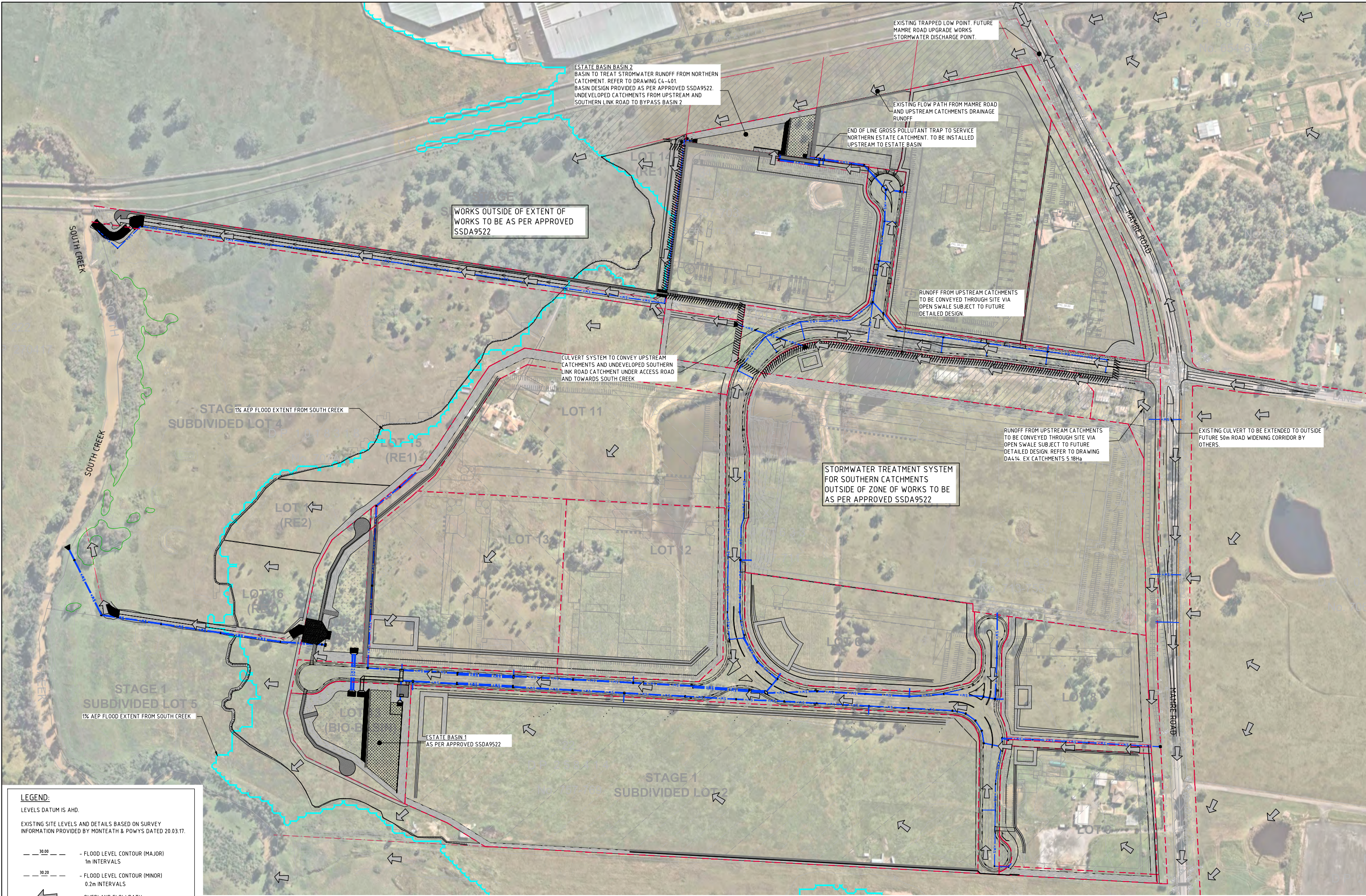




LEGEND:
LEVELS DATUM IS AHD.

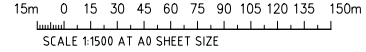
EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS DATED 20.03.17.

— 30.00 — FLOOD LEVEL CONTOUR (MAJOR)
1m INTERVALS

— 30.20 — FLOOD LEVEL CONTOUR (MINOR)
0.2m INTERVALS

← OVERLAND FLOW PATH

OVERALL STORMWATER MANAGEMENT PLAN
SCALE 1:1500



ISSUED FOR DEVELOPMENT APPLICATION	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS
	12.11.21	A							



PROJECT
MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW



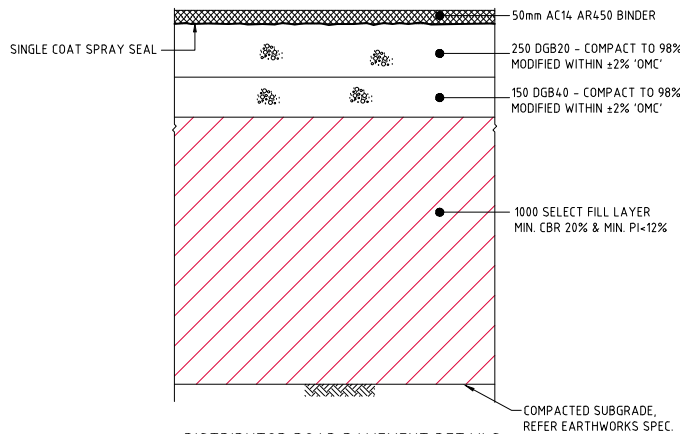
Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Mudgee, NSW 2850
Tel: (02) 8551-7669 Fax: (02) 8541-3731
email: mail@costinroe.com.au

Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

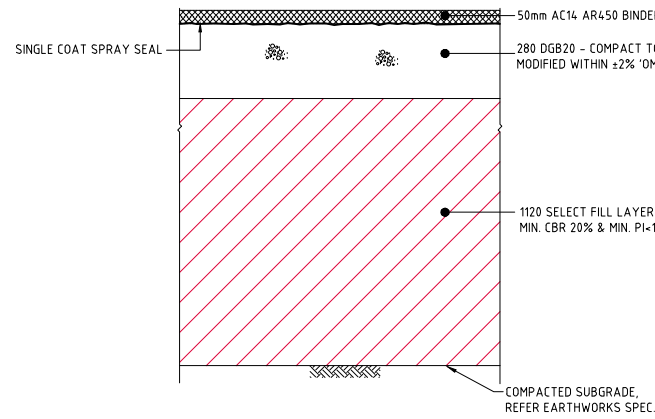
DRAWING TITLE
OVERALL STORMWATER MANAGEMENT PLAN

DRAWING NO. **C013362.02-C3-420**



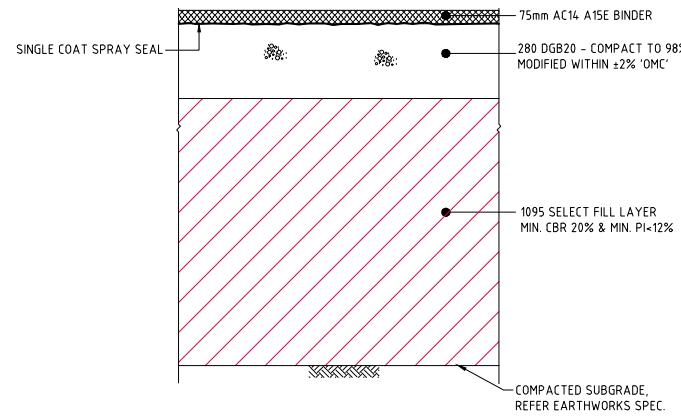
DISTRIBUTOR ROAD PAVEMENT DETAILS

SCALE 1:10
DESIGN TRAFFIC 5x10⁷ ESA's
DESIGN CBR VALUE OF 2%
NOTE: FINAL DESIGN SUBJECT TO FURTHER TESTING TO CONFIRM CBR VALUE



INDUSTRIAL ROAD PAVEMENT DETAILS

SCALE 1:10
DESIGN TRAFFIC 1x10⁷ ESA's
DESIGN CBR VALUE OF 2%
NOTE: FINAL DESIGN SUBJECT TO FURTHER TESTING TO CONFIRM CBR VALUE



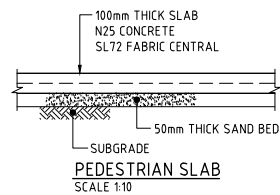
CUL-DE-SAC PAVEMENT DETAILS

SCALE 1:10
DESIGN TRAFFIC 1x10⁷ ESA's
DESIGN CBR VALUE OF 2%
NOTE: FINAL DESIGN SUBJECT TO FURTHER TESTING TO CONFIRM CBR VALUE



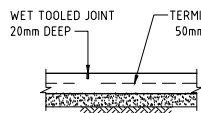
NORTHERN BASIN ACCESS TRACK

SCALE 1:10



PEDESTRIAN SLAB

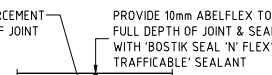
SCALE 1:10



WET TOOLED JOINT

SCALE 1:10

NOTE: PROVIDE SAWCUT JOINTS AT 2000 MAX. CTS.

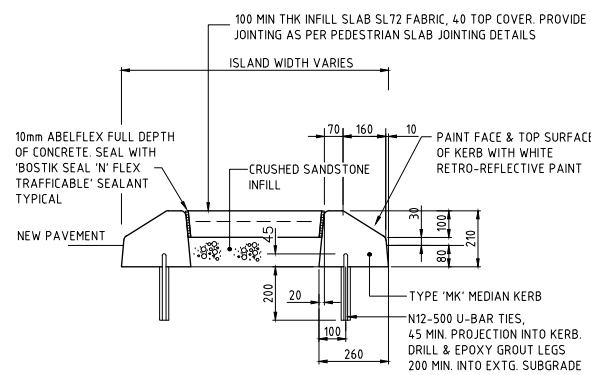


BUTT JOINT

SCALE 1:10

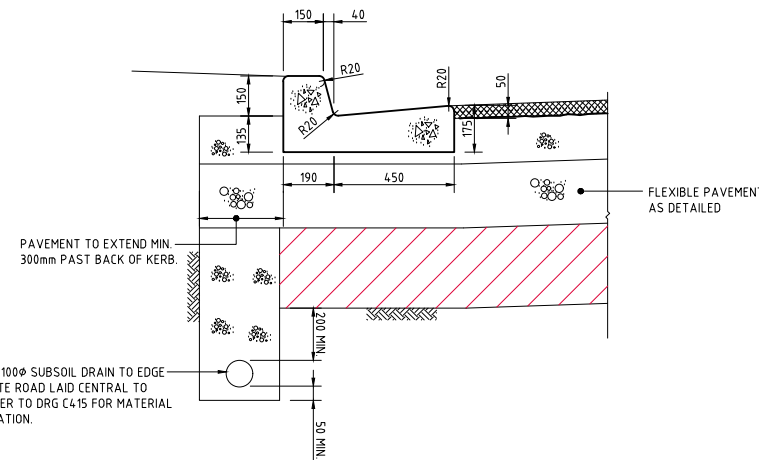
NOTE: PROVIDE EXPANSION JOINTS AT 6000 MAX. CTS.

PEDESTRIAN SLAB DETAILS



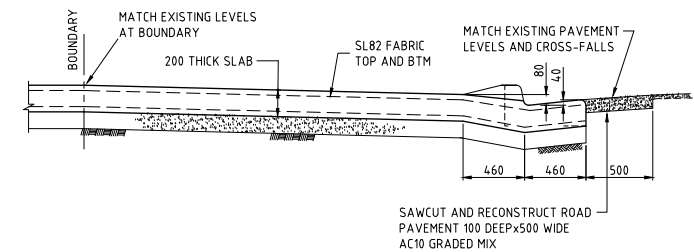
TYPICAL SECTION THRU' MEDIAN ISLAND

1:10



PENRITH CITY COUNCIL KERB & GUTTER

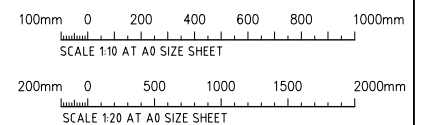
SCALE 1:10



INDUSTRIAL VEHICULAR CROSS OVER DETAIL - IVC

SCALE 1:20

FOR DEVELOPMENT APPLICATION



ISSUED FOR DEVELOPMENT APPLICATION			12/11/21			A		
AMENDMENTS			DATE			ISSUE		



PROJECT
MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW



Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Windsor, Sydney NSW 2000
Tel: (02) 8551-7669 Fax: (02) 8541-3731
email: mail@costinroe.com.au

Costin Roe Consulting

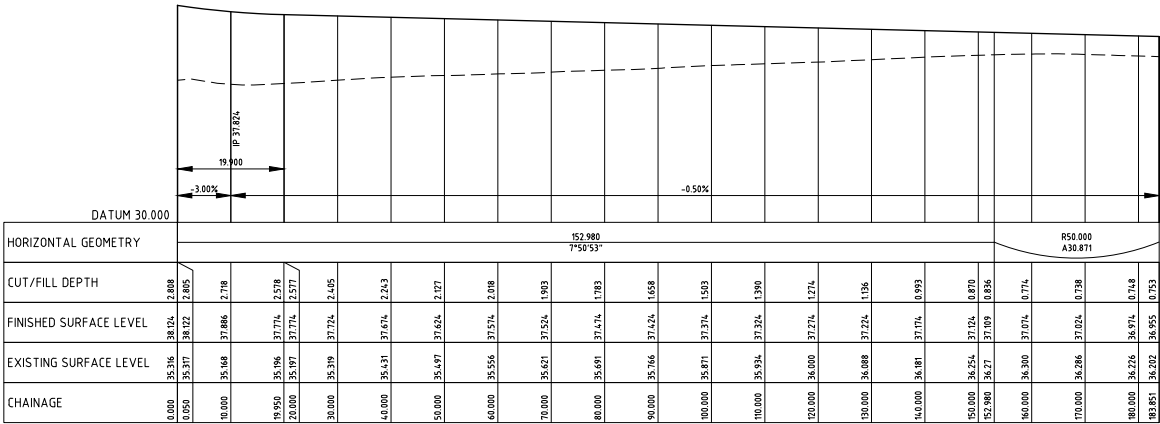
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE
ROADWORKS DETAILS MOD 3

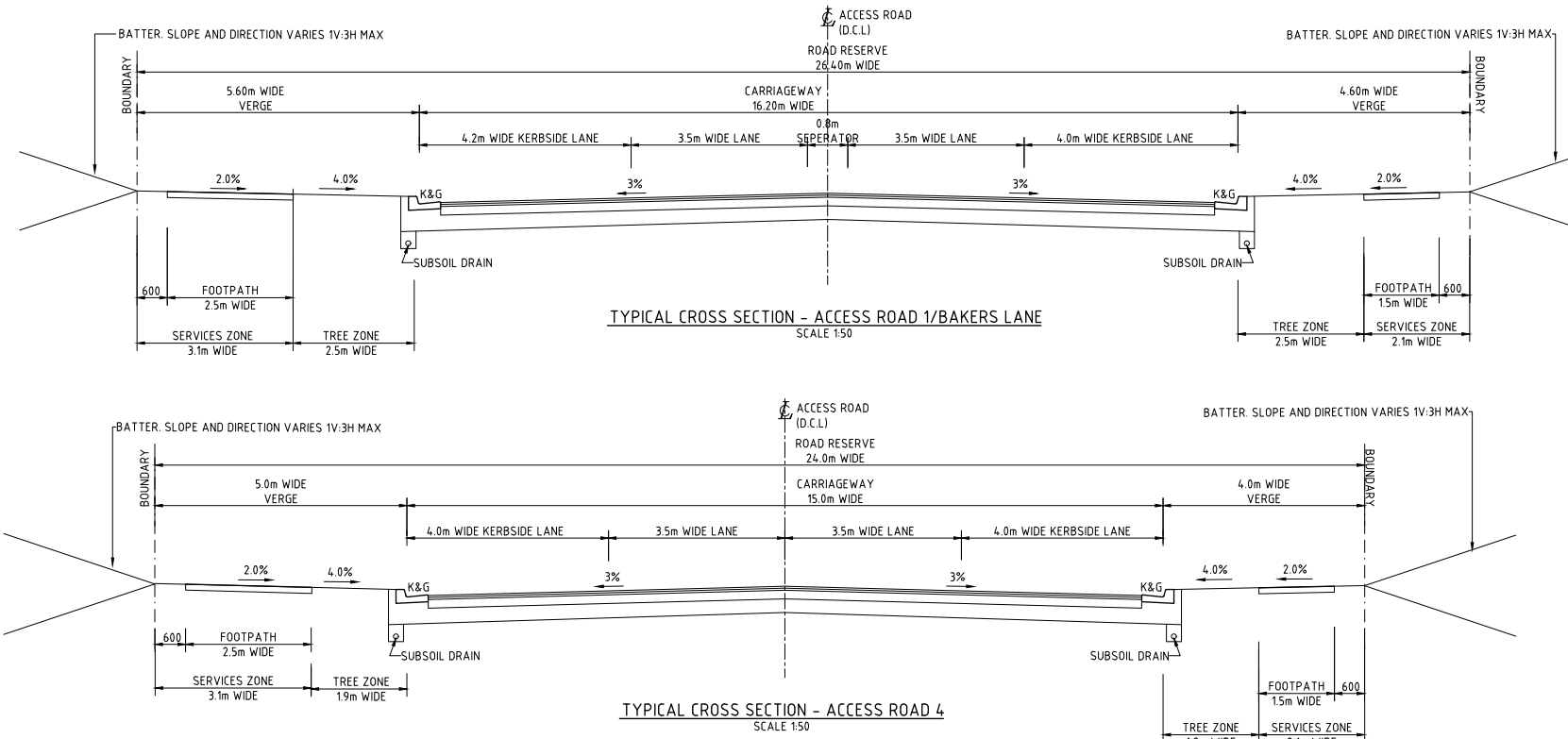
DRAWING No. **C013362.02-C3-500**

1/10

DRAWING No C013362.02-C3-501



LONGITUDINAL SECTION - CL ACCESS ROAD 4
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100



FOR DEVELOPMENT APPLICATION

ISSUED FOR DEVELOPMENT APPLICATION	12/11/21	A	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE
AMENDMENTS								



PROJECT
MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW



Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Wahib Bay, Sydney NSW 2000
Tel: (02) 8554-7699 Fax: (02) 8541-3721
email: mail@costinroe.com.au ©

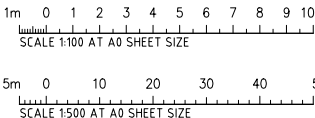
Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE
ROAD LONG SECTIONS
SHEET 2
MOD 3

DRAWING No C013362.02-C3-502

ISSUE A



PAVEMENT MAINTENANCE NOTES :

DURING THE LIFE OF THE PAVEMENT, DAMAGE IN VARIOUS FORMS IS LIKELY TO OCCUR. GOOD MAINTENANCE WILL KEEP PROBLEMS TO A MINIMUM AND EXTEND THE LIFE OF PAVEMENTS. THE FOLLOWING LIKELY AREAS OF DAMAGE MAY OR MAY NOT OCCUR DURING THE LIFE OF THE PAVEMENTS:

SLAB PAVEMENTS :

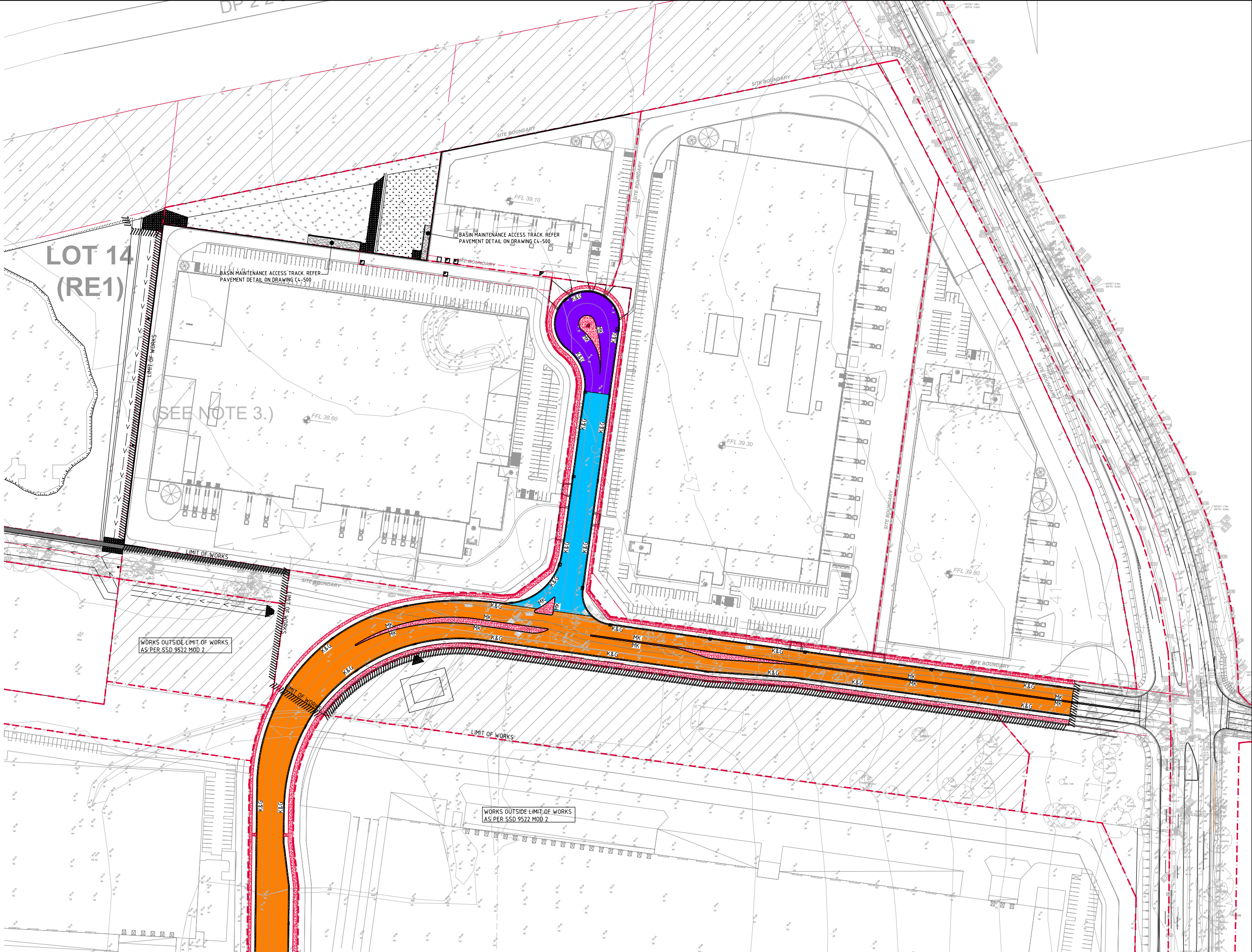
1. DAMAGE TO JOINTS SUCH AS FRETTING OR BREAKING AWAY OF PIECES SHOULD BE REPAIRED USING CONCRETE REPAIR PRODUCTS AND THE JOINTING MATERIAL MADE GOOD.
2. CRACKING OF SLABS WHICH MAY OCCUR OVER THE LIFE OF THE SLAB SHOULD BE REPAIRED BY EPOXY GROUTING AS SOON AS POSSIBLE TO PREVENT LOCAL FRETTING AND BREAKING AWAY. THE DEFINITION OF A CRACK WHICH MAY BECOME DETRIMENTAL IS ONE WHICH IS GREATER THAN 0.3mm.
3. LOCAL DAMAGE DUE TO MECHANICAL PROCESSES OR PALLETS (WITH PROTRUDING NAILS) SHOULD BE REPAIRED AS SOON AS POSSIBLE WITH AN EPOXY CONCRETE REPAIR PRODUCT.
4. LOCAL MOVEMENT OF SLABS CAUSED BY EXTERNAL SOURCES SUCH AS INGRESS OF WATER SHOULD BE REFERRED TO THE ENGINEER TO DETERMINE THE BEST METHOD OF REPAIR.
5. JOINT SEALANTS WILL GENERALLY BREAKDOWN AND NEED REPLACEMENT AFTER 12 MONTHS WHEN MOST OF THE SLAB SHRINKAGE HAS TAKEN PLACE. RESEALING NEEDS TO BE CARRIED OUT TO ENSURE ONGOING SUPPORT TO SLAB EDGES.

ASPHALT PAVEMENTS :

1. UNLESS NOTED OTHERWISE, FLEXIBLE PAVEMENTS SHOWN ON THESE DRAWINGS ARE THE MINIMUM NECESSARY TO SUPPORT ARTICULATED VEHICLES FOR A MINIMUM DESIGN LIFETIME.
2. CRACKING OF THE ASPHALT SURFACE AND OTHER DEFECTS SHOULD BE REPAIRED QUICKLY TO PREVENT INGRESS OF WATER TO THE SUBGRADE, WHICH WILL ACCELERATE DETERIORATION OF PAVEMENTS.
3. DRAINAGE GRADES SHOULD BE MAINTAINED TO AVOID PONDING OF SURFACE WATER WHICH MAY CONTRIBUTE TO DETERIORATION.

LEGEND:

- INDUSTRIAL ROAD 1x10⁷ ESA
- DISTRIBUTOR ROAD 5x10⁷ ESA
- CUL-DE-SAC PAVEMENT
- CONCRETE FOOTPATH
- SEWAGE IOP STATION
- K&G
- KERB & GUTTER
- MK
- MOUNTABLE KERB



FOR DEVELOPMENT APPLICATION

ROAD PAVEMENT PLAN
SCALE 1:750

6m 0 15 30 45 60 75m
SCALE 1:750 AT A0 SHEET SIZE

ISSUED FOR DEVELOPMENT APPLICATION			12/11/21			A					
AMENDMENTS			DATE			ISSUE			AMENDMENTS		
			DATE			ISSUE					

CLIENT

PROJECT

MAMRE SOUTH PRECINCT

657 - 708 MAMRE ROAD

KEMPS CREEK, 2178, NSW

DESIGNED: [] DATE: []

CHECKED: [] DATE: []

SCALE: []

SIZE: []

SCALE: []

AS SHOWN

CAD REF: []

CAD REF: []

Costin Roe Consulting Pty Ltd.

Consulting Engineers

Level 1, 8 Windmill Street

Windsor, Sydney NSW 2000

Ph: (02) 9551-7669 Fax: (02) 9541-3731

email: mail@costinroe.com.au

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE

PAVEMENT TYPE PLAN

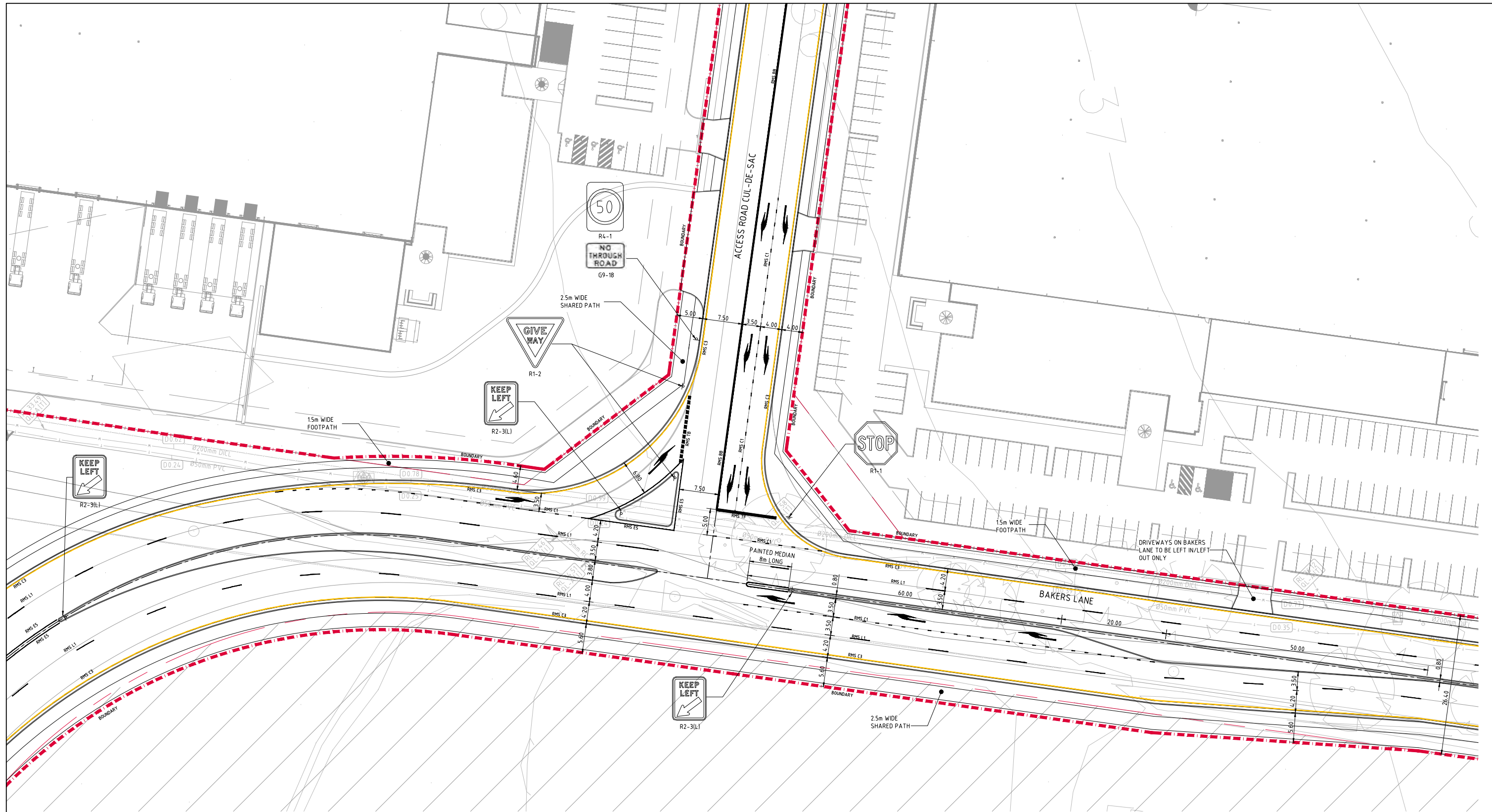
MOD 3

DRAWING NO

C013362.02-C3-503

SCALE

A



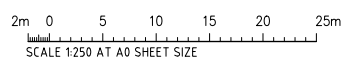
FUNCTIONAL LAYOUT PLAN-MOD 4 CUL-DE-SAC/BAKERS LANE
1:250 SCALE

LINEMARKING NOTES:
ALL REGULATORY SIGNPOSTING AND LINE MARKING SHOWN ON THESE DRAWINGS WILL NEED TO BE APPROVED BY WRITTEN AUTHORISATION FROM AN OFFICER AUTHORISED UNDER SECTION 5.9 OF THE RMS DELEGATIONS MANUAL

ALL LINEMARKING TO CONFORM TO RMS DELINEATION MANUAL AND QA SPECIFICATION R145. REFER TO THIS DOCUMENT FOR LINE TYPES, DIMENSIONS & MARKER SPACING.

RPM'S TO BE PROVIDED IN CONJUNCTION WITH LINEMARKING AS PER RMS QA SPECIFICATION R142.

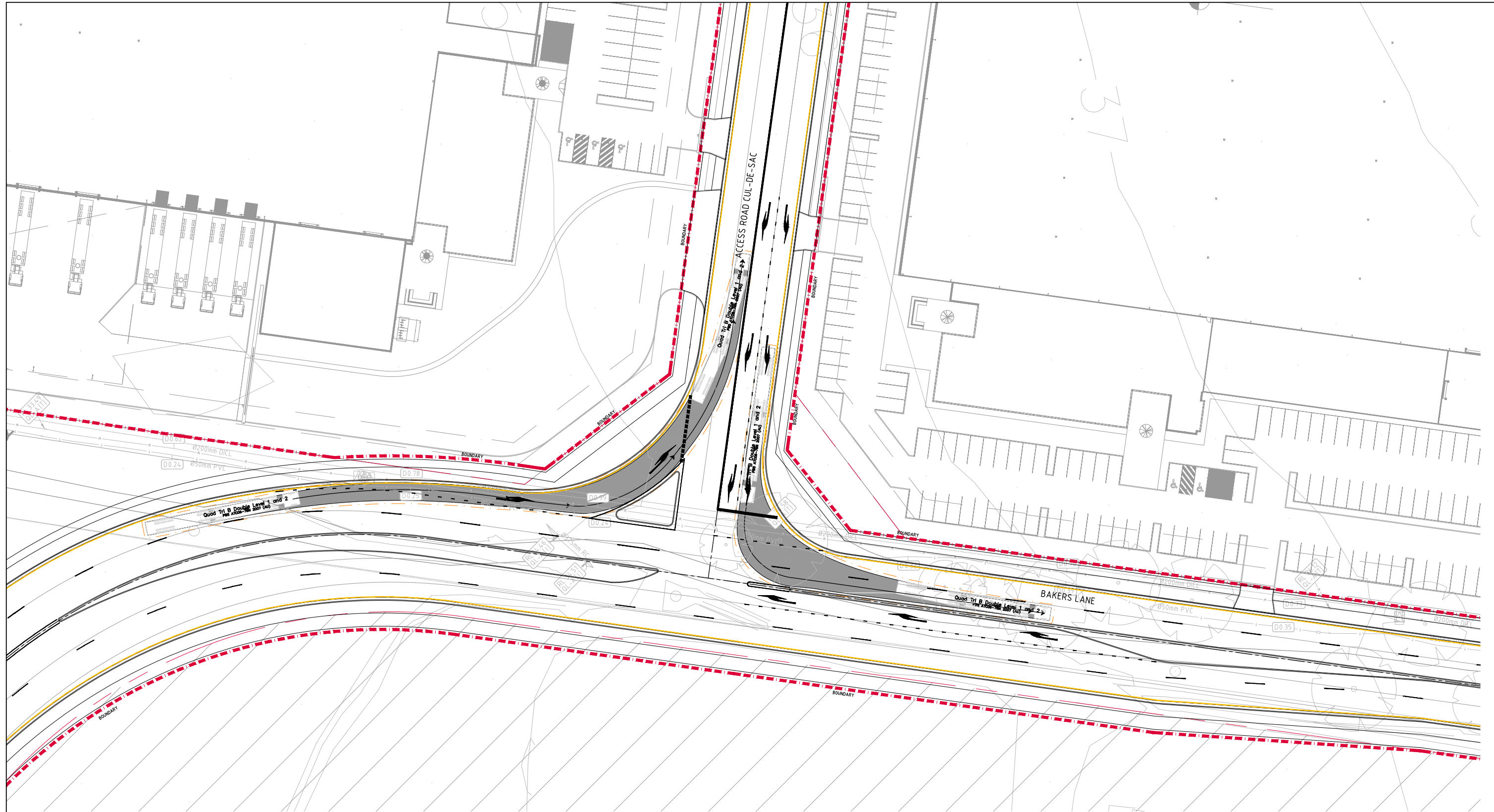
REMOVE ALL EXISTING LINEMARKING AS REQUIRED TO ALLOW FOR MARKING OF NEW INTERSECTION LAYOUTS. LINEMARKING REMOVAL TO BE PERFORMED IN ACCORDANCE WITH RMS STANDARDS



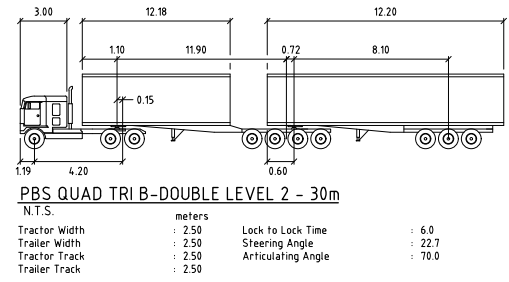
FOR INFORMATION ONLY

ISSUED FOR INFORMATION			17.11.21			B								
ISSUED FOR INFORMATION			21.10.21			A								
AMENDMENTS			DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS

ALTIS PROPERTY PARTNERS		FRASERS PROPERTY		PROJECT MAMRE SOUTH PRECINCT 657 - 708 MAMRE ROAD KEMPS CREEK, 2178, NSW		CLIENT Costin Roe Consulting Pty Ltd. Consulting Engineers Level 1, 8 Windmill Street Wahia, NSW 2159 Tel: (02) 8051-7669 Fax: (02) 8041-3731 email: mail@costinroe.com.au		Costin Roe Consulting		DRAWING TITLE FUNCTIONAL LAYOUT PLAN CUL-DE-SAC/BAKERS LANE MOD 3		DRAWING NO C013362.02-SK4-01		REVISION B	
DESIGNED: MW		DATE: NOV 21		CHECKED: MW		SCALE: AS SHOWN		CNO REF: C013362.02-SK4-01		PRECISION COMMUNICATION ACCOUNTABILITY					

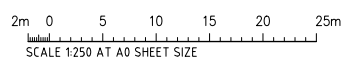


FUNCTIONAL LAYOUT PLAN-MOD 4 CUL-DE-SAC/BAKERS LANE
1:250 SCALE



NOTE:
THIS PLAN HAS BEEN PRODUCED USING VEHICLE MODELLING
COMPUTER SOFTWARE AUTODESK AUTOTURN.
THE VEHICLES ADOPTED ARE BASED UPON VEHICLE DATA
PROVIDED BY THE SOFTWARE FOR AUSTRROADS & AS2890.

SWEPT PATH NOTE:
SWEPT PATH RUN SPEED 15km/h.
— VEHICLE BODY PATH
- - - VEHICLE BODY PATH
600mm CLEARANCE



FOR INFORMATION ONLY

ISSUED FOR INFORMATION				17.11.21				B			
ISSUED FOR INFORMATION				21.10.21				A			
AMENDMENTS				DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE

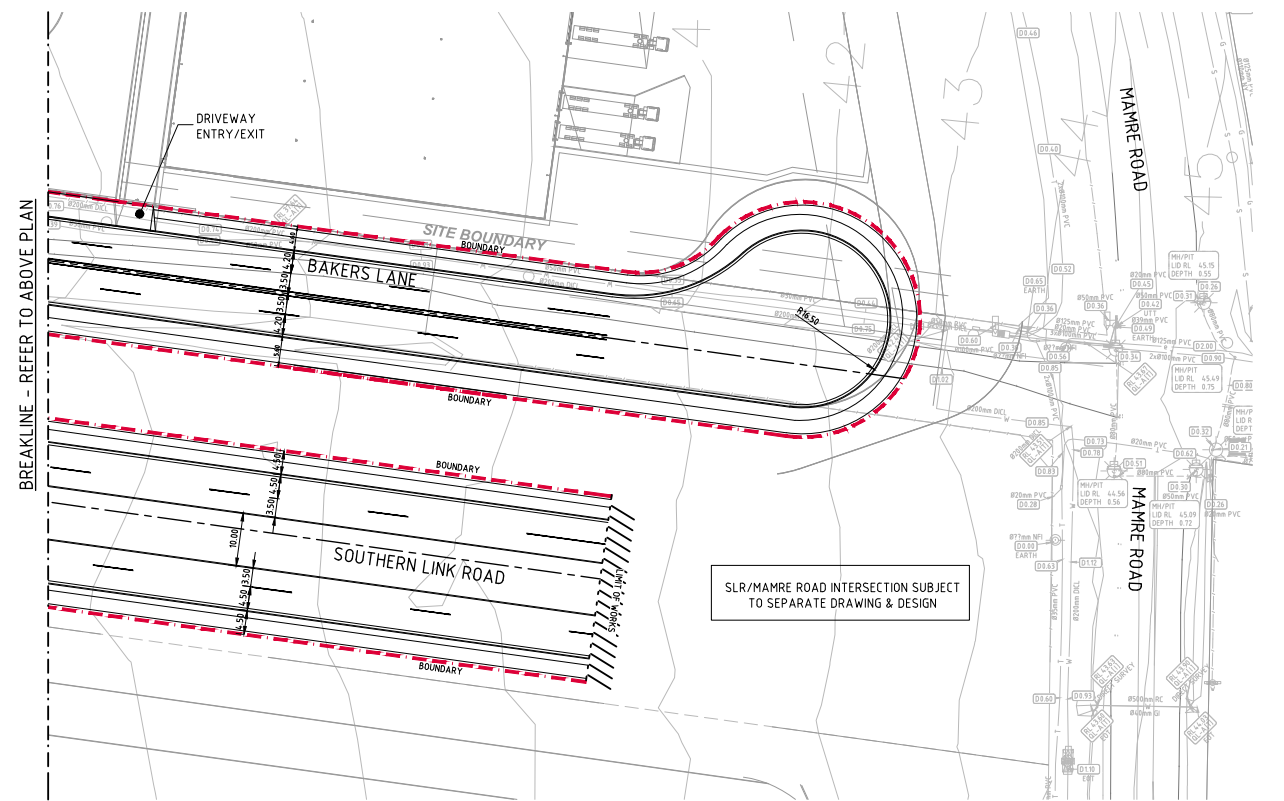
ALTIS PROPERTY PARTNERS		FRASERS PROPERTY		PROJECT MAMRE SOUTH PRECINCT 657 - 708 MAMRE ROAD KEMPS CREEK, 2178, NSW		CLIENT Costin Roe Consulting Pty Ltd. Consulting Engineers Level 1, 8 Windmill Street Wahia, NSW 2100 Tel: (02) 8051-7669 Fax: (02) 8041-3731 email: mail@costinroe.com.au		Costin Roe Consulting		DRAWING TITLE TURNING PATHS PLAN-SHEET 1 CUL-DE-SAC/BAKERS LANE MOD 3	
DESIGNED	MC	DATE	NOV 21	CHECKED	MC	SCALE	AS SHOWN	CAO REF.	C013362.02-SK4-02	PRECISION COMMUNICATION ACCOUNTABILITY	DRAWING NO C013362.02-SK4-02
										B	

ALL REGULATORY SIGNPOSTING AND LINE MARKING SHOWN ON THESE DRAWINGS WILL NEED TO BE APPROVED BY WRITTEN AUTHORISATION FROM AN OFFICER AUTHORISED UNDER SECTION 5.9 OF THE RMS DELEGATIONS MANUAL

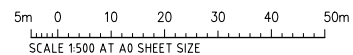
ALL LINEMARKING TO CONFORM TO RMS DELINEATION MANUAL AND QA SPECIFICATION R145. REFER TO THIS DOCUMENT FOR LINE TYPES, DIMENSIONS & MARKER SPACING.

RPM's TO BE PROVIDED IN CONJUNCTION WITH LINEMARKING AS PER RMS QA SPECIFICATION R142.

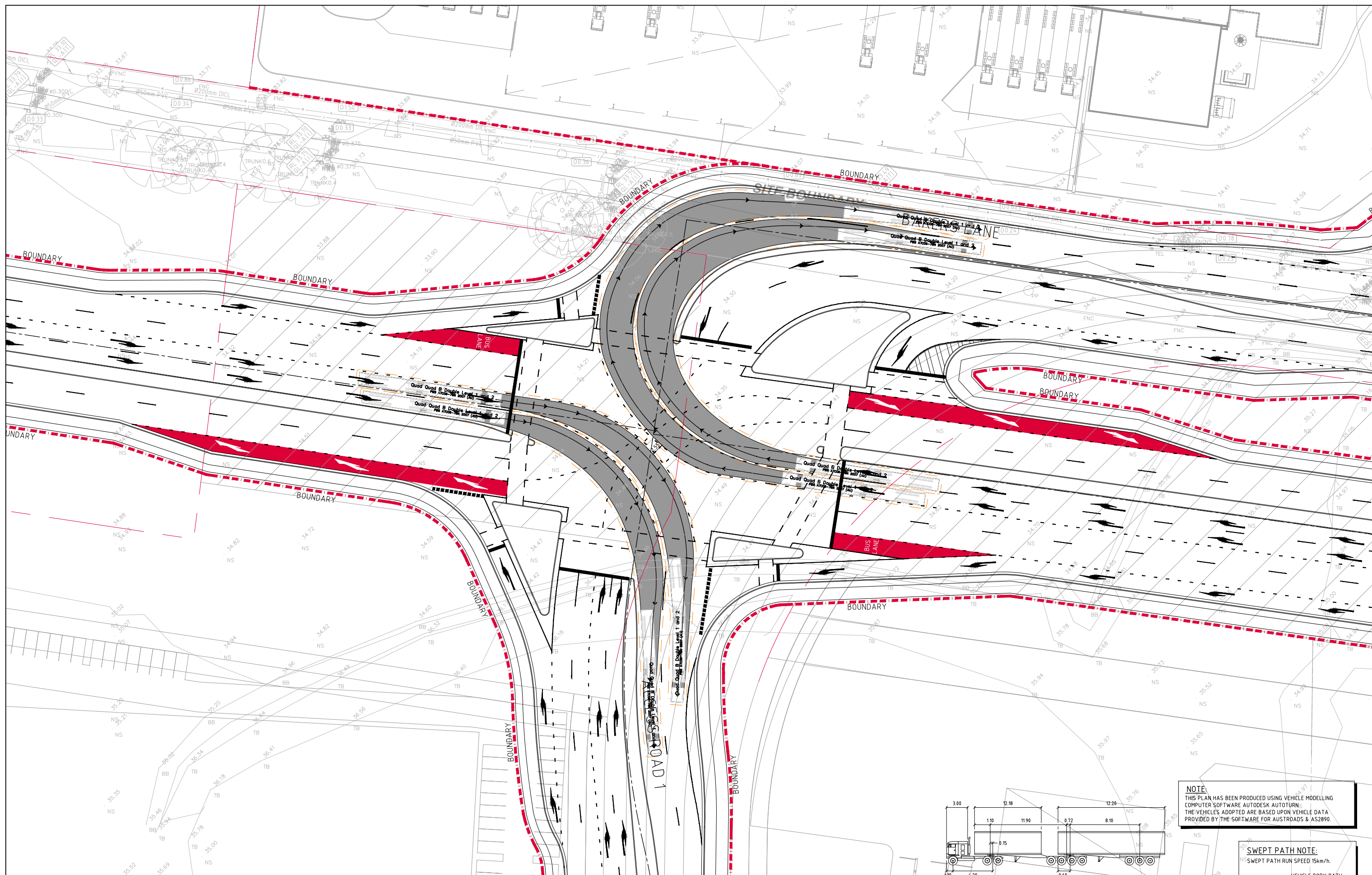
REMOVE ALL EXISTING LINEMARKING AS REQUIRED TO ALLOW FOR MARKING OF NEW INTERSECTION LAYOUTS. LINEMARKING REMOVAL TO BE PERFORMED IN ACCORDANCE WITH RMS STANDARDS



 **FUNCTIONAL LAYOUT PLAN-MOD 4 SLR/BAKERS LANE**
1:500 SCALE



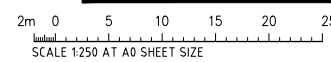
																														 PROJECT MAMRE SOUTH PRECINCT 657 - 708 MAMRE ROAD KEMPS CREEK, 2178, NSW  Costin Roe Consulting Pty Ltd. Consulting Engineers ***** Level 1, 8 Windmill Street Wahai Bay, Sydney NSW 2000 Tel: (02) 9581-7699 Fax: (02) 9541-3728 Email: mail@costinroe.com.au ©										 PRECISION COMMUNICATION ACCOUNTABILITY										DRAWING TITLE FUNCTIONAL LAYOUT PLAN SLR/BAKERS LANE MOD 3 DRAWING NO C013362.02-SK4-06 ISSUE 1									
ISSUED FOR INFORMATION 17.11.21 8 ISSUES FOR INFORMATION 09.11.21 A AMENDMENTS DATE ISSUE AMENDMENTS DATE ISSUE AMENDMENTS																																																											



NOTE:
THIS PLAN HAS BEEN PRODUCED USING VEHICLE MODELLING
COMPUTER SOFTWARE AUTODESK AUTOTURN.
THE VEHICLES ADOPTED ARE BASED UPON VEHICLE DATA
PROVIDED BY THE SOFTWARE FOR AUSTRROADS & AS2890.

SWEEP PATH NOTE:
SWEEP PATH RUN SPEED 15km/h.

———— VEHICLE BODY PATH
----- VEHICLE BODY PATH
600mm CLEARANCE



FOR INFORMATION ONLY

															PROJECT MAMRE SOUTH PRECINCT Level 1, 6 Windmill Street Kemps Creek, 2178, NSW  Costin Roe Consulting Pty Ltd. Consulting Engineers ***** Unit 10, 50 Sydney NSW 2000 Tel: (02) 8241-7699 Fax: (02) 8241-3721 email: mail@costinroecol.com.au			DRAWING TITLE TURNING PATHS PLAN-SHEET 2 SLR/BAKERS LANE MOD 3 DRAWING NO C013362.02-SK4-08		
ISSUED FOR INFORMATION 17.11.21 B ISSUED FOR INFORMATION 09.11.21 A AMENDMENTS DATE ISSUE			AMENDMENTS DATE ISSUE			DESIGNED MW DRAWN MC DATE NOV 21 CHECKED MW SIZE A3 SCALE AS SHOWN CAD REF: C013362.02-SK4-08			PRECISION COMMUNICATION ACCOUNTABILITY											

