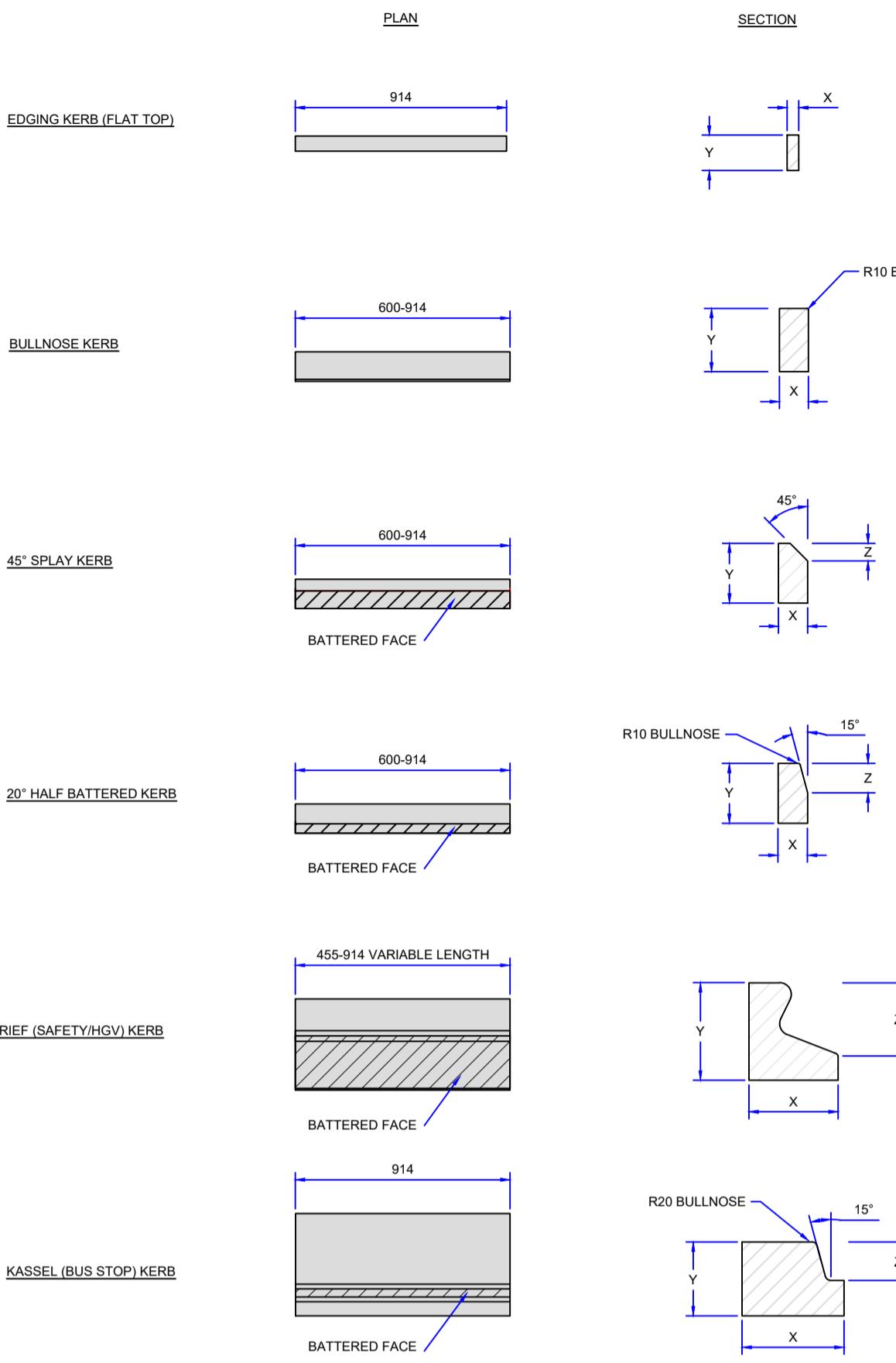
GENERAL NOTES:

- Do not scale from this drawing. Use only written dimensions.
- All dimensions are in millimeters unless stated otherwise.
- This drawing is to be read in conjunction with and checked against all other WBC Standard Drawings, Highway Design Guide, British Standards and any other relevant guidance. In the event of any conflict with such guidance's, the standards shall prevail.
- All kerbs to BS EN 1340:2003.
- Appointed WBC Highway Engineer to be present during inspections/CB testing.

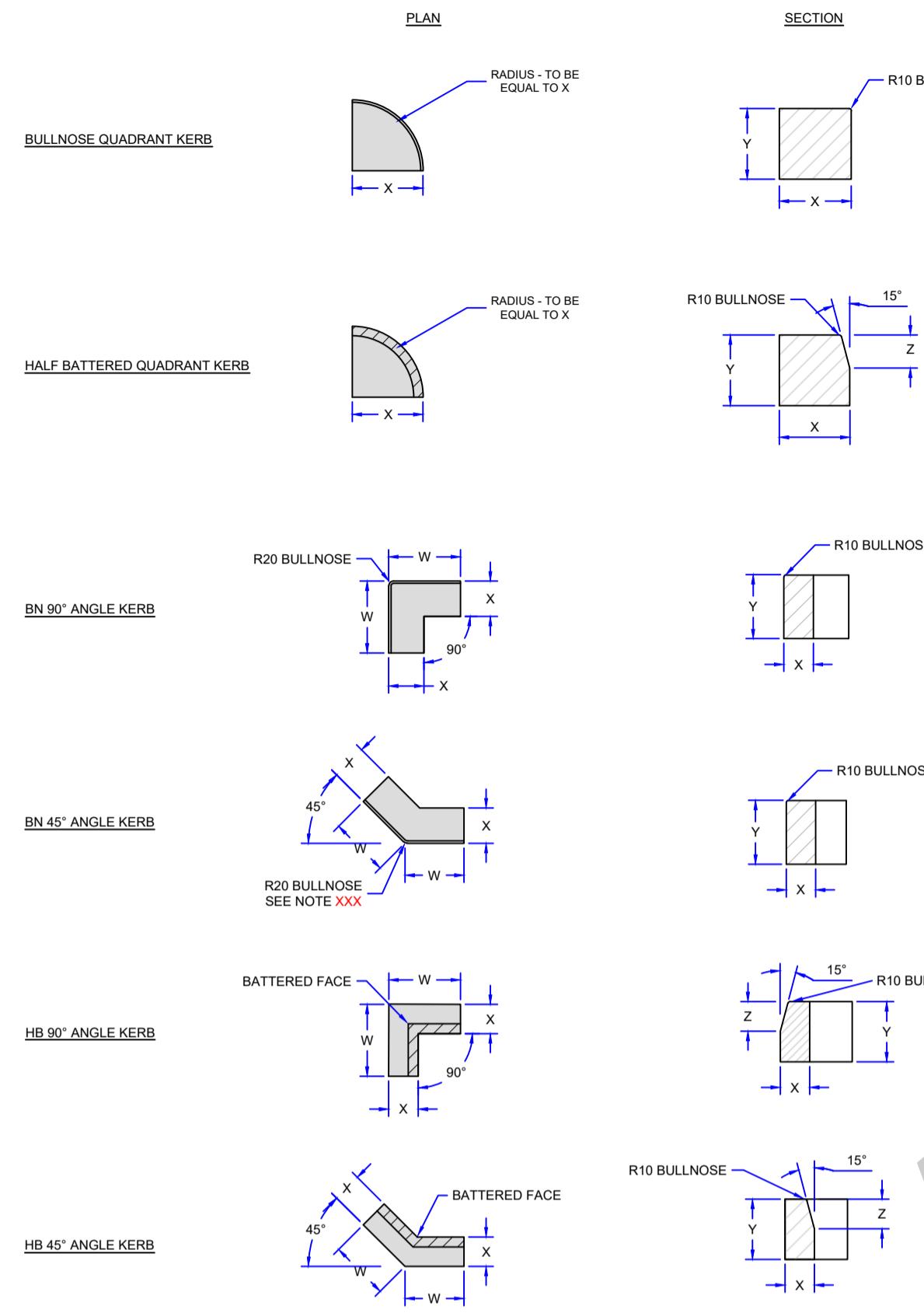
CONSTRUCTION NOTES:

- See Highways Design Guide Table A1 'Junction Radii' for requirements pending road priority.
- All kerbs shall be square (90°) unless otherwise indicated.
- Kerbs to be precast concrete (simple finish) unless otherwise indicated. Changes to kerb material such as granite or conservation kerb require approval from appointed WBC Engineer.
- Where natural stone kerbs are approved for use:
 - Granite shall be fine picked/textured on all sides.
 - Conservation kerb shall be pimpled fine/coarse.
 Where approved or instructed by the Highway Authority in writing in advance, a rough punched finish may be used on an alternative.
- Transition kerbs to be used at all changes in kerb face.
- For radii of 15m or less kerbs and channels of the appropriate radius shall be used.
- For radii between 15m and 18m straight kerbs 600 long shall be used.
- The length of any kerb or channel shall not be less than 600.
- Cutting of kerbs and channels shall be by approved mechanical means.
- Edging kerbs shall be provided on all free edges of paved areas not confined by a kerb or boundary wall.

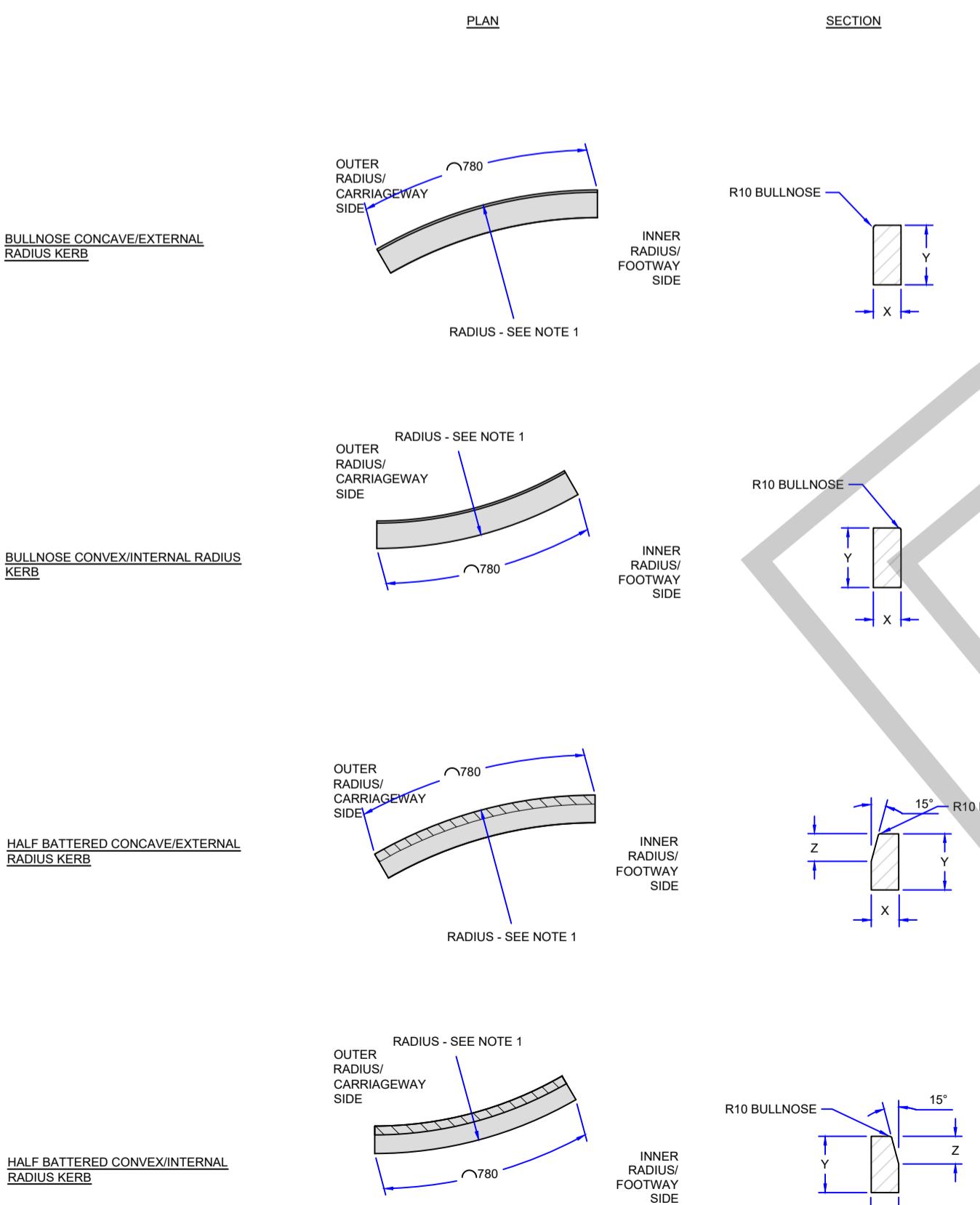
STRAIGHT KERBS



QUADRANTS AND ANGLES



RADIUS KERBS



RADIUS

ORIENTATION	TYPE	X	Y	Z
CONCAVE/EXTERNAL	BN	125	255	-
	HB	125	255	100
CONCAVE/INTERNAL	BN	125	255	-
	HB	125	255	100

APPROX NO. UNITS PER 1/4 CIRCLE

SIZE OF RADIUS (m)	UNITS PER 1/4 CIRCLE
0.5	1
1	2
2	4
3	6
4	8
5	10
6	12
8	16
10	20
15	30

STRAIGHT KERBS

TYPE	X	Y	Z
EDGING	50	150	-
BN	125	255	-
	125	150	-
HB	125	255	100
SP	125	255	75
TRIEF	380	415	300
KASSEL	435	314	160

TRANSITION DROPPER KERBS

TYPE	X	X2	Y	Y2	Z
BN	125	-	150	225	-
HB-BN	125	100	150	225	75

TRANSITION KERBS

TYPE	X	Y	Z
125-300 BN	125	300	150
KASSEL TO BN	435	-	314

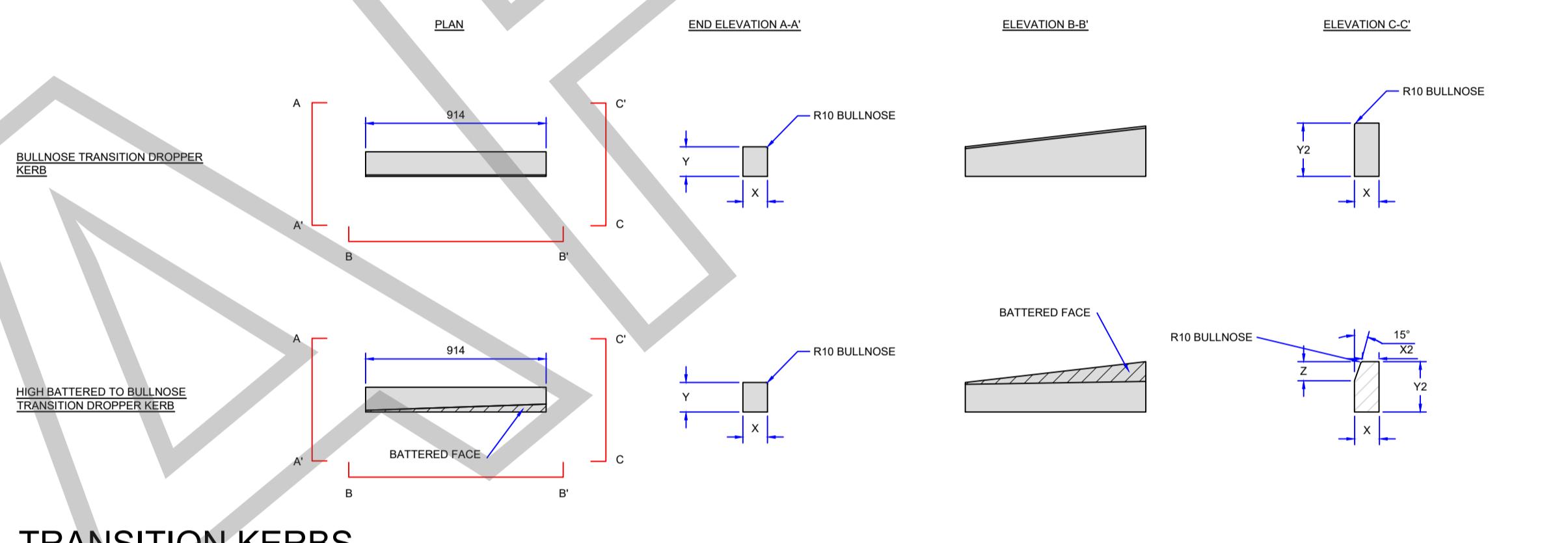
NOTE:

* ALL THE ABOVE UNITS SHALL BE AVAILABLE AS BOTH LEFT AND RIGHT MIRROR VERSIONS

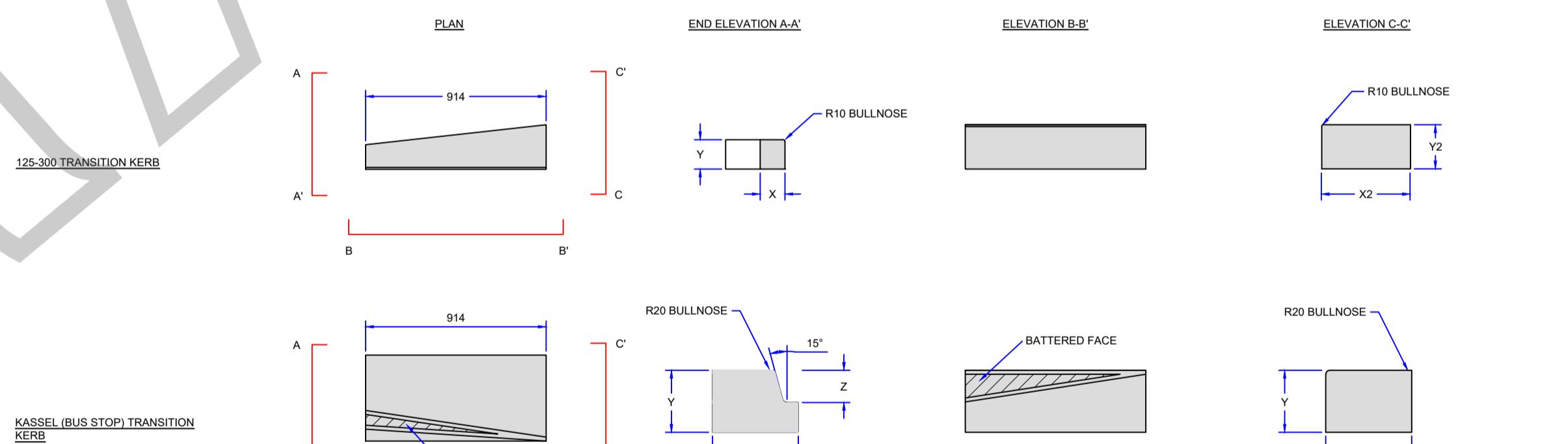
QUADRANTS

TYPE	X	Y	Z
BN	300	225	-
HB	300	225	100

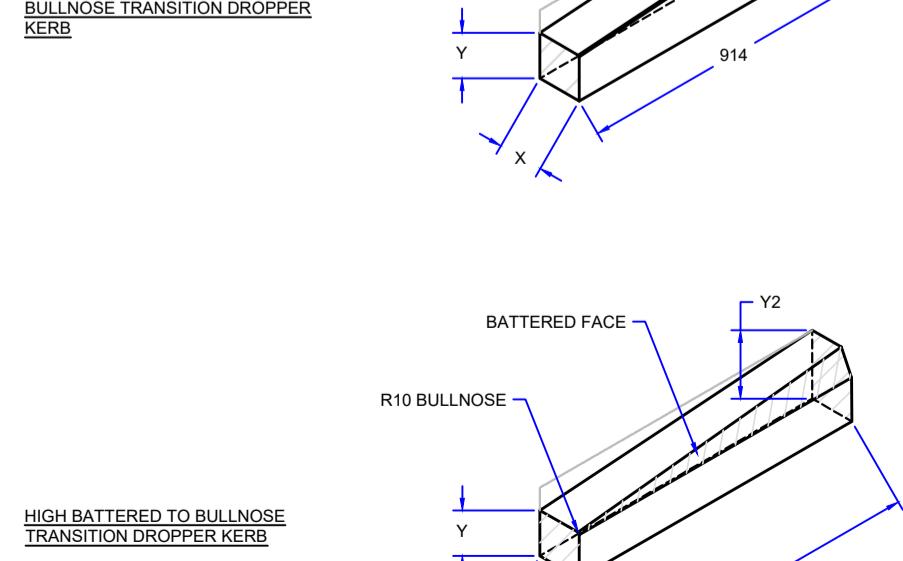
TRANSITION DROPPER KERBS



TRANSITION KERBS



BULLNOSE TRANSITION DROPPER KERB



ANGLES

ORIENTATION	TYPE	ANGLE	W	X	Y	Z
CONCAVE/EXTERNAL	BN	90°	305	125	255	-
	HB	90°	305	125	255	100
CONCAVE/INTERNAL	BN	90°	305	125	255	-
	HB	90°	305	125	255	100

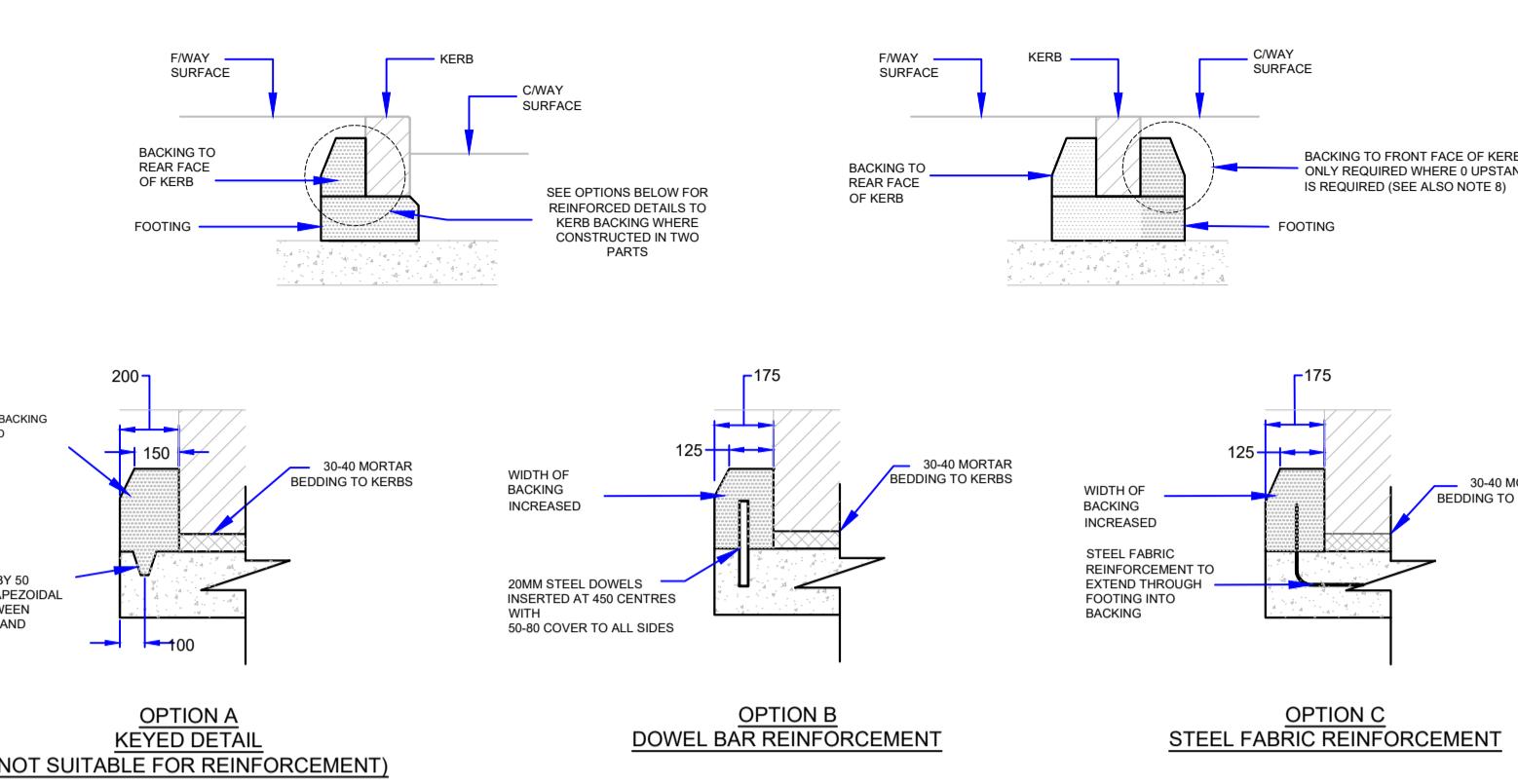


WOKINGHAM
BOROUGH COUNCIL
HIGHWAYS DEVELOPMENT
DESIGN STANDARD PLANS

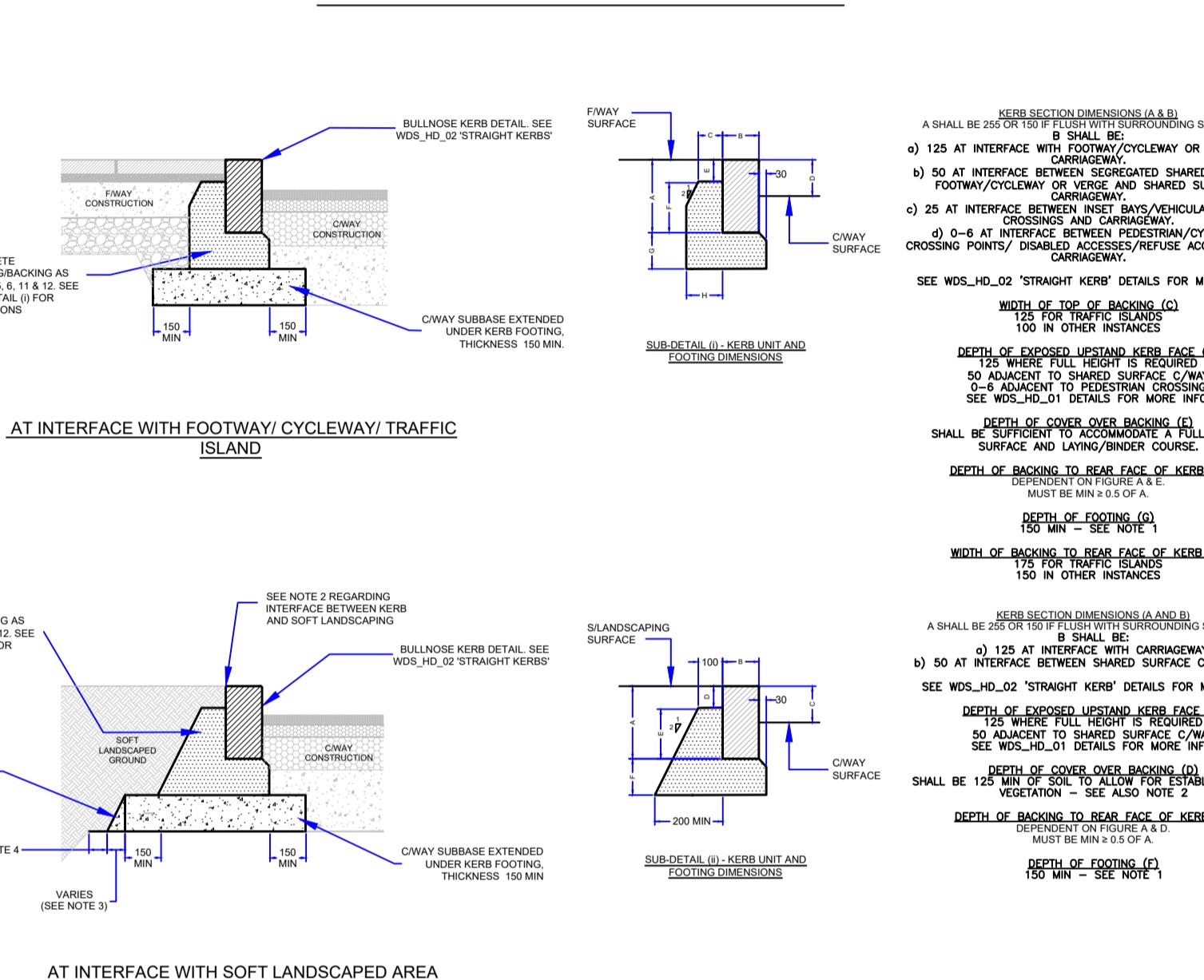
STANDARD DETAILS
SHEET 2 OF 4

Scale	NOT TO SCALE		Drawn	SL
Drawn	Designed	WBC	Checked	Approved
WDS_HD_02			A	
Date Drawn	16/07/2020	Date Approved	17/07/2020	

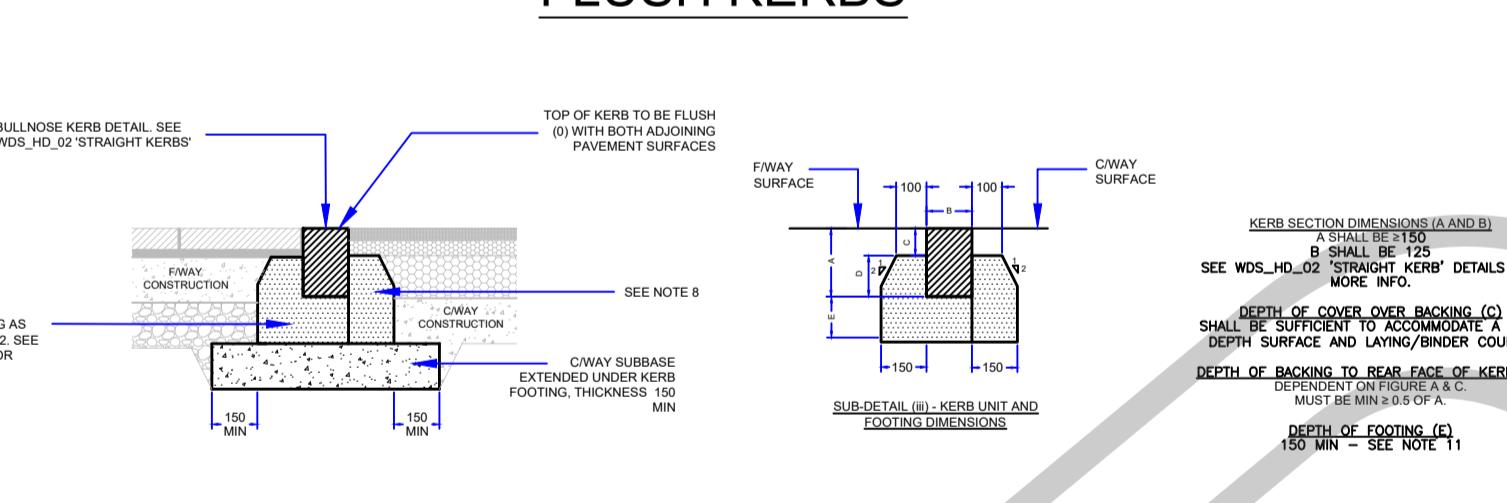
GENERAL LAYOUT DETAILS WITH OPTIONAL VARIABLES FOR ADAPTATION



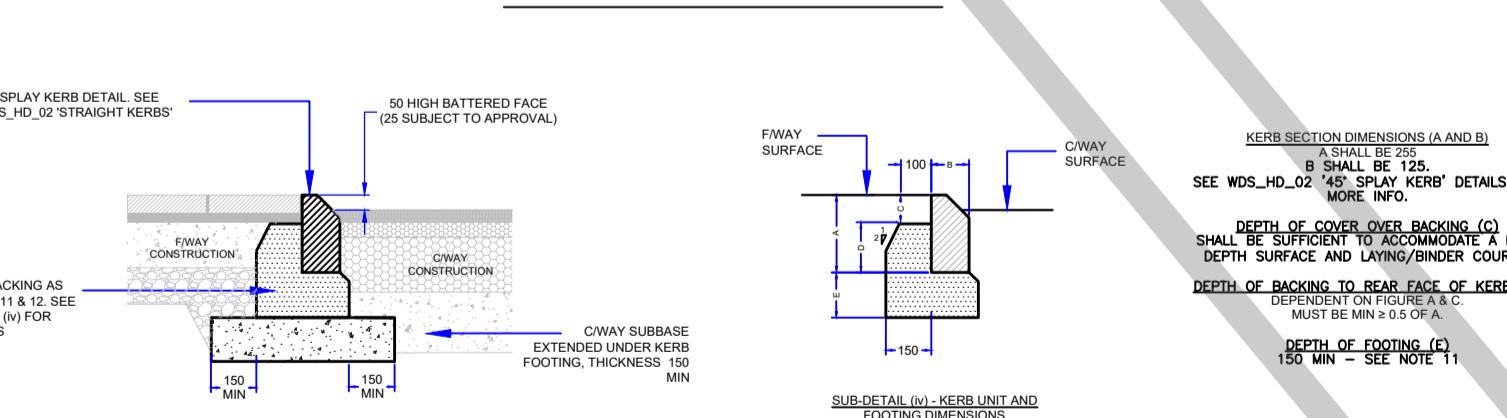
VARIED UPSTAND KERBS



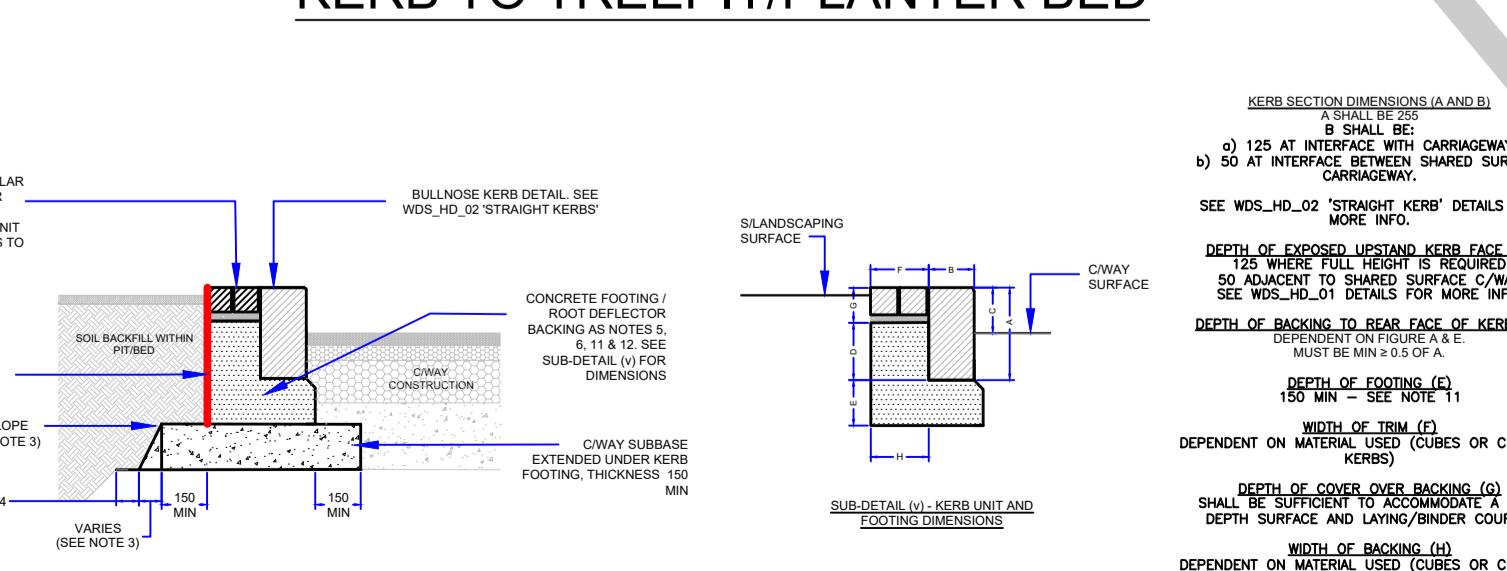
FLUSH KERBS



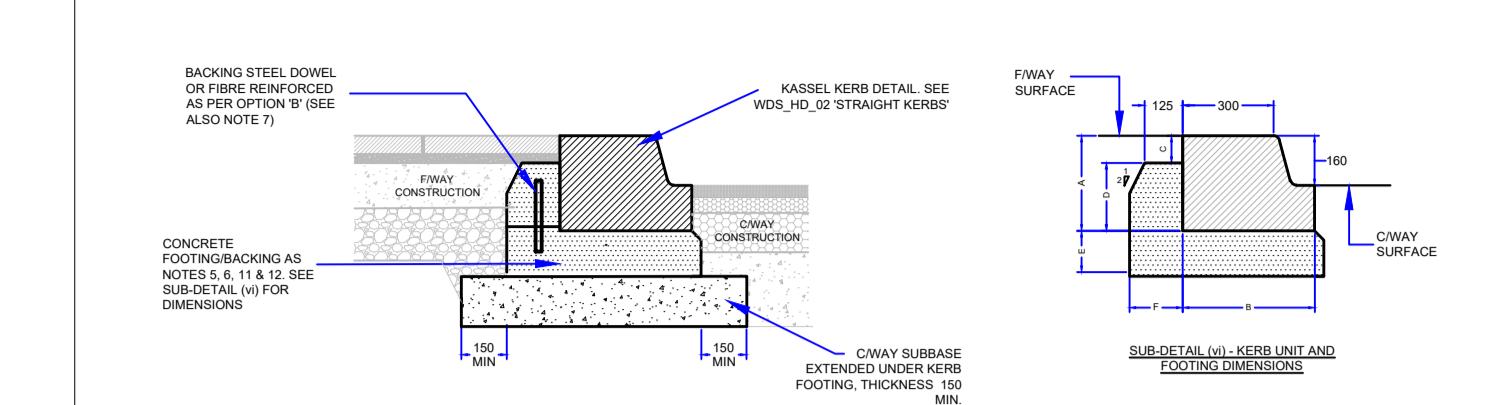
SPLAYED KERBS



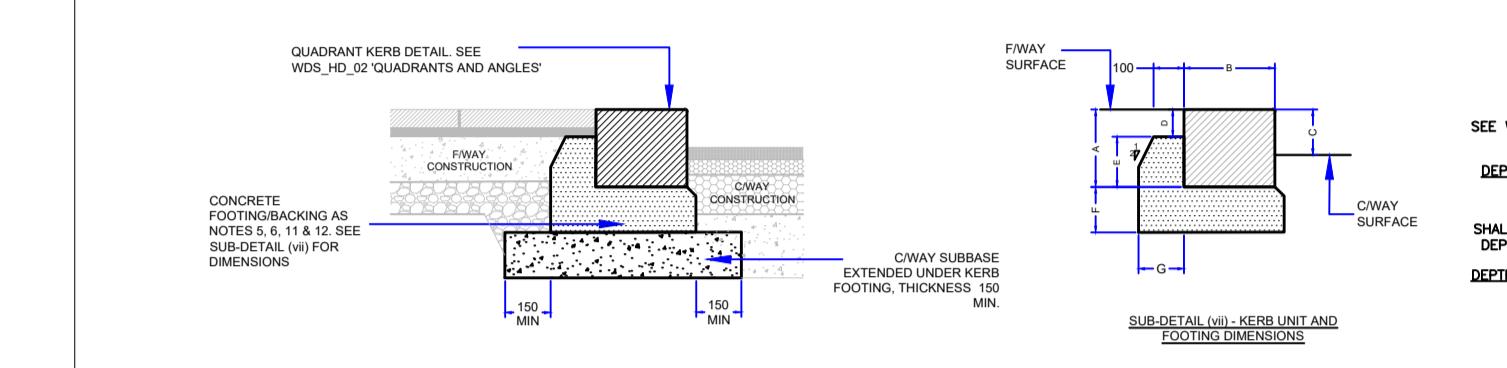
KERB TO TREEPIT/PLANTER BED



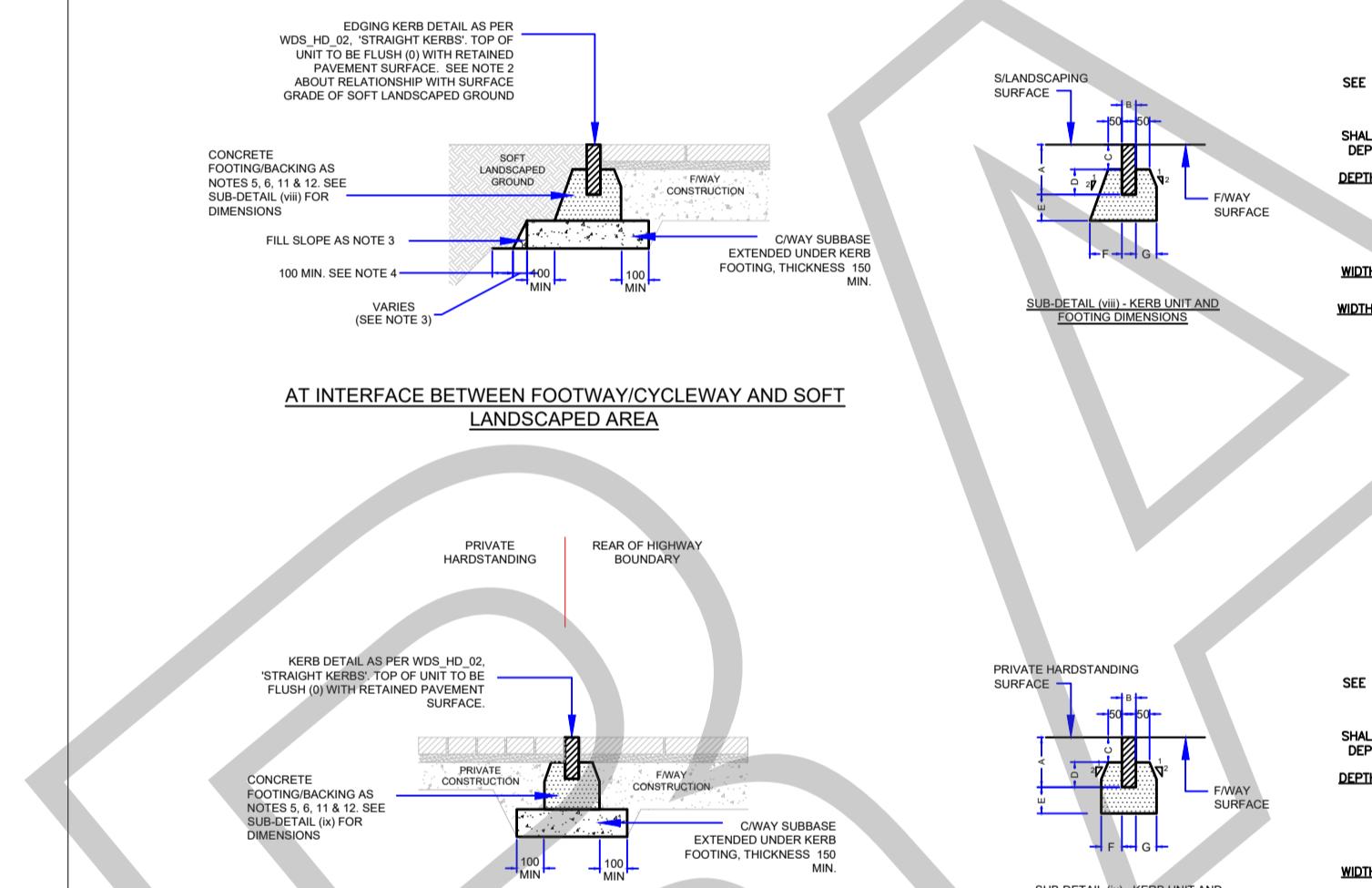
KASSEL (BUS STOP) KERBS



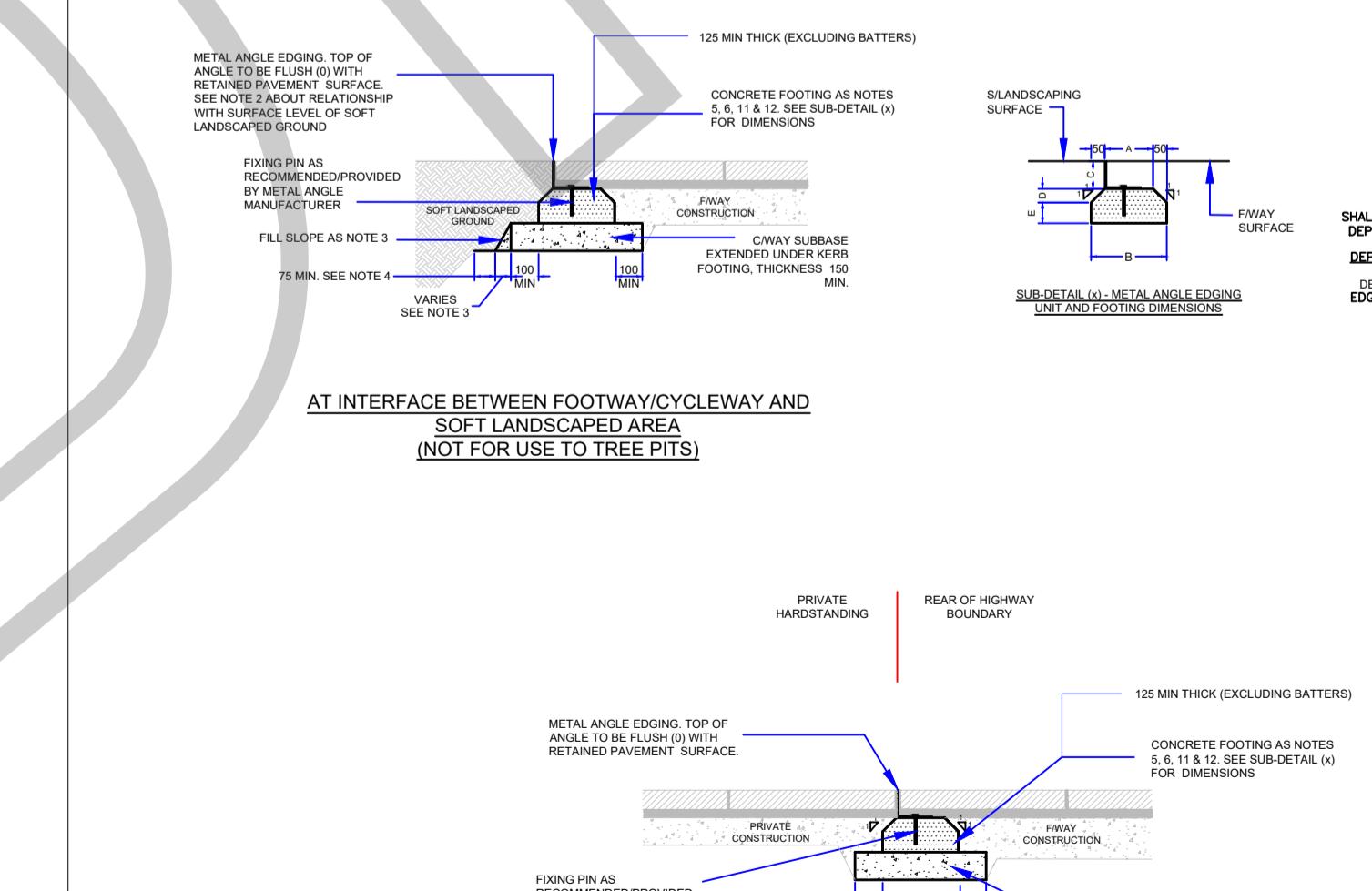
QUADRANT KERBS



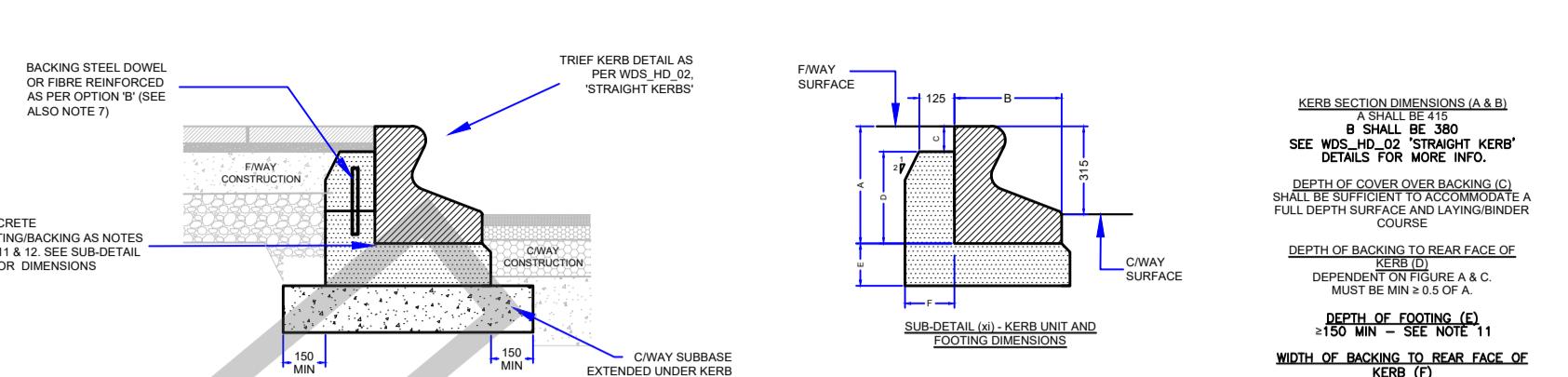
EDGING KERBS



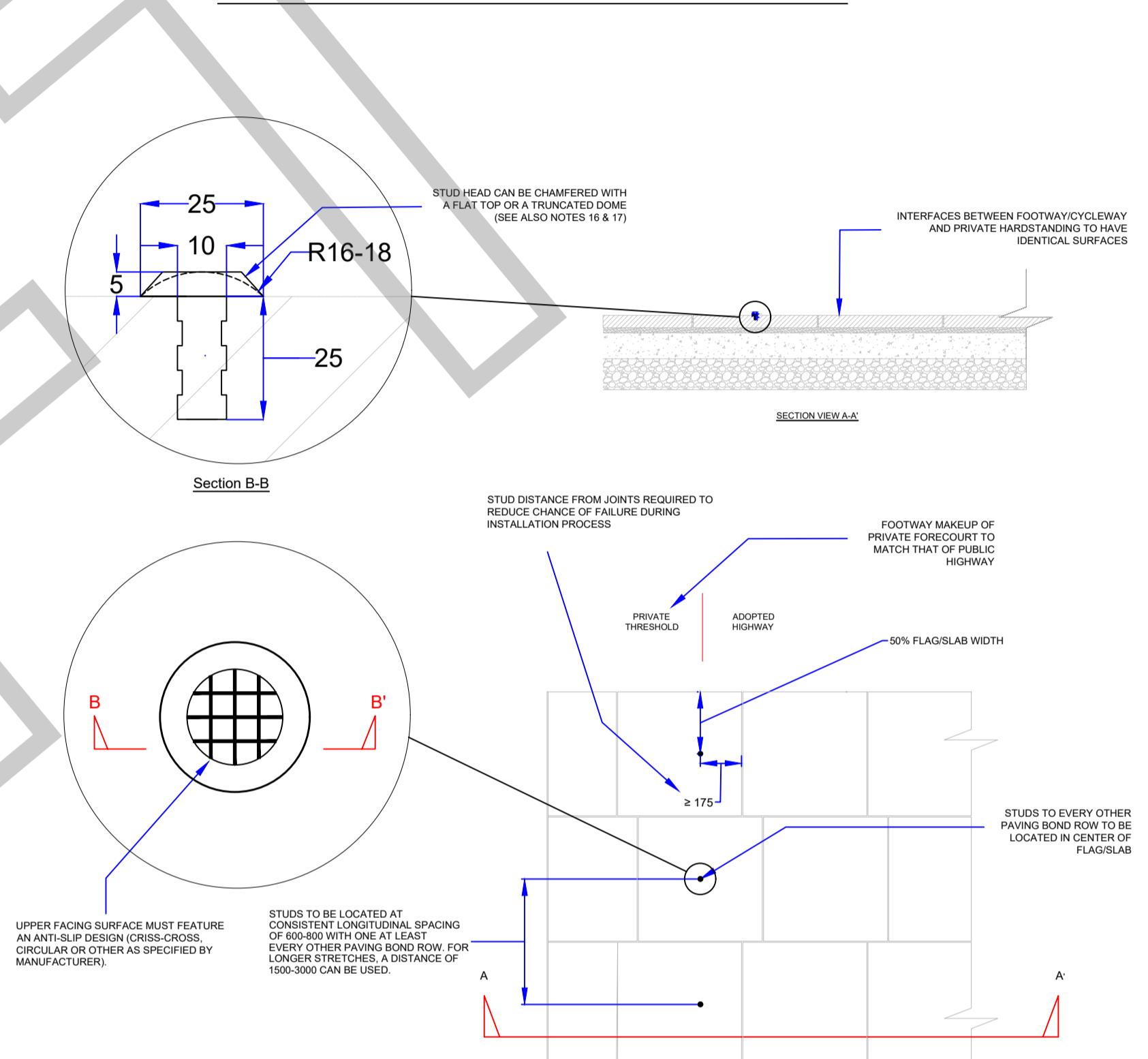
METAL EDGING/DEMARCATION



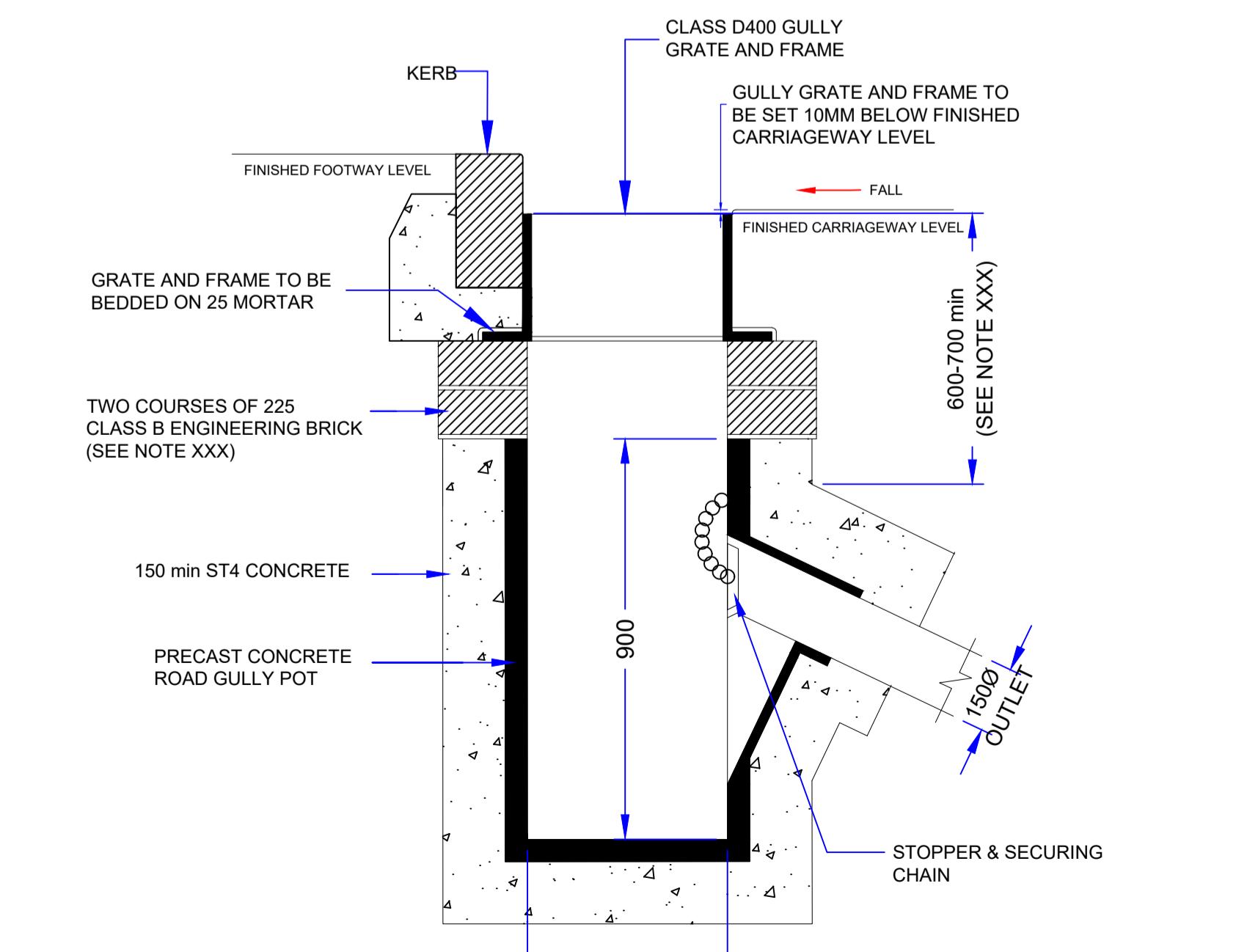
TRIEF (SAFETY/HGV) KERBS



METAL STUD DEMARCTION LINE



PRECAST TRAPPED ROAD GULLY DETAIL (CHANNEL INLET)

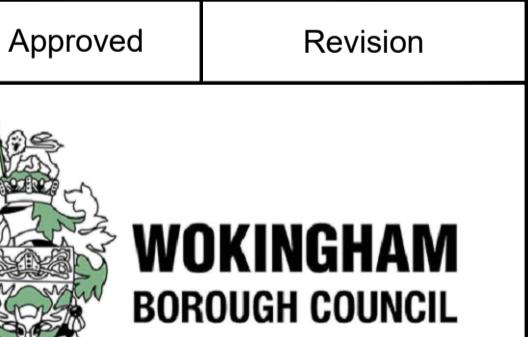


NOTES

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- The drawings shall be read in conjunction with and checked against all other WBC Standard Detail drawings, Highways Design Guide, British Standards and all other relevant guidance.
- In the absence of the standard, with solid dimensions, the standard shall prevail.
- All kerbs to BS EN 1340:2003.
- Appointed BHC Highway Engineer to be present during inspections/CBR testing.
- All concrete within ground to AC-4 with design sulphate class of D5-4.

CONSTRUCTION NOTES:

- In all instances, the depth of footings/backings shall be sufficient to be placed directly on top of the sub-base.
- The surface grade of the soft landscaped area at the interface with the kerb will vary. Typically
 - If the soft landscaped area is grass, the surface grade shall be 25mm above the kerb, and the backfill down to the kerb shall be flush with it within the final 150mm.
 - If the soft landscaped surface is mulched then the final mulch surface grade shall be 25mm below the kerb to prevent the kerb from pushing the mulch from spreading.
 - If the soft landscaped area is set binding gravel, then the final gravel surface grade should be flush (0-6mm) with the top of the kerb.
 - If the carriageway pavement is pervious, the landscaped area should be 40mm min beneath the top of the kerb to prevent sediment from it being carried onto the carriageway surface with runoff.
- The subbase beneath the kerb shall be terminated with a slight gradient of that depth shall be 25mm (heightwise) where the subbase is composed of an unbound granular mixture and vertical if it is composed of a concrete or hydraulically bound mixture.
- Minimum 75 terrace below base of subbase fill slope and any further subgrade cut slope.
- All in situ concrete footing and backfill to be C20 (STA).
- If kerbs and footing cannot be laid in one operation (elsewhere reinforcement of backfill is required) then standard details shall be adopted as per one of the reinforced options under 'General Layouts for Adaptation' to securely bed kerbs/linings back to pre-cast footings.
- Reinforcement dowel bars may be required with standard kerbs in circumstances where the kerbs are more vulnerable.
- If an edge channel is required then the section of footing beyond the front face of the kerb is to be omitted.
- If kerbs used back to the edges of Traffic Islands then their footings shall be steel dowel or fabric reinforced or one of the reinforced options under 'General Layouts for Adaptation'.
- Kerbs shall be laid with dry joints and closely butted to adjacent kerbs and channels.
- In all instances, the depth of footings/beams shall be sufficient to allow them to be placed directly on top of the subbase.
- Movement joints shall be provided through footings/beams/backing.
- Root deflectors shall be >400 high (appropriate to the required depth).
- The top of root deflectors shall be flush (0 to 25mm) with modular kerb tops. The base of root deflectors shall rest on the footway/carriageway subbase extension which shall be extended upwards where necessary.
- Root Barriers may be required or justified to protect:
 - major underground utility lines (especially if these have associated easements); and
 - vulnerable base structures.
 However, these shall not normally follow Statutory Undertakers will allow extension distances around major utilities to be reduced if Root Barriers are installed. Designers are advised to check with Statutory Undertakers for their policy on this matter at an early stage.
- Stud material to be stainless steel.
- Studs to be set in resin at depths specified by manufacturer.



Project: WOKINGHAM BOROUGH COUNCIL HIGHWAYS DEVELOPMENT DESIGN STANDARD PLANS

Time: STANDARD DETAILS SHEET 3 OF 4

Scale: NOT TO SCALE
Drawn: SL
Designed: WBC
Rev. A
Checked: -
Approved: -

Date Drawn: 16/07/2020
Date Approved: 17/07/2020

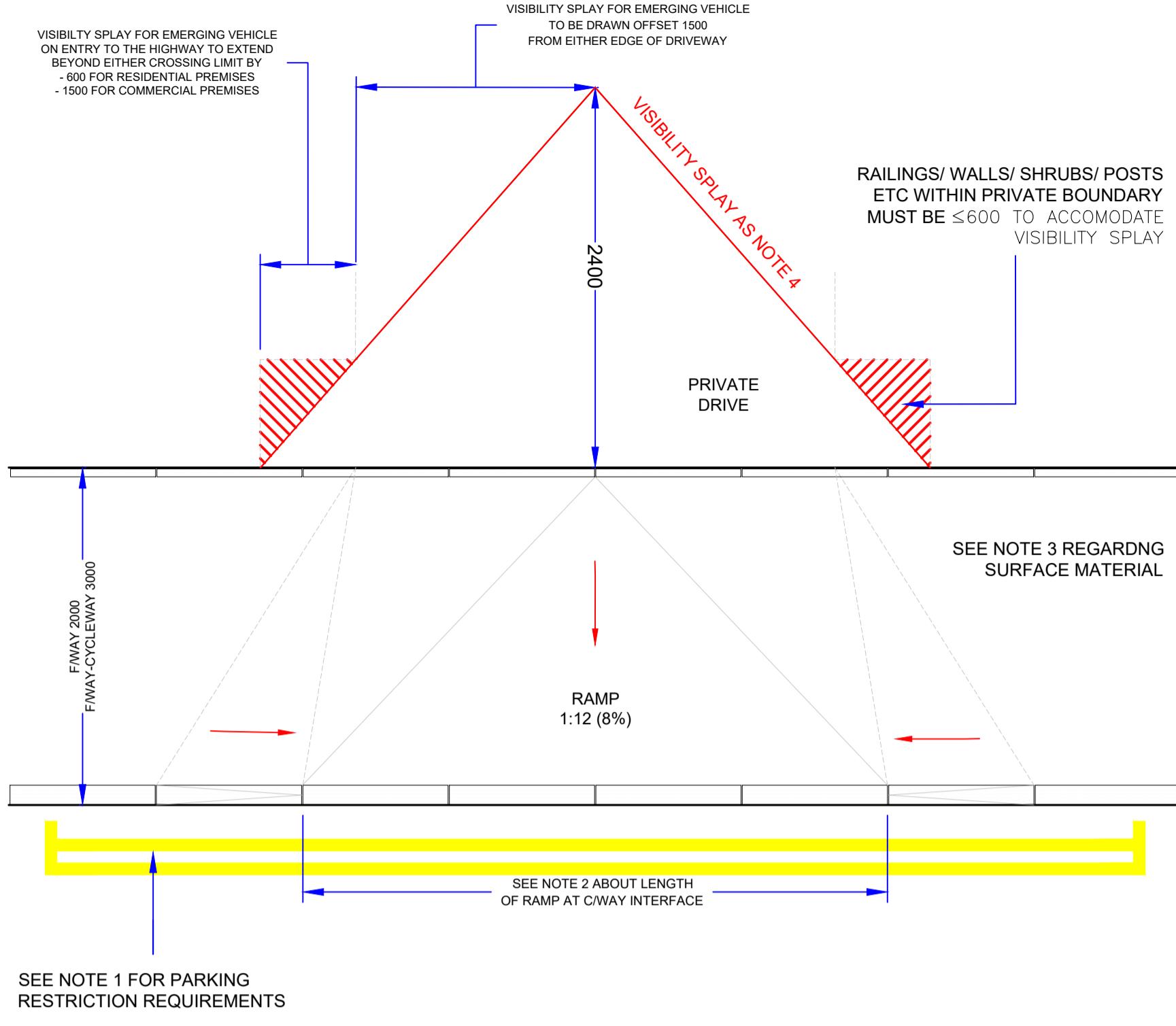
NOTES

GENERAL NOTES:

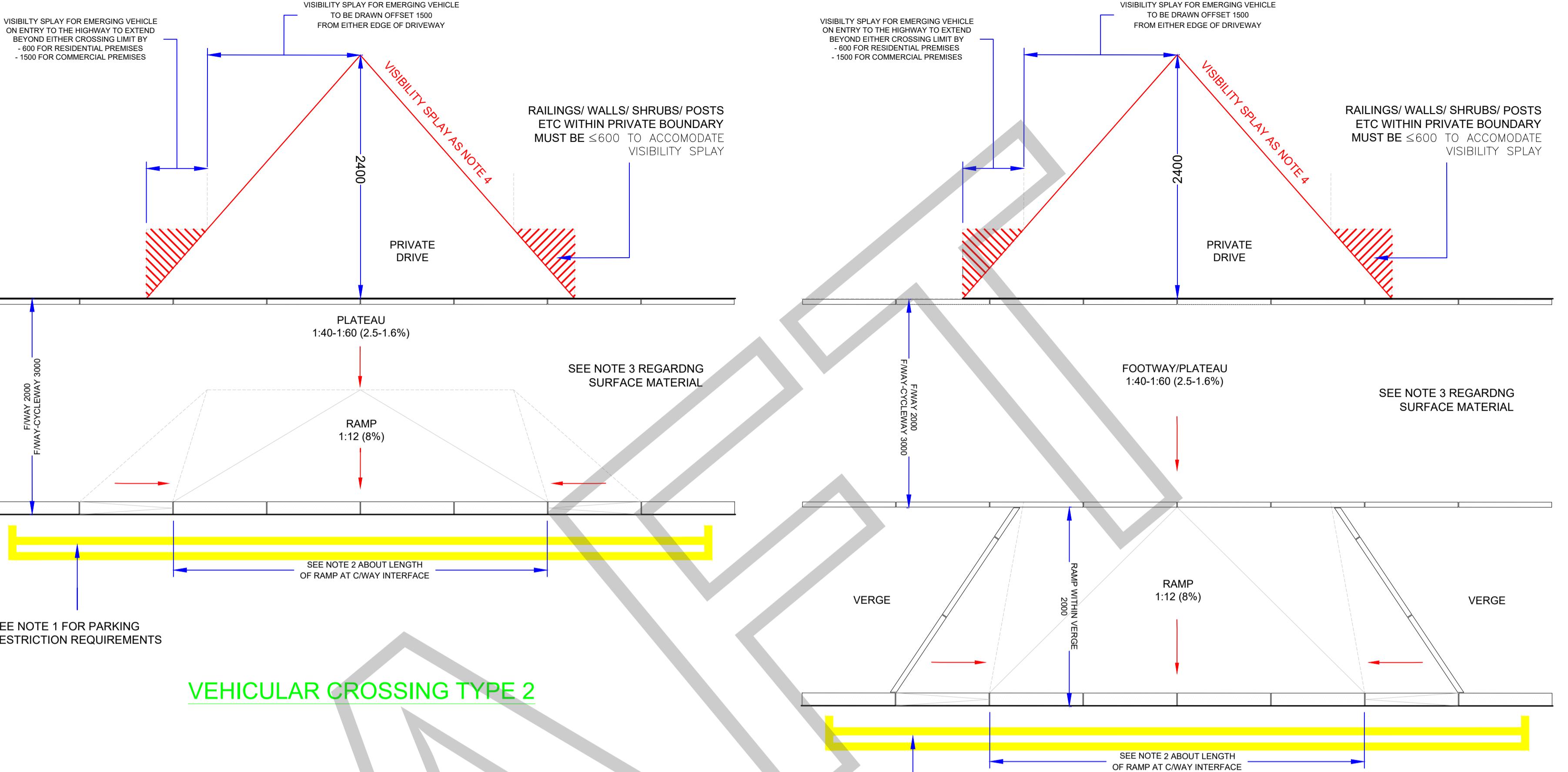
1. Do not scale from this drawing. Use only written dimensions.
2. All dimensions are in millimeters unless stated otherwise.
3. This drawing is to be read in conjunction with and checked against all other WBC Standard Detail drawings, Highways Design Guide, British Standards and all other relevant guidance's. In the event of any conflict with said guidance's, the guidance's prevail.
4. Appointed WBC Highway Engineer to be present during inspections/CBR testing.

CONSTRUCTION NOTES:

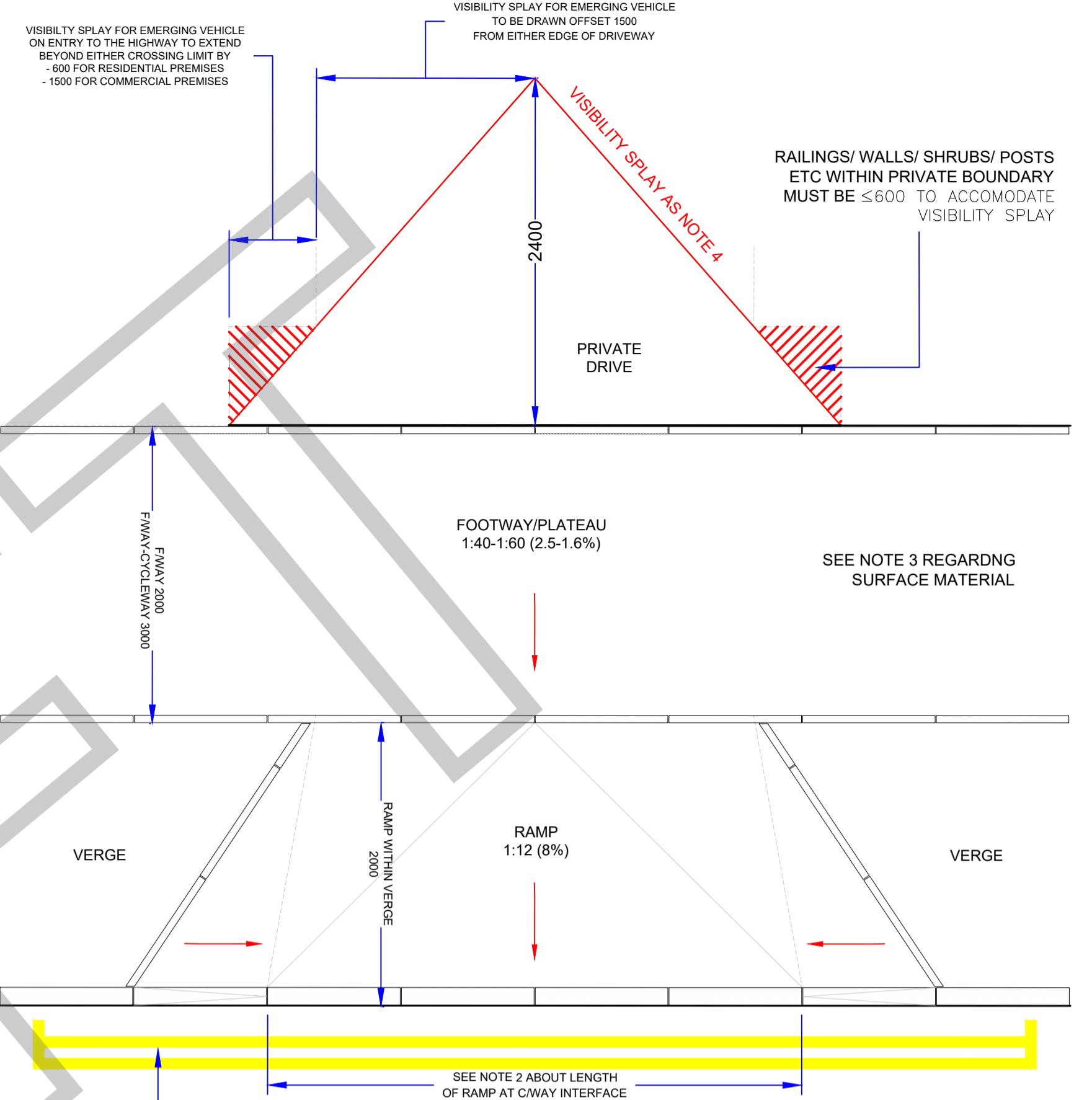
1. Double yellow line restrictions will be required along the carriageway edge between parking bays within roads governed by Restricted Parking Zones. These shall run through for 1000m either side of ramps prior to the ramp transition. Roads elsewhere can be controlled with optional H-Bar white lines to the same specification.
2. Ramp width to be minimum necessary value of 3600 and a maximum of 4500. Vehicle tracking to be provided as determined appropriate. The ramp shall be increased to 7200mm maximum of 9000 for crossings leading to double drives. Maximum values subject to if the private hard standing provides space for the vehicles to work side by side in a sufficient area for both vehicles to emerge onto the Highway in forward gear. Vehicle tracking simulations will be required to demonstrate both these points.
3. See WDS_HD_01 for details on surface materials. Where Footways and Footways that of the carriageway road and transition, the two surfaces shall be delineated using edging kerb.
4. At the interface between a private hard standing and the rear limit of the Highway at a Vehicle Crossing, vehicle users emerging from the latter should be provided with a clear visibility splay in both directions that is unimpeded by any significant vertical obstruction. This shall be applied to the vertical plane within the splay between 600-2000 above surface level. This is so that they can see pedestrians who may be passing along the roadway.
5. Where an inset parking bay is adjacent a verge/verge/service margin, the verge construction shall be replaced with a footway as per WDS_HD_01 'Tarmac/footway' with a width ≥ 1000 .
6. If related area is to be footway and surface material of build-out is to match that of footway, edging kerb is not required.
7. Min width for residential inset parking bays to be 2500 for Primary and Secondary roads. All other roads to be appropriate to design (min 2000). If inset bay is intended for commercial use, loading bay width shall 3000.
8. For residential parking bays, length shall be 6000 and 6600 for Disabled Bays. For commercial use Loading Bays, length shall be dependent on intended vehicle size and space required for unloading (generally 2000).
9. For residential inset bays, taper shall be 45° from end kerb to rear of bay (2500 if bay width is 2500). For commercial use Loading Bays, the tapers shall be dependent on method of entry/ manoeuvre as below:
 - Forwards in: Vehicle length \times width
 - Forwards out: Vehicle length \times width
 - Reverse in: Vehicle length \times width
10. Typically 2500 or 3500 if accommodating trees.
11. Tactiles to be a minimum of 3 blister paving slabs below rear kerb face for pedestrian crossing point and a minimum of 2 behind rear kerb face. Shall be minimum of 2 behind rear kerb face in other circumstances.
12. See Highways Design Guide Table A1 'Junction Radii' for requirements pending road priority.
13. The Highway Authority reserves the right to require applicants to relocate the Highway Authority or Statutory Undertaker service covers and chambers (including gullies) within the carriageway should these be located immediately in front of proposed pedestrian and vehicular ramps.
14. Any existing Highway Authority or Statutory Undertaker service covers within the area of the plinth or ramp shall be re-jointed, strengthened and replaced with appropriate load bearing cover. Existing Highway Authority or Statutory Undertaker services within the same area shall be lower where necessary.
15. Existing verges adjacent to new kerbing must be regraded and seeded.
16. Manhole covers should not be set until the base is laid.



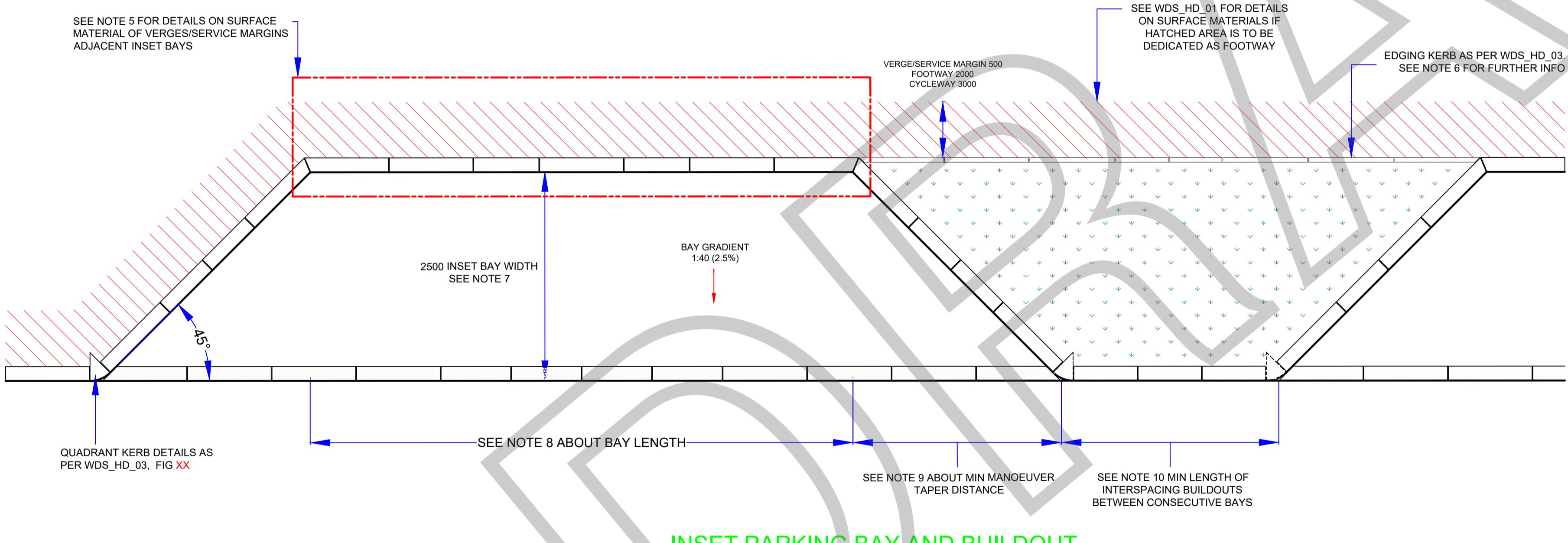
VEHICULAR CROSSING TYPE 1



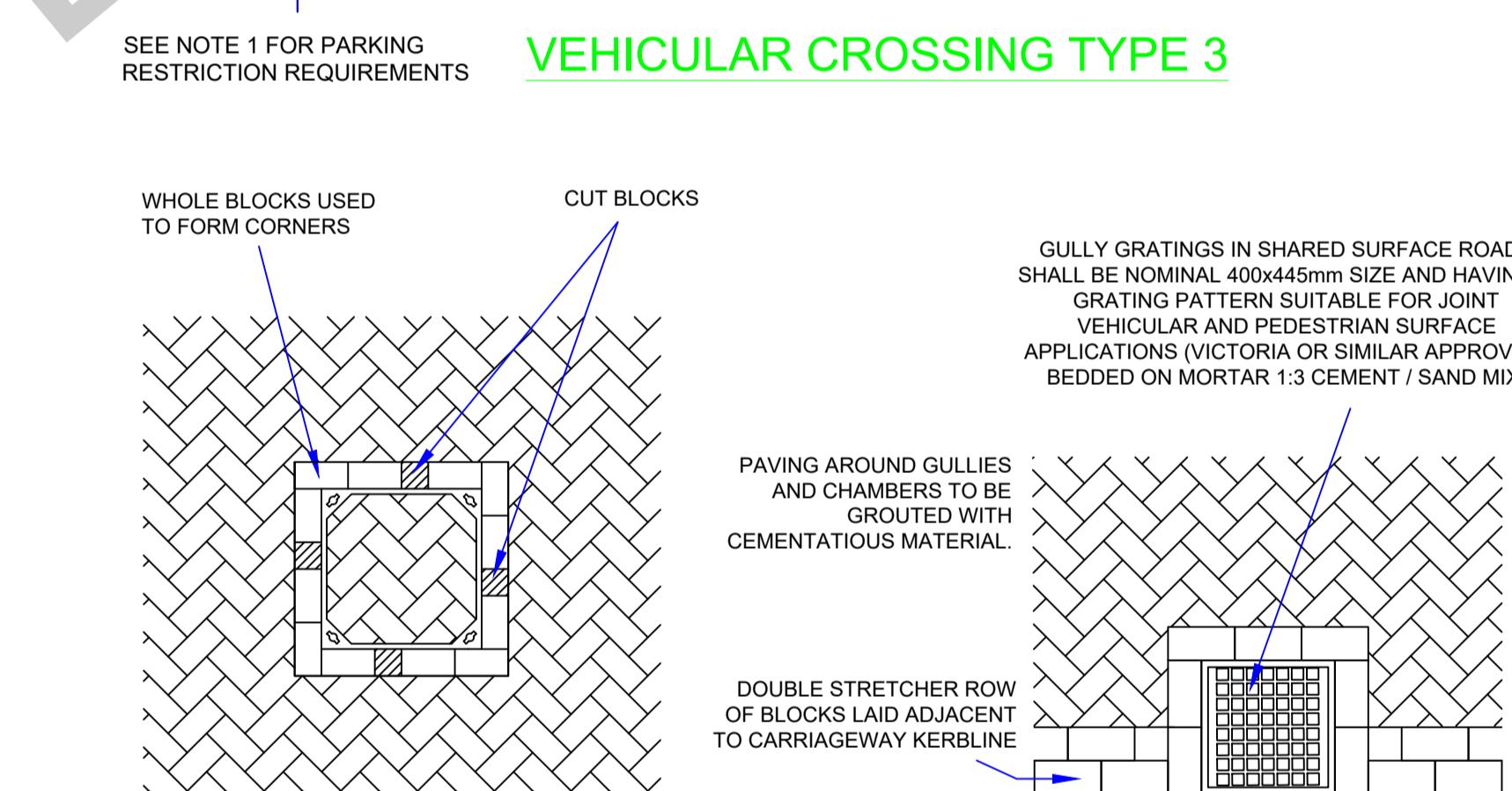
VEHICULAR CROSSING TYPE 2



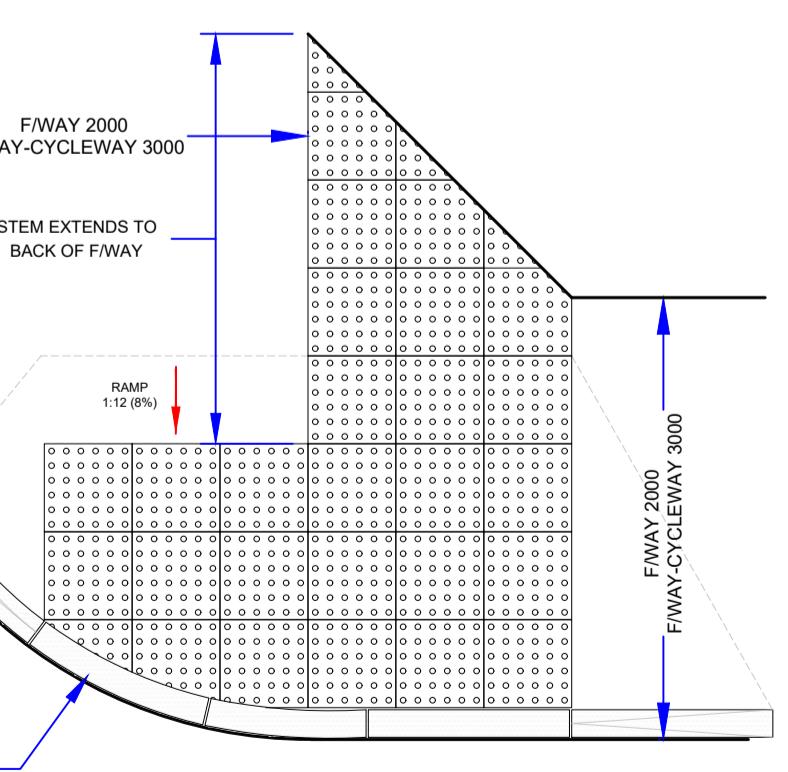
VEHICULAR CROSSING TYPE 3



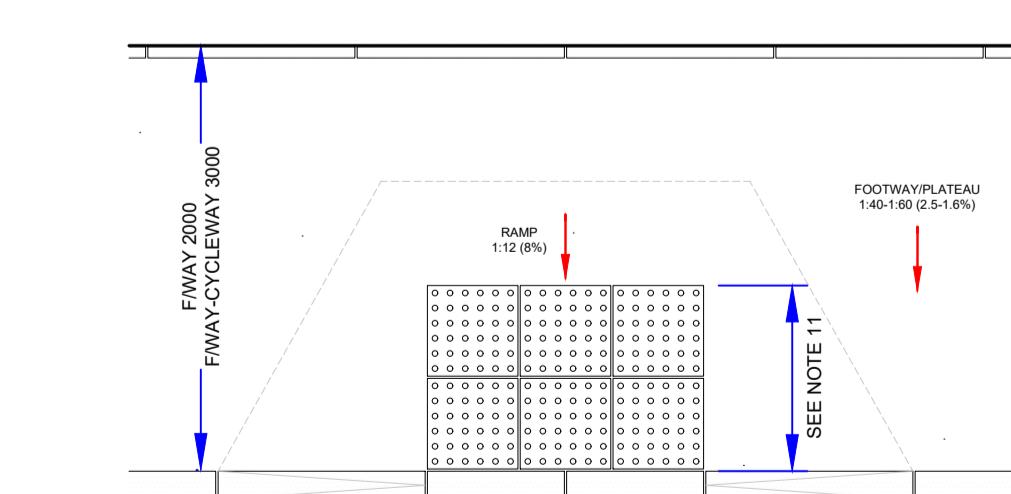
INSET PARKING BAY AND BUILDOUT



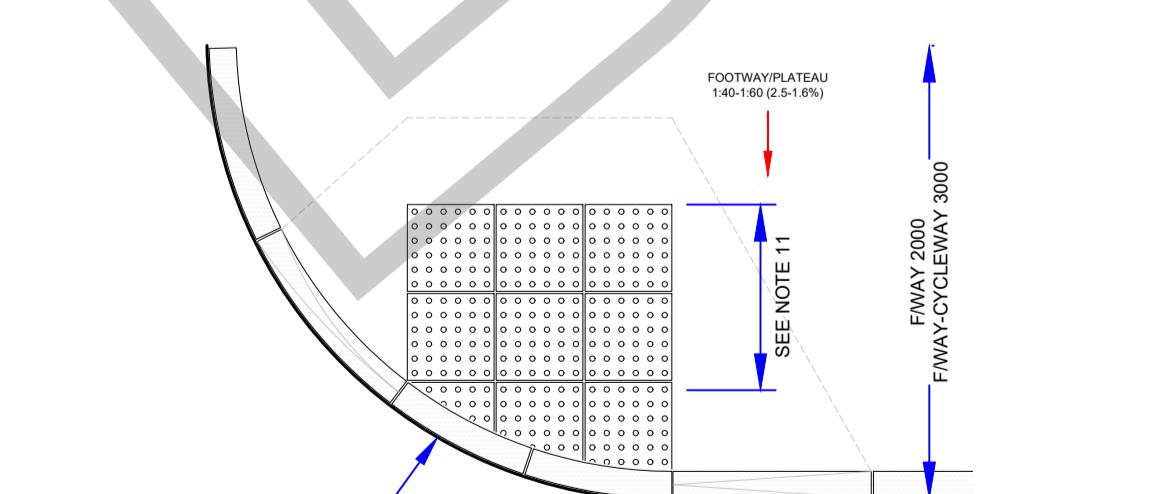
DETAILS AROUND CARRIAGEWAY IRONWORK IN BLOCKWORK



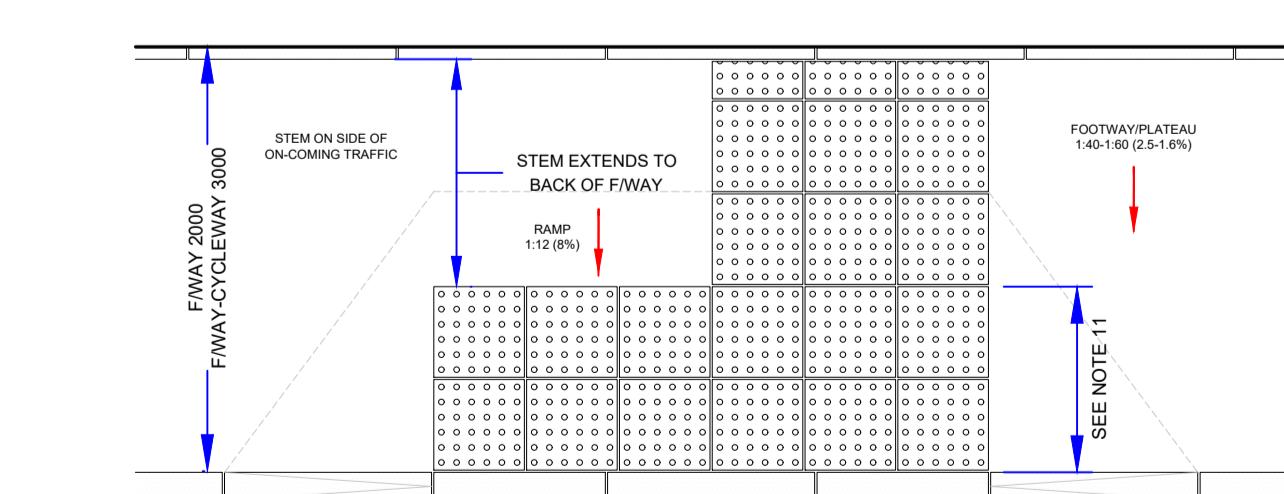
CONTROLLED TACTILE PAVING PEDESTRIAN CROSSING AT JUNCTION



INSET TACTILE PAVING PEDESTRIAN CROSSING POINT AWAY FROM JUNCTIONS



TACTILE PAVING PEDESTRIAN CROSSING AT JUNCTION



INSET CONTROLLED TACTILE PAVING PEDESTRIAN CROSSING POINT AWAY FROM JUNCTIONS

17/07/2020	A
Date Approved	Revision



WOKINGHAM
BOROUGH COUNCIL

Project
WOKINGHAM BOROUGH COUNCIL
HIGHWAYS DEVELOPMENT
DESIGN STANDARD PLANS

Title
STANDARD DETAILS
SHEET 4 OF 4

Scale NOT TO SCALE	Drawn SL Designed WBC
Drawing No. WDS_HD_04	Rev. A Checked Approved
Date Drawn 16/07/2020	Date Approved 17/07/2020