Prepared by:

Orion Consulting

CONSULT AUSTRALIA
Member Firm

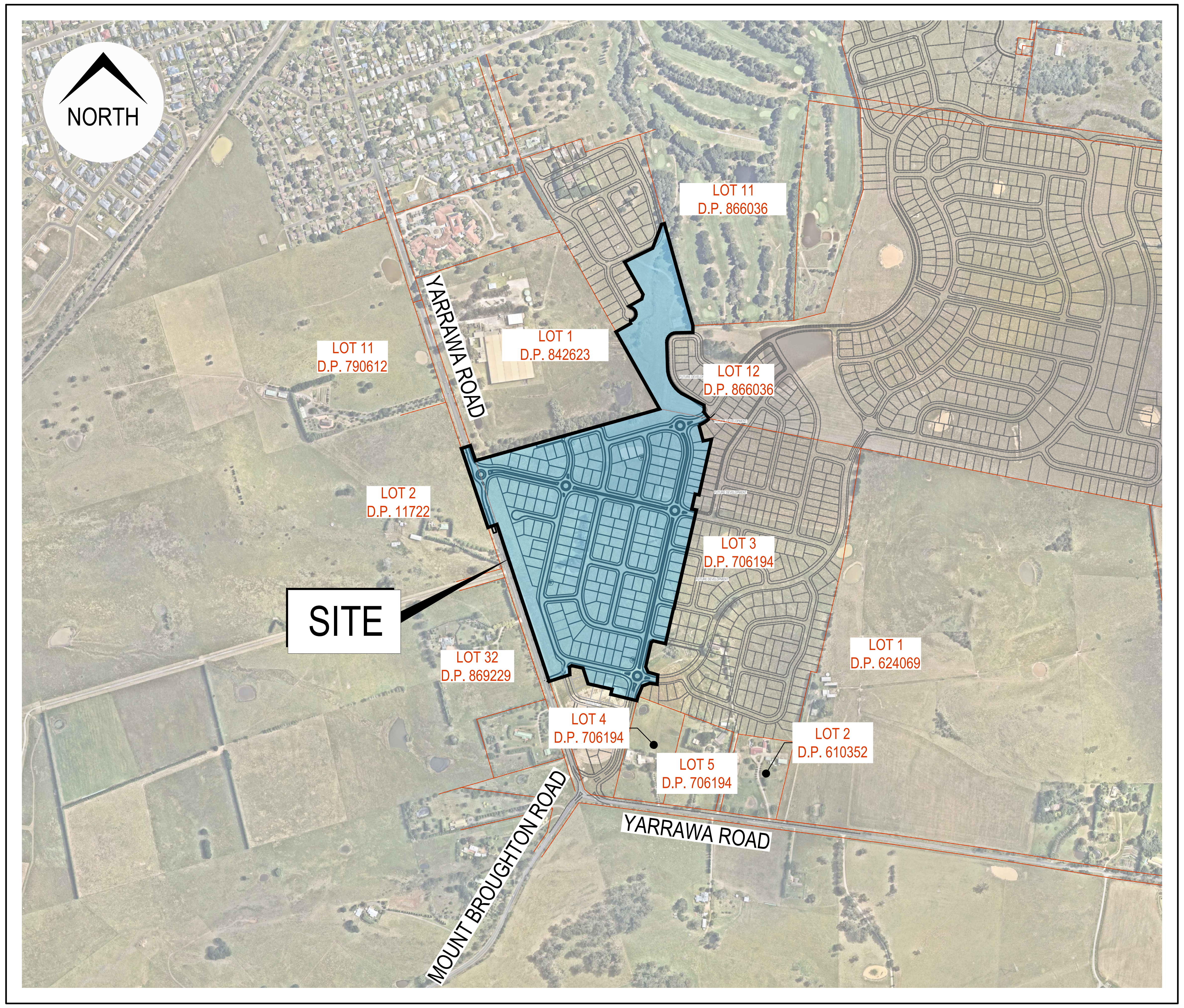
Prepared for:

Aoyuan
building a healthy lifestyle

LGA:

WINGECARRIBEE
SHIRE COUNCIL

DA: 19/1183



SITE / LOCATION (Image courtesy of Nearmap 14.01.2021)

LOT 3 D.P. 706194
LOT 12 D.P. 866036

STAGE 1

32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,

ROAD AND DRAINAGE DESIGN

ISSUED FOR CONSTRUCTION CERTIFICATE

Project No. 20-0071 Set No. 02 Milestone CC Plan 000 Revision C

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ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
D	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Disclaimer and Copyright:
ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

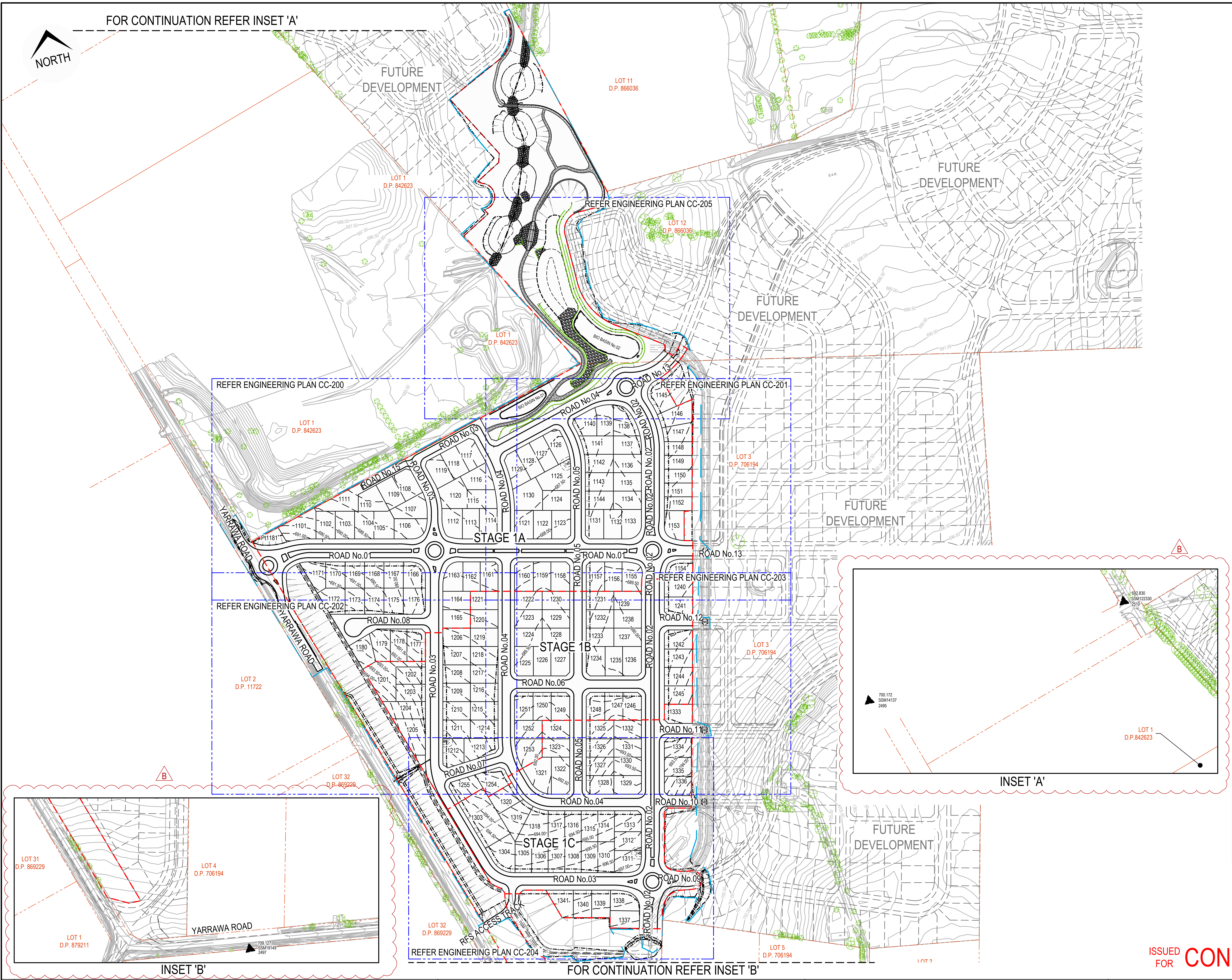
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SHEET INDEX

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	001	D

Plotted:Monday, 18 October 2021 5:40:39 PM File Name:D:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-001.dwg



LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - ELECTRICITY	—E—	—E—	—E—
GAS	—G—	—G—	—G—
SEWER	—S—	—S—	—S—
WATER	—W—	—W—	—W—
TELECOMS	—T—	—T—	—T—
NBN	—NBN—	—NBN—	—NBN—
OPTIC FIBRE	—OF—	—OF—	—OF—
CONTOUR LINE & LABEL	—20.0—	---20.0---	---20.0---
LOT NUMBER & BOUNDARY	LOT #	LOT #	LOT #
APPROXIMATE LIMIT OF WORKS		▭	
BUILDING / ENVELOPE	▭	▭	
ROAD, NUMBER, CONTROL LINE, CHAINAGE & CHAINAGE MARK	ROAD CH #	ROAD CH #	ROAD CH #
COUNCIL STANDARD KERB & GUTTER OR ROLL KERB		K&G RK	
COUNCIL STANDARD KERB ONLY & RAISED MEDIAN KERB		KO SF	
COUNCIL STANDARD DISH CROSSING		DC	
COUNCIL STANDARD DISH DRAIN		DD	
INDICATIVE DRIVEWAY LOCATION		■	▭
COUNCIL STANDARD CONCRETE FOOTPATH & KERB RAMP			
STORMWATER DRAINAGE PIPE AND STRUCTURE			
STORMWATER DRAINAGE PIPE AND STUB			
EASEMENT (REFER LEGEND)	(A) (B) (C)	(A) (B) (C)	
SUBSOIL DRAIN		—SS—SS—	
DIVERSION SWALE			
RETAINING WALL		RW01	
BATTER			
TREE - TO BE RETAINED			
TREE - TO BE REMOVED			
STAGING BOUNDARY		▭	
ELECTRICAL SUBSTATION			

SURVEY PROVIDED BY KEATLEY SURVEYORS: REF: 3042CON01 (DATED 12-08-2021)

COORDINATES: MGA GDA2020 DATUM: AHD

COORDINATES ORIGIN: SSM14137 LEVELS ORIGIN: E 258465.097 N 6172425.097 RL700.172AHD

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

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ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 20 40 60 80 100 120 140 160 180 200
SCALE 1:2000 (A1) SCALE 1:4000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
GENERAL LAYOUT
PLAN AND
LEGEND

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	002	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-002.dwg

GENERAL NOTES

G1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH WINGECARRIBEE SHIRE COUNCIL WORKS SPECIFICATION CIVIL (CURRENT EDITION) AND/OR AS DIRECTED BY THEIR REPRESENTATIVE.

G2. SURVEY MARKS: -
   a. SURVEY MARKS SHOWN THUS ▲ SHALL BE RETAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE SUPERINTENDENT MUST BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.

G3. THE CONTRACTOR SHALL LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST IF NECESSARY.

G4. THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS. TO BE PROVIDED PRIOR TO THE APPROVAL OF THE PLANS.

G5. THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.

G6. COUNCIL'S TREE PRESERVATION ORDER MUST BE OBSERVED AND NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL'S ENGINEER.

G7. TREES TO BE RETAINED ON SITE SHALL BE PROTECTED BY SUITABLE STURDY APPROVED PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF SITE WORKS.

G8. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES, EXISTING INFRASTRUCTURE AND DEBRIS ETC. PERIMETER FENCES TO REMAIN.

G9. FILLING IS TO BE FROM A NOMINATED SOURCE, OF SOUND CLEAN MATERIAL, FREE FROM LARGE ROCK, STUMPS, CONTAMINATED MATTER, INDUSTRIAL AND BUILDING WASTE, ORGANIC MATTER AND OTHER DEBRIS. PLACING OF FILLING ON THE PREPARED AREAS SHALL NOT COMMENCE UNTIL THE AUTHORITY TO DO SO HAS BEEN OBTAINED FROM THE COUNCIL.

G10. SITE FILL AREAS: - THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.

G11. ALL SITE FILLING TO BE COMPACTED TO 95% STANDARD COMPACTION AND SHALL BE CONTROLLED BY A REGISTERED SOIL LABORATORY IN ACCORDANCE WITH COUNCIL'S "WORKS SPECIFICATION".

G12. ALL SITE REGRADING AREAS SHALL BE GRADED AT A MINIMUM 1% TO THE ENGINEERS REQUIREMENTS.

G13. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.

G14. ALL DRAINAGE LINES THROUGH LOTS SHALL BE CONTAINED WITHIN THE FOLLOWING EASEMENTS: -
a) INTERALLOTMENT DRAINS (C.D.L.) - 2m WIDE MINIMUM

G15. NO VEHICLE CROSSINGS UNLESS SHOWN.

G16. PRAM CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING.

G17. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.

G18. DIMENSIONS OF ANY DETAIL SHALL NOT BE SCALED - DIMENSIONS, IF IN DOUBT, SHALL BE VERIFIED BY THE SUPERINTENDENT.

G19. ALL CONSTRUCTION AND RESTORATION WORK ON COUNCIL'S ROAD AND FOOTPATH AREA ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S STANDARD SPECIFICATIONS.

G20. COUNCIL'S STANDARD DETAILS TO BE USED UNLESS NOTED OTHERWISE

SURVEY SET OUT INFORMATION NOTES

S1. ALL SITE SET OUT AND CONTROL POINTS ARE TO BE CERTIFIED BY A REGISTERED SURVEYOR - DESIGN IS TO GDA 2020 COORDINATES.

S2. THE INFORMATION DETAILED ON THE CERTIFIED CONSTRUCTION CERTIFICATE PLANS TAKES PRECEDENCE OVER ALL ELECTRONIC INFORMATION PROVIDED. THE ORDER OF PRIORITY FOR USE OF ALL INFORMATION PROVIDED IS AS FOLLOWS:

   a. CERTIFIED CONSTRUCTION CERTIFICATE DRAWINGS
   b. 2D DRAFTING BASE (ELECTRONIC FILE)
   c. 3D DTM (ELECTRONIC FILE)

S3. ANY DISCREPANCY BETWEEN ANY OF THE INFORMATION CONTAINED WITHIN THESE FILES IS TO BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDENT PRIOR TO CONSTRUCTION WHO WILL SEEK CLARIFICATION AND ISSUE INSTRUCTIONS ON THE APPROPRIATE COURSE OF ACTION.

S4. CONTROL TO BE PROVIDED TO CONTRACTOR AND TO BE THE ONLY CONTROL USED TO CONSTRUCT THE WORKS.

STORMWATER DRAINAGE NOTES

D1. STORMWATER DESIGN CRITERIA:
1:100 MAJOR SYSTEM
1:5 MINOR SYSTEM

D2. PIPES TO BE INSTALLED TO TYPE HS3 SUPPORT IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SD157.

D3. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 AND AS/NZS 3500 3.2 & COUNCIL'S SPECIFICATIONS.

D4. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.

D5. GRATES AND COVERS SHALL CONFORM TO AS 3996 & COUNCIL SPECIFICATIONS.

D6. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.

D7. DRAINAGE LINES UNDER ROADS SHALL BE BACKFILLED WITH NON-COHESIVE SAND AND HAVE 3.0m OF SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK, DISCHARGING INTO DOWN STREAM PITS.

D8. ALL STORMWATER PIPES WITHIN ROADS TO BE REINFORCED CONCRETE PIPE (RCP) CLASS 2 MINIMUM OR FIBRE REINFORCED EQUIVALENT UNO.

D9. ALL INTERALLOTMENT DRAINAGE LINES SHALL BE LAID AT A MINIMUM GRADE OF 1% UNLESS OTHERWISE INDICATED.

D10. DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS (UNO).

D11. INTERALLOTMENT DRAINAGE EASEMENTS TO BE 2m WIDE.

EARTHWORKS NOTES

REFER TO THE FOLLOWING GEOTECHNICAL REPORTS:
1. ROCK DEPTH INVESTIGATION - PREPARED BY DOUGLAS PARTNERS REF 40494.03.R.002.REV0 DATED 7TH APRIL 2020
2. SALINITY - PREPARED BY DOUGLAS PARTNERS REF 40494.03.R.003.REV0 DATED 7TH APRIL 2020
3. PAVEMENT DESIGN - PREPARED BY CONSTRUCTION SCIENCE - REF NO. 10791E-P-363-B

E1. EARTHWORKS ARE TO BE CARRIED OUT TO THE SATISFACTION OF THE COUNCIL.
UNSUITABLE MATERIALS ARE TO BE REMOVED FROM ROADS AND LOTS PRIOR TO FILLING. THE CONTRACTOR IS TO ARRANGE AND MAKE AVAILABLE COMPACTION TESTING RESULTS FOR ALL AREAS THAT CONTAIN FILL IN EXCESS OF 200mm.

E2. COMPACTION OF EARTHWORKS SHALL CONTINUE UNTIL A DRY DENSITY RATIO OF 95% FOR SITE FILLING AND 100% FOR ROAD PAVEMENT SUBGRADES HAS BEEN ACHIEVED IN ACCORDANCE WITH TEST METHOD AS1289.5.3.1 OR AS.1289.5.1.1. THE CONTROL TESTING OF EARTHWORKS SHALL BE IN ACCORDANCE WITH THE GUIDELINES IN AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'. WHERE IT IS PROPOSED TO USE TEST METHOD AS1289.5.8.1 TO DETERMINE THE FIELD DENSITY, A SAND REPLACEMENT METHOD SHALL BE USED TO CONFIRM THE RESULTS.

E3. THE SUITABLE QUALIFIED GEOTECHNICAL ENGINEER, SHALL HAVE A LEVEL 1 RESPONSIBILITY FOR ALL FILLING AS DEFINED IN APPENDIX B AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS', AND AT THE END OF THE WORKS SHALL CONFIRM THE EARTHWORKS COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION AND DRAWINGS BY WRITTEN NOTIFICATION.

E4. IN AREAS TO BE FILLED WHERE THE SLOPE OF THE NATURAL SURFACE EXCEEDS 1(V):4(H), BENCHES ARE TO BE CUT TO PREVENT SLIPPING OF THE PLACED FILL MATERIAL AS REQUIRED BY THE COUNCIL.

E5. ALL BATTERS ARE TO BE SCARIFIED TO A DEPTH OF 50mm TO ASSIST WITH ADHESION OF TOP SOIL TO BATTER FACE.

E6. PROVIDE MINIMUM 250mm TOPSOIL DEPTH ON FOOTPATHS, FILLED AREAS AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION. TOPSOILED AREAS TO BE STABILISED WITH APPROVED VEGETATION (HYDROSEEDING OR EQUIVALENT) A MAXIMUM OF 14 DAYS AFTER TOPSOILING AND ARE TO BE WATERED TO ENSURE GERMINATION.

E7. THE CONTRACTOR SHALL CONTROL SEDIMENTATION, EROSION AND POLLUTION DURING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF 'MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION' PRODUCED BY LANDCOM.

E8. FOOTWAY AREA TO BE FULLY TURFED WITH KIKUYU 'VILLAGE GREEN', AND SHALL BE MAINTAINED AND REPLACED AS REQUIRED DURING THE CONSTRUCTION MAINTENANCE PERIOD, IN ACCORDANCE WITH CONDITION.

E9. THE CONTRACTOR SHALL PROVIDE ALL LEVEL 1 TESTING INCLUDING SITE CLASS TO AS2970 FOR ALL LOTS. CLASS 'P' NOT ACCEPTABLE.

SIGNAGE AND LINE MARKING NOTES:

SL1. TO ELIMINATE EXCESSIVE GLARE FROM THE SURFACE OF A SIGN IT SHOULD BE TURNED APPROXIMATELY 5° AWAY FROM THE NORMAL TO THE HEADLIGHT BEAM / LINE OF SIGHT.

SL2. ALL SIGNAGE TO BE CLEAR OF ALL VEGETATION AND OBSTRUCTIONS.

SL3. SIGNS TO BE INSTALLED IN ACCORDANCE WITH AS1742.

SL4. THE LOCATION OF ALL EXISTING SIGNS TO BE CONFIRMED PRIOR TO COMMENCING WORK. ENSURE ADOPTED METHOD OF CONSTRUCTION WILL AVOID DAMAGE TO ALL SERVICES.

SL5. ALL EXISTING LINE MARKING EFFECTED BY THE NEW WORKS AND NOT OTHERWISE CONFLICTING WITH NEW LINE MARKING IS TO BE REINSTATED.

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:

For:
Aoyuan
building a healthy lifestyle

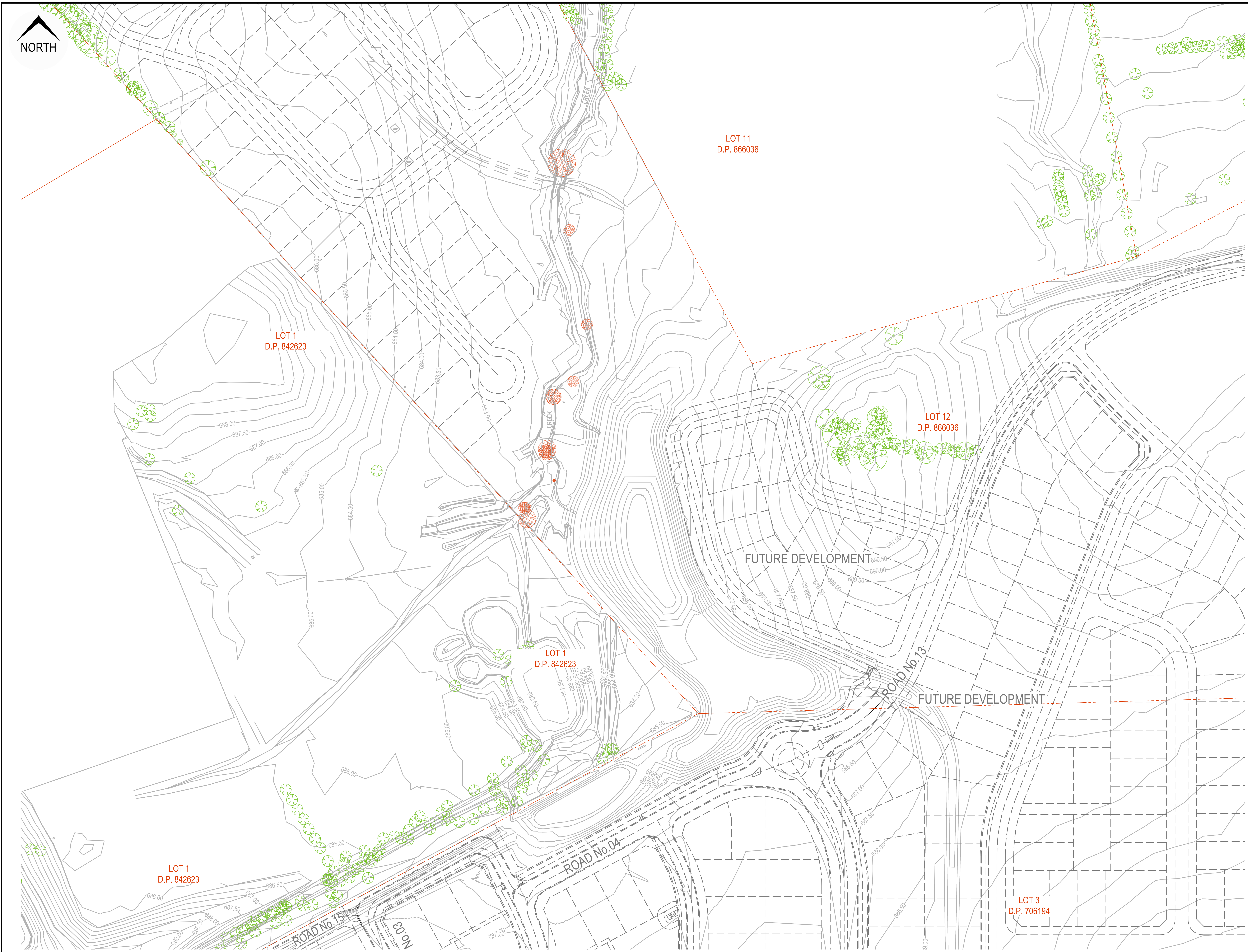
By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
GENERAL NOTES

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	003	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-003.dwg



ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

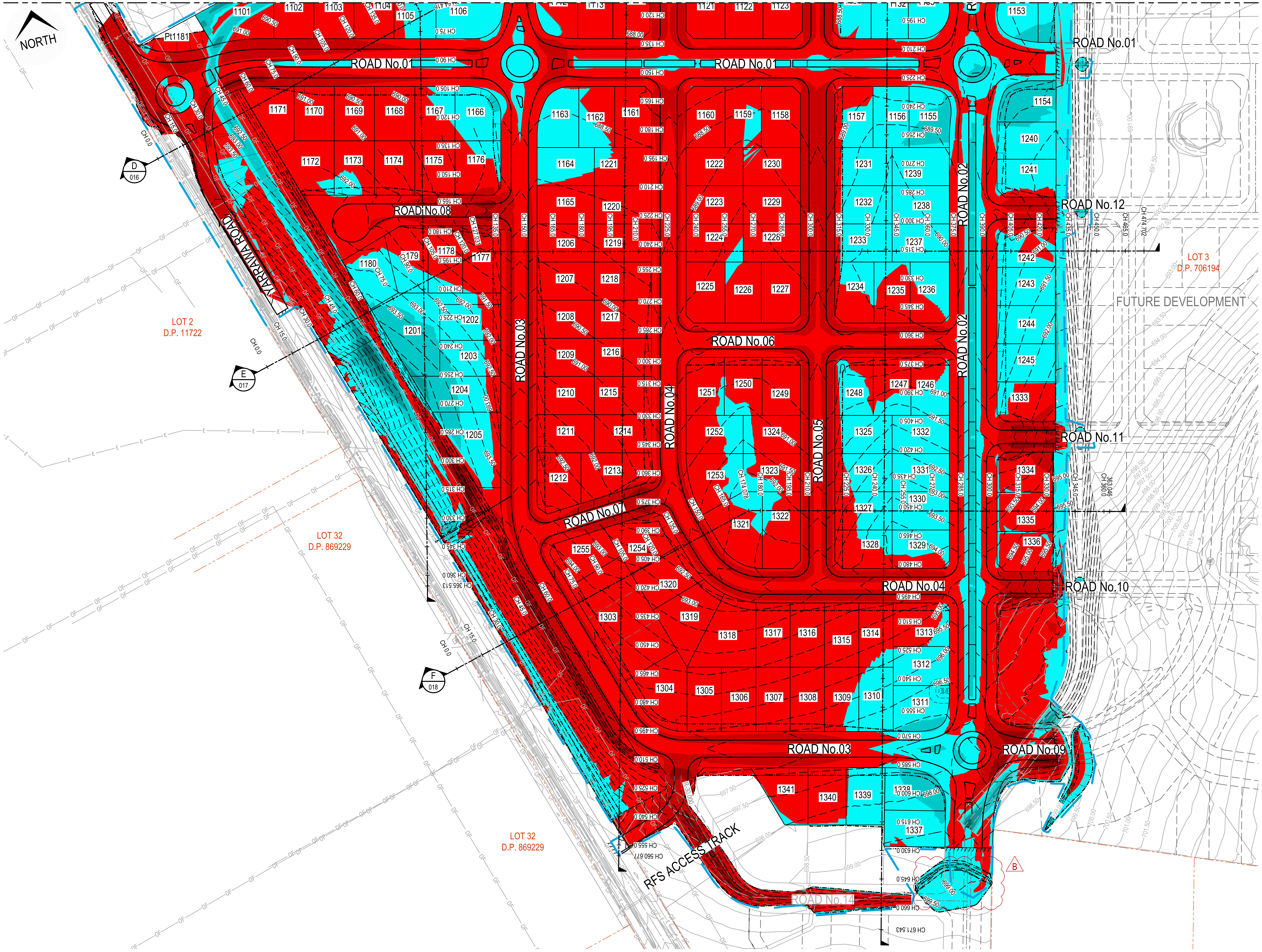
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TREE REMOVAL PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	004	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-004.dwg

REFER TO DRAWING 011 FOR CONTINUATION



LEGEND

APPROXIMATE EXTENT OF FILL	0.0 - 0.5m	🟦
	0.5 - 1.0m	🟦
	1.0 - 1.5m	🟦
	1.5 - 2.0m	🟦
	2.0 - 2.5m	🟦
	> 2.5m	🟦
APPROXIMATE EXTENT OF CUT	0.0 - 0.5m	🟥
	0.5 - 1.0m	🟥
	1.0 - 1.5m	🟥
	1.5 - 2.0m	🟥
	2.0 - 2.5m	🟥
	> 2.5m	🟥

VOLUMES

B

CUT -	57,301m³
FILL -	20,100m³
EXPORT -	37,201m³

NOTES:

- NO BULKING FACTOR HAS BEEN APPLIED.
- THESE VOLUMES ARE IN SITU ONLY (EXISTING (BEW CC) SURFACE TO BEW SURFACE)
- NO ALLOWANCE HAS BEEN MADE FOR UNSUITABLE MATERIAL ASSOCIATED WITH EXISTING DAMS SUCH AS WATER, MUD, SLUDGE ETC.
- ALLOWANCE HAS BEEN MADE FOR TOPSOIL STRIPPING AND RESPREAD, 250mm ON LOTS, 500mm IN BASIN AREA
- DESIGN CONTOURS SHOWN ARE FINISHED SURFACE LEVELS.
- EXISTING LEVELS WITHIN DEVELOPMENT ADOPTED FROM BEW CC PACKAGE PREPARED, REF 20-0071-03 BY ORION CONSULTING.

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

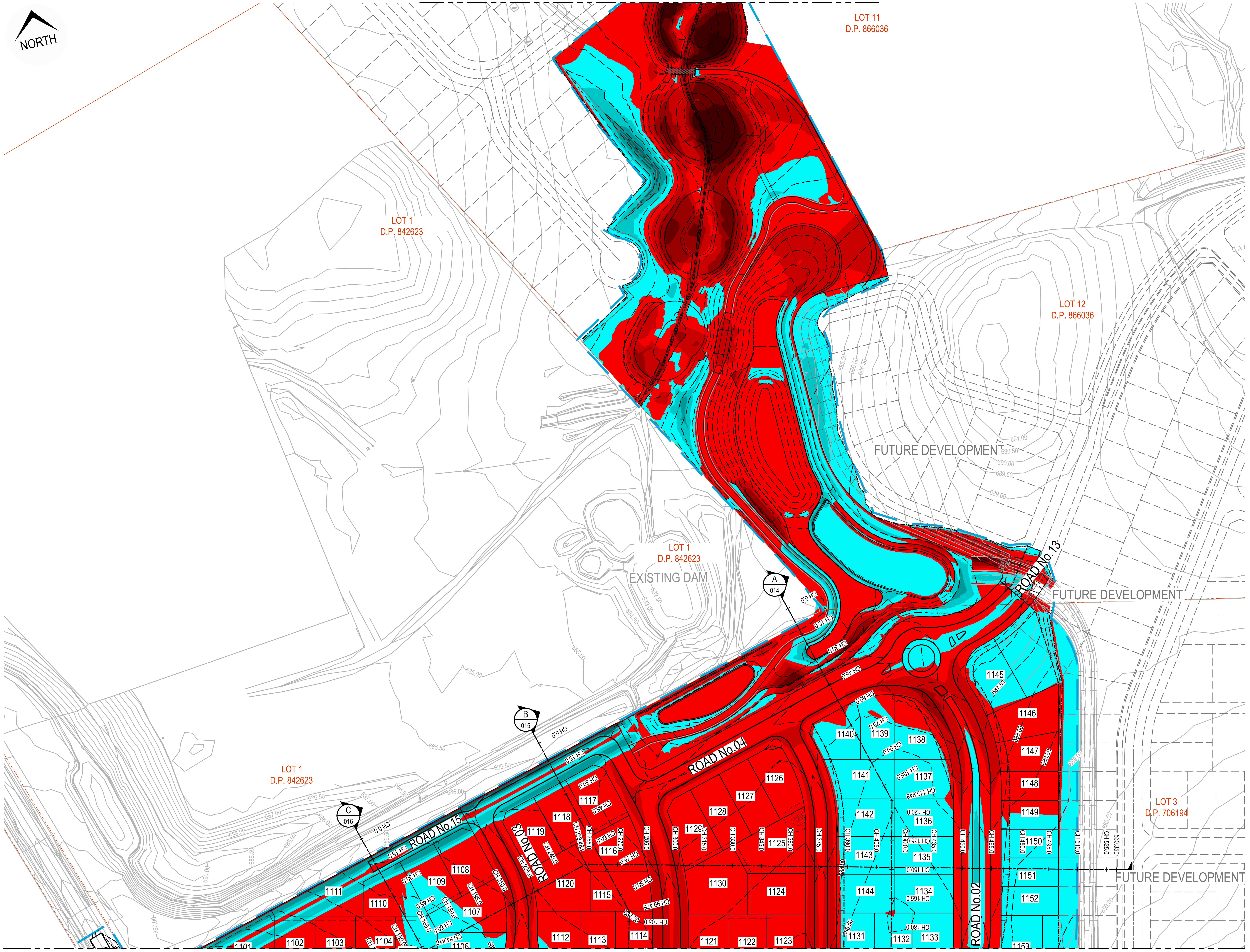
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING PLAN
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	010	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-010.dwg

REFER TO INSET 'A' FOR CONTINUATION



REFER TO DRAWING 010 FOR CONTINUATION

LEGEND

APPROXIMATE EXTENT OF FILL	0.0 - 0.5m	🟦
	0.5 - 1.0m	🟦
	1.0 - 1.5m	🟦
	1.5 - 2.0m	🟦
	2.0 - 2.5m	🟦
	> 2.5m	🟦
APPROXIMATE EXTENT OF CUT	0.0 - 0.5m	🟥
	0.5 - 1.0m	🟥
	1.0 - 1.5m	🟥
	1.5 - 2.0m	🟥
	2.0 - 2.5m	🟥
	> 2.5m	🟥

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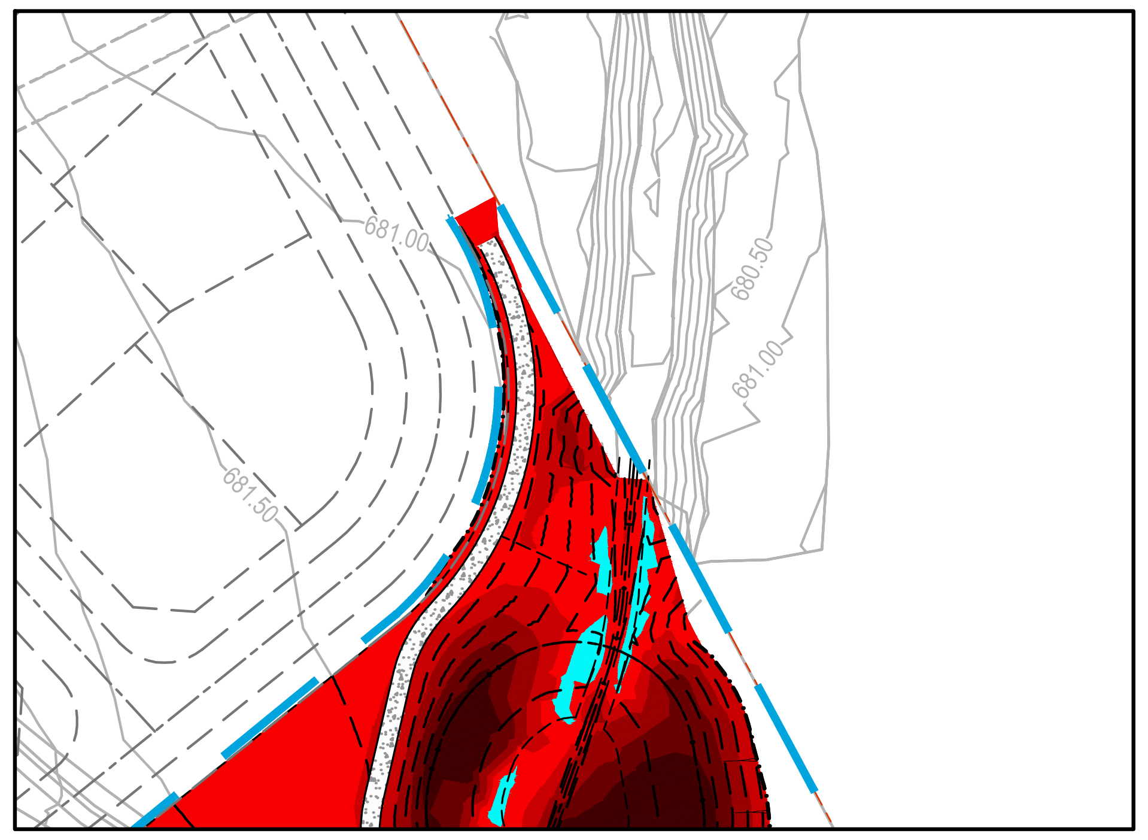
INSET 'A'

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1)
SCALE 1:2000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

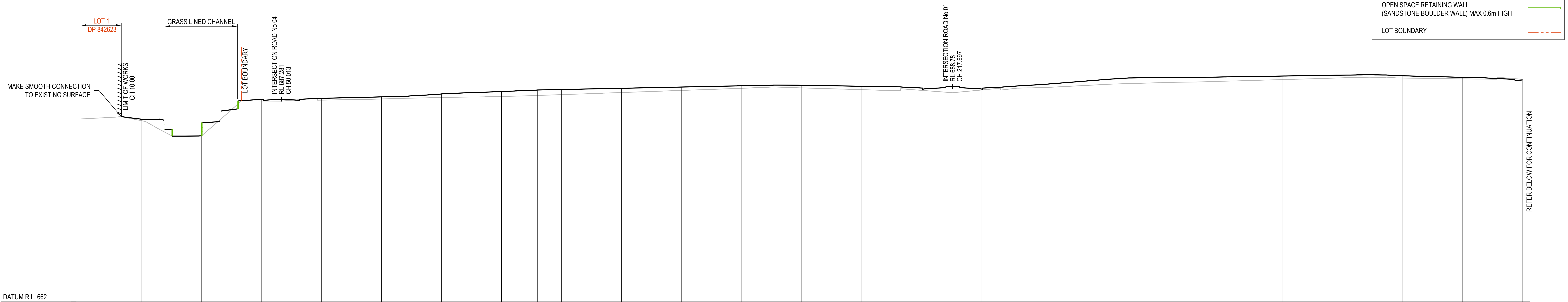
Title:
SITE REGRADING PLAN
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	011	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-011.dwg

LEGEND

DESIGN SURFACE	—
EXISTING SURFACE	—
PROPOSED RETAINING WALL 01 (CONCRETE SLEEPER WALL) MAX 2.0m HIGH	═
OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL) MAX 0.6m HIGH	═
LOT BOUNDARY	- - -

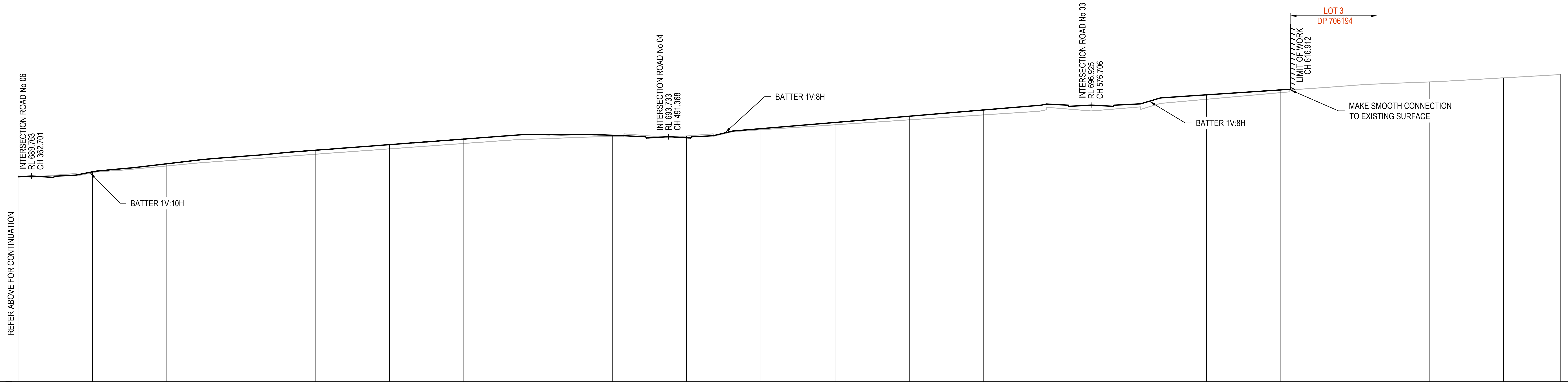


DATUM R.L. 662

DESIGN LEVEL		684.8	682.7	687.26	687.39	687.57	687.94	688.24	688.43	688.49	688.64	688.8	688.96
BEW CC LEVEL	684.82	684.61	682.7	687.06	687.16	687.31	687.49	687.63	687.75	687.85	688.11	688.38	688.64
CHAINAGE	0	15	30	45	60	75	90	105	113.948	120	135	150	165

DESIGN LEVEL	689.02	688.89	688.68	688.54	689.12	689.71	689.98	690.05	690.17	690.28	690.2	690.01	689.68
BEW CC LEVEL	688.7	688.47	688.38	688.44	688.73	689.1	689.35	689.52	689.73	689.94	689.92	689.82	689.76
CHAINAGE	180	195	210	225	240	255	270	285	300	315	330	345	360

SITE SECTION A
011
SCALE: 1:500 (H)
SCALE: 1:250 (V)



DATUM R.L. 669

DESIGN LEVEL	689.68	690.19	691	691.74	692.37	692.93	693.49	693.94	693.88	693.62	694.55
BEW CC LEVEL	689.76	690.1	690.78	691.4	691.97	692.51	693.05	693.5	693.76	693.8	694.44
CHAINAGE	360	375	390	405	420	435	450	465	480	495	510

DESIGN LEVEL	695.17	695.8	696.43	696.97	697	697.95	698.45				
BEW CC LEVEL	694.93	695.43	695.93	696.6	696.67	697.51	698.18	698.92	699.26	699.67	700
CHAINAGE	525	540	555	570	585	600	615	630	645	660	671.543

SITE SECTION A
010
SCALE: 1:500 (H)
SCALE: 1:250 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

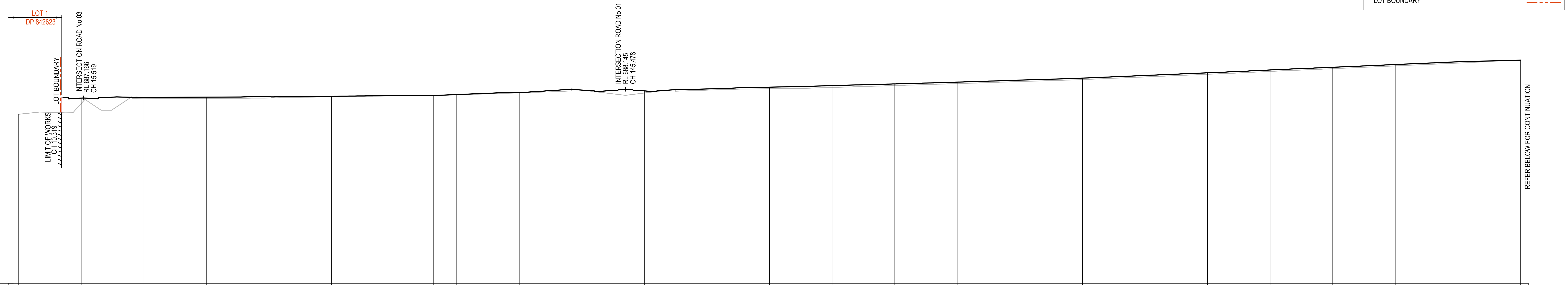
Title:
SITE REGRADING
SECTIONS
SHEET 01 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	014	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-014.dwg

LEGEND

DESIGN SURFACE ━━
EXISTING SURFACE ──
PROPOSED RETAINING WALL 01 (CONCRETE SLEEPER WALL) MAX 2.0m HIGH ▭
OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL) MAX 0.6m HIGH ▭
LOT BOUNDARY — – –

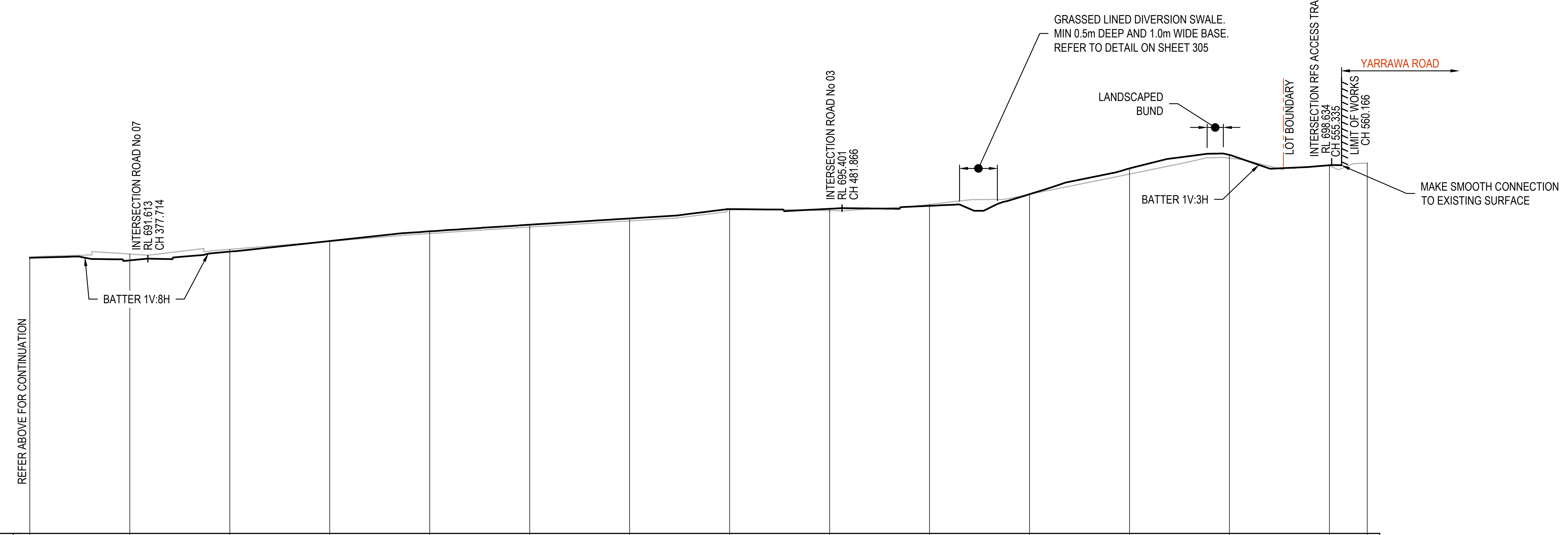


DATUM R.L. 665

DESIGN LEVEL		687.15	687.24	687.27	687.33	687.37	687.44	687.48	687.57	687.83	688.11	688.01	688.24
BEW CC LEVEL	685.21	686.5	687.06	687.11	687.16	687.31	687.41	687.45	687.53	687.77	688.1	687.75	688.1
CHAINAGE	0	15	30	45	60	75	90	99.476	105	120	135	150	165

DESIGN LEVEL	688.46	688.65	688.84	689.06	689.3	689.54	689.86	690.17	690.52	690.83	691.16	691.49	691.68
BEW CC LEVEL	688.27	688.42	688.65	688.88	689.13	689.36	689.68	690	690.34	690.67	691	691.34	691.73
CHAINAGE	180	195	210	225	240	255	270	285	300	315	330	345	360

SITE SECTION B/011
SCALE: 1:500 (H)
SCALE: 1:250 (V)



DATUM R.L. 671

DESIGN LEVEL	691.68	691.49	692.14	692.93	693.66	694.16	694.63	695.32	695.35	695.58	696.44	698.38	699.4	698.62	
BEW CC LEVEL	691.73	691.96	692.31	692.92	693.5	693.99	694.45	695.38	695.22	695.68	696.44	697.96	699.15	698.59	698.79
CHAINAGE	360	375	390	405	420	435	450	465	480	495	510	525	540	555	560.677

SITE SECTION B/010
SCALE: 1:500 (H)
SCALE: 1:250 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
V	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
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By:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING
SECTIONS
SHEET 02 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	015	B

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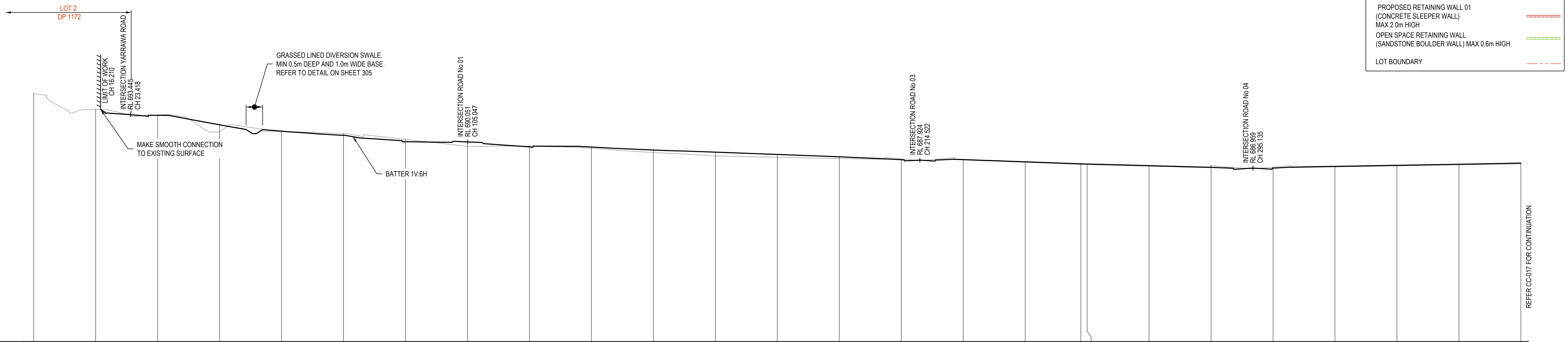
LEGEND

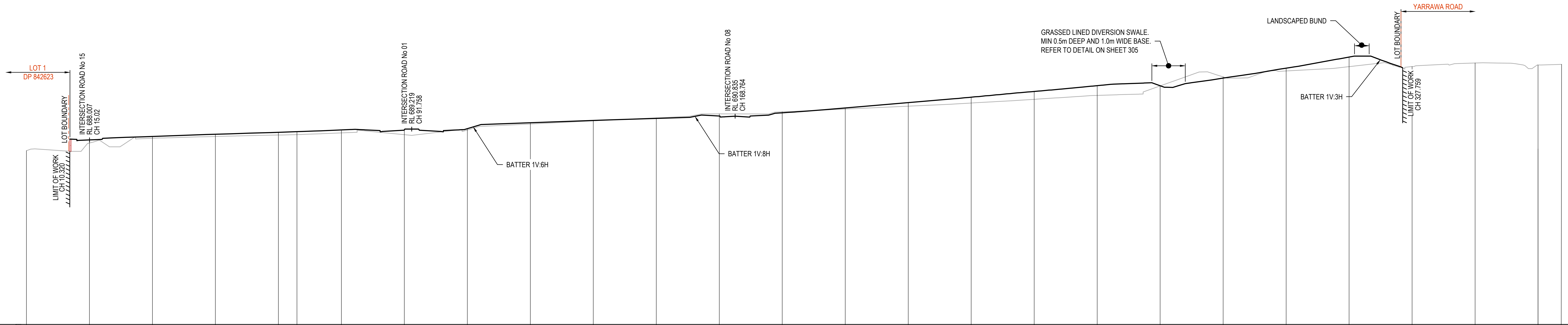
DESIGN SURFACE	▬
EXISTING SURFACE	─
PROPOSED RETAINING WALL 01 (CONCRETE SLEEPER WALL) MAX 2.0m HIGH	▭
OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL) MAX 0.6m HIGH	═
LOT BOUNDARY	─ ─



DATUM R.L. 666

DESIGN LEVEL			693.34	692.2	691.43	690.91	690.14	690.13	689.53	689.51	689.14	688.89	688.61	688.33	687.97	687.99	687.72	687.48	687.46	687.26	687.05	686.96	687.17	687.29	687.43	687.56
BEW CC LEVEL	696.01	694.06	693.38	691.35	691.37	691.13	690.43	689.59	689.63	689.36	688.85	688.44	688.27	688.12	688.08	687.94	687.66	687.4	687.38	687.19	687.24	687.08	687.1	687.22	687.35	687.48
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	253.483	255	270	285	300	315	330	345	360

SITE SECTION D / 010
SCALE: 1:500 (H)
SCALE: 1:250 (V)



DATUM R.L. 666

DESIGN LEVEL		688.01	688.42	688.68	688.91	688.99	689.19	689.22	689.35	690.05	690.33	690.57	690.86	691.24	691.82	692.46	693.1	693.78	694.47	694.47	695.38	696.56	697.88				
BEW CC LEVEL	686.71	687.63	688.2	688.42	688.59	688.63	688.84	688.63	689.19	689.9	690.27	690.63	691.1	691.36	691.69	692.03	692.4	692.85	693.31	694.45	695.52	696.23	696.74	696.75	697.18	696.94	697.01
CHAINAGE	0	15	30	45	60	64.416	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	365.513

SITE SECTION C / 010
SCALE: 1:500 (H)
SCALE: 1:250 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

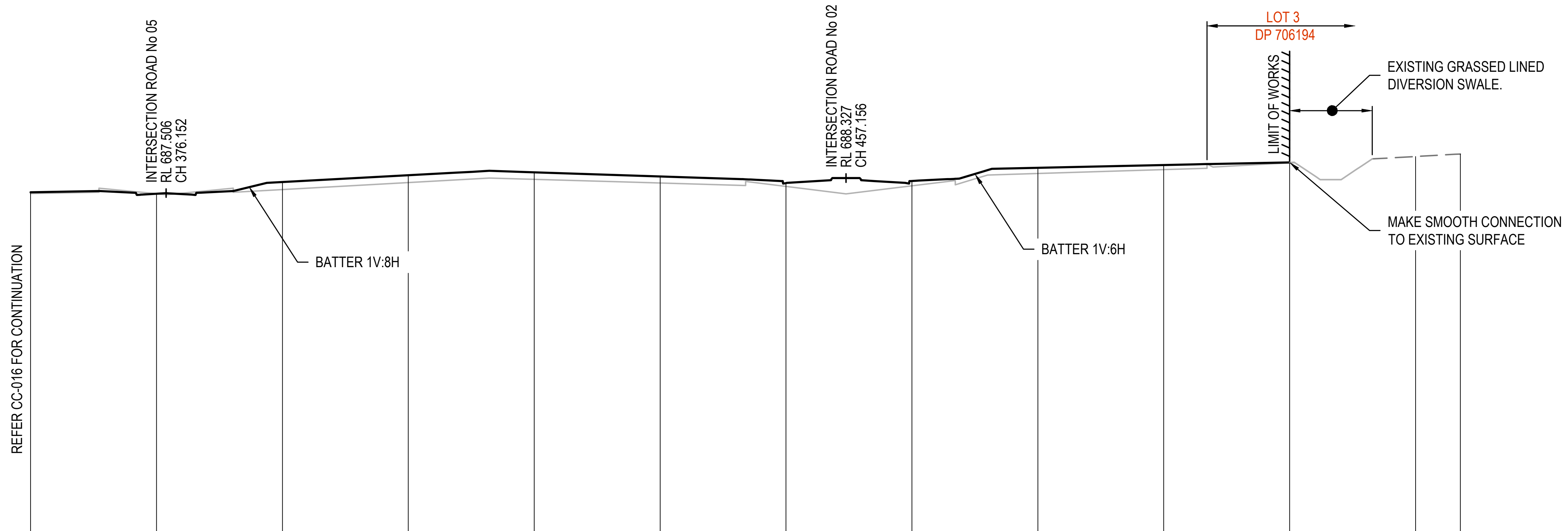
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING
SECTIONS
SHEET 03 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	016	B

LEGEND

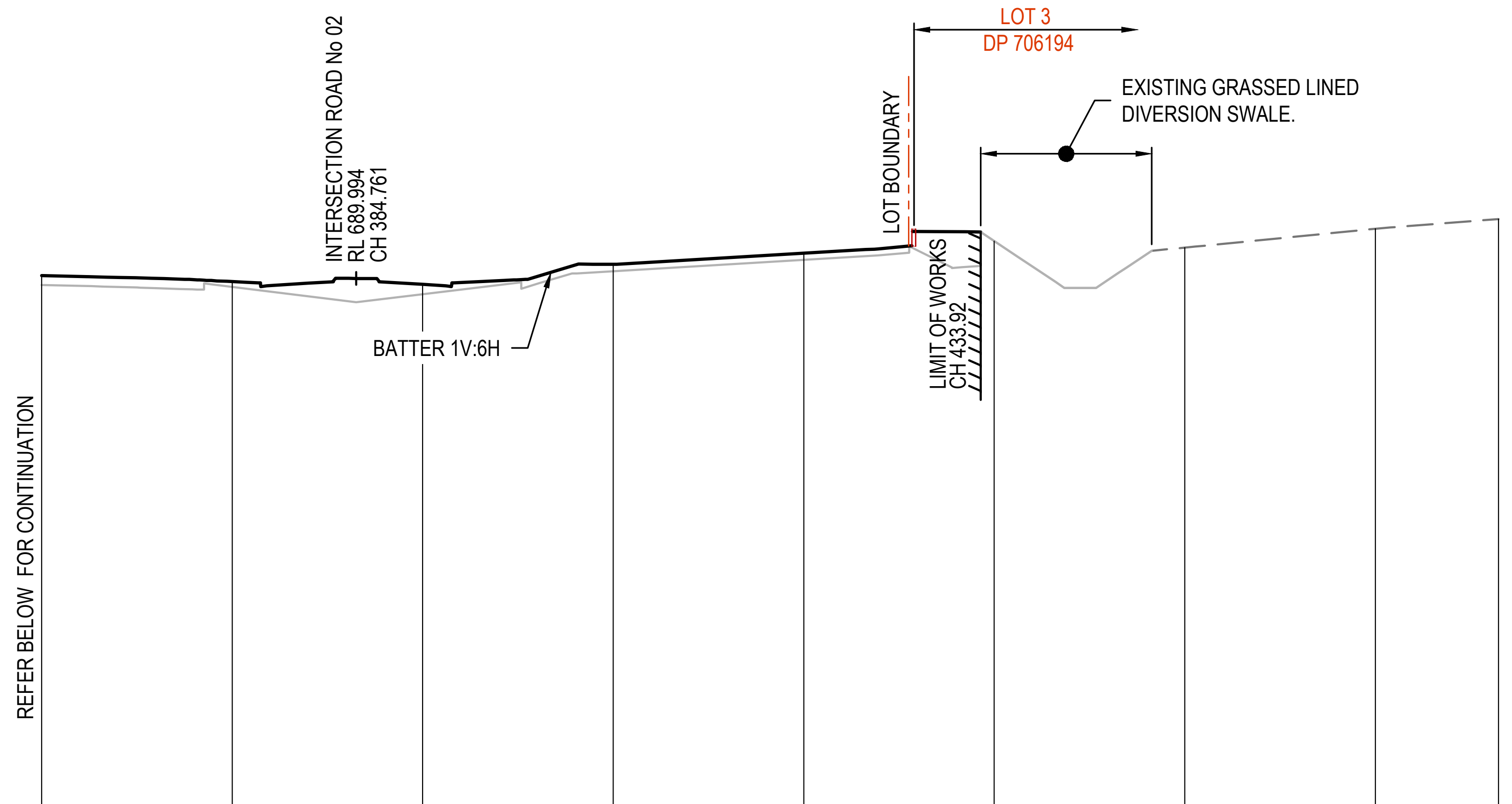
DESIGN SURFACE
EXISTING SURFACE
PROPOSED RETAINING WALL 01
(CONCRETE SLEEPER WALL)
MAX 2.0m HIGH
OPEN SPACE RETAINING WALL
(SANDSTONE BOULDER WALL) MAX 0.6m HIGH
LOT BOUNDARY



DATUM R.L. 667

DESIGN LEVEL	687.56	687.47	688.16	688.57	688.75	688.5	688.11	688.23	689.01	689.18	689.34		
BEW CC LEVEL	687.48	687.47	687.72	688.14	688.33	688.11	687.91	687.94	688.67	688.91	689.3	689.69	689.84
CHAINAGE	360	375	390	405	420	435	450	465	480	495	510	525	530.35

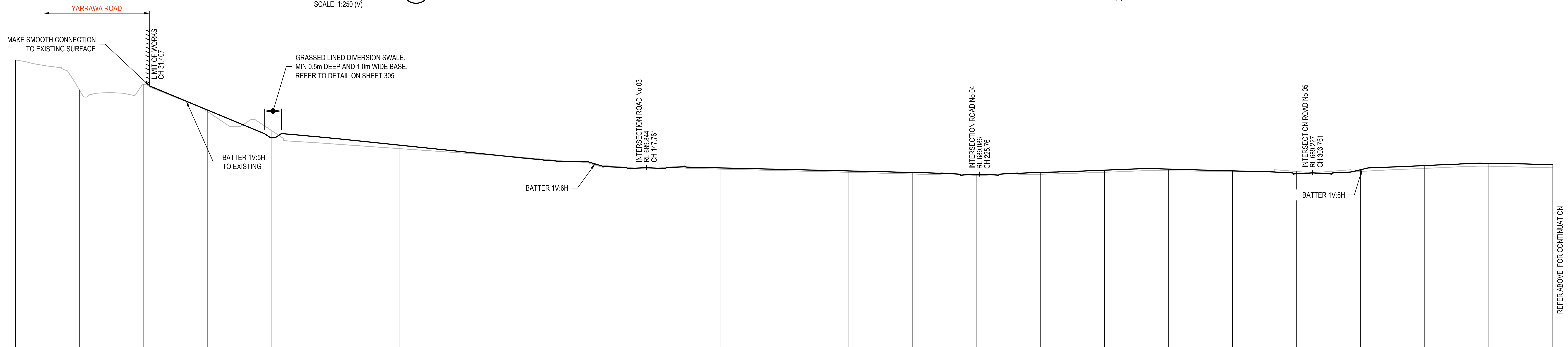
SITE SECTION D
011
SCALE: 1:500 (H)
SCALE: 1:250 (V)



DATUM R.L. 669

DESIGN LEVEL	690.18	689.94	689.84	690.62	691.06	691.54			
BEW CC LEVEL	689.82	689.74	689.45	690.35	690.8	691.54	691.28	692.02	692.41
CHAINAGE	360	375	390	405	420	435	450	465	474.702

SITE SECTION E
010
SCALE: 1:500 (H)
SCALE: 1:250 (V)



DATUM R.L. 668

DESIGN LEVEL				696.57	693.32	693.25	692.47	691.69	690.91	690.57	690.38	689.78	689.81
BEW CC LEVEL	702.44	698.9	699.61	696.38	694.16	692.59	692.06	691.53	690.98	690.66	690.25	689.78	689.66
CHAINAGE	0	15	30	45	60	75	90	105	120	127.031	135	150	165

DESIGN LEVEL	689.63	689.45	689.27	689.06	689.27	689.54	689.67	689.46	689.11	689.59	690.08	690.35	690.18
BEW CC LEVEL	689.47	689.29	689.09	688.92	689.07	689.3	689.46	689.39	689.39	689.4	689.75	690.01	689.82
CHAINAGE	180	195	210	225	240	255	270	285	300	315	330	345	360

SITE SECTION E
010
SCALE: 1:500 (H)
SCALE: 1:250 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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SUSTAINABLE CERTIFICATION ISO 9001
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING
SECTIONS
SHEET 04 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	017	B

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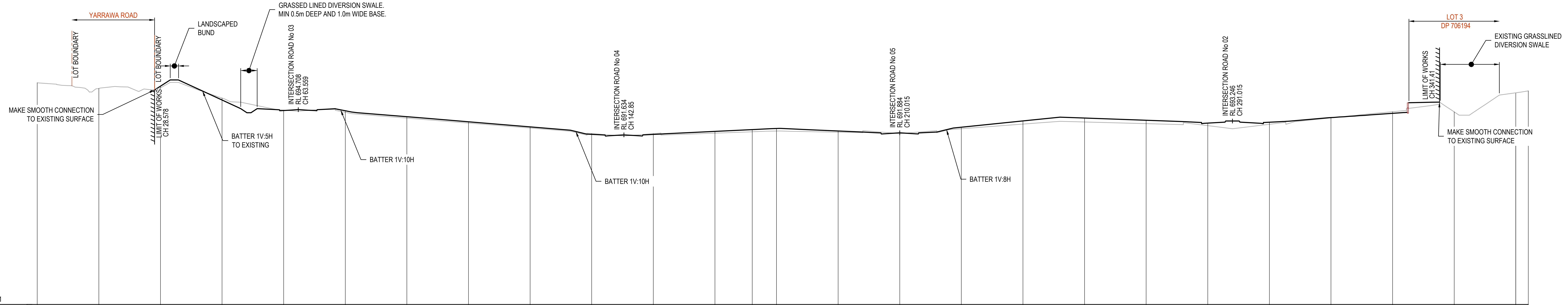
LEGEND

DESIGN SURFACE	▬
EXISTING SURFACE	▬
PROPOSED RETAINING WALL 01 (CONCRETE SLEEPER WALL) MAX 2.0m HIGH	🟥
OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL) MAX 0.6m HIGH	🟩
LOT BOUNDARY	— - —


YARRAWA ROAD
LOT BOUNDARY
LOT BOUNDARY
LANDSCAPED BUND
GRASSED LINED DIVERSION SWALE. MIN 0.5m DEEP AND 1.0m WIDE BASE.
MAKE SMOOTH CONNECTION TO EXISTING SURFACE
LIMIT OF WORKS CH 28.578
BATTER 1V:5H TO EXISTING
INTERSECTION ROAD No 03 RL 694.708 CH 63.559
BATTER 1V:10H
INTERSECTION ROAD No 04 RL 691.634 CH 142.85
BATTER 1V:10H
INTERSECTION ROAD No 05 RL 691.884 CH 210.015
BATTER 1V:8H
INTERSECTION ROAD No 02 RL 693.246 CH 291.015
LOT 3
DP 706194
LIMIT OF WORKS CH 341.41
EXISTING GRASSLINED DIVERSION SWALE
MAKE SMOOTH CONNECTION TO EXISTING SURFACE

DATUM R.L. 671

DESIGN LEVEL			697.56	695.87	694.6	694.57	693.84	693.23	692.61	691.7	691.69	692.06	692.28	692.41	692.11	691.88	692.56	693.33	693.68	693.42	693.06	693.18	693.74	694.25	694.43		
BEW CC LEVEL	697.97	697.28	697.36	696.11	694.65	694.38	693.68	693.07	692.47	691.8	691.79	691.85	692.01	692.1	691.96	691.79	692.38	692.95	693.2	693	692.76	692.93	693.69	694.45	694.43	696.75	696.99
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	174.078	180	195	210	225	240	255	270	285	300	315	330	345	360	363.046

SITE SECTION F / 010

SCALE: 1:500 (H)
SCALE: 1:250 (V)

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Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING
SECTIONS
SHEET 05 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	018	B

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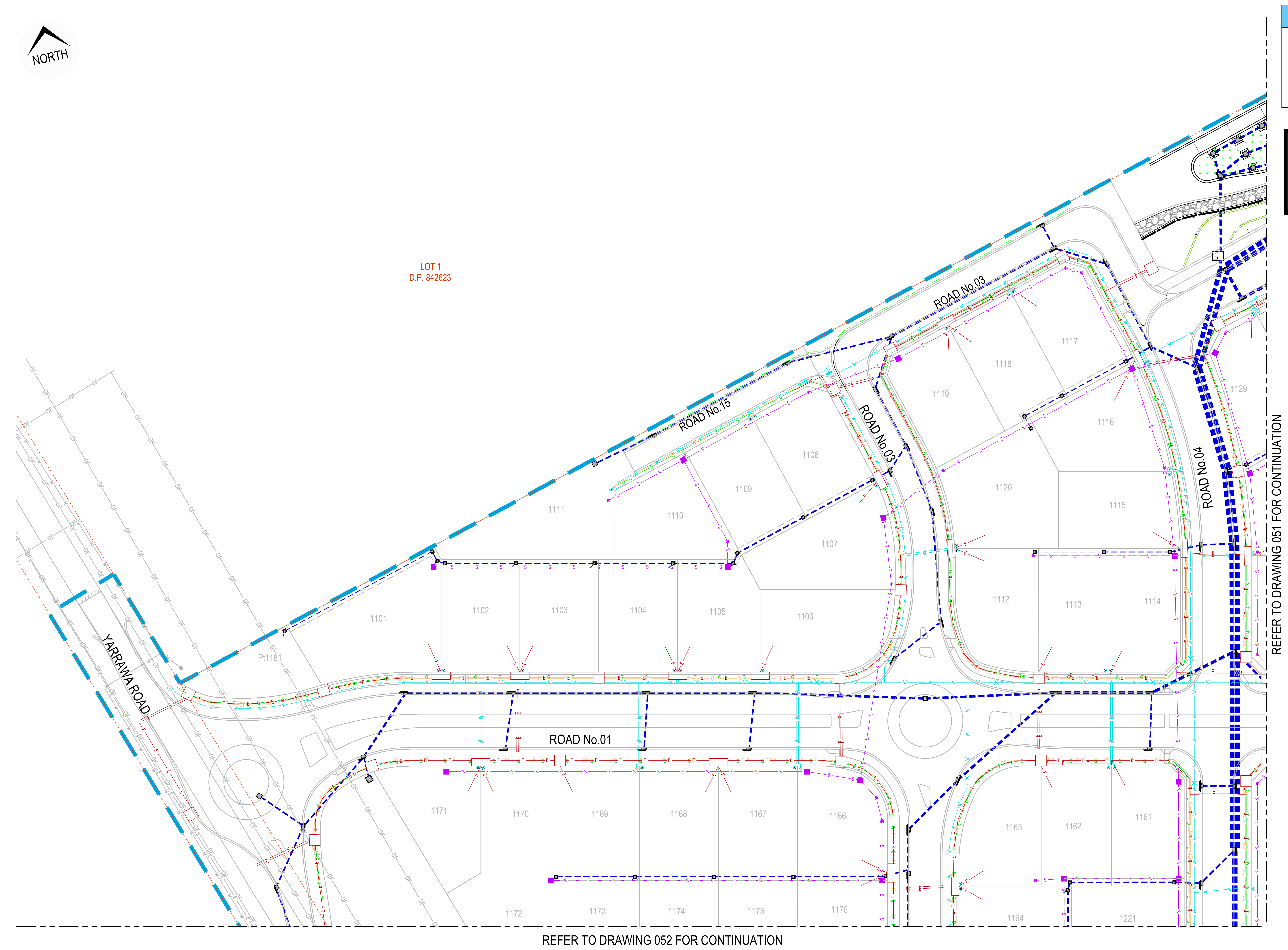

LEGEND

UTILITY -	EXISTING	PROPOSED	FUTURE
ELECTRICITY	—E—	—E—	—E—
GAS	—G—	—G—	—G—
SEWER	—S—	—S—	—S—
WATER	—W—	—W—	—W—
COMMUNICATIONS	—OF—	—OF—	—OF—
DRAINAGE	▪▪▪▪▪	▬ ▬ ▬	▬ ▬ ▬

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

SERVICES INFORMATION

SERVICE	DATE
SEWER	26/9/2021
WATER	26/9/2021
ELECTRICAL	6/07/2021
OPTIC FIBRE	SHOWN AS INDICATIVE
GAS	SHOWN AS INDICATIVE

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NOTE:
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2. POTHOLING OF EXISTING SERVICES TO BE UNDERTAKEN PRIOR TO CONSTRUCTION

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
COMBINED
SERVICES LAYOUT PLAN
SHEET 01 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	050	C

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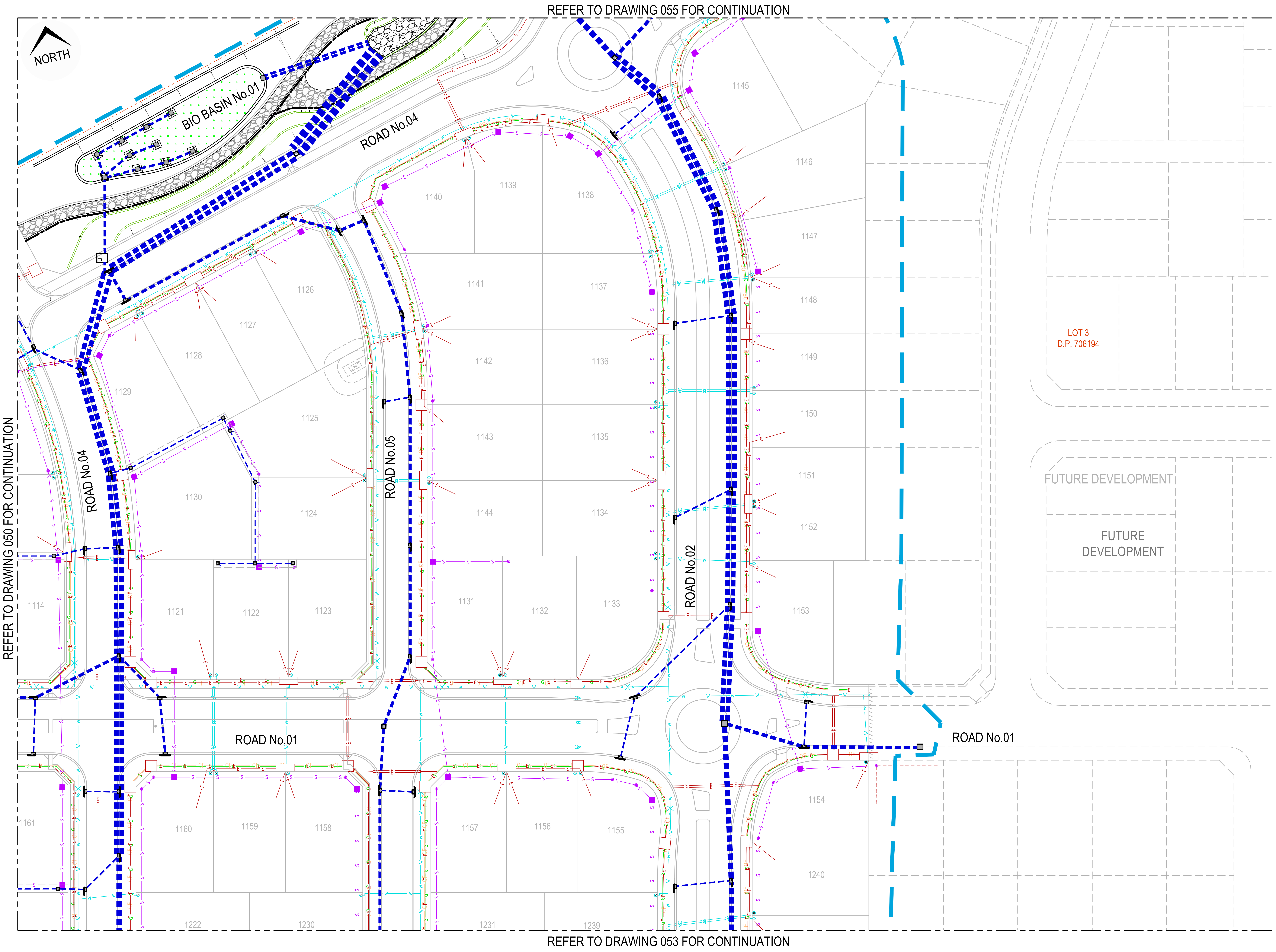

LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - ELECTRICITY	E	E	E
GAS	G	G	G
SEWER	S	S	S
WATER	W	W	W
COMMUNICATIONS	OF	OF	OF
DRAINAGE	▬ ▬ ▬	▬ ▬ ▬	▬ ▬ ▬

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SERVICES INFORMATION

SERVICE	DATE
SEWER	26/9/2021
WATER	26/9/2021
ELECTRICAL	6/07/2021
OPTIC FIBRE	SHOWN AS INDICATIVE
GAS	SHOWN AS INDICATIVE

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
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A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

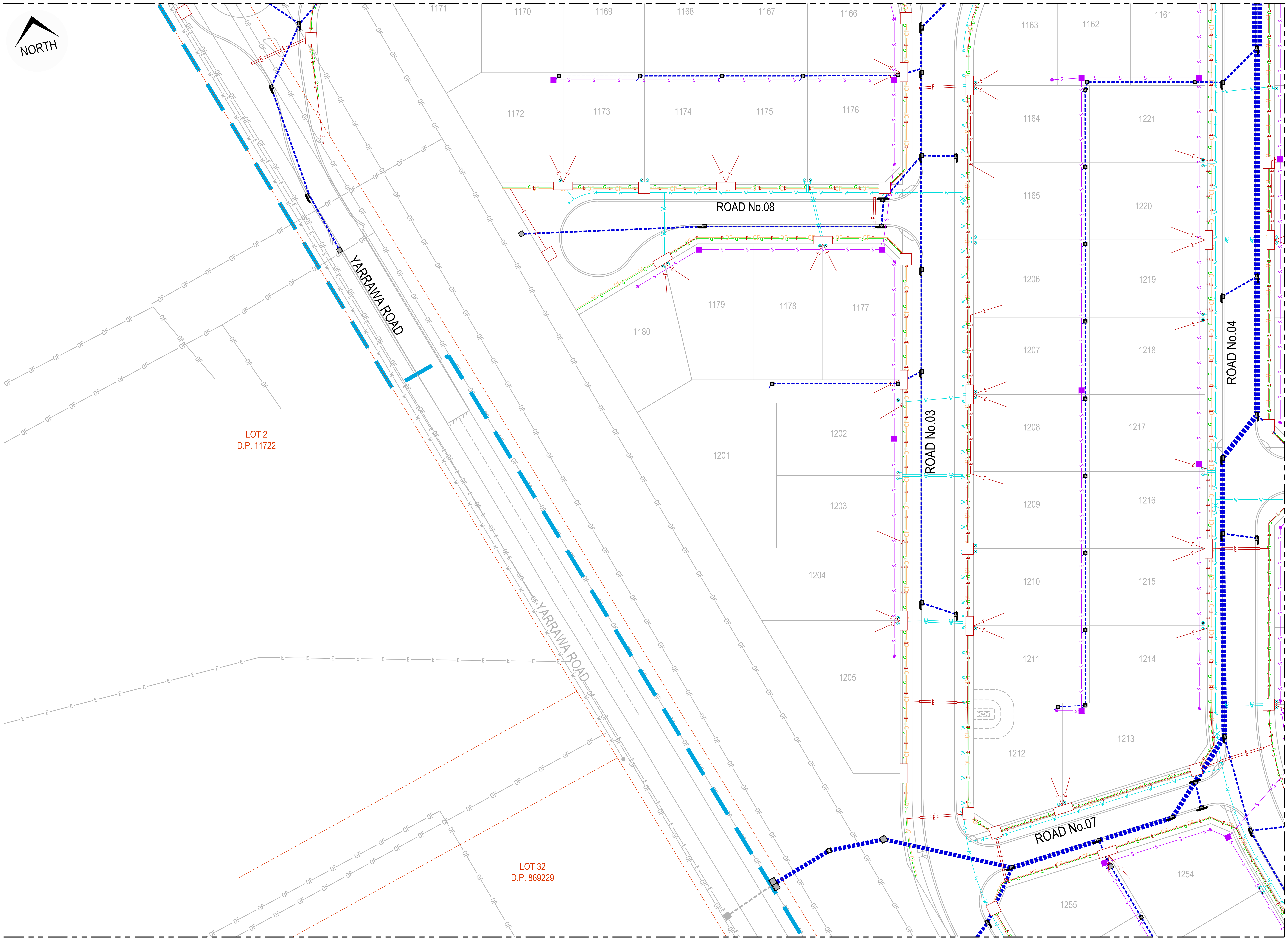
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
COMBINED
SERVICES LAYOUT PLAN
SHEET 02 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	051	C

REFER TO DRAWING 050 FOR CONTINUATION



REFER TO DRAWING 053 FOR CONTINUATION

REFER TO DRAWING 054 FOR CONTINUATION

LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - ELECTRICITY	—E—	—E—	—E—
GAS	—G—	—G—	—G—
SEWER	—S—	—S—	—S—
WATER	—W—	—W—	—W—
COMMUNICATIONS	—OF—	—OF—	—OF—
DRAINAGE	▬ ▬ ▬	▬ ▬ ▬	▬ ▬ ▬

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NOTE:
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2. POTHOLING OF EXISTING SERVICES TO BE UNDERTAKEN PRIOR TO CONSTRUCTION

SERVICES INFORMATION

SERVICE	DATE
SEWER	26/9/2021
WATER	26/9/2021
ELECTRICAL	6/07/2021
OPTIC FIBRE	SHOWN AS INDICATIVE
GAS	SHOWN AS INDICATIVE

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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SUSTAINABLE CERTIFICATION ISO 9001
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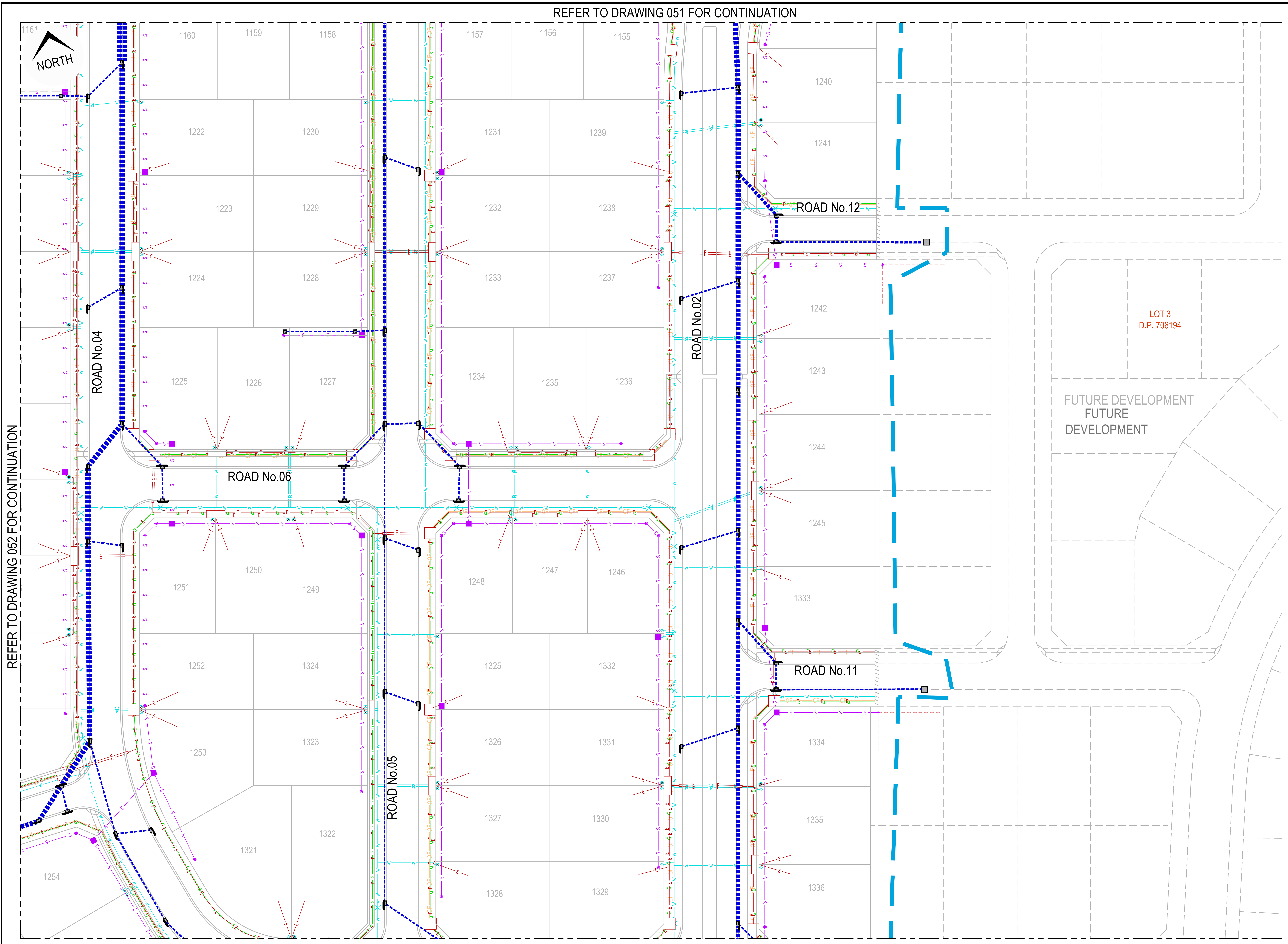
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
COMBINED
SERVICES LAYOUT PLAN
SHEET 03 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	052	C

REFER TO DRAWING 051 FOR CONTINUATION



REFER TO DRAWING 054 FOR CONTINUATION

LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - ELECTRICITY	—E—	—E—	—E—
GAS	—G—	—G—	—G—
SEWER	—S—	—S—	—S—
WATER	—W—	—W—	—W—
COMMUNICATIONS	—OF—	—OF—	—OF—
DRAINAGE	▬ ▬ ▬	▬ ▬ ▬	▬ ▬ ▬

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SERVICES INFORMATION

SERVICE	DATE
SEWER	26/9/2021
WATER	26/9/2021
ELECTRICAL	6/07/2021
OPTIC FIBRE	SHOWN AS INDICATIVE
GAS	SHOWN AS INDICATIVE

ISSUED FOR CONSTRUCTION CERTIFICATE

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C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
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Project:
STAGE 1
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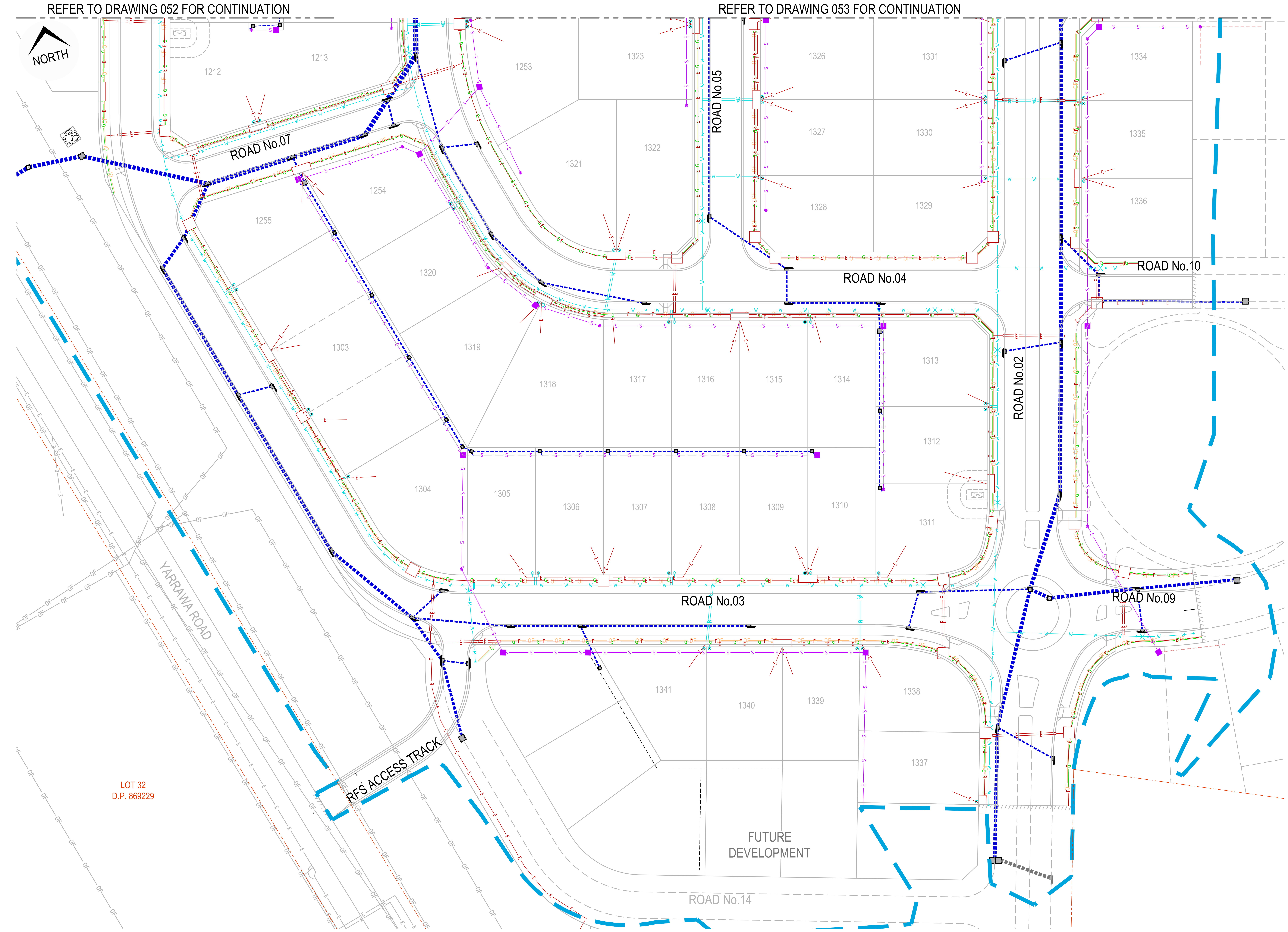
ROAD & DRAINAGE DESIGN

Title:
COMBINED
SERVICES LAYOUT PLAN
SHEET 04 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	053	C



LEGEND

UTILITY -	EXISTING	PROPOSED	FUTURE
ELECTRICITY	—E—	—E—	—E—
GAS	—G—	—G—	—G—
SEWER	—S—	—S—	—S—
WATER	—W—	—W—	—W—
COMMUNICATIONS	—OF—	—OF—	—OF—
DRAINAGE	▪▪▪▪▪	▬ ▬ ▬	▬ ▬ ▬

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SERVICES INFORMATION

SERVICE	DATE
SEWER	26/9/2021
WATER	26/9/2021
ELECTRICAL	6/07/2021
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GAS	SHOWN AS INDICATIVE

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Title:
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SERVICES LAYOUT PLAN
SHEET 05 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	054	C

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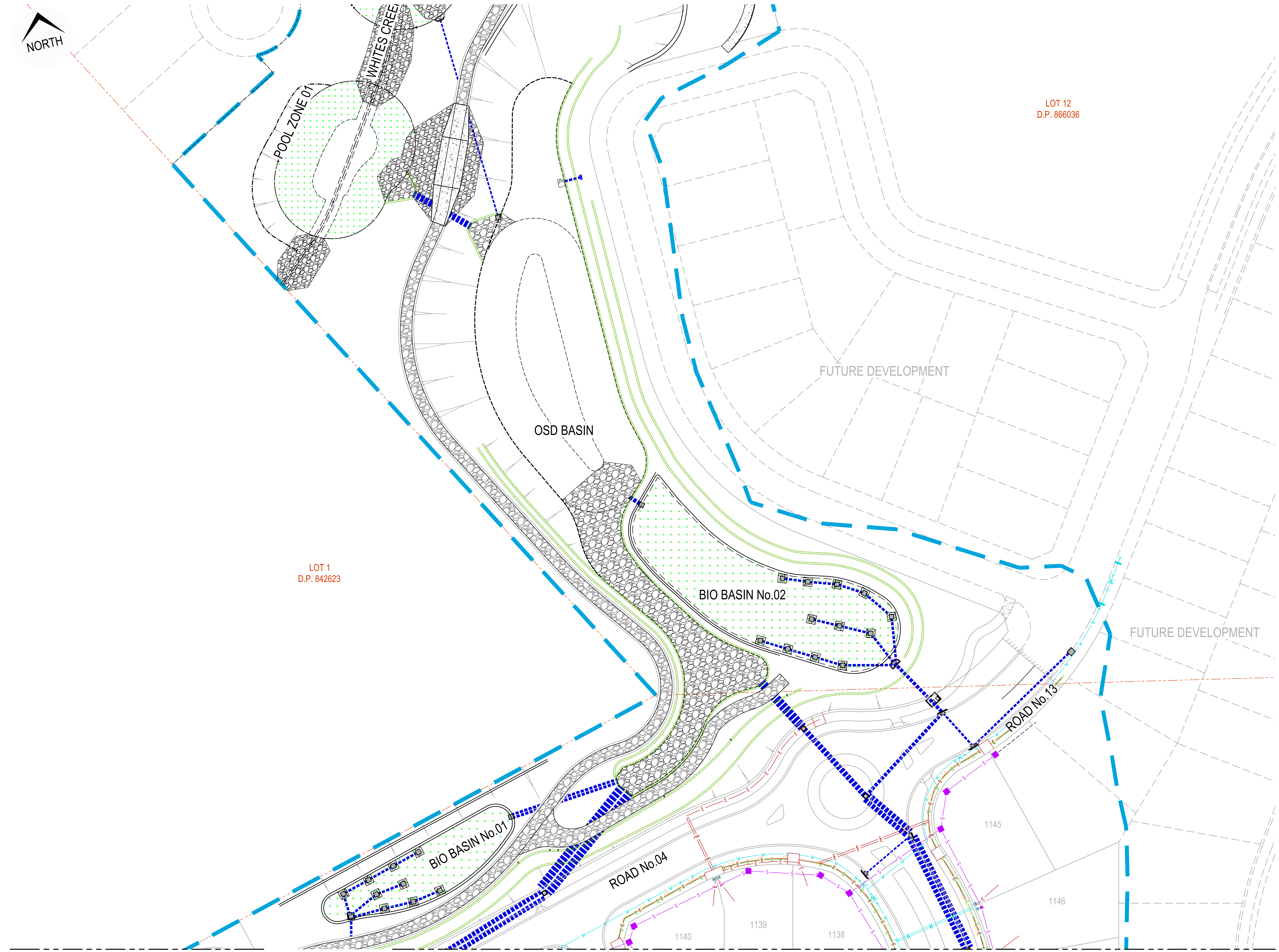

LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - ELECTRICITY	—E—	—E—	—E—
GAS	—G—	—G—	—G—
SEWER	—S—	—S—	—S—
WATER	—W—	—W—	—W—
COMMUNICATIONS	—OF—	—OF—	—OF—
DRAINAGE	▬ ▬ ▬	▬ ▬ ▬	▬ ▬ ▬

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NOTE:
1. SERVICES SHOWN ARE FOR INFORMATION. FINAL APPROVED SERVICES PLANS TAKE PRECEDENCE OVER THE INFORMATION SHOWN WITHIN THE COMBINED SERVICES PLAN.
2. POTHOLING OF EXISTING SERVICES TO BE UNDERTAKEN PRIOR TO CONSTRUCTION

SERVICES INFORMATION

SERVICE	DATE
SEWER	26/9/2021
WATER	26/9/2021
ELECTRICAL	6/07/2021
OPTIC FIBRE	SHOWN AS INDICATIVE
GAS	SHOWN AS INDICATIVE

REFER TO DRAWING 050 FOR CONTINUATION

REFER TO DRAWING 051 FOR CONTINUATION

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:D:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-055.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
D	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

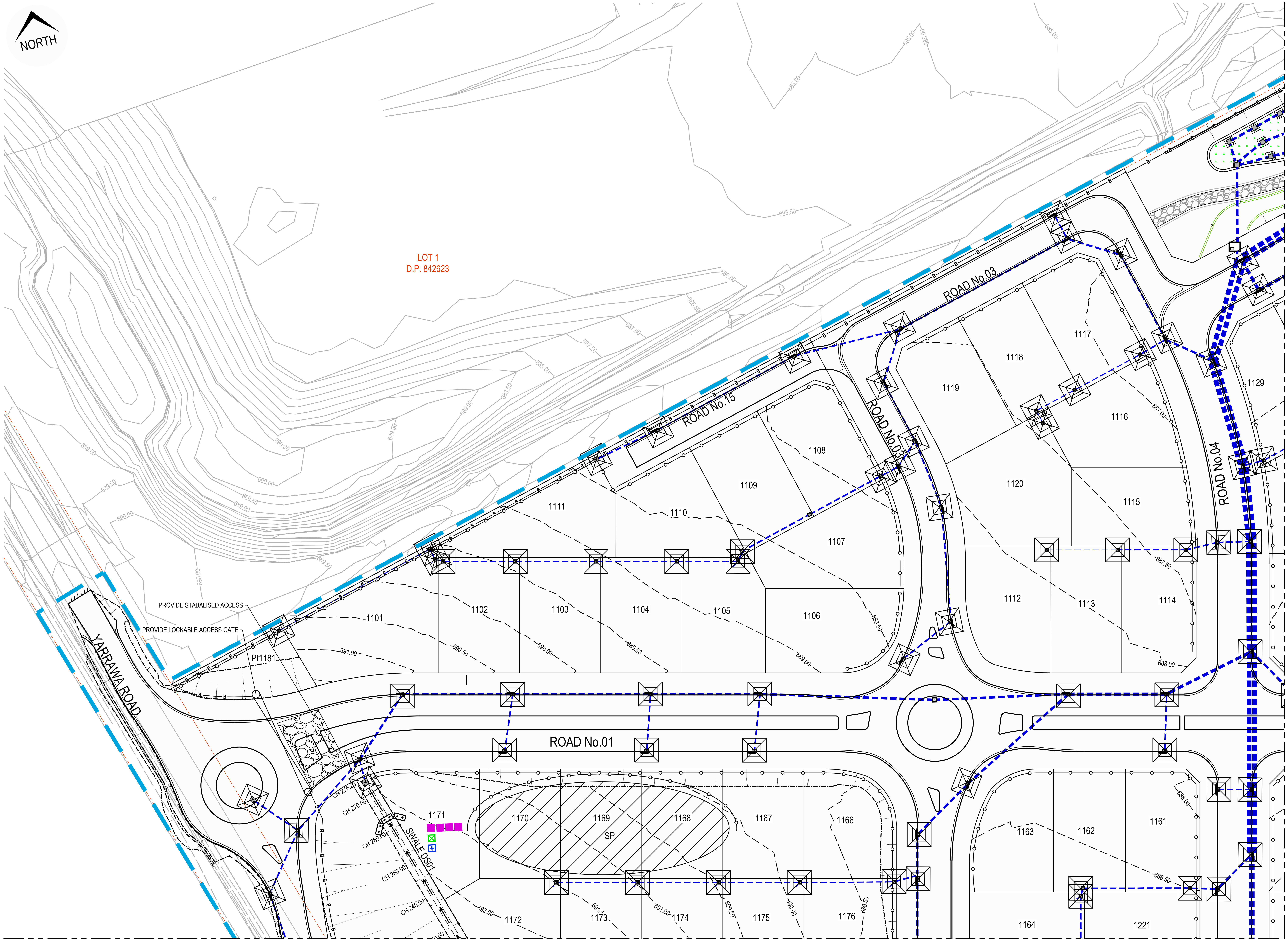
For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
COMBINED
SERVICES LAYOUT PLAN
SHEET 06 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	055	D



REFER TO DRAWING 102 FOR CONTINUATION

LEGEND

CONTOURS	——10.0—— – – –20.0– – –
STABILISED SITE ACCESS	▨
POSSIBLE STOCKPILE LOCATION	SP
SITE SECURITY FENCE	——B——B——B——
SEDIMENT FENCE	—o——o——o——
DIVERSION SWALE	——→ ——→ ——→
STRAW / HAY BALE FILTER	⬦⬦
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	☒
GREEN WASTE BIN (1 x 2.5 x 2.5m)	☒
MASONRY WASTE BIN (1 x 2.5 x 2.5m)	⊞
WASTE BINS x 4 - 1 x MIXED MATERIAL, 1 x PAPER / CARDBOARD, 1 x METAL & 1 x TREATED TIMBER	■■■■

NOTE:
WHERE PRACTICAL, SEDIMENT AND EROSION CONTROL DEVICES INSTALLED DURING THE BULK EARTHWORKS CONSTRUCTION ARE TO BE MAINTAINED

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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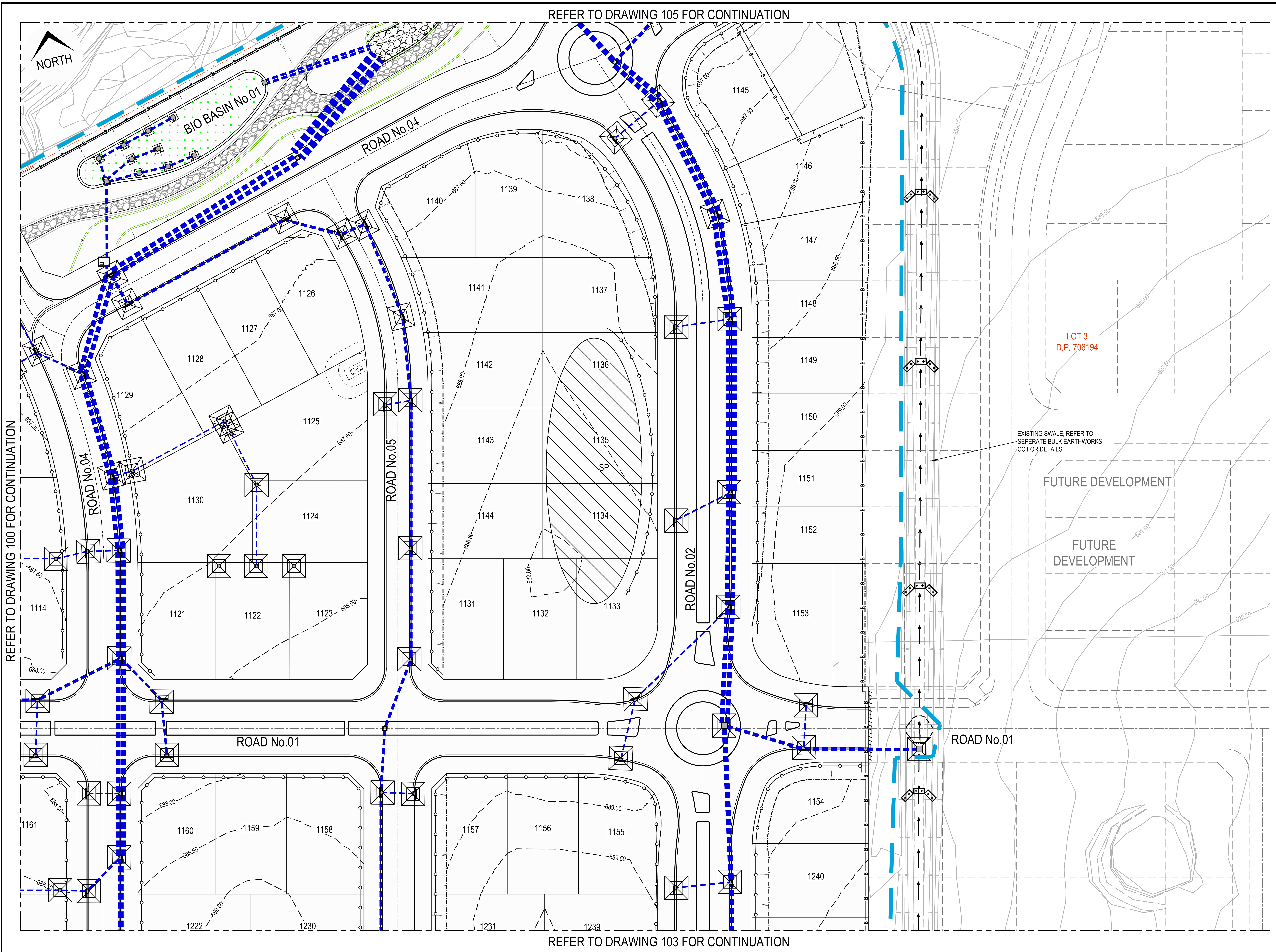
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL PLAN
SHEET 01 OF 07

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	100	B



LEGEND

CONTOURS	——10.0—— – – –20.0– – –
STABILISED SITE ACCESS	▨
POSSIBLE STOCKPILE LOCATION	SP
SITE SECURITY FENCE	——B——B——B——
SEDIMENT FENCE	—o—o—o—o—
DIVERSION SWALE	→ → →
STRAW / HAY BALE FILTER	⌄
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	⊠
GREEN WASTE BIN (1 x 2.5 x 2.5m)	⊠
MASONRY WASTE BIN (1 x 2.5 x 2.5m)	⊞
WASTE BINS x 4 - 1 x MIXED MATERIAL, 1 x PAPER / CARDBOARD, 1 x METAL & 1 x TREATED TIMBER	■■■■

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
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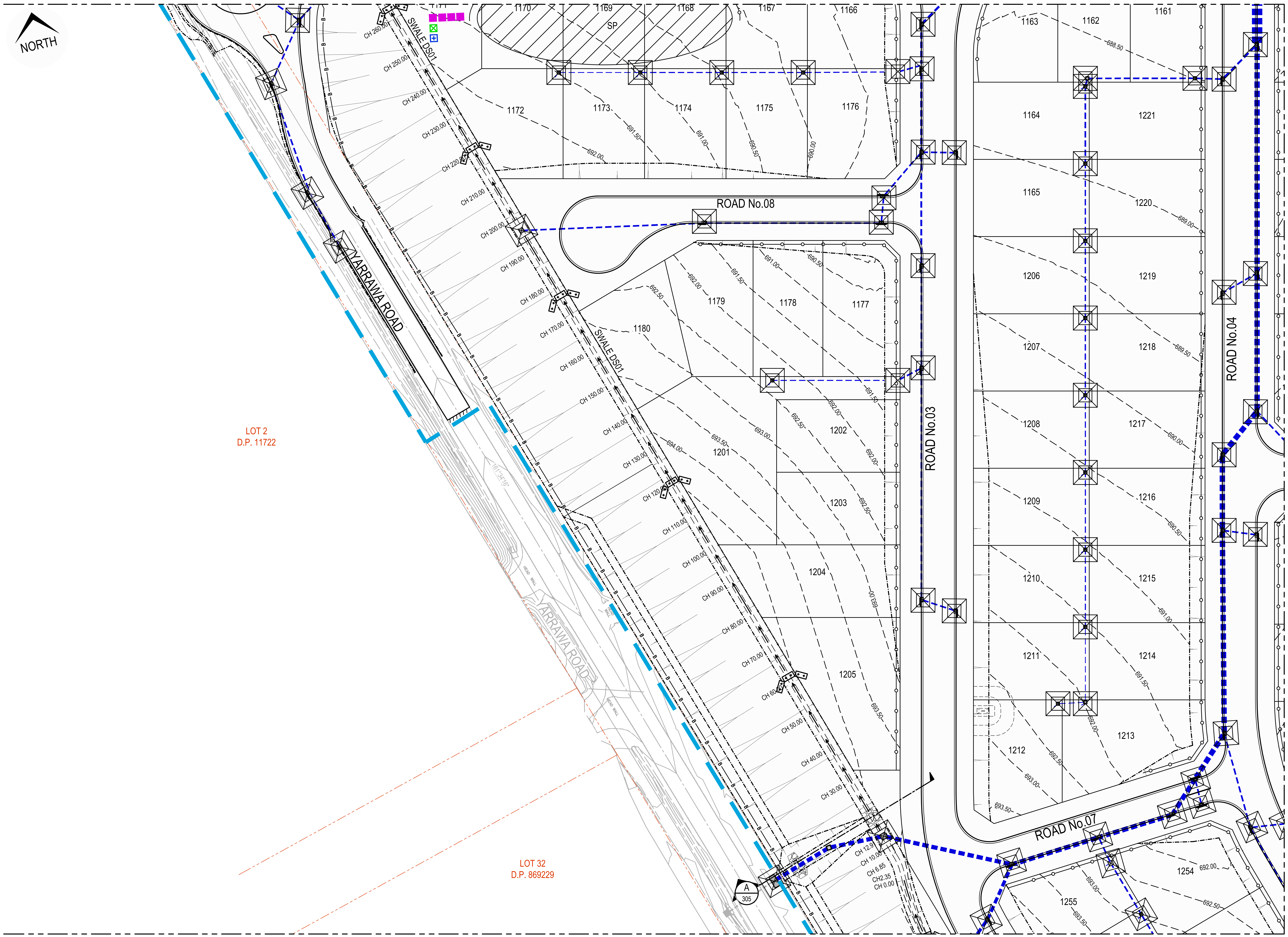
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL PLAN
SHEET 02 OF 07

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	101	B

REFER TO DRAWING 100 FOR CONTINUATION



REFER TO DRAWING 103 FOR CONTINUATION

REFER TO DRAWING 104 FOR CONTINUATION

LEGEND

CONTOURS	—10.0— ---20.0---
STABILISED SITE ACCESS	▨
POSSIBLE STOCKPILE LOCATION	SP
SITE SECURITY FENCE	—B—B—B—
SEDIMENT FENCE	—o—o—o—o—
DIVERSION SWALE	→ → →
STRAW / HAY BALE FILTER	⌄
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	⊠
GREEN WASTE BIN (1 x 2.5 x 2.5m)	☒
MASONRY WASTE BIN (1 x 2.5 x 2.5m)	⊞
WASTE BINS x 4 - 1 x MIXED MATERIAL, 1 x PAPER / CARDBOARD, 1 x METAL & 1 x TREATED TIMBER	🟪🟪🟪🟪

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Project:
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ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL PLAN
SHEET 03 OF 07

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	102	C

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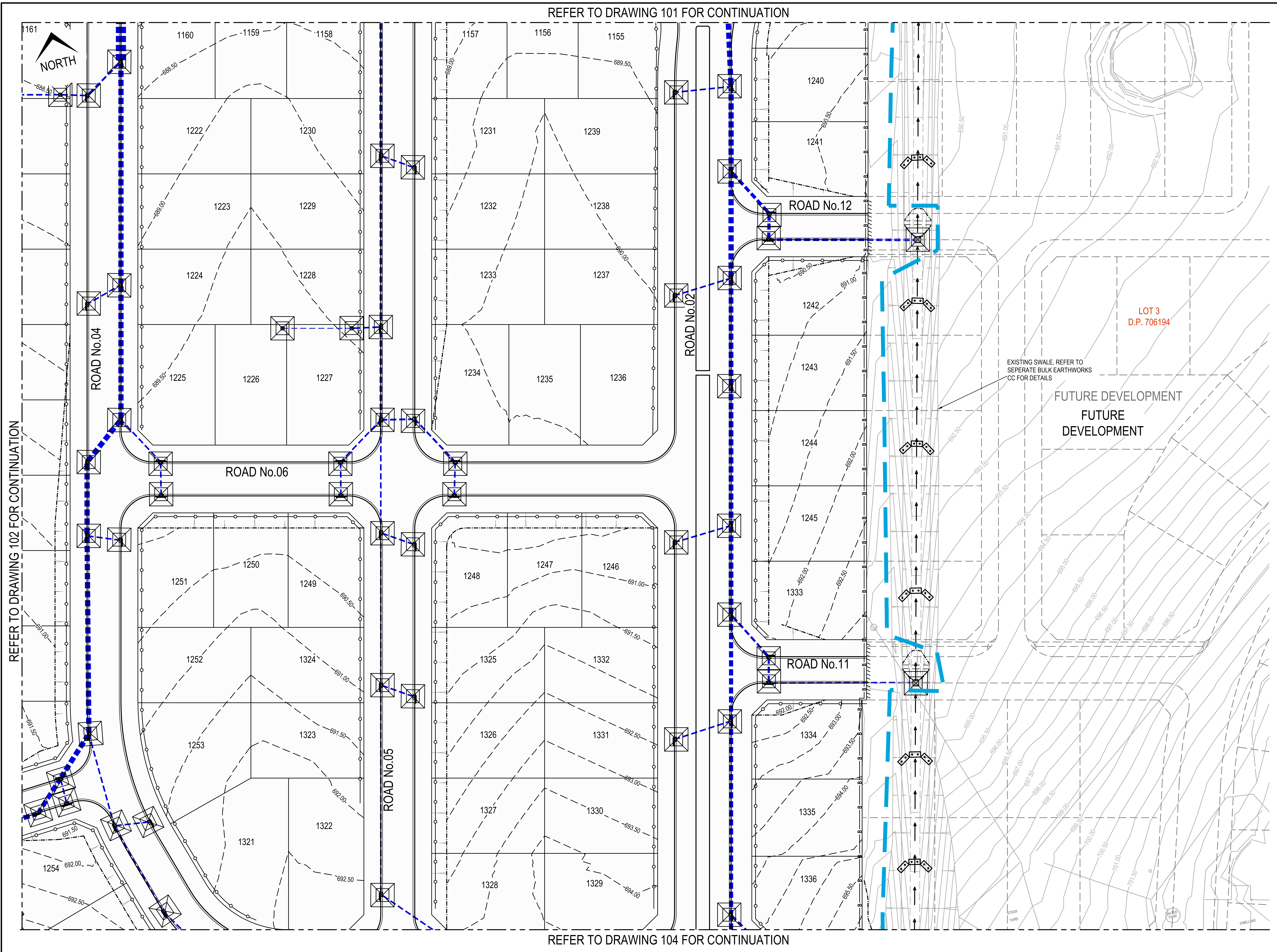

LEGEND

CONTOURS	——10.0—— – – –20.0– – –
STABILISED SITE ACCESS	▨
POSSIBLE STOCKPILE LOCATION	SP
SITE SECURITY FENCE	——B——B——B——
SEDIMENT FENCE	——○——○——○——○——
DIVERSION SWALE	→ → →
STRAW / HAY BALE FILTER	⊠ ⊠ ⊠
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	⊠
GREEN WASTE BIN (1 x 2.5 x 2.5m)	⊠
MASONRY WASTE BIN (1 x 2.5 x 2.5m)	⊞
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Project:
STAGE 1
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ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL PLAN
SHEET 04 OF 07

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	103	C

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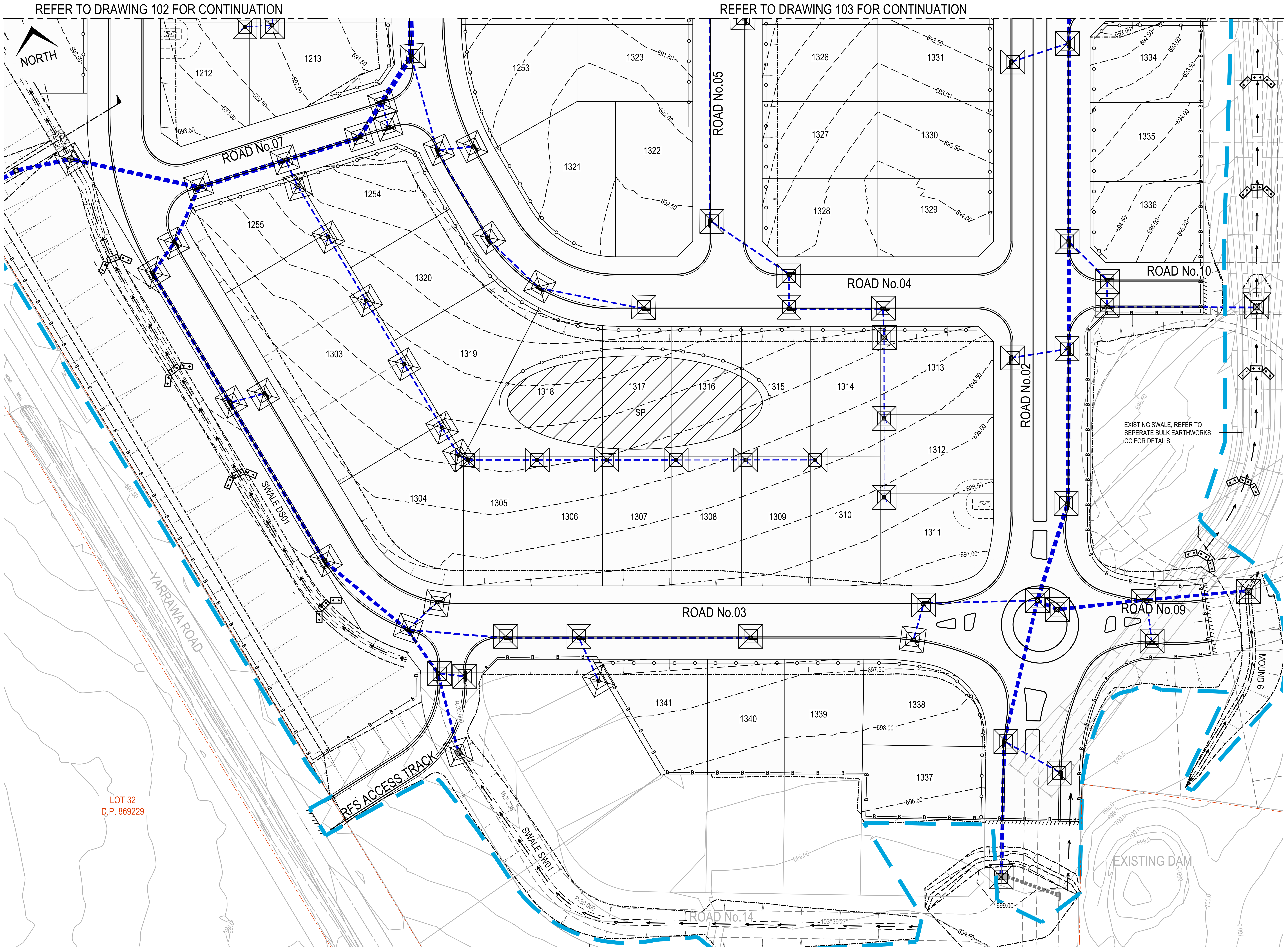

LEGEND	
CONTOURS	—10.0— ---20.0---
STABILISED SITE ACCESS	▨
POSSIBLE STOCKPILE LOCATION	SP
SITE SECURITY FENCE	—B—B—B—
SEDIMENT FENCE	—o—o—o—o—
DIVERSION SWALE	→ → →
STRAW / HAY BALE FILTER	✕
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	☒
GREEN WASTE BIN (1 x 2.5 x 2.5m)	☒
MASONRY WASTE BIN (1 x 2.5 x 2.5m)	⊞
WASTE BINS x 4 - 1 x MIXED MATERIAL, 1 x PAPER / CARDBOARD, 1 x METAL & 1 x TREATED TIMBER	■■■■

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL PLAN
SHEET 05 OF 07

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	104	C

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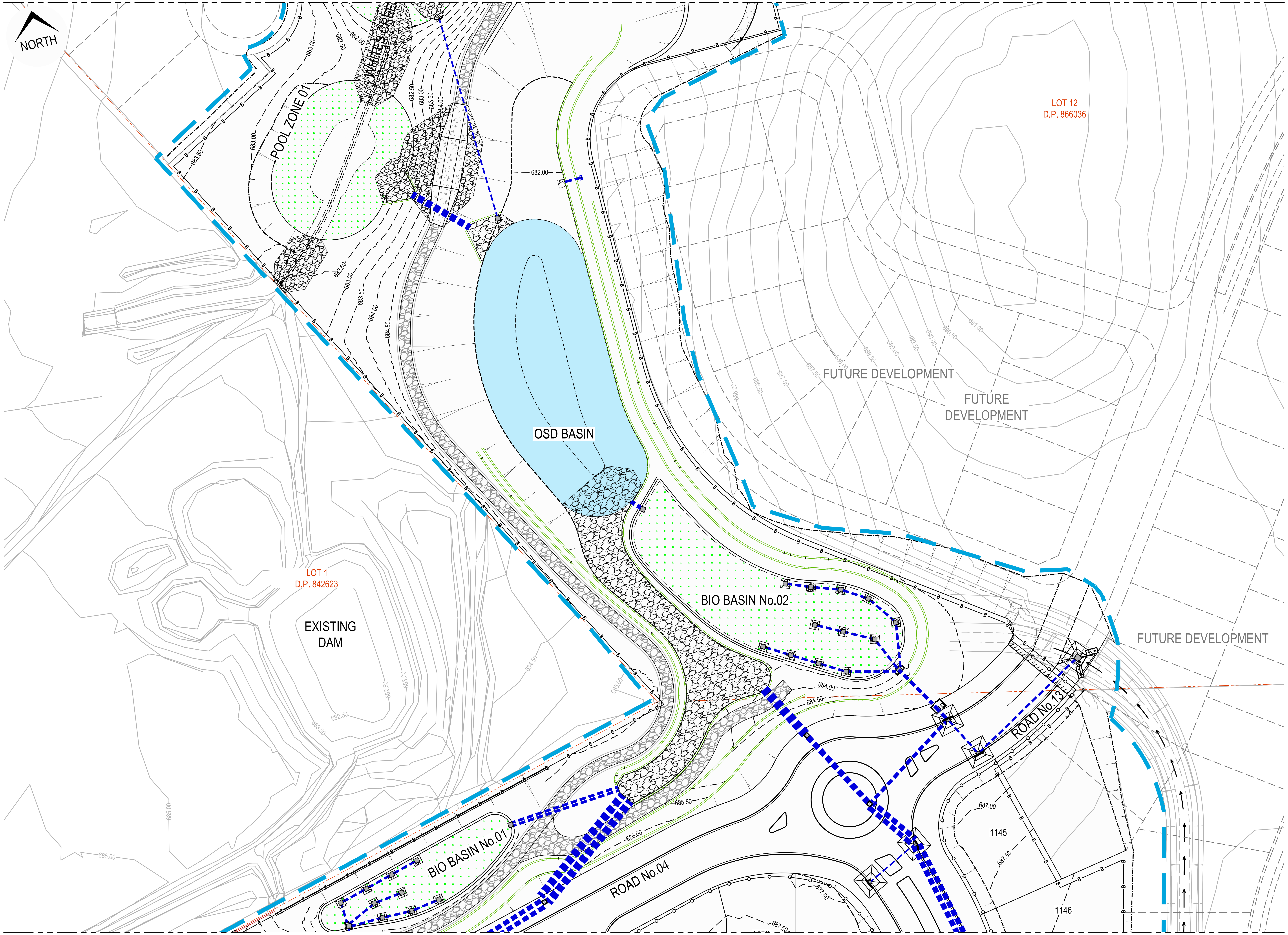
REFER TO DRAWING CC-106 FOR CONTINUATION



REFER TO DRAWING CC-100 FOR CONTINUATION

REFER TO DRAWING CC-101 FOR CONTINUATION

LEGEND

CONTOURS	——10.0—— ——20.0——
STABILISED SITE ACCESS	▨
POSSIBLE STOCKPILE LOCATION	SP
SITE SECURITY FENCE	——B——B——B——
SEDIMENT FENCE	—○—○—○—
DIVERSION SWALE	→ → →
STRAW / HAY BALE FILTER	◇◇◇
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	☒
GREEN WASTE BIN (1 x 2.5 x 2.5m)	☒
MASONRY WASTE BIN (1 x 2.5 x 2.5m)	⊞
WASTE BINS x 4 - 1 x MIXED MATERIAL, 1 x PAPER / CARDBOARD, 1 x METAL & 1 x TREATED TIMBER	■■■■

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C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
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For:
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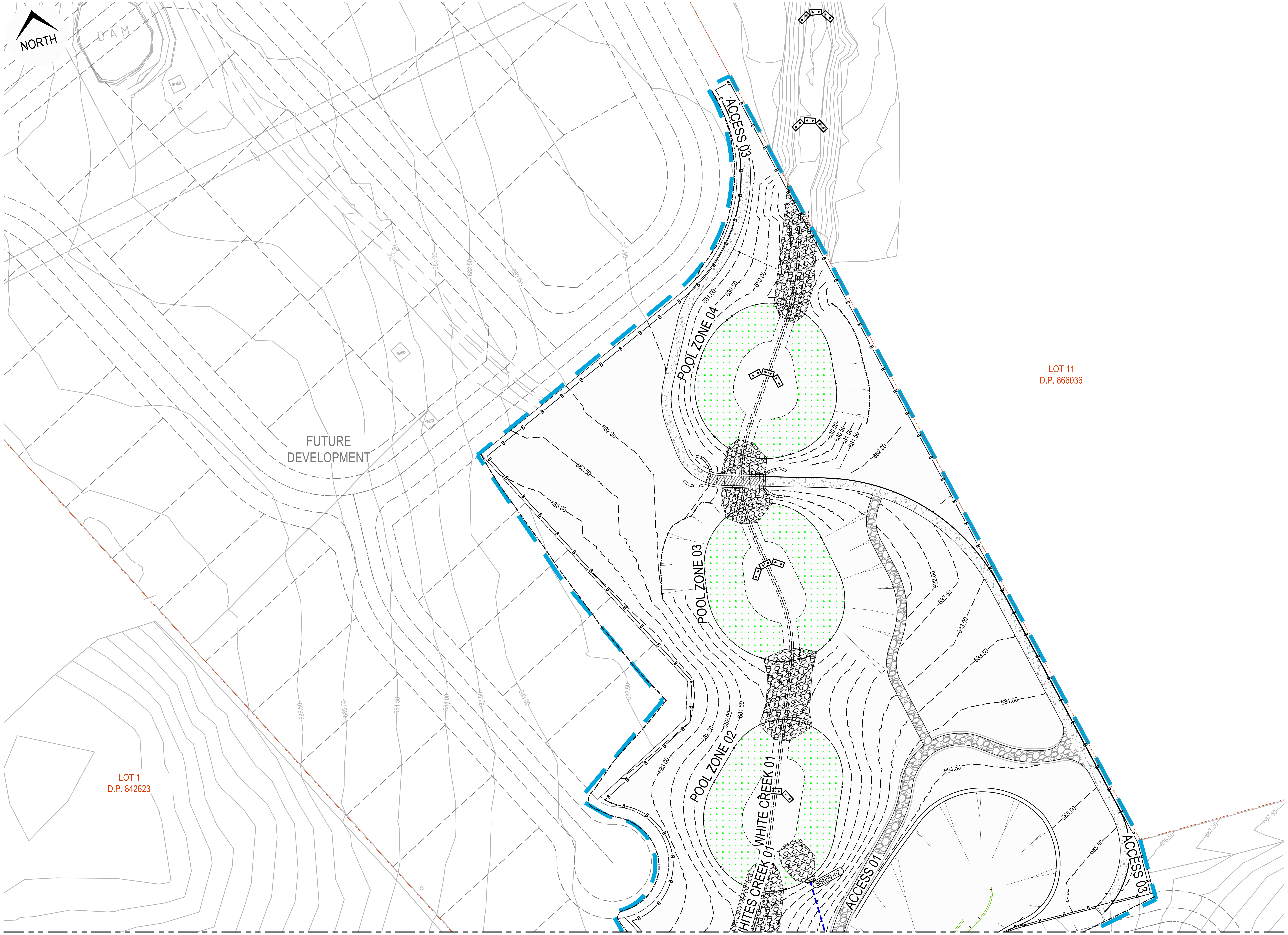
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL PLAN
SHEET 06 OF 07

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	105	C



REFER TO DRAWING 101 FOR CONTINUATION

LEGEND

CONTOURS	10.0 ——— 20.0 – – –
STABILISED SITE ACCESS	▨
POSSIBLE STOCKPILE LOCATION	SP
SITE SECURITY FENCE	—B—B—B—
SEDIMENT FENCE	—o—o—o—o—
DIVERSION SWALE	→ → →
STRAW / HAY BALE FILTER	
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	☒
GREEN WASTE BIN (1 x 2.5 x 2.5m)	☒
MASONRY WASTE BIN (1 x 2.5 x 2.5m)	⊞
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A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Project:
STAGE 1
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141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL PLAN
SHEET 07 OF 07

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	106	A

GENERAL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE "ENVIRONMENT PROTECTION AUTHORITY".AND "DEPT OF LAND AND WATER CONSERVATION". MEASURES OUTLINED IN THE SEDIMENT & EROSION CONTROL PLAN MUST BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING AND AFTER THE CONSTRUCTION WORKS.
2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
4. ALL TAIL-OUT DRAINS SHALL BE GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
6. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
7. ALL DISTURBED AREAS SHALL BE REVEGETATED WITHIN 14 WORKING DAYS FROM THE CONCLUSION OF LAND SHAPING.
8. MINIMISE DUST BY WATERING WHEN REQUIRED.

STOCKPILE NOTES:

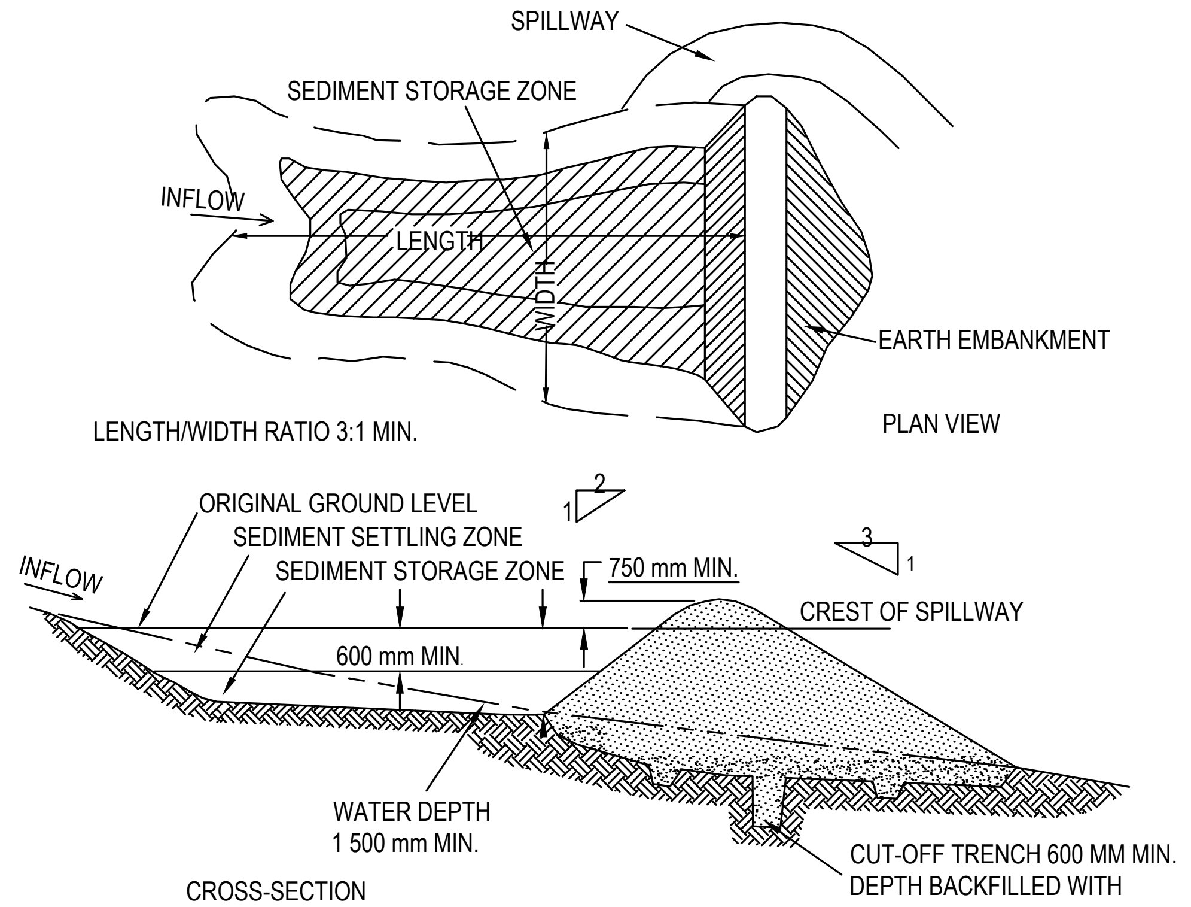
9. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
10. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.
11. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATE.
12. ALL STOCKPILES TO BE (MAX) 2m HIGH AND PROTECTED WITH SILT FENCE.

SPECIAL NOTES:

13. LOCATION AND EXTENT OF SOIL AND WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE.
14. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE GUIDELINES SET OUT IN "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION " -4TH EDITION AND THE ACCOMPANYING ROAD AND DRAINAGE PLANS.
15. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT.
16. MANAGEMENT DEVICES SHALL BE MAINTAINED ON A REGULAR BASIS. WHERE CLEANING IS REQUIRED, THE SEDIMENT SHALL BE REMOVED TO A POINT NOMINATED BY THE ENGINEER.
17. PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS, AND AFTER THE ROAD CENTRELINES HAVE BEEN PEGGED AND/OR PERMANENTLY MARKED, THE SITE MUST BE INSPECTED BY COUNCIL'S REPRESENTATIVE AND THE APPLICANT'S REPRESENTATIVE TO IDENTIFY AND APPROPRIATELY MARK:-
    a) THE TREES TO BE RETAINED.
    b) ALL TREES TO BE LEFT UNDISTURBED AND TO BE CORDONED OFF.
18. NO TREES SHALL BE REMOVED WITHOUT COUNCIL'S CLEARANCE.
19. MANAGEMENT DEVICES TO REMAIN UNTIL THE END OF THE MAINTENANCE PERIOD.

SEDIMENTATION CONTROL DEVICES:

20. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 450mm INTO THE GROUND AND LOCATED ON THE BALE CENTRE LINE.
21. SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2m (3m MAX) CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.

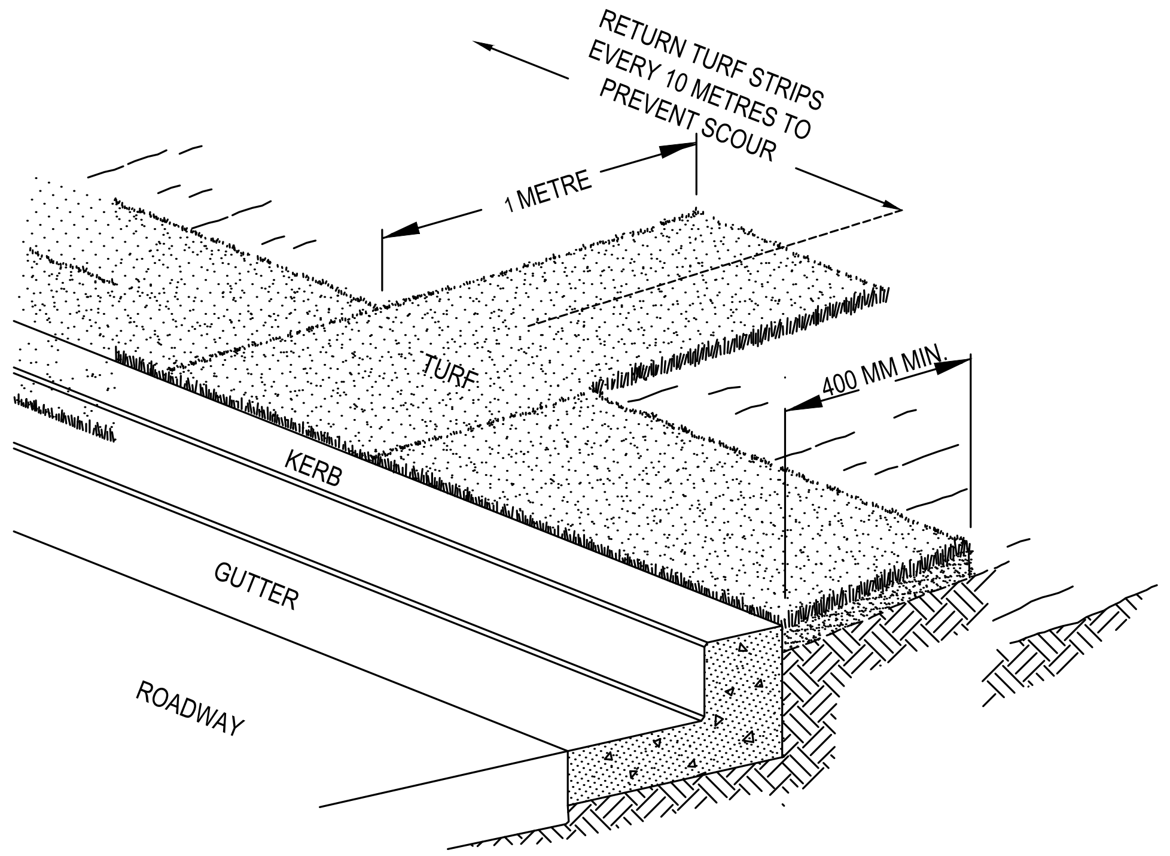


CONSTRUCTION NOTES:

1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
2. CONSTRUCT A CUT-OFF TRENCH 500 MM DEEP AND 1,200 MM WIDE ALONG THE CENTRELINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.
3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95 PER CENT STANDARD PROCTOR DENSITY.
4. SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.
5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100 MM TO HELP BOND COMPACTED FILL TO THE EXISTING SUBSTRATE.
6. SPREAD THE FILL IN 100 MM TO 150 MM LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.
7. CONSTRUCT THE EMERGENCY SPILLWAY. 8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.

EARTH BASIN - WET
(APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY)

SD 6-4

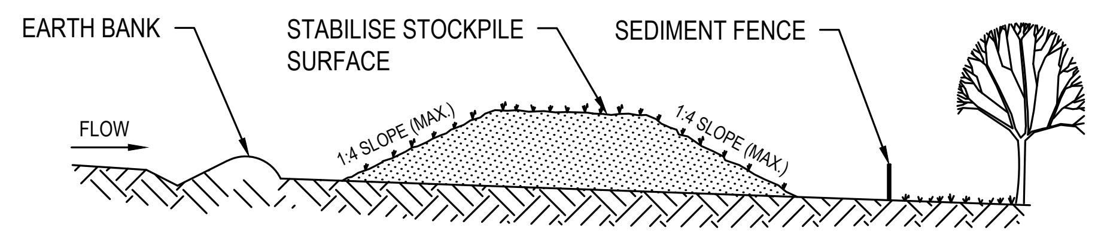


CONSTRUCTION NOTES:

1. INSTALL A 400mm MINIMUM WIDE ROLL OF TURF ON THE FOOTPATH NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB.
2. LAY 1.4 METRE LONG TURF STRIPS NORMAL TO THE KERB EVERY 10m.
3. REHABILITATE DISTURBED SOIL BEHIND THE TURF STRIP FOLLOWING THE ESCP/SWMP.

KERBSIDE TURF STRIP

SD 6-13

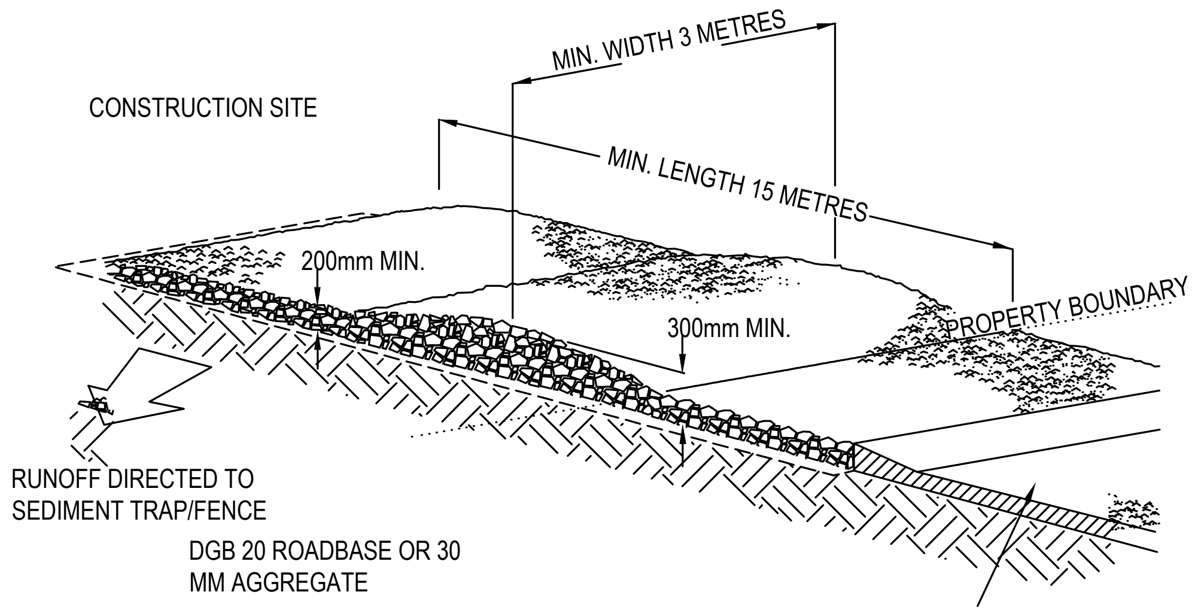


CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. ALL STOCKPILES ARE TO BE LOCATED AND PLACED IN ACCORDANCE WITH THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN.
5. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) NO STABILISATION IS REQUIRED. REVIEW THE ADEQUACY OF SEDIMENT CONTROLS IF RAINFALL IS PREDICTED.
6. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) THE FOLLOWING ADDITIONAL CONTROLS ARE REQUIRED:
   -MAXIMUM BATTER SLOPE REDUCED TO 1:4
   -CONSTRUCT A CONTOUR DRAIN ON THE LOW SIDE OF THE STOCKPILE, AND DISCHARGING THROUGH A STRAW BALE OR 200mm HIGH GRAVEL DAM
   -ESTABLISH GRASS COVER TO SURFACE OF STOCKPILE WITHIN 14 DAYS, USING HYDROMULCH WITH A 75:25 MIX OF SEASONAL AND PERMANENT GRASS SEEDS, AND A STRAW MULCH THICKNESS OF NO LESS THAN 5mm.
7. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

STOCKPILES

SD 4-1



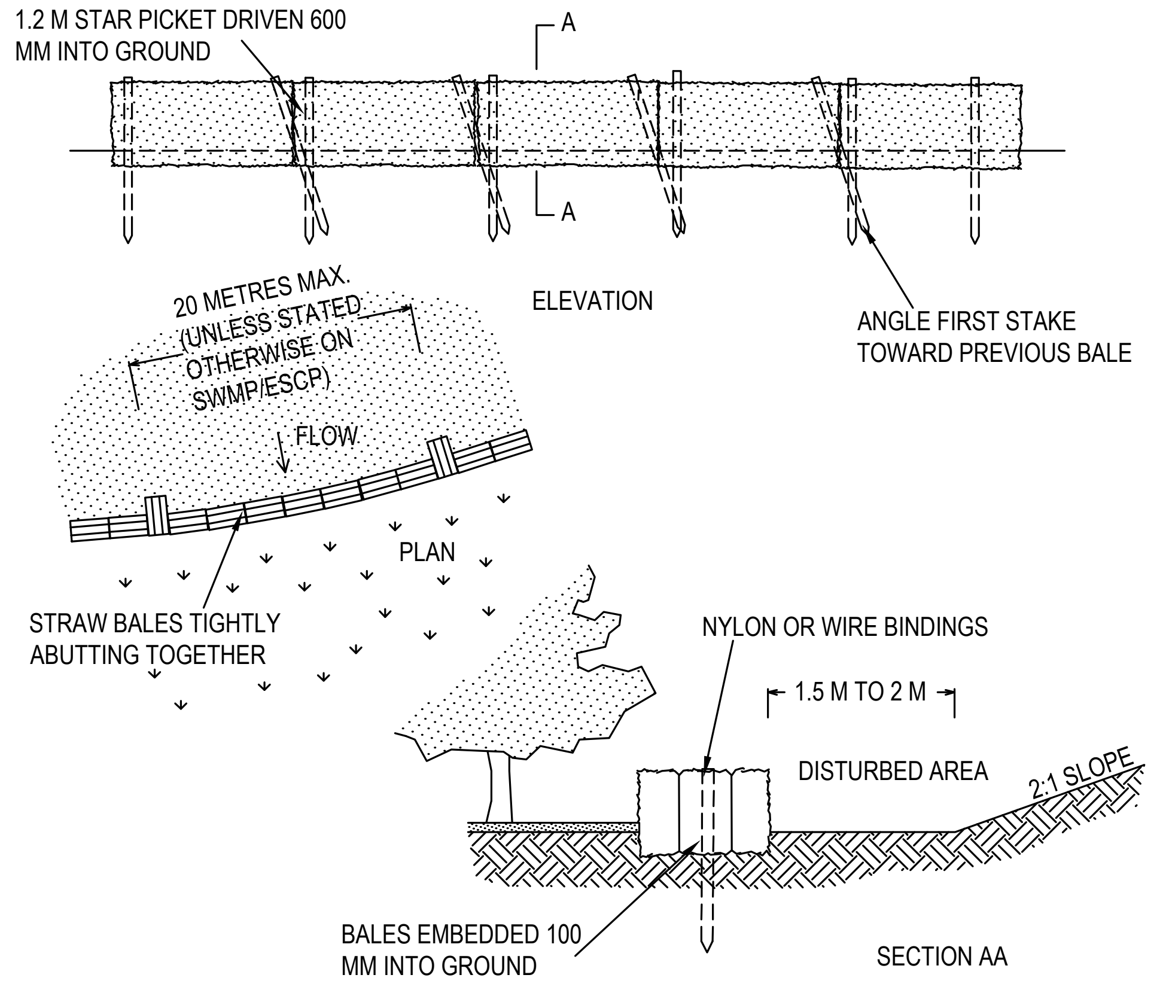
GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS. GEOFABRIC MAY BE A WOVEN OR NEEDLE-PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N

CONSTRUCTION NOTES:

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE

STABILISED SITE ACCESS

SD 6-14

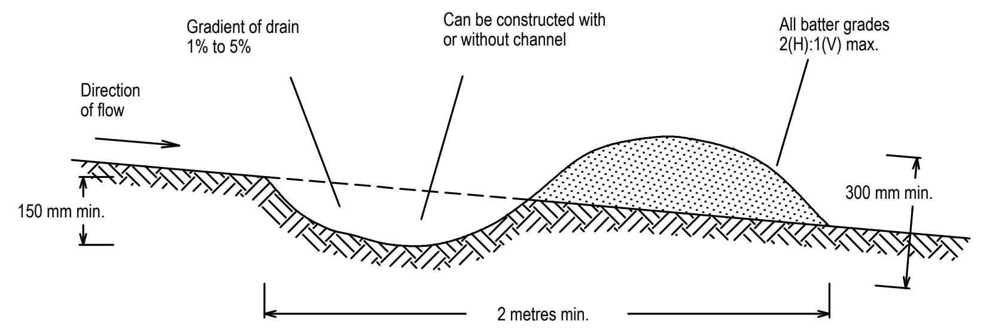

1.2 M STAR PICKET DRIVEN 600 MM INTO GROUND
A
A
ELEVATION
ANGLE FIRST STAKE TOWARD PREVIOUS BALE
20 METRES MAX. (UNLESS STATED OTHERWISE ON SWMP/ESCP)
FLOW
PLAN
STRAW BALES TIGHTLY ABUTTING TOGETHER
NYLON OR WIRE BINDINGS
1.5 M TO 2 M
DISTURBED AREA
2:1 SLOPE
BALES EMBEDDED 100 MM INTO GROUND
SECTION AA

CONSTRUCTION NOTES:

1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75 mm TO 100 mm AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE.DRIVE THEM 600 mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1 TO 2 METRES DOWNSLOPE FROM THE TOE.
6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

STRAW BALE FILTER

SD 6-7


Gradient of drain 1% to 5%
Can be constructed with or without channel
All batter grades 2(H):1(V) max.
Direction of flow
150 mm min.
300 mm min.
2 metres min.

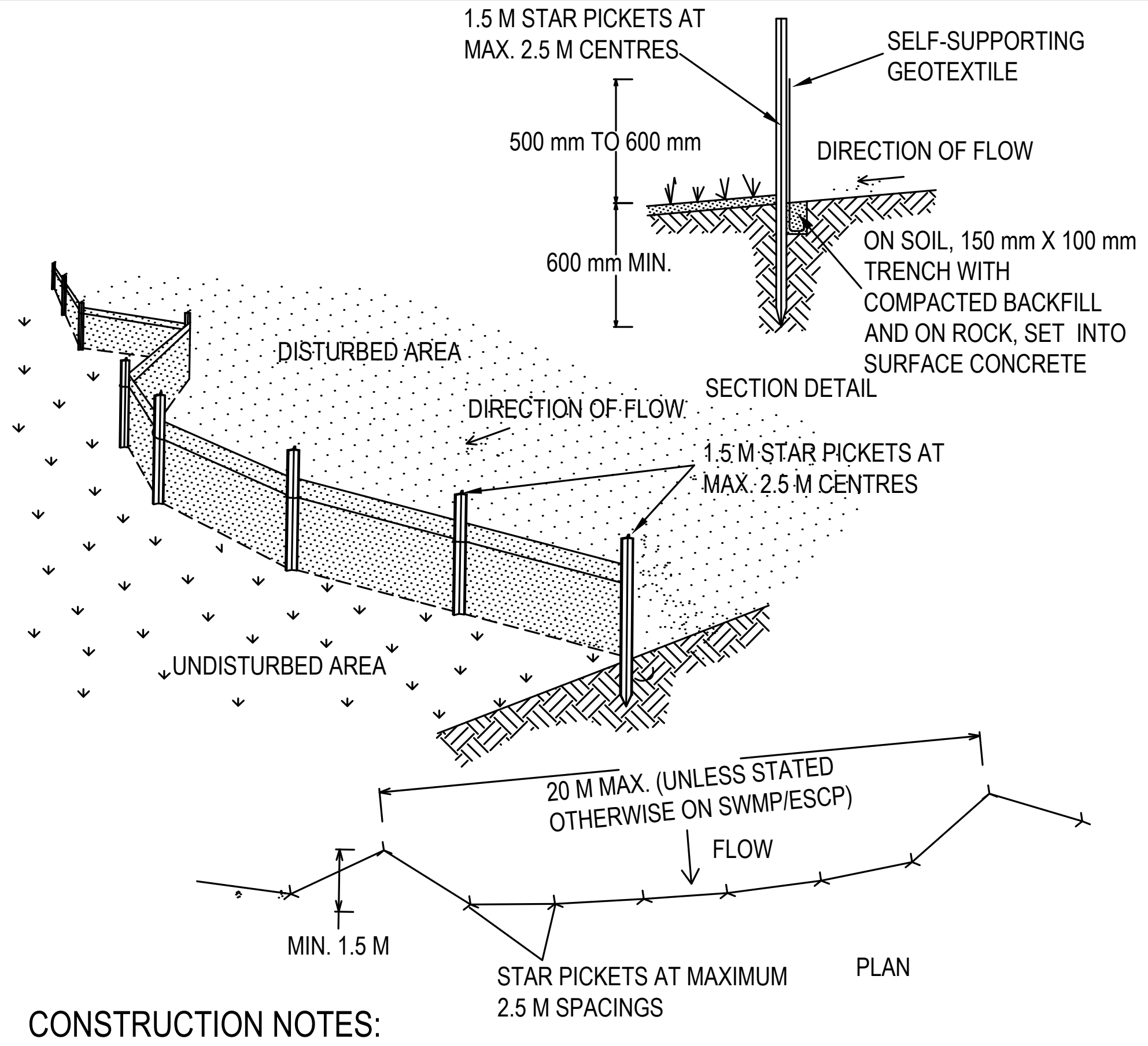
NOTE: Only to be used as temporary bank where maximum upslope length is 80 metres.

Construction Notes

1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

EARTH BANK (LOW FLOW)

SD 5-5

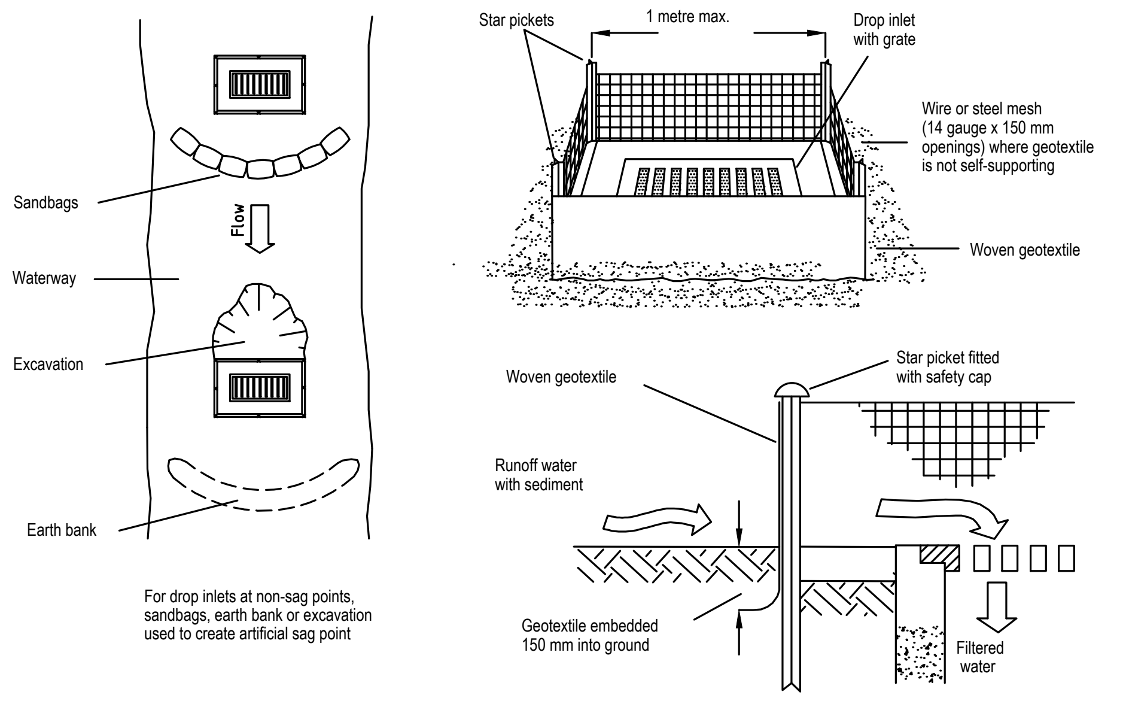

1.5 M STAR PICKETS AT MAX. 2.5 M CENTRES
SELF-SUPPORTING GEOTEXTILE
500 mm TO 600 mm
DIRECTION OF FLOW
600 mm MIN.
ON SOIL, 150 mm X 100 mm TRENCH WITH COMPACTED BACKFILL AND ON ROCK, SET INTO SURFACE CONCRETE
SECTION DETAIL
DISTURBED AREA
DIRECTION OF FLOW
1.5 M STAR PICKETS AT MAX. 2.5 M CENTRES
UNDISTURBED AREA
20 M MAX. (UNLESS STATED OTHERWISE ON SWMP/ESCP)
FLOW
MIN. 1.5 M
STAR PICKETS AT MAXIMUM 2.5 M SPACINGS
PLAN

CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE

SD 6-8

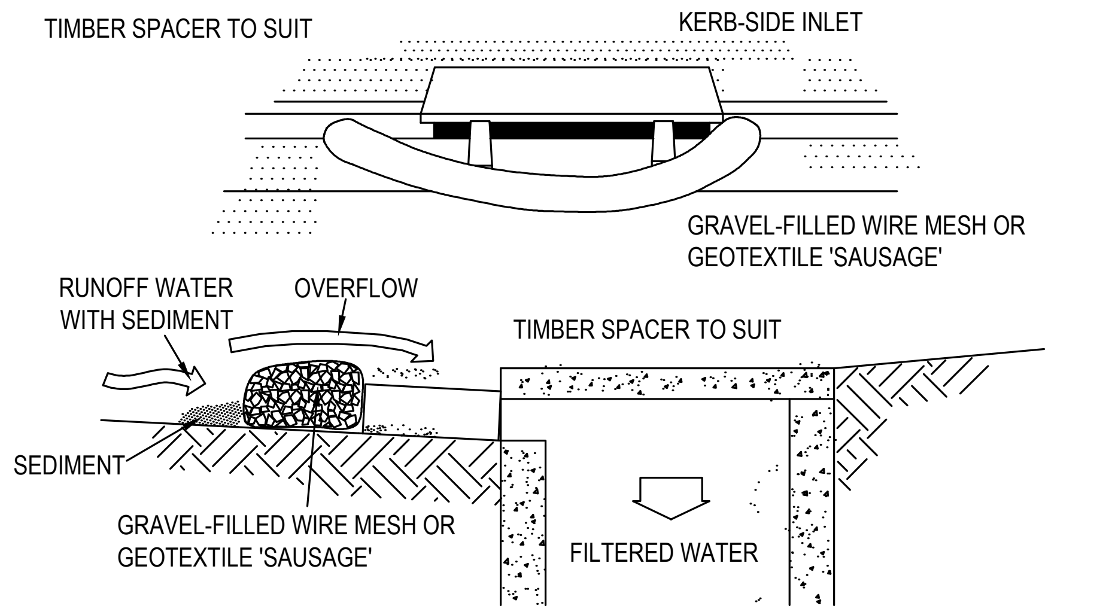

Sandbags
Flow
Waterway
Excavation
Earth bank
For drop inlets at non-sag points, sandbags, earth bank or excavation used to create artificial sag point
Star pickets
1 metre max.
Drop inlet with grate
Wire or steel mesh (14 gauge x 150 mm openings) where geotextile is not self-supporting
Woven geotextile
Woven geotextile
Star picket fitted with safety cap
Runoff water with sediment
Geotextile embedded 150 mm into ground
Filtered water

Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-8 for installation procedures for geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

GEOTEXTILE INLET FILTER

SD 6-12


TIMBER SPACER TO SUIT
KERB-SIDE INLET
GRAVEL-FILLED WIRE MESH OR GEOTEXTILE 'SAUSAGE'
RUNOFF WATER WITH SEDIMENT
OVERFLOW
TIMBER SPACER TO SUIT
SEDIMENT
GRAVEL-FILLED WIRE MESH OR GEOTEXTILE 'SAUSAGE'
FILTERED WATER

NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

CONSTRUCTION NOTES:

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH AND GRAVEL INLET FILTER

SD 6-11

1. Erosion Hazard and Sediment Basins

Site Name: 141 Yarrawa Road, Moss Vale

Site Location:

Precinct/Stage: Wingecarribee

Other Details:

Site area	Sub-catchment or Name of Structure						Notes
	CAT 1	CAT 2					
Total catchment area (ha)	26.52	33.92					
Disturbed catchment area (ha)	14.29	5.29					
Soil analysis (enter sediment type if known, or laboratory particle size data)							
Sediment Type (C, F or D) if known:	D	D					From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D	D					Automatic calculation from above
Rainfall data							
Design rainfall depth (no of days)	5	5					See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	75	75					
x-day, y-percentile rainfall event (mm)	16.5	16.5					
Rainfall R-factor (if known)							Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	11.3	11.3					
RUSLE Factors							
Rainfall erosivity (R-factor)	2760	2760					Auto-filled from above
Soil erodibility (K-factor)	0.041	0.041					RUSLE LS factor calculated for a high rill/interrill ratio.
Slope length (m)	100	100					
Slope gradient (%)	5	5					
Length/gradient (LS-factor)	1.35	1.35					
Erosion control practice (P-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (C-factor)	1	1	1	1	1	1	
Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)							
Storage (soil) zone design (no of months)	2	2	2	2	2	2	Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.5	0.5					See Table F2, page F-4 in Appendix F
Calculations and Type D/F Sediment Basin Volumes							
Soil loss (t/ha/yr)	198	198					
Soil Loss Class	2	2					See Table 4.2, page 4-13
Soil loss (m^3/ha/yr)	153	153					Conversion to cubic metres
Sediment basin storage (soil) volume (m^3)	364	135					See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m^3)	2188	2799					See Sections 6.3.4(i) for calculations
Sediment basin total volume (m^3)	2552	2934					

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION
CONTROL NOTES & DETAILS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	107	A

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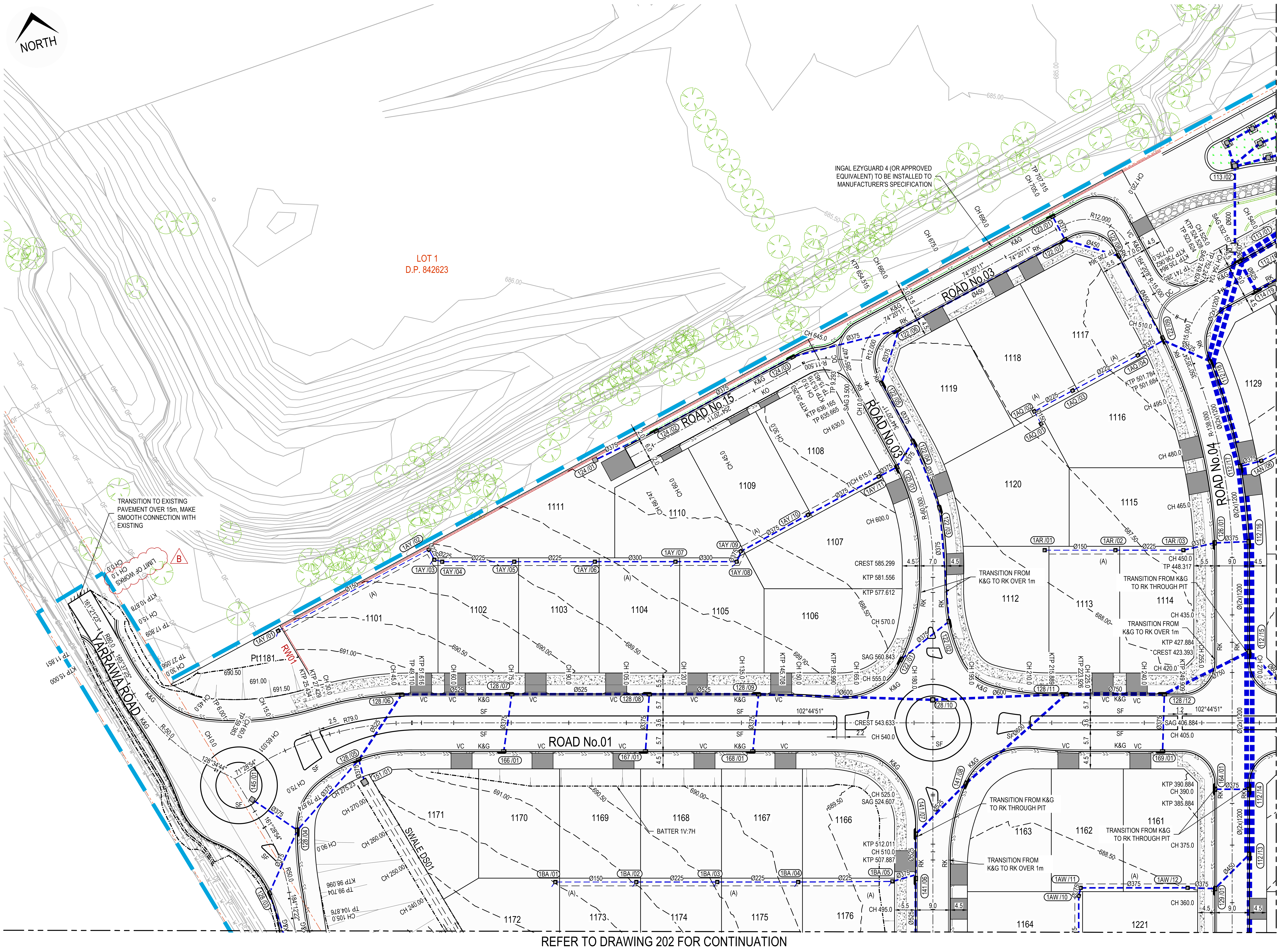
NORTH
LOT 1
D.P. 842623
INGAL EZYGUARD 4 (OR APPROVED EQUIVALENT) TO BE INSTALLED TO MANUFACTURER'S SPECIFICATION
TRANSITION TO EXISTING PAVEMENT OVER 15m, MAKE SMOOTH CONNECTION WITH EXISTING
LIMIT OF WORKS
YARRAWA ROAD
ROAD No.01
ROAD No.03
ROAD No.04
ROAD No.15
SWALE DS01
RW01
TRANSITION FROM K&G TO RK OVER 1m
TRANSITION FROM K&G TO RK THROUGH PIT
BATTER 1V:7H
CREST 585.299
CREST 543.633
CREST 423.393
1101
1102
1103
1104
1105
1106
1107
1108
1109
1110
1111
1112
1113
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1175
1176
1221
REFER TO DRAWING 201 FOR CONTINUATION
REFER TO DRAWING 202 FOR CONTINUATION

LEGEND

DENOTES DRAINAGE EASEMENT TO COUNCIL'S MINIMUM WIDTH (2.0m)	(A)
PROPOSED RESIDENTIAL RETAINING WALL (TEXTURED CONCRETE SLEEPER WALL)	🟥
PROPOSED OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL)	🟩
PROPOSED SITE BOUNDARY RETAINING WALL (KEYSTONE WALL)	▭
DENOTES INDICATIVE DRIVEWAY LOCATION (NOT PART OF THIS APPLICATION)	▨
DENOTES INDICATIVE DRIVEWAY LOCATION (VEHICULAR CROSSING ONLY PART OF THIS APPLICATION)	▨ VC

B

NOTE:

1. ROOF WATER CONNECTION TO BE PROVIDED IN KERB TO COUNCIL STANDARD DETAIL.
2. PROVIDE STUB CONNECTION FOR INTERALLOTMENT PITS FOR FUTURE HOUSE CONNECTION.
3. REFER TO PLAN 305 FOR VC SETOUT FOR DRIVEWAYS

B

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B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

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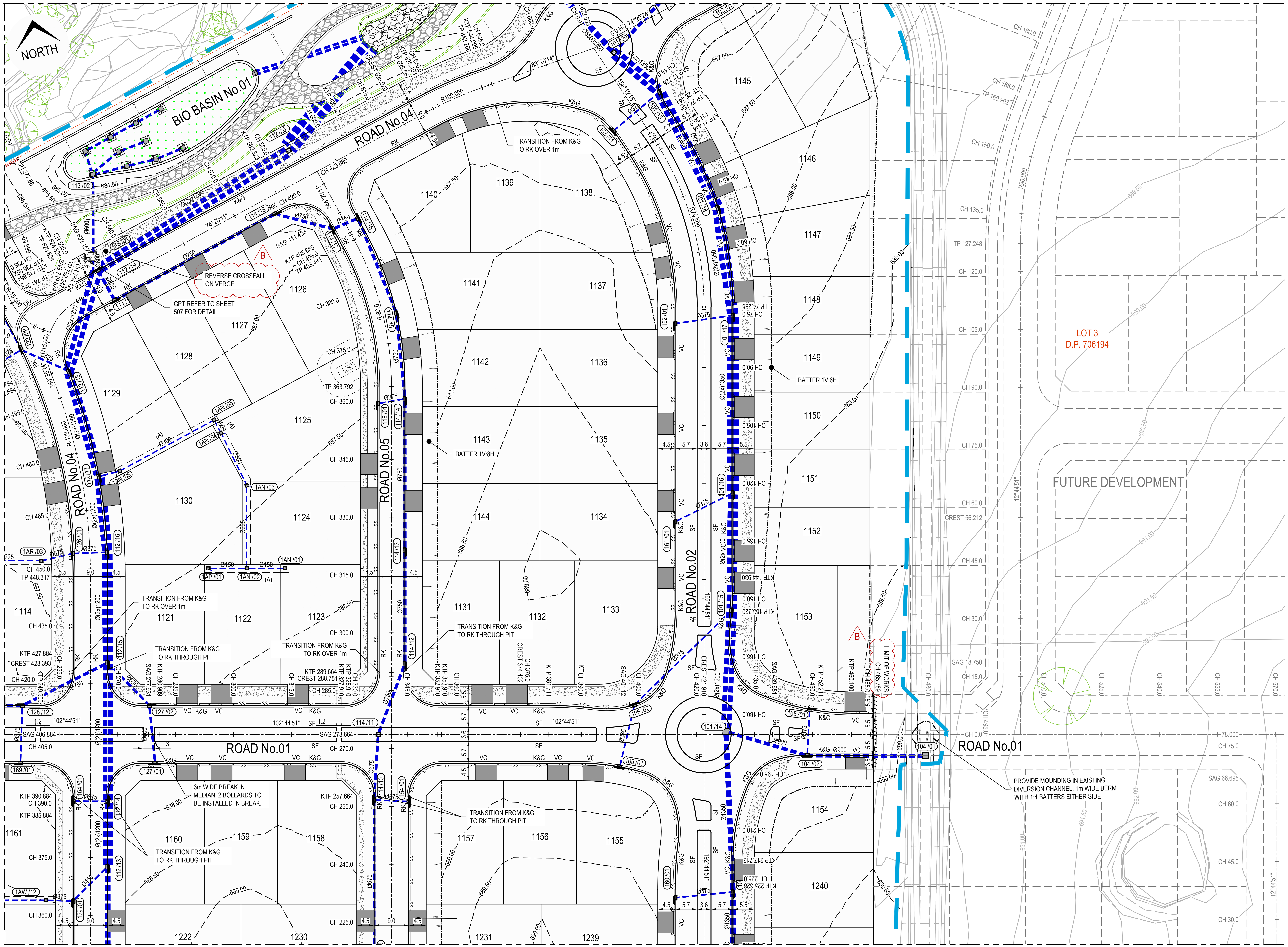
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ENGINEERING PLAN
SHEET 01 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	200	B

REFER TO DRAWING 205 FOR CONTINUATION



REFER TO DRAWING 200 FOR CONTINUATION

REFER TO DRAWING 203 FOR CONTINUATION

LEGEND

DENOTES DRAINAGE EASEMENT TO COUNCIL'S MINIMUM WIDTH (2.0m)	(A)
PROPOSED RESIDENTIAL RETAINING WALL (TEXTURED CONCRETE SLEEPER WALL)	🟥
PROPOSED OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL)	🟩
PROPOSED SITE BOUNDARY RETAINING WALL (KEYSTONE WALL)	🟪
DENOTES INDICATIVE DRIVEWAY LOCATION (NOT PART OF THIS APPLICATION)	▨
DENOTES INDICATIVE DRIVEWAY LOCATION (VEHICULAR CROSSING ONLY PART OF THIS APPLICATION)	▨ VC

B

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2. PROVIDE STUB CONNECTION FOR INTERALLOTMENT PITS FOR FUTURE HOUSE CONNECTION.
3. REFER TO PLAN 305 FOR VC SETOUT FOR DRIVEWAYS

B

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B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ENGINEERING PLAN
SHEET 02 OF 06

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20-0071	02	CC	201	B

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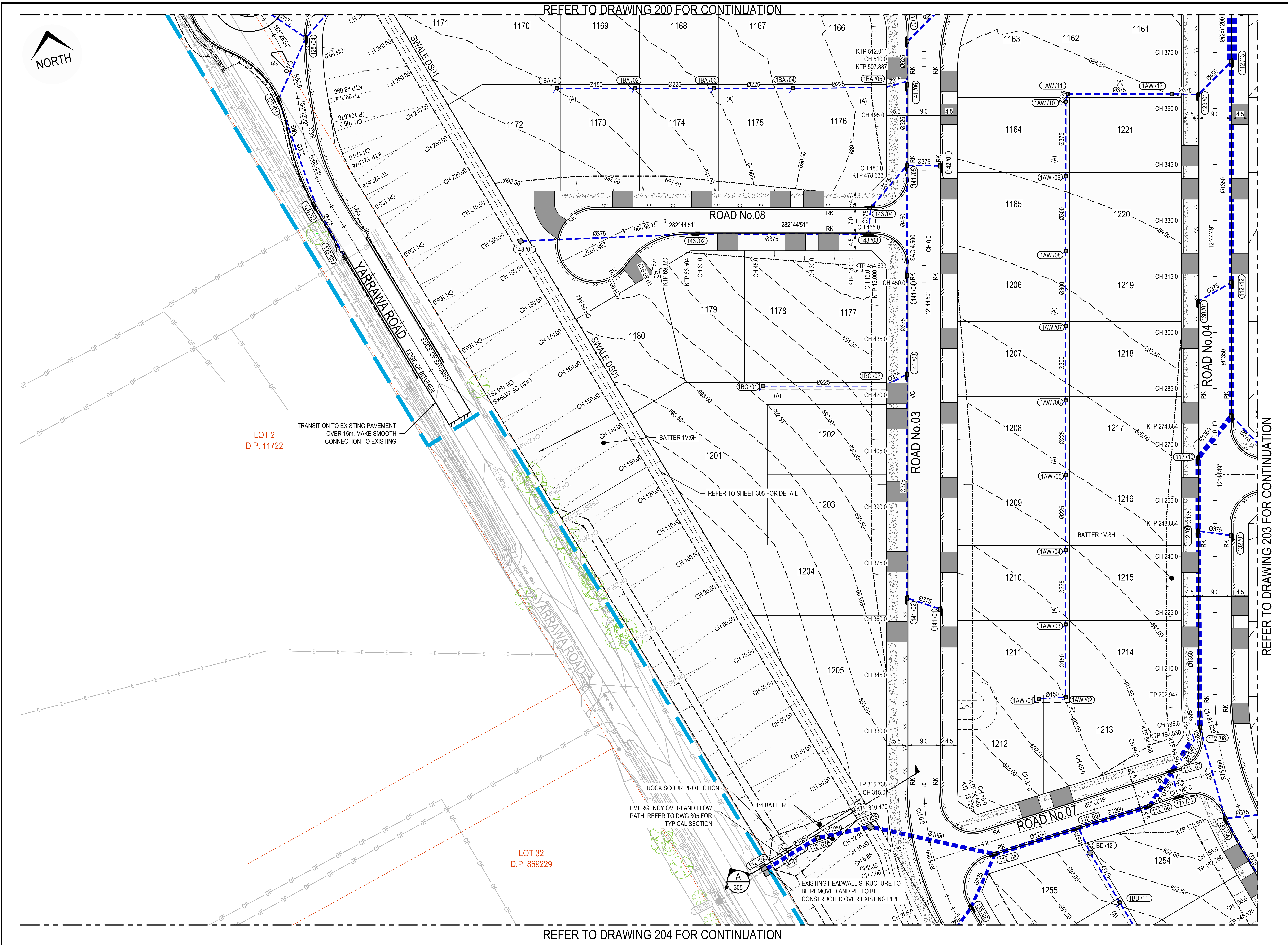
REFER TO DRAWING 200 FOR CONTINUATION
REFER TO DRAWING 203 FOR CONTINUATION
REFER TO DRAWING 204 FOR CONTINUATION
NORTH
YARRAWA ROAD
SWALE DS01
ROAD No.08
ROAD No.03
ROAD No.04
ROAD No.07
EDGE OF BITUMEN
LIMIT OF WORKS CH 194.791
LOT 2
D.P. 11722
LOT 32
D.P. 869229
TRANSITION TO EXISTING PAVEMENT OVER 15m, MAKE SMOOTH CONNECTION TO EXISTING
BATTER 1V:5H
BATTER 1V:8H
REFER TO SHEET 305 FOR DETAIL
ROCK SCOUR PROTECTION
EMERGENCY OVERLAND FLOW PATH. REFER TO DWG 305 FOR TYPICAL SECTION
1:4 BATTER
EXISTING HEADWALL STRUCTURE TO BE REMOVED AND PIT TO BE CONSTRUCTED OVER EXISTING PIPE.
A
305

LEGEND

DENOTES DRAINAGE EASEMENT TO COUNCIL'S MINIMUM WIDTH (2.0m)	(A)
PROPOSED RESIDENTIAL RETAINING WALL (TEXTURED CONCRETE SLEEPER WALL)	🟥
PROPOSED OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL)	🟩
PROPOSED SITE BOUNDARY RETAINING WALL (KEYSTONE WALL)	🟪
DENOTES INDICATIVE DRIVEWAY LOCATION (NOT PART OF THIS APPLICATION)	▨
DENOTES INDICATIVE DRIVEWAY LOCATION (VEHICULAR CROSSING ONLY PART OF THIS APPLICATION)	▨ VC

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1. ROOF WATER CONNECTION TO BE PROVIDED IN KERB TO COUNCIL STANDARD DETAIL.
2. PROVIDE STUB CONNECTION FOR INTERALLOTMENT PITS FOR FUTURE HOUSE CONNECTION.
3. REFER TO PLAN 305 FOR VC SETOUT FOR DRIVEWAYS

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C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ENGINEERING PLAN
SHEET 03 OF 06

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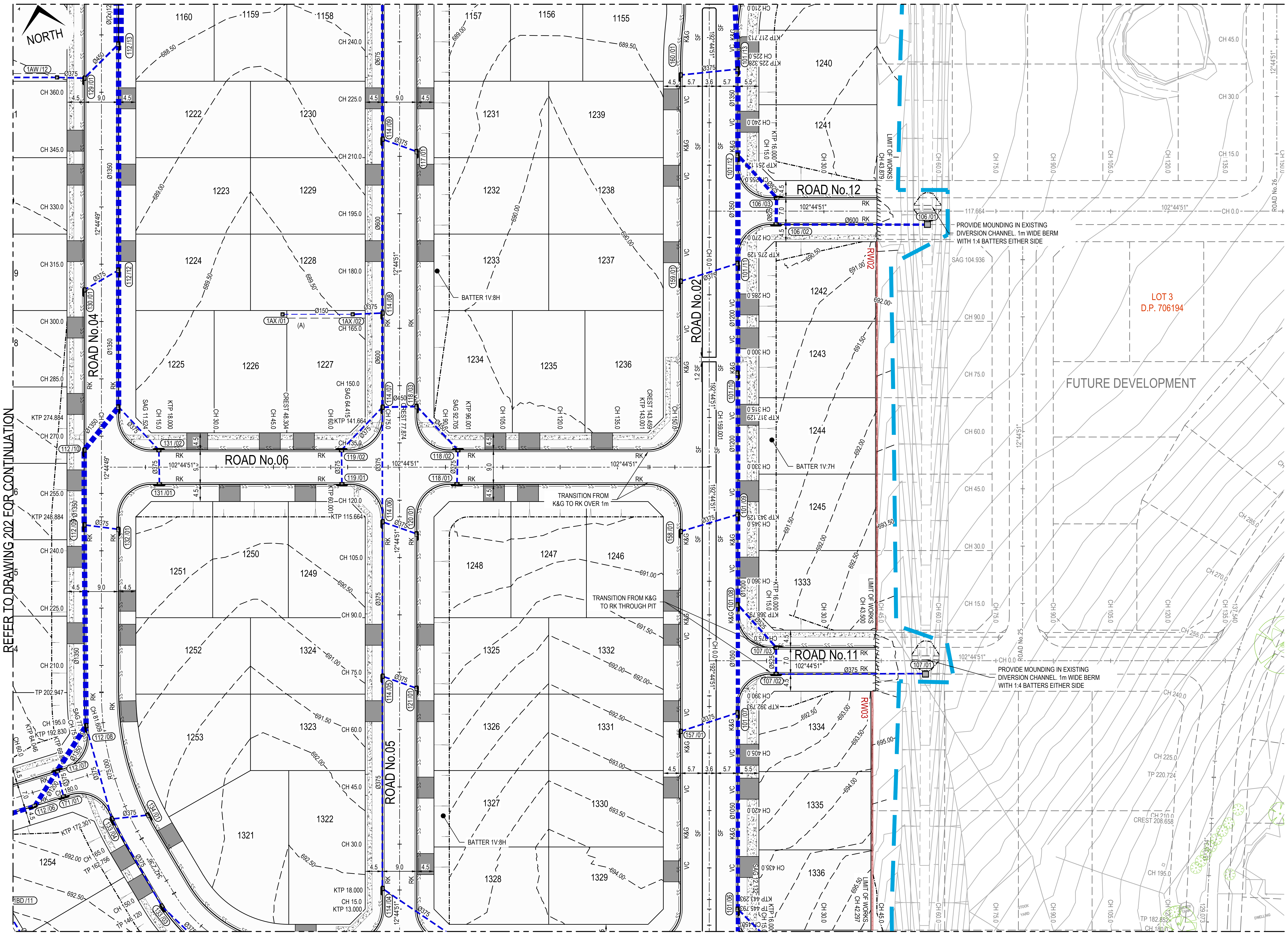
20-0071	02	CC	202	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-202.dwg



LEGEND

DENOTES DRAINAGE EASEMENT TO COUNCIL'S MINIMUM WIDTH (2.0m)	(A)
PROPOSED RESIDENTIAL RETAINING WALL (TEXTURED CONCRETE SLEEPER WALL)	🟥
PROPOSED OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL)	🟩
PROPOSED SITE BOUNDARY RETAINING WALL (KEYSTONE WALL)	🟪
DENOTES INDICATIVE DRIVEWAY LOCATION (NOT PART OF THIS APPLICATION)	▨
DENOTES INDICATIVE DRIVEWAY LOCATION (VEHICULAR CROSSING ONLY PART OF THIS APPLICATION)	▨ VC

NOTE:

1. ROOF WATER CONNECTION TO BE PROVIDED IN KERB TO COUNCIL STANDARD DETAIL.
2. PROVIDE STUB CONNECTION FOR INTERALLOTMENT PITS FOR FUTURE HOUSE CONNECTION.
3. REFER TO PLAN 305 FOR VC SETOUT FOR DRIVEWAYS

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

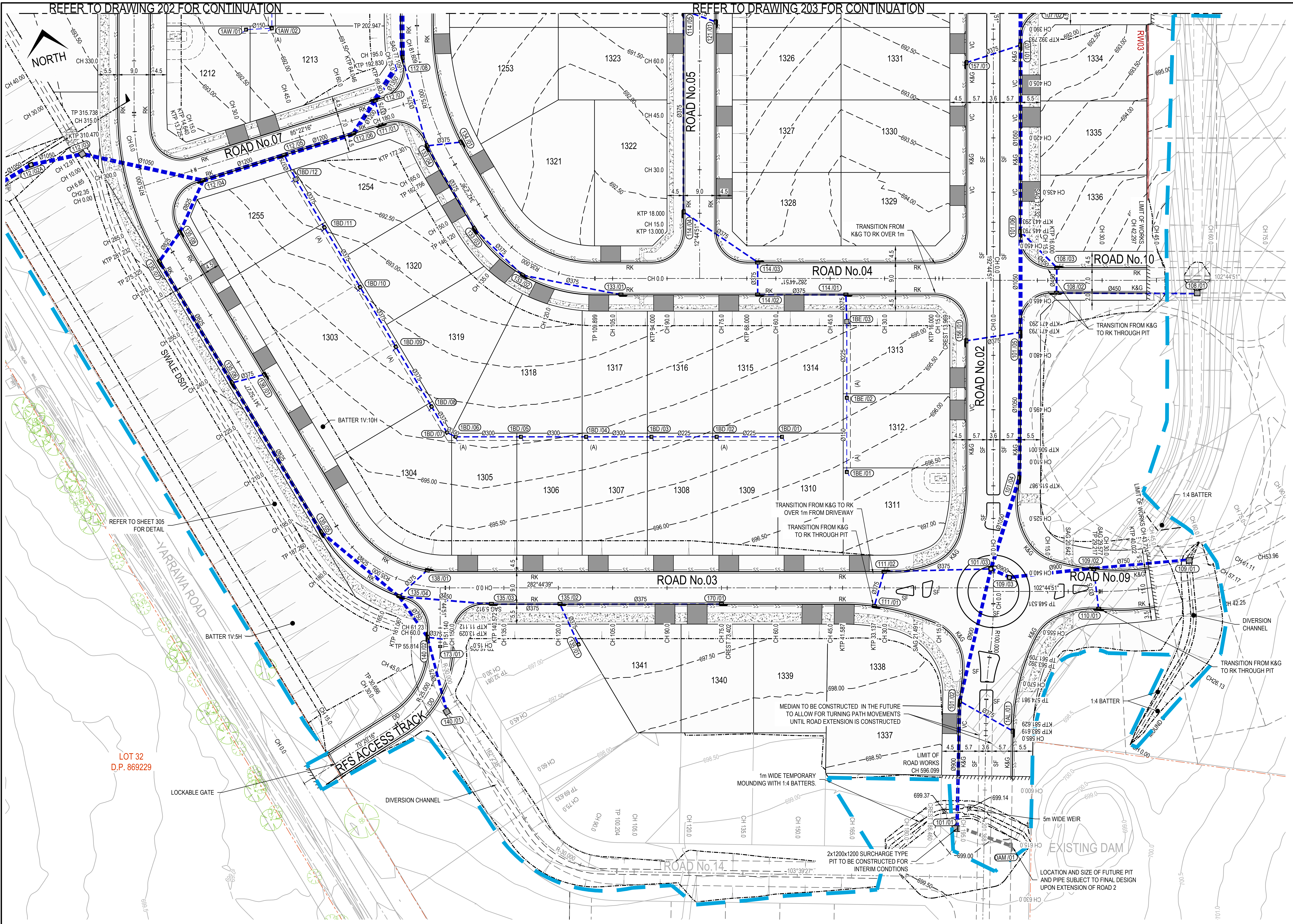
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ENGINEERING PLAN
SHEET 04 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	203	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-203.dwg


REFER TO DRAWING 202 FOR CONTINUATION
REFER TO DRAWING 203 FOR CONTINUATION
NORTH
ROAD No.07
ROAD No.05
ROAD No.04
ROAD No.10
ROAD No.02
ROAD No.03
ROAD No.09
ROAD No.14
RFS ACCESS TRACK
YARRAWA ROAD
SWALE DS01
LOT 32
D.P. 869229
1212
1213
1253
1323
1326
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1307
1308
1309
1310
1311
1341
1340
1339
1338
1337
BATTER 1V:10H
BATTER 1V:5H
REFER TO SHEET 305 FOR DETAIL
LOCKABLE GATE
DIVERSION CHANNEL
TRANSITION FROM K&G TO RK OVER 1m
TRANSITION FROM K&G TO RK THROUGH PIT
TRANSITION FROM K&G TO RK OVER 1m FROM DRIVEWAY
TRANSITION FROM K&G TO RK THROUGH PIT
MEDIAN TO BE CONSTRUCTED IN THE FUTURE TO ALLOW FOR TURNING PATH MOVEMENTS UNTIL ROAD EXTENSION IS CONSTRUCTED
LIMIT OF ROAD WORKS CH 596.099
1m WIDE TEMPORARY MOUNDING WITH 1:4 BATTERS.
2x1200x1200 SURCHARGE TYPE PIT TO BE CONSTRUCTED FOR INTERIM CONDTIONS
5m WIDE WEIR
EXISTING DAM
LOCATION AND SIZE OF FUTURE PIT AND PIPE SUBJECT TO FINAL DESIGN UPON EXTENSION OF ROAD 2
1:4 BATTER
1:4 BATTER
DIVERSION CHANNEL
TRANSITION FROM K&G TO RK THROUGH PIT
LIMIT OF WORKS CH 42.297
RW03

LEGEND

DENOTES DRAINAGE EASEMENT TO COUNCIL'S MINIMUM WIDTH (2.0m)	(A)
PROPOSED RESIDENTIAL RETAINING WALL (TEXTURED CONCRETE SLEEPER WALL)	🟥
PROPOSED OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL)	🟩
PROPOSED SITE BOUNDARY RETAINING WALL (KEYSTONE WALL)	🟪
DENOTES INDICATIVE DRIVEWAY LOCATION (NOT PART OF THIS APPLICATION)	▨
DENOTES INDICATIVE DRIVEWAY LOCATION (VEHICULAR CROSSING ONLY PART OF THIS APPLICATION)	▨ VC

NOTE:

1. ROOF WATER CONNECTION TO BE PROVIDED IN KERB TO COUNCIL STANDARD DETAIL.
2. PROVIDE STUB CONNECTION FOR INTERALLOTMENT PITS FOR FUTURE HOUSE CONNECTION.
3. REFER TO PLAN 305 FOR VC SETOUT FOR DRIVEWAYS

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

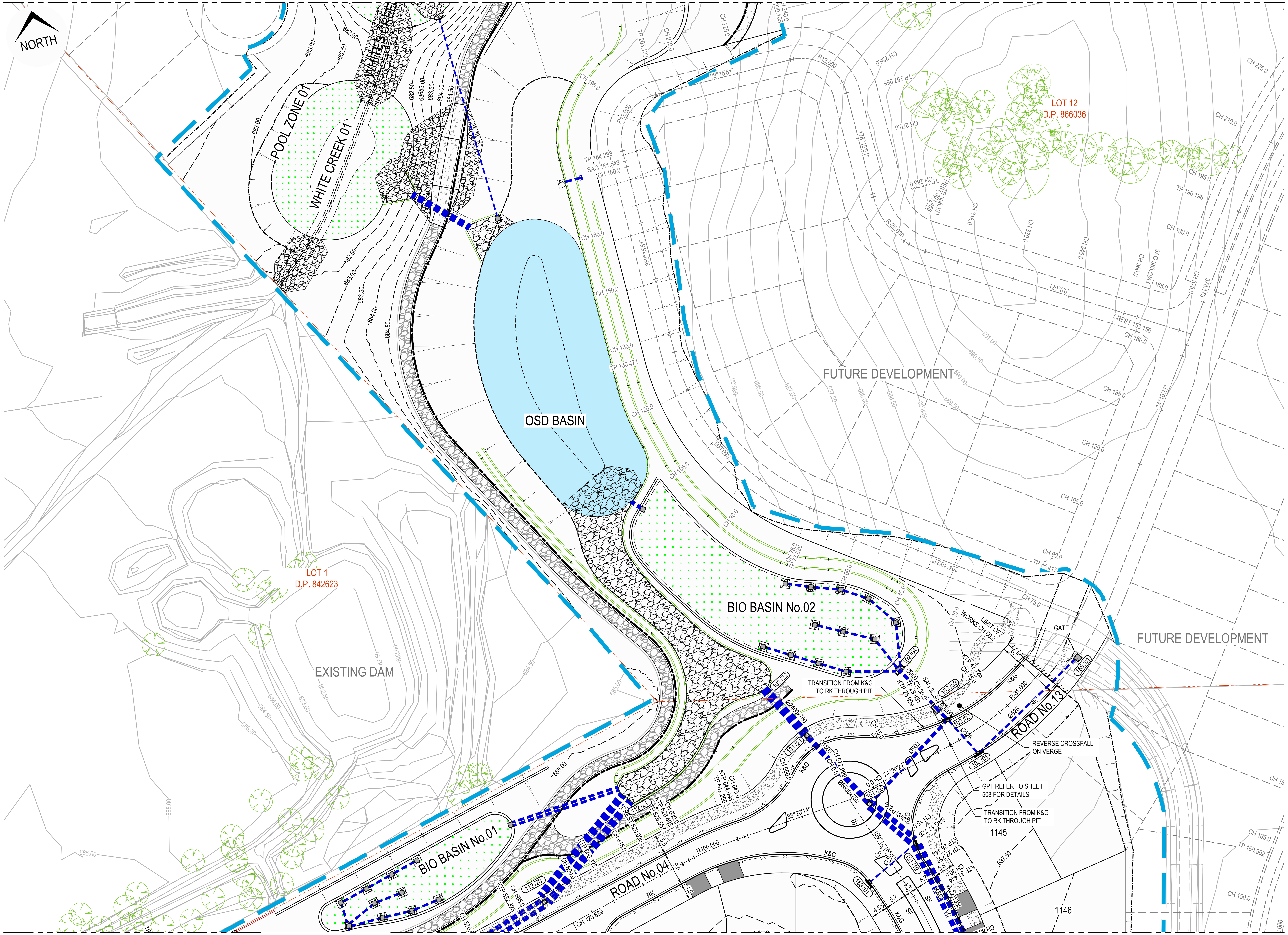
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ENGINEERING PLAN
SHEET 05 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	204	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN

REFER TO DRAWING 206 FOR CONTINUATION



REFER TO DRAWING 200 FOR CONTINUATION

REFER TO DRAWING 201 FOR CONTINUATION

LEGEND

DENOTES DRAINAGE EASEMENT TO COUNCIL'S MINIMUM WIDTH (2.0m)	(A)
PROPOSED RESIDENTIAL RETAINING WALL (TEXTURED CONCRETE SLEEPER WALL)	🟥
PROPOSED OPEN SPACE RETAINING WALL (SANDSTONE BOULDER WALL)	🟩
PROPOSED SITE BOUNDARY RETAINING WALL (KEYSTONE WALL)	🟪
DENOTES INDICATIVE DRIVEWAY LOCATION (NOT PART OF THIS APPLICATION)	▨
DENOTES INDICATIVE DRIVEWAY LOCATION (VEHICULAR CROSSING ONLY PART OF THIS APPLICATION)	▨ VC

NOTE:

1. ROOF WATER CONNECTION TO BE PROVIDED IN KERB TO COUNCIL STANDARD DETAIL.
2. PROVIDE STUB CONNECTION FOR INTERALLOTMENT PITS FOR FUTURE HOUSE CONNECTION.
3. REFER TO PLAN 305 FOR VC SETOUT FOR DRIVEWAYS

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:D:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-205.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1)
SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

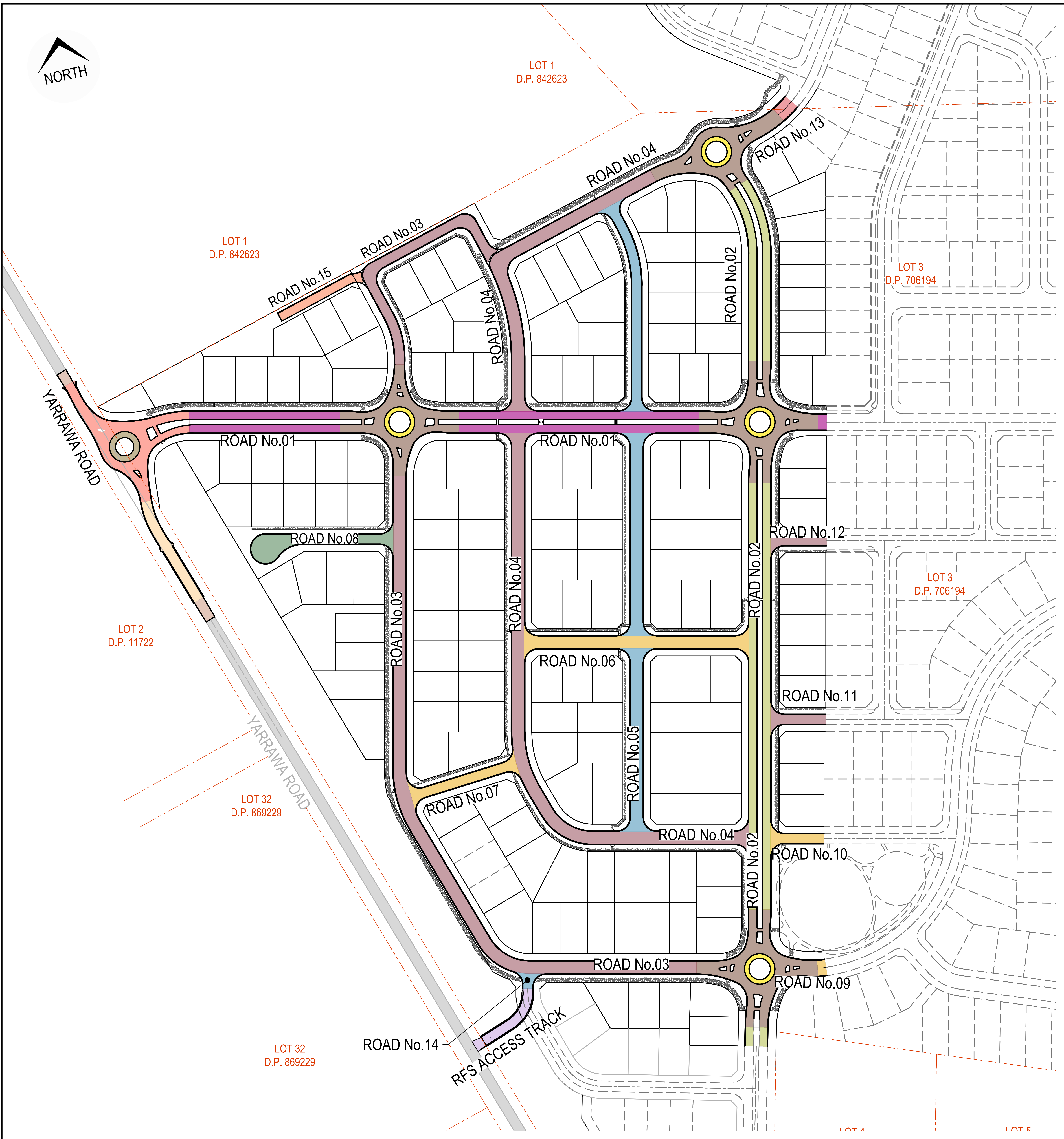
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ENGINEERING PLAN
SHEET 06 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	205	C



LEGEND

EXISTING PAVEMENT	■
PROPOSED CONCRETE FOOTPATH (CONSTRUCTION DEFERRED) TO COUNCIL SPECIFICATIONS. REFER TO TYPICAL ROAD SECTIONS FOR WIDTH	▨

REFER STAGE 1 GEOTECHNICAL INVESTIGATION UNDERTAKEN BY CONSTRUCTION SCIENCE REF 10791E - P - 363 - B.

PAVEMENT TYPE 1 - $3x10^5$
■ ROADS No. 03, 04, 11, 12
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
310mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 3%

PAVEMENT TYPE 2 - $3x10^5$
■ ROAD No.06, 07, 09 & 10
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
250mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 4%

PAVEMENT TYPE 3 - $3x10^5$
■ ROADS No.05 & 14
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
320mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 3%

PAVEMENT TYPE 4 - $5x10^4$
■ ROAD No.08
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
200mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 4%

PAVEMENT TYPE 5 - $1.2x10^6$
■ ROAD No.13
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
380mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 3%

B

PAVEMENT TYPE 6 - $1.2x10^6$
■ ROAD No.02
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
310mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 4%

PAVEMENT TYPE 7 - $5x10^4$
■ ROAD No.15
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
230mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 3%

PAVEMENT TYPE 8 - $2.1x10^6$
■ ROUNDABOUT INTERSECTIONS
60mm ASPHALTIC CONCRETE STYRENE BUTADIENE (SBS) POLYMER MODIFIED AC (INCLUDING TRANSITIONS)
150mm DGB20 BASE COURSE
400mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 3%

PAVEMENT TYPE 9 - $4x10^6$
■ YARRAWA ROAD ROUNDABOUT
60mm ASPHALTIC CONCRETE STYRENE BUTADIENE (SBS) POLYMER MODIFIED AC (INCLUDING TRANSITIONS)
150mm DGB20 BASE COURSE
440mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 4%

PAVEMENT TYPE 10 - $2.1x10^6$
■ YARRAWA ROAD
40mm ASPHALTIC CONCRETE (AC14)
110mm DGB20 BASE COURSE
330mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 4%

PAVEMENT TYPE 11 - $6x10^6$
■ ROUNDABOUT ANULUS
205mm LEAN MIXED CONCRETE
150mm DGB20 BASE COURSE
SUBGRADE MATERIAL CBR ≥ 3%

PAVEMENT TYPE 12 - $6x10^6$
■ YARRAWA ROAD ROUNDABOUT ANULUS
210mm LEAN MIXED CONCRETE
150mm DGB20 BASE COURSE
SUBGRADE MATERIAL CBR ≥ 4%

B

PAVEMENT TYPE 13 - $1x10^4$
■ RFS ACCESS TRACK
40mm ASPHALTIC CONCRETE (AC14)
100mm DGB20 BASE COURSE
160mm CRUSHED SANDSTONE SUB-BASE COURSE

PAVEMENT TYPE 14
■ MILL AND RESHEET

PAVEMENT TYPE 15 - $2.1x10^6$
■ ROAD No.01
40mm ASPHALTIC CONCRETE (AC14)
150mm DGB20 BASE COURSE
400mm CRUSHED SANDSTONE SUB-BASE COURSE
SUBGRADE MATERIAL CBR ≥ 3%

B

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-210.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 15 30 45 60 75 90 105 120 135 150
SCALE 1:1500 (A1) SCALE 1:3000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
PAVEMENT PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	210	B

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF/FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1)
SCALE 1:2000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

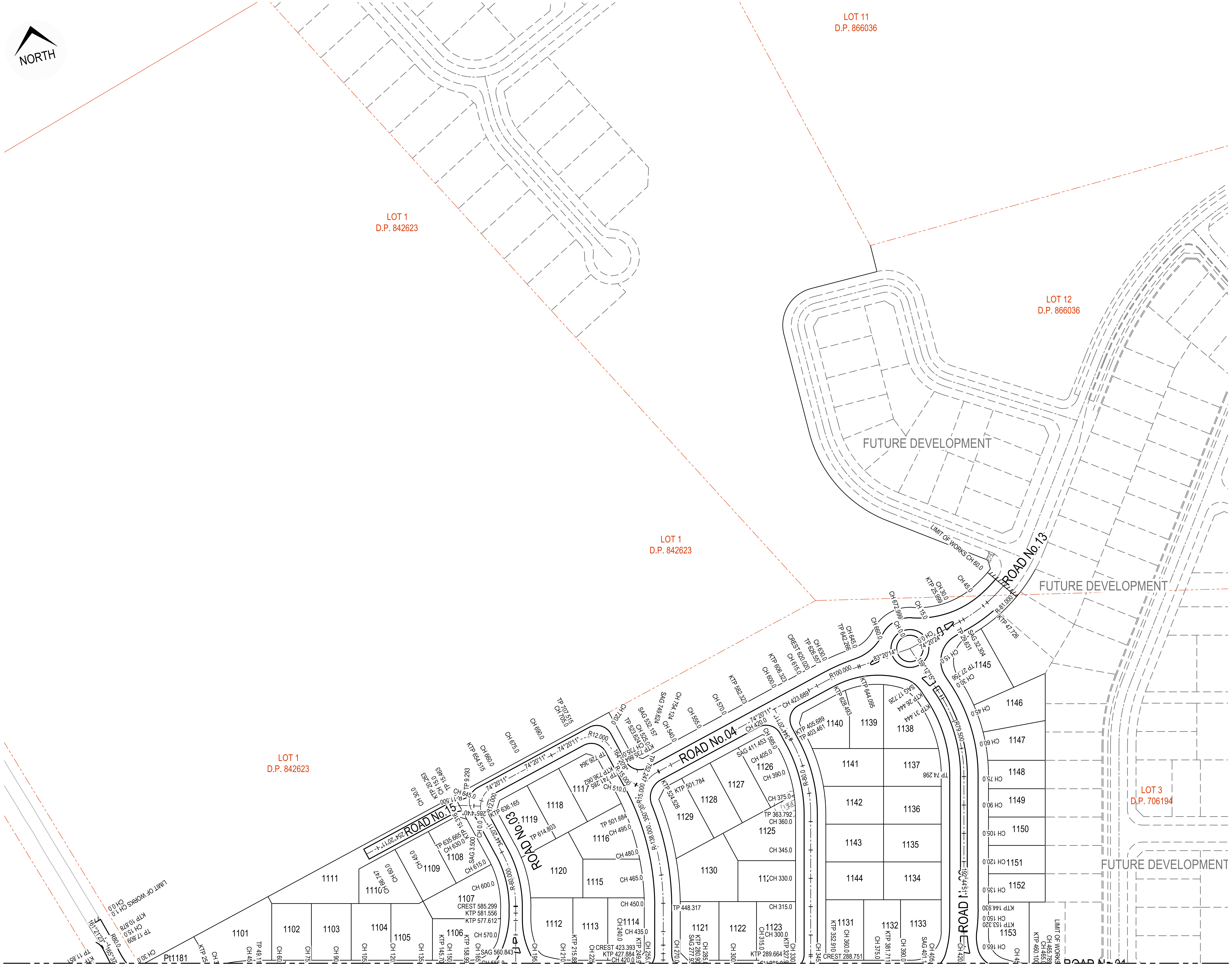
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
CONTROL LINE
SETOUT PLAN
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	220	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Sdata\ORION-SYN



REFER TO DRAWING CC-220 FOR CONTINUATION

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF/FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1)
SCALE 1:2000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
CONTROL LINE
SETOUT PLAN
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	221	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-221.dwg

SETOUT TABLE ROAD No 01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258693.21	6171791.66	71°28'54.34"		
6	258698.9	6171793.57	71°28'54.34"		
27.56	258719.86	6171800.59		79	43.11
49.11	258741.42	6171795.71	102°44'51.02"		
728.08	259403.66	6171645.89	102°44'51.02"		
739.99	259415.37	6171643.24		75	23.826
751.91	259425.68	6171637.06	120°56'58.53"		
766.77	259438.42	6171629.42	120°56'58.53"		

SETOUT TABLE ROAD No 02

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259116.42	6171893.27	159°12'15.11"		
27.76	259126.27	6171867.32	159°12'15.11"		
51.03	259134.78	6171844.92		79.5	46.543
74.3	259129.49	6171821.55	192°44'51.02"		
548.53	259024.85	6171359.01	192°44'51.02"		
555.12	259023.39	6171352.57		100	13.178
561.71	259021.1	6171346.38	200°17'52.04"		
563.39	259020.52	6171344.8	200°17'52.04"		
569.19	259018.51	6171339.36		-100	11.589
574.98	259017.14	6171333.73	193°39'27.00"		
722.96	258982.2	6171189.93	193°39'27.00"		
745.1	258976.72	6171167.38		60	44.288
767.25	258957.49	6171154.39	235°56'57.19"		
812.73	258919.8	6171128.92	235°56'57.19"		

SETOUT TABLE ROAD No 03

CHAINAGE	EASTING	NORTHING	BEARING
0	259025.82	6171363.3	282°44'39.17"
151.14	258878.4	6171396.64	282°44'39.17"
169.2	258859.04	6171401.02	
187.26	258852.86	6171419.89	341°52'27.38"
275.33	258825.46	6171503.59	341°52'27.38"
295.53	258819.02	6171523.27	
315.74	258823.59	6171543.47	12°44'50.48"
585.05	258883.02	6171806.14	12°44'50.48"
599.93	258886.37	6171820.96	
614.8	258882.27	6171835.58	344°20'10.74"
635.67	258876.63	6171855.67	344°20'10.74"
645.09	258873.39	6171867.22	
654.51	258884.95	6171870.46	74°20'10.74"
707.51	258935.98	6171884.77	74°20'10.74"
716.94	258947.53	6171888.01	
726.36	258950.77	6171876.46	164°20'08.13"
741.29	258954.8	6171862.09	164°20'08.13"
746.77	258956.35	6171856.57	
752.25	258961.19	6171853.49	122°27'47.18"
754.12	258962.78	6171852.48	122°27'47.18"

SETOUT TABLE ROAD No 04

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259044.65	6171446.53	282°44'51.02"		
109.9	258937.46	6171470.78	282°44'51.02"		
128.01	258918.03	6171475.18		35	36.222
146.12	258911.89	6171494.13	342°02'36.42"		
162.76	258906.76	6171509.95	342°02'36.42"		
182.85	258900.41	6171529.54		75	40.191
202.95	258904.95	6171549.63	12°44'49.09"		
448.32	258959.09	6171788.95	12°44'49.09"		
475	258965.06	6171815.3		-138	53.366
501.68	258960.64	6171841.96	350°35'23.69"		
501.7	258960.64	6171841.98	350°35'23.69"		
512.66	258958.44	6171855.24		15	21.925
523.62	258971.38	6171858.87	74°20'10.76"		
626.56	259070.49	6171886.66	74°20'10.76"		
634.41	259078.07	6171888.79		100	15.709
642.27	259085.89	6171889.7	83°20'13.86"		
673	259116.42	6171893.27	83°20'13.86"		

SETOUT TABLE ROAD No 05

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258965.65	6171464.41	12°44'51.02"		
363.79	259045.92	6171819.23	12°44'51.02"		
383.63	259050.39	6171838.98		-80	39.67
403.46	259044.92	6171858.48	344°20'10.74"		
423.69	259039.46	6171877.96	344°20'10.74"		

SETOUT TABLE ROAD No 06

CHAINAGE	EASTING	NORTHING	BEARING
0	258917.96	6171607.11	102°44'51.02"
159	259073.04	6171572.03	102°44'51.02"

SETOUT TABLE ROAD No 07

CHAINAGE	EASTING	NORTHING	BEARING
0	258821.84	6171523.18	85°22'16.36"
81.61	258903.18	6171529.77	85°22'16.36"

SETOUT TABLE ROAD No 08

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258856.89	6171690.64	282°44'51.02"		
69.32	258789.27	6171705.94	282°44'51.02"		
75.12	258783.52	6171707.24		-25	11.591
80.91	258777.79	6171705.83	256°10'56.84"		
99.54	258759.69	6171701.38	256°10'56.84"		

SETOUT TABLE ROAD No 09

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259025.6	6171362.32	102°44'51.02"		
29.22	259054.1	6171355.88	102°44'51.02"		
106.03	259147.83	6171334.67		-101	153.635
182.85	259173.67	6171427.24	15°35'34.12"		
220.72	259183.85	6171463.72	15°35'34.12"		
292.66	259205.94	6171542.89		119	143.864
364.59	259287.8	6171550.25	84°51'35.57"		
392.18	259315.29	6171552.72	84°51'35.57"		
507.12	259454.21	6171565.22		-161	229.874
622.06	259461.64	6171704.5	3°03'12.36"		
680.9	259464.77	6171763.26	3°03'12.36"		

SETOUT TABLE ROAD No 10

CHAINAGE	EASTING	NORTHING	BEARING
0	259044.54	6171446.04	102°44'51.02"
129.07	259170.43	6171417.56	102°44'51.02"

SETOUT TABLE ROAD No 11

CHAINAGE	EASTING	NORTHING	BEARING
0	259061.86	6171522.61	102°44'51.02"
137.54	259196.01	6171492.26	102°44'51.02"

SETOUT TABLE ROAD No 12

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259087.82	6171637.37	102°44'51.02"		
198.6	259281.52	6171593.55	102°44'51.02"		
211.18	259295.73	6171590.34		20	25.172
223.77	259297.03	6171575.84	174°51'35.57"		
248.42	259299.24	6171551.28	174°51'35.57"		

SETOUT TABLE ROAD No 13

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259116.42	6171893.27	74°20'24.27"		
29.63	259144.95	6171901.26	74°20'24.27"		
58.02	259173.46	6171909.26		-81	56.786
86.42	259190.1	6171933.76	34°10'20.76"		
138.13	259219.15	6171976.55	34°10'20.76"		
141.98	259221.31	6171979.73		-200	7.694
145.83	259223.35	6171983	31°58'05.41"		
164.13	259233.04	6171998.52	31°58'05.41"		
167.98	259235.07	6172001.79		200	7.695
171.83	259237.23	6172004.97	34°10'20.98"		
190.22	259247.56	6172020.19	34°10'20.98"		
275.59	259299.47	6172096.64		180	170.75
360.97	259391.85	6172099.02	88°31'26.09"		
412.63	259443.49	6172100.35	88°31'26.09"		

SETOUT TABLE ROAD No.14

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258877.01	6171396.99	192°44'51.02"		
16.01	258873.48	6171381.38	192°44'51.02"		
24.04	258871.66	6171373.34		-30	16.076
32.08	258874.2	6171365.51	162°02'38.38"		
69.63	258885.78	6171329.79	162°02'38.38"		
84.92	258890.95	6171313.84		-30	30.571
100.2	258907.24	6171309.88	103°39'27.00"		
201.37	259005.54	6171286	103°39'27.00"		

SETOUT TABLE ROAD No 15

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258876.6	6171862.03	285°04'39.65"		
9.29	258867.63	6171864.45	285°04'39.65"		
12.38	258864.58	6171865.27		-11.5	6.17
15.46	258861.53	6171864.42	254°20'10.75"		
66.75	258812.15	6171850.57	254°20'10.75"		

SETOUT TABLE RFS ACCESS TRACK

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258828.52	6171352.62	70°20'16.20"		
30.69	258857.42	6171362.94	70°20'16.20"		
43.25	258870.36	6171367.57		-25	25.129
55.81	258873.39	6171380.97	12°44'51.02"		
61.23	258874.59	6171386.25	12°44'51.02"		

SETOUT TABLE DS01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258811.82	6171523.19	359°02'40.38"		
2.35	258811.78	6171525.55	359°02'40.38"		
4.6	258811.75	6171527.81		-15	4.496
6.85	258811.04	6171529.96	341°52'11.84"		
12.91	258809.16	6171535.72			
275.23	258727.55	6171785.02	341°52'27.87"		

SETOUT TABLE YARRAWA ROAD

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258663.76	6171847.75	161°21'22.81"		
11.85	258667.55	6171836.53	161°21'22.81"		
14.83	258668.51	6171833.7		80	5.958
17.81	258669.25	6171830.81	165°37'24.68"		
27.06	258671.54	6171821.86	165°37'24.68"		
43.22	258675.7	6171805.63		-50	32.328
59.38	258688.8	6171795.18	128°34'44.11"		
65.03	258693.21	6171791.66			
79.87	258697.92	6171777.59	161°28'54.34"		
89.79	258701.12	6171768.06		50	19.831
99.7	258700.38	6171758.04	184°12'21.58"		
104.88	258700	6171752.88	184°12'21.58"		
116.73	258699.12	6171740.91		-60	23.703
128.58	258702.92	6171729.51	161°34'16.31"		
300	258757.11	6171566.88	161°34'16.31"		

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF/FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD SETOUT
TABLES

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	222	A

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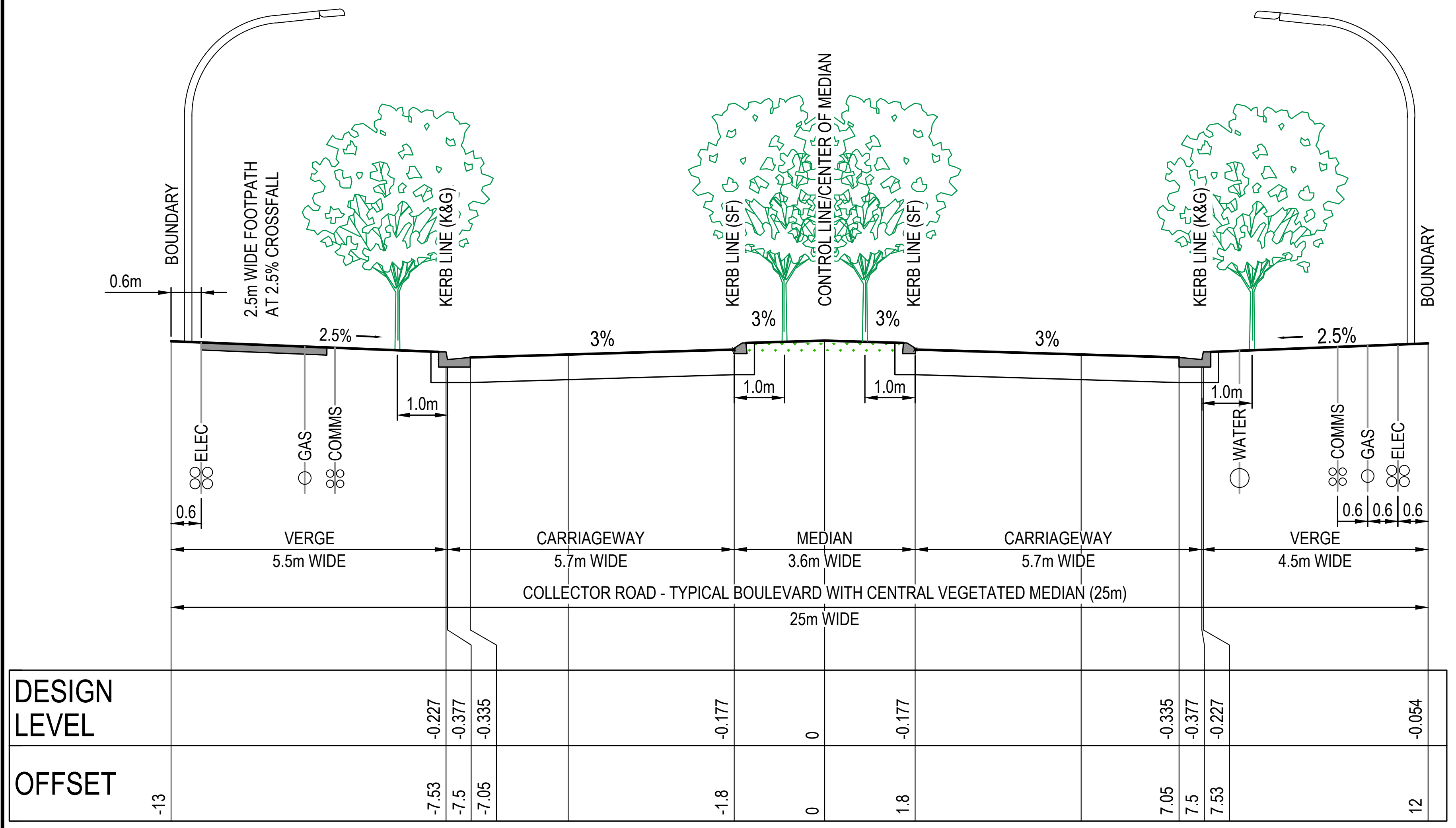
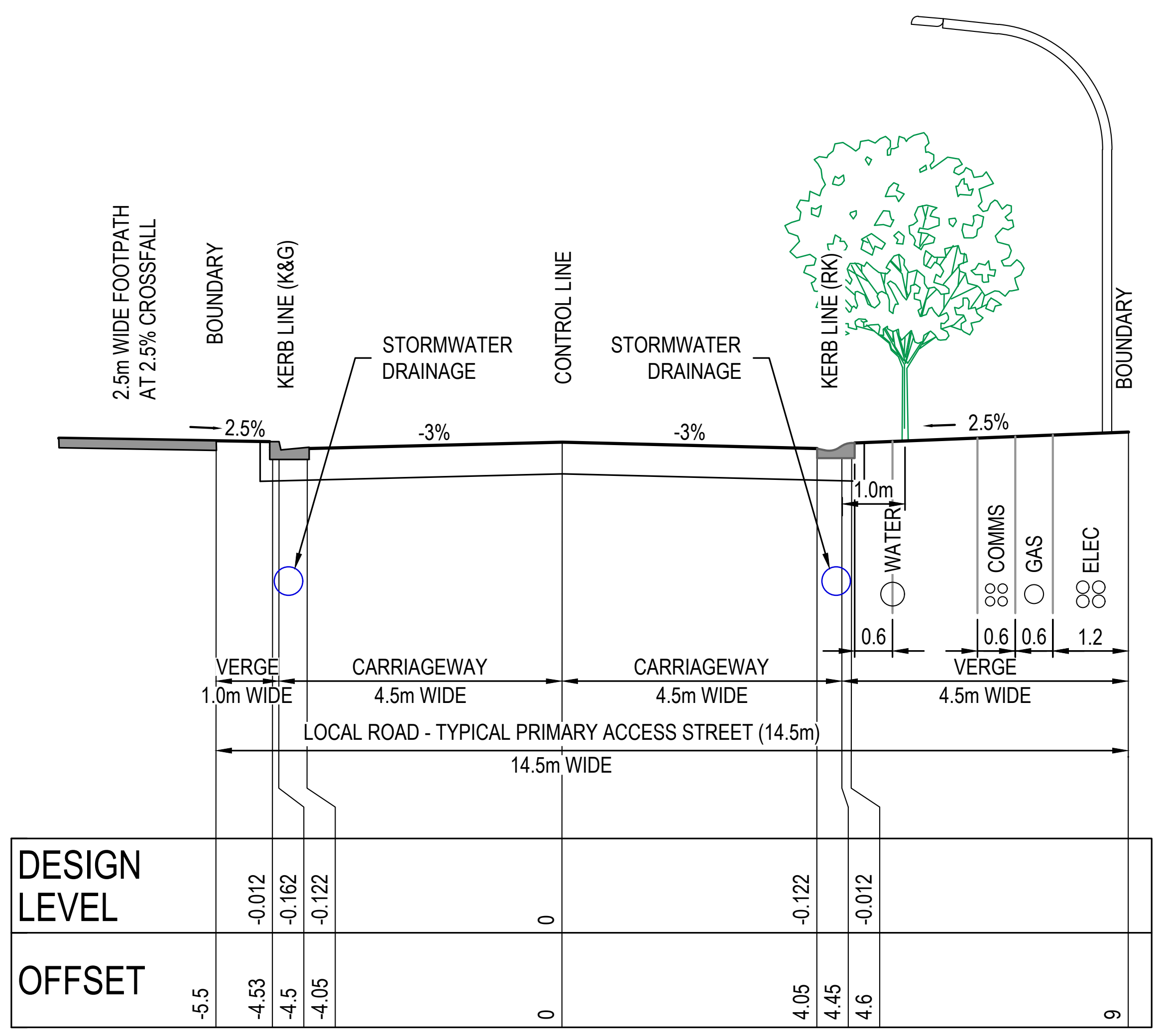
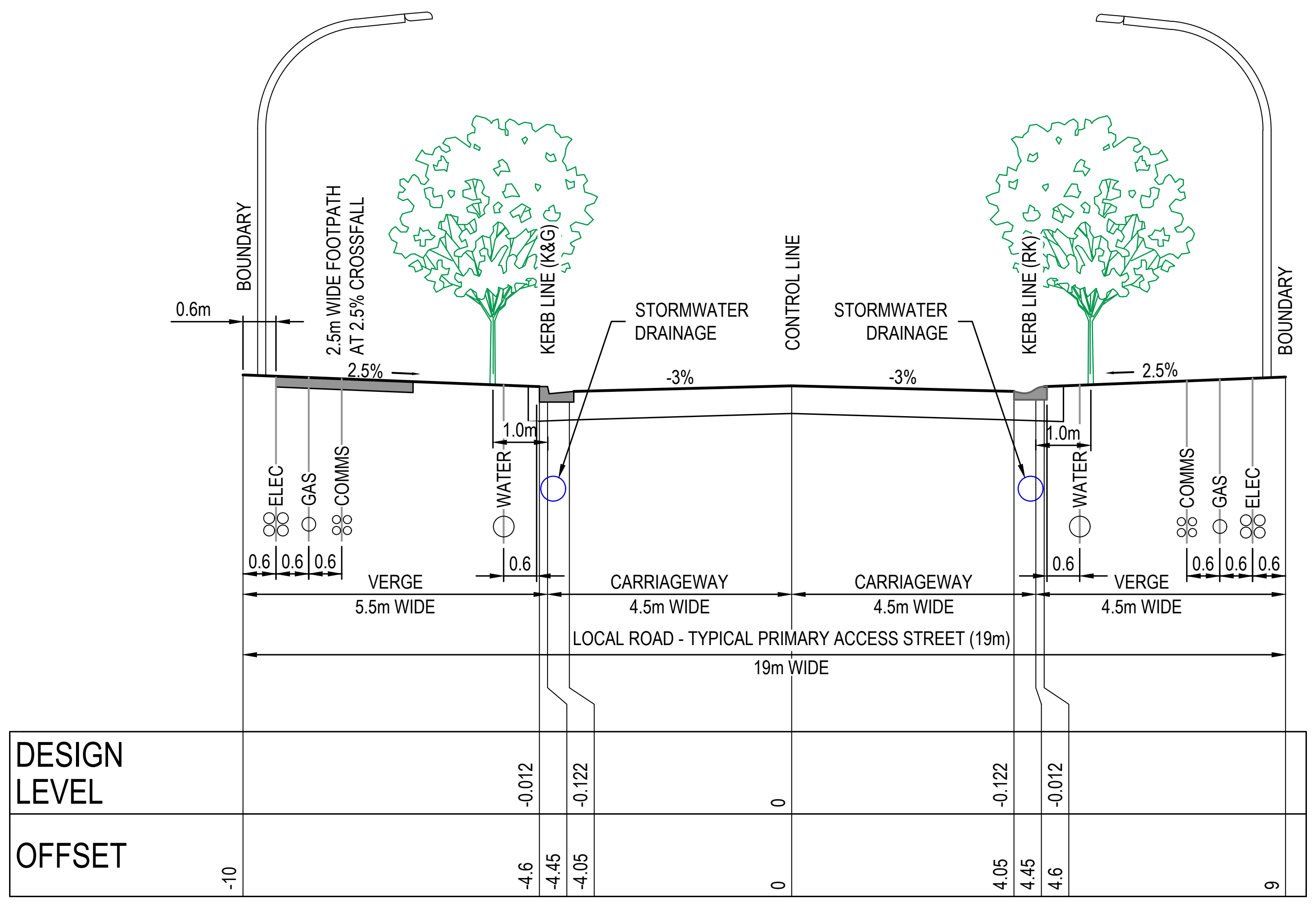


TYPICAL CROSS SECTION - BOULEVARD B1
ROAD No.01 (CH0 - CH421.91) & ROAD No.02
SCALE 1:100

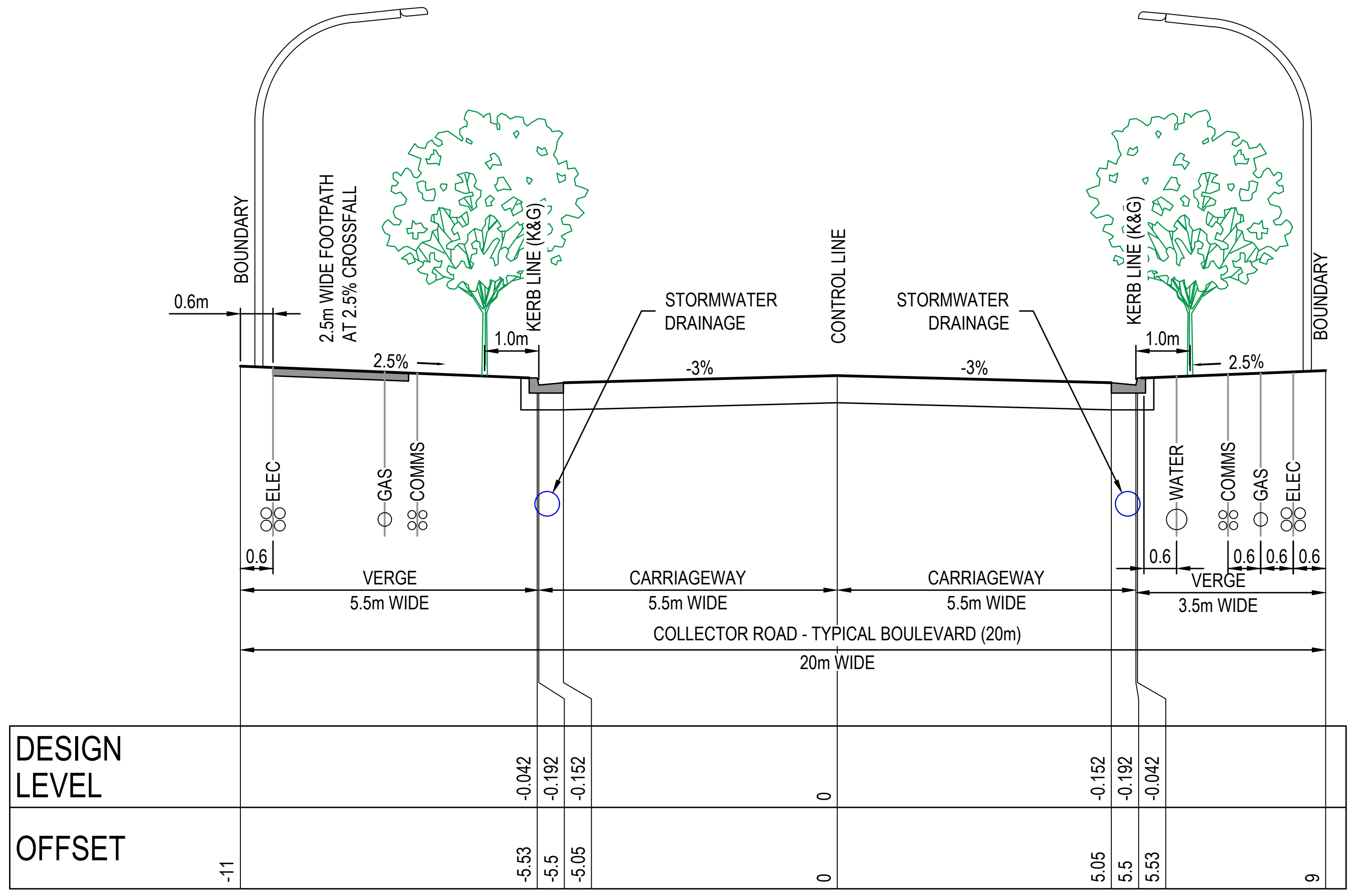


TYPICAL CROSS SECTION - LOCAL L1a (VARIANT)
ROAD No.03 (CH 157.572 - CH 295.311)
SCALE 1:100

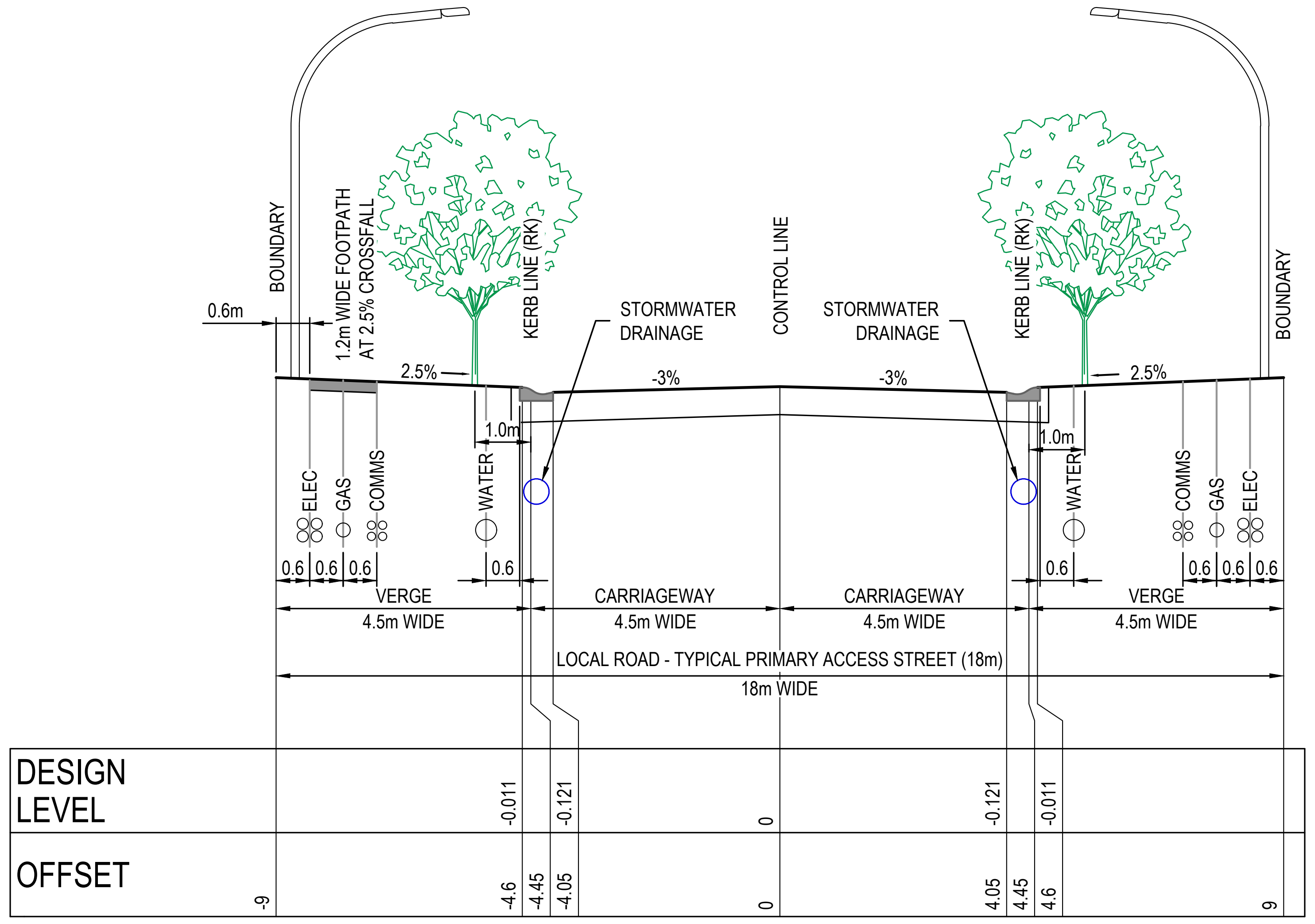


TYPICAL CROSS SECTION - LOCAL L1b (VARIANT)
ROAD No.04 (CH 523.264 - END)
SCALE 1:100

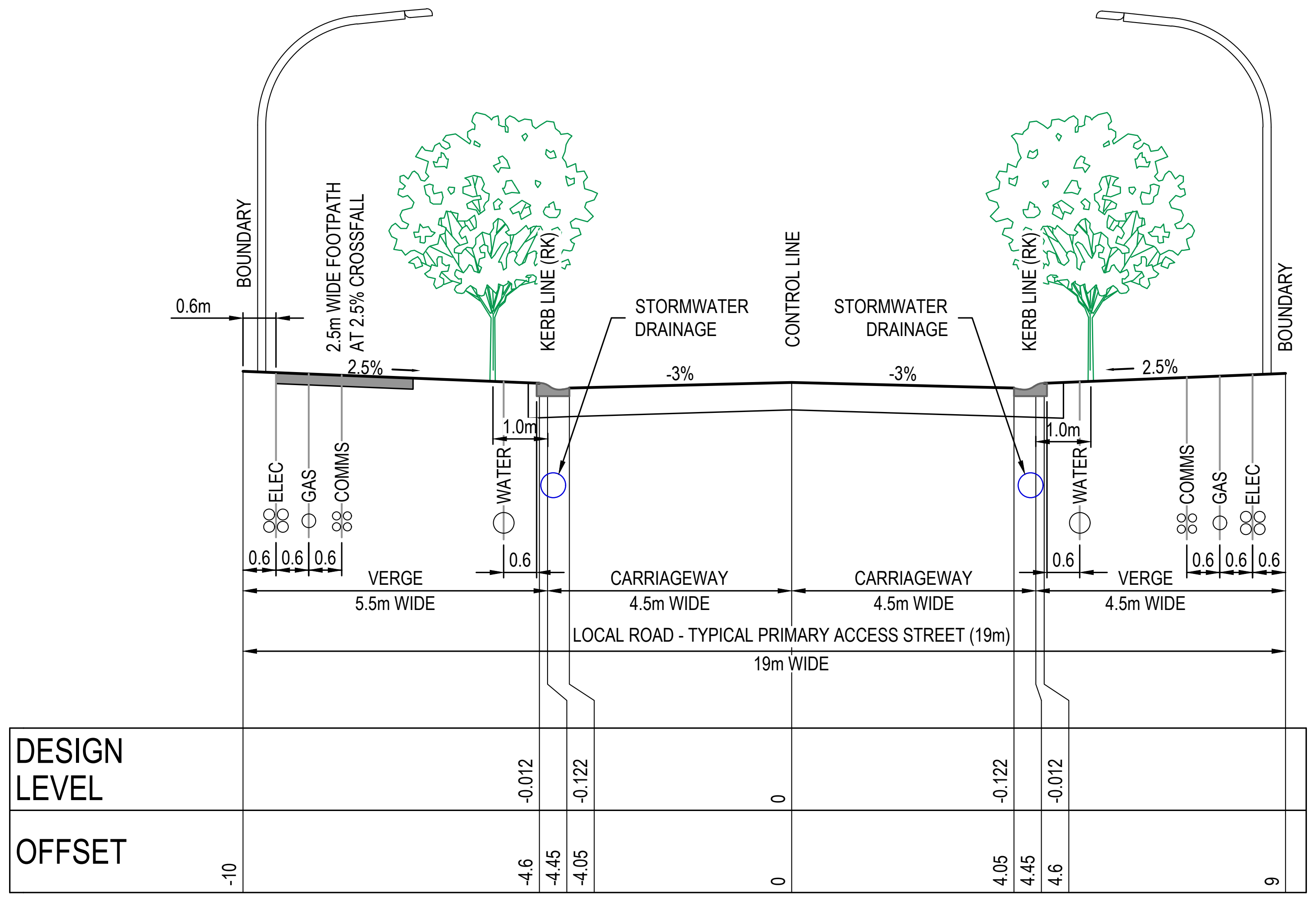
B



TYPICAL CROSS SECTION - BOULEVARD B3a (VARIANT)
ROAD No.01 (CH 421.91- CH 465.77), ROAD No.09 & No.13
SCALE 1:100



TYPICAL CROSS SECTION - LOCAL L1
ROAD No.06, ROAD No.04 (CH 0 - CH 406.884)
& ROAD No.05 (CH 0 - CH 273.664)
SCALE 1:100



TYPICAL CROSS SECTION - LOCAL L1b (VARIANT)
ROAD No.03 (CH 0 - CH 152.572 & CH 295.311 - CH 543.633)
& ROAD No.04 (CH 406.884 - 510)
SCALE 1:100

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM/CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

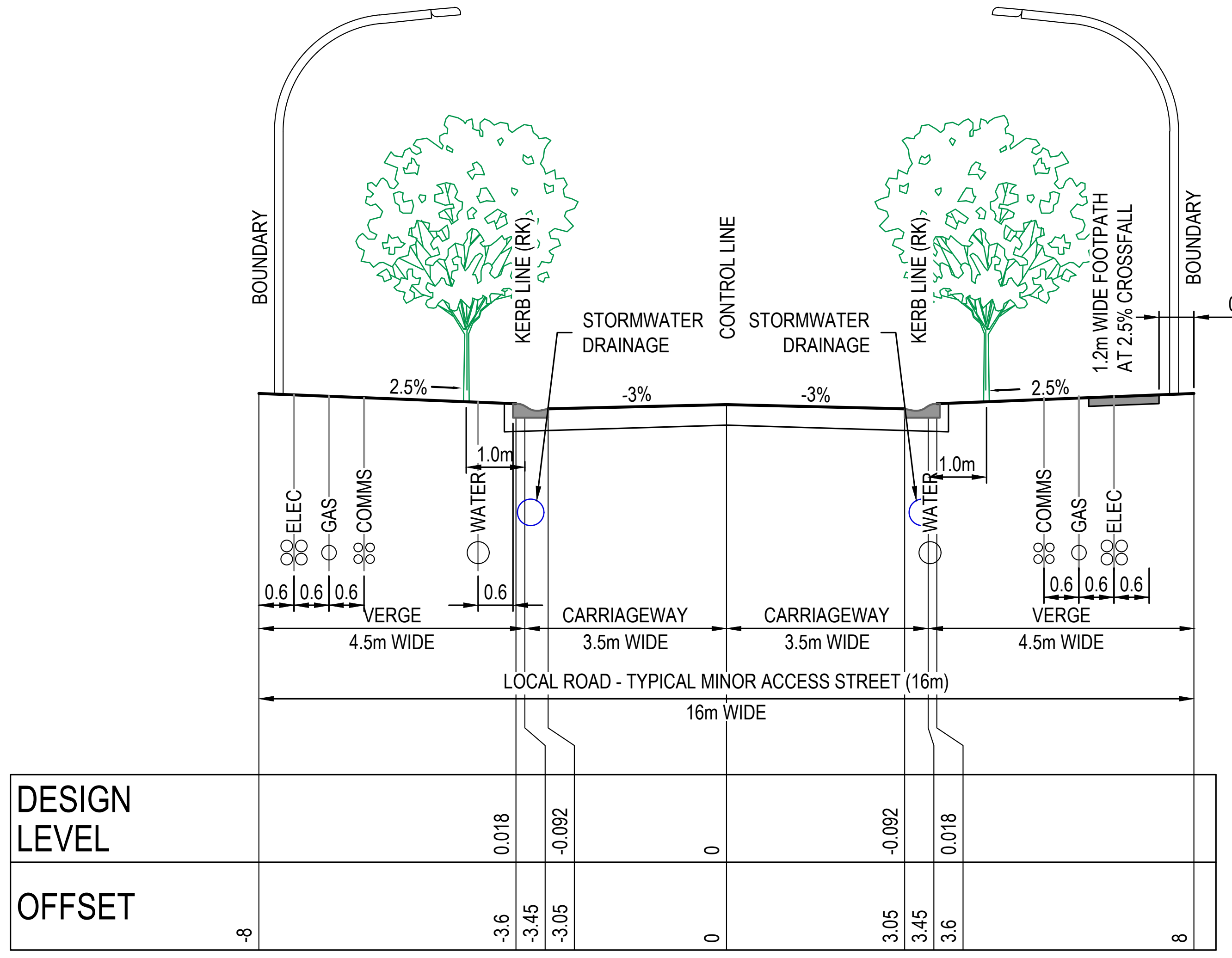
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

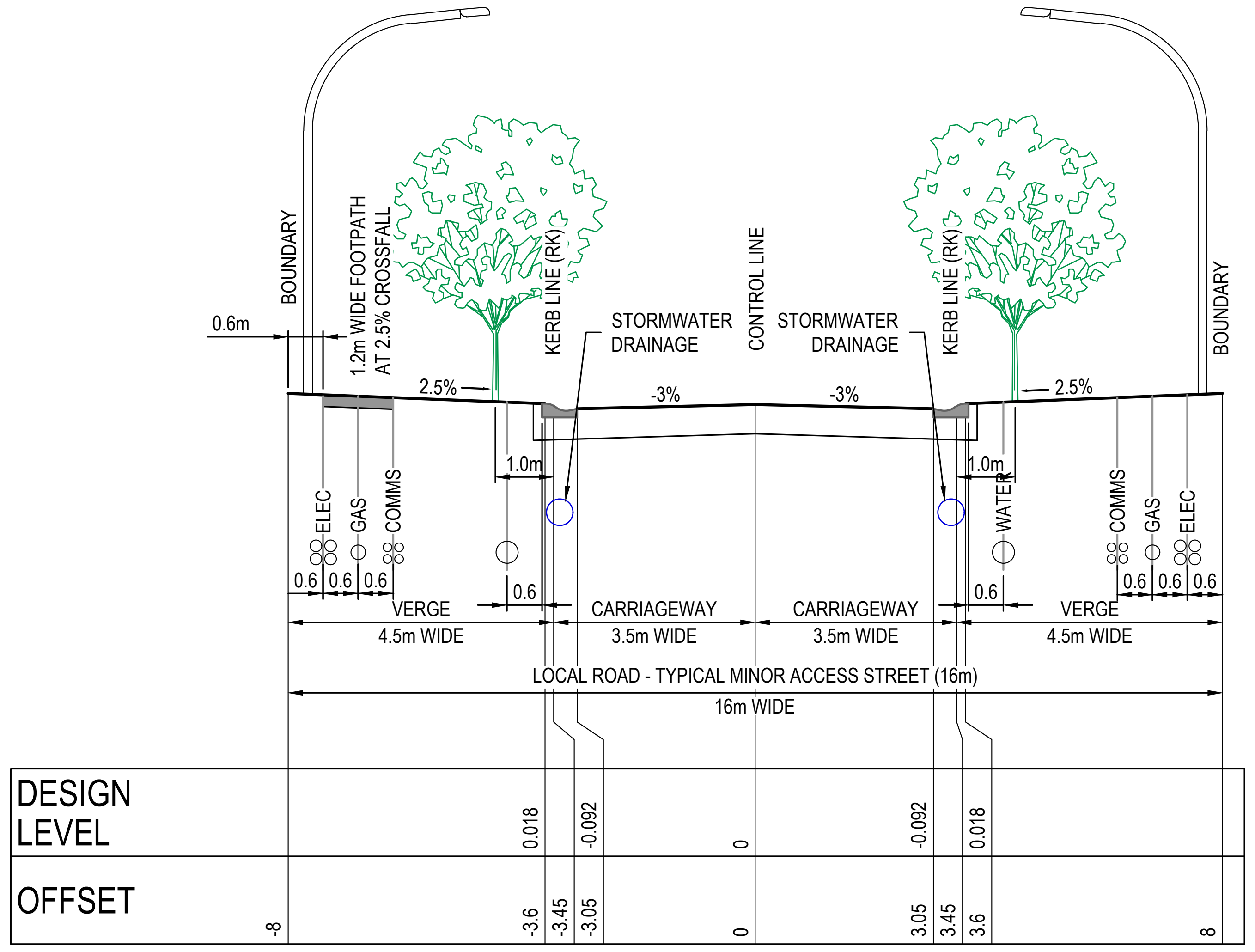
Title:
TYPICAL ROAD
CROSS SECTIONS
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	300	B

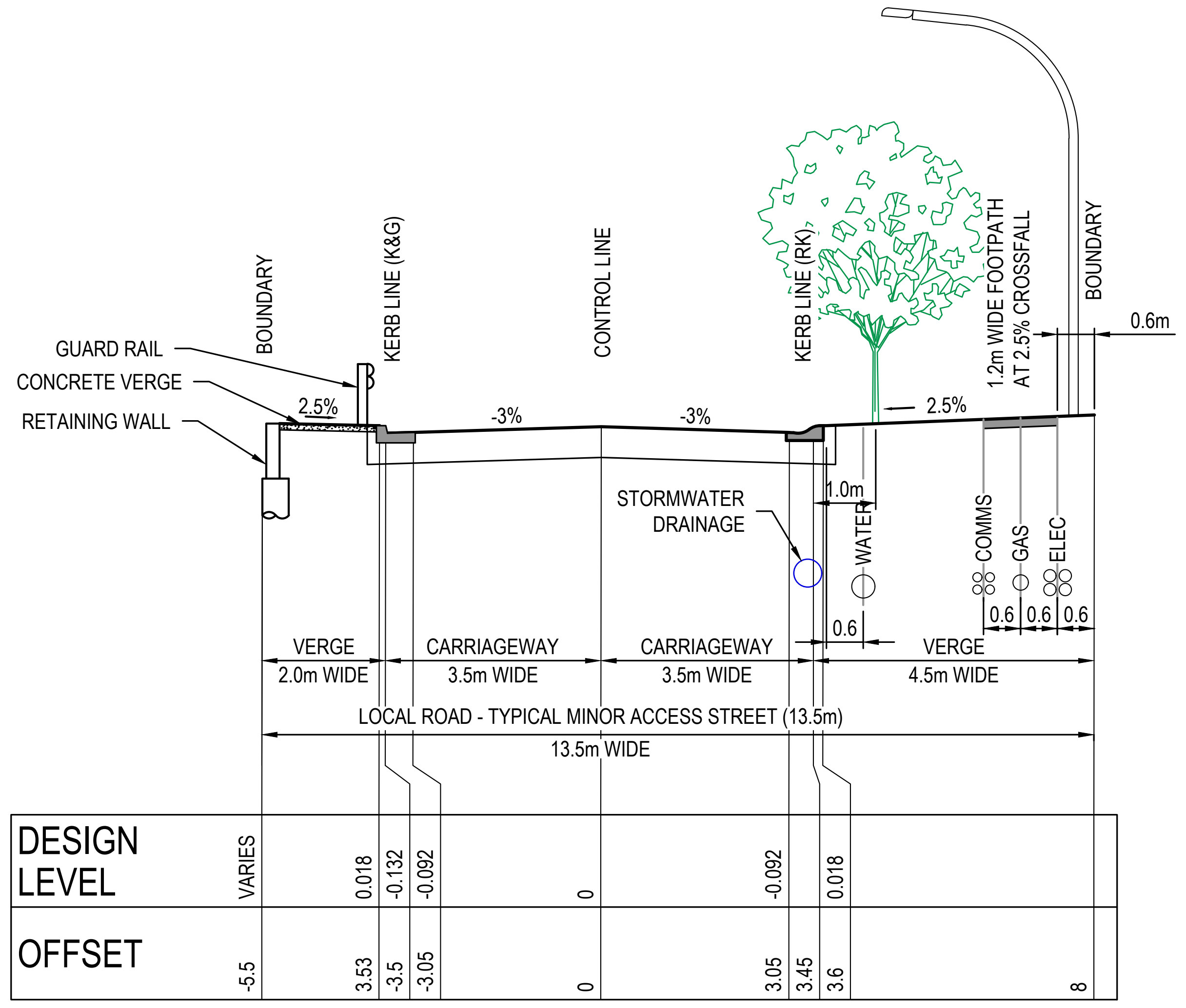
Plotted:Tuesday, 21 September 2021 9:46:58 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-300.dwg



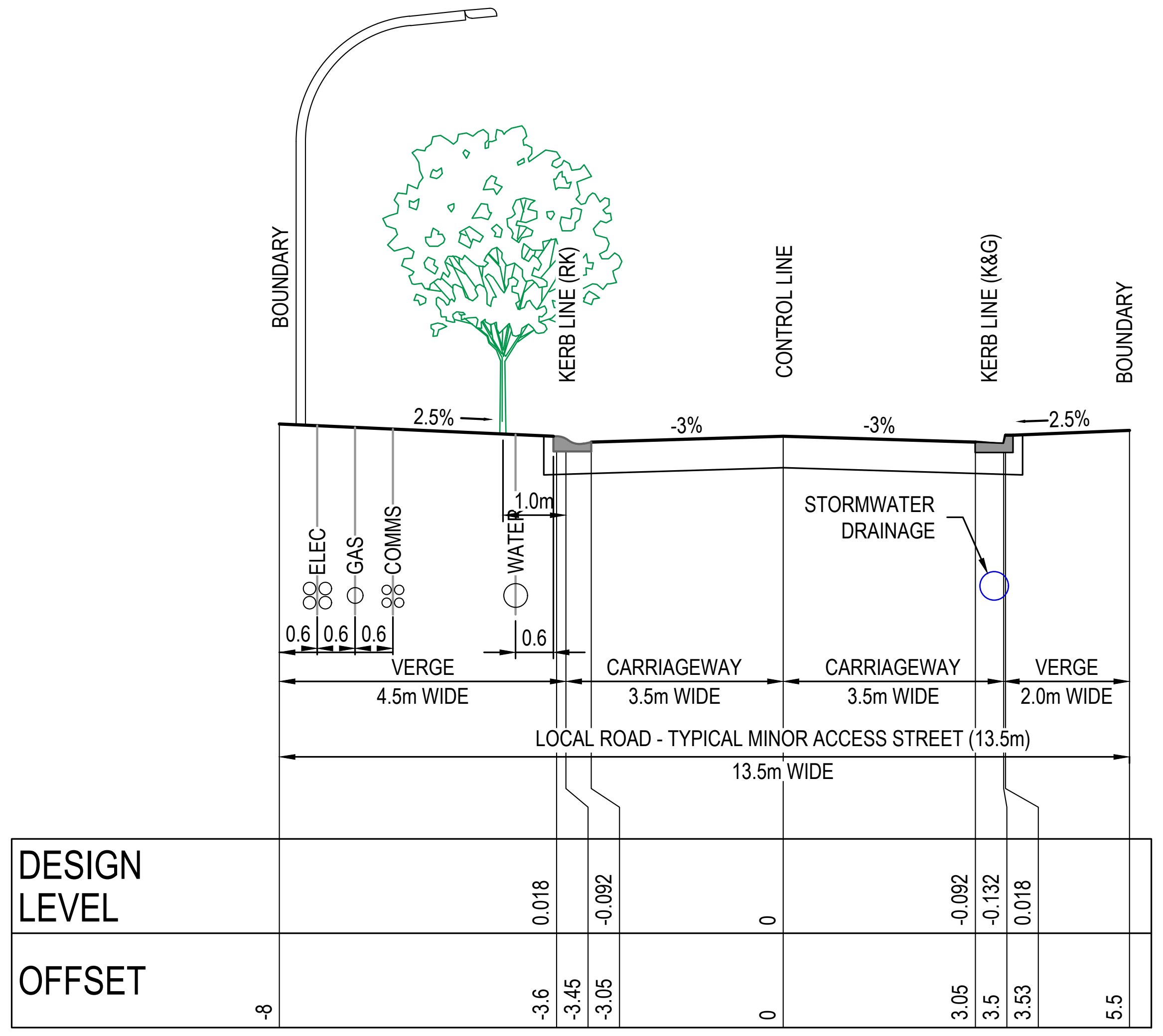
TYPICAL CROSS SECTION - LOCAL L2
ROAD No.08, ROAD No.12 &
ROAD No.03 (CH 543.633 - TP 635.665)
SCALE 1:100



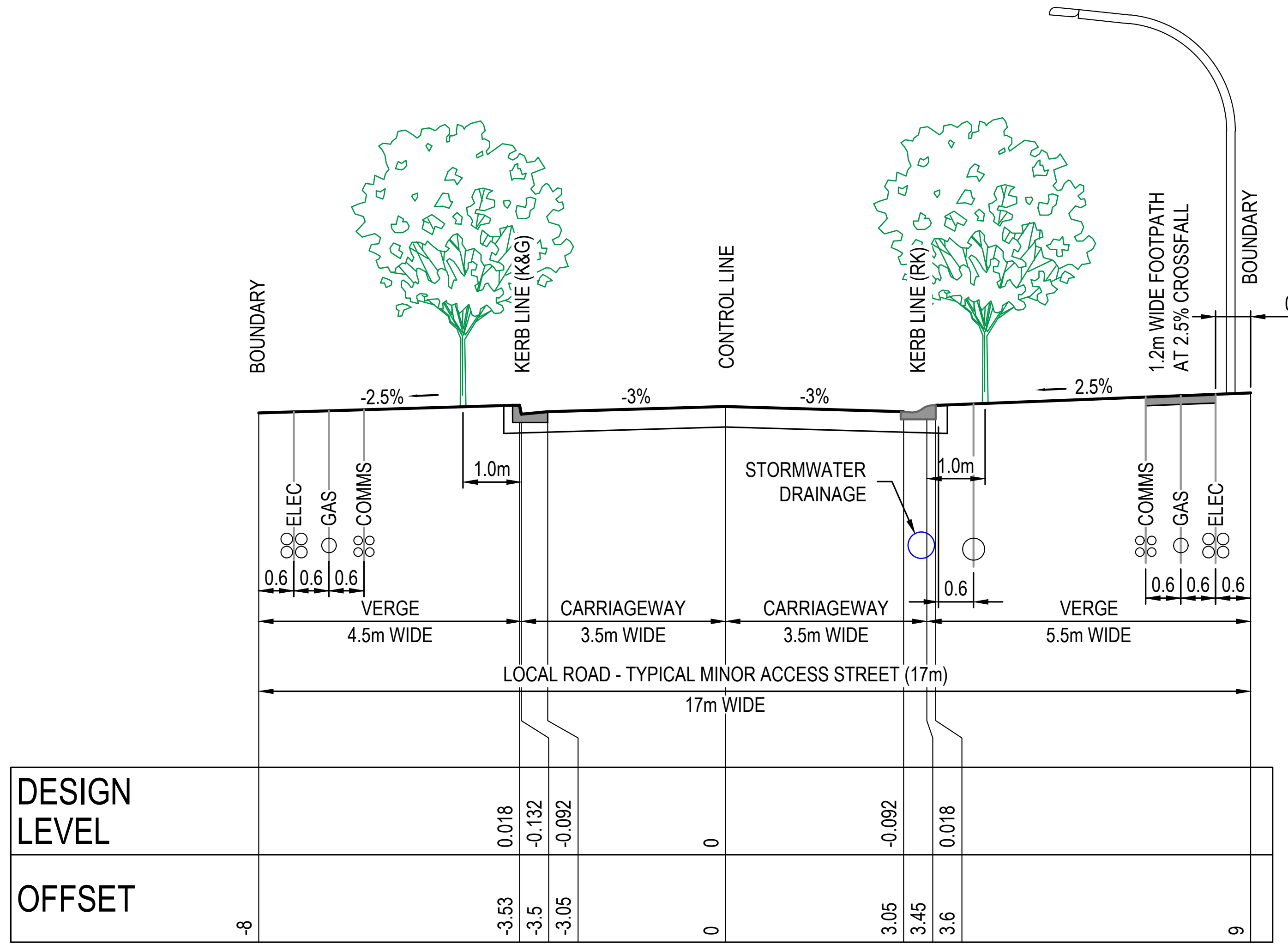
TYPICAL CROSS SECTION - LOCAL L2
ROAD No.07, ROAD No.11 &
ROAD No.05 (CH 273.664 - END)
SCALE 1:100



TYPICAL CROSS SECTION - LOCAL L2b (VARIANT)
ROAD No.03 (TP 654.515 - TP 707.515)
SCALE 1:100



TYPICAL CROSS SECTION - LOCAL L2b (VARIANT)
ROAD No.10
SCALE 1:100



TYPICAL CROSS SECTION - LOCAL L2c (VARIANT)
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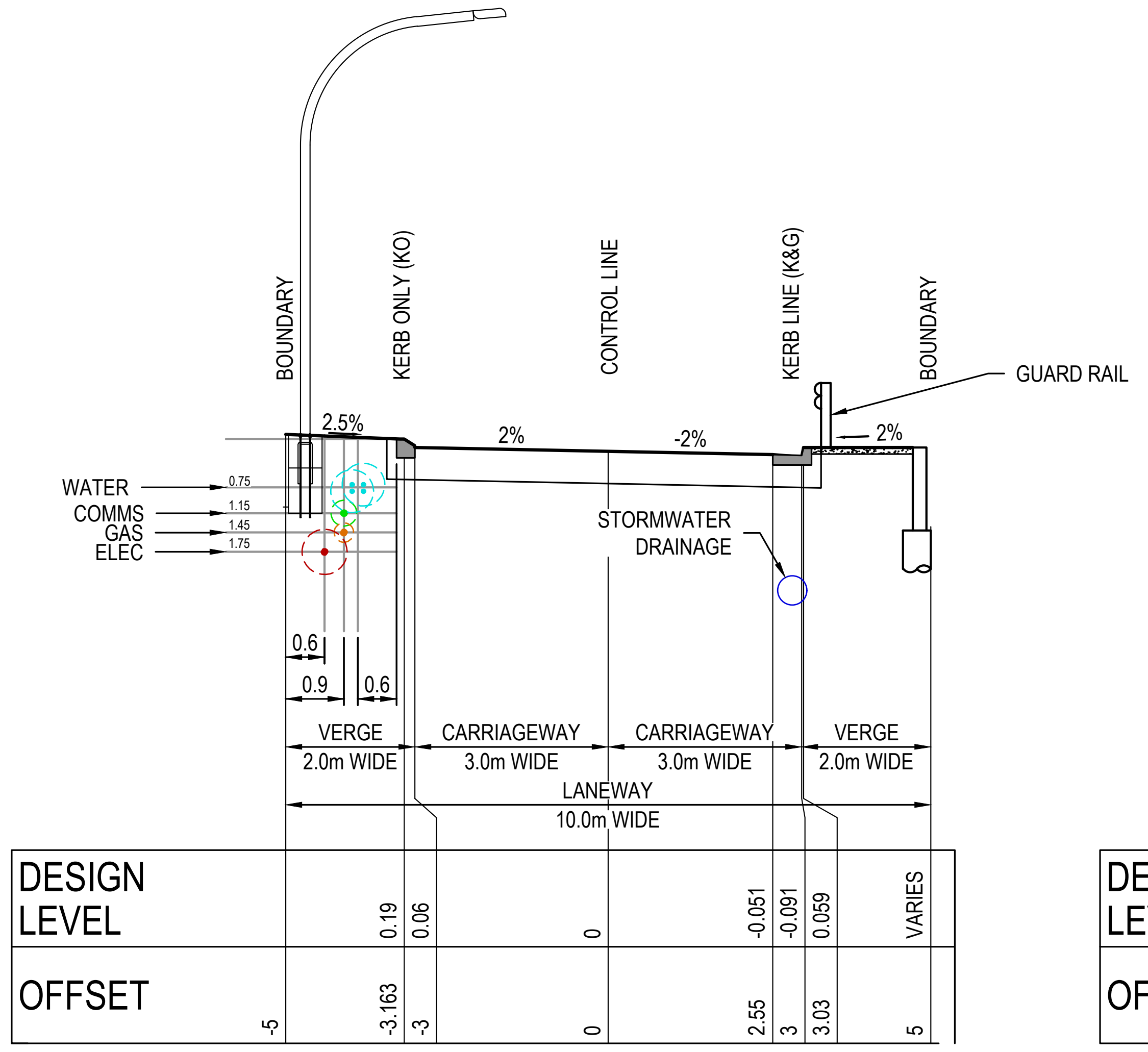
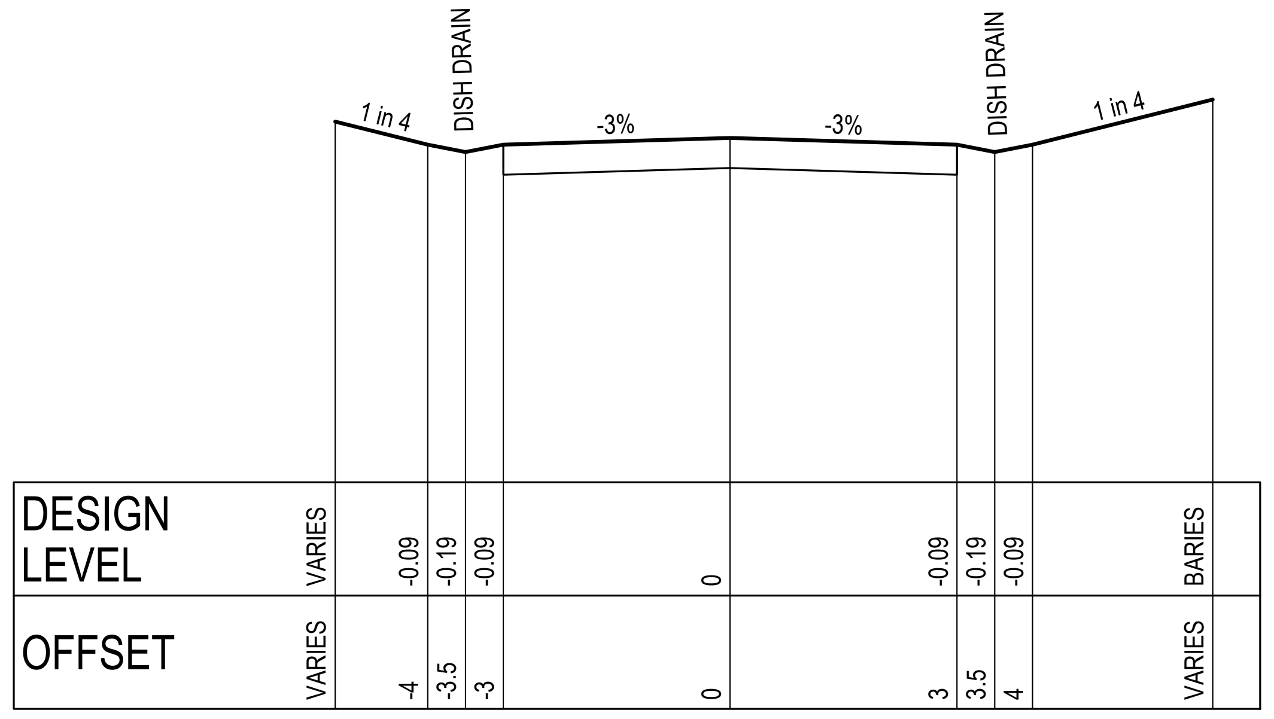
SCALE 1:100



TYPICAL CROSS SECTION - ROAD No.15
SCALE 1:100


DISH DRAIN
DISH DRAIN
1 in 4
-3%
-3%
1 in 4
DESIGN LEVEL
VARIES -0.09 -0.19 -0.09 0 -0.09 -0.19 -0.09 BARIES
OFFSET
VARIES -4 -3.5 -3 0 3 3.5 4 VARIES

TYPICAL CROSS SECTION - RFS TRACK
SCALE 1:100

ISSUED FOR CONSTRUCTION CERTIFICATE

A	FM/CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1)
SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

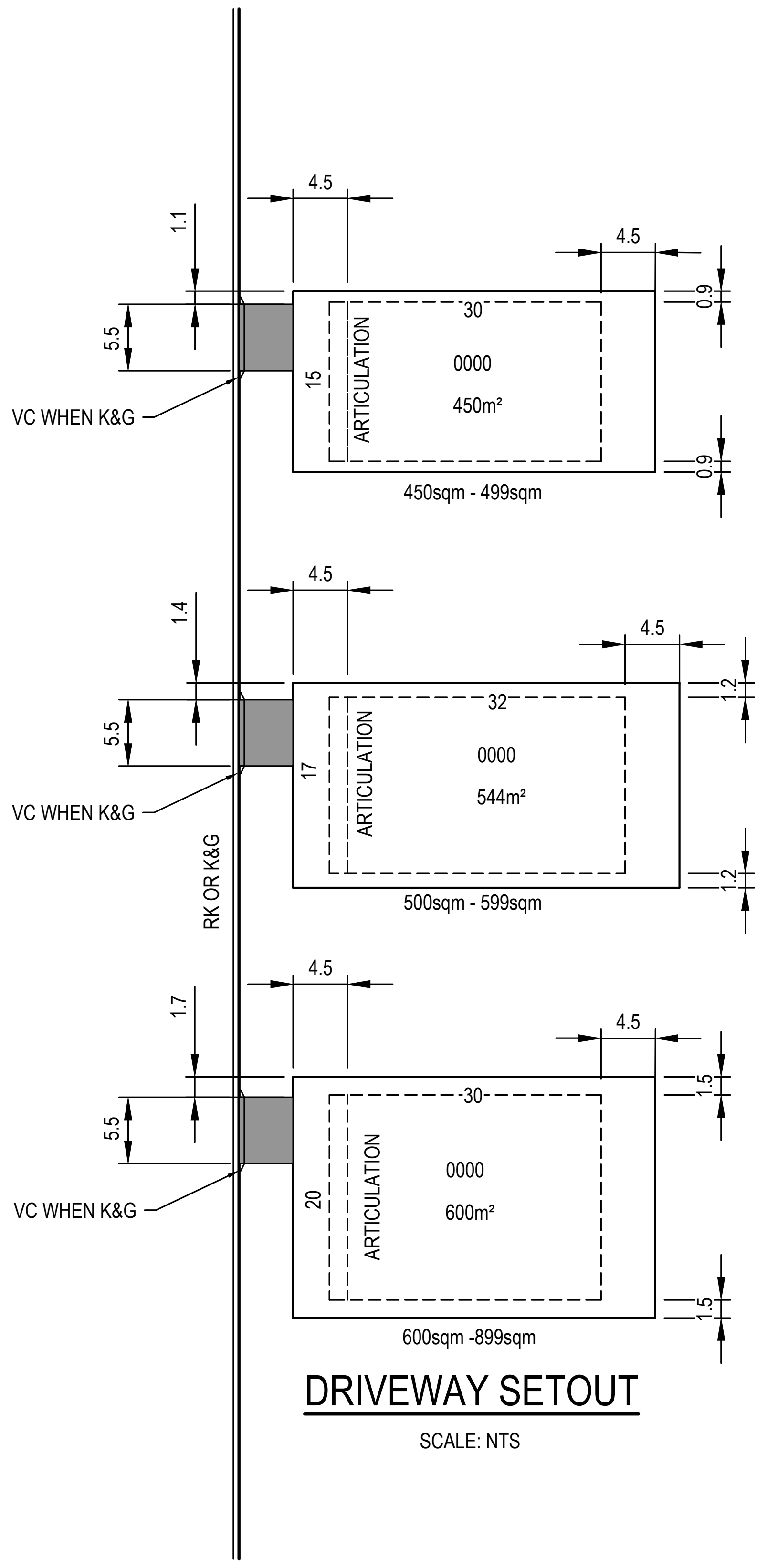
By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

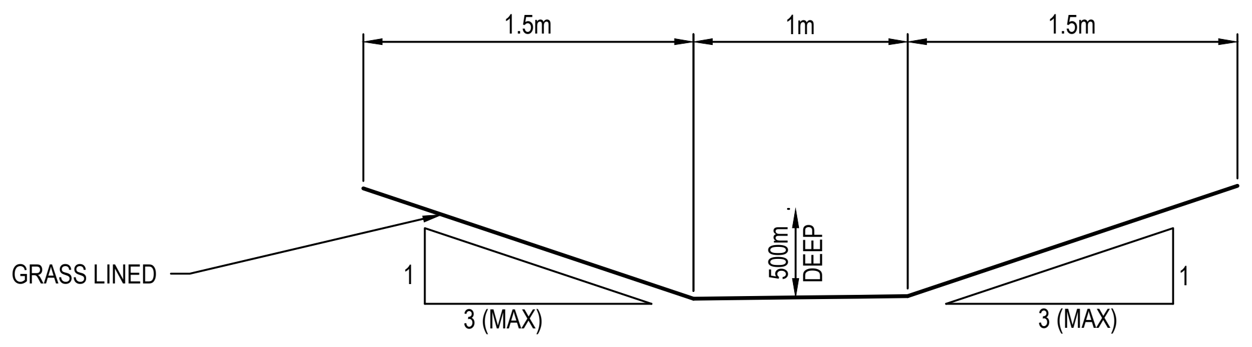
Title:
TYPICAL ROAD
CROSS SECTIONS
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	301	A



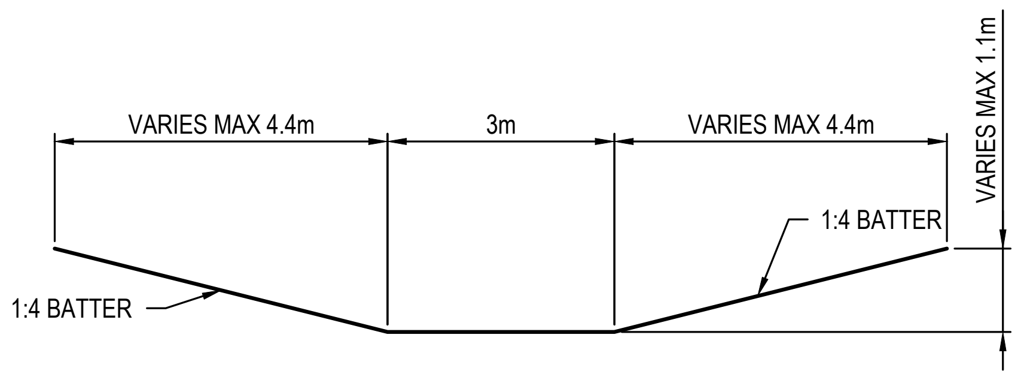
DRIVEWAY SETOUT

SCALE: NTS



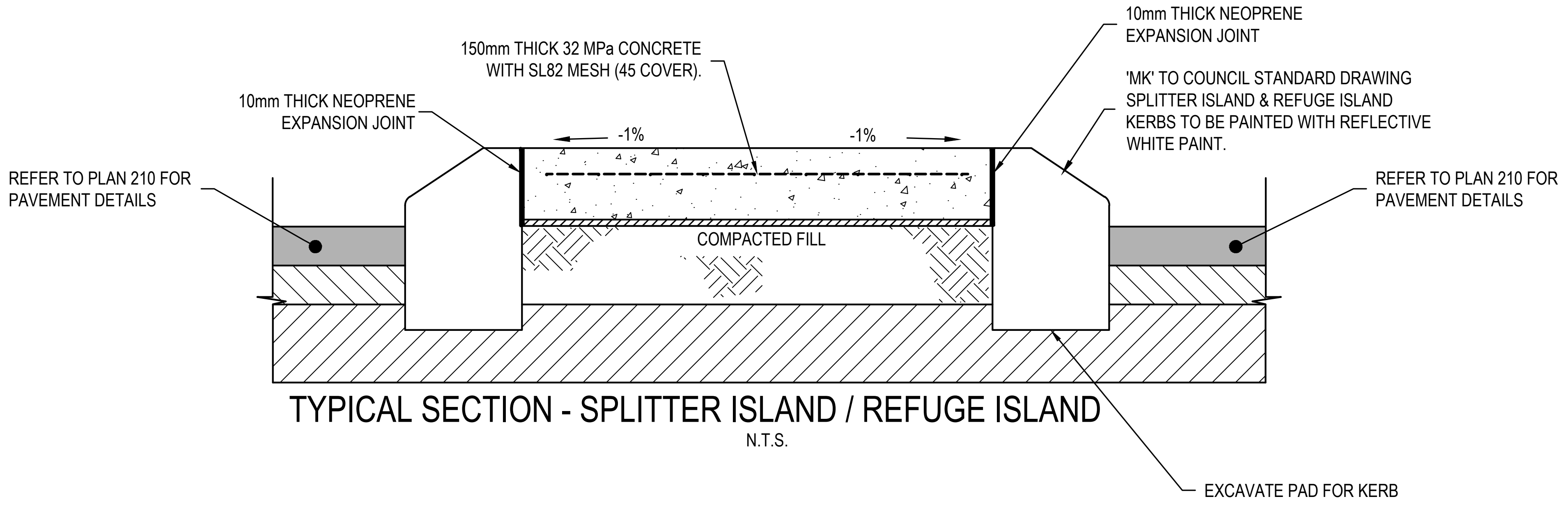
SWALE DETAIL

SCALE: NTS



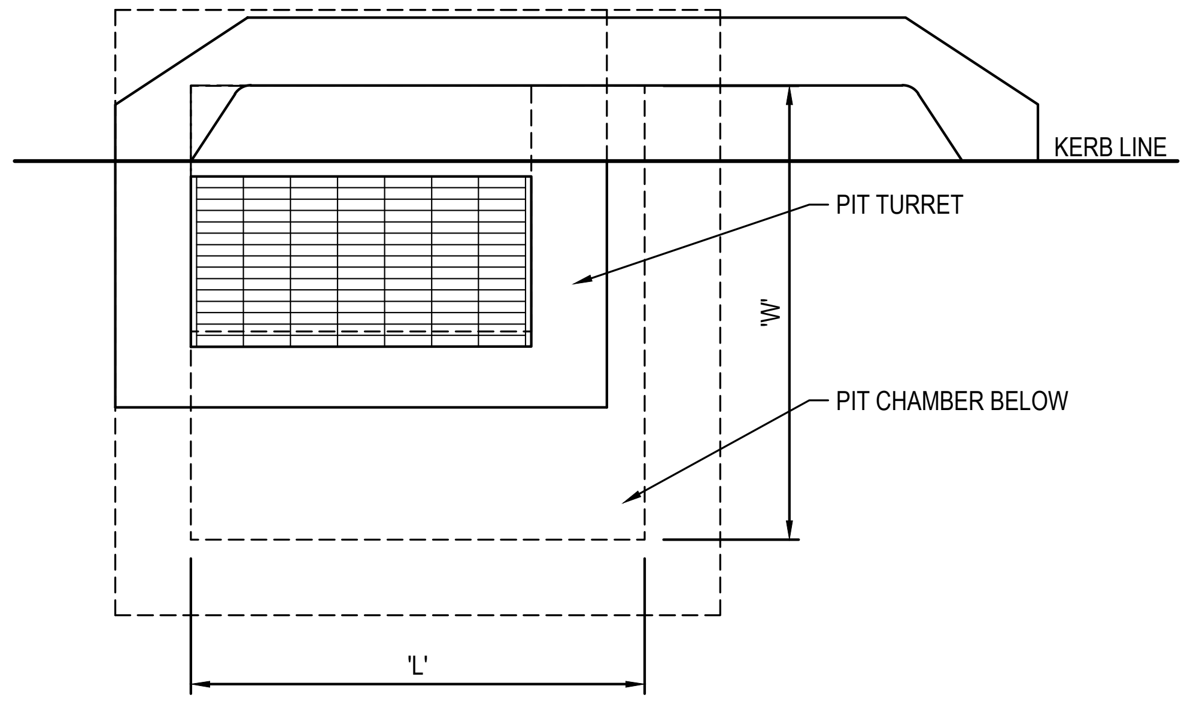
OVERLAND FLOW PATH TYPICAL SECTION

SCALE: NTS


150mm THICK 32 MPa CONCRETE WITH SL82 MESH (45 COVER).
10mm THICK NEOPRENE EXPANSION JOINT
REFER TO PLAN 210 FOR PAVEMENT DETAILS
-1%
-1%
COMPACTED FILL
10mm THICK NEOPRENE EXPANSION JOINT
'MK' TO COUNCIL STANDARD DRAWING SPLITTER ISLAND & REFUGE ISLAND KERBS TO BE PAINTED WITH REFLECTIVE WHITE PAINT.
REFER TO PLAN 210 FOR PAVEMENT DETAILS
EXCAVATE PAD FOR KERB

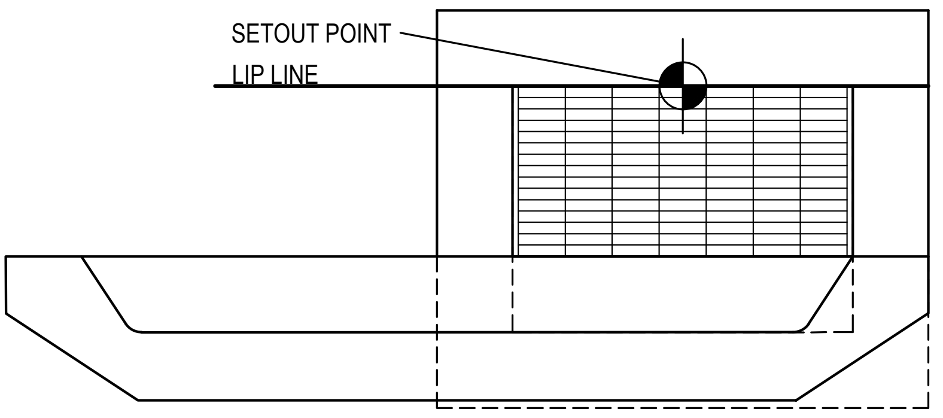
TYPICAL SECTION - SPLITTER ISLAND / REFUGE ISLAND

N.T.S.



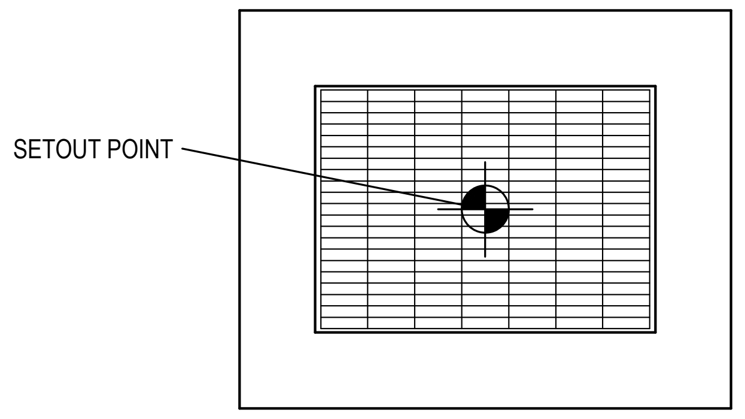
PIT CHAMBER DIMENSION (TYPICAL)

SCALE 1:20



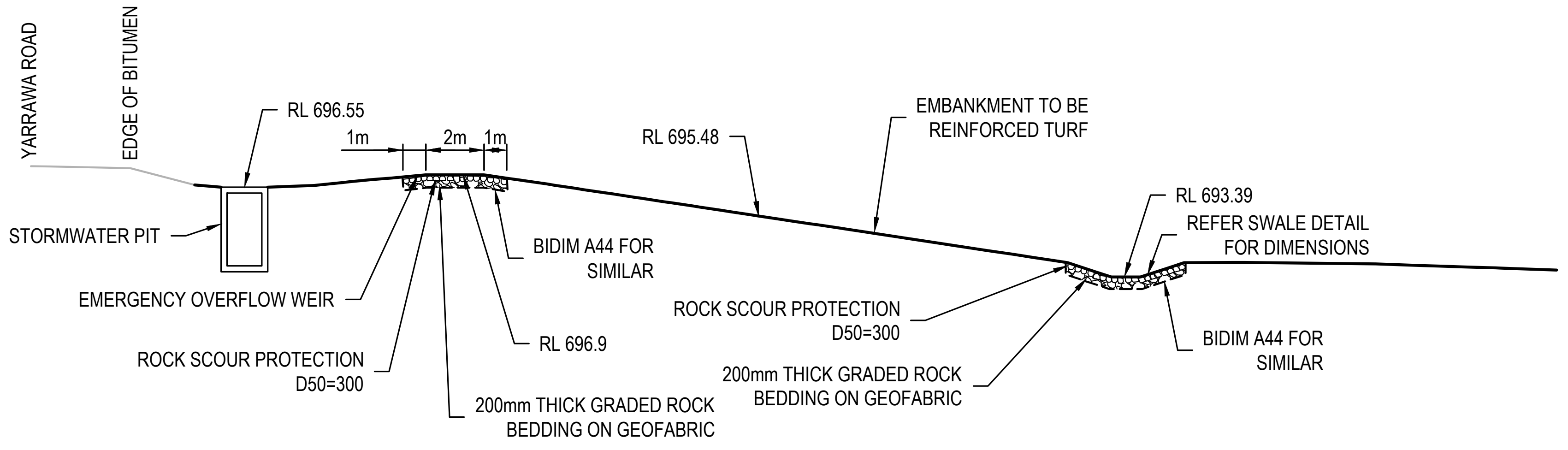
SETOUT DETAIL KERB INLET PIT (LINTEL)

SCALE 1:20



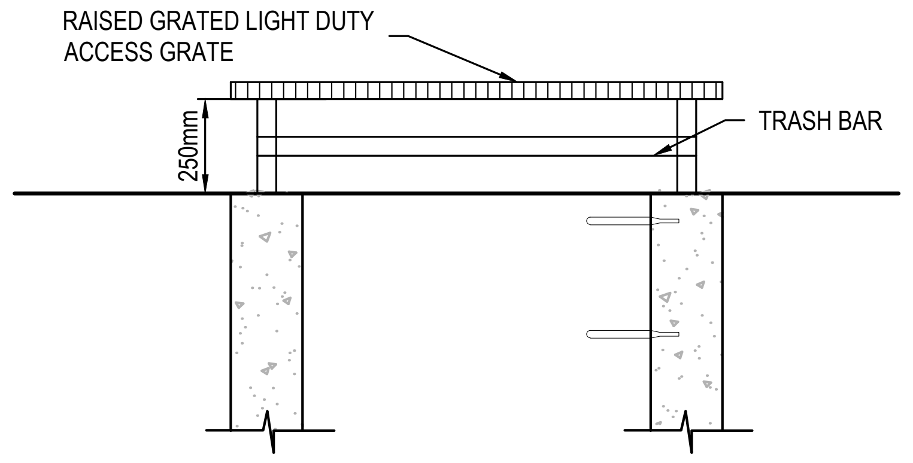
SETOUT DETAIL GRATED SURFACE INLET PIT (G.S.I.P.) & RAISED SURFACE INLET PIT (R.S.I.P.)

SCALE 1:20


YARRAWA ROAD
EDGE OF BITUMEN
RL 696.55
1m
2m
1m
RL 695.48
EMBANKMENT TO BE REINFORCED TURF
RL 693.39
REFER SWALE DETAIL FOR DIMENSIONS
STORMWATER PIT
BIDIM A44 FOR SIMILAR
EMERGENCY OVERFLOW WEIR
ROCK SCOUR PROTECTION D50=300
RL 696.9
ROCK SCOUR PROTECTION D50=300
200mm THICK GRADED ROCK BEDDING ON GEOFABRIC
200mm THICK GRADED ROCK BEDDING ON GEOFABRIC
BIDIM A44 FOR SIMILAR

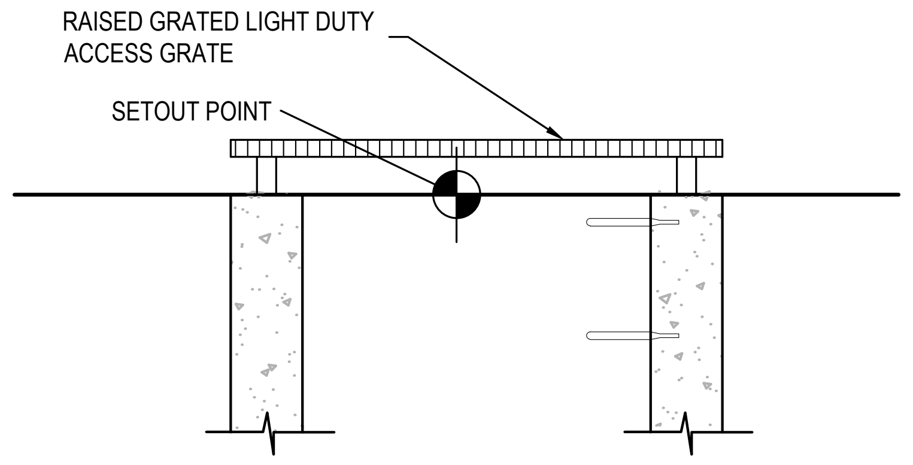
SECTION A/202

N.T.S.



RAISED GRATE 250mm OPENING SURFACE INLET PIT (R.S.I.P)

SCALE 1:20



SETOUT DETAIL RAISED SURFACE INLET PIT (R.S.I.P)

SCALE 1:20

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
SCALE 1:20 (A1) SCALE 1:40 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DETAILS
PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	305	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-305.dwg

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	691.925	691.556	15
	691.697	690.539	22.615
	691.613	690.785	25.434
	691.554	691.397	27.429
	691.48	691.32	30
	691.2	691.017	40.115
	691.071	690.87	45
	690.966	690.747	49.11
	690.904	690.672	51.616
	690.759	690.492	57.615
	690.703	690.42	60
	690.349	689.97	75
	689.995	689.52	90
	689.806	689.28	98.008
	689.651	689.078	105
	689.453	688.827	115.508
	689.381	688.738	120
	689.218	688.548	133.008
	689.199	688.527	135
	689.091	688.445	145.708
	689.049	688.552	150
	688.959	688.715	158.99
	688.899	688.569	165
	688.749	687.984	180
	688.599	688.157	195
	688.449	688.14	210
	688.39	687.725	215.889
	688.309	687.638	223.926
	688.299	687.627	225
	688.149	687.477	240
	688.049	687.378	249.908
	687.999	687.327	255
	687.928	687.257	262.022
	687.869	687.197	270
	687.849	687.176	277.931
	687.85	687.177	279.522
	687.852	687.179	280.908
	687.864	687.191	285
	687.963	687.289	297.022
	687.999	687.325	300
	688.179	687.505	315
	688.334	687.66	327.91
	688.346	687.672	328.91
	688.359	687.685	330
	688.539	687.865	345
	688.634	687.96	352.91
	688.646	687.972	353.91
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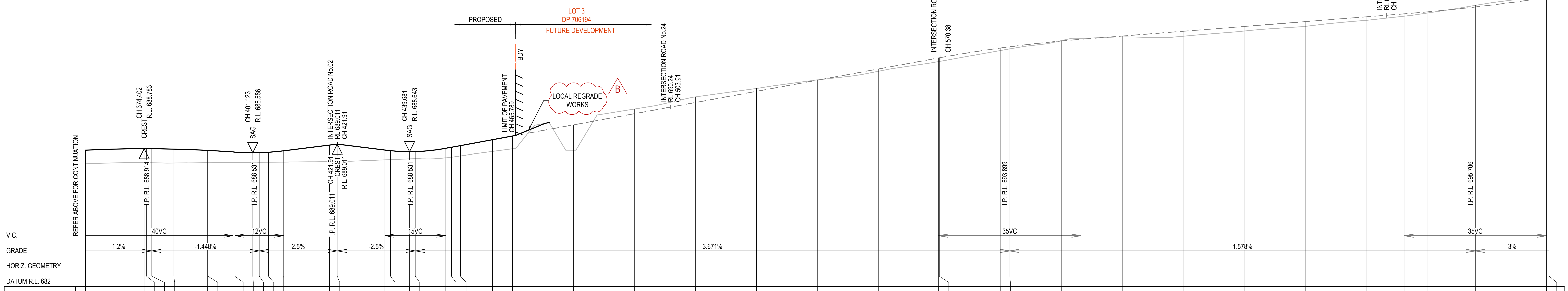
	688.714	688.04	360

LONGITUDINAL SECTION - ROAD No.01

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.	DESIGN LEVEL	BEW CC LEVEL	CHAINAGE
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	688.783	688.096	374.402
	688.783	688.095	375
	688.782	688.092	376.273
	688.765	688.08	381.711
	688.703	688.095	390
	688.701	688.094	390.101
	688.625	688.104	396.273
	688.618	688.105	396.722
	688.586	688.112	401.123
	688.591	688.115	402.722
	688.611	688.12	405
	688.681	688.126	408.722
	688.963	688.146	420
	689.011	688.149	421.91
	688.719	688.233	433.604
	688.688	688.244	435
	688.643	688.282	439.681
	688.647	688.293	441.104
	688.807	688.335	448.604
	688.858	688.366	450
	688.939	688.426	452.211
	689.229	688.653	460.1
	689.408	688.783	465
	689.959	688.711	480
	690.51	690.741	495
	691.06	691.339	510
	691.611	691.753	525
	692.161	692.178	540
	692.712	692.6	555
	693.256	693.078	569.824
	693.263	693.084	570
	693.744	693.621	585
	693.807	693.704	587.324
	694.092	694.109	600
	694.175	694.224	604.824
	694.335	694.291	615
	694.572	694.327	630
	694.809	694.583	645
	695.045	694.812	660
	695.282	695.109	675
	695.429	695.316	684.352
	695.525	695.469	690
	695.768	695.848	701.852
	695.842	695.949	705
	696.231	696.368	719.352
	696.25	696.395	720

LONGITUDINAL SECTION - ROAD No.01

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-310.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

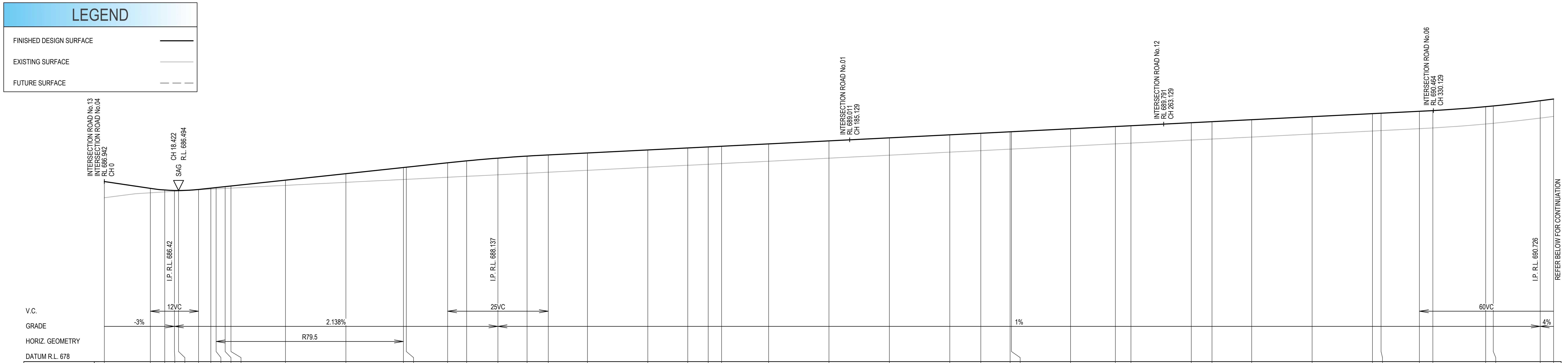
For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 01 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	310	B



W.A.E.												
DESIGN LEVEL	686.942	686.6	686.52	686.497	686.494	686.548	686.613	686.641	686.689	686.72	687.009	687.33
BEW CC LEVEL		686.381	686.426	686.455	686.468	686.529	686.563	686.576	686.598	686.613	686.748	686.898
CHAINAGE	0	11.415	15	17.415	18.422	23.415	26.444	27.756	30	31.444	45	60

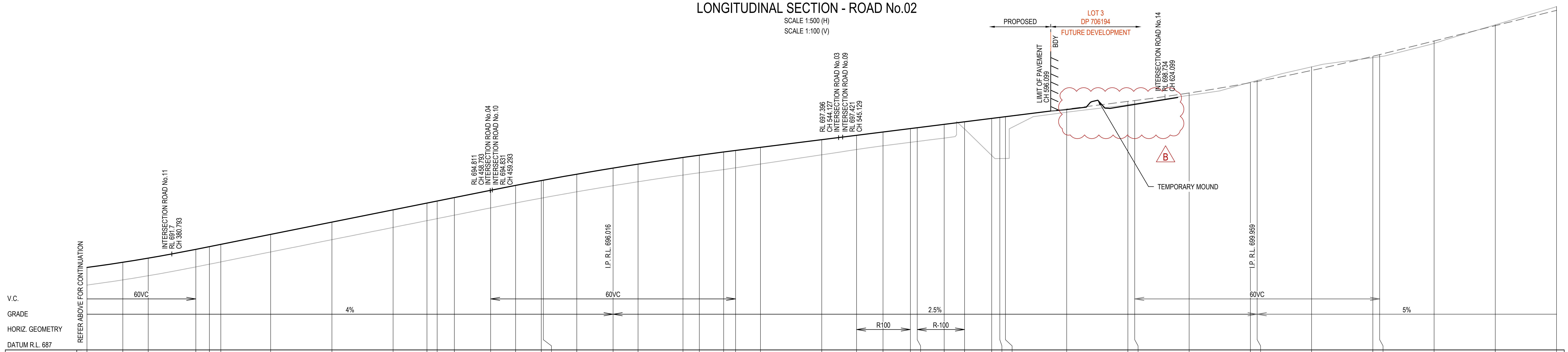
W.A.E.												
DESIGN LEVEL	687.636	687.651	687.87	687.966	688.102	688.203	688.262	688.36	688.51	688.609	688.66	688.693
BEW CC LEVEL	687.041	687.048	687.151	687.198	687.276	687.348	687.401	687.498	687.648	687.747	687.798	687.831
CHAINAGE	74.298	75	85.272	90	97.772	105	110.272	120	135	144.93	150	153.32

W.A.E.											
DESIGN LEVEL	688.81	688.96	689.11	689.26	689.337	689.41	689.413	689.56	689.671	689.71	689.86
BEW CC LEVEL	687.948	688.098	688.248	688.398	688.475	688.548	688.551	688.698	688.809	688.848	688.998
CHAINAGE	165	180	195	210	217.713	225	225.328	240	251.129	255	270

W.A.E.											
DESIGN LEVEL	689.911	690.01	690.16	690.31	690.331	690.426	690.462	690.659	690.694	690.951	691.038
BEW CC LEVEL	689.049	689.148	689.298	689.448	689.469	689.565	689.601	689.797	689.832	690.09	690.176
CHAINAGE	275.129	285	300	315	317.129	326.664	330	343.129	345	356.664	360

LONGITUDINAL SECTION - ROAD No.02

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.												
DESIGN LEVEL	691.038	691.291	691.494	691.926	692.06	692.172	692.66	693.26	693.86	694.192	694.292	694.46
BEW CC LEVEL	690.176	690.43	690.632	691.065	691.198	691.31	691.798	692.398	692.998	693.33	693.43	693.598
CHAINAGE	360	368.793	375	386.664	390	392.793	405	420	435	443.293	445.793	450

W.A.E.												
DESIGN LEVEL	694.816	695.055	695.292	695.311	695.604	695.903	696.097	696.422	696.533	696.692	696.765	696.918
BEW CC LEVEL	693.954	694.194	694.431	694.449	694.743	695.041	695.235	695.561	695.672	695.831	695.919	696.102
CHAINAGE	458.893	465	471.293	471.793	480	488.893	495	506.001	510	515.987	518.893	525

W.A.E.											
DESIGN LEVEL	697.293	697.506	697.668	697.836	697.878	698.043	698.167	698.333	698.383	698.418	698.793
BEW CC LEVEL	696.554	696.812	696.995	697.163	697.205	697.37	697.815	696.521	696.37	696.375	698.64
CHAINAGE	540	548.531	555	561.709	563.392	570	574.981	581.629	583.619	585	600

W.A.E.											
DESIGN LEVEL	699.168	699.209	699.58	700.085	700.147	700.684	701.376	701.459	702.126	702.876	703.626
BEW CC LEVEL	699.011	699.056	699.464	700.104	700.194	700.859	701.308	701.355	702.01	702.918	703.809
CHAINAGE	615	616.667	630	645	646.667	660	675	676.667	690	705	720

LONGITUDINAL SECTION - ROAD No.02

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

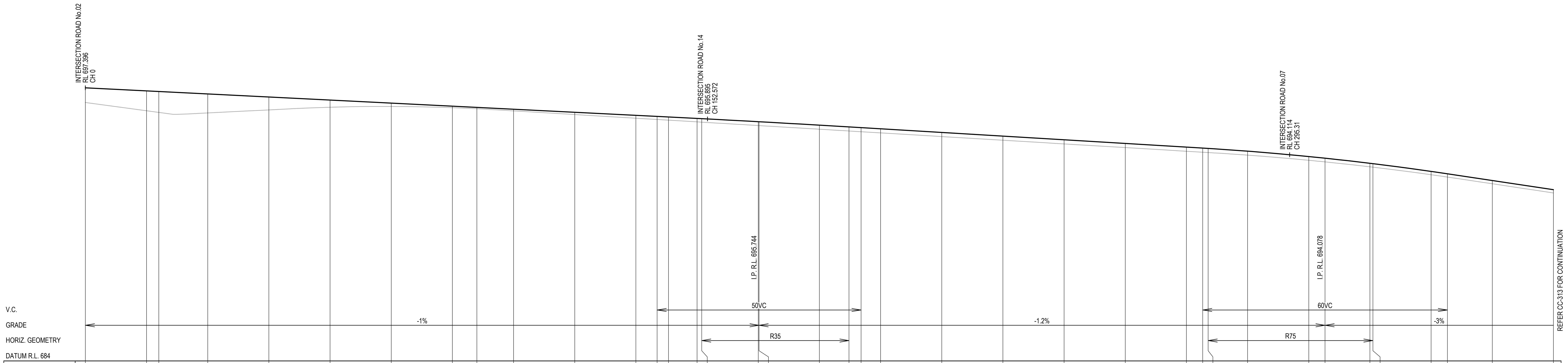
Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 02 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	311	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-311.dwg

LEGEND

FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
FUTURE SURFACE	— — —



W.A.E.													
DESIGN LEVEL	697.396	697.246	697.216	697.096	696.946	696.796	696.646	696.496	696.436	696.346	696.196	696.046	695.994
BEW CC LEVEL	696.678	696.27	696.189	696.163	696.313	696.443	696.481	696.42	696.368	696.265	696.085	695.905	695.842
CHAINAGE	0	15	18	30	45	60	75	90	96.001	105	120	135	140.208

W.A.E.													
DESIGN LEVEL	695.966	695.894	695.882	695.734	695.731	695.564	695.479	695.444	695.386	695.206	695.026	694.846	694.666
BEW CC LEVEL	695.809	695.725	695.711	695.545	695.543	695.365	695.278	695.242	695.185	695.005	694.825	694.645	694.465
CHAINAGE	143.001	150	151.14	165	165.208	180	187.26	190.208	195	210	225	240	255

W.A.E.												
DESIGN LEVEL	694.486	694.438	694.422	694.288	694.025	693.943	693.694	693.676	693.296	693.178	692.848	692.398
BEW CC LEVEL	694.285	694.237	694.221	694.094	693.841	693.763	693.521	693.504	693.134	693.019	692.69	692.24
CHAINAGE	270	273.99	275.325	285	300	303.99	315	315.738	330	333.99	345	360

LONGITUDINAL SECTION - ROAD No.03

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

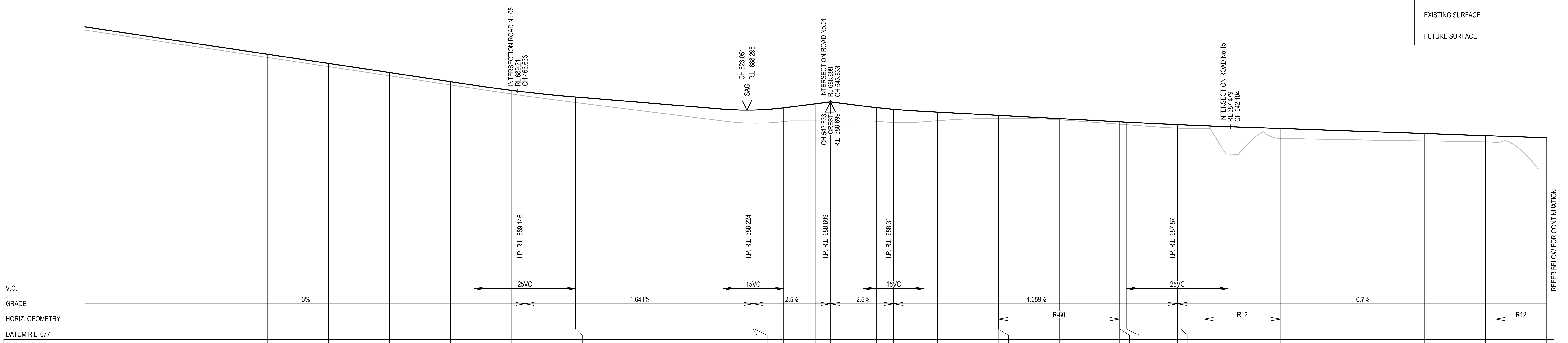
Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 03 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	312	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-312.dwg

LEGEND

FINISHED DESIGN SURFACE	━━
EXISTING SURFACE	──
FUTURE SURFACE	— — —



W.A.E.											
DESIGN LEVEL	692.398	691.948	691.498	691.048	690.598	690.147	689.697	689.521	689.27	689.189	688.956
BEW CC LEVEL	692.24	691.79	691.34	690.89	690.44	689.99	689.54	689.364	689.096	689.001	688.691
CHAINAGE	360	375	390	405	420	435	450	455.864	465	468.364	480

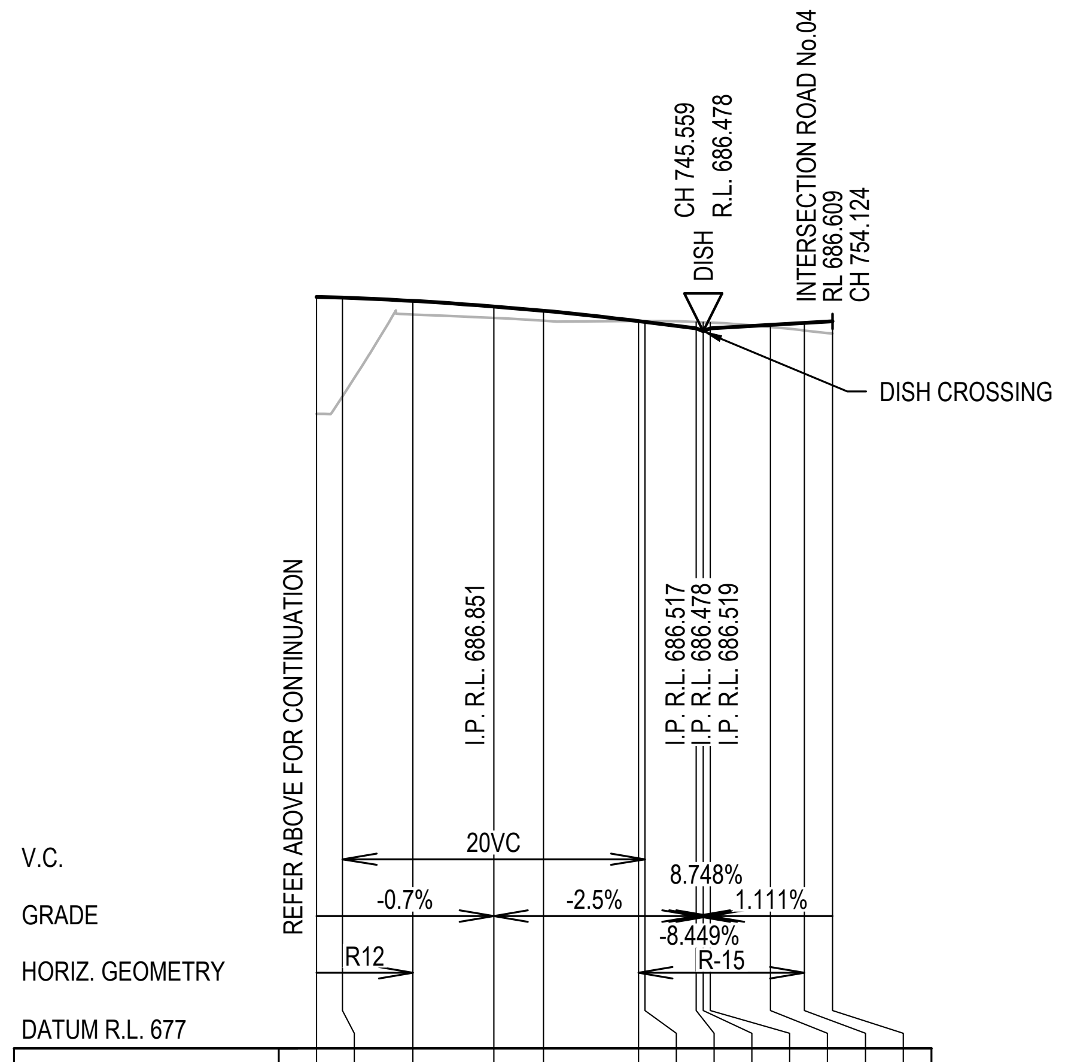
W.A.E.											
DESIGN LEVEL	688.941	688.709	688.463	688.347	688.298	688.301	688.303	688.411	688.608	688.699	688.498
BEW CC LEVEL	688.669	688.316	687.941	687.763	687.662	687.654	687.652	687.731	687.766	687.765	687.763
CHAINAGE	480.864	495	510	517.107	523.051	524.607	525	532.107	540	543.633	551.696

W.A.E.											
DESIGN LEVEL	688.42	688.337	688.231	688.196	688.037	688.036	687.878	687.721	687.719	687.702	687.581
BEW CC LEVEL	687.743	687.695	687.726	687.776	687.897	687.897	687.819	687.602	687.599	687.575	687.408
CHAINAGE	555	559.196	566.696	570	585	585.051	600	614.803	615	616.619	629.119

W.A.E.											
DESIGN LEVEL	687.573	687.526	687.482	687.458	687.392	687.353	687.248	687.143	687.038	687.021	686.933
BEW CC LEVEL	687.398	687.391	686.127	686.331	686.905	686.884	686.83	686.778	686.729	686.706	685.388
CHAINAGE	630	635.665	641.619	645	654.515	660	675	690	705	707.515	720

LONGITUDINAL SECTION - ROAD No.03

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.														
DESIGN LEVEL	686.933	686.921	686.879	686.806	686.749	686.612	686.601	686.517	686.478	686.519	686.563	686.588	686.609
BEW CC LEVEL	685.388	685.619	686.701	686.656	686.619	686.615	686.615	686.602	686.598	686.594	686.536	686.488	686.447
CHAINAGE	720	721.715	726.364	731.715	735	741.285	741.715	745.095	745.559	746.026	750	752.247	754.124

LONGITUDINAL SECTION - ROAD No.03

SCALE 1:500 (H)
SCALE 1:100 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

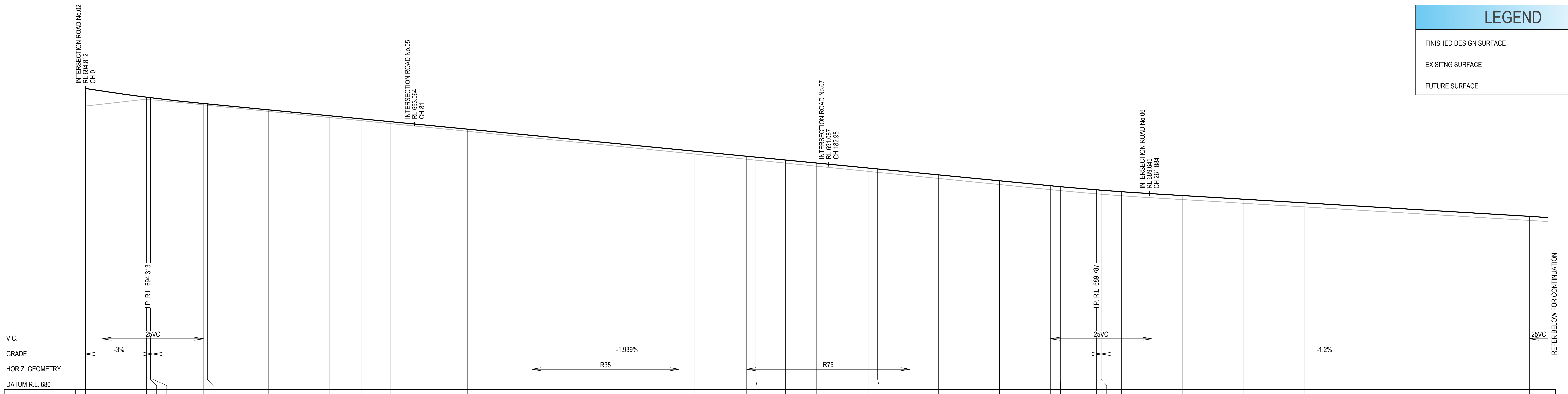
For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 04 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	313	B



W.A.E.											
DESIGN LEVEL	694.811	694.688	694.386	694.361	694.347	694.071	694.053	693.762	693.472	693.317	693.181
BEW CC LEVEL	693.95	694.043	694.265	694.258	694.25	694.006	693.987	693.687	693.387	693.227	693.087
CHAINAGE	0	4.092	15	16	16.592	29.092	30	45	60	68	75

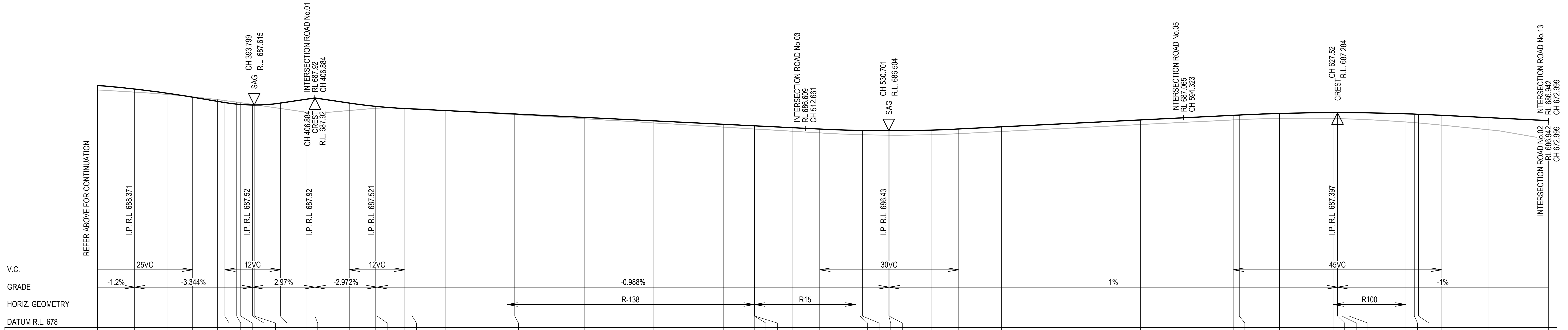
W.A.E.											
DESIGN LEVEL	692.89	692.812	692.599	692.504	692.308	692.017	691.802	691.726	691.479	691.436	691.294
BEW CC LEVEL	692.787	692.707	692.487	692.389	692.187	691.887	691.665	691.587	691.332	691.287	691.141
CHAINAGE	90	94	105	109.899	120	135	146.12	150	162.756	165	172.301

W.A.E.											
DESIGN LEVEL	691.145	690.896	690.854	690.7	690.563	690.272	690.029	689.982	689.828	689.81	689.736
BEW CC LEVEL	690.987	690.731	690.687	690.529	690.387	690.087	689.837	689.788	689.63	689.612	689.536
CHAINAGE	180	192.83	195	202.947	210	225	237.529	240	248.884	250.029	255

W.A.E.										
DESIGN LEVEL	689.637	689.547	689.489	689.367	689.187	689.007	688.827	688.647	688.521	688.459
BEW CC LEVEL	689.437	689.347	689.289	689.167	688.987	688.807	688.627	688.447	688.321	688.267
CHAINAGE	262.529	270	274.884	285	300	315	330	345	355.5	360

LONGITUDINAL SECTION - ROAD No.04

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.											
DESIGN LEVEL	688.459	688.304	688.124	687.953	687.773	687.721	687.653	687.637	687.615	687.615	687.699
BEW CC LEVEL	688.267	688.171	688.072	687.968	687.847	687.808	687.74	687.715	687.641	687.631	687.466
CHAINAGE	360	368	375	380.5	385.884	387.443	390	390.884	393.443	393.799	399.443

W.A.E.											
DESIGN LEVEL	687.864	687.92	687.699	687.557	687.551	687.462	687.446	687.376	687.244	687.228	687.079
BEW CC LEVEL	687.304	687.249	687.378	687.477	687.478	687.478	687.464	687.379	687.219	687.199	687.019
CHAINAGE	405	406.884	414.297	420	420.297	426.297	427.884	435	448.317	450	465

W.A.E.											
DESIGN LEVEL	686.931	686.783	686.717	686.717	686.716	686.635	686.578	686.521	686.517	686.515	686.504
BEW CC LEVEL	686.839	686.659	686.579	686.579	686.578	686.479	686.41	686.338	686.333	686.33	686.313
CHAINAGE	480	495	501.684	501.699	501.784	510	515.794	523.624	524.528	525	530.701

W.A.E.											
DESIGN LEVEL	686.504	686.533	686.58	686.672	686.822	686.945	686.972	687.122	687.172	687.184	687.249
BEW CC LEVEL	686.312	686.334	686.38	686.472	686.622	686.745	686.772	686.922	686.972	686.984	687.038
CHAINAGE	530.794	540	545.794	555	570	582.323	585	600	605.02	606.323	615

W.A.E.										
DESIGN LEVEL	687.284	687.284	687.284	687.283	687.236	687.223	687.216	687.172	687.072	686.942
BEW CC LEVEL	687.033	687.028	687.023	687.014	686.882	686.854	686.839	686.747	686.547	686.134
CHAINAGE	626.557	627.52	628.493	630	642.266	644.095	645	650.02	660	672.999

LONGITUDINAL SECTION - ROAD No.04

SCALE 1:500 (H)
SCALE 1:100 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

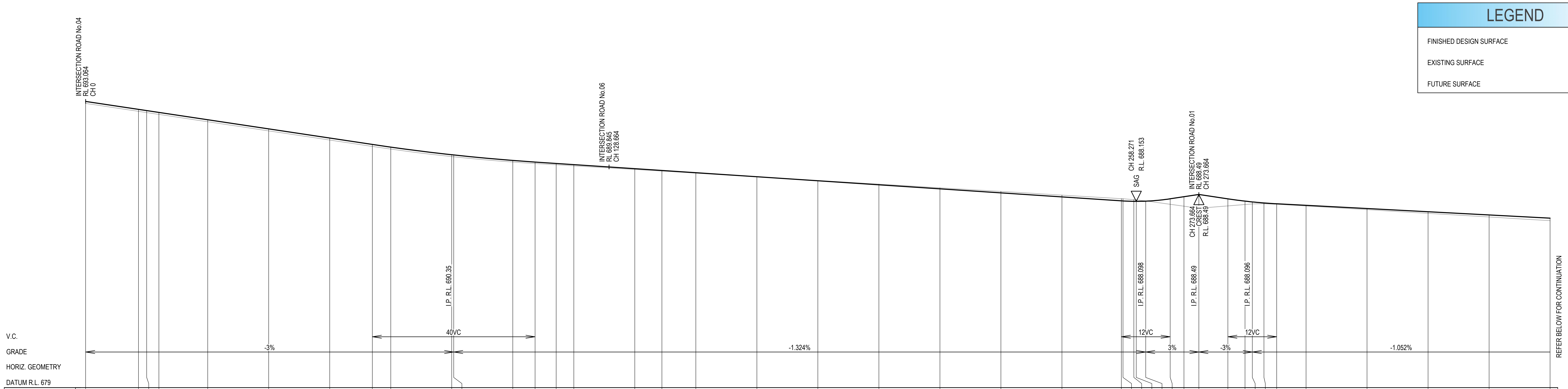
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 05 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	314	A

LEGEND

FINISHED DESIGN SURFACE	▬
EXISTING SURFACE	─
FUTURE SURFACE	— — —



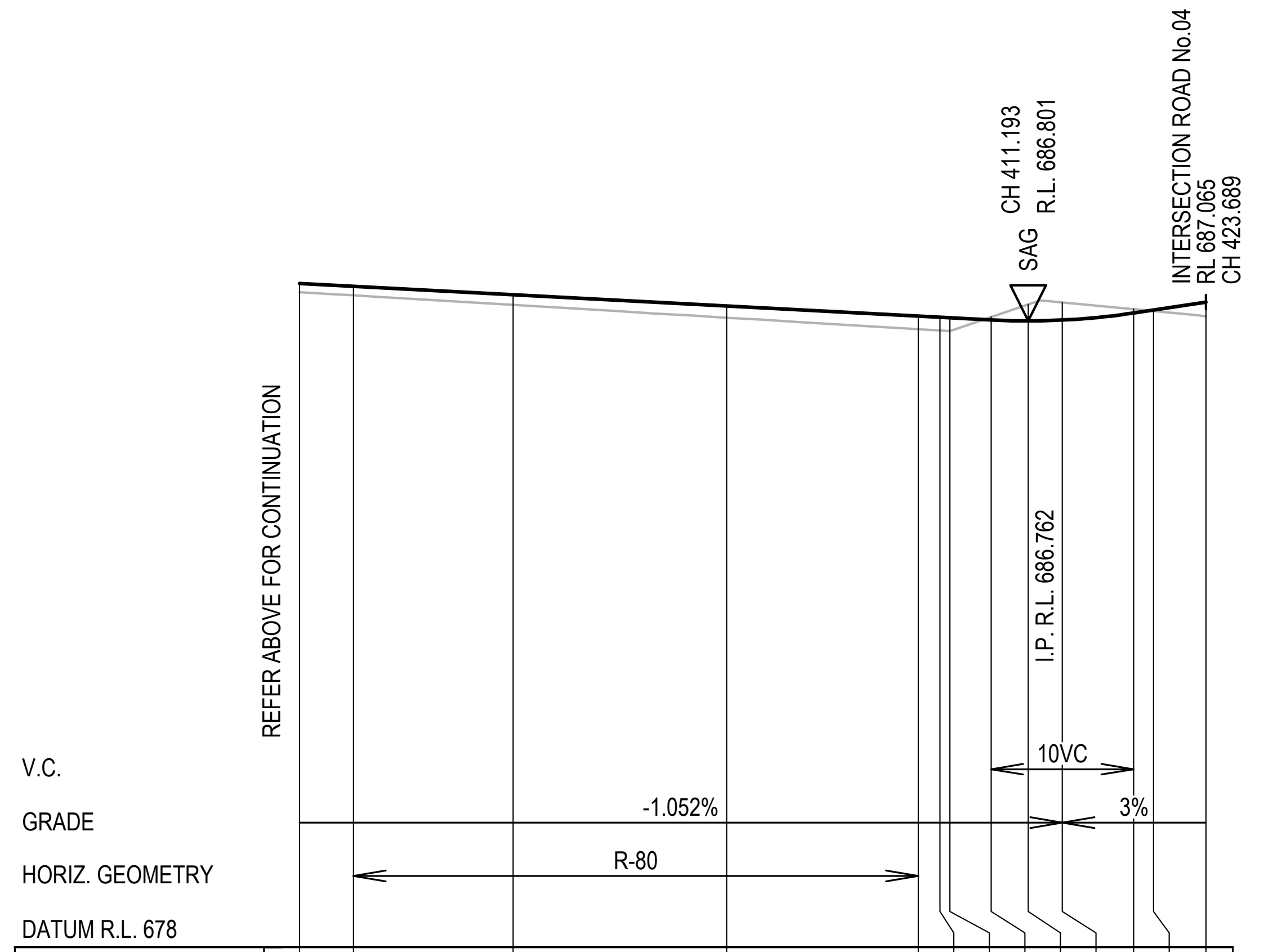
W.A.E.														
DESIGN LEVEL	693.064	692.674	692.614	692.524	692.164	691.714	691.264	690.95	690.819	690.444	690.434	690.164	690.085	690.017
BEW CC LEVEL	692.967	692.578	692.518	692.428	692.068	691.618	691.168	690.853	690.722	690.353	690.344	690.086	690.013	689.951
CHAINAGE	0	13	15	18	30	45	60	70.476	75	90	90.476	105	110.476	115.664

W.A.E.														
DESIGN LEVEL	689.959	689.761	689.672	689.562	689.363	689.165	688.966	688.768	688.569	688.371	688.177	688.172	688.154	688.153
BEW CC LEVEL	689.899	689.719	689.639	689.539	689.359	689.179	688.999	688.819	688.639	688.459	688.283	688.278	688.236	688.224
CHAINAGE	120	135	141.664	150	165	180	195	210	225	240	254.597	255	257.664	258.271

W.A.E.														
DESIGN LEVEL	688.163	688.278	688.38	688.49	688.276	688.164	688.126	688.074	688.033	687.957	687.799	687.642	687.484	687.326
BEW CC LEVEL	688.174	688.009	687.916	687.816	687.929	687.996	688.025	688.032	688.011	687.925	687.745	687.565	687.385	687.205
CHAINAGE	260.597	266.597	270	273.664	280.79	285	286.79	289.664	292.79	300	315	330	345	360

LONGITUDINAL SECTION - ROAD No.05

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.													
DESIGN LEVEL	687.326	687.286	687.168	687.01	686.869	686.853	686.845	686.815	686.801	686.813	686.912	686.954	687.065
BEW CC LEVEL	687.205	687.16	687.025	686.845	686.684	686.665	686.657	686.856	687.034	687.06	686.966	686.94	686.865
CHAINAGE	360	363.792	375	390	403.461	405	405.689	408.596	411.193	413.596	418.596	420	423.689

LONGITUDINAL SECTION - ROAD No.05

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

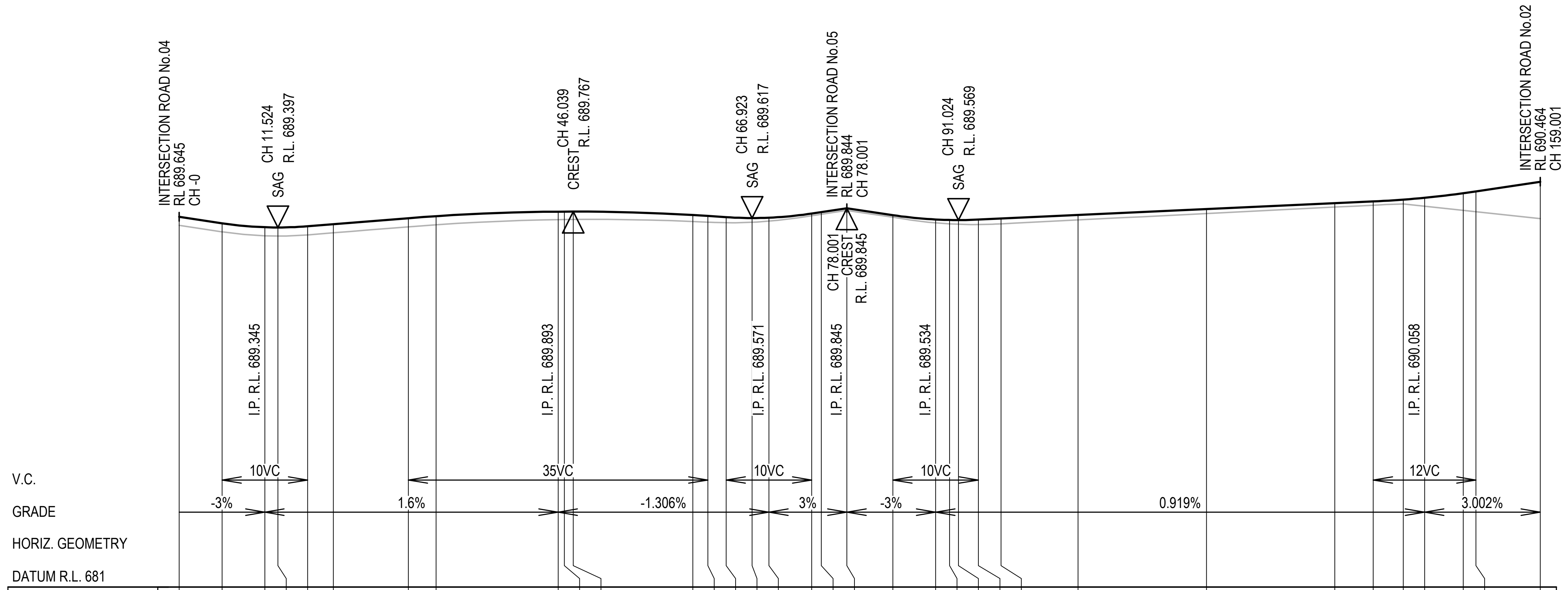
Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 06 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	315	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-315.dwg

LEGEND

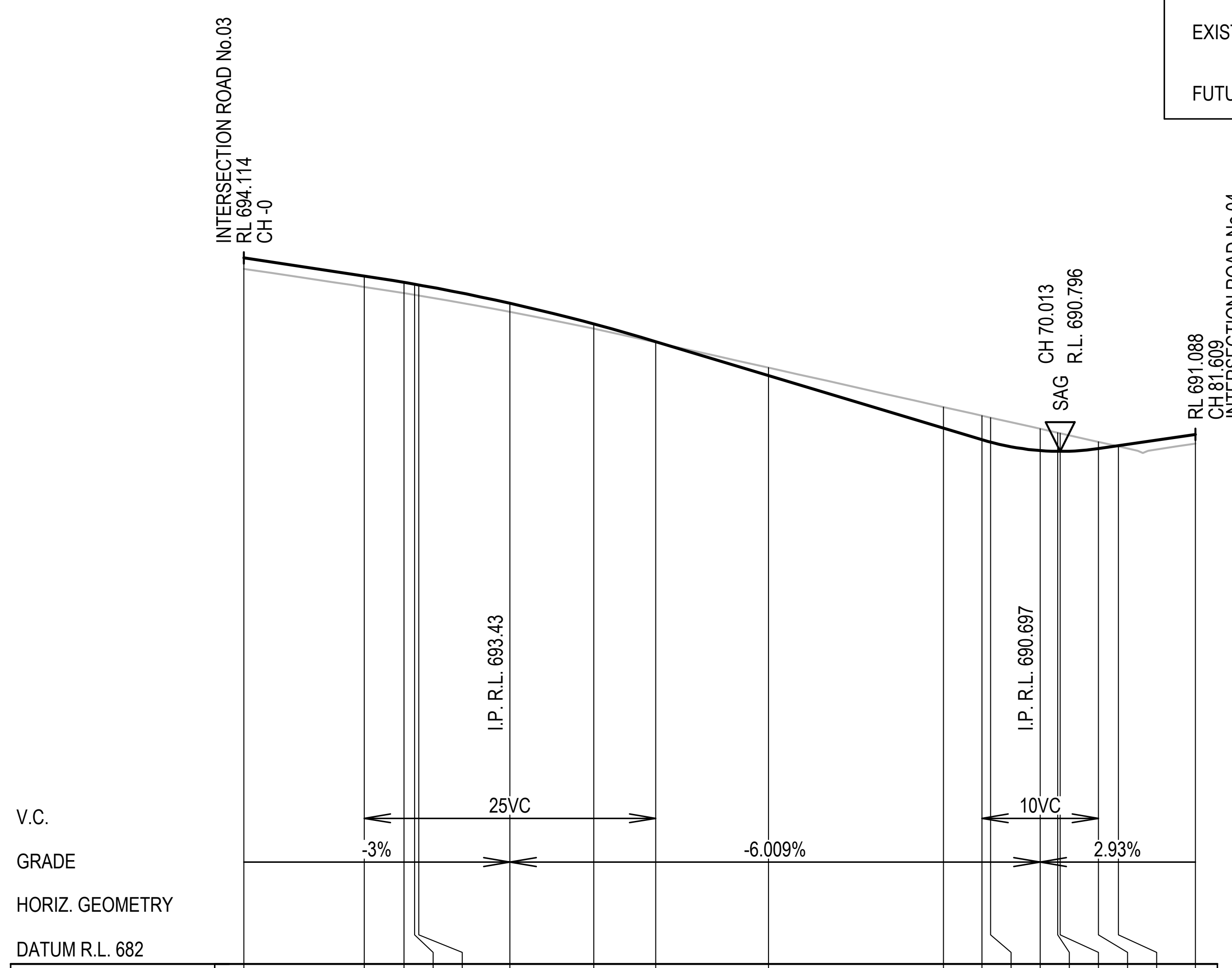
FINISHED DESIGN SURFACE	▬
EXISTING SURFACE	─
FUTURE SURFACE	– – –



W.A.E.																																		
DESIGN LEVEL	689.645	689.495	689.402	689.397	689.425	689.473	689.613	689.66	689.766	689.767	689.767	689.686	689.664	689.637	689.617	689.625	689.721	689.755	689.845	689.684	689.583	689.571	689.569	689.58	689.604	689.686	689.824	689.962	690.003	690.046	690.09	690.196	690.239	690.464
BEW CC LEVEL		689.294	689.201	689.196	689.223	689.271	689.411	689.459	689.578	689.581	689.582	689.535	689.519	689.506	689.517	689.545	689.672	689.705	689.795	689.634	689.505	689.479	689.472	689.465	689.482	689.572	689.722	689.872	689.917	689.944	689.891	689.795	689.763	689.603
CHAINAGE	-0	5.002	10.002	11.524	15	18	26.765	30	44.265	45	46.039	60	61.765	63.891	66.923	68.891	73.891	75	78.001	83.369	88.369	90	91.024	93.369	96.001	105	120	135	139.488	143.001	145.488	150	151.488	159.001

LONGITUDINAL SECTION - ROAD No.06

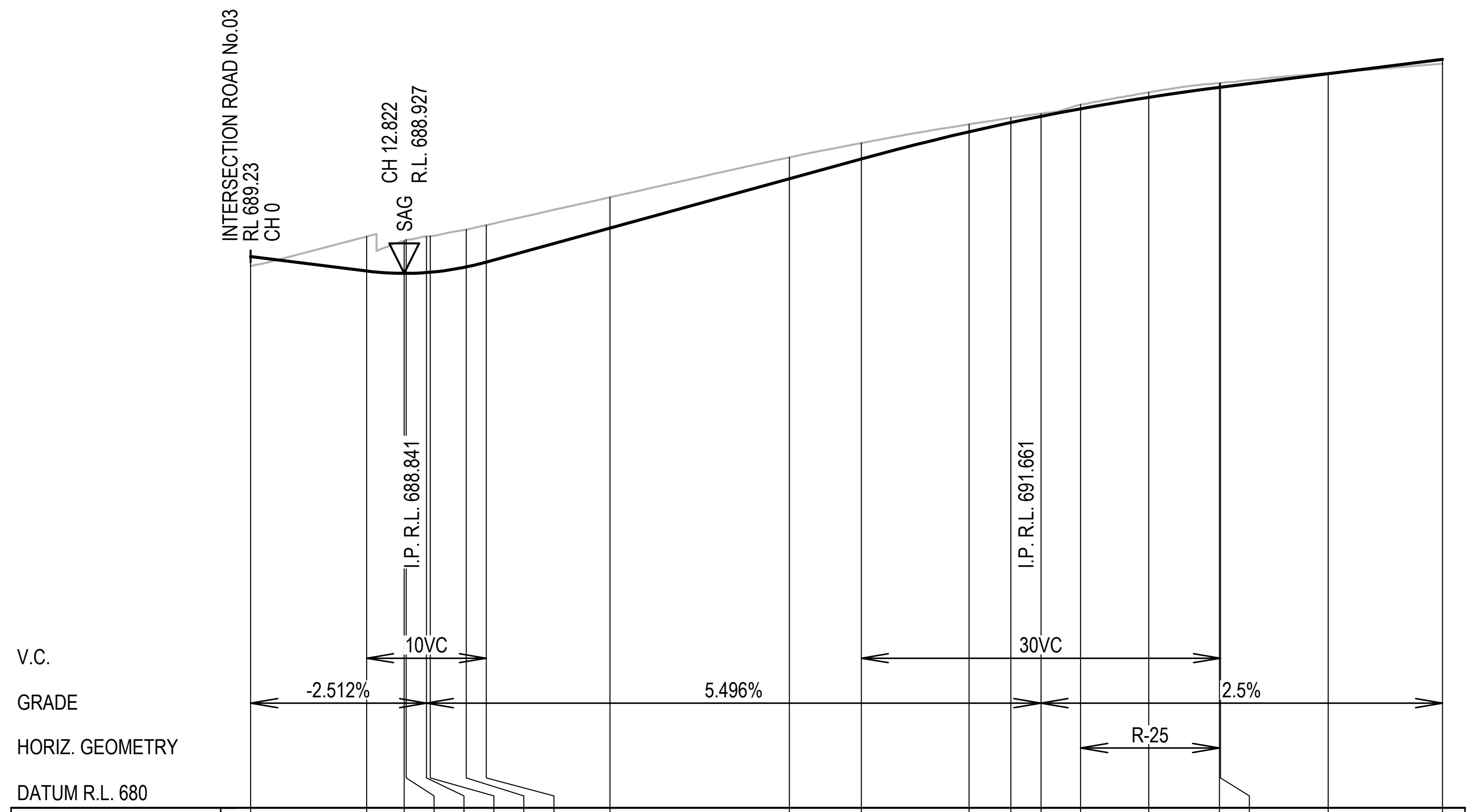
SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.																		
DESIGN LEVEL	694.114	693.805	693.696	693.664	693.651	693.336	692.981	692.679	692.097	691.195	690.998	690.955	690.809	690.796	690.796	690.844	690.894	691.087
BEW CC LEVEL	693.927	693.617	693.51	693.48	693.468	693.189	692.9	692.667	692.231	691.556	691.408	691.374	691.183	691.115	691.106	690.958	690.882	690.928
CHAINAGE	0	10.316	13.725	14.64	15	22.816	30	35.316	45	60	63.291	64.046	68.291	69.803	70.013	73.291	75	81.609

LONGITUDINAL SECTION - ROAD No.07

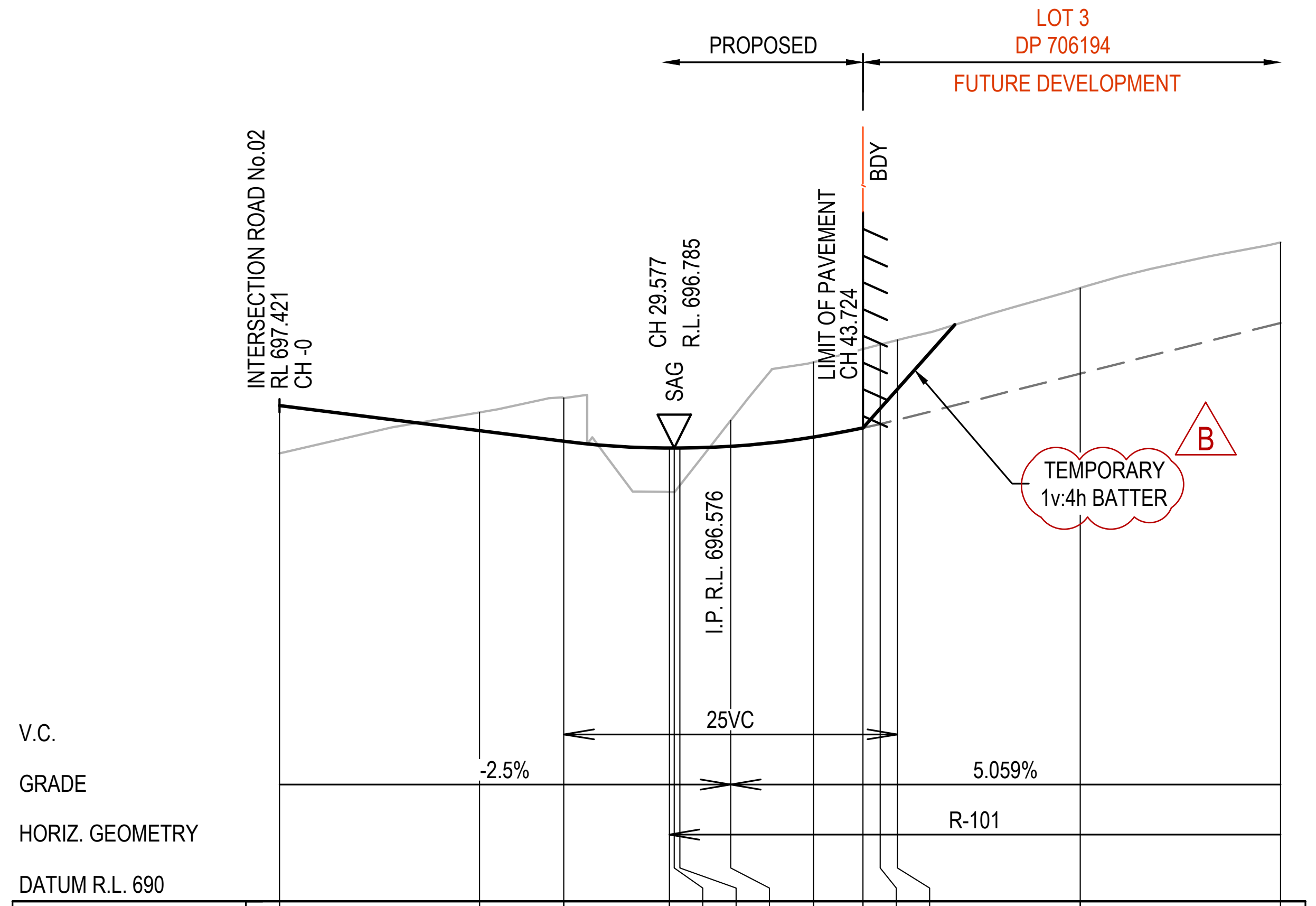
SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.																				
DESIGN LEVEL	689.21	688.967	688.927	688.927	688.941	688.946	689.035	689.116	689.683	690.507	690.837	691.291	691.446	691.549	691.676	691.868	692.034	692.036	692.261	692.5
BEW CC LEVEL	689.05	689.543	689.471	689.488	689.544	689.549	689.658	689.734	690.198	690.865	691.104	691.418	691.526	691.596	691.747	691.95	692.103	692.105	692.274	692.431
CHAINAGE	0	9.685	12.822	13	14.685	15	18	19.685	30	45	51.003	60	63.504	66.003	69.32	75	80.912	81.003	90	99.544

LONGITUDINAL SECTION - ROAD No.08

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.													
DESIGN LEVEL	697.421	697.046	696.888	696.785	696.785	696.785	696.812	696.95	697.087	697.144	697.208	697.901	698.659
BEW CC LEVEL		697.32	697.537	696.128	696.127	696.229	697.203	698.073	698.269	698.336	698.404	699.182	699.863
CHAINAGE	-0	15	21.309	29.217	29.577	30	33.809	40.022	43.724	45	46.309	60	75

LONGITUDINAL SECTION - ROAD No.09

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 07 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	316	B

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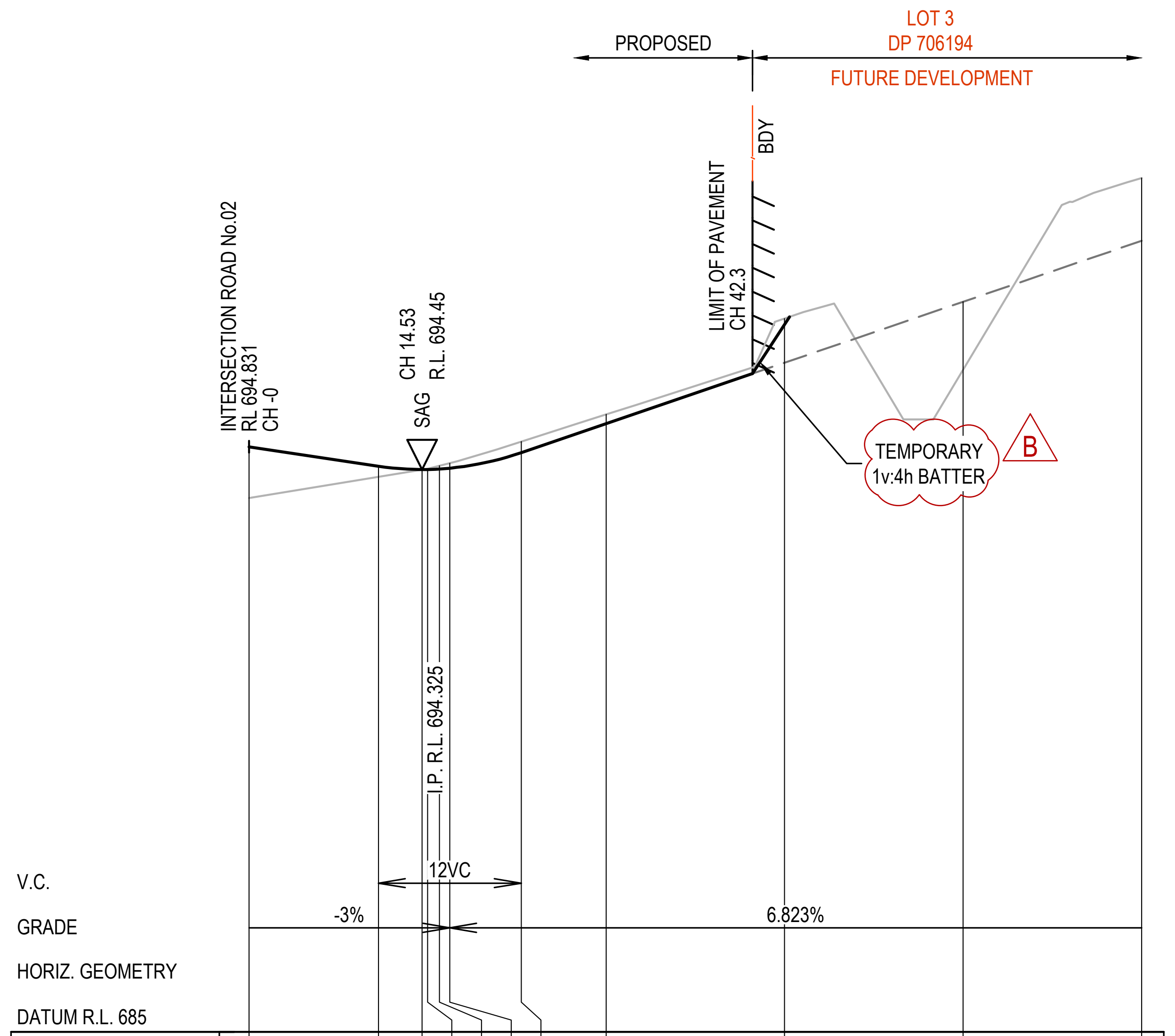
LEGEND

FINISHED DESIGN SURFACE ——

EXISTING SURFACE ——

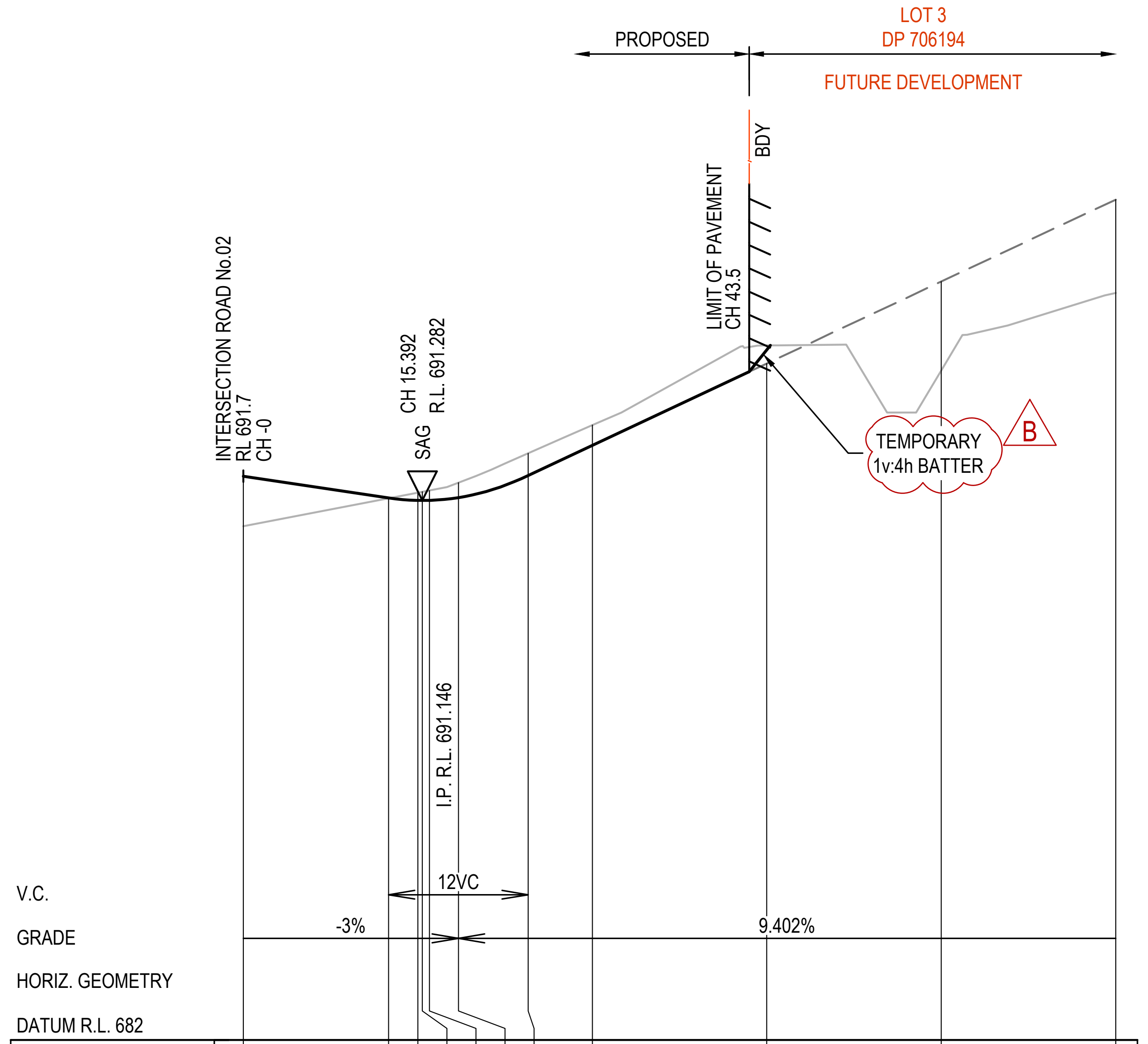
FUTURE SURFACE — — —



W.A.E.											
DESIGN LEVEL	694.831	694.505	694.45	694.451	694.459	694.472	694.735	695.221	696.245	697.268	698.292
BEW CC LEVEL		694.327	694.448	694.463	694.512	694.557	694.918	695.375	696.987	696.128	699.349
CHAINAGE	-0	10.866	14.53	15	16	16.866	22.866	30	45	60	75

LONGITUDINAL SECTION - ROAD No.10

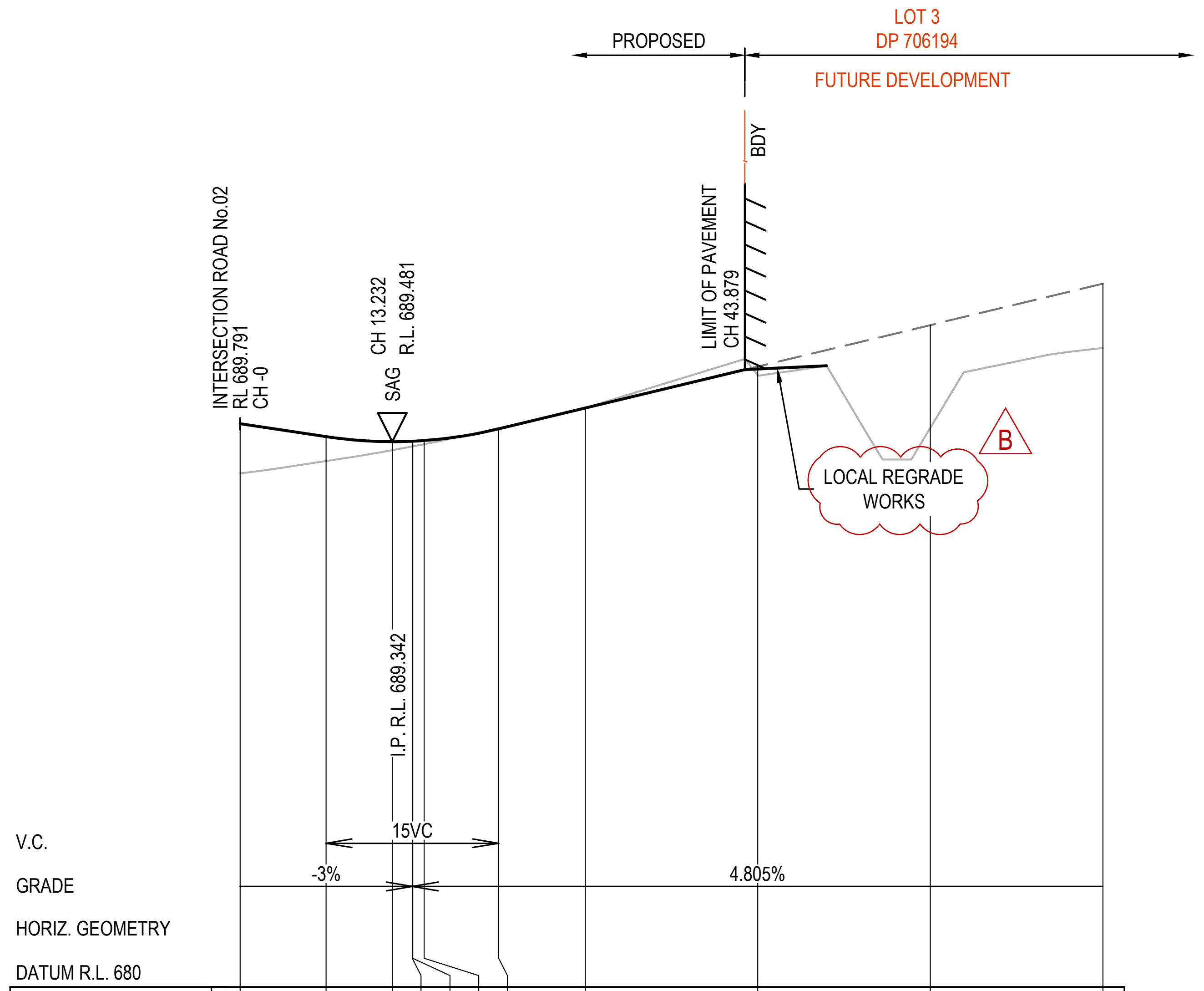
SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.											
DESIGN LEVEL	691.7	691.326	691.283	691.282	691.284	691.332	691.71	692.228	693.638	695.049	696.459
BEW CC LEVEL		691.32	691.417	691.432	691.455	691.588	692.093	692.578	693.95	693.517	694.852
CHAINAGE	-0	12.489	15	15.392	16	18.489	24.489	30	45	60	75

LONGITUDINAL SECTION - ROAD No.11

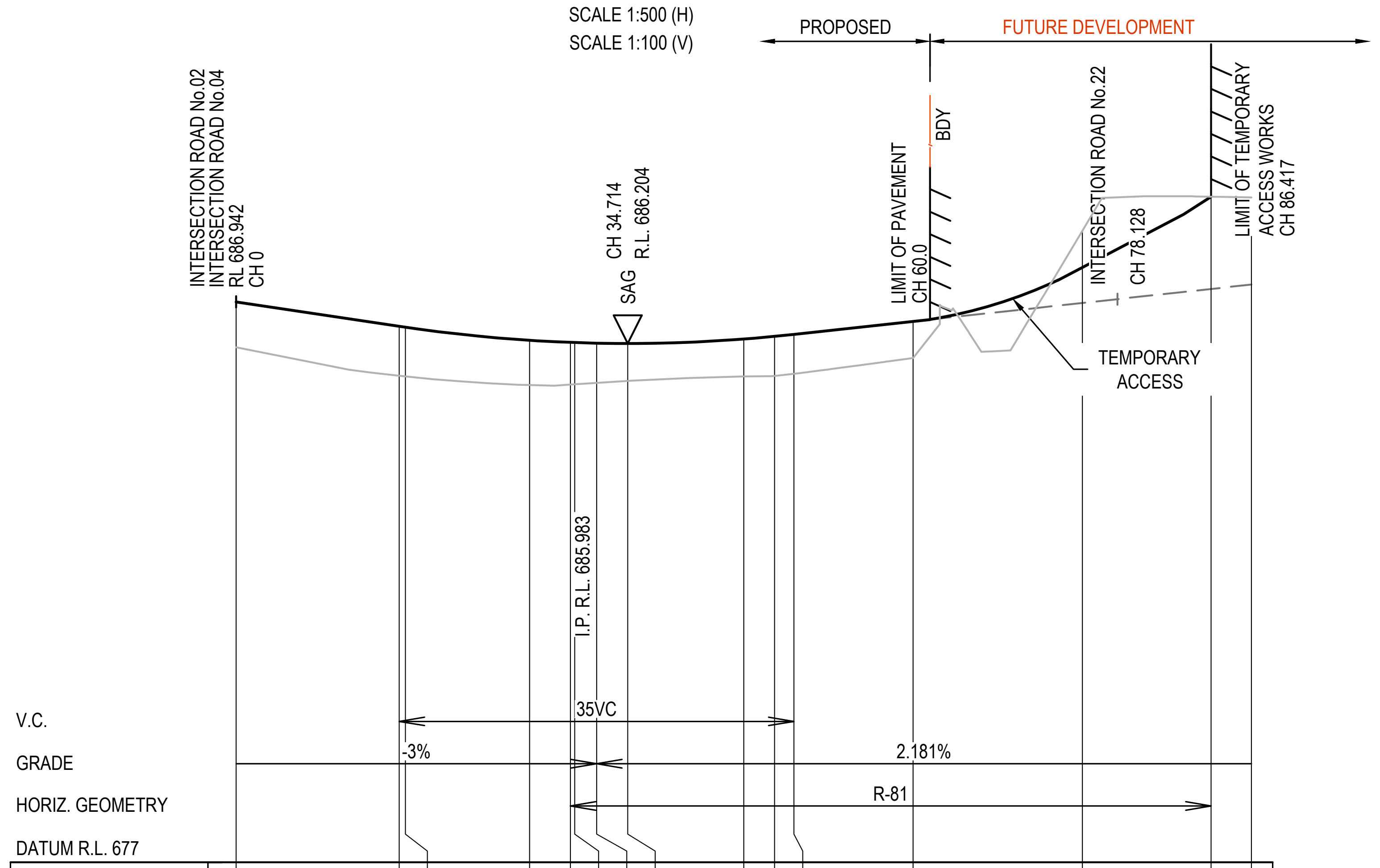
SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.											
DESIGN LEVEL	689.791	689.567	689.481	689.488	689.489	689.501	689.702	690.064	690.785	691.506	692.227
BEW CC LEVEL		689.142	689.332	689.396	689.397	689.436	689.713	690.067	690.639	689.72	691.107
CHAINAGE	-0	7.466	13.232	14.966	15	16	22.466	30	45	60	75

LONGITUDINAL SECTION - ROAD No.12

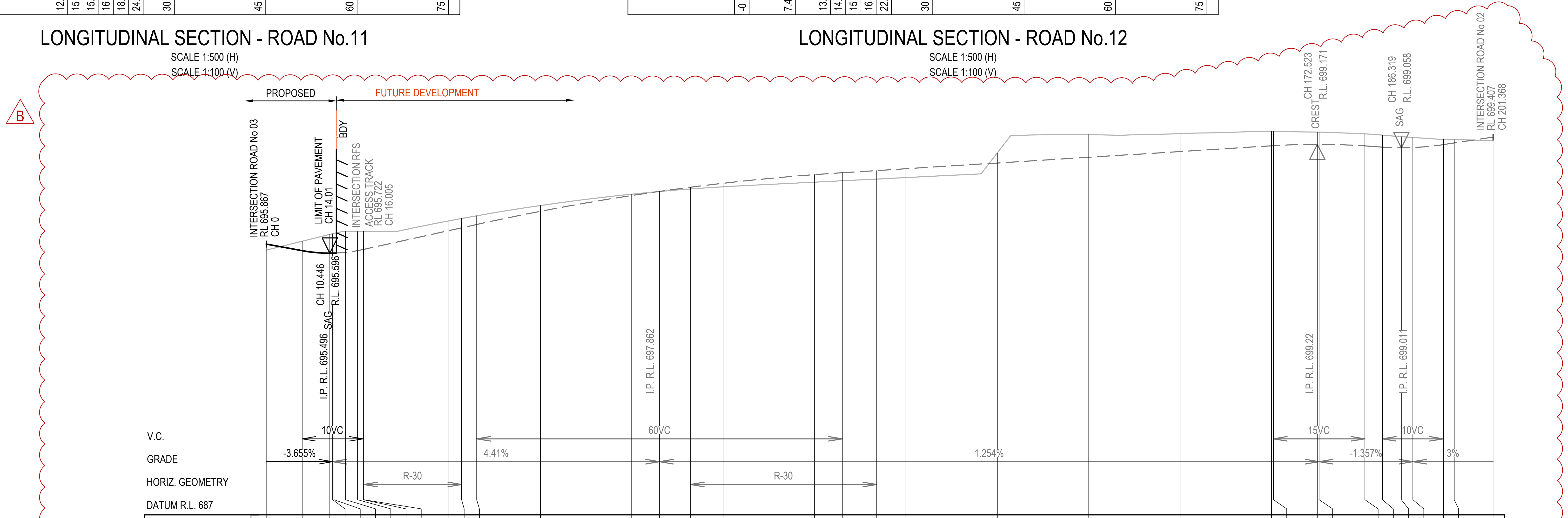
SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.															
DESIGN LEVEL	686.942	686.508	686.492	686.261	686.224	686.221	686.21	686.204	686.283	686.33	686.365	686.595	686.922	687.171	687.25
BEW CC LEVEL	686.134	685.631	685.618	685.466	685.475	685.48	685.507	685.54	685.618	685.626	685.666	685.946	688.203	688.808	688.795
CHAINAGE	0	14.447	15	25.999	29.631	30	31.947	34.714	45	47.726	49.447	60	75	86.417	90

LONGITUDINAL SECTION - ROAD No.13

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.	DESIGN LEVEL	EXISTING LEVEL	CHAINAGE
	695.895	695.694	0
	695.679	695.989	5.914
	695.596	696.212	10.446
	695.597	696.233	10.914
	695.598	696.242	11.112
	695.623	696.305	13.029
	695.68	696.307	15
	695.717	696.308	15.914
	695.721	696.308	16.005
	696.338	696.657	30
	696.43	696.735	32.081
	696.539	696.824	34.557
	696.971	697.161	45
	697.491	697.534	60
	697.626	697.621	64.557
	697.763	697.704	69.633
	697.893	697.776	75
	698.176	697.928	90
	698.239	697.975	94.557
	698.309	698.03	100.204
	698.37	698.078	105
	698.558	698.89	120
	698.746	699.492	135
	698.934	699.523	150
	699.122	699.594	165
	699.126	699.593	165.318
	699.171	699.572	172.523
	699.171	699.571	172.818
	699.123	699.518	180
	699.118	699.515	180.318
	699.079	699.474	183.205
	699.058	699.421	186.319
	699.066	699.396	188.205
	699.161	699.333	193.205
	699.215	699.327	195
	699.406	699.287	201.368

LONGITUDINAL SECTION - ROAD No.14

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR **CONSTRUCTION CERTIFICATE**

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

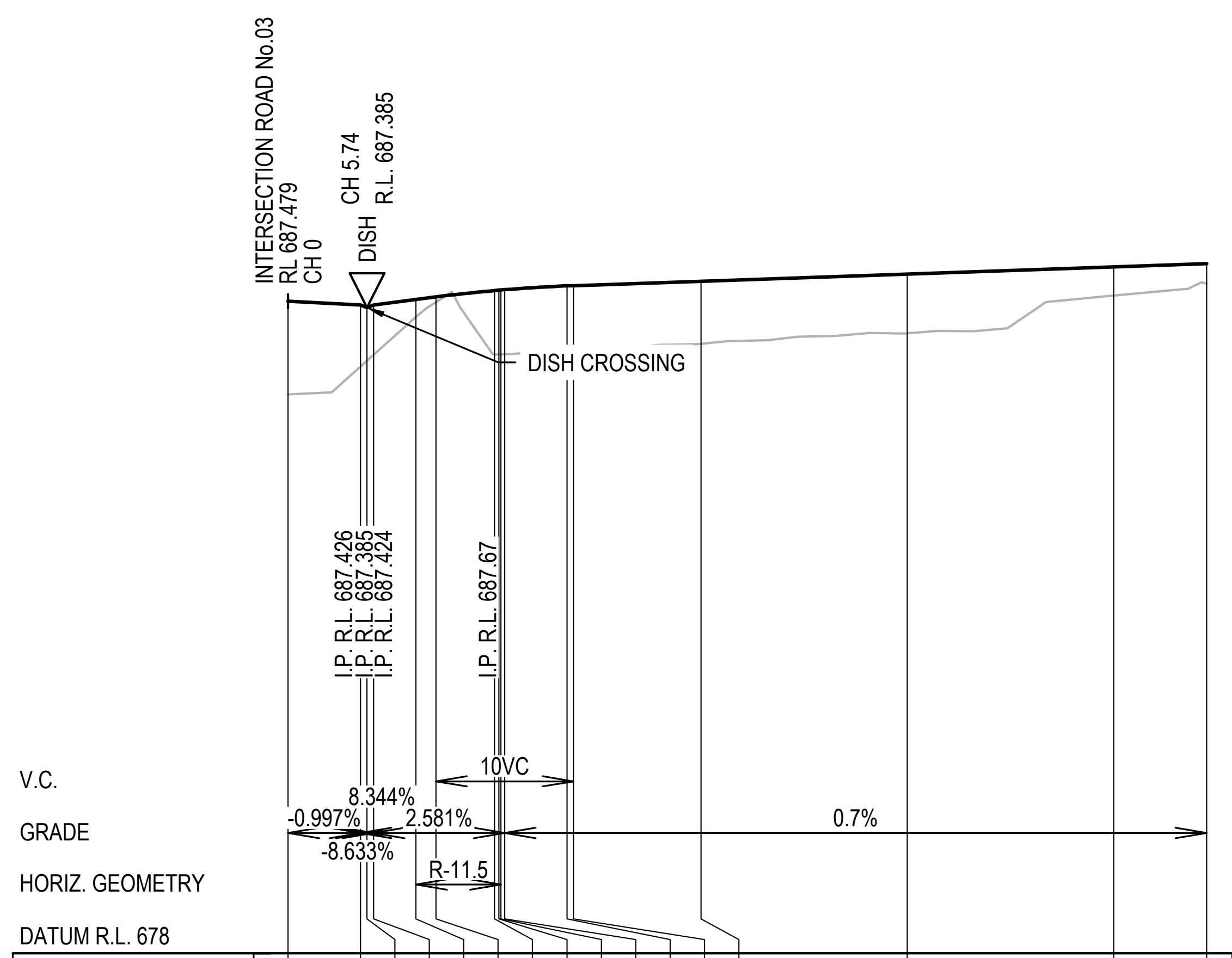
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 08 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	317	B

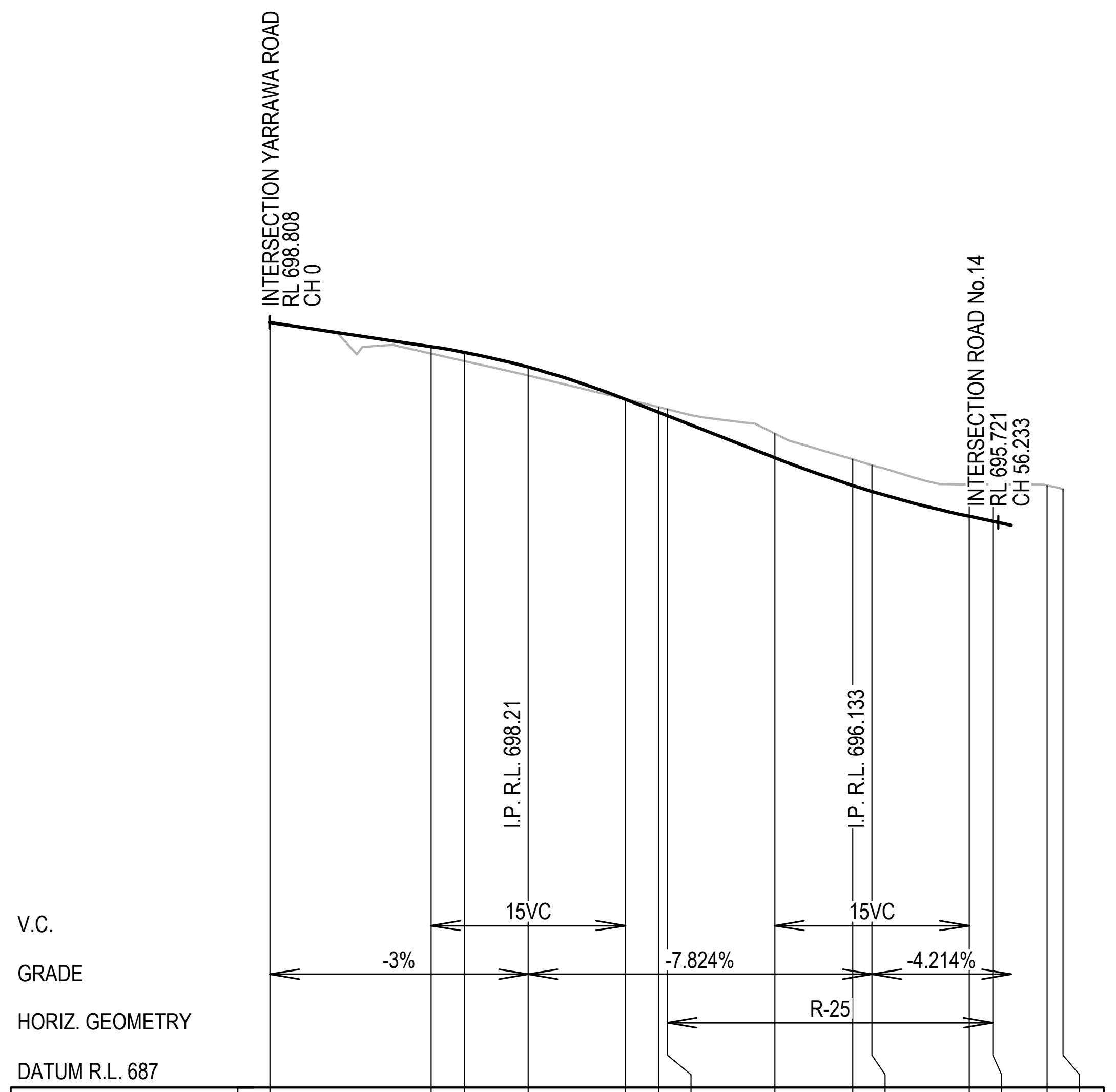
LEGEND	
FINISHED DESIGN SURFACE	━━
EXISITING SURFACE	──
FUTURE SURFACE	— — —



W.A.E.																
DESIGN LEVEL	687.479	687.426	687.385	687.424	687.504	687.541	687.634	687.639	687.642	687.646	687.701	687.705	687.77	687.875	687.98	688.027
BEW CC LEVEL	686.125	686.528	686.613	686.697	687.249	687.482	686.703	686.703	686.704	686.708	686.77	686.777	686.861	687.012	687.563	687.735
CHAINAGE	0	5.263	5.74	6.209	9.293	10.741	15	15.316	15.463	15.741	20.263	20.741	30	45	60	66.747

LONGITUDINAL SECTION - ROAD No.15

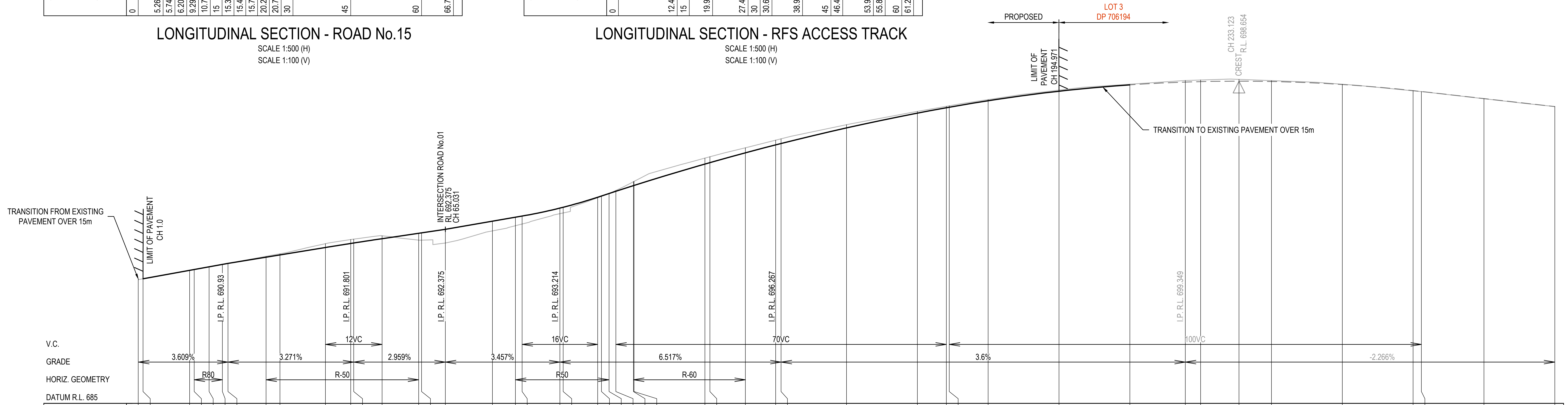
SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.														
DESIGN LEVEL	698.808	698.435	698.348	698.119	697.623	697.423	697.369	696.72	696.293	696.201	695.817	695.74		
BEW CC LEVEL	698.813	698.328	698.213	697.988	697.625	697.501	697.468	697.092	696.697	696.605	696.31	696.309	696.293	696.237
CHAINAGE	0	12.441	15	19.941	27.441	30	30.686	38.982	45	46.482	53.982	55.814	60	61.233

LONGITUDINAL SECTION - RFS ACCESS TRACK

SCALE 1:500 (H)
SCALE 1:100 (V)



W.A.E.												
DESIGN LEVEL		690.280	690.637	690.672	690.786	690.887	690.93	691.194	691.29	691.605	691.777	691.797
BEW CC LEVEL	690.244	690.280	690.637	690.672	690.786	690.89	690.93	691.234	691.34	691.764	691.944	691.962
CHAINAGE	0	1	10.878	11.851	15	17.809	19.006	27.056	30	39.634	45	45.634

W.A.E.												
DESIGN LEVEL	691.979	692.208	692.226	692.375	692.72	692.888	692.938	693.275	693.311	693.735	693.787	693.892
BEW CC LEVEL	692.11	691.919	691.918	691.796	692.307	692.528	692.6	693.041	693.072	693.711	693.771	693.896
CHAINAGE	51.634	59.383	60	65.031	75	79.874	81.298	89.298	90	97.298	98.096	99.704

W.A.E.												
DESIGN LEVEL	693.986	694.226	694.234	695.141	695.202	695.617	695.954	696.012	696.673	697.298	697.527	697.549
BEW CC LEVEL	694.023	694.395	694.408	695.394	695.452	695.831	696.155	696.213	696.806	697.371	697.588	697.61
CHAINAGE	101.142	104.876	105	120	121.074	128.579	135	136.142	150	165	171.142	171.754

W.A.E.											
DESIGN LEVEL	697.826	698.227	698.497	698.616	698.634	698.654	698.64	698.513	698.255	698.216	697.916	697.576
BEW CC LEVEL	697.873	698.274	698.525	698.681	698.702	698.729	698.678	698.522	698.243	698.208	697.909	697.576
CHAINAGE	180	195	210	221.754	225	233.123	240	255	270	271.754	285	300

LONGITUDINAL SECTION - YARRAWA ROAD

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

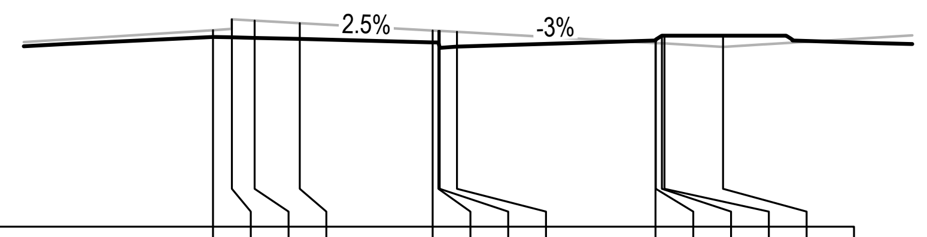
Title:
ROAD LONGITUDINAL
SECTIONS
SHEET 09 OF 09

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	318	B

ROAD No.01

LEGEND

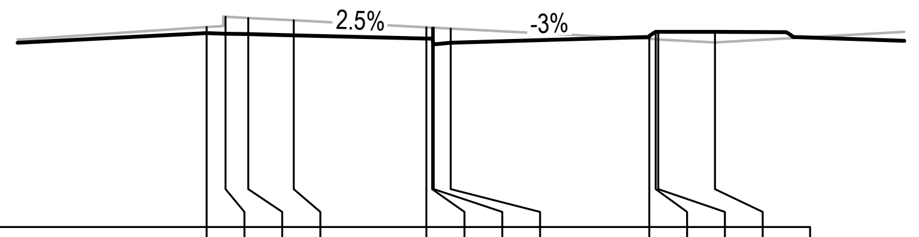
FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⊕



DATUM R.L. 686

W.A.E.													
DESIGN LEVEL	691.01	690.997	690.982	690.952	690.865	690.865	690.715	690.755	690.912	690.942	691.042	691.042	691.042
BEW CC LEVEL	691.187	691.468	691.435	691.368	691.173	691.165	691.163	691.138	690.846	690.846	690.837	690.833	690.747
OFFSET	-13.493	-12.993	-12.393	-11.193	-7.683	-7.533	-7.493	-7.043	-1.793	-1.783	-1.623	-1.553	0

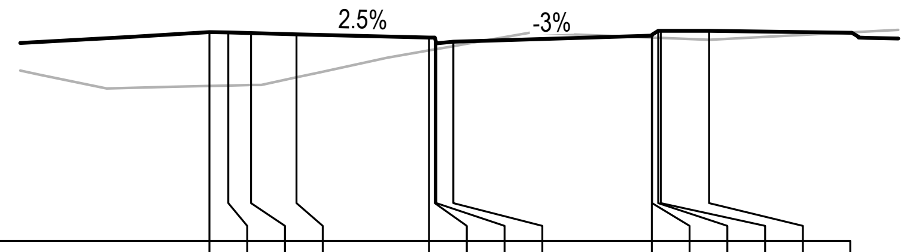
CH 49.11



DATUM R.L. 686

W.A.E.												
DESIGN LEVEL	691.115	691.102	691.087	691.057	690.97	690.97	690.82	690.86	691.017	691.147	691.147	691.147
BEW CC LEVEL	691.272	691.548	691.516	691.454	691.27	691.262	691.26	691.236	690.961	690.952	690.948	690.87
OFFSET	-13.438	-12.938	-12.338	-11.138	-7.628	-7.478	-7.438	-6.988	-1.738	-1.568	-1.498	0

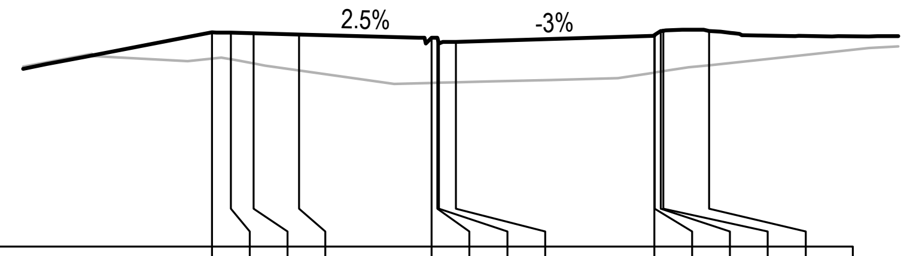
CH 45



DATUM R.L. 686

W.A.E.													
DESIGN LEVEL	691.524	691.511	691.496	691.466	691.379	691.379	691.229	691.269	691.426	691.456	691.556	691.556	691.556
BEW CC LEVEL	690.098	690.109	690.123	690.326	691.039	691.065	691.073	691.152	691.378	691.378	691.372	691.369	691.32
OFFSET	-13.22	-12.72	-12.12	-10.92	-7.41	-7.26	-7.22	-6.77	-1.52	-1.51	-1.35	-1.28	0

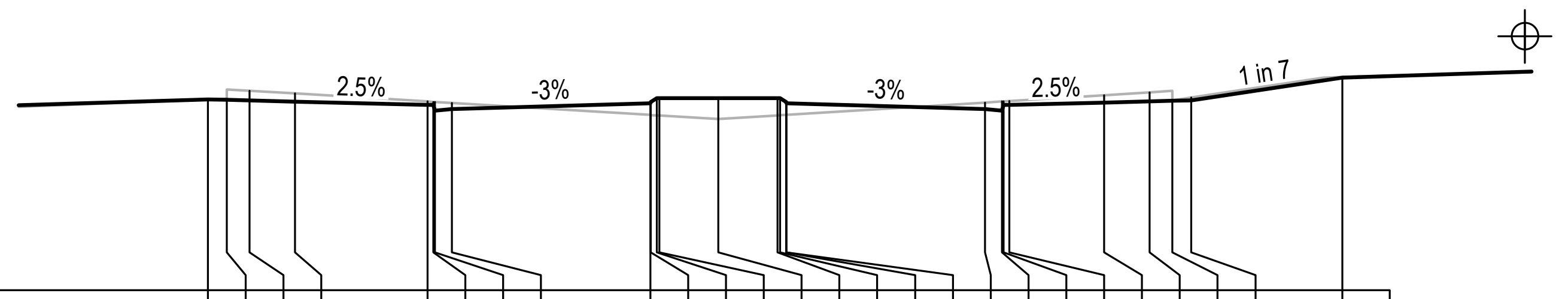
CH 30



DATUM R.L. 686

W.A.E.													
DESIGN LEVEL	691.657	691.644	691.629	691.599	691.511	691.511	691.361	691.401	691.559	691.589	691.689	691.689	691.689
BEW CC LEVEL	690.962	690.943	690.833	690.65	690.318	690.322	690.323	690.334	690.59	690.592	690.616	690.627	690.785
OFFSET	-13.15	-12.65	-12.05	-10.85	-7.34	-7.19	-7.15	-6.7	-1.45	-1.44	-1.28	-1.21	0

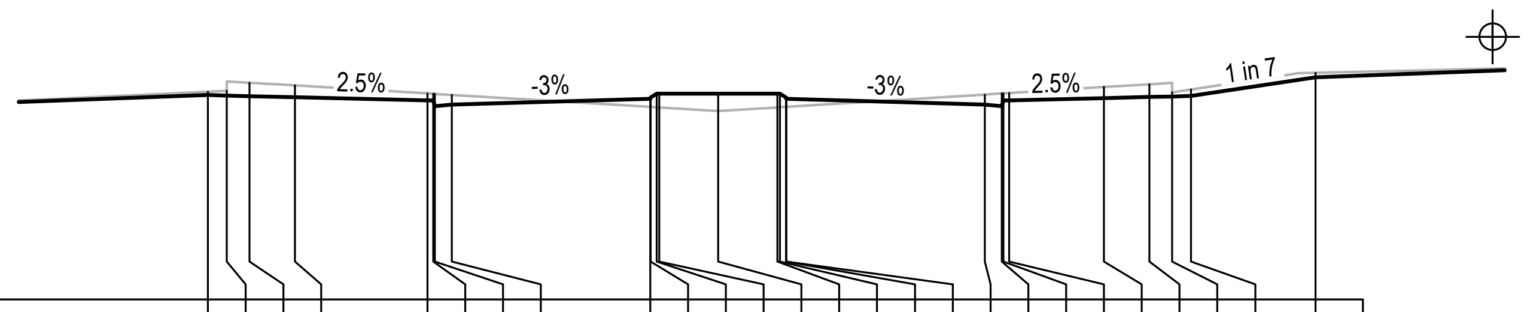
KTP CH 25.434



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	690.039	690.026	690.011	689.981	689.894	689.894	689.744	689.784	689.941	689.971	690.071	690.071	690.071	690.071	690.071	689.971	689.941	689.784	689.744	689.894	689.894	689.956	689.986	690.001	690.014	690.614
BEW CC LEVEL	690.035	690.054	690.268	690.196	689.984	689.975	689.973	689.945	689.629	689.628	689.618	689.614	689.52	689.617	689.621	689.631	689.632	689.957	689.985	689.988	689.997	690.153	690.227	690.015	690.09	690.627
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

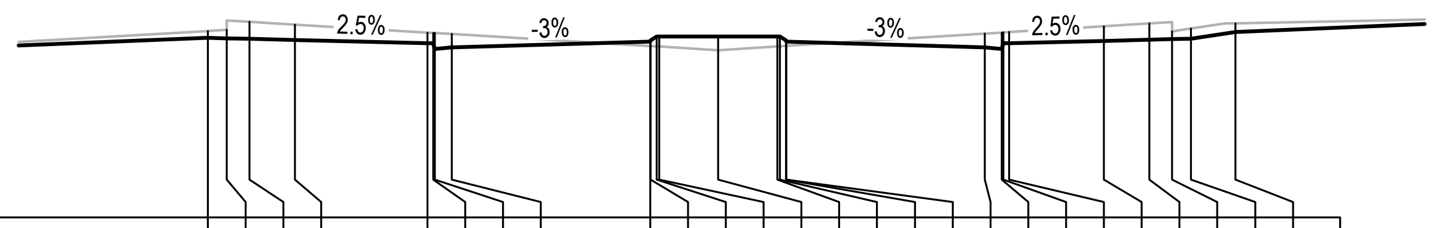
CH 90



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	690.393	690.38	690.365	690.335	690.247	690.247	690.097	690.137	690.295	690.325	690.425	690.425	690.425	690.425	690.425	690.325	690.295	690.137	690.097	690.247	690.247	690.31	690.34	690.355	690.368	690.862
BEW CC LEVEL	690.481	690.504	690.718	690.646	690.434	690.425	690.423	690.395	690.079	690.078	690.068	690.064	689.97	690.067	690.071	690.081	690.082	690.407	690.435	690.438	690.447	690.603	690.677	690.465	690.54	690.978
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	15.795

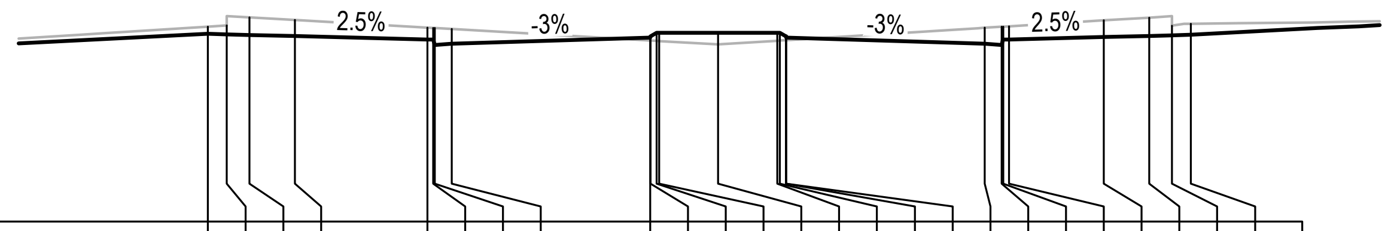
CH 75



DATUM R.L. 686

W.A.E.																										
DESIGN LEVEL	690.746	690.734	690.719	690.689	690.601	690.601	690.451	690.491	690.649	690.679	690.779	690.779	690.779	690.779	690.779	690.679	690.649	690.491	690.451	690.601	690.601	690.664	690.694	690.709	690.721	690.899
BEW CC LEVEL	690.926	690.954	691.168	691.096	690.884	690.875	690.873	690.845	690.529	690.528	690.518	690.514	690.42	690.517	690.521	690.531	690.532	690.857	690.885	690.888	690.897	691.053	691.127	690.915	690.99	691.131
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	13.682

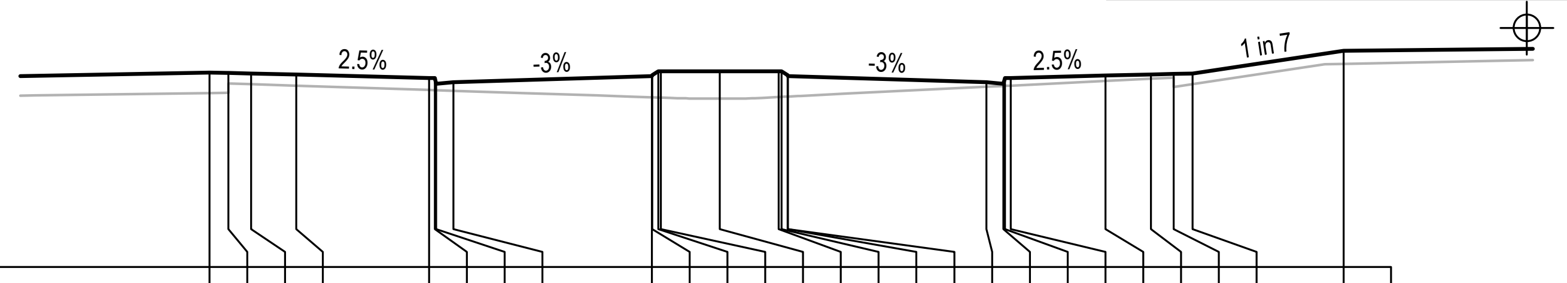
CH 60



DATUM R.L. 686

W.A.E.																									
DESIGN LEVEL	690.947	690.935	690.92	690.89	690.802	690.802	690.652	690.692	690.85	690.88	690.98	690.98	690.98	690.98	690.98	690.88	690.85	690.692	690.652	690.802	690.802	690.865	690.895	690.91	690.922
BEW CC LEVEL	691.137	691.168	691.383	691.314	691.113	691.104	691.102	691.076	690.775	690.774	690.765	690.761	690.672	690.768	690.773	690.783	690.783	691.109	691.137	691.139	691.149	691.304	691.379	691.166	691.216
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

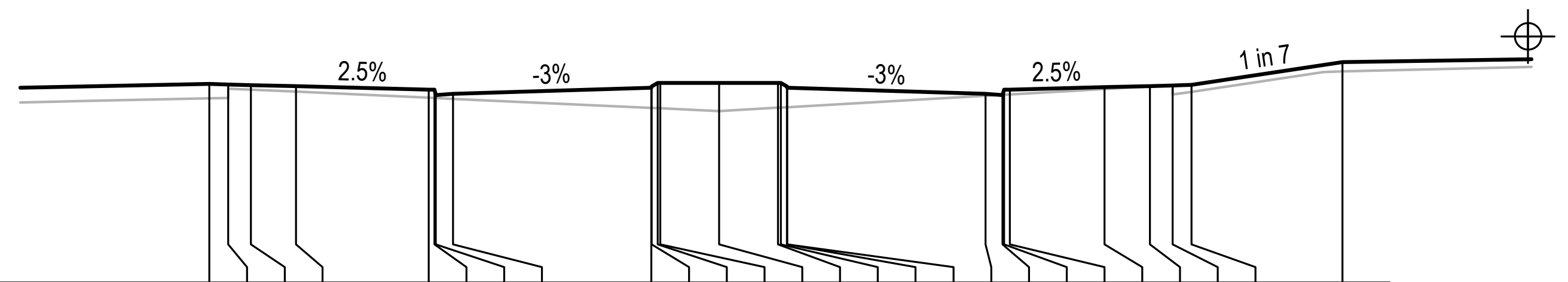
KTP CH 51.616



DATUM R.L. 684

W.A.E.																										
DESIGN LEVEL	689.135	689.123	689.108	689.078	688.99	688.99	688.84	688.88	689.037	689.067	689.167	689.167	689.167	689.167	689.167	689.067	689.037	688.88	688.84	688.99	688.99	689.053	689.083	689.098	689.11	689.71
BEW CC LEVEL	688.591	688.598	688.828	688.789	688.673	688.668	688.667	688.652	688.48	688.48	688.475	688.472	688.445	688.488	688.492	688.5	688.5	688.757	688.779	688.781	688.789	688.911	688.97	688.749	688.824	689.36
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

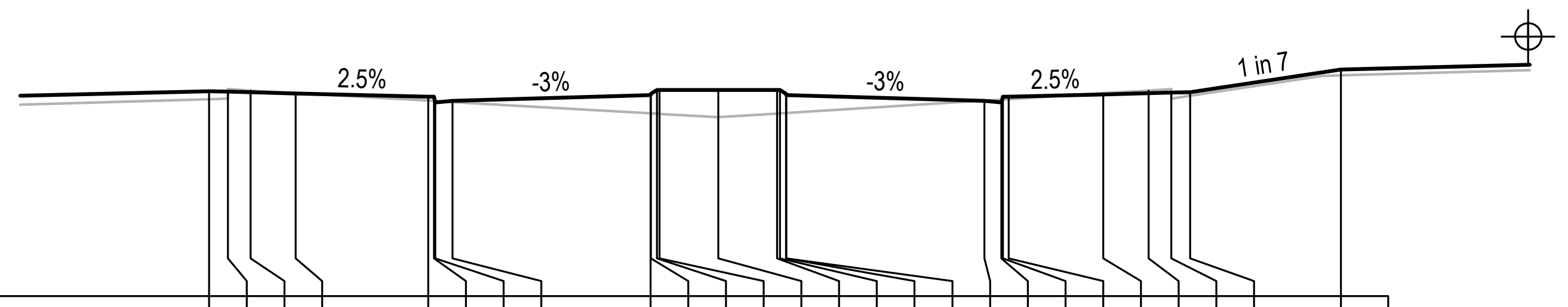
KTP CH 145.708



DATUM R.L. 684

W.A.E.																										
DESIGN LEVEL	689.242	689.23	689.215	689.185	689.097	689.097	688.947	688.987	689.145	689.175	689.275	689.275	689.275	689.275	689.275	689.175	689.145	688.987	688.947	689.097	689.097	689.16	689.19	689.205	689.217	689.817
BEW CC LEVEL	688.861	688.871	689.093	689.039	688.878	688.872	688.87	688.849	688.609	688.609	688.602	688.598	688.527	688.616	688.62	688.629	688.63	688.93	688.955	688.958	688.966	689.11	689.178	688.962	689.037	689.574
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

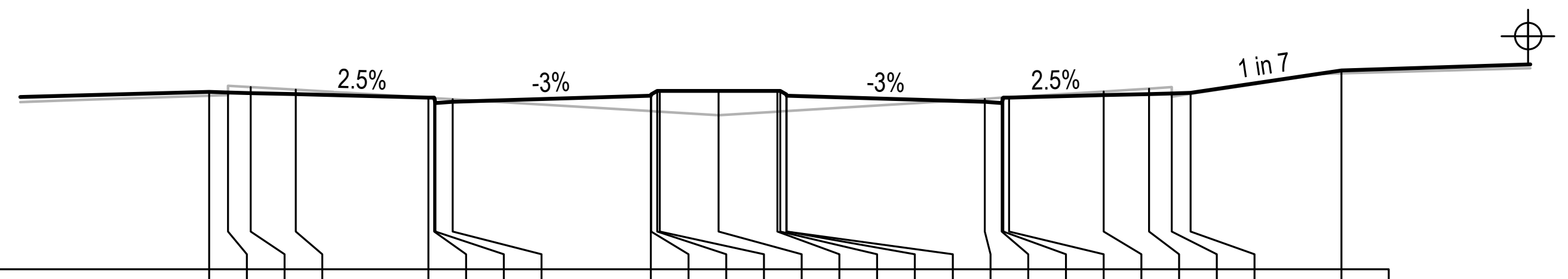
CH 135



DATUM R.L. 684

W.A.E.																										
DESIGN LEVEL	689.425	689.413	689.398	689.368	689.28	689.28	689.13	689.17	689.327	689.357	689.457	689.457	689.457	689.457	689.457	689.357	689.327	689.17	689.13	689.28	689.28	689.343	689.373	689.388	689.4	690
BEW CC LEVEL	689.216	689.23	689.446	689.378	689.177	689.169	689.167	689.141	688.841	688.841	688.832	688.828	688.738	688.835	688.84	688.85	688.85	689.176	689.204	689.206	689.216	689.371	689.446	689.233	689.308	689.847
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

CH 120



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	689.695	689.682	689.667	689.637	689.549	689.549	689.399	689.439	689.597	689.627	689.727	689.727	689.727	689.727	689.727	689.627	689.597	689.439	689.399	689.549	689.549	689.612	689.642	689.657	689.67	690.27
BEW CC LEVEL	689.596	689.613	689.827	689.754	689.542	689.533	689.531	689.504	689.187	689.186	689.177	689.172	689.078	689.175	689.179	689.189	689.19	689.516	689.544	689.546	689.555	689.711	689.785	689.573	689.648	690.187
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

CH 105

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Disclaimer and Copyright:
ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 01 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	330	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN\0102-CC-Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-330.dwg

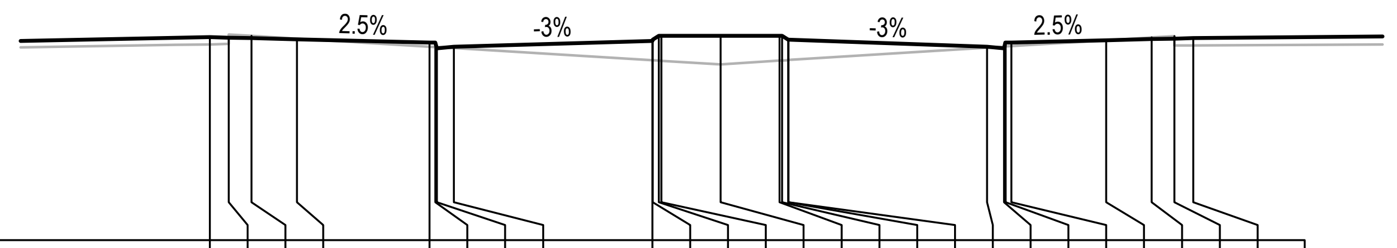
ROAD No.01

LEGEND

FINISHED DESIGN SURFACE ─

EXISTING SURFACE ─

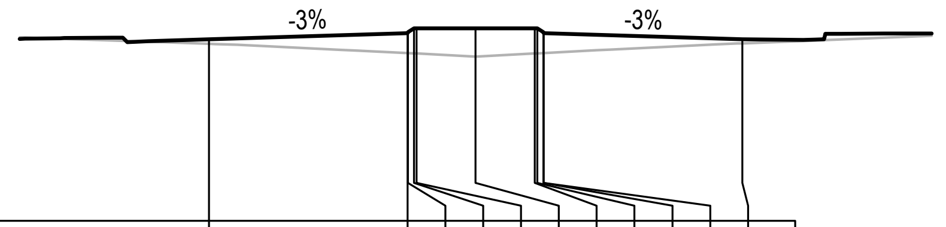
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 683

W.A.E.																									
DESIGN LEVEL	688.353	688.34	688.325	688.295	688.208	688.208	688.058	688.098	688.255	688.285	688.385	688.385	688.385	688.385	688.385	688.285	688.255	688.098	688.058	688.208	688.208	688.27	688.3	688.315	688.328
BEW CC LEVEL	688.164	688.173	688.386	688.314	688.102	688.093	688.091	688.063	687.747	687.746	687.736	687.732	687.638	687.735	687.739	687.749	687.75	688.075	688.103	688.106	688.115	688.271	688.345	688.383	688.135
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

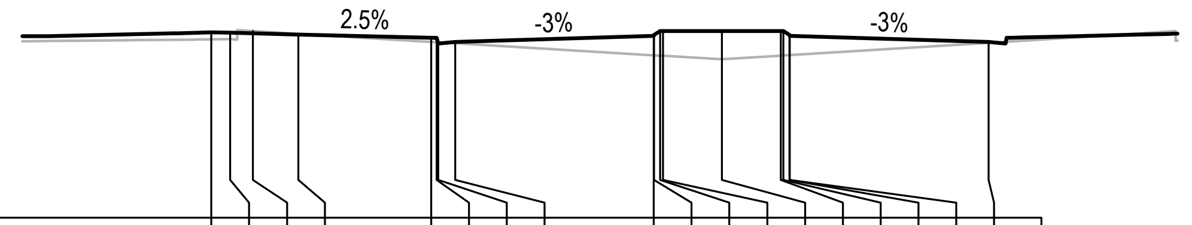
KTP CH 223.926



DATUM R.L. 683

W.A.E.										
DESIGN LEVEL	687.787	687.945	687.975	688.075	688.075	688.075	688.075	688.075	687.975	687.945	687.787
BEW CC LEVEL	687.664	687.42	687.42	687.411	687.408	687.327	687.409	687.413	687.421	687.422	687.675
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

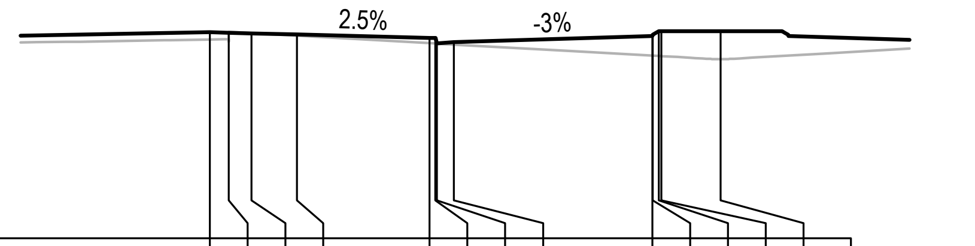
CH 255



DATUM R.L. 683

W.A.E.																		
DESIGN LEVEL	687.908	687.896	687.881	687.851	687.763	687.763	687.613	687.653	687.81	687.84	687.94	687.94	687.94	687.94	687.94	687.84	687.81	687.653
BEW CC LEVEL	687.72	687.726	687.94	687.867	687.655	687.646	687.644	687.617	687.3	687.299	687.29	687.286	687.191	687.288	687.293	687.302	687.303	687.629
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

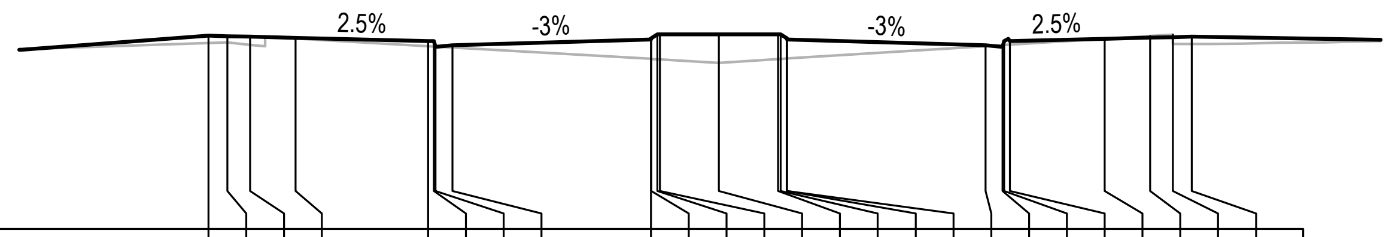
CH 285



DATUM R.L. 683

W.A.E.													
DESIGN LEVEL	688.433	688.421	688.406	688.376	688.288	688.288	688.138	688.178	688.336	688.366	688.466	688.466	688.466
BEW CC LEVEL	688.243	688.193	688.409	688.343	688.147	688.139	688.136	688.111	687.819	687.818	687.809	687.805	687.725
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0

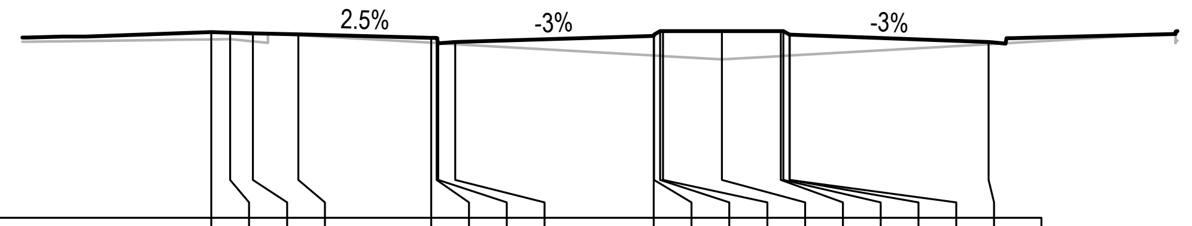
KTP CH 215.889



DATUM R.L. 683

W.A.E.																									
DESIGN LEVEL	688.093	688.081	688.066	688.036	687.948	687.948	687.798	687.838	687.995	688.025	688.125	688.125	688.125	688.125	688.125	688.025	687.995	687.838	687.798	687.948	687.948	688.011	688.041	688.056	688.068
BEW CC LEVEL	687.896	687.913	687.853	688.017	687.817	687.808	687.806	687.78	687.481	687.48	687.471	687.467	687.378	687.475	687.479	687.489	687.49	687.816	687.843	687.846	687.855	688.011	688.085	688.123	687.875
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

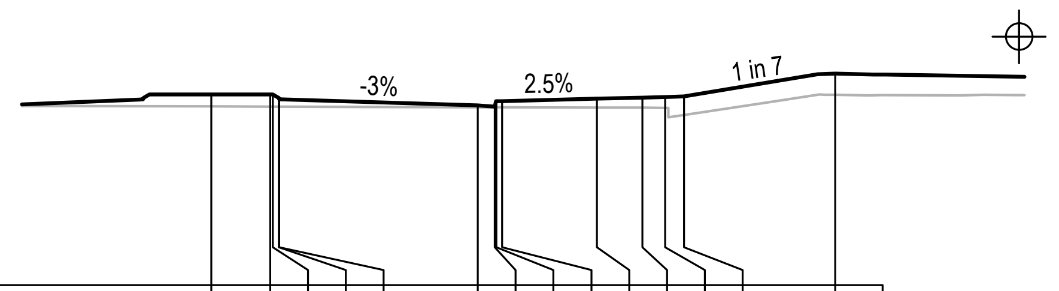
KTP CH 249.908



DATUM R.L. 683

W.A.E.																		
DESIGN LEVEL	687.895	687.883	687.868	687.838	687.75	687.75	687.6	687.64	687.798	687.828	687.928	687.928	687.928	687.928	687.928	687.828	687.798	687.64
BEW CC LEVEL	687.706	687.713	687.653	687.818	687.617	687.609	687.607	687.581	687.281	687.281	687.272	687.268	687.179	687.268	687.272	687.281	687.281	687.581
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

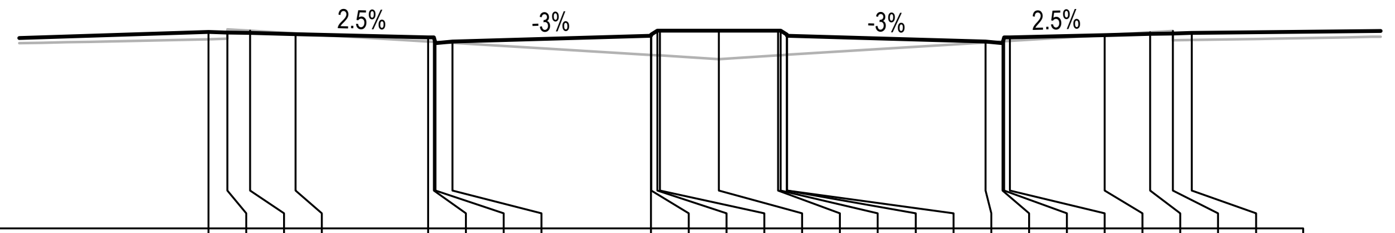
KTP CH 280.908



DATUM R.L. 684

W.A.E.															
DESIGN LEVEL	689.035	689.035	689.035	688.935	688.905	688.747	688.707	688.857	688.857	688.92	688.95	688.965	688.977	689.577
BEW CC LEVEL	688.715	688.71	688.71	688.71	688.71	688.694	688.692	688.692	688.692	688.684	688.68	688.679	688.491	689.022
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

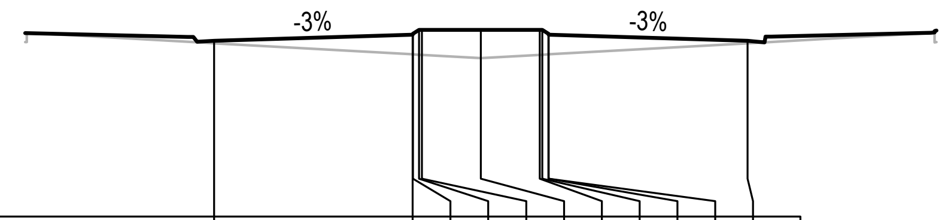
KTP CH 158.99



DATUM R.L. 683

W.A.E.																									
DESIGN LEVEL	688.192	688.18	688.165	688.135	688.047	688.047	687.897	687.937	688.095	688.125	688.225	688.225	688.225	688.225	688.225	688.125	688.095	687.937	687.897	688.047	688.047	688.11	688.14	688.155	688.167
BEW CC LEVEL	688	688.012	688.226	688.153	687.941	687.932	687.93	687.903	687.586	687.585	687.576	687.571	687.477	687.574	687.578	687.588	687.589	687.915	687.943	687.945	687.954	688.11	688.185	688.222	687.98
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

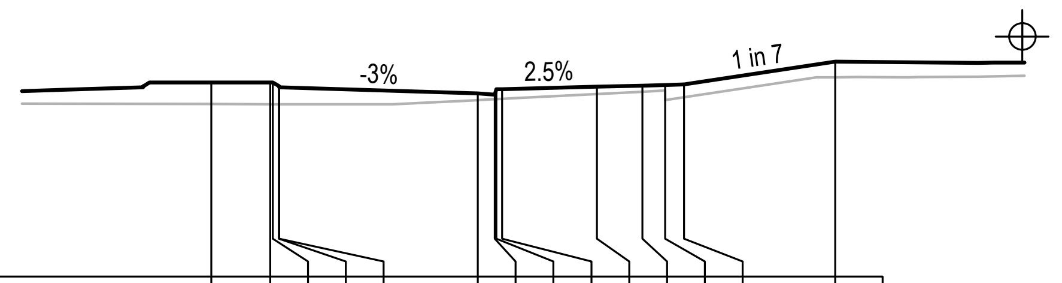
CH 240



DATUM R.L. 683

W.A.E.										
DESIGN LEVEL	687.637	687.795	687.825	687.925	687.925	687.925	687.925	687.925	687.825	687.795	687.637
BEW CC LEVEL	687.572	687.277	687.277	687.268	687.264	687.176	687.264	687.268	687.276	687.277	687.571
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

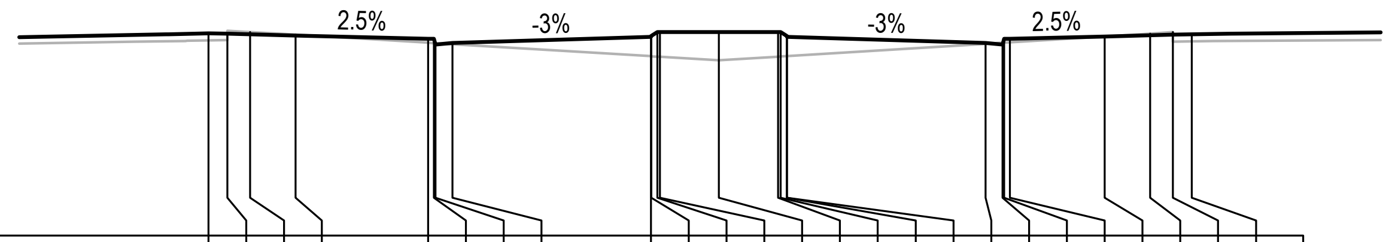
CH 277.931



DATUM R.L. 684

W.A.E.														
DESIGN LEVEL	689.125	689.125	689.125	689.025	688.995	688.837	688.797	688.947	688.947	689.01	689.04	689.055	689.067	689.667
BEW CC LEVEL	688.552	688.549	688.548	688.548	688.548	688.656	688.679	688.681	688.689	688.816	688.877	688.658	688.733	689.26
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

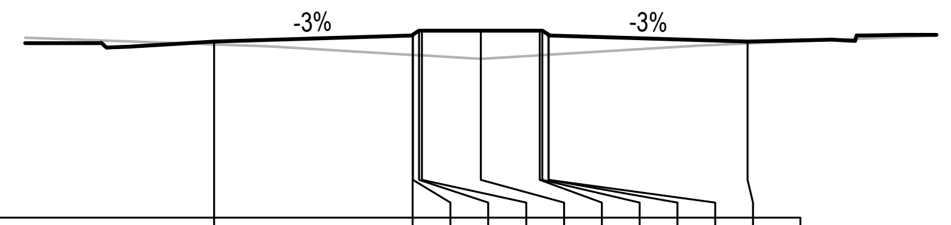
CH 150



DATUM R.L. 683

W.A.E.																									
DESIGN LEVEL	688.342	688.33	688.315	688.285	688.197	688.197	688.047	688.087	688.245	688.275	688.375	688.375	688.375	688.375	688.375	688.275	688.245	688.087	688.047	688.197	688.197	688.26	688.29	688.305	688.317
BEW CC LEVEL	688.153	688.162	688.376	688.303	688.091	688.082	688.08	688.053	687.736	687.735	687.726	687.721	687.627	687.724	687.728	687.738	687.739	688.065	688.093	688.095	688.104	688.26	688.335	688.372	688.13
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 225



DATUM R.L. 683

W.A.E.										
DESIGN LEVEL	687.657	687.815	687.845	687.945	687.945	687.945	687.945	687.945	687.845	687.815	687.657
BEW CC LEVEL	687.58	687.303	687.303	687.293	687.289	687.197	687.291	687.295	687.304	687.305	687.6
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

CH 270

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Disclaimer and Copyright:

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 02 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	331	A

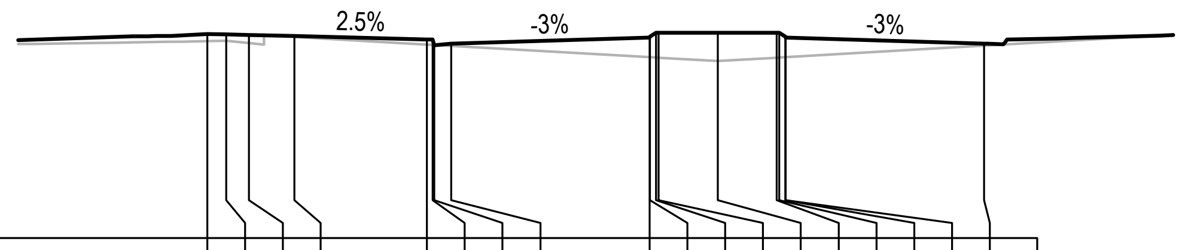
ROAD No.01

LEGEND

FINISHED DESIGN SURFACE

EXISTING SURFACE

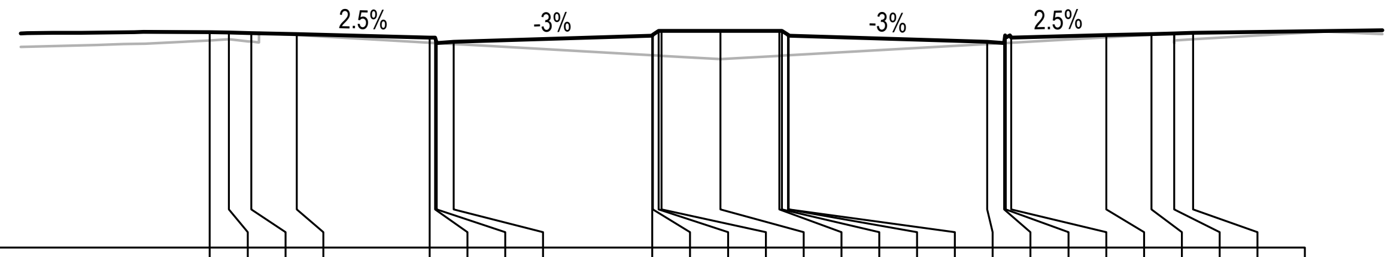
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.



DATUM R.L. 683

W.A.E.																		
DESIGN LEVEL	688.39	688.377	688.362	688.332	688.244	688.244	688.094	688.134	688.292	688.322	688.422	688.422	688.422	688.422	688.422	688.322	688.292	688.134
BEW CC LEVEL	688.198	688.206	688.146	688.311	688.111	688.102	688.1	688.074	687.775	687.774	687.765	687.761	687.672	687.762	687.766	687.775	687.776	688.078
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

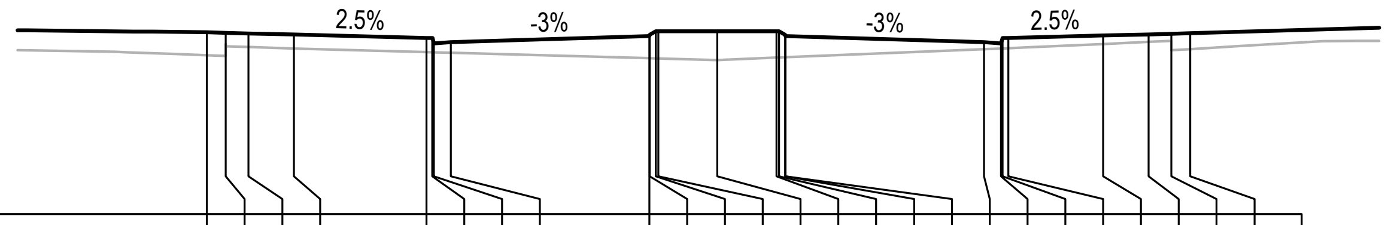
KTP CH 328.91



DATUM R.L. 683

W.A.E.																								
DESIGN LEVEL	688.69	688.677	688.662	688.632	688.544	688.544	688.394	688.434	688.592	688.622	688.722	688.722	688.722	688.722	688.722	688.622	688.592	688.434	688.394	688.544	688.544	688.607	688.637	688.652	688.665
BEW CC LEVEL	688.468	688.496	688.436	688.612	688.411	688.402	688.4	688.374	688.075	688.074	688.065	688.061	687.972	688.061	688.065	688.074	688.075	688.374	688.4	688.402	688.411	688.554	688.622	688.394	688.496
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

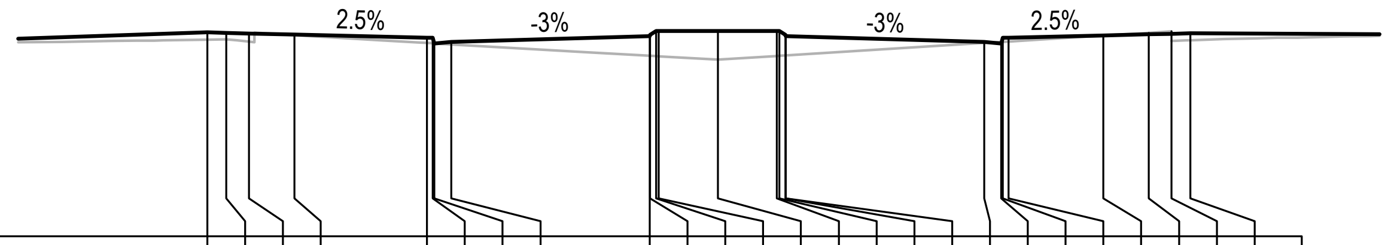
KTP CH 353.91



DATUM R.L. 684

W.A.E.																								
DESIGN LEVEL	688.809	688.797	688.782	688.752	688.664	688.664	688.514	688.554	688.711	688.741	688.841	688.841	688.841	688.841	688.841	688.741	688.711	688.554	688.514	688.664	688.664	688.727	688.757	688.772	688.784
BEW CC LEVEL	688.205	688.243	688.42	688.385	688.284	688.28	688.279	688.267	688.127	688.126	688.122	688.12	688.08	688.143	688.146	688.152	688.153	688.366	688.384	688.385	688.392	688.504	688.559	688.336	688.366
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

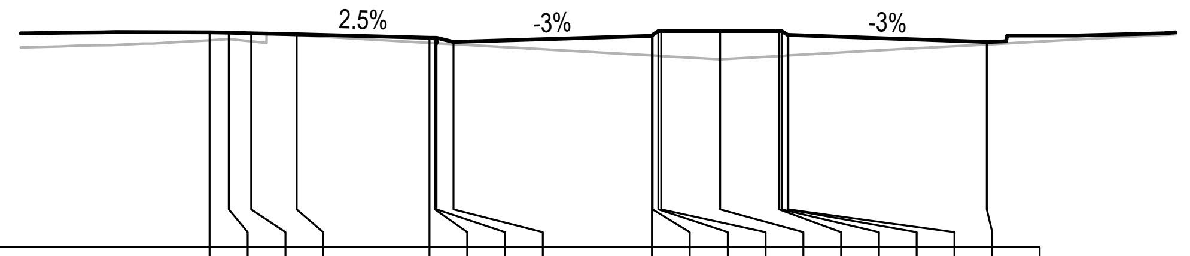
KTP CH 381.711



DATUM R.L. 683

W.A.E.																								
DESIGN LEVEL	688.378	688.365	688.35	688.32	688.232	688.232	688.082	688.122	688.28	688.31	688.41	688.41	688.41	688.41	688.41	688.31	688.28	688.122	688.082	688.232	688.232	688.295	688.325	688.34	688.353
BEW CC LEVEL	688.186	688.194	688.134	688.306	688.099	688.09	688.088	688.062	687.763	687.762	687.753	687.749	687.66	687.757	687.761	687.771	687.772	688.097	688.125	688.128	688.137	688.293	688.367	688.404	688.172
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

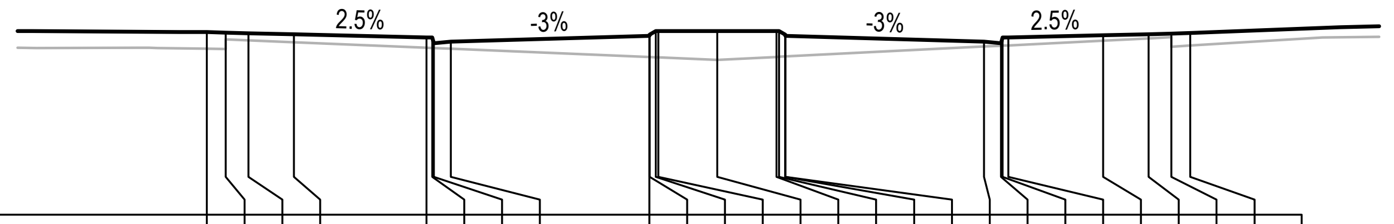
KTP CH 327.91



DATUM R.L. 683

W.A.E.																		
DESIGN LEVEL	688.678	688.665	688.65	688.62	688.532	688.532	688.382	688.422	688.58	688.61	688.71	688.71	688.71	688.71	688.71	688.61	688.58	688.422
BEW CC LEVEL	688.466	688.494	688.434	688.599	688.399	688.39	688.388	688.362	688.063	688.062	688.053	688.049	687.96	688.048	688.052	688.061	688.061	688.354
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

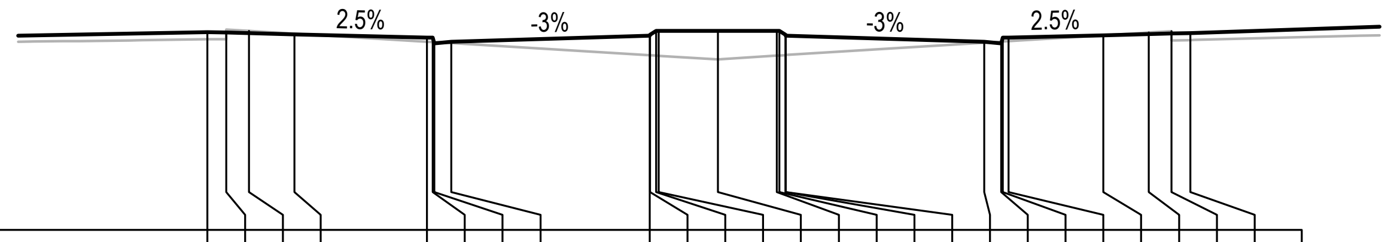
KTP CH 352.91



DATUM R.L. 684

W.A.E.																								
DESIGN LEVEL	688.827	688.814	688.799	688.769	688.681	688.681	688.531	688.571	688.729	688.759	688.859	688.859	688.859	688.859	688.859	688.759	688.729	688.571	688.531	688.681	688.681	688.744	688.774	688.789	688.802
BEW CC LEVEL	688.39	688.382	688.607	688.558	688.413	688.407	688.405	688.386	688.17	688.169	688.163	688.16	688.095	688.173	688.176	688.184	688.185	688.446	688.468	688.47	688.478	688.603	688.662	688.442	688.472
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

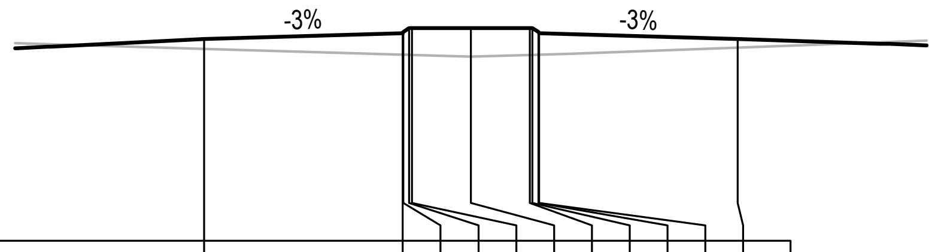
CH 375



DATUM R.L. 683

W.A.E.																								
DESIGN LEVEL	688.223	688.21	688.195	688.165	688.078	688.078	687.928	687.968	688.125	688.155	688.255	688.255	688.255	688.255	688.255	688.155	688.125	687.968	687.928	688.078	688.078	688.14	688.17	688.185	688.198
BEW CC LEVEL	688.033	688.039	688.253	688.181	687.969	687.96	687.958	687.93	687.614	687.613	687.603	687.599	687.505	687.602	687.606	687.616	687.617	687.942	687.97	687.973	687.982	688.138	688.212	688.249	688.013
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

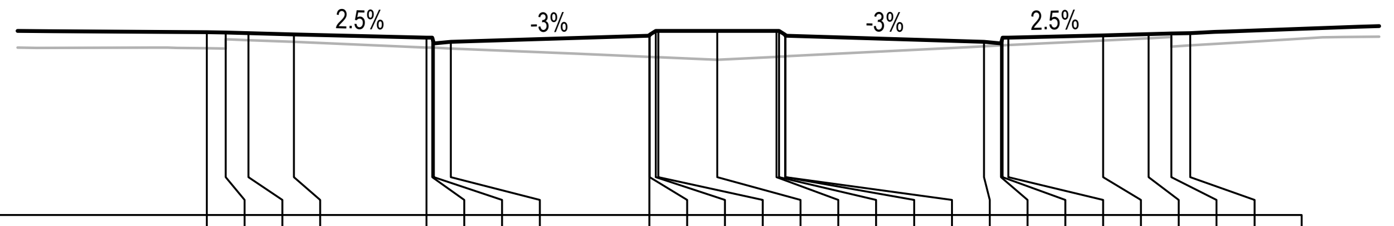
CH 315



DATUM R.L. 683

W.A.E.											
DESIGN LEVEL	688.328	688.485	688.515	688.615	688.615	688.615	688.615	688.615	688.515	688.485	688.328
BEW CC LEVEL	688.071	687.918	687.917	687.913	687.911	687.865	687.908	687.91	687.914	687.914	688.103
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

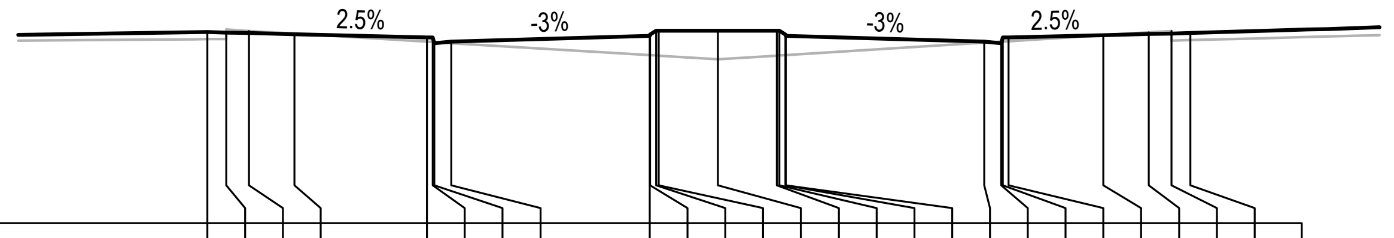
CH 345



DATUM R.L. 684

W.A.E.																								
DESIGN LEVEL	688.827	688.814	688.799	688.769	688.682	688.682	688.532	688.572	688.729	688.759	688.859	688.859	688.859	688.859	688.859	688.759	688.729	688.572	688.532	688.682	688.682	688.744	688.774	688.789	688.802
BEW CC LEVEL	688.4	688.393	688.618	688.568	688.423	688.417	688.415	688.397	688.175	688.174	688.167	688.164	688.096	688.175	688.178	688.187	688.187	688.453	688.475	688.477	688.484	688.609	688.669	688.449	688.479
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

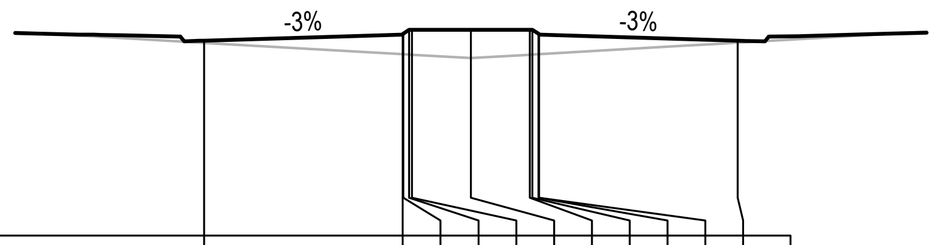
KTP CH 374.402



DATUM R.L. 683

W.A.E.																								
DESIGN LEVEL	688.043	688.03	688.015	687.985	687.898	687.898	687.748	687.788	687.945	687.975	688.075	688.075	688.075	688.075	688.075	687.975	687.945	687.788	687.748	687.898	687.898	687.96	687.99	688.005	688.018
BEW CC LEVEL	687.856	687.859	688.073	688.001	687.789	687.78	687.778	687.75	687.434	687.433	687.423	687.419	687.325	687.422	687.426	687.436	687.437	687.762	687.79	687.793	687.802	687.958	688.032	688.069	687.832
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

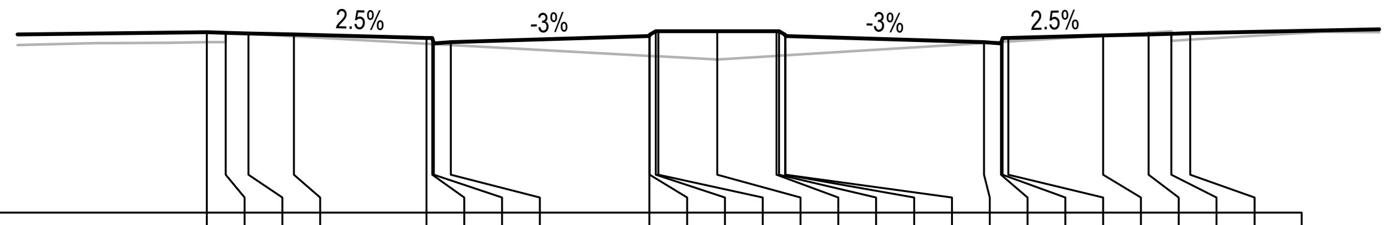
CH 300



DATUM R.L. 683

W.A.E.											
DESIGN LEVEL	688.148	688.305	688.335	688.435	688.435	688.435	688.435	688.435	688.335	688.305	688.148
BEW CC LEVEL	688.09	687.788	687.788	687.779	687.775	687.685	687.775	687.779	687.789	687.789	688.095
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

CH 330



DATUM R.L. 684

W.A.E.																								
DESIGN LEVEL	688.758	688.746	688.731	688.701	688.613	688.613	688.463	688.503	688.66	688.69	688.79	688.79	688.79	688.79	688.79	688.69	688.66	688.503	688.463	688.613	688.613	688.676	688.706	688.721	688.733
BEW CC LEVEL	688.496	688.502	688.719	688.653	688.461	688.453	688.451	688.426	688.139	688.138	688.129	688.125	688.04	688.137	688.141	688.151	688.152	688.478	688.505	688.508	688.517	688.673	688.747	688.535	688.565
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 360

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 03 OF 30

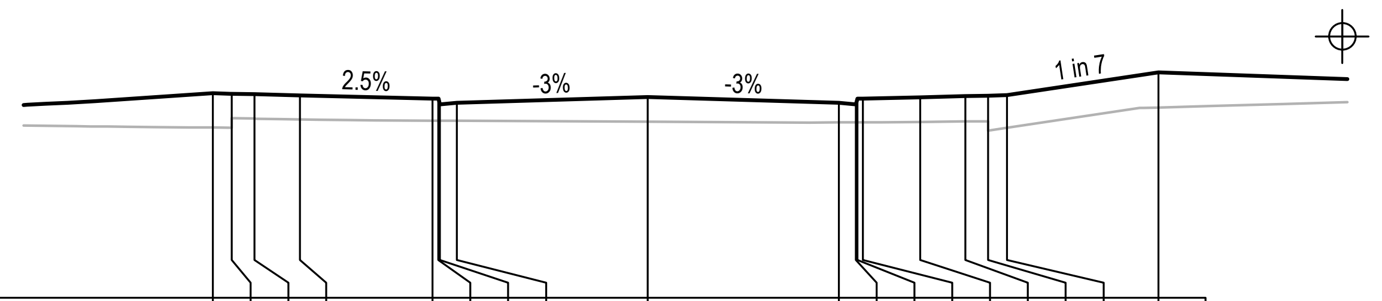
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	332	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-332.dwg

ROAD No.01

LEGEND

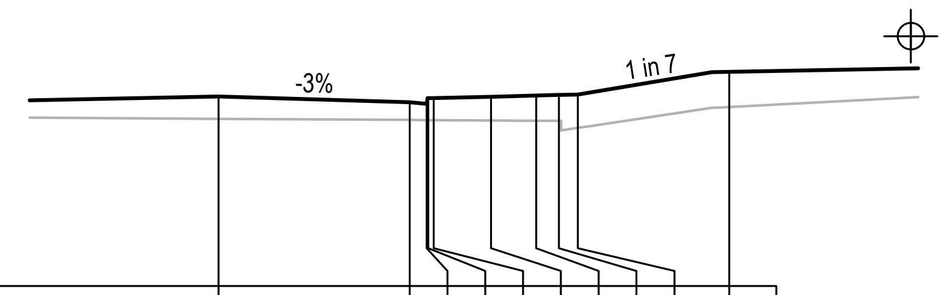
FINISHED DESIGN SURFACE	▬
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 684

W.A.E.																				
DESIGN LEVEL	689.408	689.396	689.381	689.351	689.263	689.263	689.113	689.153	689.305	689.153	689.113	689.263	689.263	689.301	689.331	689.346	689.358	689.958	
BEW CC LEVEL	688.501	688.497	688.737	688.717	688.681	688.681	688.68	688.678	688.653	688.637	688.641	688.641	688.639	688.649	688.661	688.417	688.492	689.031	
OFFSET	-11.5	-11	-10.4	-9.2	-5.69	-5.54	-5.5	-5.05	0	5.05	5.5	5.54	5.69	7.2	8.4	9	9.5	13.5	

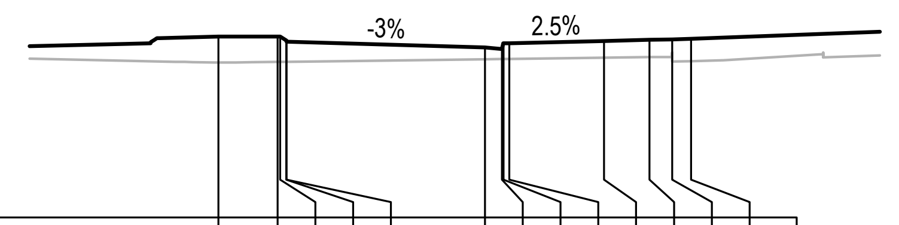
KTP CH 460.1



DATUM R.L. 684

W.A.E.										
DESIGN LEVEL	689.015	688.863	688.823	688.973	688.973	689.011	689.041	689.056	689.069	689.669
BEW CC LEVEL	688.426	688.394	688.391	688.391	688.39	688.381	688.373	688.37	688.186	688.741
OFFSET	0	5.05	5.5	5.54	5.69	7.2	8.4	9	9.5	13.5

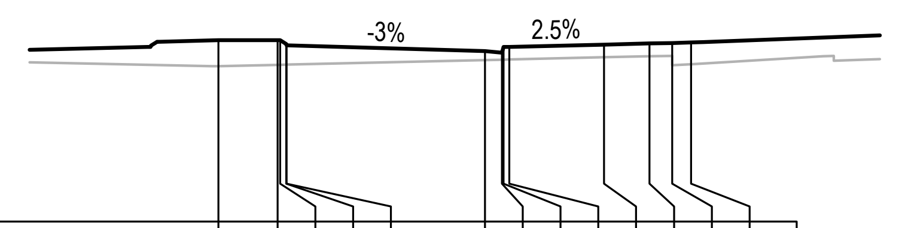
KTP CH 452.211



DATUM R.L. 684

W.A.E.													
DESIGN LEVEL	688.777	688.777	688.777	688.677	688.647	688.49	688.45	688.6	688.6	688.663	688.693	688.708	688.72
BEW CC LEVEL	688.094	688.112	688.113	688.115	688.115	688.18	688.186	688.187	688.188	688.219	688.234	688.118	688.132
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

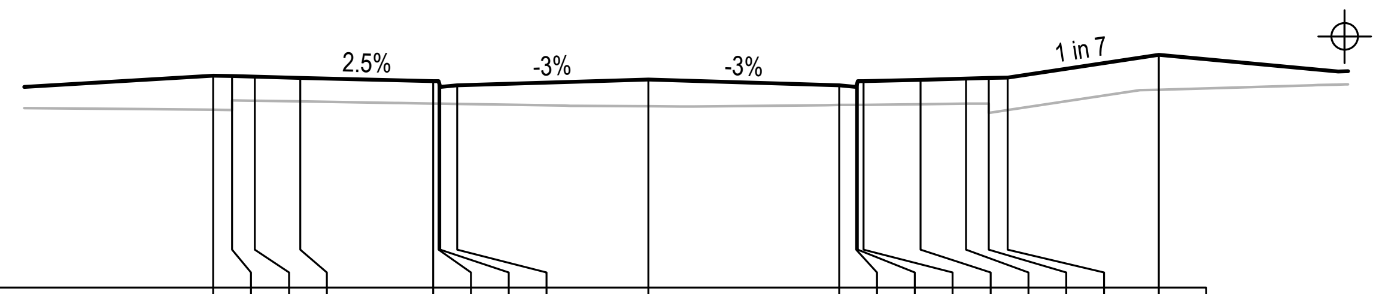
KTP CH 390.101



DATUM R.L. 684

W.A.E.													
DESIGN LEVEL	688.779	688.779	688.779	688.679	688.649	688.491	688.451	688.601	688.601	688.664	688.694	688.709	688.721
BEW CC LEVEL	688.095	688.131	688.133	688.136	688.137	688.257	688.267	688.268	688.272	688.329	688.357	688.121	688.151
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 390



DATUM R.L. 684

W.A.E.																		
DESIGN LEVEL	689.588	689.576	689.561	689.531	689.443	689.443	689.293	689.333	689.484	689.333	689.293	689.443	689.443	689.481	689.511	689.526	689.538	690.138
BEW CC LEVEL	688.687	688.683	688.924	688.905	688.85	688.848	688.847	688.84	688.783	688.813	688.818	688.818	688.82	688.835	688.847	688.603	688.678	689.218
OFFSET	-11.5	-11	-10.4	-9.2	-5.69	-5.54	-5.5	-5.05	0	5.05	5.5	5.54	5.69	7.2	8.4	9	9.5	13.5

CH 465

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 04 OF 30

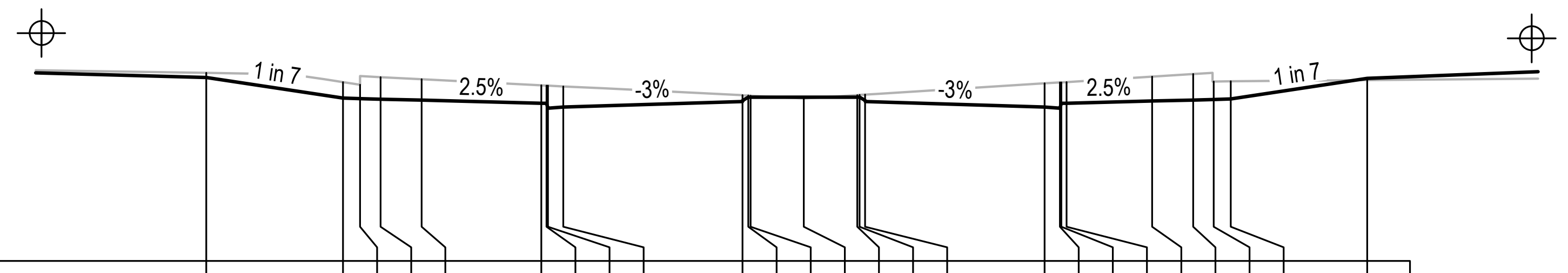
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	333	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-333.dwg

ROAD No.02

LEGEND

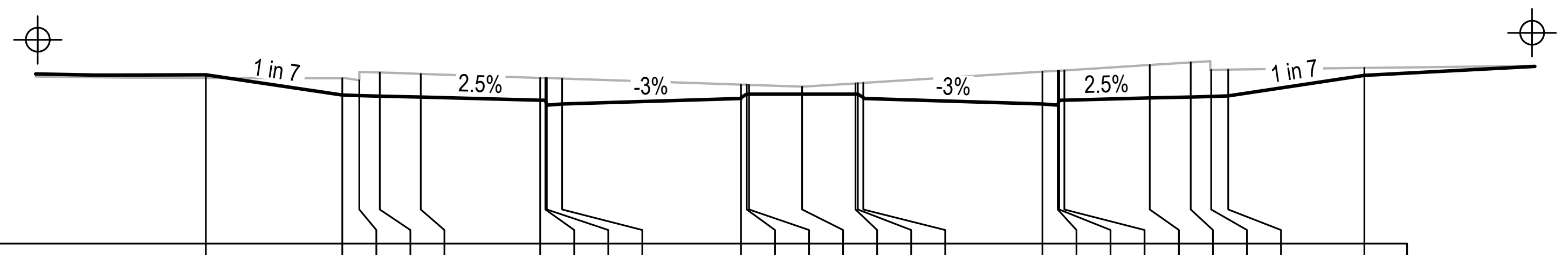
FINISHED DESIGN SURFACE
EXISTING SURFACE
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 682

W.A.E.																									
DESIGN LEVEL	687.354	686.754	686.742	686.727	686.697	686.609	686.609	686.459	686.499	686.657	686.787	686.787	686.787	686.787	686.787	686.687	686.499	686.459	686.609	686.609	686.672	686.702	686.717	686.729	687.329
BEW CC LEVEL	687.493	687.224	687.149	687.369	687.309	687.132	687.125	687.123	687.1	686.838	686.83	686.826	686.748	686.845	686.849	686.859	687.186	687.214	687.216	687.225	687.381	687.456	687.242	687.246	687.283
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.63	-1.56	0	1.56	1.63	1.79	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

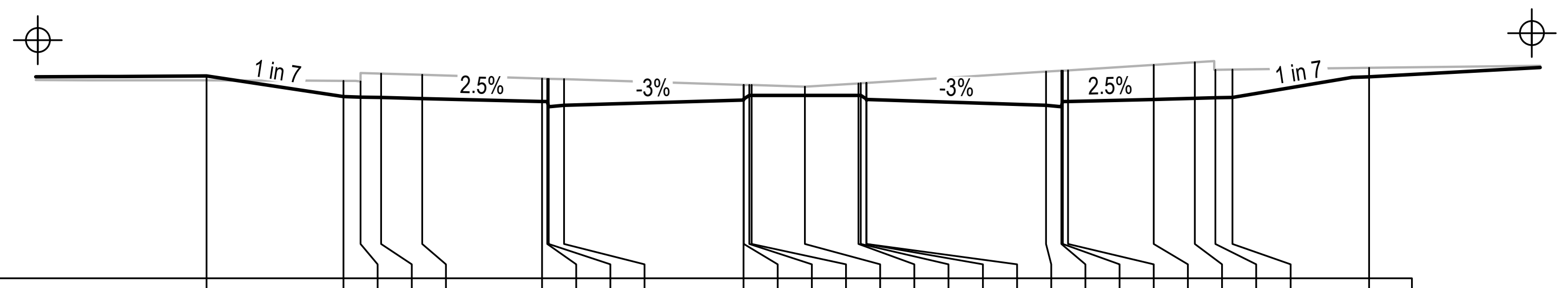
CH 45



DATUM R.L. 682

W.A.E.																									
DESIGN LEVEL	686.949	686.349	686.336	686.321	686.291	686.204	686.204	686.054	686.094	686.251	686.381	686.381	686.381	686.381	686.381	686.281	686.094	686.054	686.204	686.204	686.266	686.296	686.311	686.324	686.924
BEW CC LEVEL	686.853	686.84	686.781	687.012	686.973	686.856	686.851	686.849	686.834	686.659	686.653	686.651	686.598	686.695	686.699	686.709	687.036	687.064	687.066	687.076	687.232	687.306	687.092	687.098	687.146
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.63	-1.56	0	1.56	1.63	1.79	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

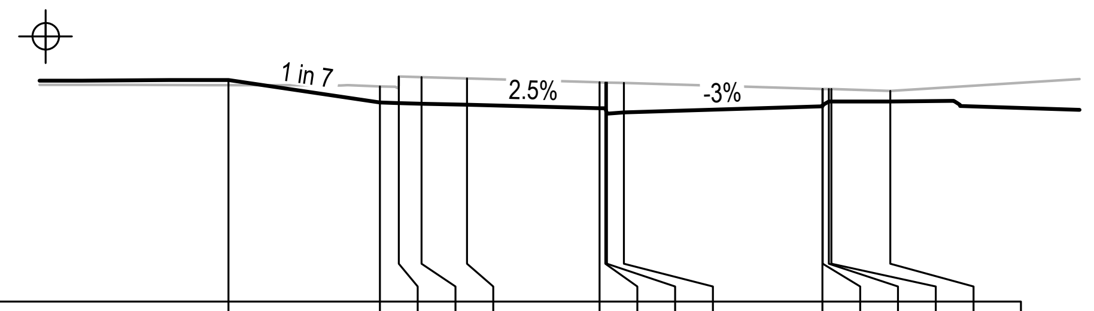
CH 30



DATUM R.L. 681

W.A.E.																											
DESIGN LEVEL	686.888	686.288	686.276	686.261	686.231	686.143	686.143	685.993	686.033	686.19	686.22	686.32	686.32	686.32	686.32	686.32	686.22	686.19	686.033	685.993	686.143	686.143	686.206	686.236	686.251	686.263	686.863
BEW CC LEVEL	686.76	686.749	686.725	686.957	686.92	686.812	686.808	686.806	686.792	686.631	686.631	686.626	686.624	686.576	686.673	686.677	686.687	686.688	687.014	687.041	687.044	687.053	687.209	687.284	687.069	687.076	687.125
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.5

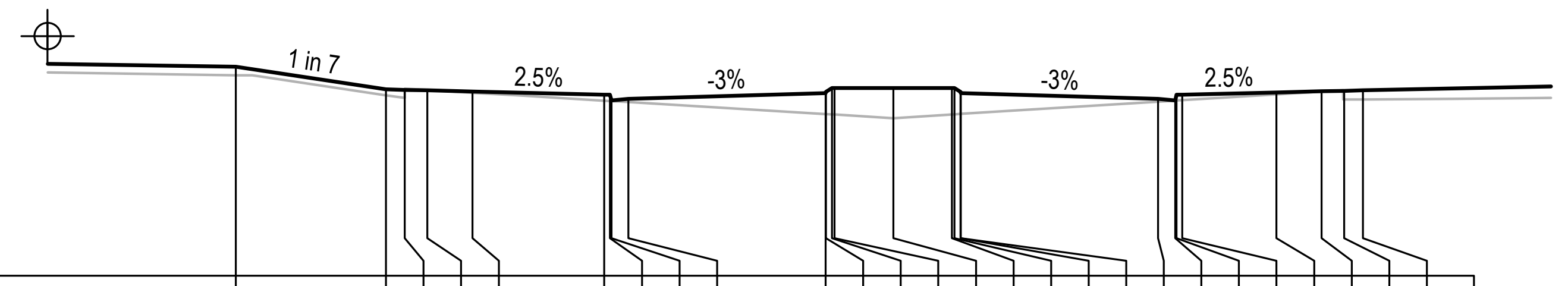
CH 27.756



DATUM R.L. 681

W.A.E.														
DESIGN LEVEL	686.853	686.253	686.24	686.225	686.195	686.107	686.107	685.957	685.997	686.155	686.185	686.285	686.285	686.285
BEW CC LEVEL	686.717	686.683	686.943	686.926	686.89	686.788	686.783	686.782	686.769	686.615	686.615	686.61	686.608	686.563
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0

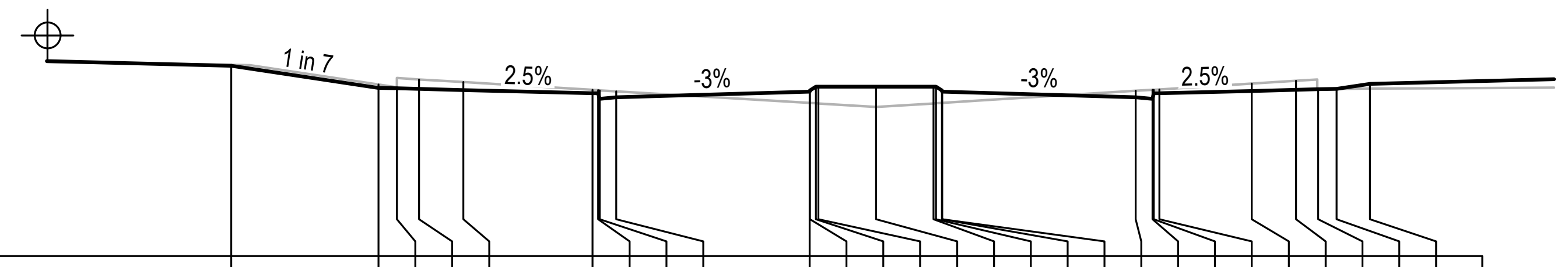
KTP CH 26.444



DATUM R.L. 683

W.A.E.																										
DESIGN LEVEL	688.563	687.963	687.951	687.936	687.906	687.818	687.818	687.668	687.708	687.866	687.896	687.996	687.996	687.996	687.996	687.996	687.896	687.866	687.708	687.668	687.818	687.818	687.881	687.911	687.926	687.938
BEW CC LEVEL	688.34	687.808	687.733	687.946	687.874	687.662	687.653	687.651	687.624	687.307	687.306	687.297	687.292	687.198	687.295	687.299	687.309	687.31	687.636	687.664	687.666	687.676	687.832	687.906	687.692	687.695
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

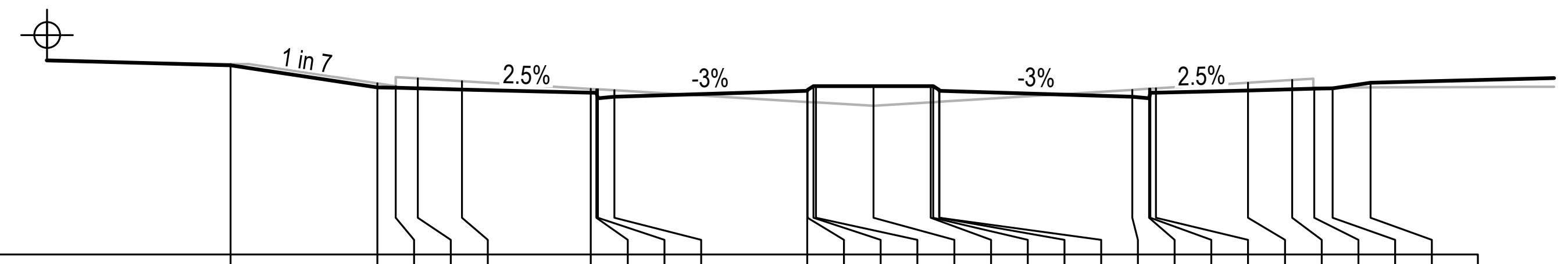
CH 90



DATUM R.L. 683

W.A.E.																											
DESIGN LEVEL	688.165	687.565	687.553	687.538	687.508	687.42	687.42	687.27	687.31	687.468	687.498	687.598	687.598	687.598	687.598	687.598	687.498	687.468	687.31	687.27	687.42	687.42	687.483	687.513	687.528	687.54	687.676
BEW CC LEVEL	688.19	687.658	687.583	687.796	687.724	687.512	687.503	687.501	687.474	687.157	687.156	687.147	687.142	687.048	687.145	687.149	687.159	687.16	687.486	687.514	687.516	687.526	687.682	687.756	687.542	687.544	687.549
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	13.401

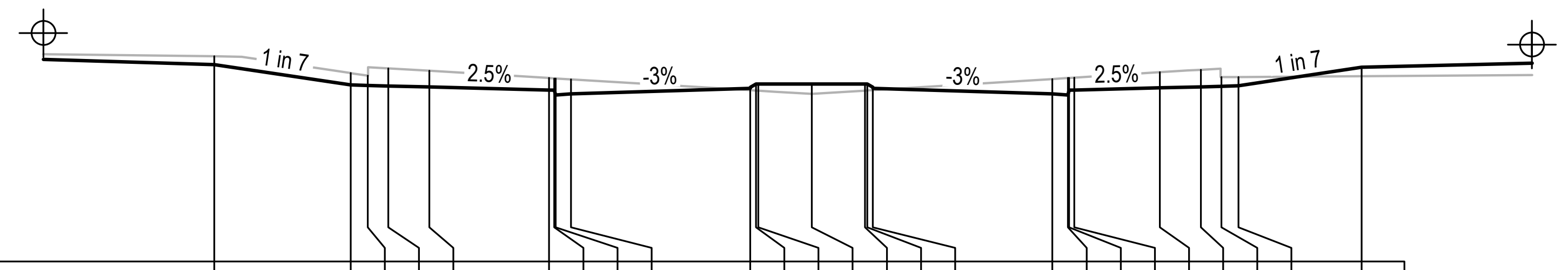
CH 75



DATUM R.L. 683

W.A.E.																											
DESIGN LEVEL	688.146	687.546	687.534	687.519	687.489	687.401	687.401	687.251	687.291	687.449	687.479	687.579	687.579	687.579	687.579	687.579	687.479	687.449	687.291	687.251	687.401	687.401	687.464	687.494	687.509	687.521	687.676
BEW CC LEVEL	688.183	687.651	687.576	687.789	687.717	687.505	687.496	687.494	687.467	687.15	687.149	687.14	687.135	687.041	687.138	687.142	687.152	687.153	687.479	687.507	687.509	687.519	687.675	687.749	687.535	687.537	687.542
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	13.528

CH 74.298



DATUM R.L. 682

W.A.E.																									
DESIGN LEVEL	687.76	687.16	687.147	687.132	687.102	687.015	687.015	686.865	686.905	687.062	687.192	687.192	687.192	687.192	687.192	687.092	686.905	686.865	687.015	687.015	687.077	687.107	687.122	687.135	687.676
BEW CC LEVEL	687.998	687.508	687.433	687.647	687.574	687.363	687.354	687.351	687.324	687.007	686.997	686.993	686.898	686.995	686.999	687.009	687.336	687.364	687.366	687.376	687.532	687.606	687.392	687.395	687.419
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.63	-1.56	0	1.56	1.63	1.79	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5	16.105

CH 60

ISSUED FOR CONSTRUCTION CERTIFICATE

A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 05 OF 30

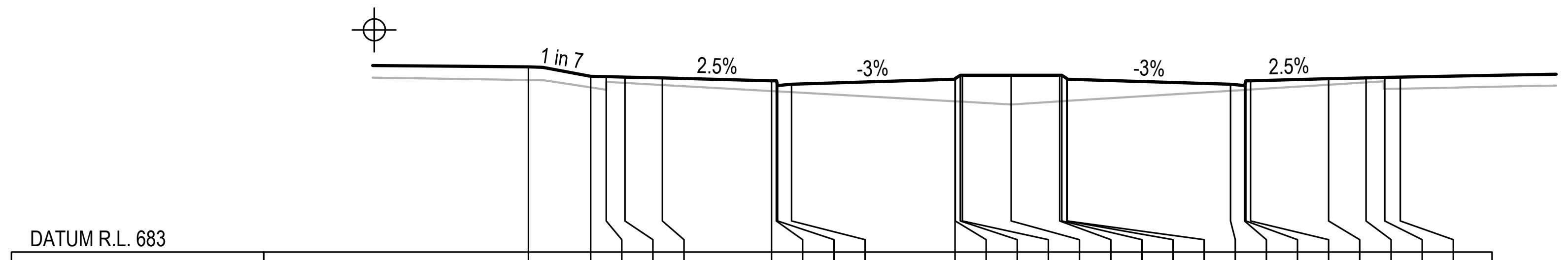
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	334	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-334.dwg

ROAD No.02

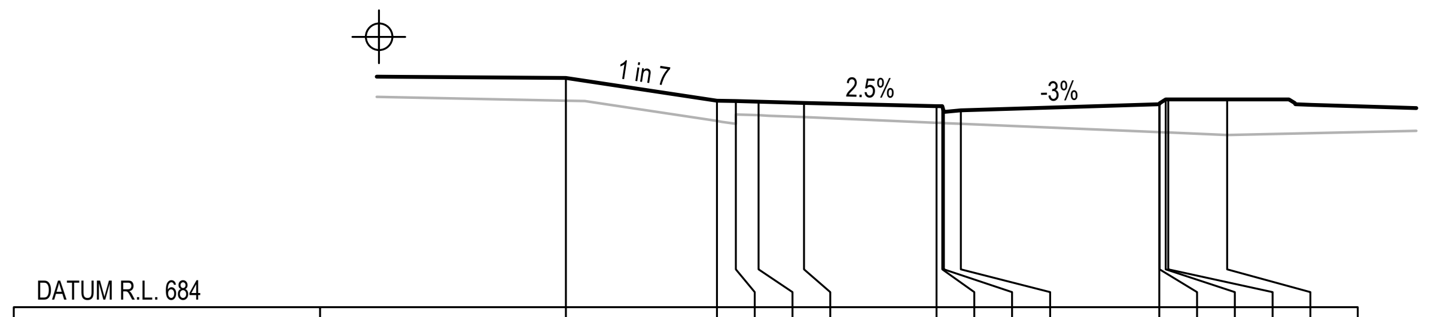
LEGEND

FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



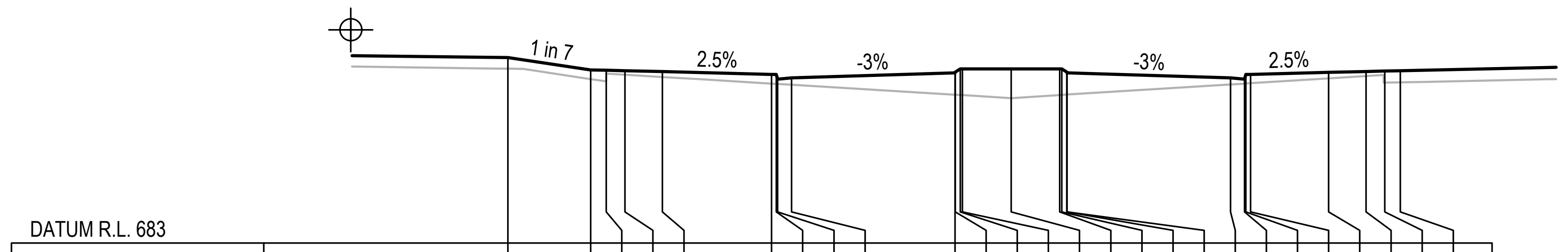
W.A.E.																										
DESIGN LEVEL	688.953	688.653	688.64	688.625	688.595	688.507	688.507	688.357	688.397	688.555	688.585	688.685	688.685	688.685	688.685	688.685	688.585	688.555	688.397	688.357	688.507	688.507	688.57	688.6	688.615	688.628
BEW CC LEVEL	688.53	688.297	688.222	688.439	688.372	688.176	688.168	688.165	688.14	687.848	687.847	687.838	687.834	687.747	687.844	687.849	687.859	687.859	688.185	688.213	688.216	688.225	688.381	688.455	688.241	688.252
OFFSET	-15.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

KTP CH 144.93



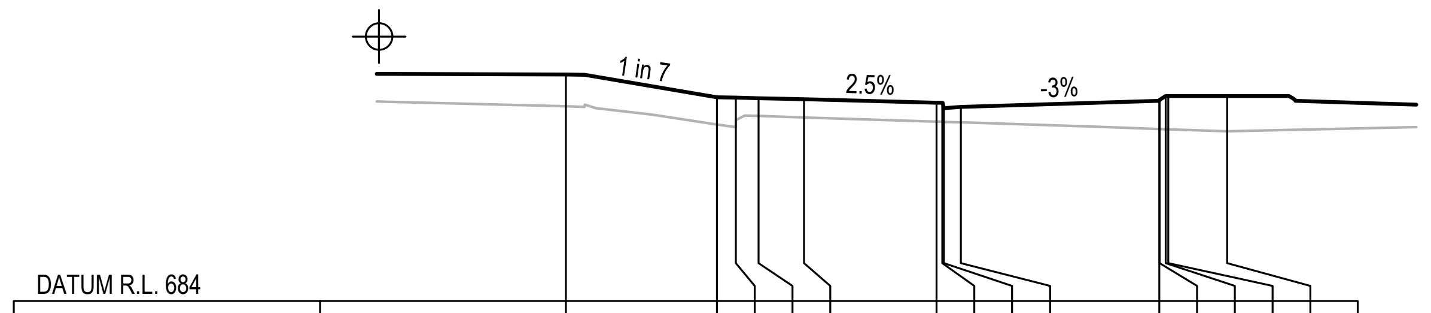
W.A.E.														
DESIGN LEVEL	690.053	689.453	689.441	689.426	689.396	689.308	689.308	689.158	689.198	689.356	689.386	689.486	689.486	689.486
BEW CC LEVEL	689.452	688.917	688.842	689.069	689.019	688.872	688.865	688.864	688.845	688.624	688.624	688.617	688.614	688.548
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0

CH 225



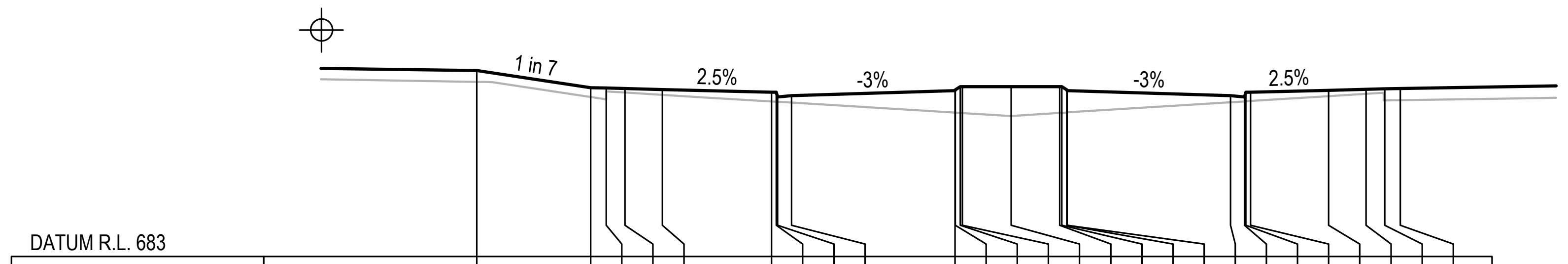
W.A.E.																										
DESIGN LEVEL	688.953	688.553	688.541	688.526	688.496	688.408	688.408	688.258	688.298	688.456	688.486	688.586	688.586	688.586	688.586	688.586	688.486	688.456	688.298	688.258	688.408	688.408	688.471	688.501	688.516	688.528
BEW CC LEVEL	688.59	688.258	688.183	688.396	688.324	688.112	688.103	688.101	688.074	687.757	687.756	687.747	687.742	687.648	687.745	687.749	687.759	687.76	688.086	688.114	688.116	688.126	688.282	688.356	688.142	688.153
OFFSET	-16.162	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 135



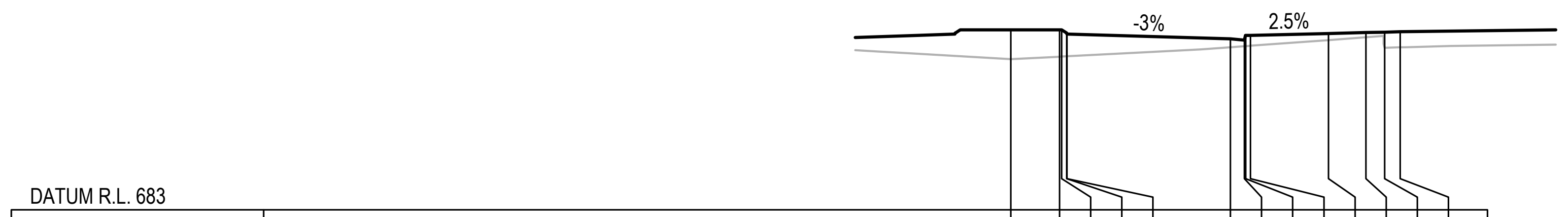
W.A.E.														
DESIGN LEVEL	689.981	689.381	689.368	689.353	689.323	689.235	689.235	689.085	689.125	689.283	689.313	689.413	689.413	689.413
BEW CC LEVEL	689.14	688.66	688.527	688.884	688.846	688.735	688.73	688.729	688.714	688.54	688.54	688.534	688.531	688.475
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0

KTP CH 217.713



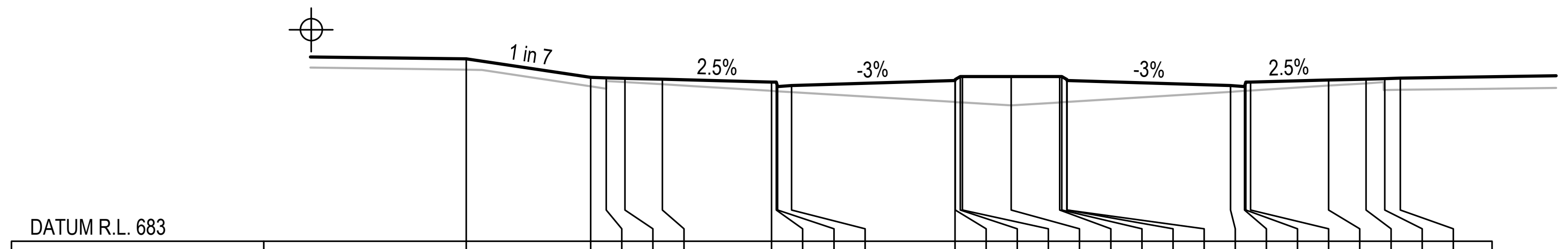
W.A.E.																										
DESIGN LEVEL	688.953	688.403	688.391	688.376	688.346	688.258	688.258	688.108	688.148	688.306	688.336	688.436	688.436	688.436	688.436	688.436	688.336	688.306	688.148	688.108	688.258	688.258	688.321	688.351	688.366	688.378
BEW CC LEVEL	688.591	688.108	688.033	688.246	688.174	687.962	687.953	687.951	687.924	687.607	687.606	687.597	687.592	687.498	687.595	687.599	687.609	687.61	687.936	687.964	687.966	687.976	688.132	688.206	687.992	688
OFFSET	-17.162	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 120



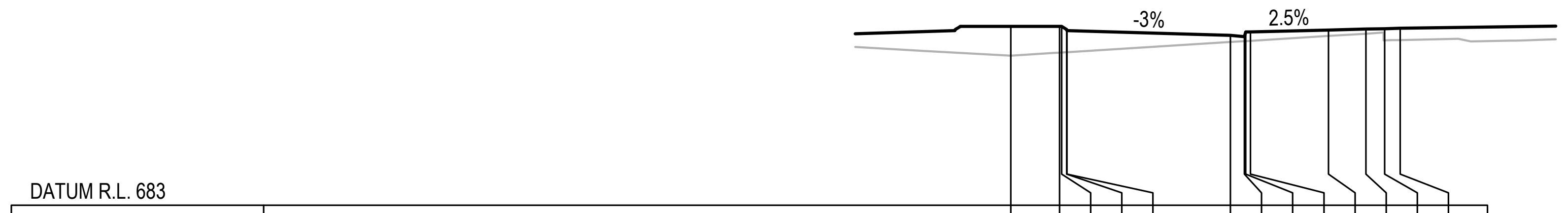
W.A.E.													
DESIGN LEVEL	688.769	688.769	688.769	688.669	688.639	688.481	688.441	688.591	688.591	688.654	688.684	688.699	688.712
BEW CC LEVEL	687.831	687.911	687.915	687.923	687.923	688.213	688.246	688.249	688.26	688.445	688.533	688.195	688.21
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

KTP CH 153.32



W.A.E.																										
DESIGN LEVEL	688.844	688.244	688.231	688.216	688.186	688.099	688.099	687.949	687.989	688.146	688.176	688.276	688.276	688.276	688.276	688.276	688.176	688.146	687.989	687.949	688.099	688.099	688.161	688.191	688.206	688.219
BEW CC LEVEL	688.49	687.958	687.883	688.096	688.024	687.812	687.803	687.801	687.774	687.457	687.456	687.447	687.442	687.348	687.445	687.449	687.459	687.46	687.786	687.814	687.816	687.826	687.982	688.056	687.842	687.847
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 105



W.A.E.													
DESIGN LEVEL	688.736	688.736	688.736	688.636	688.606	688.448	688.408	688.558	688.558	688.621	688.651	688.666	688.678
BEW CC LEVEL	687.798	687.895	687.899	687.909	687.91	688.236	688.264	688.266	688.276	688.432	688.506	688.292	688.303
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 150

ISSUED FOR CONSTRUCTION CERTIFICATE

A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Disclaimer and Copyright:

ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 06 OF 30

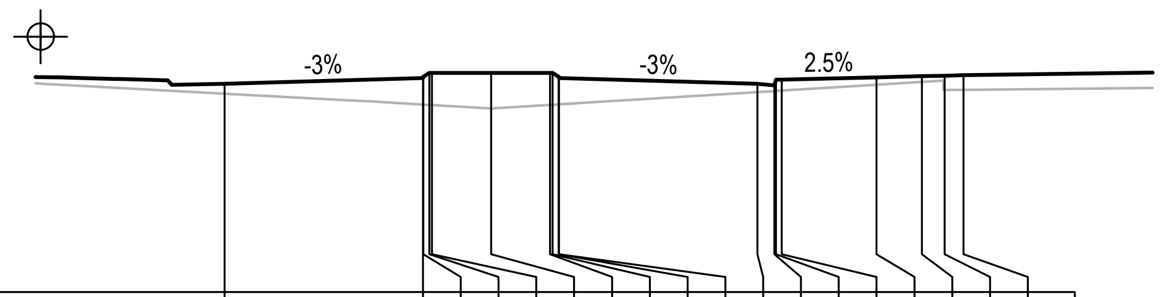
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	335	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Sdata\ORION-SYN\0162-CC-Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-335.dwg

ROAD No.02

LEGEND

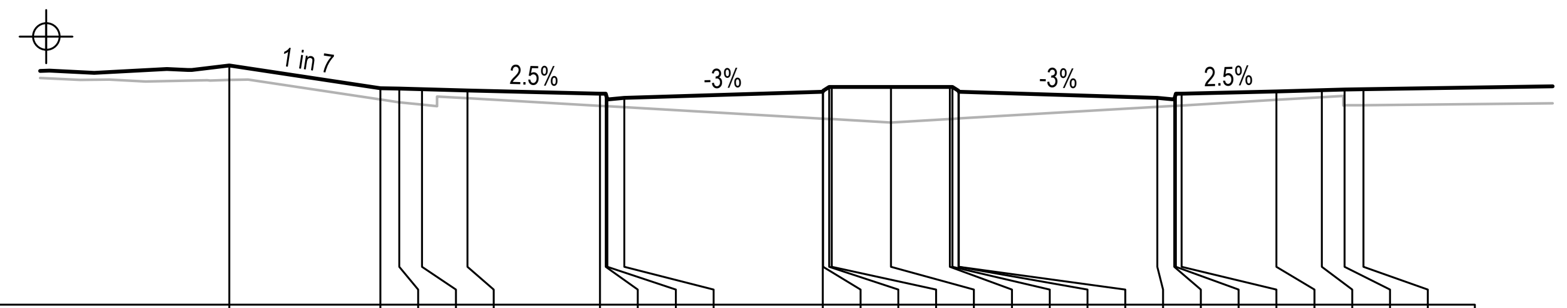
FINISHED DESIGN SURFACE	━
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 684

W.A.E.																		
DESIGN LEVEL	689.498	689.656	689.686	689.786	689.786	689.786	689.786	689.786	689.686	689.656	689.498	689.458	689.608	689.608	689.671	689.701	689.716	689.728
BEW CC LEVEL	689.243	688.953	688.952	688.943	688.939	688.848	688.943	688.947	688.957	688.958	689.283	689.311	689.314	689.323	689.478	689.553	689.339	689.343
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

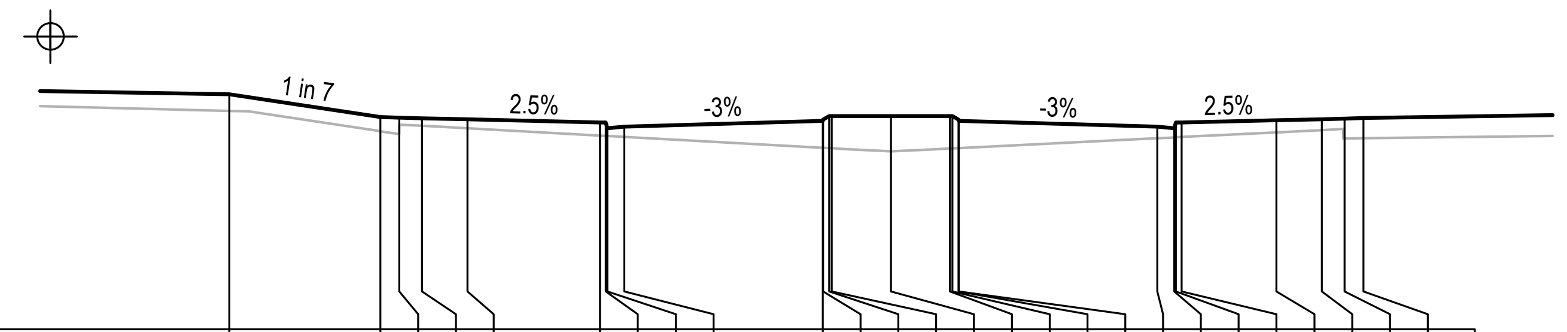
CH 255



DATUM R.L. 684

W.A.E.																										
DESIGN LEVEL	690.315	689.715	689.702	689.687	689.657	689.569	689.569	689.419	689.459	689.617	689.647	689.747	689.747	689.747	689.747	689.747	689.647	689.617	689.459	689.419	689.569	689.569	689.632	689.662	689.677	689.69
BEW CC LEVEL	689.932	689.419	689.344	689.284	689.448	689.248	689.24	689.237	689.212	688.912	688.912	688.902	688.898	688.809	688.901	688.905	688.914	688.915	689.223	689.249	689.252	689.26	689.407	689.478	689.262	689.267
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

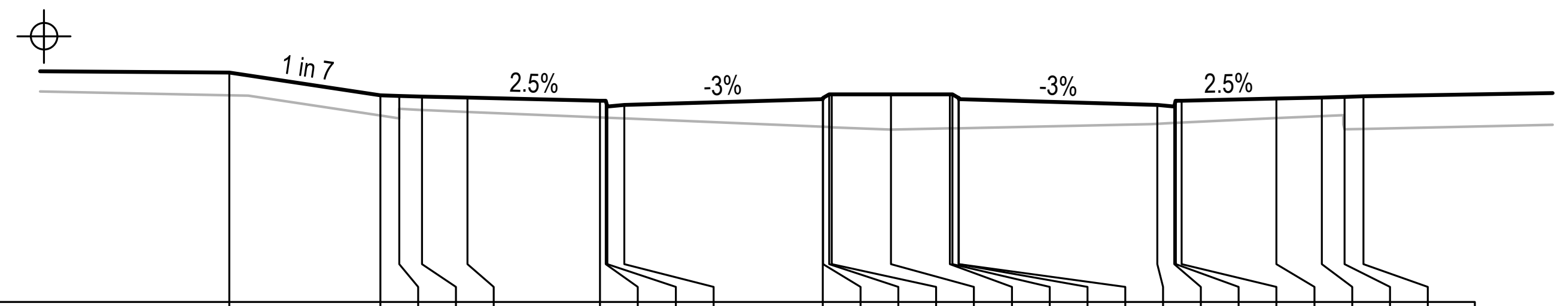
KTP CH 251.129



DATUM R.L. 684

W.A.E.																										
DESIGN LEVEL	690.203	689.603	689.591	689.576	689.546	689.458	689.458	689.308	689.348	689.506	689.536	689.636	689.636	689.636	689.636	689.636	689.536	689.506	689.348	689.308	689.458	689.458	689.521	689.551	689.566	689.578
BEW CC LEVEL	689.769	689.231	689.156	689.374	689.308	689.116	689.108	689.106	689.081	688.794	688.794	688.785	688.781	688.698	688.773	688.777	688.785	688.785	689.046	689.068	689.07	689.077	689.202	689.261	689.04	689.046
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

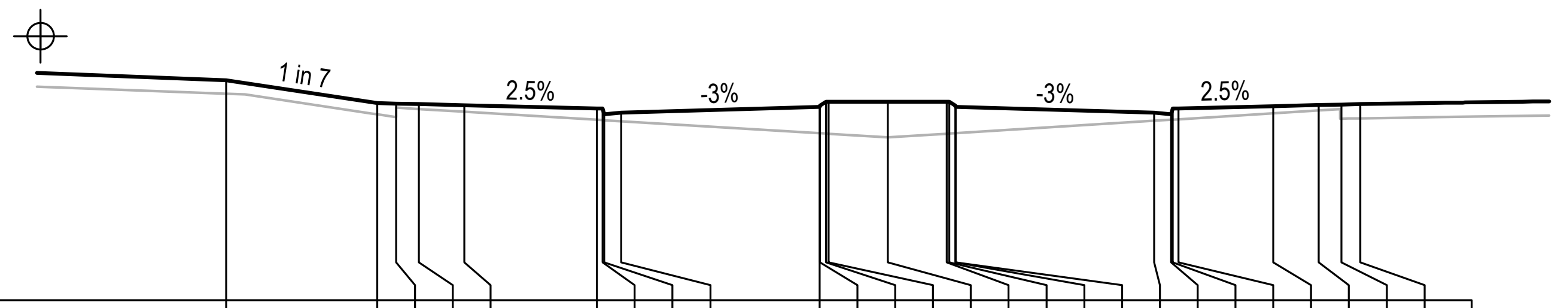
CH 240



DATUM R.L. 684

W.A.E.																										
DESIGN LEVEL	690.057	689.457	689.444	689.429	689.399	689.311	689.311	689.161	689.201	689.359	689.389	689.489	689.489	689.489	689.489	689.489	689.389	689.359	689.201	689.161	689.311	689.311	689.374	689.404	689.419	689.432
BEW CC LEVEL	689.46	688.925	688.85	689.074	689.023	688.875	688.869	688.867	688.848	688.627	688.627	688.62	688.617	688.551	688.586	688.587	688.591	688.591	688.71	688.731	688.733	688.74	688.856	688.911	688.563	688.574
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

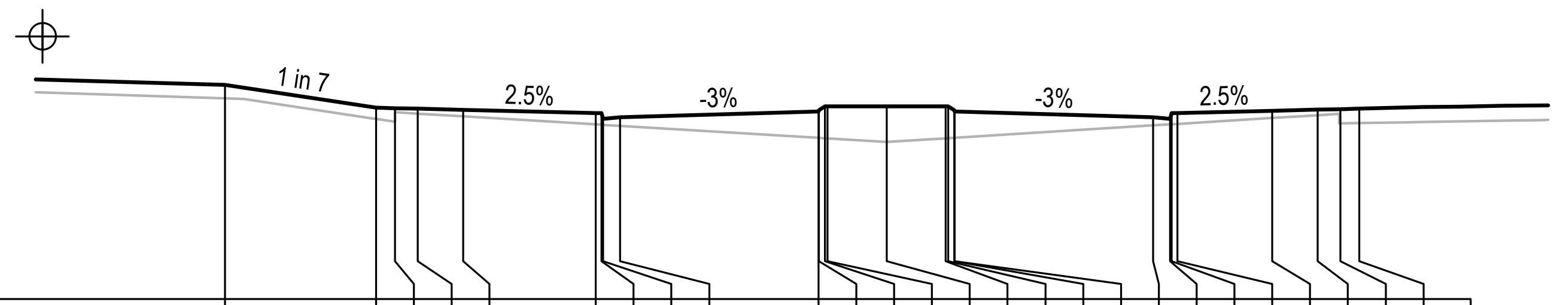
KTP CH 225.328



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	690.803	690.203	690.191	690.176	690.146	690.058	690.058	689.908	689.948	690.106	690.136	690.236	690.236	690.236	690.236	690.236	690.136	690.106	689.948	689.908	690.058	690.058	690.121	690.151	690.166	690.178
BEW CC LEVEL	690.451	689.908	689.833	690.046	689.974	689.762	689.753	689.751	689.724	689.407	689.406	689.397	689.392	689.298	689.395	689.399	689.409	689.41	689.736	689.764	689.766	689.776	689.932	690.006	689.792	689.8
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

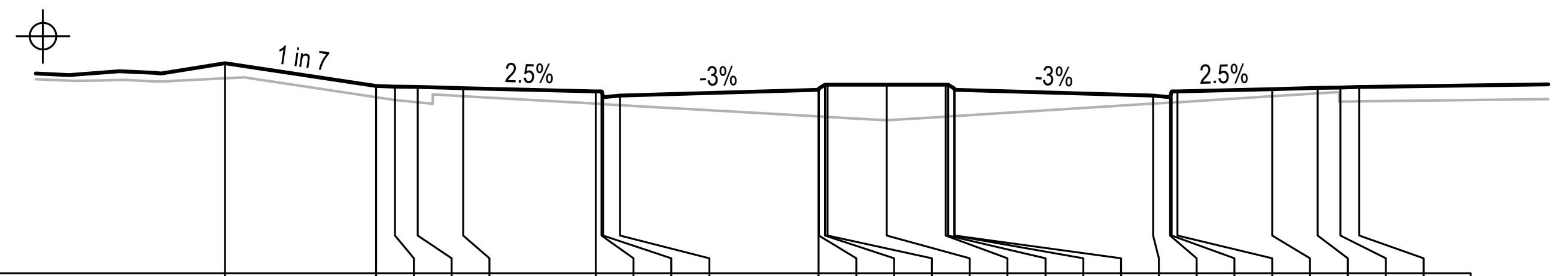
CH 300



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	690.653	690.053	690.041	690.026	689.996	689.908	689.908	689.758	689.798	689.956	689.986	690.086	690.086	690.086	690.086	690.086	689.986	689.956	689.798	689.758	689.908	689.908	689.971	690.001	690.016	690.028
BEW CC LEVEL	690.299	689.758	689.683	689.896	689.824	689.612	689.603	689.601	689.574	689.257	689.256	689.247	689.242	689.148	689.245	689.249	689.259	689.26	689.586	689.614	689.616	689.626	689.782	689.856	689.642	689.65
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

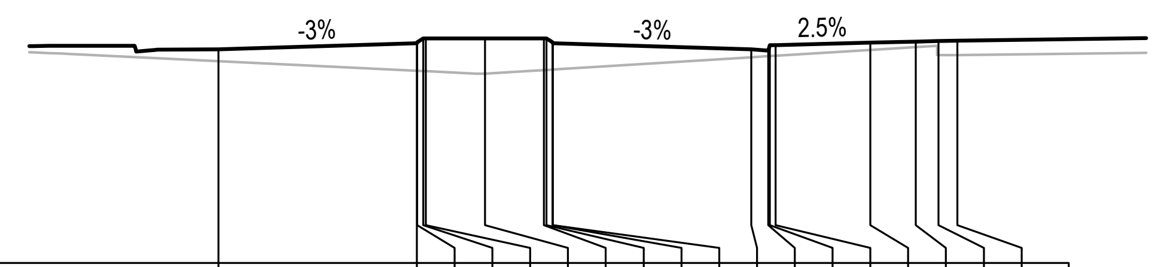
CH 285



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	690.555	689.955	689.942	689.927	689.897	689.809	689.809	689.659	689.699	689.857	689.887	689.987	689.987	689.987	689.987	689.987	689.887	689.857	689.699	689.659	689.809	689.809	689.872	689.902	689.917	689.93
BEW CC LEVEL	690.158	689.659	689.584	689.524	689.688	689.488	689.48	689.477	689.452	689.152	689.152	689.142	689.138	689.049	689.146	689.151	689.161	689.161	689.487	689.515	689.518	689.527	689.683	689.757	689.543	689.549
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

KTP CH 275.129



DATUM R.L. 684

W.A.E.																		
DESIGN LEVEL	689.648	689.806	689.836	689.936	689.936	689.936	689.936	689.936	689.836	689.806	689.648	689.608	689.758	689.758	689.821	689.851	689.866	689.878
BEW CC LEVEL	689.336	689.081	689.08	689.072	689.069	688.998	689.095	689.099	689.109	689.11	689.436	689.464	689.466	689.476	689.632	689.706	689.492	689.498
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 270

ISSUED FOR CONSTRUCTION CERTIFICATE

A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Disclaimer and Copyright:

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

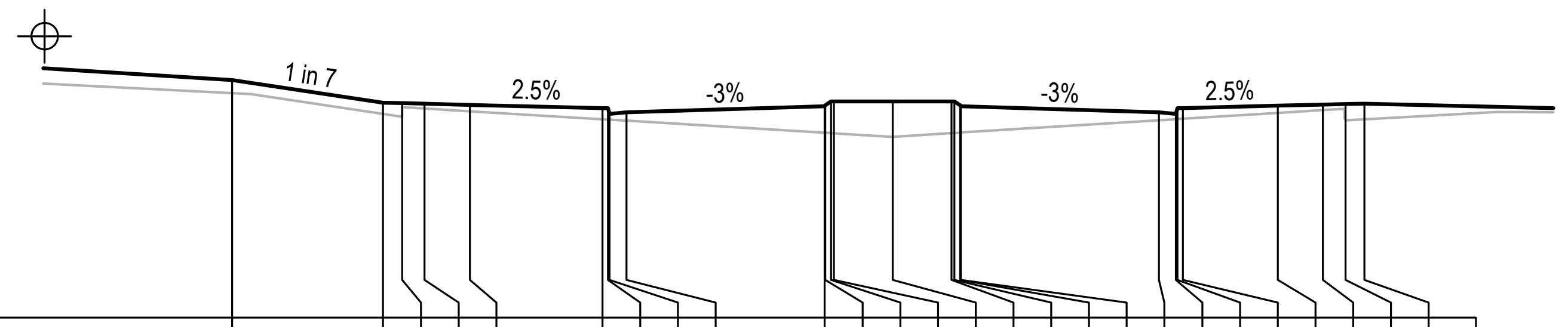
Title:
ROAD CROSS
SECTIONS
SHEET 07 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	336	A

ROAD No.02

LEGEND

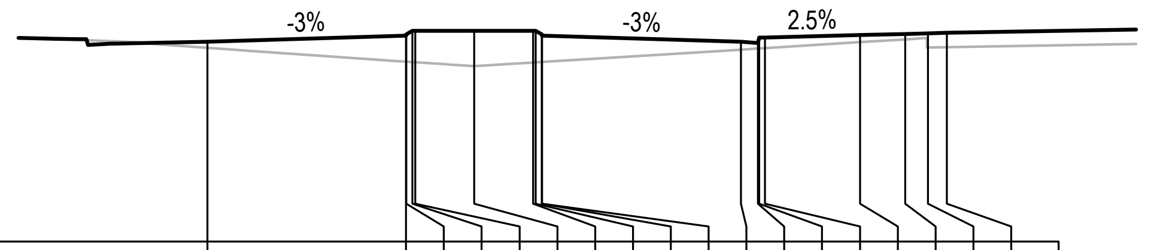
FINISHED DESIGN SURFACE	━
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	691.303	690.703	690.69	690.675	690.645	690.557	690.557	690.407	690.447	690.605	690.635	690.735	690.735	690.735	690.735	690.735	690.635	690.605	690.447	690.407	690.557	690.557	690.62	690.65	690.665	690.678
BEW CC LEVEL	690.957	690.407	690.332	690.546	690.473	690.261	690.252	690.25	690.223	689.906	689.905	689.896	689.891	689.797	689.894	689.898	689.908	689.909	690.235	690.263	690.265	690.275	690.431	690.505	690.232	690.26
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

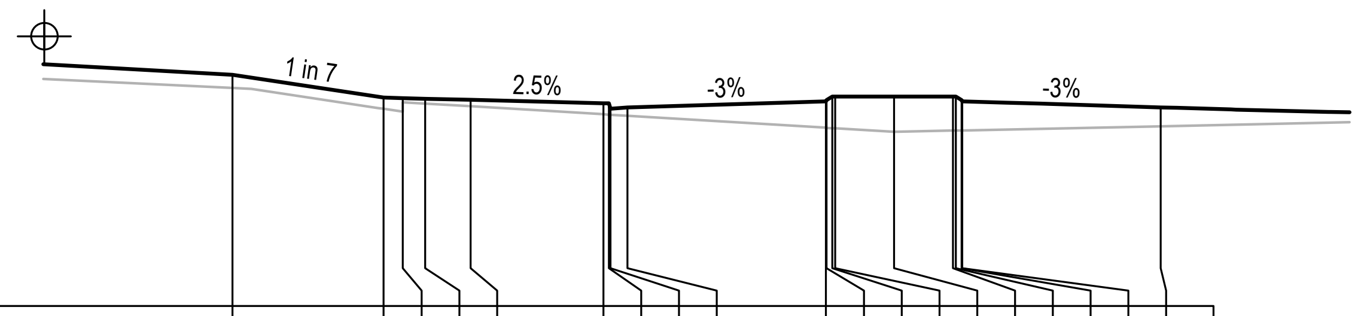
KTP CH 343.129



DATUM R.L. 686

W.A.E.																		
DESIGN LEVEL	691.282	691.44	691.47	691.57	691.57	691.57	691.57	691.57	691.47	691.44	691.282	691.242	691.392	691.392	691.455	691.485	691.5	691.513
BEW CC LEVEL	691.12	690.751	690.751	690.74	690.735	690.632	690.729	690.734	690.744	690.744	691.07	691.098	691.101	691.11	691.266	691.34	691.126	691.135
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

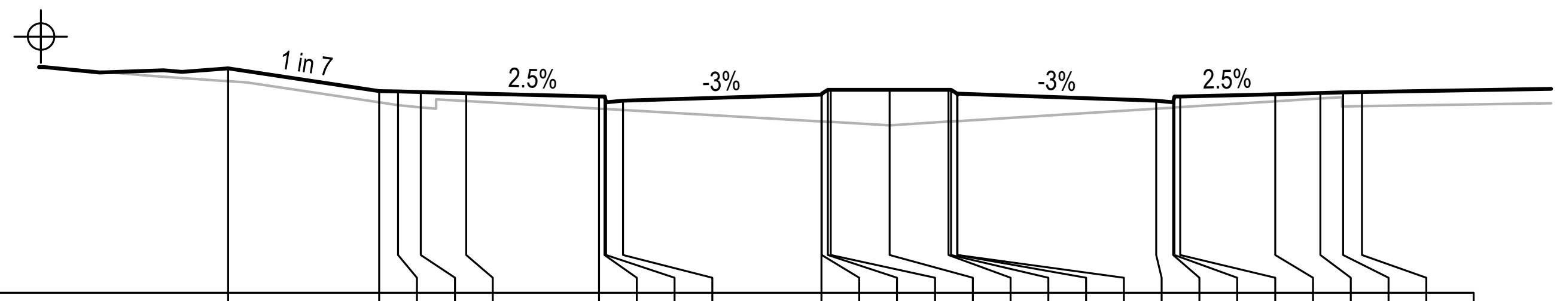
CH 375



DATUM R.L. 685

W.A.E.																			
DESIGN LEVEL	691.106	690.506	690.494	690.479	690.449	690.361	690.361	690.211	690.251	690.408	690.438	690.538	690.538	690.538	690.538	690.538	690.438	690.408	690.251
BEW CC LEVEL	690.76	690.211	690.136	690.349	690.277	690.065	690.056	690.054	690.027	689.71	689.709	689.699	689.695	689.601	689.634	689.636	689.639	689.64	689.751
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

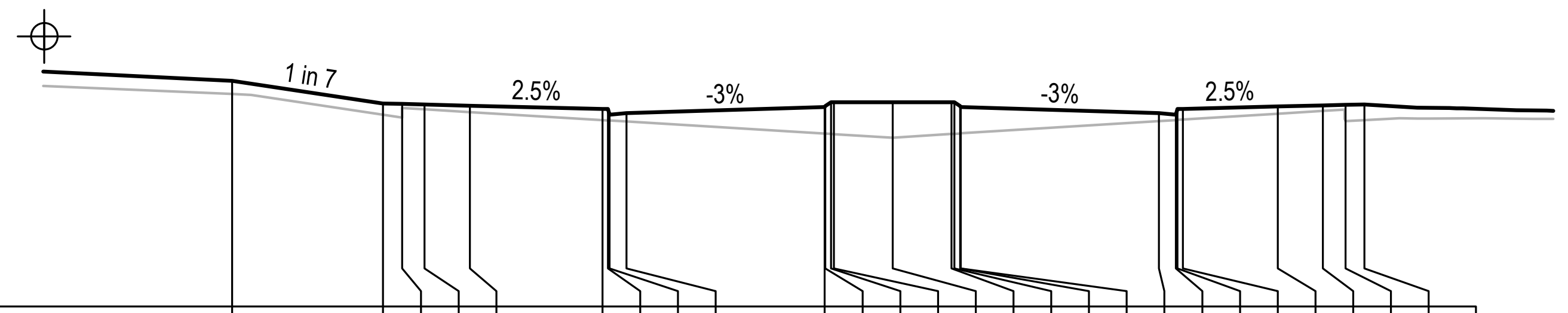
CH 330



DATUM R.L. 686

W.A.E.																										
DESIGN LEVEL	691.935	691.335	691.323	691.308	691.278	691.19	691.19	691.04	691.08	691.237	691.267	691.367	691.367	691.367	691.367	691.367	691.267	691.237	691.08	691.04	691.19	691.19	691.253	691.283	691.298	691.31
BEW CC LEVEL	691.595	691.039	690.964	690.904	691.069	690.868	690.86	690.858	690.832	690.533	690.532	690.523	690.519	690.43	690.527	690.531	690.541	690.542	690.868	690.896	690.898	690.907	691.063	691.138	690.924	690.932
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

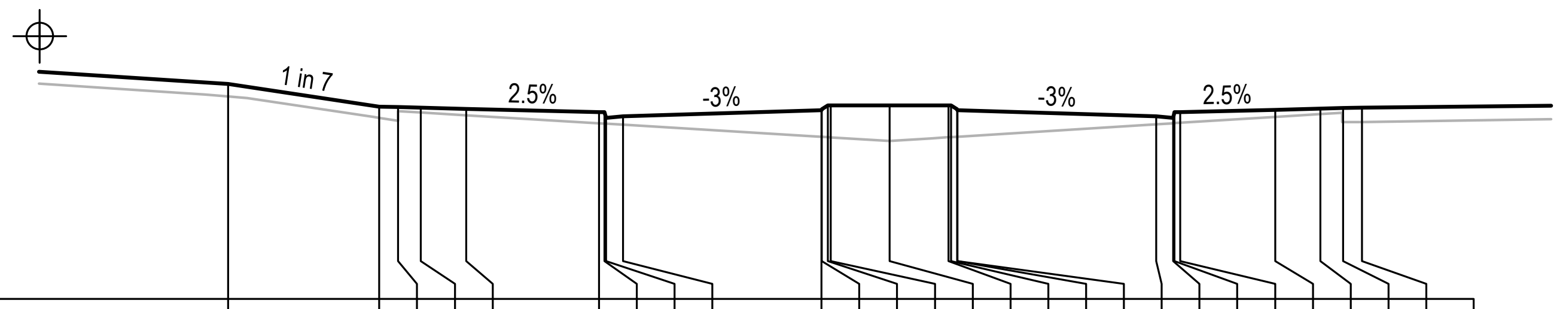
KTP CH 368.793



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	690.975	690.375	690.362	690.347	690.317	690.229	690.229	690.079	690.119	690.277	690.307	690.407	690.407	690.407	690.407	690.407	690.307	690.277	690.119	690.079	690.229	690.229	690.292	690.322	690.337	690.35
BEW CC LEVEL	690.625	690.079	690.004	690.218	690.145	689.934	689.925	689.922	689.895	689.578	689.578	689.568	689.564	689.469	689.566	689.571	689.581	689.581	689.907	689.935	689.938	689.947	690.103	690.177	689.904	689.93
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

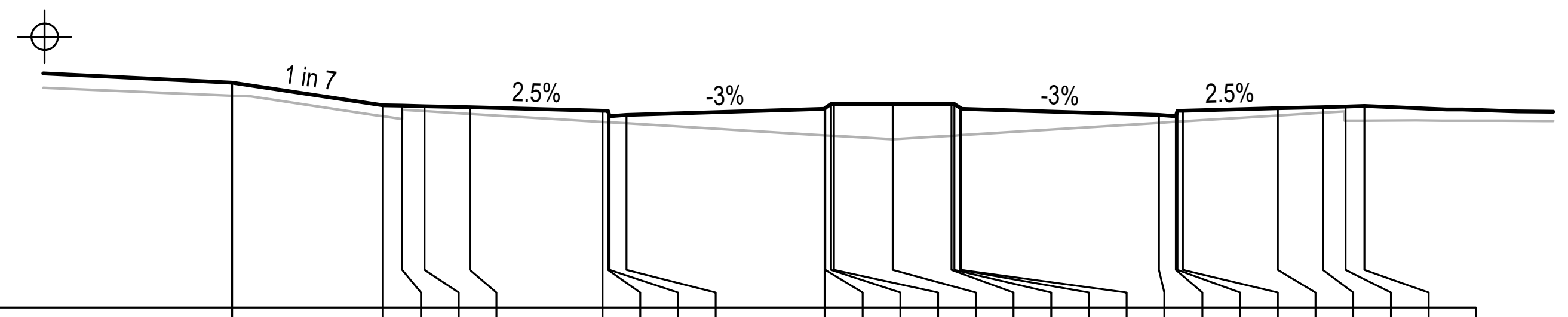
KTP CH 317.129



DATUM R.L. 686

W.A.E.																										
DESIGN LEVEL	691.681	691.081	691.069	691.054	691.024	690.936	690.936	690.786	690.826	690.984	691.014	691.114	691.114	691.114	691.114	691.114	691.014	690.984	690.826	690.786	690.936	690.936	690.999	691.029	691.044	691.056
BEW CC LEVEL	691.352	690.786	690.711	690.924	690.852	690.64	690.631	690.629	690.602	690.285	690.284	690.275	690.27	690.176	690.273	690.277	690.287	690.288	690.614	690.642	690.644	690.654	690.81	690.884	690.67	690.675
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

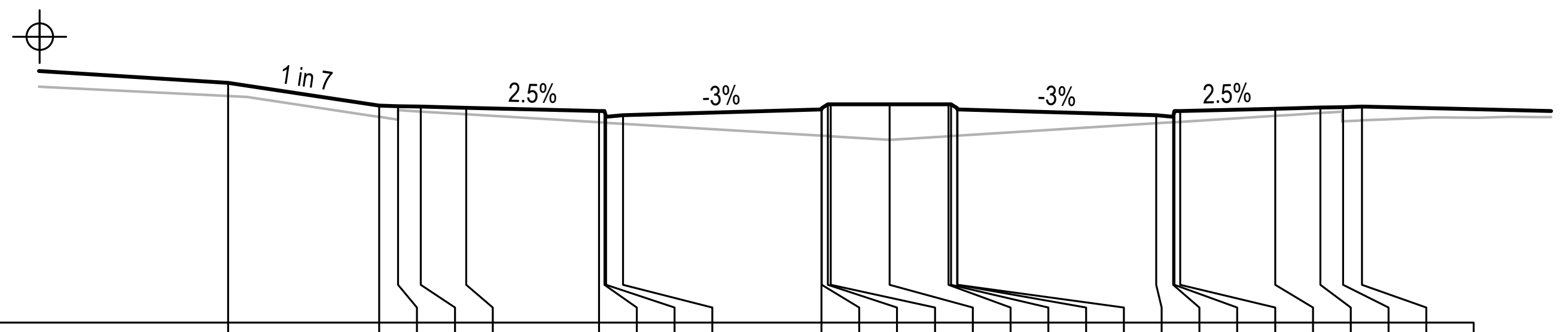
CH 360



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	690.953	690.353	690.341	690.326	690.296	690.208	690.208	690.058	690.098	690.256	690.286	690.386	690.386	690.386	690.386	690.386	690.286	690.256	690.098	690.058	690.208	690.208	690.271	690.301	690.316	690.328
BEW CC LEVEL	690.604	690.058	689.983	690.196	690.124	689.912	689.903	689.901	689.874	689.557	689.556	689.547	689.542	689.448	689.545	689.549	689.559	689.56	689.886	689.914	689.916	689.926	690.082	690.156	689.942	689.944
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

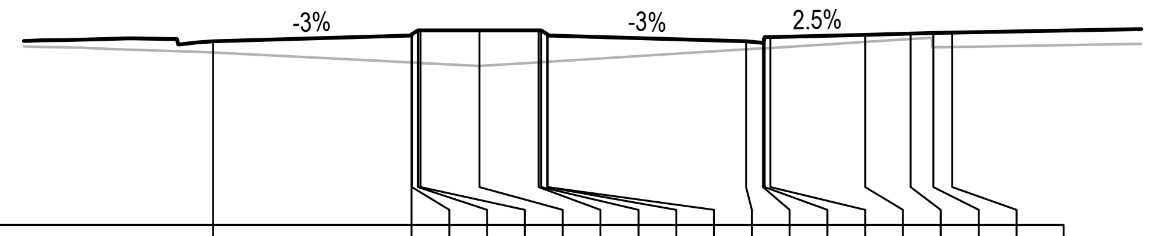
CH 315



DATUM R.L. 685

W.A.E.																										
DESIGN LEVEL	691.338	690.738	690.725	690.71	690.68	690.592	690.592	690.442	690.482	690.64	690.67	690.77	690.77	690.77	690.77	690.77	690.67	690.64	690.482	690.442	690.592	690.592	690.655	690.685	690.7	690.713
BEW CC LEVEL	690.992	690.442	690.367	690.581	690.508	690.296	690.287	690.285	690.258	689.941	689.94	689.931	689.926	689.832	689.929	689.934	689.944	689.944	690.27	690.298	690.301	690.31	690.466	690.54	690.321	690.348
OFFSET	-17.5	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 345



DATUM R.L. 687

W.A.E.																		
DESIGN LEVEL	691.848	692.006	692.036	692.136	692.136	692.136	692.136	692.136	692.036	692.006	691.848	691.808	691.958	691.958	692.021	692.051	692.066	692.079
BEW CC LEVEL	691.554	691.289	691.289	691.281	691.277	691.198	691.295	691.299	691.309	691.31	691.636	691.664	691.666	691.676	691.832	691.906	691.692	691.7
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

CH 390

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 08 OF 30

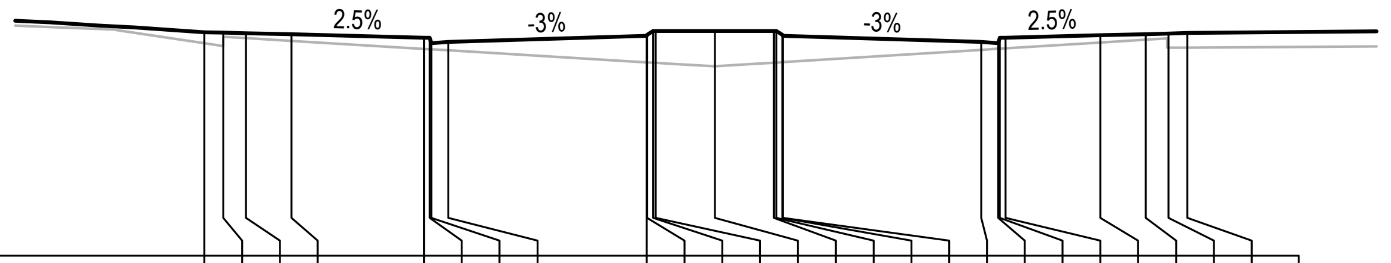
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	337	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-337.dwg

ROAD No.02

LEGEND

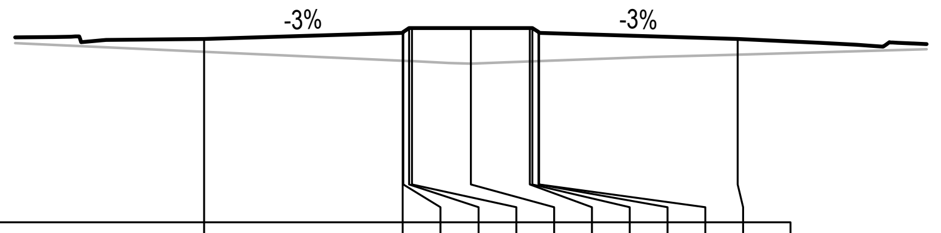
FINISHED DESIGN SURFACE ―
EXISTING SURFACE ―
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 688

W.A.E.																									
DESIGN LEVEL	693.904	693.891	693.876	693.846	693.758	693.758	693.608	693.648	693.806	693.836	693.936	693.936	693.936	693.936	693.936	693.836	693.806	693.648	693.608	693.758	693.758	693.821	693.851	693.866	693.879
BEW CC LEVEL	693.608	693.533	693.747	693.674	693.462	693.453	693.451	693.424	693.107	693.106	693.097	693.092	692.998	693.095	693.099	693.109	693.11	693.436	693.464	693.466	693.476	693.632	693.706	693.492	693.495
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

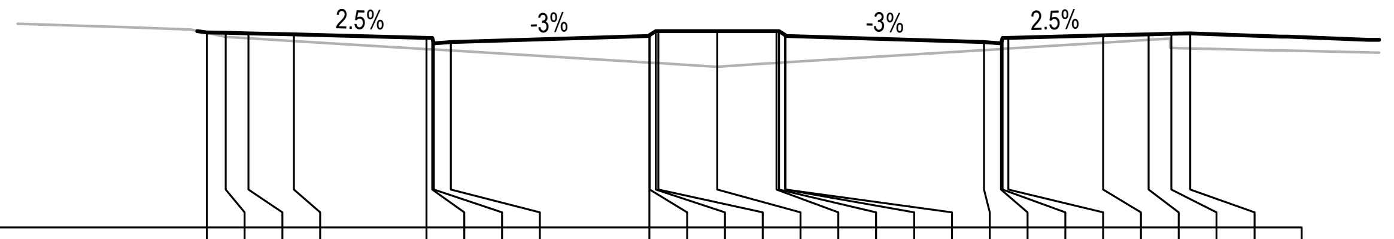
CH 435



DATUM R.L. 690

W.A.E.											
DESIGN LEVEL	694.844	695.001	695.031	695.131	695.131	695.131	695.131	695.131	695.031	695.001	694.844
BEW CC LEVEL	694.505	694.268	694.267	694.26	694.257	694.194	694.251	694.254	694.259	694.26	694.432
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

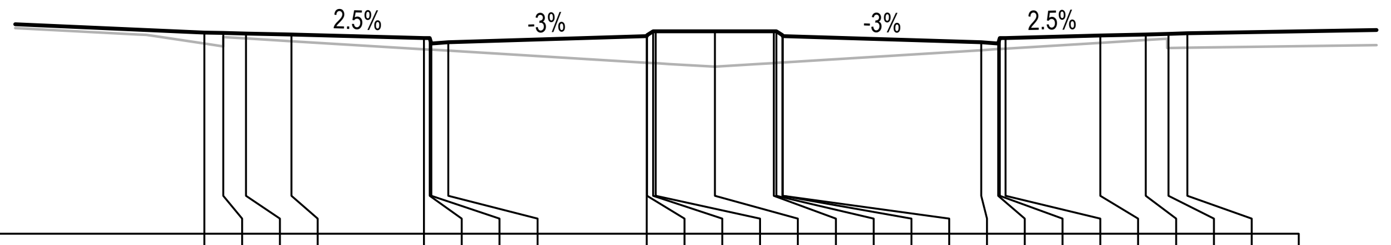
CH 465



DATUM R.L. 691

W.A.E.																									
DESIGN LEVEL	696.141	696.128	696.113	696.083	695.995	695.995	695.845	695.885	696.043	696.073	696.173	696.173	696.173	696.173	696.173	696.073	696.043	695.885	695.845	695.995	695.995	696.058	696.088	696.103	696.116
BEW CC LEVEL	696.125	696.02	695.983	695.911	695.699	695.69	695.688	695.661	695.344	695.343	695.334	695.329	695.235	695.332	695.336	695.346	695.347	695.673	695.701	695.703	695.713	695.869	695.943	695.728	695.716
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

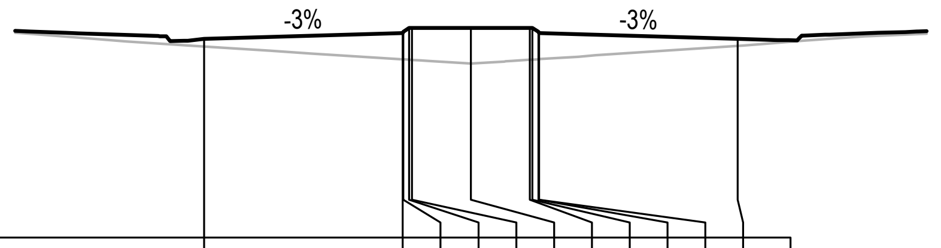
CH 495



DATUM R.L. 688

W.A.E.																									
DESIGN LEVEL	693.304	693.291	693.276	693.246	693.158	693.158	693.008	693.048	693.206	693.236	693.336	693.336	693.336	693.336	693.336	693.236	693.206	693.048	693.008	693.158	693.158	693.221	693.251	693.266	693.279
BEW CC LEVEL	693.008	692.933	693.147	693.074	692.862	692.853	692.851	692.824	692.507	692.506	692.497	692.492	692.398	692.495	692.499	692.509	692.51	692.836	692.864	692.866	692.876	693.032	693.106	692.892	692.899
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

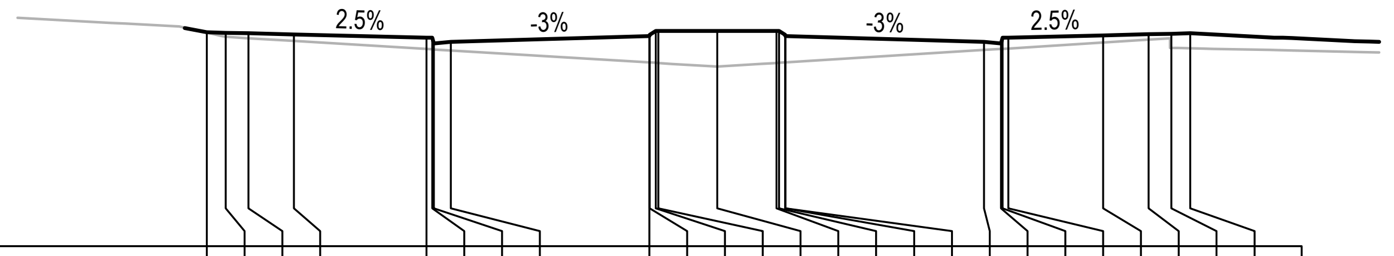
CH 420



DATUM R.L. 689

W.A.E.											
DESIGN LEVEL	694.248	694.406	694.436	694.536	694.536	694.536	694.536	694.536	694.436	694.406	694.248
BEW CC LEVEL	694.051	693.711	693.71	693.699	693.695	693.598	693.698	693.703	693.713	693.714	694.063
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

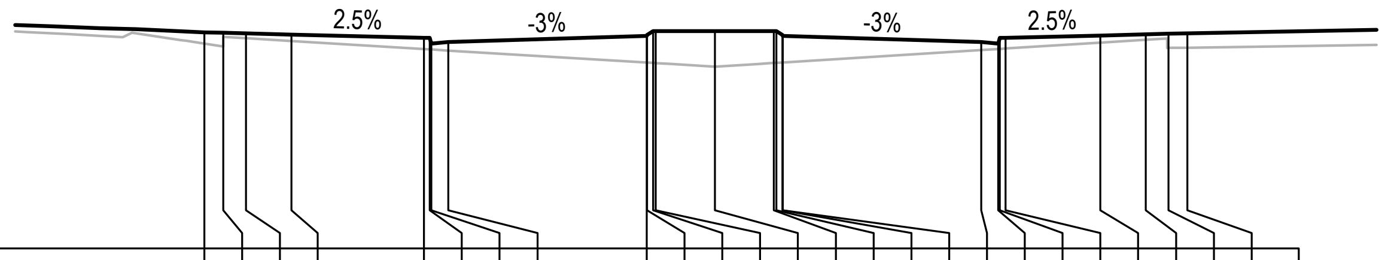
CH 450



DATUM R.L. 690

W.A.E.																									
DESIGN LEVEL	695.648	695.635	695.62	695.59	695.503	695.503	695.353	695.393	695.55	695.58	695.68	695.68	695.68	695.68	695.68	695.58	695.55	695.393	695.353	695.503	695.503	695.565	695.595	695.61	695.623
BEW CC LEVEL	695.64	695.527	695.491	695.418	695.207	695.198	695.195	695.168	694.851	694.851	694.841	694.837	694.743	694.839	694.844	694.854	694.854	695.18	695.208	695.211	695.22	695.376	695.45	695.235	695.224
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

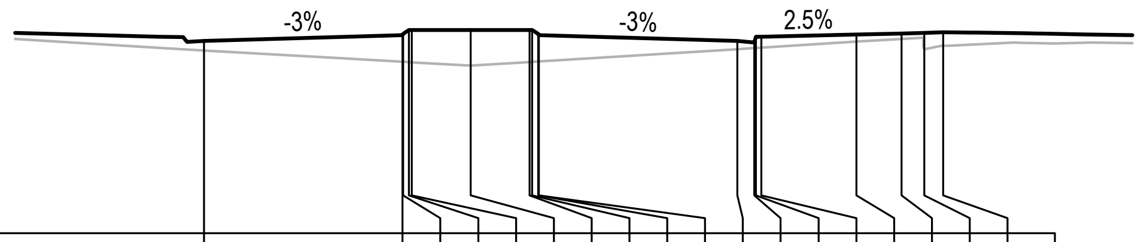
CH 480



DATUM R.L. 687

W.A.E.																									
DESIGN LEVEL	692.704	692.691	692.676	692.646	692.558	692.558	692.408	692.448	692.606	692.636	692.736	692.736	692.736	692.736	692.736	692.636	692.606	692.448	692.408	692.558	692.558	692.621	692.651	692.666	692.679
BEW CC LEVEL	692.408	692.333	692.547	692.474	692.262	692.253	692.251	692.224	691.907	691.906	691.897	691.892	691.798	691.895	691.899	691.909	691.91	692.236	692.264	692.266	692.276	692.432	692.506	692.292	692.3
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

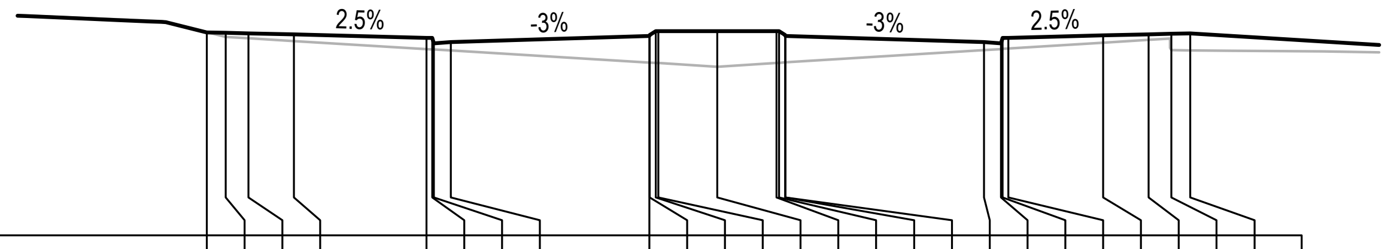
CH 405



DATUM R.L. 689

W.A.E.																		
DESIGN LEVEL	694.08	694.238	694.268	694.368	694.368	694.368	694.368	694.368	694.268	694.238	694.08	694.04	694.19	694.19	694.253	694.283	694.298	694.31
BEW CC LEVEL	693.832	693.533	693.532	693.523	693.519	693.43	693.527	693.531	693.541	693.542	693.868	693.896	693.898	693.908	694.063	694.138	693.865	693.958
OFFSET	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

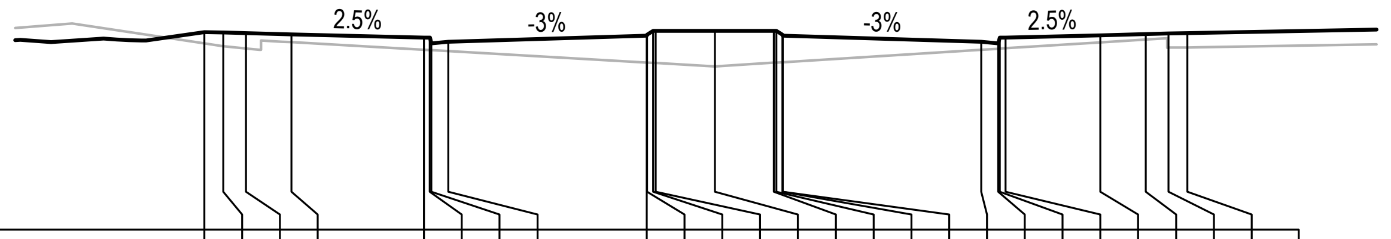
KTP CH 445.793



DATUM R.L. 690

W.A.E.																									
DESIGN LEVEL	695.354	695.342	695.327	695.297	695.209	695.209	695.059	695.099	695.257	695.287	695.387	695.387	695.387	695.387	695.387	695.287	695.257	695.099	695.059	695.209	695.209	695.272	695.302	695.317	695.329
BEW CC LEVEL	695.358	695.234	695.197	695.125	694.913	694.904	694.902	694.875	694.558	694.557	694.548	694.543	694.449	694.546	694.55	694.56	694.561	694.887	694.915	694.917	694.927	695.083	695.157	694.884	694.88
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

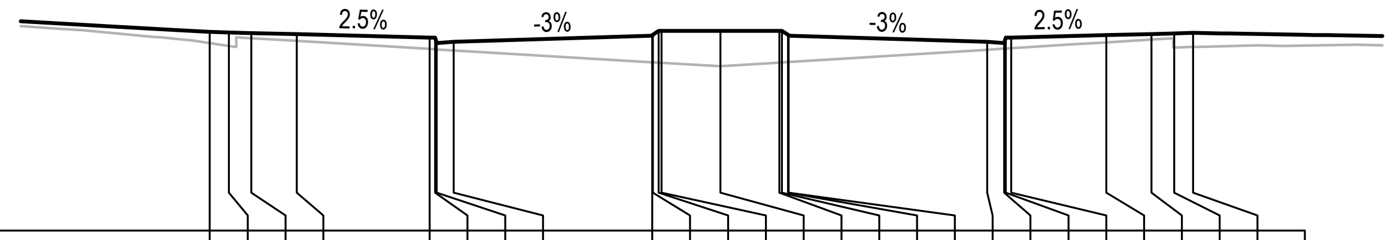
KTP CH 471.793



DATUM R.L. 687

W.A.E.																									
DESIGN LEVEL	692.215	692.203	692.188	692.158	692.07	692.07	691.92	691.96	692.118	692.148	692.248	692.248	692.248	692.248	692.248	692.148	692.118	691.96	691.92	692.07	692.07	692.133	692.163	692.178	692.19
BEW CC LEVEL	691.919	691.844	691.785	691.949	691.749	691.74	691.738	691.712	691.413	691.412	691.403	691.399	691.31	691.407	691.411	691.421	691.422	691.748	691.776	691.778	691.788	691.943	692.018	691.804	691.812
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

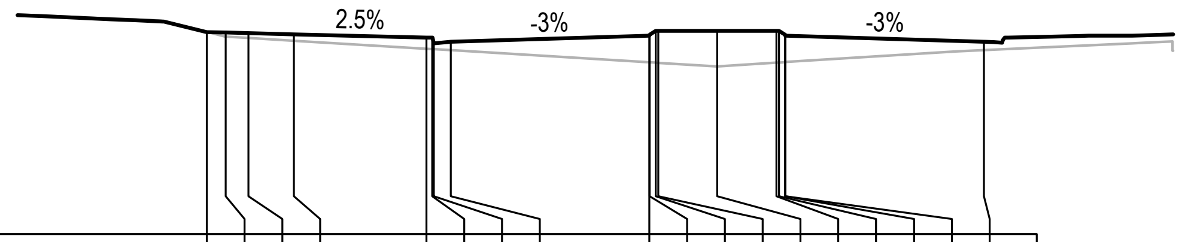
KTP CH 392.793



DATUM R.L. 689

W.A.E.																									
DESIGN LEVEL	694.235	694.223	694.208	694.178	694.09	694.09	693.94	693.98	694.138	694.168	694.268	694.268	694.268	694.268	694.268	694.168	694.138	693.98	693.94	694.09	694.09	694.153	694.183	694.198	694.21
BEW CC LEVEL	693.94	693.865	694.073	694.001	693.789	693.78	693.778	693.751	693.434	693.433	693.423	693.419	693.33	693.427	693.431	693.441	693.442	693.768	693.796	693.798	693.808	693.963	694.038	693.825	693.843
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

KTP CH 443.293



DATUM R.L. 690

W.A.E.																		
DESIGN LEVEL	695.336	695.324	695.309	695.279	695.191	695.191	695.041	695.081	695.238	695.268	695.368	695.368	695.368	695.368	695.368	695.268	695.238	695.081
BEW CC LEVEL	695.34	695.215	695.179	695.107	694.895	694.886	694.883	694.856	694.539	694.539	694.529	694.525	694.431	694.528	694.532	694.542	694.543	694.857
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05

KTP CH 471.293

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 09 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	338	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN

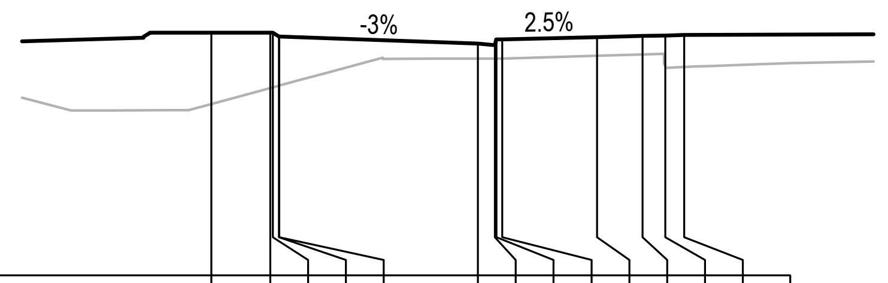
ROAD No.02

LEGEND

FINISHED DESIGN SURFACE ―

EXISTING SURFACE ―

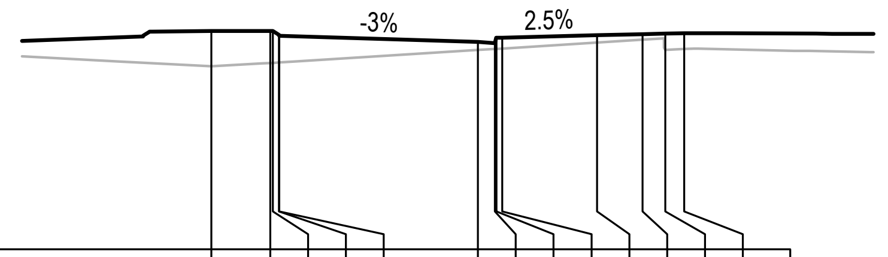
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 692

W.A.E.													
DESIGN LEVEL	698.409	698.409	698.409	698.309	698.279	698.122	698.082	698.232	698.232	698.295	698.325	698.34	698.352
BEW CC LEVEL	696.527	696.949	696.968	697.012	697.014	697.727	697.727	697.728	697.729	697.805	697.841	697.524	697.507
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

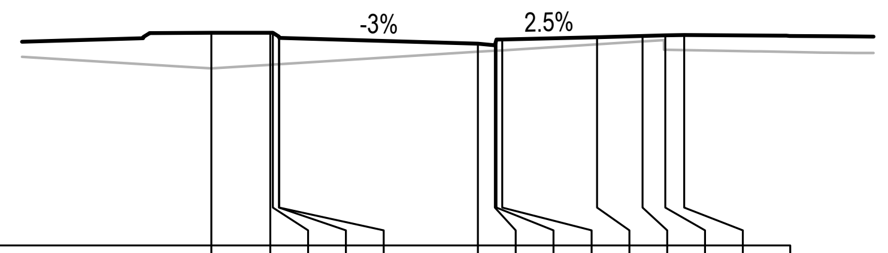
KTP CH 581.629



DATUM R.L. 691

W.A.E.													
DESIGN LEVEL	696.768	696.768	696.768	696.668	696.638	696.48	696.44	696.59	696.59	696.653	696.683	696.698	696.71
BEW CC LEVEL	695.831	695.918	695.923	695.932	695.932	696.262	696.291	696.293	696.303	696.461	696.537	696.265	696.289
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

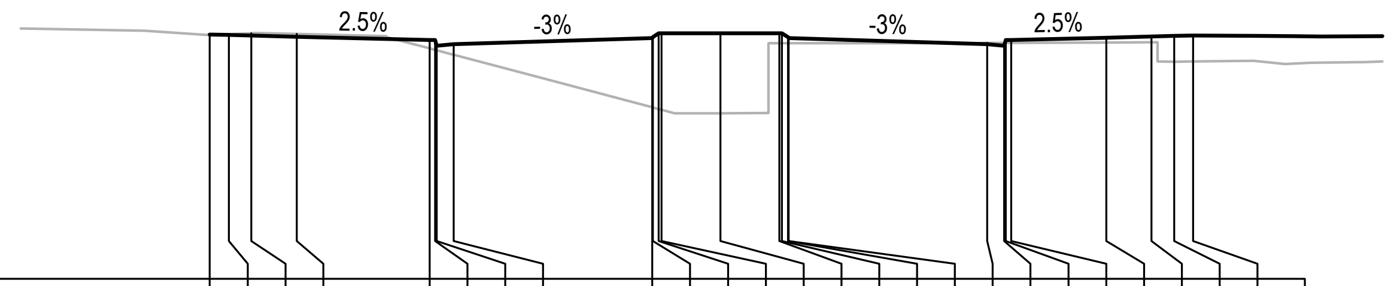
KTP CH 515.987



DATUM R.L. 691

W.A.E.													
DESIGN LEVEL	696.609	696.609	696.609	696.509	696.479	696.322	696.282	696.432	696.432	696.494	696.524	696.539	696.552
BEW CC LEVEL	695.672	695.768	695.773	695.783	695.783	696.109	696.137	696.14	696.149	696.305	696.38	696.164	696.155
OFFSET	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

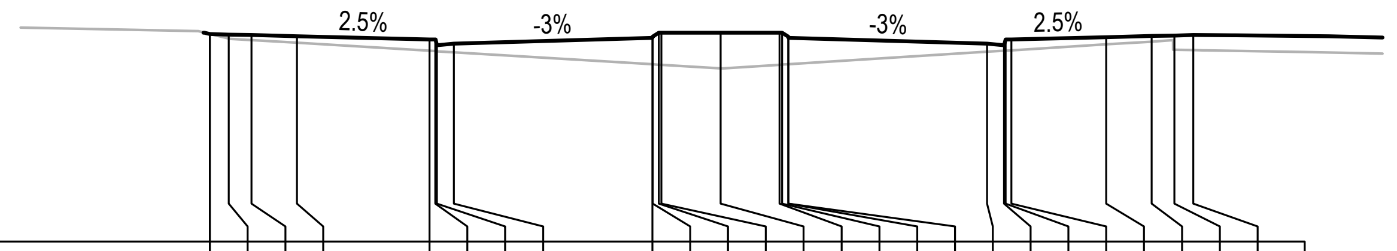
CH 510



DATUM R.L. 692

W.A.E.																										
DESIGN LEVEL	698.462	698.449	698.434	698.404	698.316	698.316	698.166	698.206	698.364	698.394	698.494	698.494	698.494	698.494	698.494	698.394	698.364	698.206	698.166	698.316	698.316	698.379	698.409	698.424	698.437
BEW CC LEVEL	698.452	698.472	698.495	698.473	698.094	698.054	698.044	697.924	696.534	696.532	696.489	696.471	696.381	698.233	698.234	698.234	698.234	698.236	698.237	698.238	698.238	698.248	698.253	697.742	697.748
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

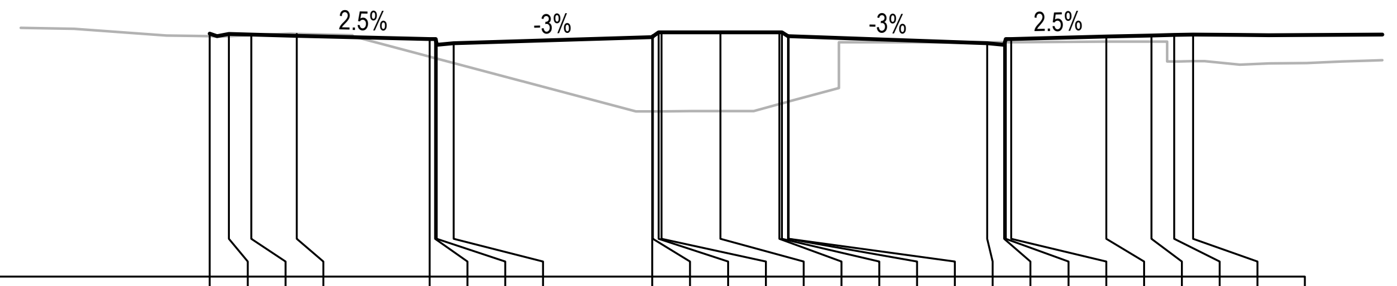
CH 585



DATUM R.L. 691

W.A.E.																									
DESIGN LEVEL	696.466	696.454	696.439	696.409	696.321	696.321	696.171	696.211	696.368	696.398	696.498	696.498	696.498	696.498	696.498	696.398	696.368	696.211	696.171	696.321	696.321	696.384	696.414	696.429	696.441
BEW CC LEVEL	696.468	696.345	696.309	696.237	696.025	696.016	696.013	695.986	695.669	695.669	695.659	695.655	695.561	695.658	695.662	695.672	695.673	695.999	696.027	696.029	696.038	696.194	696.269	696.054	696.044
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

KTP CH 506.001



DATUM R.L. 692

W.A.E.																									
DESIGN LEVEL	698.427	698.414	698.399	698.369	698.282	698.282	698.132	698.172	698.329	698.359	698.459	698.459	698.459	698.459	698.459	698.359	698.329	698.172	698.132	698.282	698.282	698.344	698.374	698.389	698.402
BEW CC LEVEL	698.355	698.36	698.384	698.42	697.814	697.774	697.764	697.645	696.37	696.37	696.371	696.371	696.376	696.562	696.581	696.624	696.627	698.197	698.199	698.199	698.199	698.209	698.214	697.688	697.694
OFFSET	-13.5	-13	-12.4	-11.2	-7.69	-7.54	-7.5	-7.05	-1.8	-1.79	-1.63	-1.56	0	1.56	1.63	1.79	1.8	7.05	7.5	7.54	7.69	10.2	11.4	12	12.5

KTP CH 583.619

ISSUED FOR CONSTRUCTION CERTIFICATE

A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Disclaimer and Copyright:

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 10 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	339	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-339.dwg

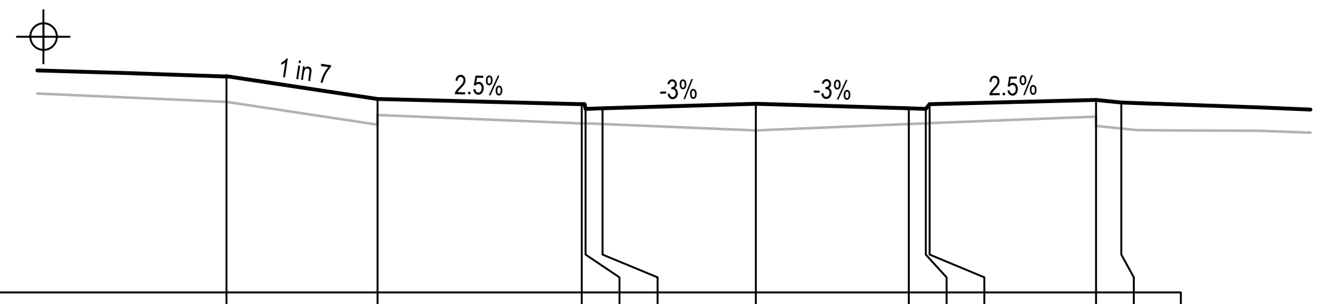
ROAD No.03

LEGEND

FINISHED DESIGN SURFACE —

EXISTING SURFACE —

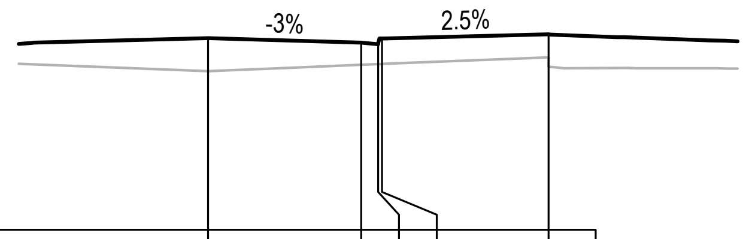
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 692

W.A.E.											
DESIGN LEVEL	697.702	697.102	696.968	696.843	696.858	696.98	696.858	696.843	696.968	697.077	697.01
BEW CC LEVEL	697.031	696.431	696.464	696.46	696.442	696.279	696.442	696.46	696.464	696.391	696.323
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	9.676

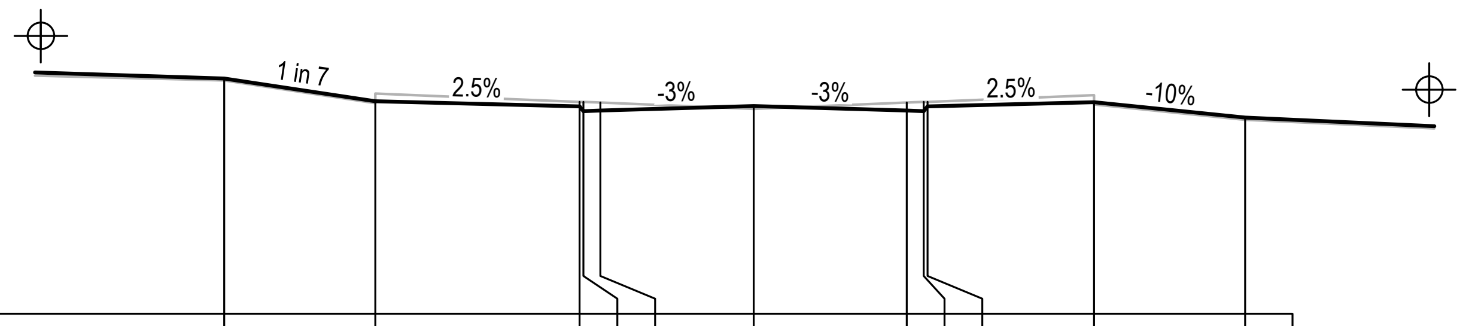
KTP CH 41.587



DATUM R.L. 692

W.A.E.					
DESIGN LEVEL	697.064	696.943	696.928	697.053	697.162
BEW CC LEVEL	696.194	696.357	696.375	696.379	696.307
OFFSET	0	4.05	4.5	4.6	9

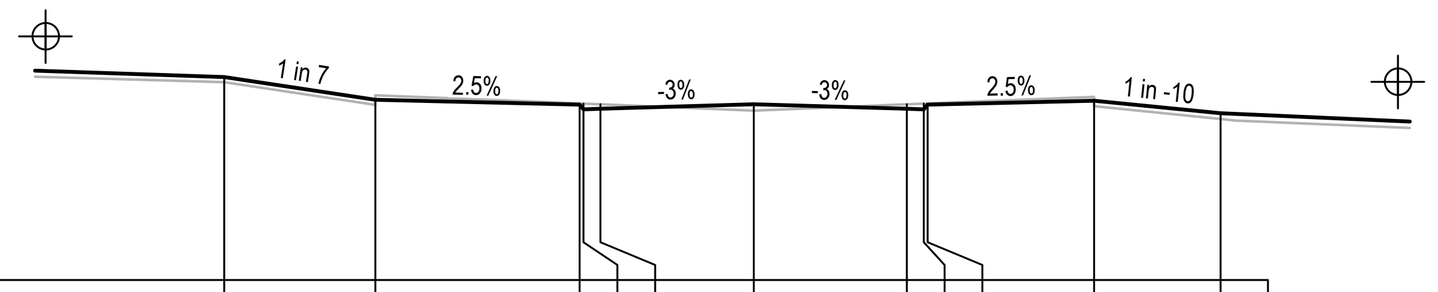
KTP CH 33.137



DATUM R.L. 691

W.A.E.											
DESIGN LEVEL	697.218	696.618	696.484	696.359	696.374	696.496	696.374	696.359	696.484	696.593	696.193
BEW CC LEVEL	697.173	696.573	696.605	696.601	696.583	696.42	696.583	696.602	696.606	696.533	696.133
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

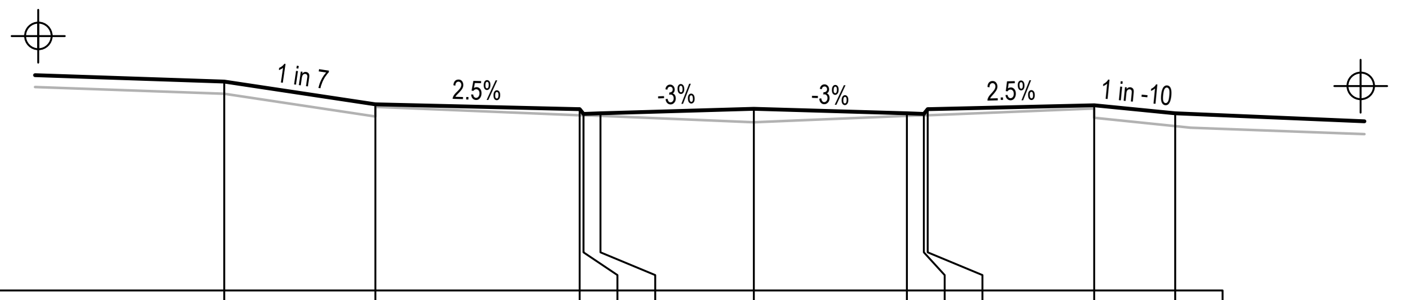
CH 90



DATUM R.L. 692

W.A.E.											
DESIGN LEVEL	697.368	696.768	696.634	696.509	696.524	696.646	696.524	696.509	696.634	696.743	696.408
BEW CC LEVEL	697.234	696.634	696.666	696.662	696.644	696.481	696.644	696.662	696.666	696.594	696.259
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	12.349

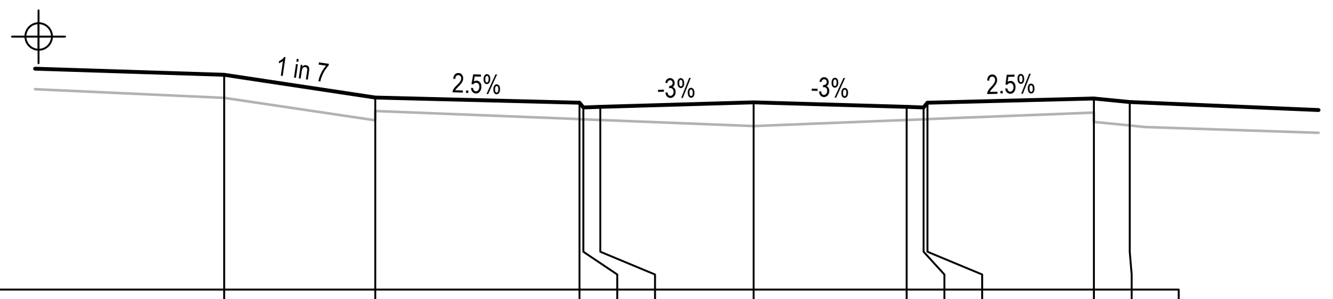
CH 75



DATUM R.L. 692

W.A.E.											
DESIGN LEVEL	697.518	696.918	696.784	696.659	696.674	696.796	696.674	696.659	696.784	696.893	696.678
BEW CC LEVEL	697.196	696.596	696.628	696.624	696.606	696.443	696.606	696.624	696.628	696.556	696.341
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	11.149

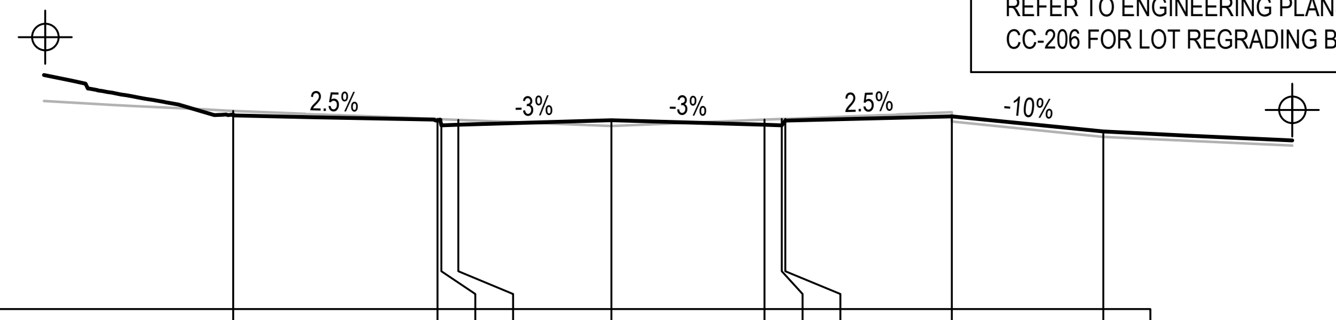
CH 60



DATUM R.L. 692

W.A.E.											
DESIGN LEVEL	697.668	697.068	696.934	696.809	696.824	696.946	696.824	696.809	696.934	697.043	696.948
BEW CC LEVEL	697.065	696.465	696.498	696.494	696.476	696.313	696.476	696.494	696.498	696.425	696.33
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	9.949

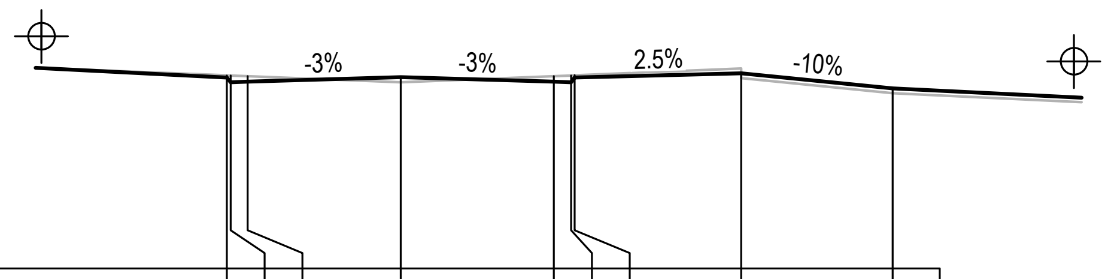
CH 45



DATUM R.L. 691

W.A.E.										
DESIGN LEVEL	696.112	695.979	695.854	695.869	695.99	695.869	695.854	695.979	696.087	695.687
BEW CC LEVEL	696.234	696.02	696.016	695.999	695.838	696.001	696.019	696.023	695.95	695.55
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

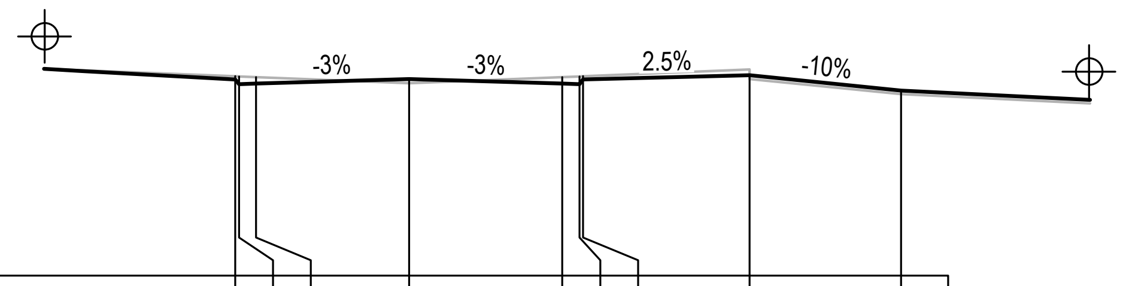
KTP CH 140.572



DATUM R.L. 691

W.A.E.									
DESIGN LEVEL	696.034	695.909	695.924	696.046	695.924	695.909	696.034	696.143	695.743
BEW CC LEVEL	696.087	696.083	696.065	695.905	696.068	696.086	696.09	696.017	695.617
OFFSET	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

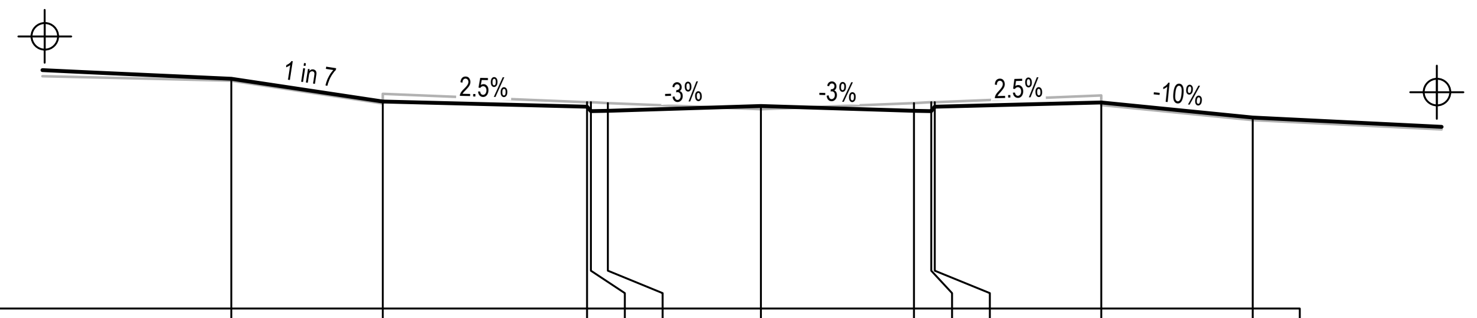
CH 135



DATUM R.L. 691

W.A.E.									
DESIGN LEVEL	696.184	696.059	696.074	696.196	696.074	696.059	696.184	696.293	695.893
BEW CC LEVEL	696.267	696.263	696.245	696.085	696.248	696.266	696.27	696.197	695.797
OFFSET	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 120



DATUM R.L. 691

W.A.E.											
DESIGN LEVEL	697.068	696.468	696.334	696.209	696.224	696.346	696.224	696.209	696.334	696.443	696.043
BEW CC LEVEL	697.017	696.417	696.45	696.446	696.428	696.265	696.428	696.446	696.45	696.377	695.977
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 105

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

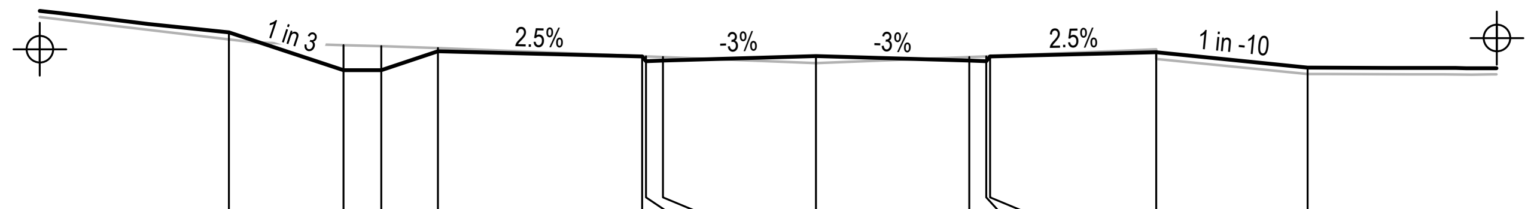
By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 11 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	340	A

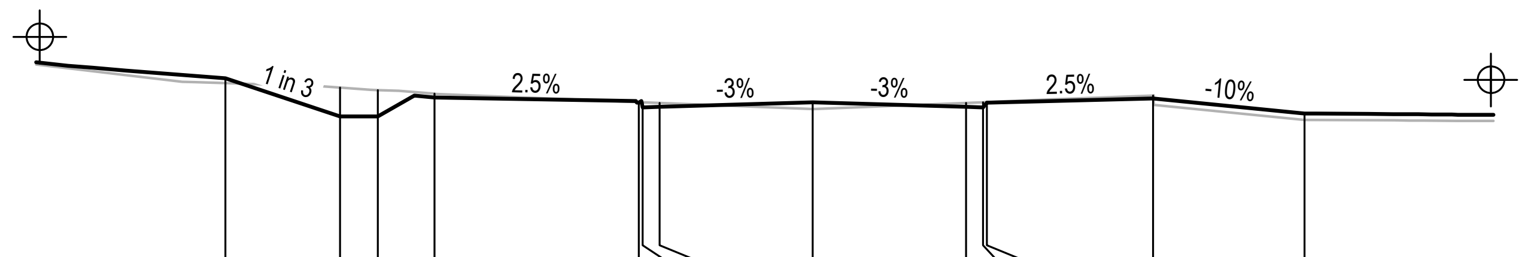
ROAD No.03



DATUM R.L. 691

W.A.E.													
DESIGN LEVEL	696.361	695.361	695.361	695.856	695.722	695.597	695.612	695.734	695.612	695.597	695.722	695.831	695.431
BEW CC LEVEL	696.17	696.022	695.992	695.947	695.73	695.726	695.708	695.545	695.708	695.726	695.73	695.657	695.257
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

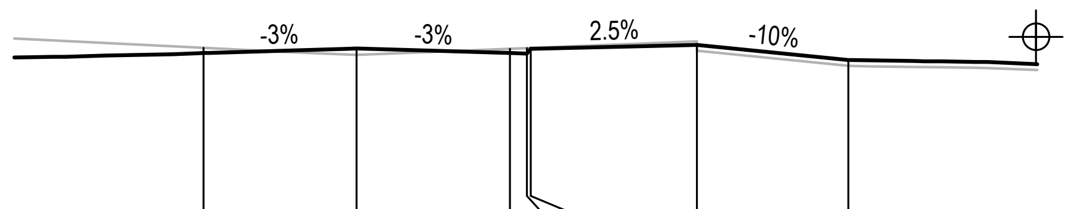
CH 165



DATUM R.L. 691

W.A.E.													
DESIGN LEVEL	696.404	695.404	695.404	695.899	695.765	695.64	695.655	695.776	695.655	695.64	695.765	695.874	695.474
BEW CC LEVEL	696.277	696.16	696.097	695.997	695.776	695.772	695.754	695.593	695.756	695.774	695.778	695.954	695.306
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

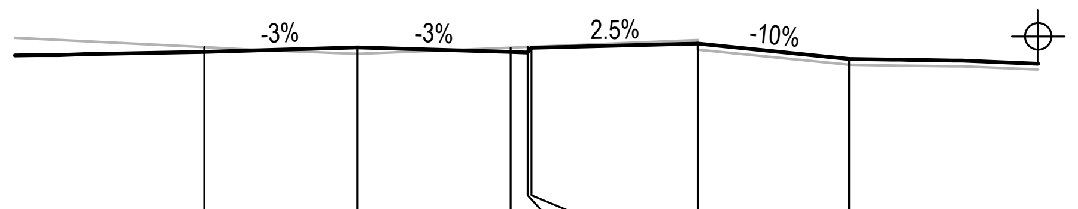
KTP CH 161.067



DATUM R.L. 691

W.A.E.							
DESIGN LEVEL	695.761	695.882	695.761	695.746	695.871	695.979	695.579
BEW CC LEVEL	695.898	695.711	695.874	695.892	695.896	695.824	695.424
OFFSET	-4.05	0	4.05	4.5	4.6	9	13

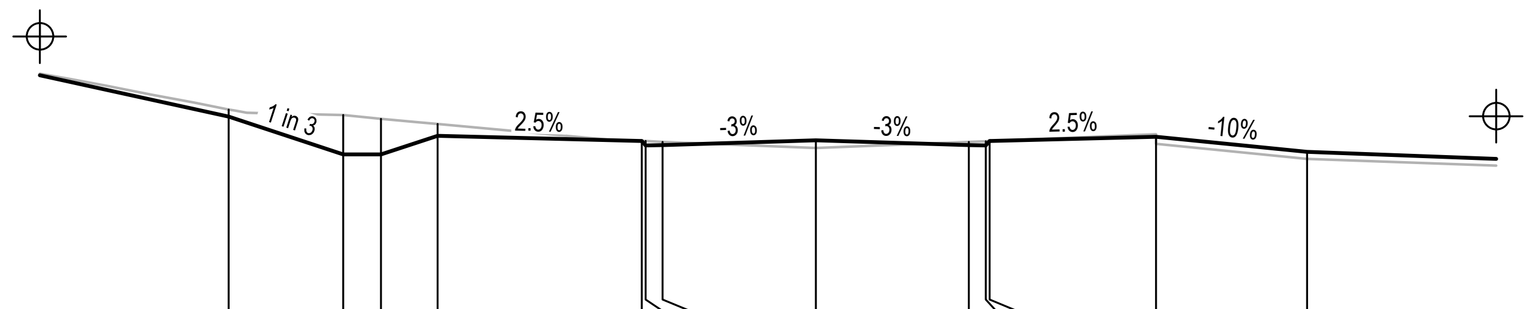
CH 151.14



DATUM R.L. 691

W.A.E.							
DESIGN LEVEL	695.772	695.894	695.772	695.757	695.882	695.991	695.591
BEW CC LEVEL	695.898	695.725	695.888	695.906	695.91	695.837	695.437
OFFSET	-4.05	0	4.05	4.5	4.6	9	13

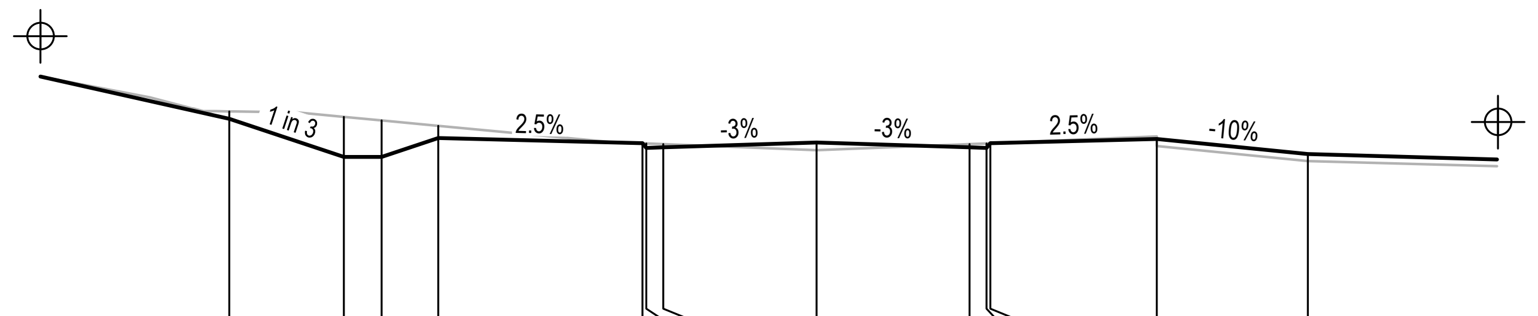
CH 150



DATUM R.L. 690

W.A.E.													
DESIGN LEVEL	695.834	694.834	694.834	695.329	695.195	695.07	695.085	695.206	695.085	695.07	695.195	695.304	694.904
BEW CC LEVEL	696.024	695.873	695.779	695.64	695.191	695.187	695.169	695.005	695.168	695.186	695.19	695.117	694.717
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

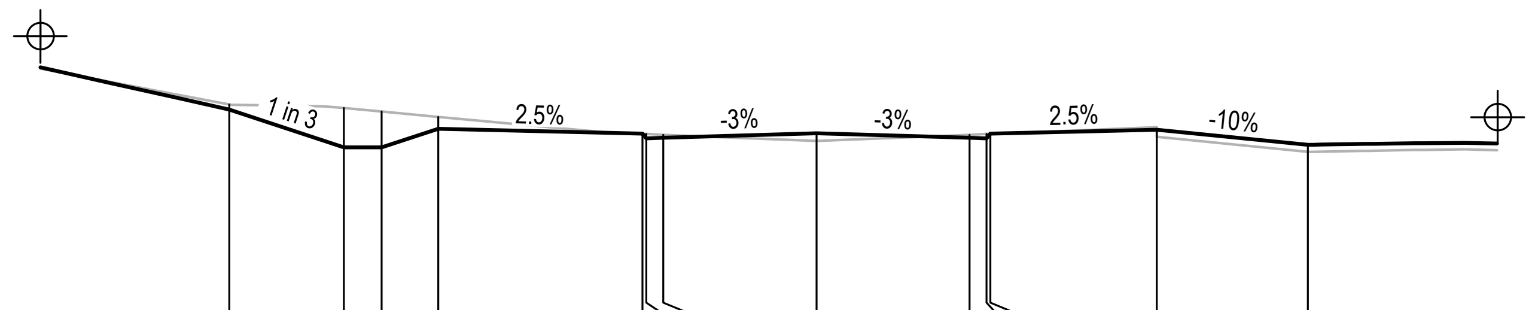
CH 210



DATUM R.L. 690

W.A.E.													
DESIGN LEVEL	696.014	695.014	695.014	695.509	695.375	695.25	695.265	695.386	695.265	695.25	695.375	695.484	695.084
BEW CC LEVEL	696.215	696.071	695.977	695.834	695.371	695.367	695.349	695.185	695.348	695.366	695.37	695.297	694.897
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

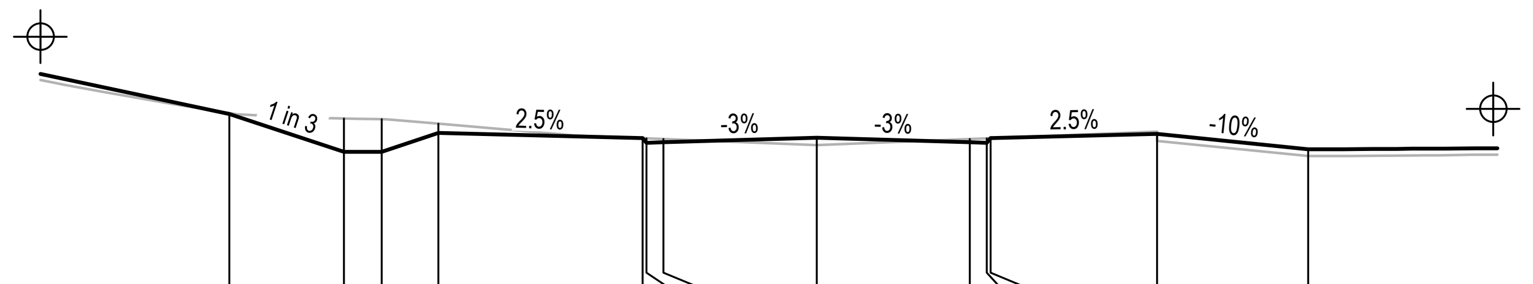
CH 195



DATUM R.L. 690

W.A.E.													
DESIGN LEVEL	696.106	695.106	695.106	695.601	695.467	695.342	695.357	695.479	695.357	695.342	695.467	695.576	695.176
BEW CC LEVEL	696.239	696.145	696.053	695.914	695.464	695.46	695.441	695.278	695.441	695.459	695.463	695.39	694.99
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 187.26



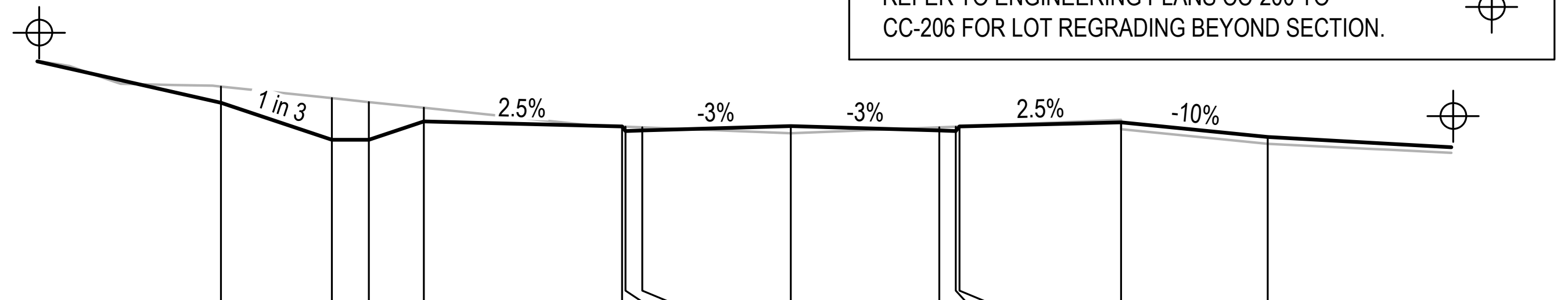
DATUM R.L. 691

W.A.E.													
DESIGN LEVEL	696.191	695.191	695.191	695.686	695.553	695.428	695.443	695.564	695.443	695.428	695.553	695.661	695.261
BEW CC LEVEL	696.213	696.072	696.051	695.933	695.551	695.547	695.528	695.365	695.528	695.546	695.55	695.477	695.077
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 180

LEGEND

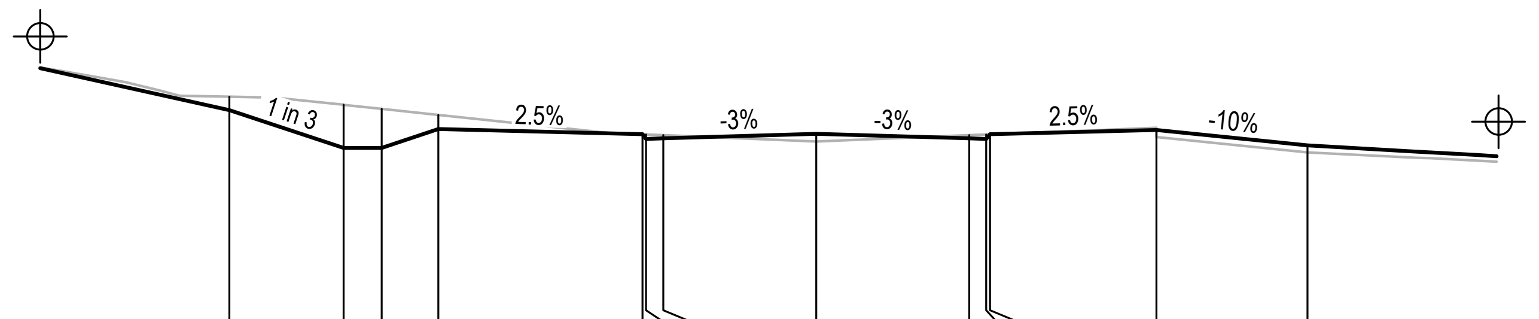
FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⊕



DATUM R.L. 689

W.A.E.													
DESIGN LEVEL	695.114	694.114	694.114	694.609	694.475	694.35	694.365	694.486	694.365	694.35	694.475	694.584	694.184
BEW CC LEVEL	695.56	695.242	695.137	694.979	694.471	694.467	694.449	694.285	694.448	694.466	694.47	694.397	693.997
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

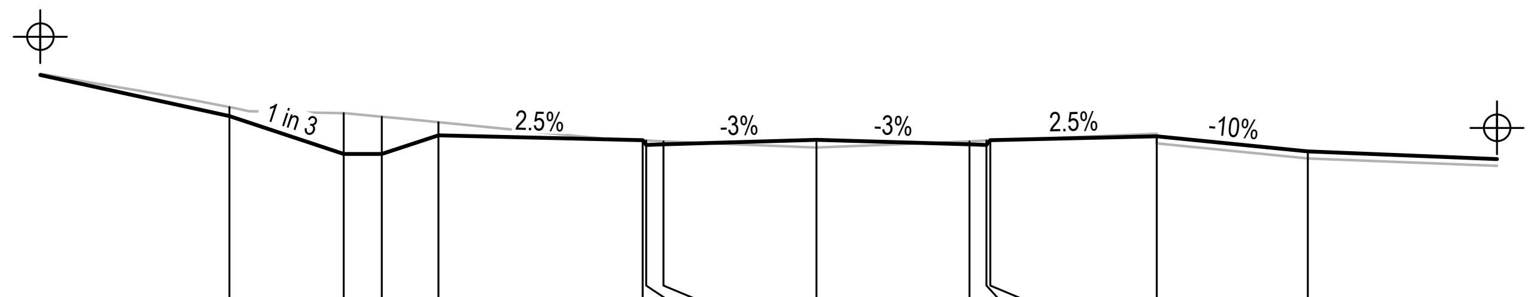
CH 270



DATUM R.L. 689

W.A.E.													
DESIGN LEVEL	695.294	694.294	694.294	694.789	694.655	694.53	694.545	694.666	694.545	694.53	694.655	694.764	694.364
BEW CC LEVEL	695.649	695.433	695.326	695.167	694.651	694.647	694.629	694.465	694.628	694.646	694.65	694.577	694.177
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

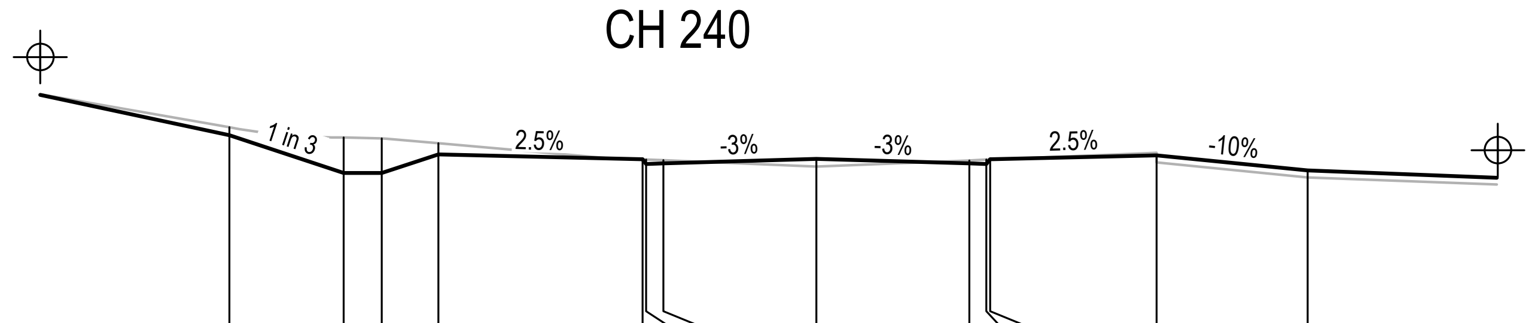
CH 255



DATUM R.L. 690

W.A.E.													
DESIGN LEVEL	695.474	694.474	694.474	694.969	694.835	694.71	694.725	694.846	694.725	694.71	694.835	694.944	694.544
BEW CC LEVEL	695.709	695.55	695.455	695.309	694.831	694.827	694.809	694.645	694.808	694.826	694.83	694.757	694.357
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 240



DATUM R.L. 690

W.A.E.													
DESIGN LEVEL	695.654	694.654	694.654	695.149	695.015	694.89	694.905	695.026	694.905	694.89	695.015	695.124	694.724
BEW CC LEVEL	695.862	695.59	695.567	695.443	695.011	695.007	694.989	694.825	694.988	695.006	695.01	694.937	694.537
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 225

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Disclaimer and Copyright:
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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1)
SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

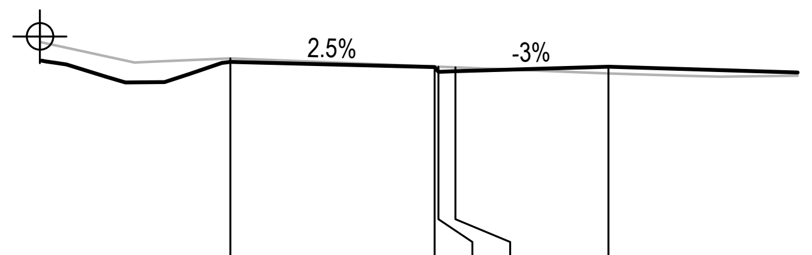
Title:
ROAD CROSS
SECTIONS
SHEET 12 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	341	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN\0182-CC Moss Vale Stage 1_2041\5\DWGS\20-0071-02-CC-341.dwg

ROAD No.03

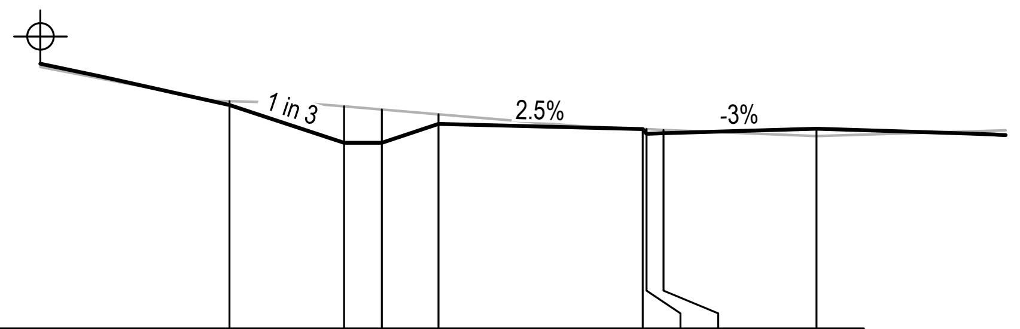
LEGEND	
FINISHED DESIGN SURFACE	━
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 689

W.A.E.					
DESIGN LEVEL	694.147	694.013	693.888	693.903	694.025
BEW CC LEVEL	694.244	694.026	694.022	694.004	693.841
OFFSET	-10	-4.6	-4.5	-4.05	0

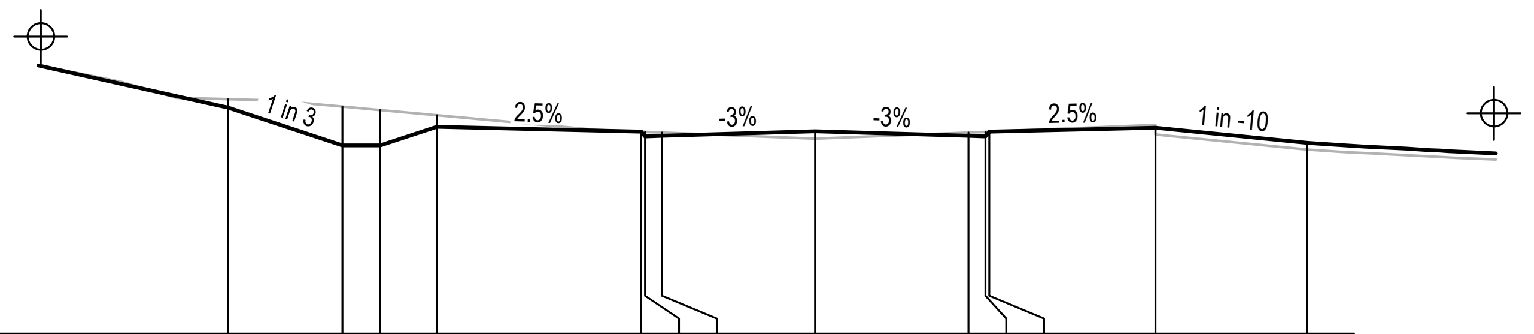
CH 300



DATUM R.L. 689

W.A.E.								
DESIGN LEVEL	694.915	693.915	693.915	694.41	694.277	694.152	694.167	694.288
BEW CC LEVEL	695.014	694.877	694.793	694.666	694.279	694.275	694.257	694.094
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0

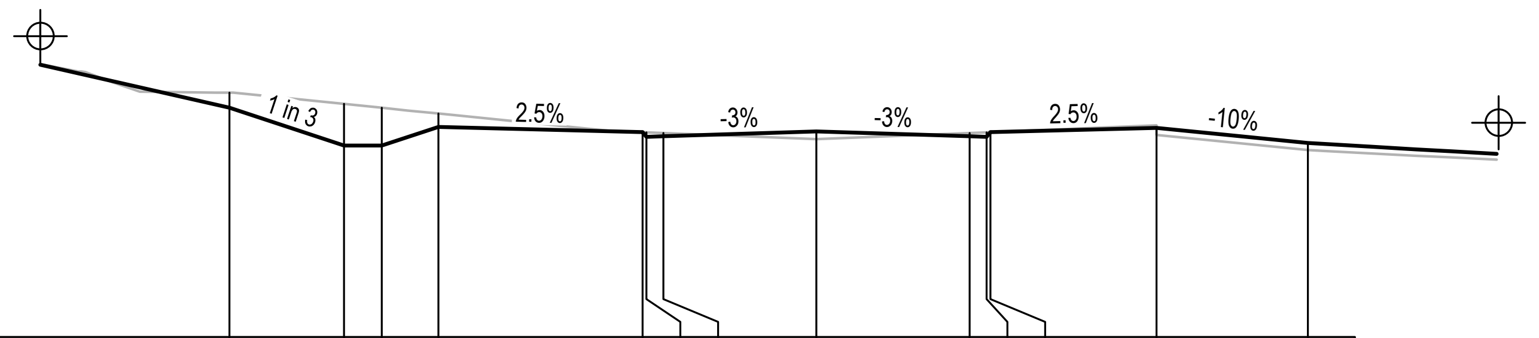
CH 285



DATUM R.L. 689

W.A.E.													
DESIGN LEVEL	694.971	693.971	693.971	694.466	694.332	694.207	694.222	694.344	694.222	694.207	694.332	694.441	694.041
BEW CC LEVEL	695.191	694.993	694.902	694.765	694.332	694.328	694.31	694.146	694.31	694.328	694.332	694.259	693.859
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

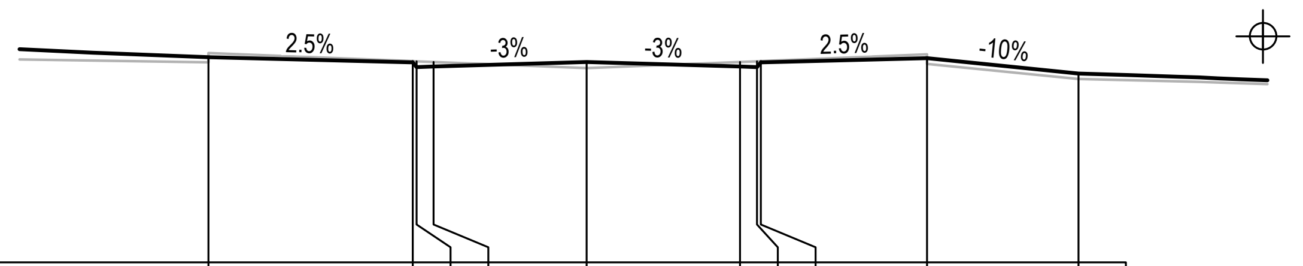
KTP CH 281.232



DATUM R.L. 689

W.A.E.													
DESIGN LEVEL	695.049	694.049	694.049	694.544	694.411	694.286	694.301	694.422	694.301	694.286	694.411	694.519	694.119
BEW CC LEVEL	695.448	695.15	695.048	694.897	694.407	694.403	694.385	694.221	694.384	694.402	694.406	694.333	693.933
OFFSET	-15.53	-12.5	-11.5	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

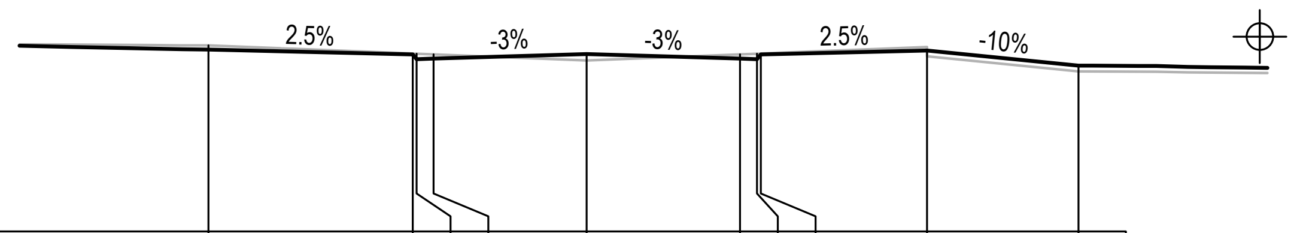
CH 275.325



DATUM R.L. 688

W.A.E.										
DESIGN LEVEL	693.418	693.284	693.159	693.174	693.296	693.174	693.159	693.284	693.393	692.993
BEW CC LEVEL	693.286	693.319	693.315	693.297	693.134	693.297	693.315	693.319	693.246	692.846
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

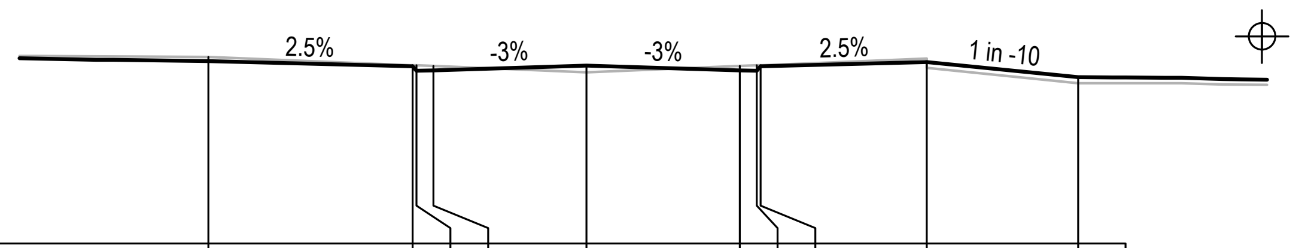
CH 330



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	693.798	693.664	693.539	693.554	693.676	693.554	693.539	693.664	693.773	693.373
BEW CC LEVEL	693.906	693.689	693.685	693.667	693.504	693.667	693.685	693.689	693.616	693.216
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

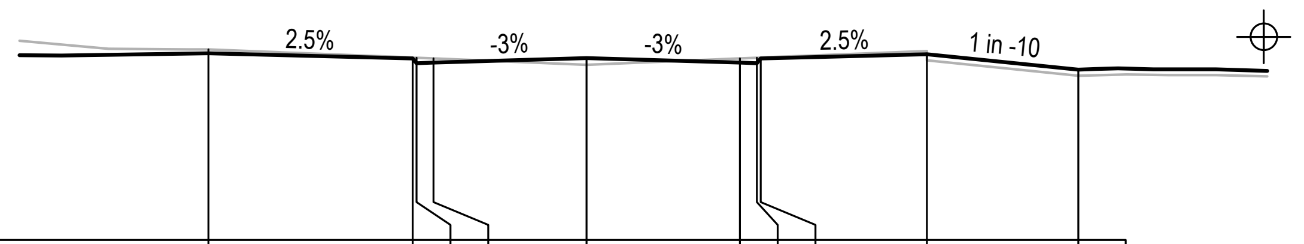
CH 315.738



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	693.816	693.682	693.557	693.572	693.694	693.572	693.557	693.682	693.791	693.391
BEW CC LEVEL	693.924	693.706	693.702	693.684	693.521	693.684	693.702	693.706	693.634	693.234
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

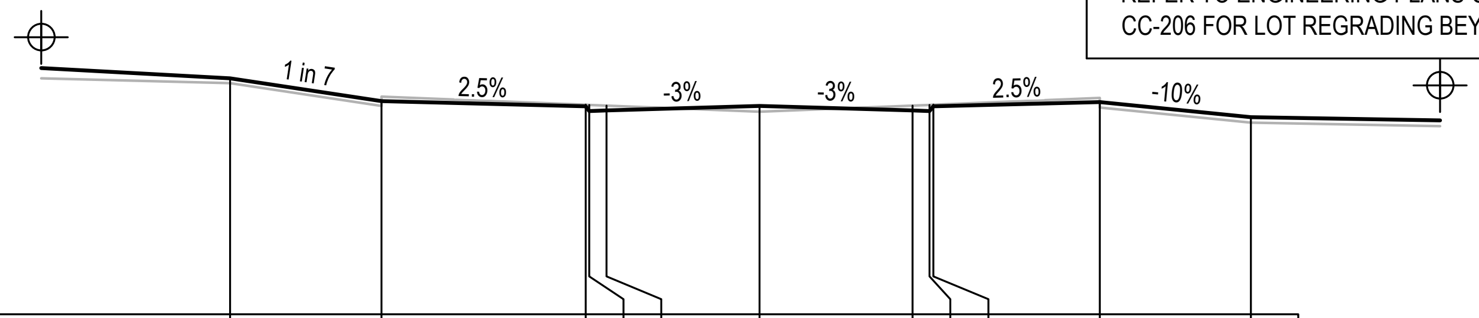
CH 315



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	693.923	693.789	693.664	693.679	693.801	693.679	693.664	693.789	693.898	693.498
BEW CC LEVEL	694.027	693.81	693.806	693.788	693.625	693.788	693.806	693.81	693.737	693.337
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

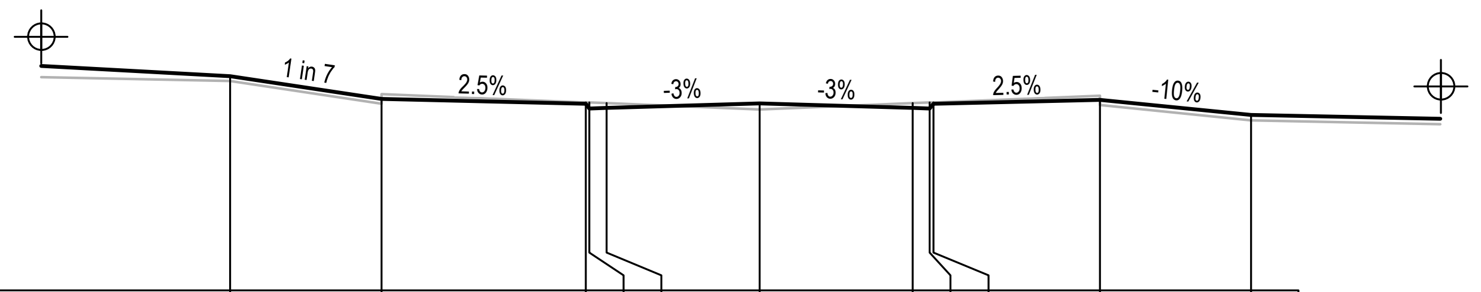
KTP CH 310.47



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	692.22	691.62	691.486	691.361	691.376	691.498	691.376	691.361	691.486	691.595	691.195
BEW CC LEVEL	692.092	691.492	691.525	691.521	691.503	691.34	691.503	691.521	691.525	691.452	691.052
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

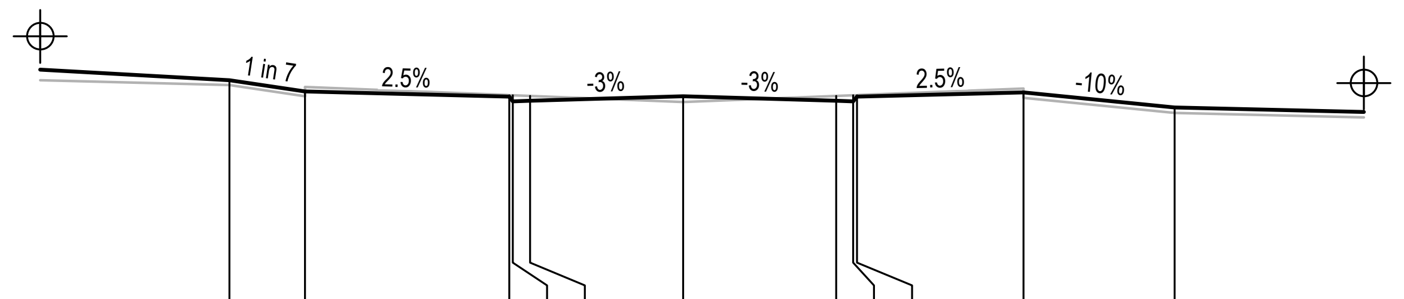
CH 390



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	692.67	692.07	691.936	691.811	691.826	691.948	691.826	691.811	691.936	692.045	691.645
BEW CC LEVEL	692.542	691.942	691.975	691.971	691.953	691.79	691.953	691.971	691.975	691.902	691.502
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

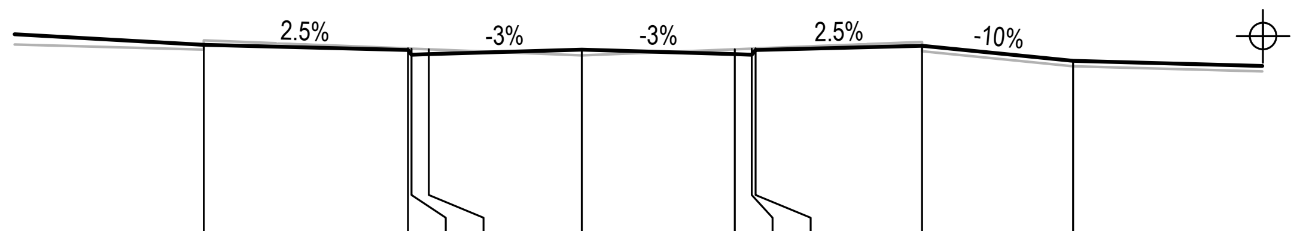
CH 375



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	692.82	692.52	692.386	692.261	692.276	692.398	692.276	692.261	692.386	692.495	692.095
BEW CC LEVEL	692.692	692.392	692.425	692.421	692.403	692.24	692.403	692.421	692.425	692.352	691.952
OFFSET	-12	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 360



DATUM R.L. 688

W.A.E.										
DESIGN LEVEL	692.97	692.836	692.711	692.726	692.848	692.726	692.711	692.836	692.945	692.545
BEW CC LEVEL	692.842	692.875	692.871	692.853	692.69	692.853	692.871	692.875	692.802	692.402
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 345

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1)
SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 13 OF 30

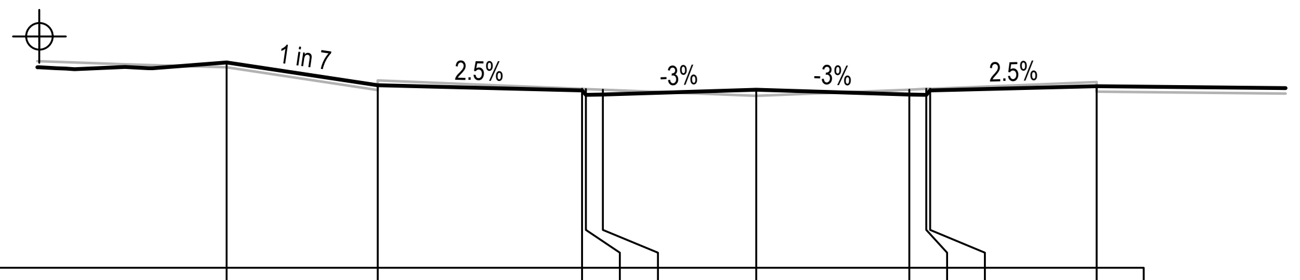
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	342	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN

ROAD No.03

LEGEND

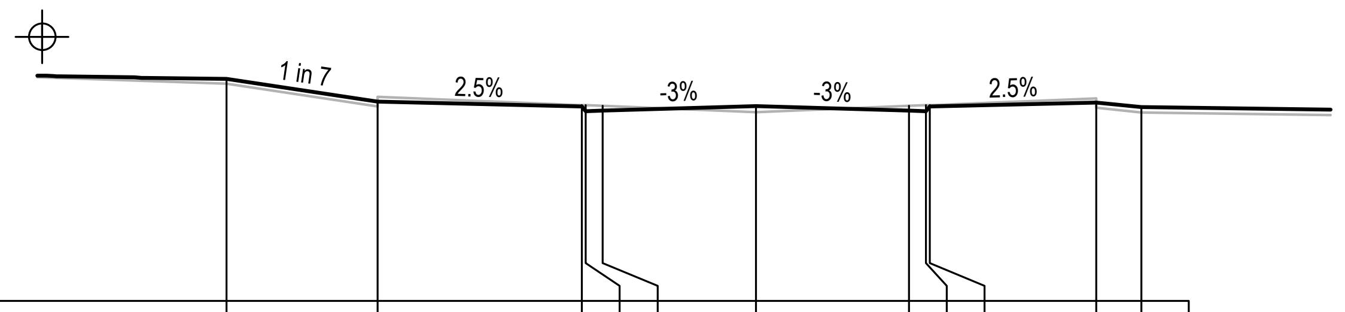
FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	690.42	689.82	689.686	689.561	689.576	689.697	689.576	689.561	689.686	689.795
BEW CC LEVEL	690.292	689.692	689.725	689.721	689.703	689.54	689.703	689.721	689.725	689.652
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

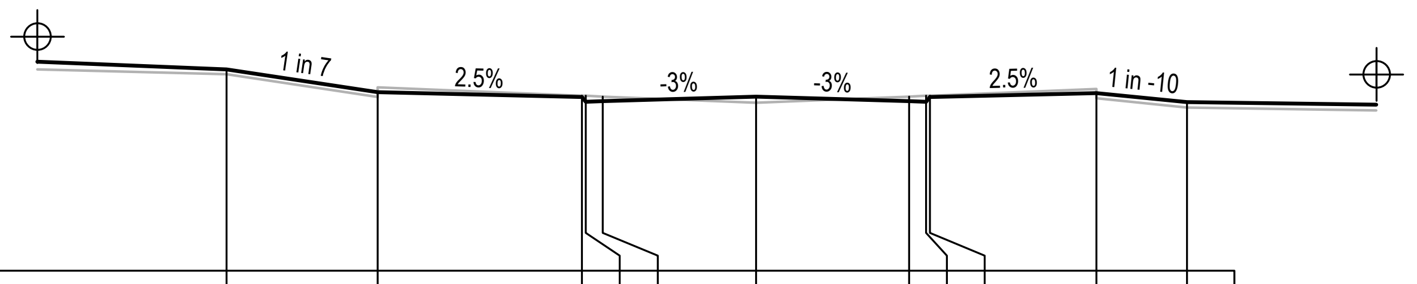
CH 450



DATUM R.L. 685

W.A.E.											
DESIGN LEVEL	690.87	690.27	690.136	690.011	690.026	690.147	690.026	690.011	690.136	690.245	690.125
BEW CC LEVEL	690.742	690.142	690.175	690.171	690.153	689.99	690.153	690.171	690.175	690.102	689.982
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	10.2

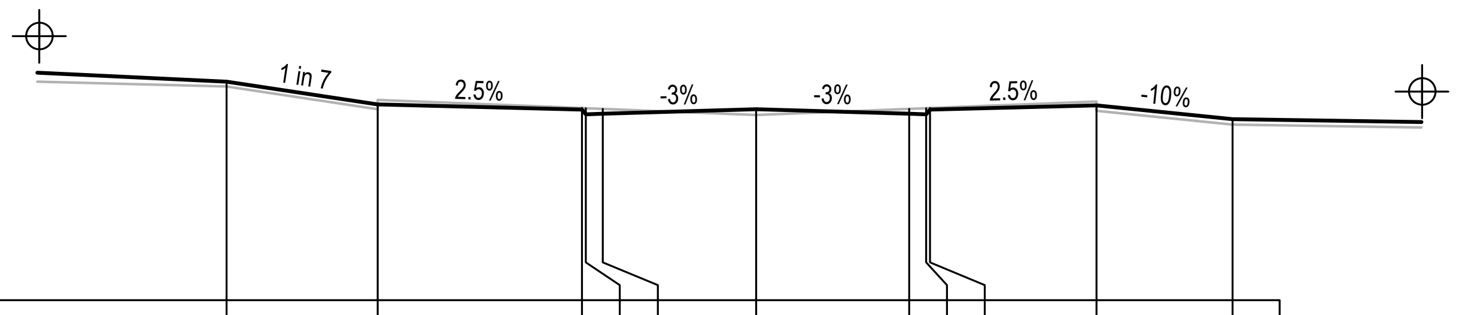
CH 435



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	691.32	690.72	690.586	690.461	690.476	690.598	690.476	690.461	690.586	690.695	690.455
BEW CC LEVEL	691.192	690.592	690.625	690.621	690.603	690.44	690.603	690.621	690.625	690.552	690.312
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	11.4

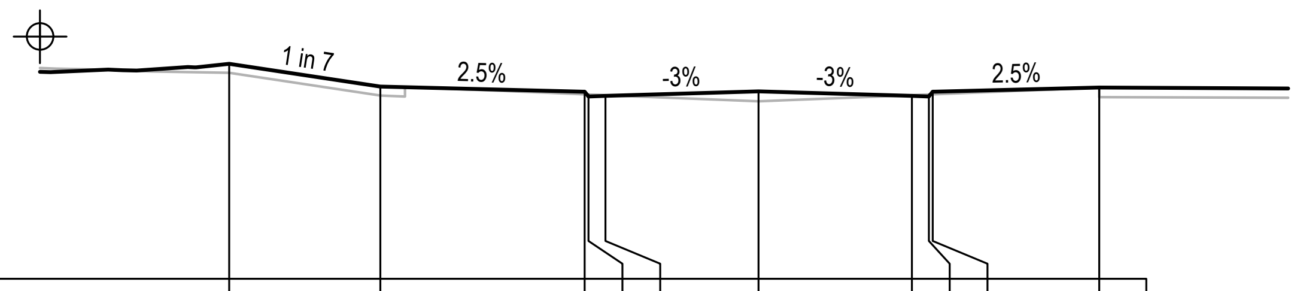
CH 420



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	691.77	691.17	691.036	690.911	690.926	691.048	690.926	690.911	691.036	691.145	690.785
BEW CC LEVEL	691.642	691.042	691.075	691.071	691.053	690.89	691.053	691.071	691.075	691.002	690.642
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	12.6

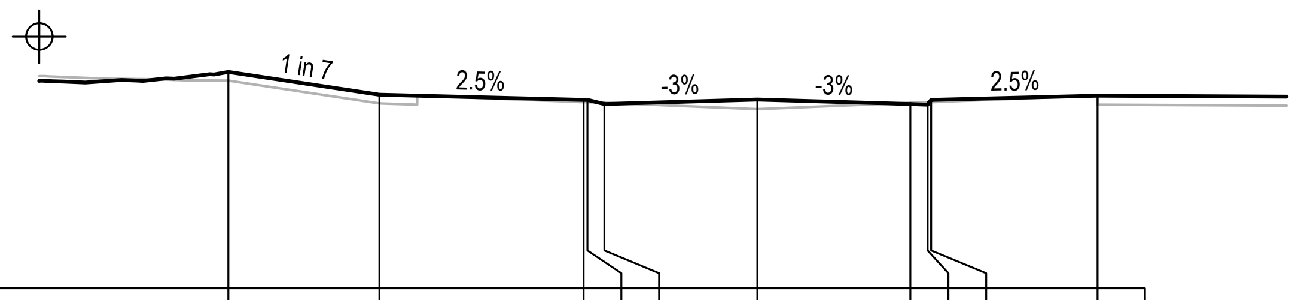
CH 405



DATUM R.L. 684

W.A.E.										
DESIGN LEVEL	689.678	689.078	688.944	688.819	688.834	688.956	688.834	688.819	688.944	689.053
BEW CC LEVEL	689.444	688.844	688.877	688.873	688.855	688.691	688.854	688.873	688.877	688.804
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

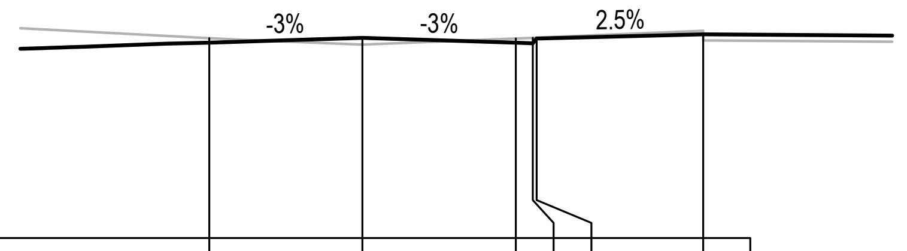
CH 480



DATUM R.L. 684

W.A.E.										
DESIGN LEVEL	689.702	689.102	688.968	688.843	688.858	688.979	688.858	688.843	688.968	689.077
BEW CC LEVEL	689.479	688.879	688.912	688.908	688.889	688.726	688.889	688.908	688.912	688.839
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

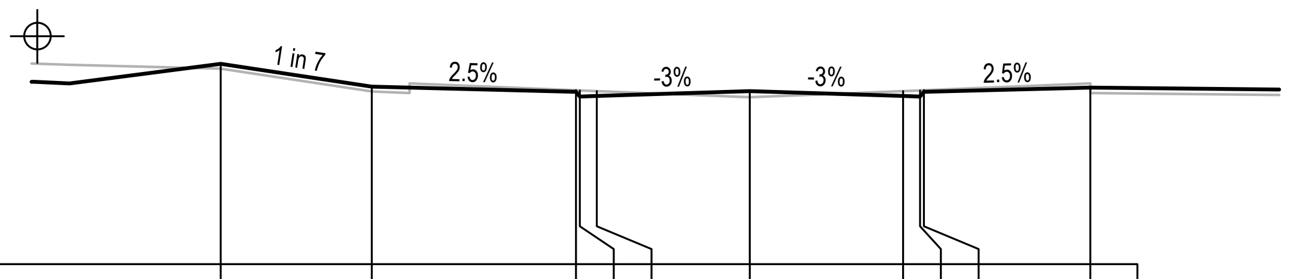
KTP CH 478.633



DATUM R.L. 684

W.A.E.						
DESIGN LEVEL	689.149	689.27	689.149	689.134	689.259	689.367
BEW CC LEVEL	689.268	689.096	689.259	689.277	689.281	689.208
OFFSET	-4.05	0	4.05	4.5	4.6	9

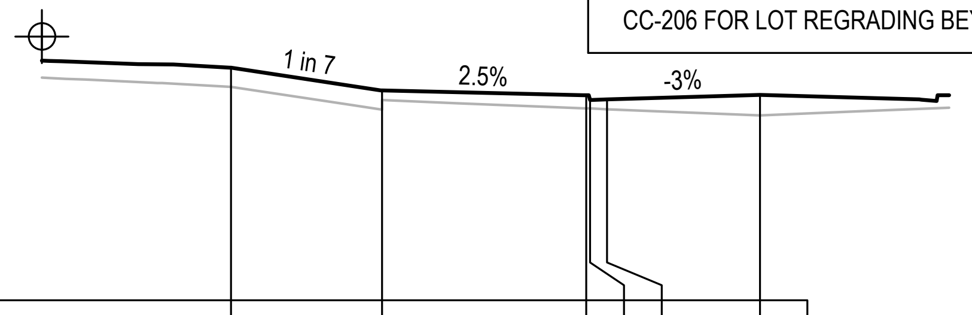
CH 465



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	690.281	689.681	689.547	689.422	689.437	689.558	689.437	689.422	689.547	689.656
BEW CC LEVEL	690.153	689.553	689.586	689.582	689.564	689.401	689.564	689.582	689.586	689.513
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

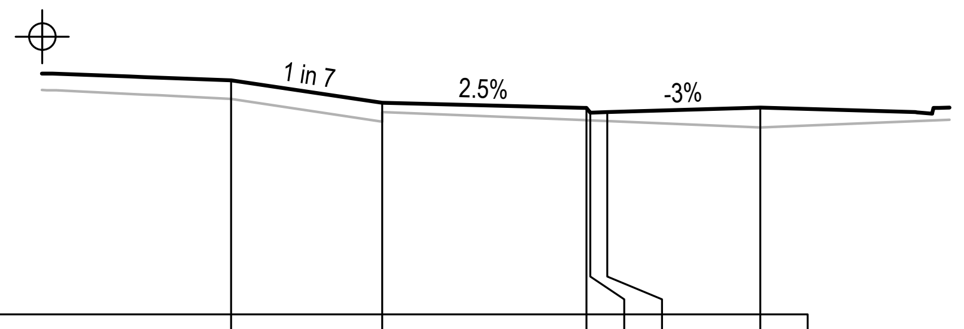
KTP CH 454.633



DATUM R.L. 683

W.A.E.						
DESIGN LEVEL	689.153	688.553	688.419	688.294	688.309	688.43
BEW CC LEVEL	688.643	688.043	688.076	688.072	688.053	687.89
OFFSET	-14	-10	-4.6	-4.5	-4.05	0

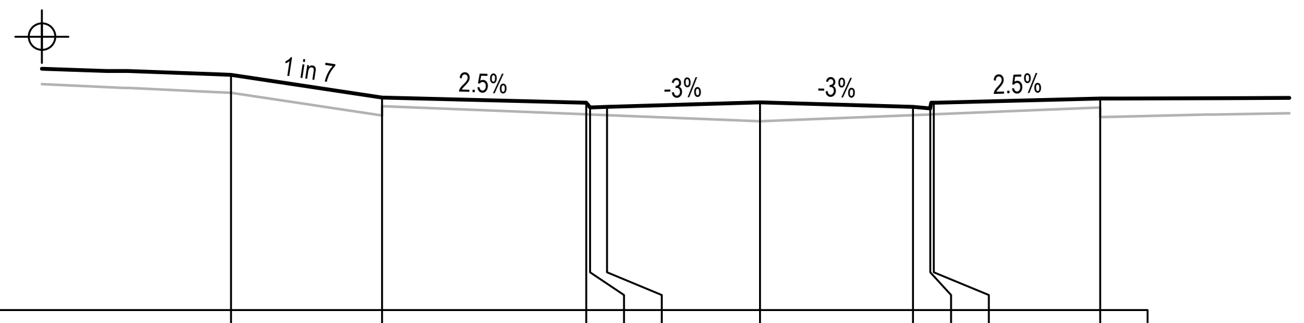
KTP CH 512.011



DATUM R.L. 683

W.A.E.						
DESIGN LEVEL	689.186	688.586	688.452	688.327	688.342	688.463
BEW CC LEVEL	688.693	688.093	688.126	688.122	688.104	687.941
OFFSET	-14	-10	-4.6	-4.5	-4.05	0

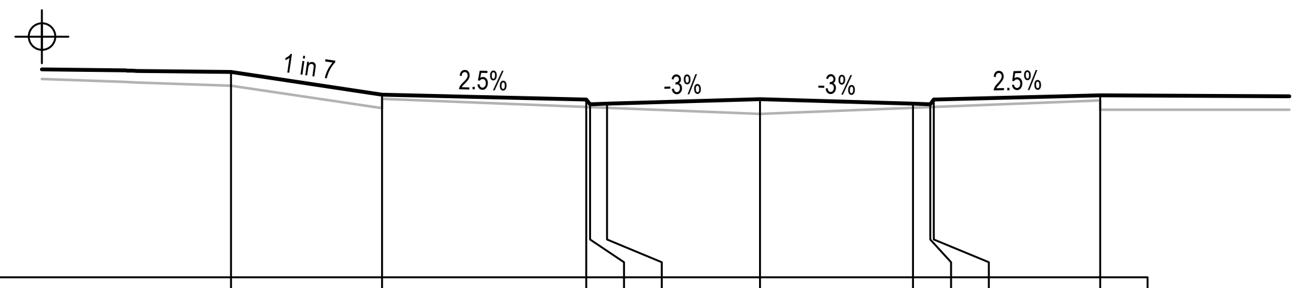
CH 510



DATUM R.L. 683

W.A.E.										
DESIGN LEVEL	689.22	688.62	688.486	688.361	688.376	688.498	688.376	688.361	688.486	688.595
BEW CC LEVEL	688.746	688.146	688.179	688.175	688.157	687.994	688.157	688.175	688.179	688.106
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

KTP CH 507.887



DATUM R.L. 684

W.A.E.										
DESIGN LEVEL	689.432	688.832	688.698	688.573	688.588	688.709	688.588	688.573	688.698	688.807
BEW CC LEVEL	689.068	688.468	688.501	688.497	688.479	688.316	688.479	688.497	688.501	688.428
OFFSET	-14	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 495

ISSUED FOR CONSTRUCTION CERTIFICATE

A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 14 OF 30

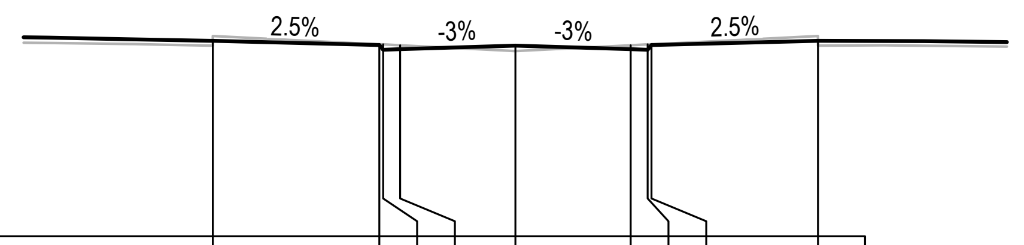
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	343	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN\[illegible]\20-0071-02-CC-343.dwg

LEGEND

FINISHED DESIGN SURFACE	▬
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖

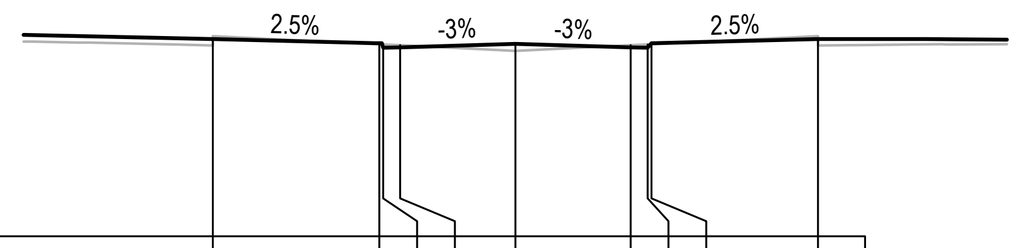
ROAD No.03



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	688.164	688.055	687.93	687.945	688.037	687.945	687.93	688.055	688.164
BEW CC LEVEL	688.04	688.074	688.069	688.047	687.897	688.047	688.069	688.074	688.04
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

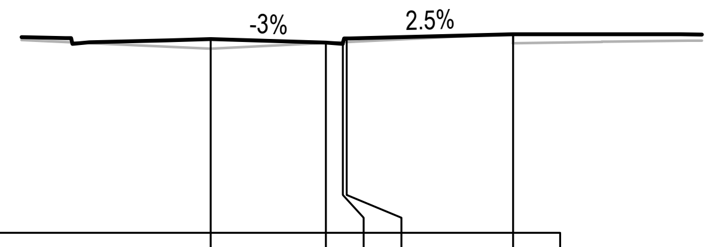
CH 585



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	688.201	688.092	687.967	687.982	688.073	687.982	687.967	688.092	688.201
BEW CC LEVEL	688.029	688.064	688.059	688.037	687.887	688.037	688.059	688.064	688.029
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

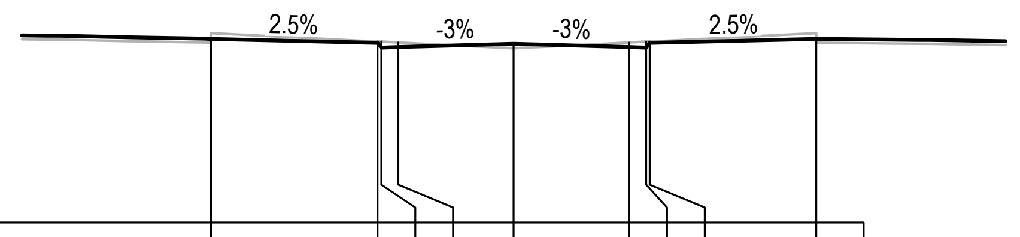
KTP CH 581.556



DATUM R.L. 683

W.A.E.					
DESIGN LEVEL	688.115	688.024	688.009	688.134	688.242
BEW CC LEVEL	687.862	688.012	688.034	688.039	687.998
OFFSET	0	3.05	3.5	3.6	8

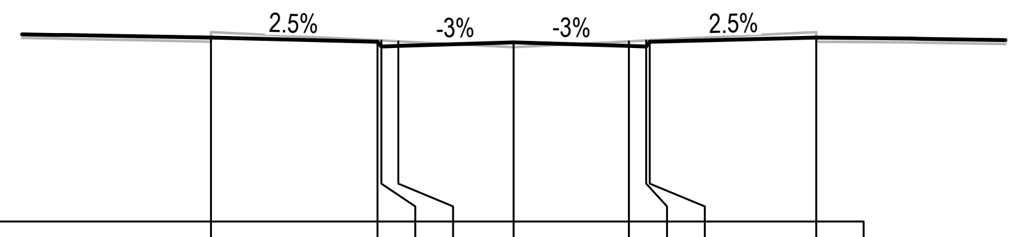
KTP CH 577.612



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.846	687.738	687.613	687.628	687.719	687.628	687.613	687.738	687.846
BEW CC LEVEL	687.742	687.776	687.771	687.749	687.599	687.749	687.771	687.776	687.742
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

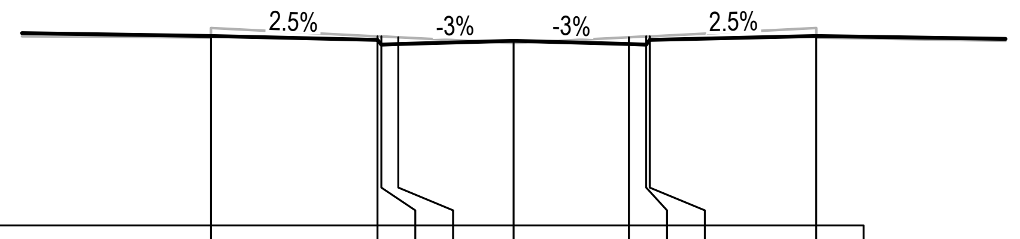
CH 615



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.849	687.74	687.615	687.63	687.721	687.63	687.615	687.74	687.849
BEW CC LEVEL	687.745	687.779	687.774	687.752	687.602	687.752	687.774	687.779	687.745
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

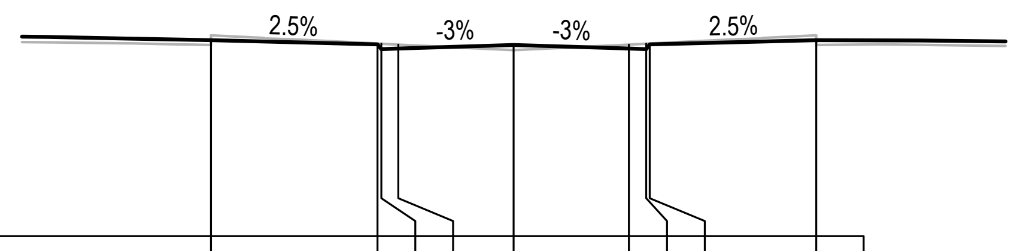
CH 614.803



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	688.005	687.897	687.772	687.787	687.878	687.787	687.772	687.897	688.005
BEW CC LEVEL	687.961	687.995	687.99	687.968	687.819	687.968	687.99	687.995	687.961
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

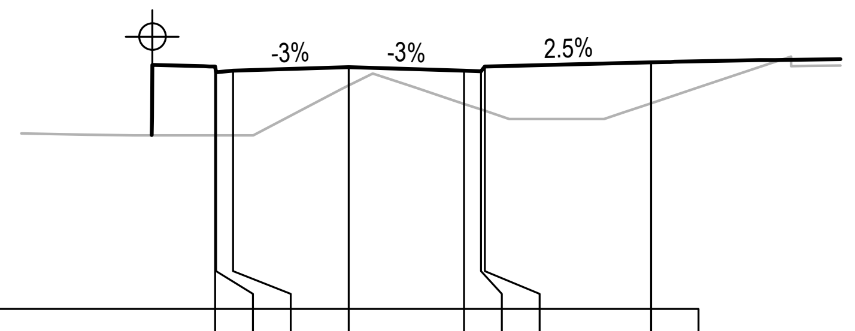
CH 600



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	688.164	688.055	687.93	687.945	688.036	687.945	687.93	688.055	688.164
BEW CC LEVEL	688.04	688.074	688.069	688.047	687.897	688.047	688.069	688.074	688.04
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

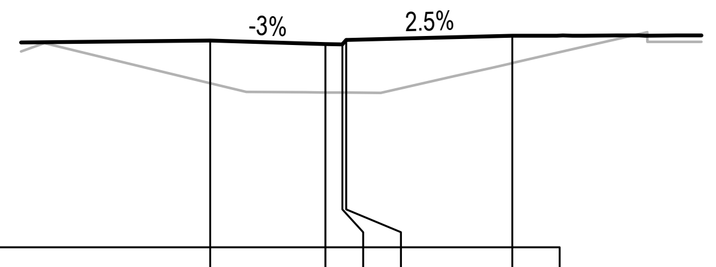
CH 585.051



DATUM R.L. 681

W.A.E.								
DESIGN LEVEL	687.41	687.26	687.3	687.392	687.3	687.285	687.41	687.519
BEW CC LEVEL	685.586	685.586	685.586	686.905	686.422	686.272	686.238	686.438
OFFSET	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	8

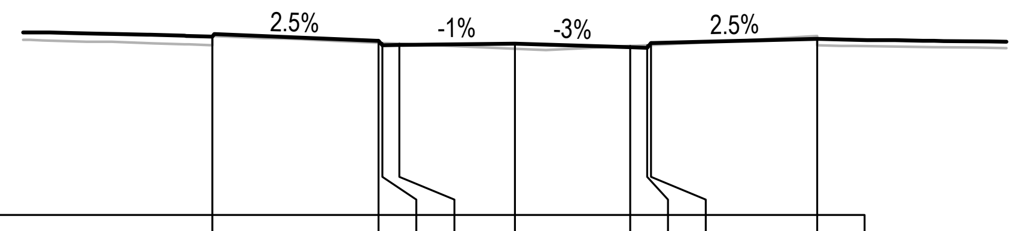
KTP CH 654.515



DATUM R.L. 682

W.A.E.					
DESIGN LEVEL	687.458	687.367	687.352	687.477	687.586
BEW CC LEVEL	686.331	686.085	686.082	686.081	686.864
OFFSET	0	3.05	3.5	3.6	8

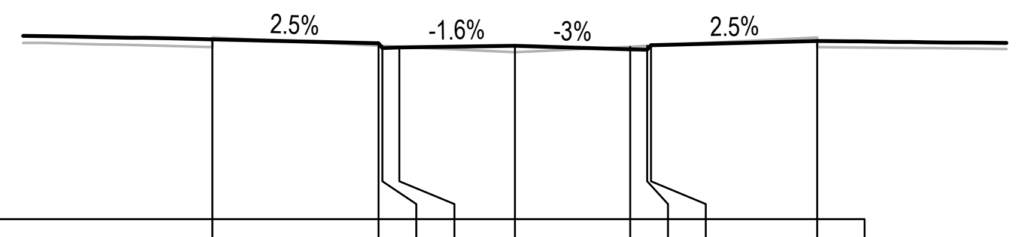
CH 645



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.715	687.606	687.481	687.496	687.526	687.435	687.42	687.545	687.654
BEW CC LEVEL	687.483	687.55	687.545	687.525	687.391	687.464	687.486	687.491	687.483
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

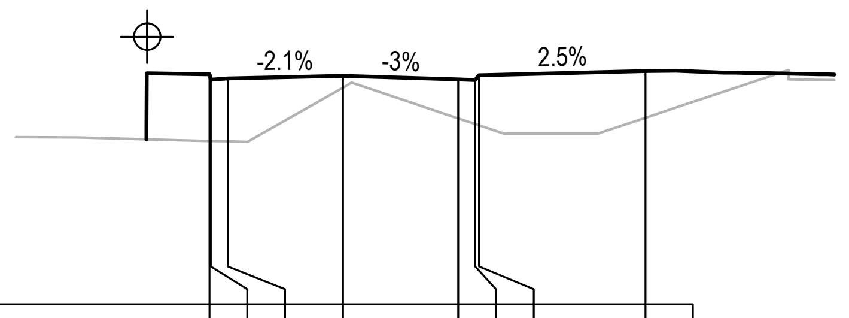
CH 635.665



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.744	687.635	687.51	687.525	687.573	687.482	687.467	687.592	687.7
BEW CC LEVEL	687.54	687.575	687.57	687.548	687.398	687.548	687.57	687.575	687.54
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

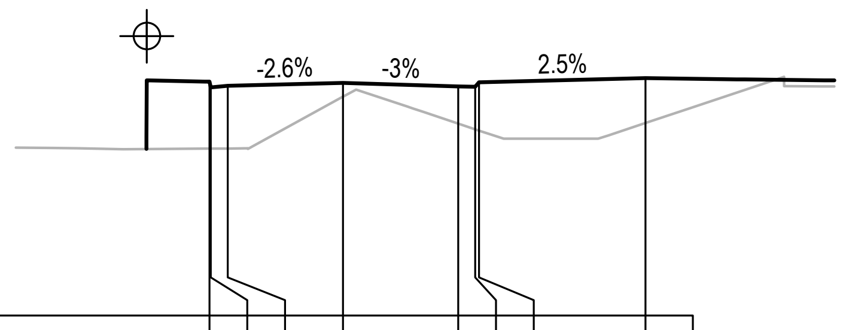
CH 630



DATUM R.L. 681

W.A.E.								
DESIGN LEVEL	687.085	686.935	686.975	687.038	686.947	686.932	687.057	687.166
BEW CC LEVEL	685.321	685.32	685.308	686.729	685.917	685.767	685.733	685.933
OFFSET	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	8

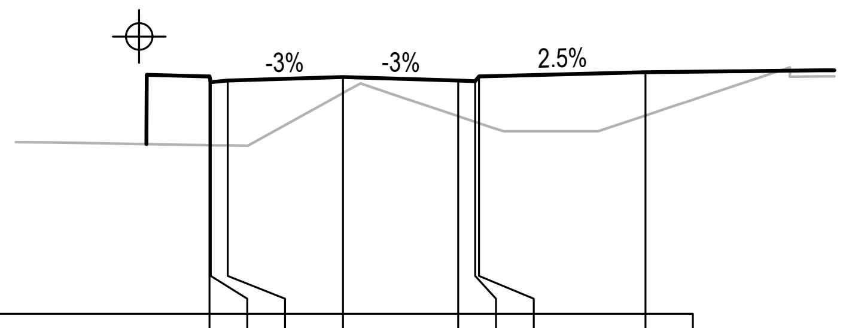
CH 705



DATUM R.L. 681

W.A.E.								
DESIGN LEVEL	687.175	687.025	687.065	687.143	687.052	687.037	687.162	687.271
BEW CC LEVEL	685.407	685.407	685.41	686.778	686.067	685.917	685.883	686.083
OFFSET	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	8

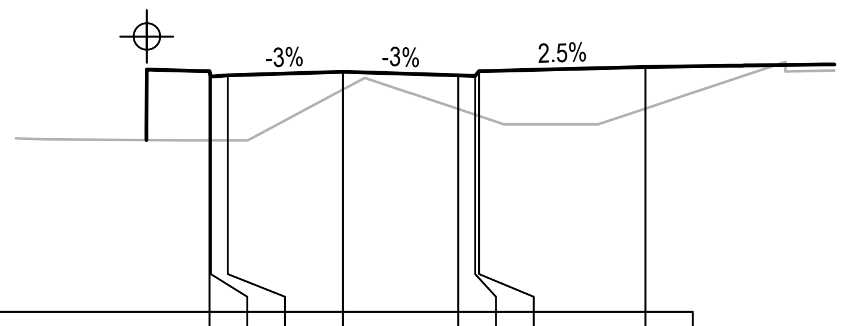
CH 690



DATUM R.L. 681

W.A.E.								
DESIGN LEVEL	687.267	687.117	687.157	687.248	687.157	687.142	687.267	687.376
BEW CC LEVEL	685.45	685.449	685.443	686.83	686.217	686.067	686.033	686.233
OFFSET	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	8

CH 675



DATUM R.L. 681

W.A.E.								
DESIGN LEVEL	687.372	687.222	687.262	687.353	687.262	687.247	687.372	687.481
BEW CC LEVEL	685.543	685.543	685.543	686.884	686.367	686.217	686.183	686.383
OFFSET	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	8

CH 660

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

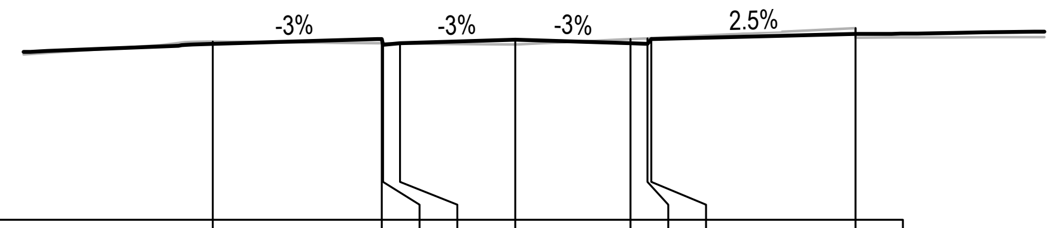
Title:
ROAD CROSS
SECTIONS
SHEET 15 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	344	A

ROAD No.03

LEGEND

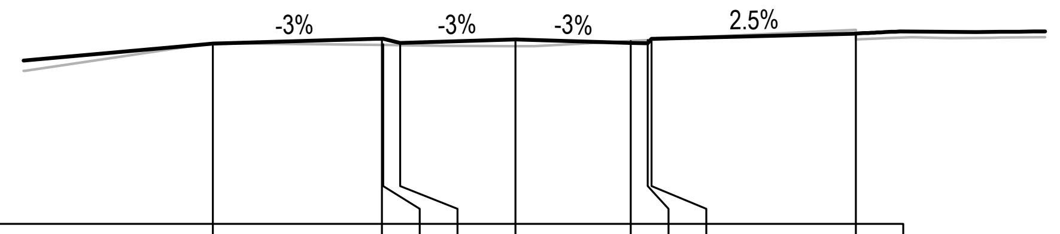
FINISHED DESIGN SURFACE	━
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	686.637	686.768	686.618	686.658	686.749	686.658	686.643	686.768	686.901
BEW CC LEVEL	686.702	686.656	686.655	686.651	686.619	686.766	686.787	686.792	687.052
OFFSET	-8	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	9

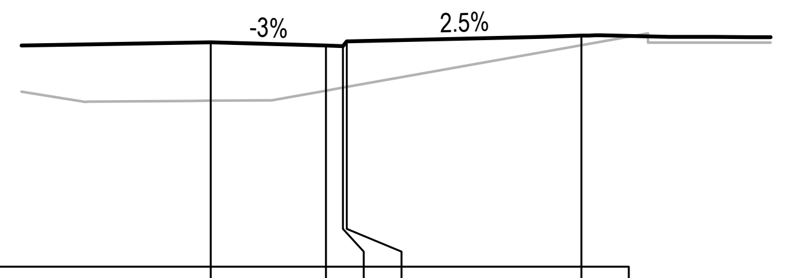
CH 735



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	686.767	686.898	686.748	686.788	686.879	686.788	686.773	686.898	687.031
BEW CC LEVEL	686.785	686.732	686.731	686.725	686.701	686.838	686.863	686.868	686.88
OFFSET	-8	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	9.001

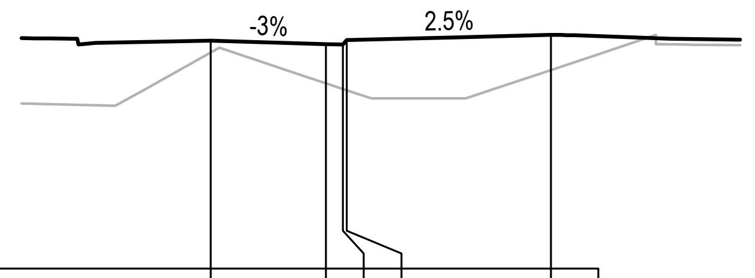
CH 726.364



DATUM R.L. 681

W.A.E.					
DESIGN LEVEL	686.933	686.842	686.827	686.952	687.106
BEW CC LEVEL	685.388	685.655	685.735	685.753	686.853
OFFSET	0	3.05	3.5	3.6	9.809

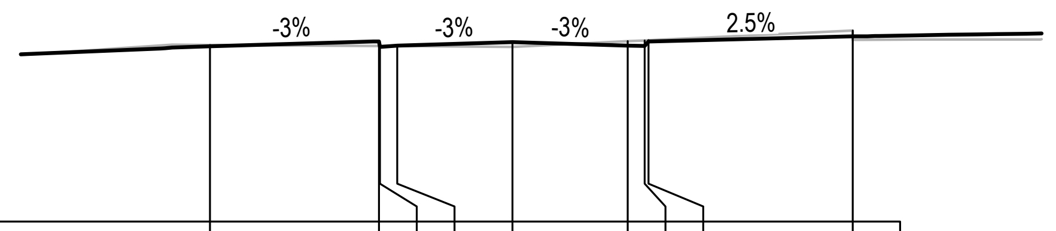
CH 720



DATUM R.L. 681

W.A.E.					
DESIGN LEVEL	687.021	686.929	686.914	687.039	687.173
BEW CC LEVEL	686.706	685.892	685.742	685.708	686.242
OFFSET	0	3.05	3.5	3.6	9.001

CH 707.515



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	686.62	686.751	686.601	686.641	686.732	686.641	686.626	686.751	686.885
BEW CC LEVEL	686.659	686.63	686.63	686.627	686.607	686.754	686.775	686.78	687.04
OFFSET	-8	-3.53	-3.5	-3.05	0	3.05	3.5	3.6	9

KTP CH 735.864

ISSUED FOR CONSTRUCTION CERTIFICATE

A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 16 OF 30

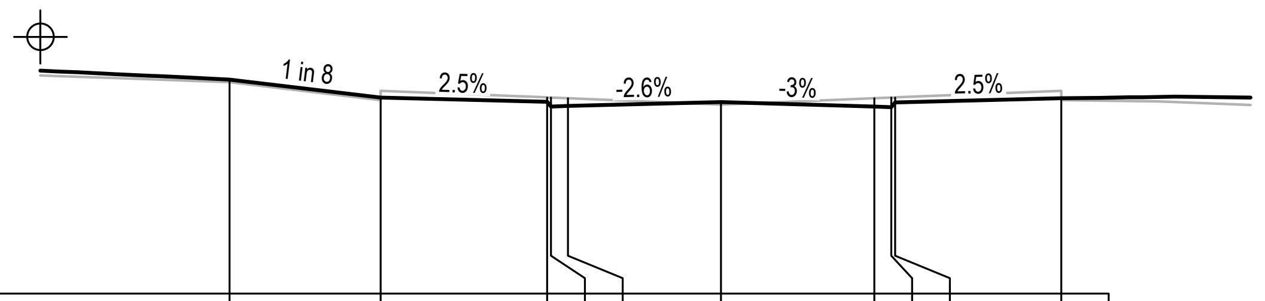
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	345	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-345.dwg

ROAD No.04

LEGEND

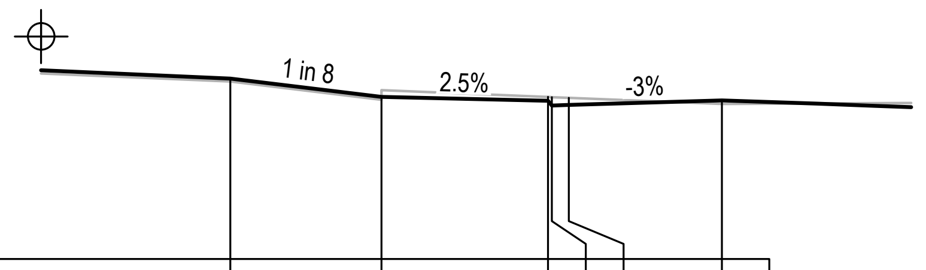
FINISHED DESIGN SURFACE	━
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	694.648	694.168	694.059	693.934	693.949	694.053	693.932	693.917	694.042	694.151
BEW CC LEVEL	694.58	694.1	694.173	694.169	694.151	693.987	694.151	694.169	694.173	694.1
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

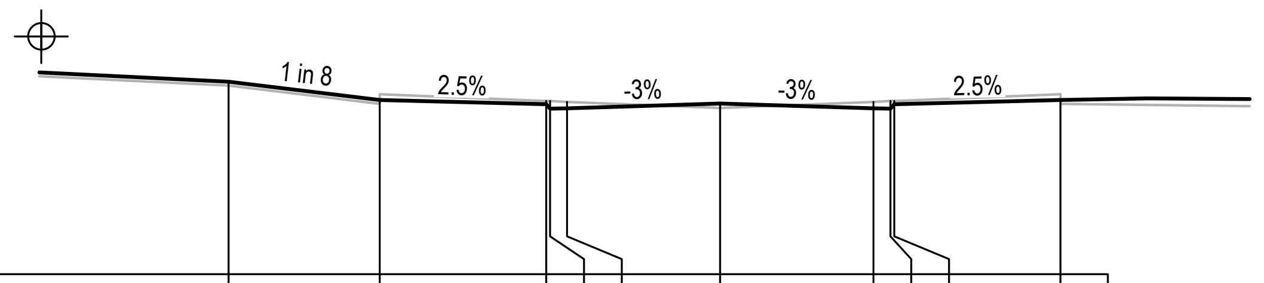
CH 30



DATUM R.L. 689

W.A.E.						
DESIGN LEVEL	693.758	693.278	693.169	693.044	693.059	693.181
BEW CC LEVEL	693.68	693.2	693.273	693.269	693.251	693.087
OFFSET	-13	-9	-4.6	-4.5	-4.05	0

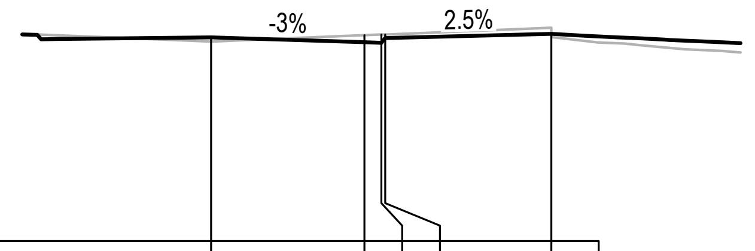
CH 75



DATUM R.L. 688

W.A.E.										
DESIGN LEVEL	693.081	692.601	692.493	692.368	692.383	692.504	692.383	692.368	692.493	692.601
BEW CC LEVEL	692.982	692.502	692.575	692.571	692.553	692.389	692.553	692.571	692.575	692.502
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

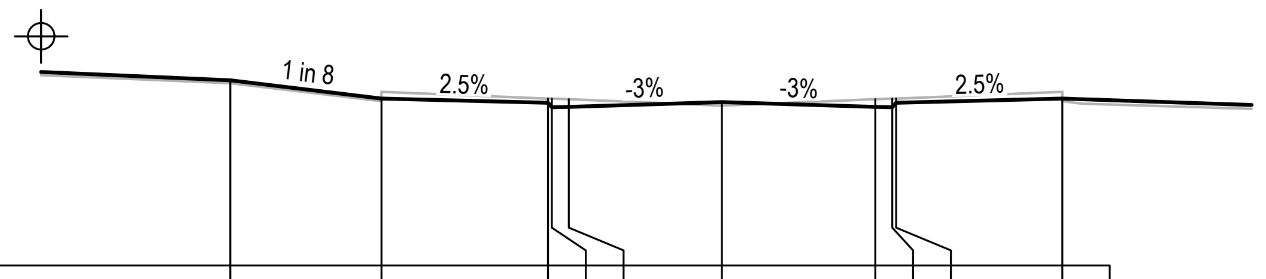
CH 109.899



DATUM R.L. 689

W.A.E.					
DESIGN LEVEL	694.361	694.24	694.225	694.35	694.458
BEW CC LEVEL	694.258	694.421	694.439	694.443	694.37
OFFSET	0	4.05	4.5	4.6	9

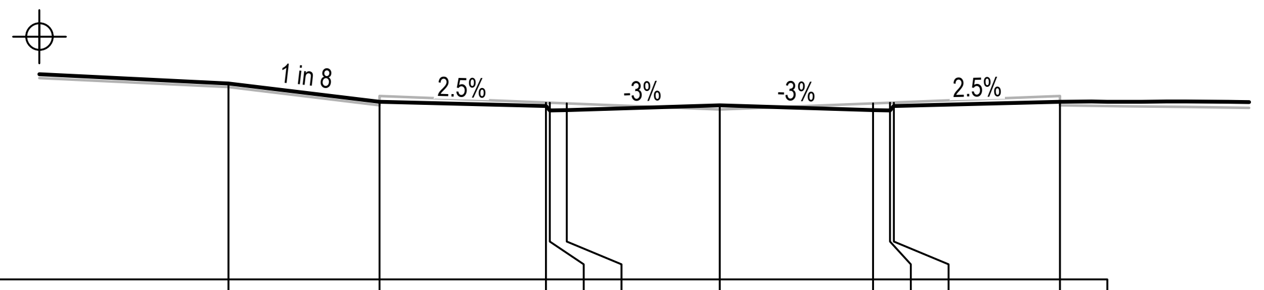
KTP CH 16



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	693.894	693.414	693.305	693.18	693.195	693.317	693.195	693.18	693.305	693.414
BEW CC LEVEL	693.82	693.34	693.413	693.409	693.391	693.227	693.391	693.409	693.413	693.34
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

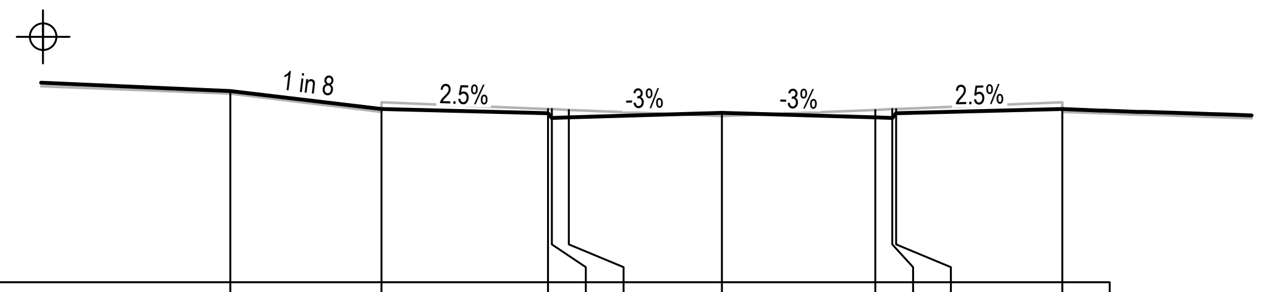
KTP CH 68



DATUM R.L. 688

W.A.E.										
DESIGN LEVEL	693.176	692.696	692.588	692.463	692.478	692.599	692.478	692.463	692.588	692.696
BEW CC LEVEL	693.08	692.6	692.673	692.669	692.651	692.487	692.651	692.669	692.673	692.6
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

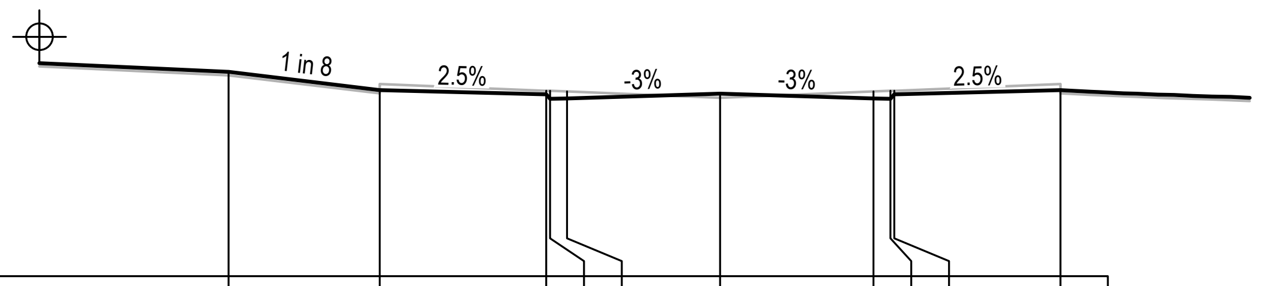
CH 105



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	694.049	693.569	693.46	693.335	693.35	693.472	693.35	693.335	693.46	693.569
BEW CC LEVEL	693.98	693.5	693.573	693.569	693.551	693.387	693.551	693.569	693.573	693.5
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

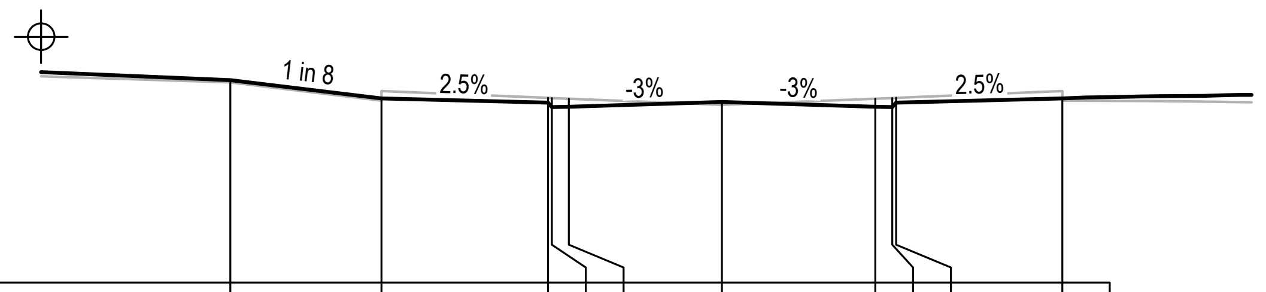
CH 60



DATUM R.L. 688

W.A.E.										
DESIGN LEVEL	693.39	692.91	692.801	692.676	692.691	692.812	692.691	692.676	692.801	692.91
BEW CC LEVEL	693.3	692.82	692.893	692.889	692.871	692.707	692.871	692.889	692.893	692.82
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

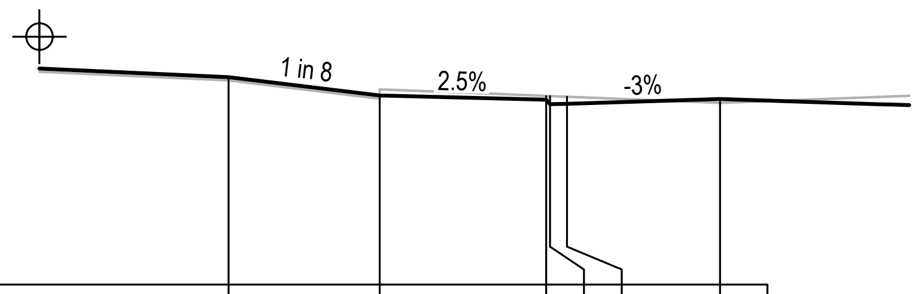
KTP CH 94



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	694.34	693.86	693.751	693.626	693.641	693.762	693.641	693.626	693.751	693.86
BEW CC LEVEL	694.28	693.8	693.873	693.869	693.851	693.687	693.851	693.869	693.873	693.8
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 45



DATUM R.L. 688

W.A.E.						
DESIGN LEVEL	693.467	692.987	692.878	692.753	692.768	692.89
BEW CC LEVEL	693.38	692.9	692.973	692.969	692.951	692.787
OFFSET	-13	-9	-4.6	-4.5	-4.05	0

CH 90

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 17 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	346	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-346.dwg

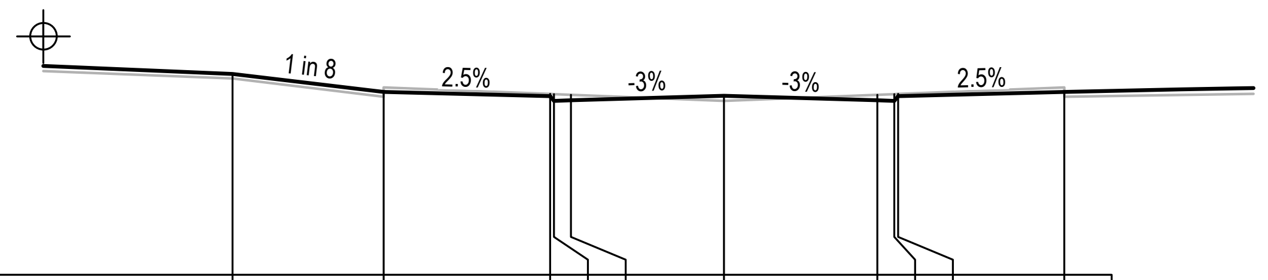
ROAD No.04

LEGEND

FINISHED DESIGN SURFACE ━━

EXISTING SURFACE ──

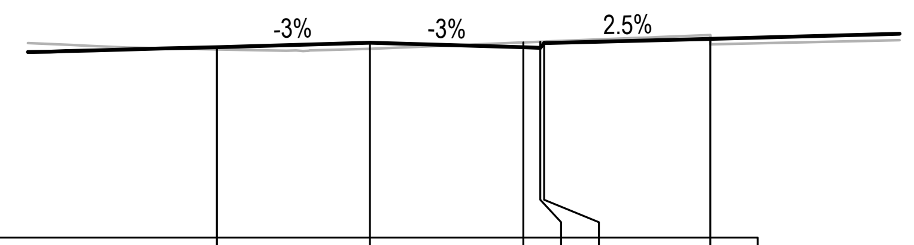
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	692.304	691.824	691.715	691.59	691.605	691.726	691.605	691.59	691.715	691.824	
BEW CC LEVEL	692.18	691.7	691.773	691.769	691.751	691.587	691.751	691.769	691.773	691.7	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

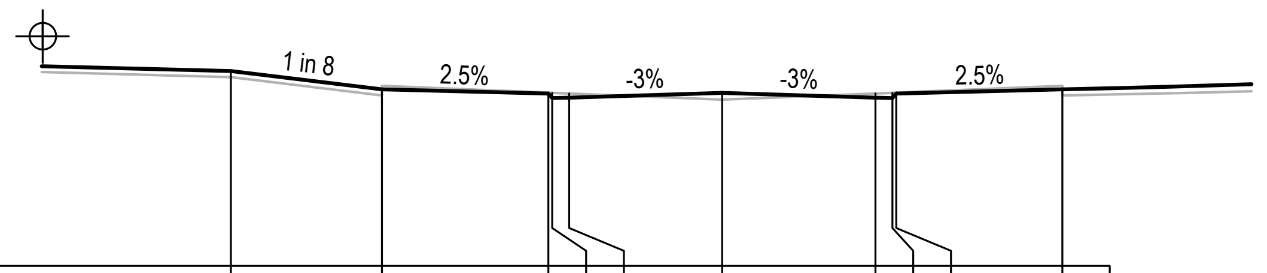
CH 150



DATUM R.L. 686

W.A.E.							
DESIGN LEVEL	691.023	691.145	691.023	691.008	691.133	691.242	
BEW CC LEVEL	690.968	690.987	691.151	691.169	691.173	691.1	
OFFSET	-4.05	0	4.05	4.5	4.6	9	

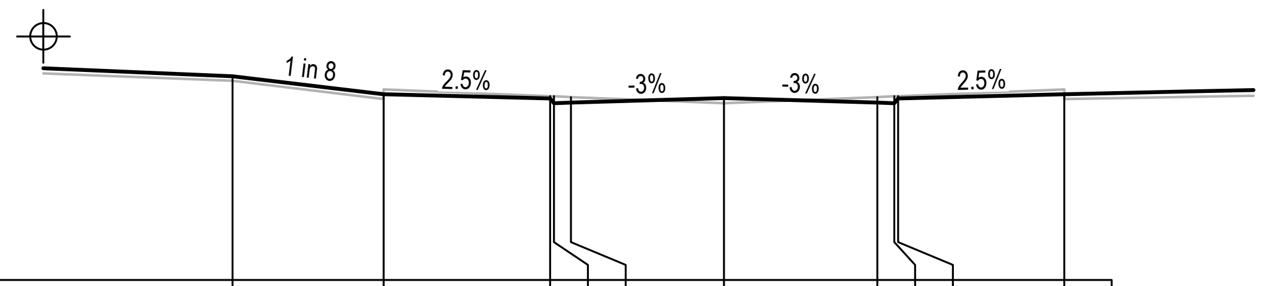
CH 180



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	691.14	690.66	690.552	690.427	690.442	690.563	690.442	690.427	690.552	690.66	
BEW CC LEVEL	690.98	690.5	690.573	690.569	690.551	690.387	690.551	690.569	690.573	690.5	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

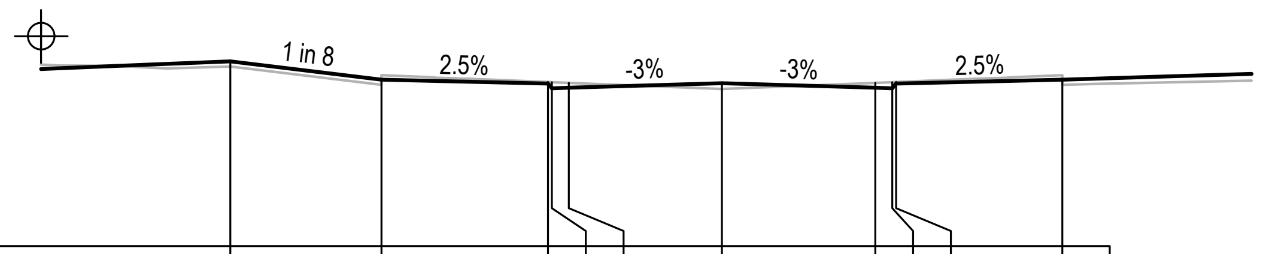
CH 210



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	692.379	691.899	691.79	691.665	691.68	691.802	691.68	691.665	691.79	691.899	
BEW CC LEVEL	692.258	691.778	691.85	691.846	691.828	691.665	691.828	691.846	691.85	691.778	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

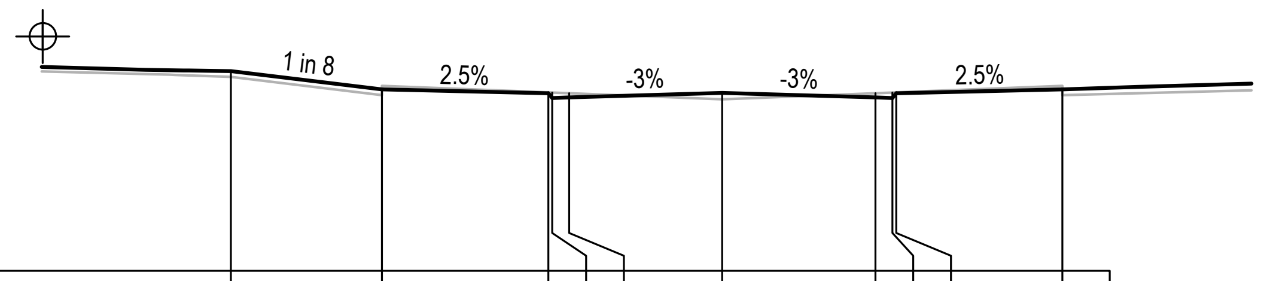
CH 146.12



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	691.871	691.391	691.283	691.158	691.173	691.294	691.173	691.158	691.283	691.391	
BEW CC LEVEL	691.734	691.254	691.327	691.323	691.305	691.141	691.305	691.323	691.327	691.254	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

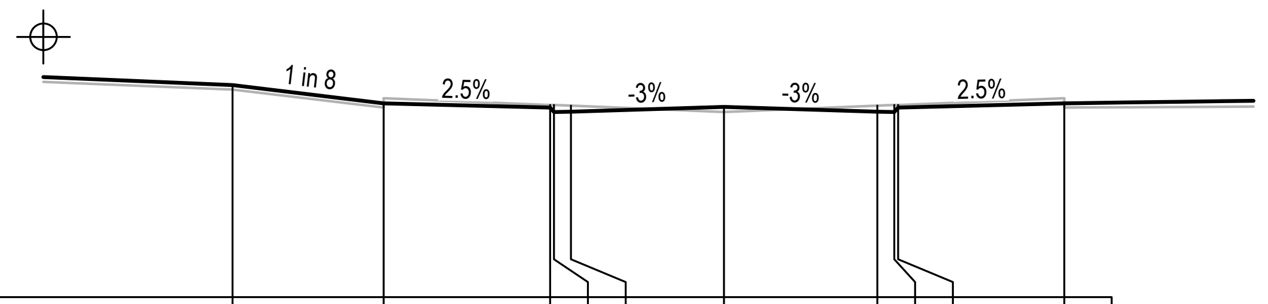
KTP CH 172.301



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	691.277	690.797	690.688	690.563	690.578	690.7	690.578	690.563	690.688	690.797	
BEW CC LEVEL	691.121	690.641	690.714	690.71	690.692	690.529	690.692	690.71	690.714	690.641	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

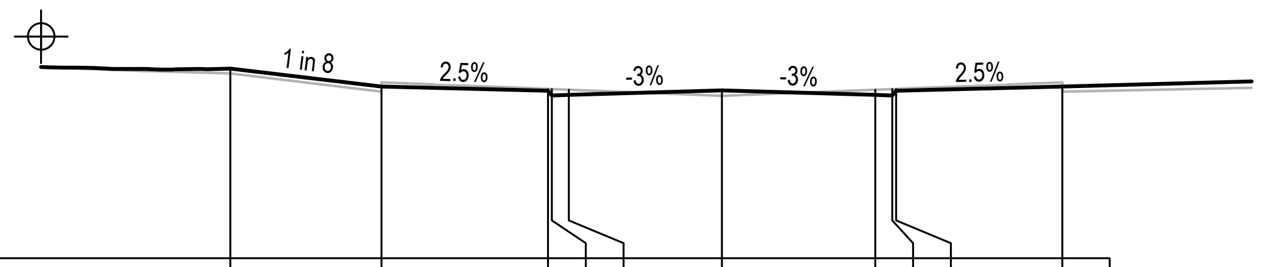
CH 202.947



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	692.595	692.115	692.006	691.881	691.896	692.017	691.896	691.881	692.006	692.115	
BEW CC LEVEL	692.48	692	692.073	692.069	692.051	691.887	692.051	692.069	692.073	692	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

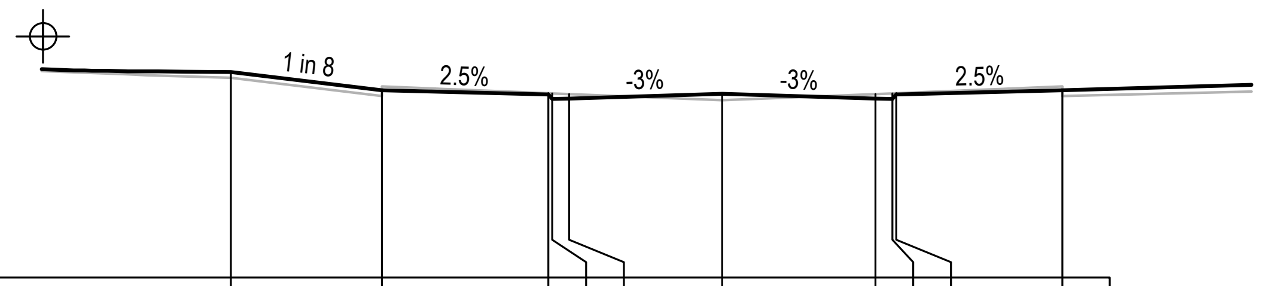
CH 135



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	692.013	691.533	691.424	691.299	691.314	691.436	691.314	691.299	691.424	691.533	
BEW CC LEVEL	691.88	691.4	691.473	691.469	691.451	691.287	691.451	691.469	691.473	691.4	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

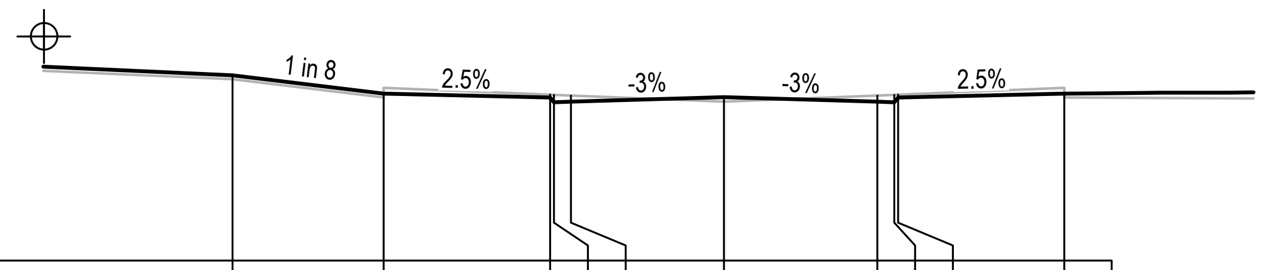
CH 165



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	691.431	690.951	690.842	690.717	690.732	690.854	690.732	690.717	690.842	690.951	
BEW CC LEVEL	691.28	690.8	690.873	690.869	690.851	690.687	690.851	690.869	690.873	690.8	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

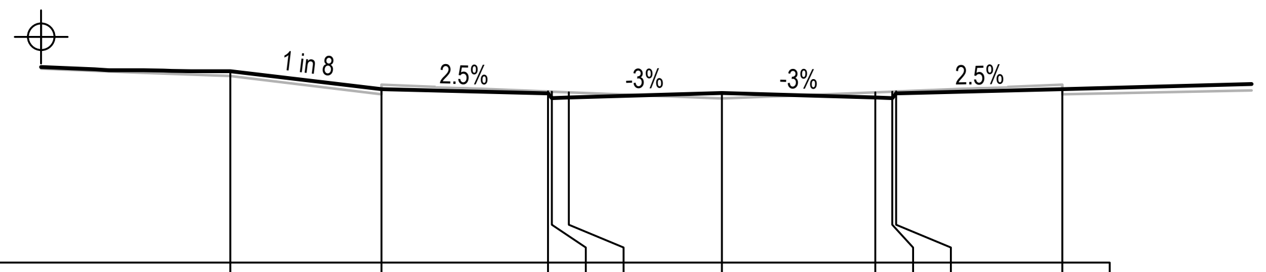
CH 195



DATUM R.L. 688

W.A.E.											
DESIGN LEVEL	692.885	692.405	692.297	692.172	692.187	692.308	692.187	692.172	692.297	692.405	
BEW CC LEVEL	692.78	692.3	692.373	692.369	692.351	692.187	692.351	692.369	692.373	692.3	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

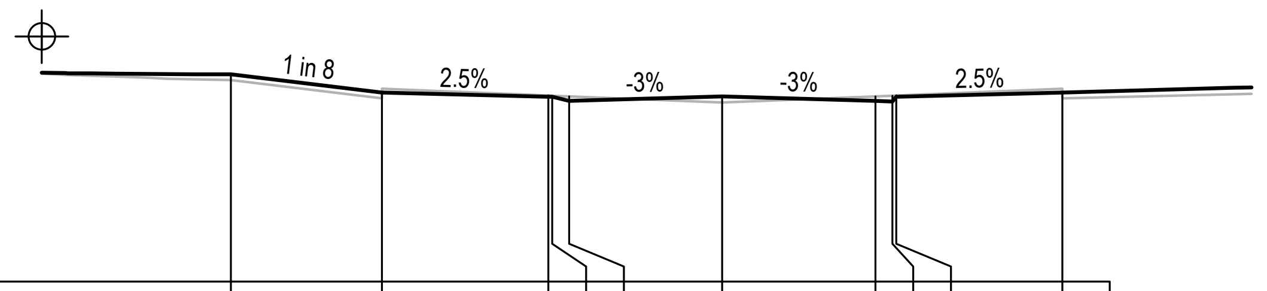
CH 120



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	692.056	691.576	691.468	691.343	691.358	691.479	691.358	691.343	691.468	691.576	
BEW CC LEVEL	691.925	691.445	691.518	691.514	691.495	691.332	691.495	691.514	691.518	691.445	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

CH 162.756



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	691.473	690.993	690.884	690.759	690.774	690.896	690.774	690.759	690.884	690.993	
BEW CC LEVEL	691.323	690.843	690.916	690.912	690.894	690.731	690.894	690.912	690.916	690.843	
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	

KTP CH 192.83

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Sdata\ORION-SYN\0102-CC-Moss Vale Stage 1_20\15\DWGS\20-0071-02-CC-347.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

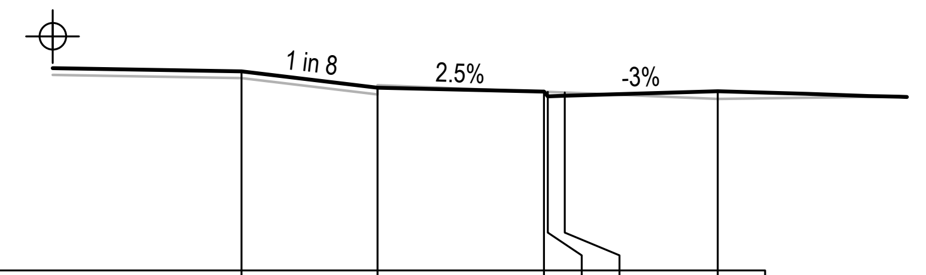
Title:
ROAD CROSS
SECTIONS
SHEET 18 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	347	A

ROAD No.04

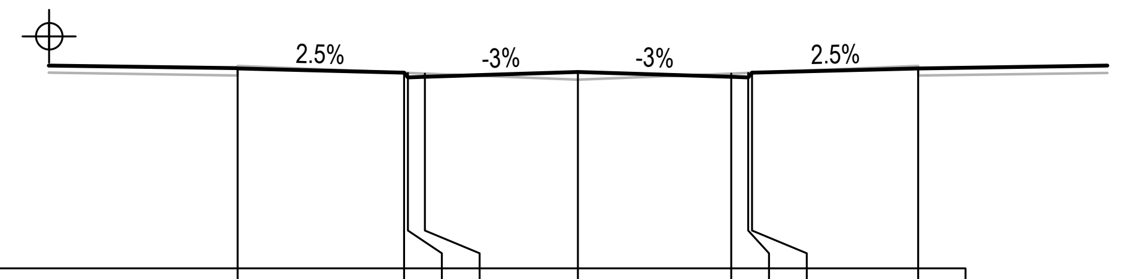
LEGEND

FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⊕



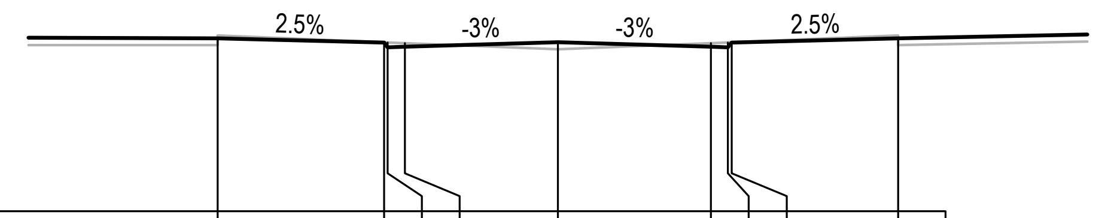
W.A.E.						
DESIGN LEVEL	690.265	689.833	689.724	689.599	689.614	689.736
BEW CC LEVEL	690.081	689.649	689.722	689.718	689.699	689.536
OFFSET	-12.6	-9	-4.6	-4.5	-4.05	0

CH 255



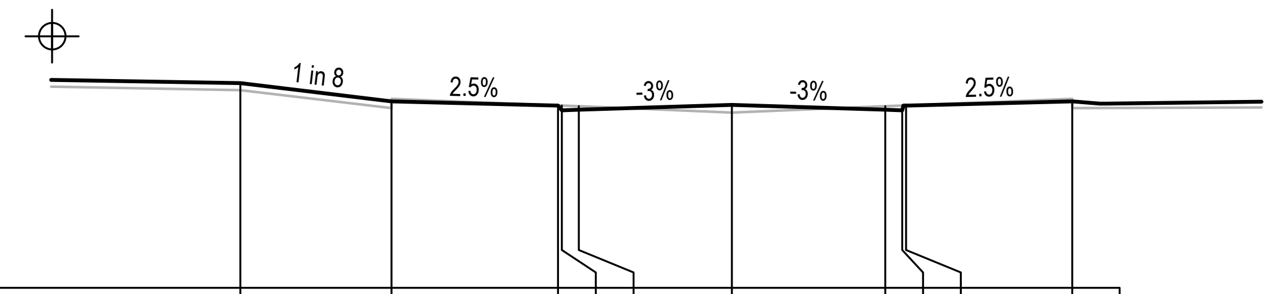
W.A.E.									
DESIGN LEVEL	689.284	689.176	689.051	689.066	689.187	689.066	689.051	689.176	689.284
BEW CC LEVEL	689.1	689.172	689.168	689.15	688.987	689.15	689.168	689.172	689.1
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 300



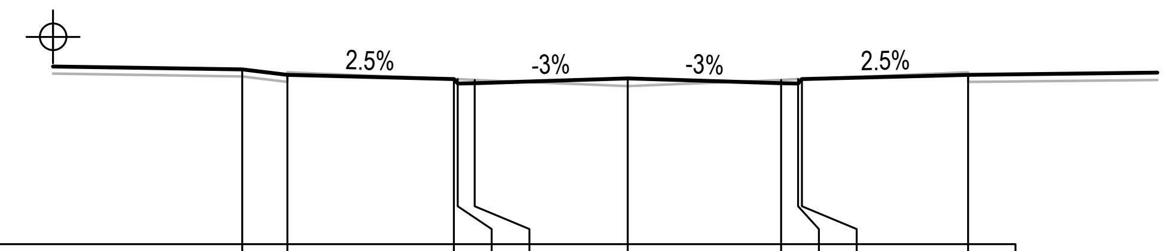
W.A.E.									
DESIGN LEVEL	688.556	688.447	688.322	688.337	688.459	688.337	688.322	688.447	688.556
BEW CC LEVEL	688.38	688.452	688.448	688.43	688.267	688.43	688.448	688.452	688.38
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 360



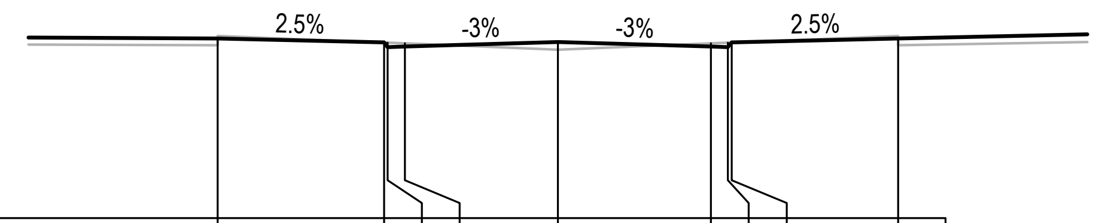
W.A.E.										
DESIGN LEVEL	690.405	689.925	689.817	689.692	689.707	689.828	689.707	689.692	689.817	689.925
BEW CC LEVEL	690.223	689.743	689.816	689.812	689.794	689.63	689.794	689.812	689.816	689.743
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

KTP CH 248.884



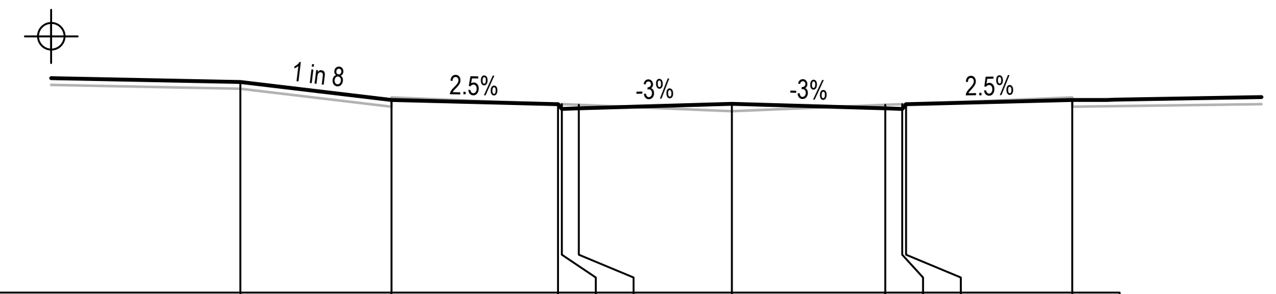
W.A.E.										
DESIGN LEVEL	689.608	689.464	689.356	689.231	689.246	689.367	689.246	689.231	689.356	689.464
BEW CC LEVEL	689.424	689.28	689.352	689.348	689.33	689.167	689.33	689.348	689.352	689.28
OFFSET	-10.2	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 285



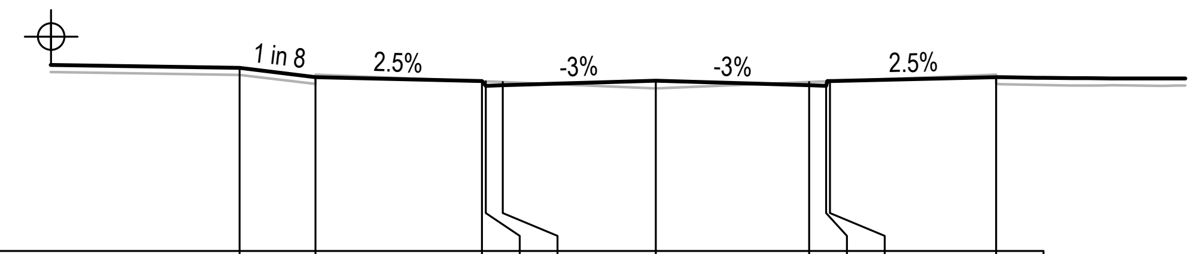
W.A.E.									
DESIGN LEVEL	688.744	688.636	688.511	688.526	688.647	688.526	688.511	688.636	688.744
BEW CC LEVEL	688.56	688.632	688.628	688.61	688.447	688.61	688.628	688.632	688.56
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 345



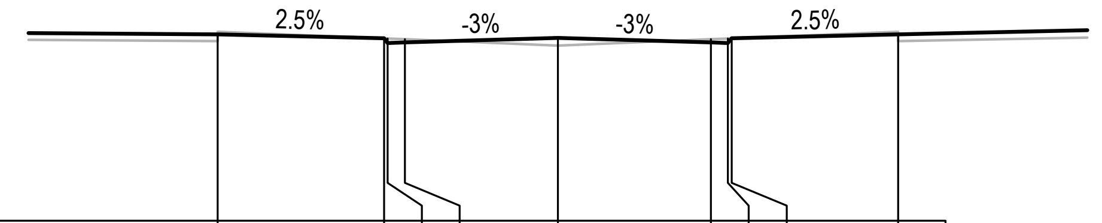
W.A.E.										
DESIGN LEVEL	690.559	690.079	689.971	689.846	689.861	689.982	689.861	689.846	689.971	690.079
BEW CC LEVEL	690.381	689.901	689.974	689.97	689.952	689.788	689.952	689.97	689.974	689.901
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 240



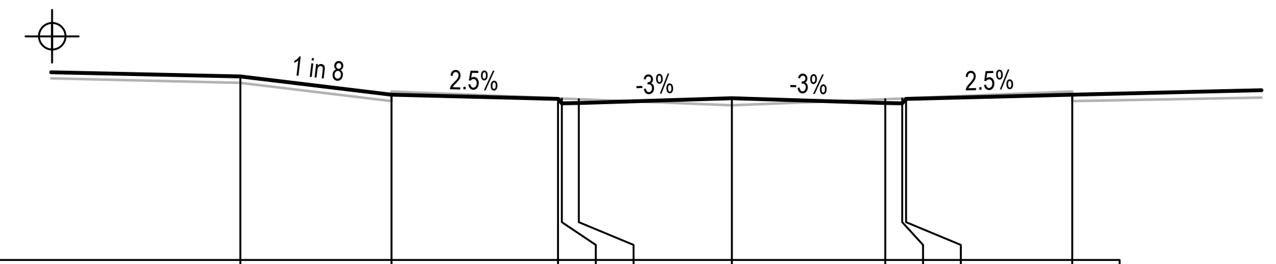
W.A.E.										
DESIGN LEVEL	689.827	689.586	689.477	689.352	689.367	689.489	689.367	689.352	689.477	689.586
BEW CC LEVEL	689.642	689.401	689.474	689.47	689.452	689.289	689.452	689.47	689.474	689.401
OFFSET	-11.009	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

KTP CH 274.884



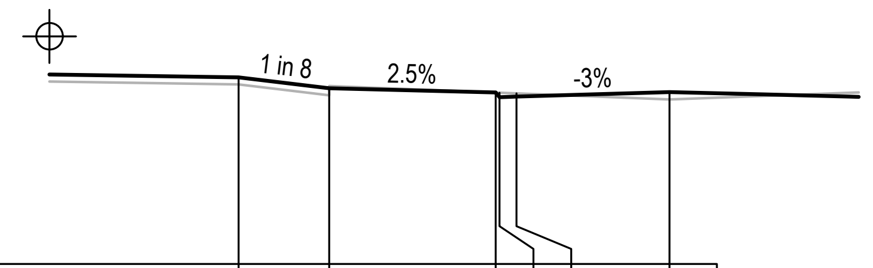
W.A.E.									
DESIGN LEVEL	688.924	688.816	688.691	688.706	688.827	688.706	688.691	688.816	688.924
BEW CC LEVEL	688.74	688.812	688.808	688.79	688.627	688.79	688.808	688.812	688.74
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 330



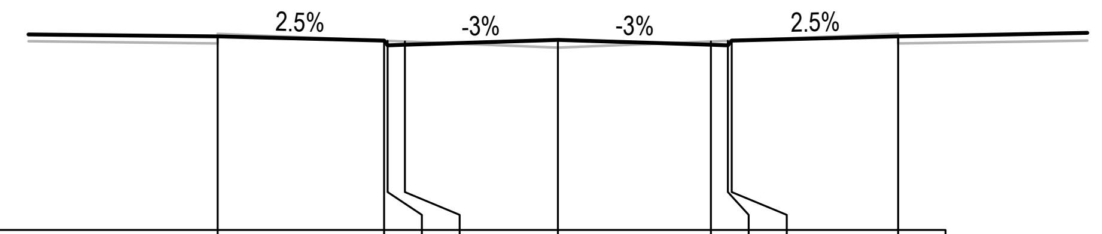
W.A.E.										
DESIGN LEVEL	690.849	690.369	690.261	690.136	690.151	690.272	690.151	690.136	690.261	690.369
BEW CC LEVEL	690.68	690.2	690.273	690.269	690.251	690.087	690.251	690.269	690.273	690.2
OFFSET	-13	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 225



W.A.E.						
DESIGN LEVEL	689.932	689.644	689.536	689.411	689.426	689.547
BEW CC LEVEL	689.748	689.46	689.532	689.528	689.51	689.347
OFFSET	-11.4	-9	-4.6	-4.5	-4.05	0

CH 270



W.A.E.									
DESIGN LEVEL	689.104	688.996	688.871	688.886	689.007	688.886	688.871	688.996	689.104
BEW CC LEVEL	688.92	688.992	688.988	688.97	688.807	688.97	688.988	688.992	688.92
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 315

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Disclaimer and Copyright:

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1)
SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

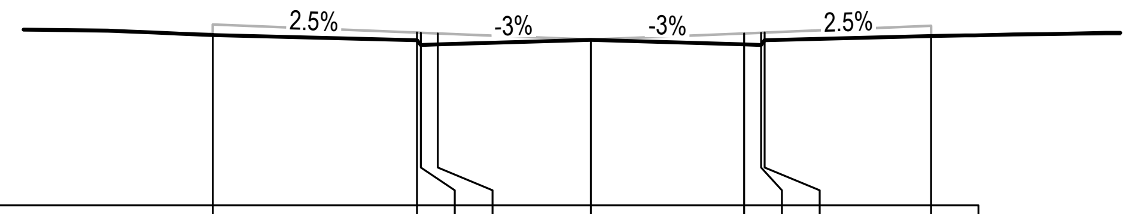
Title:
ROAD CROSS
SECTIONS
SHEET 19 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	348	A

ROAD No.04

LEGEND

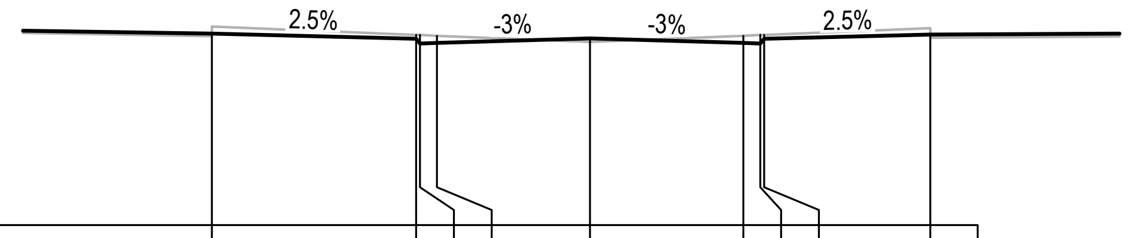
FINISHED DESIGN SURFACE —
EXISTING SURFACE —
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.498	687.364	687.239	687.254	687.376	687.254	687.239	687.364	687.473
BEW CC LEVEL	687.532	687.564	687.56	687.542	687.379	687.542	687.56	687.564	687.492
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

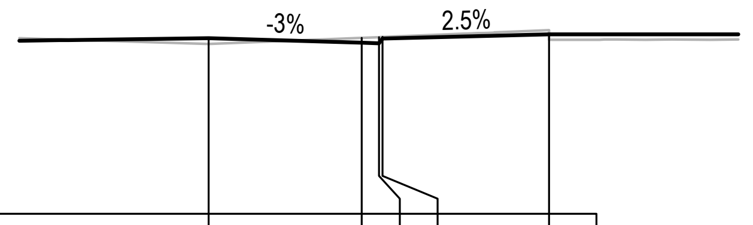
CH 435



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	687.054	686.92	686.795	686.81	686.931	686.81	686.795	686.92	687.029
BEW CC LEVEL	686.992	687.024	687.02	687.002	686.839	687.002	687.02	687.024	686.952
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

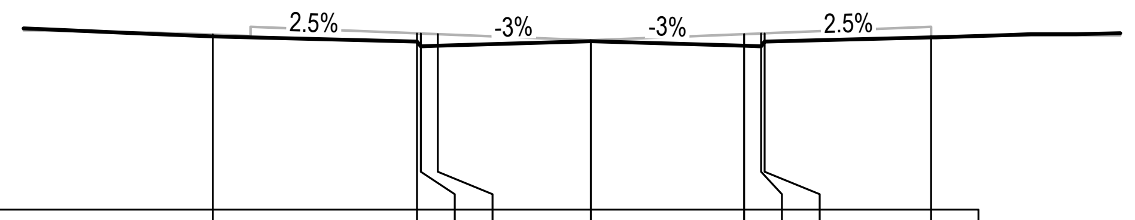
CH 480



DATUM R.L. 682

W.A.E.					
DESIGN LEVEL	686.635	686.513	686.498	686.623	686.732
BEW CC LEVEL	686.479	686.642	686.66	686.664	686.592
OFFSET	0	4.05	4.5	4.6	9

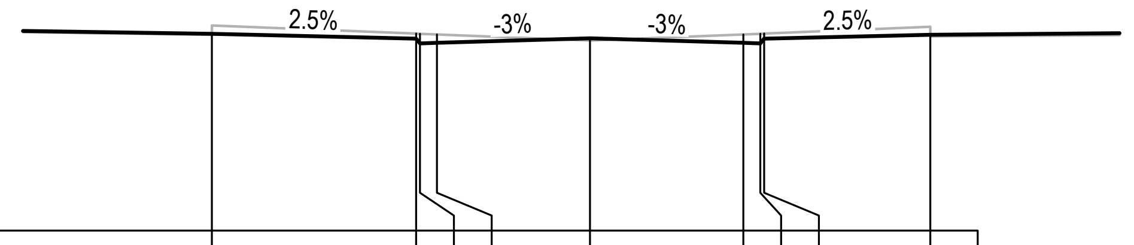
CH 510



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.568	687.435	687.31	687.325	687.446	687.325	687.31	687.435	687.543
BEW CC LEVEL	687.617	687.65	687.646	687.628	687.464	687.628	687.646	687.65	687.577
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

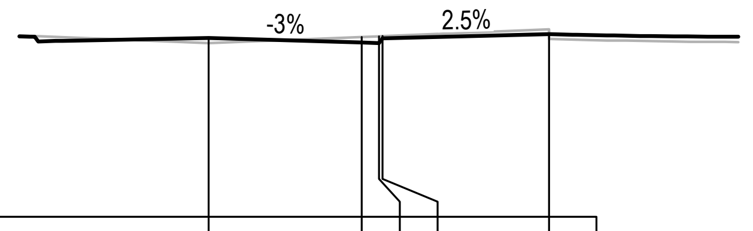
KTP CH 427.884



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	687.202	687.068	686.943	686.958	687.079	686.958	686.943	687.068	687.177
BEW CC LEVEL	687.172	687.204	687.2	687.182	687.019	687.182	687.2	687.204	687.132
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

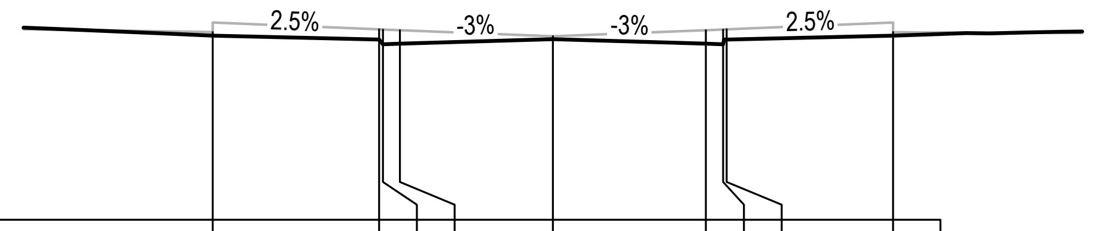
CH 465



DATUM R.L. 682

W.A.E.					
DESIGN LEVEL	686.717	686.595	686.58	686.705	686.814
BEW CC LEVEL	686.579	686.742	686.76	686.764	686.691
OFFSET	0	4.05	4.5	4.6	9

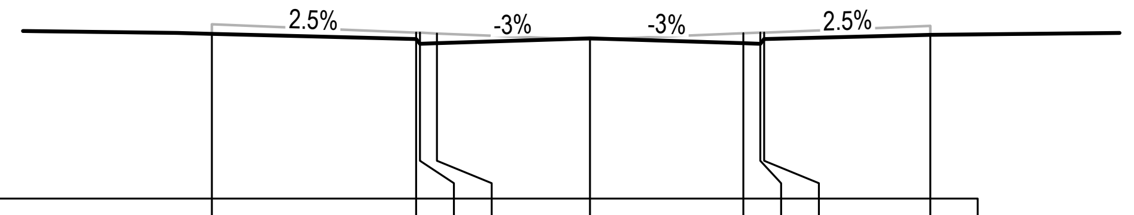
CH 501.699



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.87	687.762	687.637	687.652	687.773	687.652	687.637	687.762	687.87
BEW CC LEVEL	687.959	688.032	688.028	688.01	687.847	688.01	688.028	688.032	687.959
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

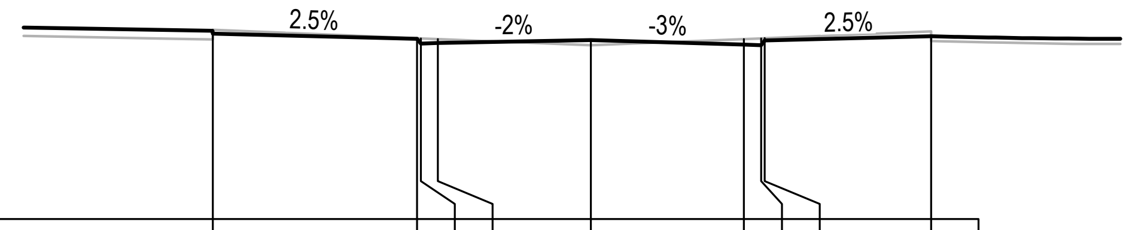
KTP CH 385.884



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.35	687.216	687.091	687.106	687.228	687.106	687.091	687.216	687.325
BEW CC LEVEL	687.352	687.384	687.38	687.362	687.199	687.362	687.38	687.384	687.312
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

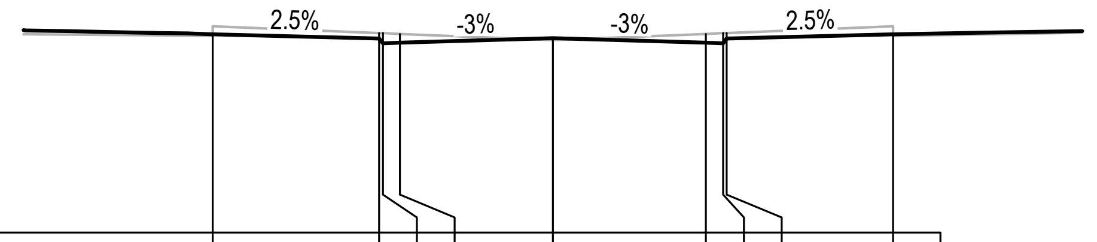
CH 450



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	686.88	686.746	686.621	686.636	686.717	686.596	686.581	686.706	686.814
BEW CC LEVEL	686.731	686.764	686.76	686.742	686.579	686.742	686.76	686.764	686.691
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

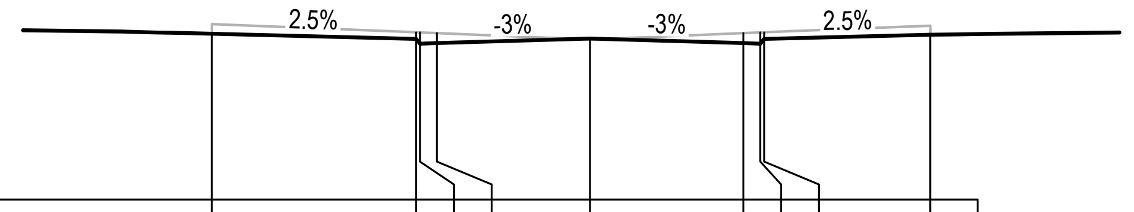
CH 501.684



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	688.221	688.113	687.988	688.003	688.124	688.003	687.988	688.113	688.221
BEW CC LEVEL	688.184	688.257	688.253	688.235	688.072	688.235	688.253	688.257	688.184
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

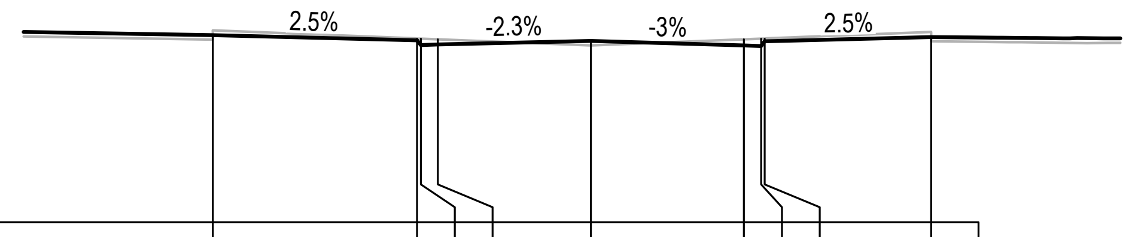
CH 375



DATUM R.L. 683

W.A.E.									
DESIGN LEVEL	687.366	687.233	687.108	687.123	687.244	687.123	687.108	687.233	687.341
BEW CC LEVEL	687.372	687.404	687.4	687.382	687.219	687.382	687.401	687.405	687.332
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 448.317



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	686.932	686.799	686.674	686.689	686.783	686.662	686.647	686.772	686.88
BEW CC LEVEL	686.812	686.844	686.84	686.822	686.659	686.822	686.84	686.844	686.772
OFFSET	-10	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9

CH 495

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

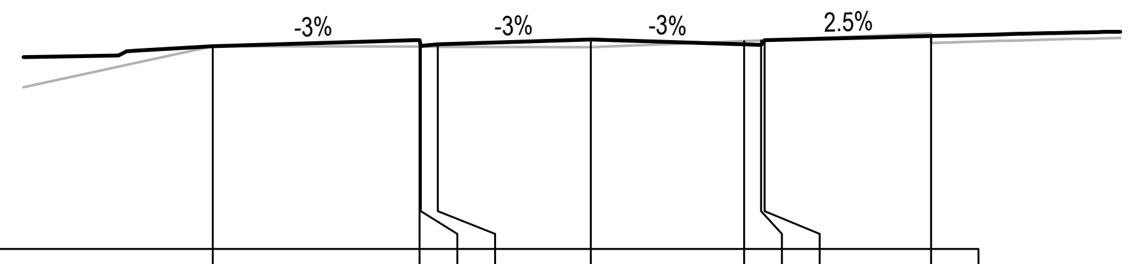
Title:
ROAD CROSS
SECTIONS
SHEET 20 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	349	A

ROAD No.04

LEGEND

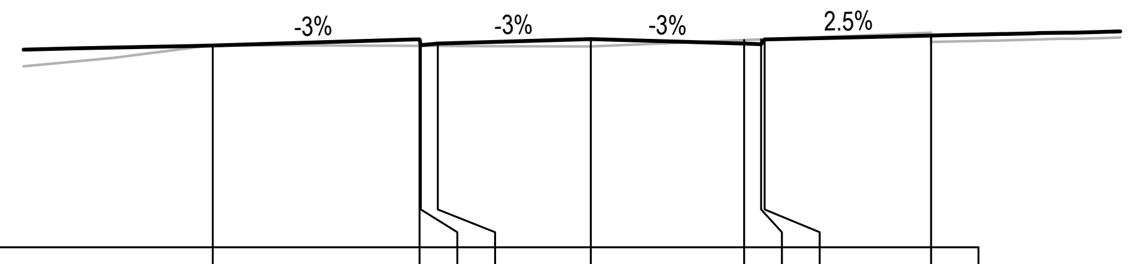
FINISHED DESIGN SURFACE ——
EXISTING SURFACE ——
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 681

W.A.E.									
DESIGN LEVEL	686.361	686.521	686.371	686.411	686.533	686.411	686.396	686.521	686.63
BEW CC LEVEL	686.362	686.347	686.347	686.345	686.334	686.497	686.515	686.519	686.446
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

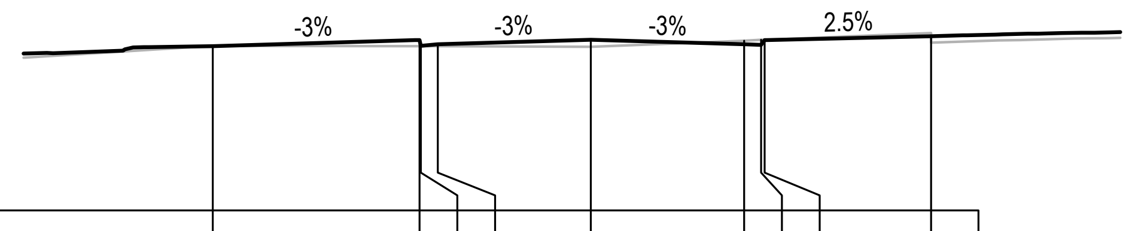
CH 540



DATUM R.L. 681

W.A.E.									
DESIGN LEVEL	686.332	686.493	686.343	686.383	686.504	686.383	686.368	686.493	686.601
BEW CC LEVEL	686.341	686.325	686.325	686.324	686.313	686.476	686.494	686.498	686.425
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

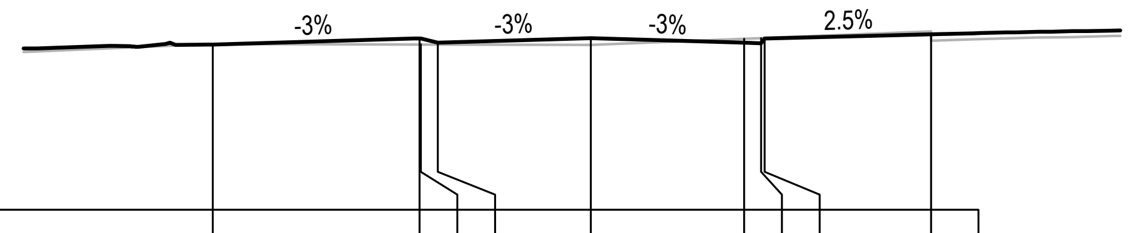
CH 530.701



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	686.343	686.503	686.353	686.393	686.515	686.393	686.378	686.503	686.612
BEW CC LEVEL	686.358	686.343	686.343	686.341	686.33	686.493	686.511	686.515	686.443
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

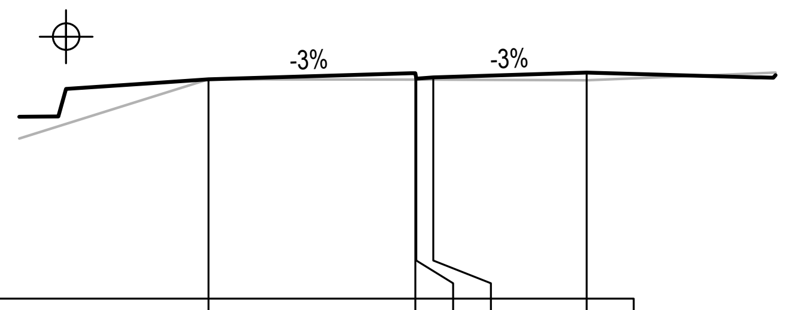
CH 525



DATUM R.L. 682

W.A.E.									
DESIGN LEVEL	686.349	686.509	686.359	686.399	686.521	686.399	686.384	686.509	686.618
BEW CC LEVEL	686.366	686.351	686.351	686.349	686.338	686.501	686.519	686.523	686.451
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

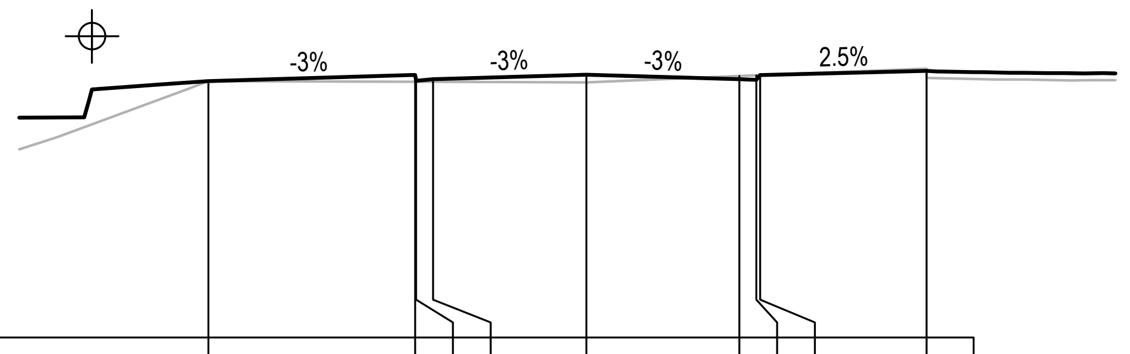
CH 523.624



DATUM R.L. 681

W.A.E.					
DESIGN LEVEL	686.8	686.96	686.81	686.85	686.972
BEW CC LEVEL	686.8	686.784	686.784	686.783	686.772
OFFSET	-10	-4.53	-4.5	-4.05	0

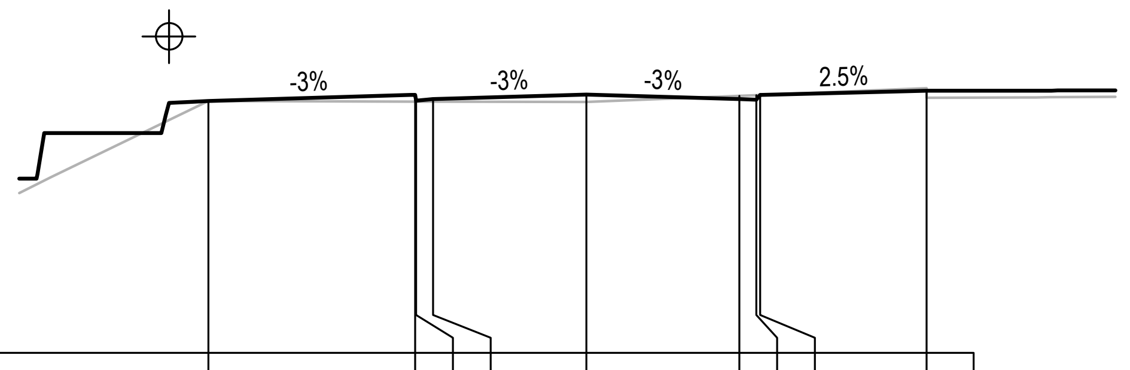
CH 585



DATUM R.L. 680

W.A.E.									
DESIGN LEVEL	686.773	686.933	686.783	686.823	686.945	686.823	686.808	686.933	687.042
BEW CC LEVEL	686.773	686.758	686.757	686.756	686.745	686.908	686.926	686.93	686.857
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

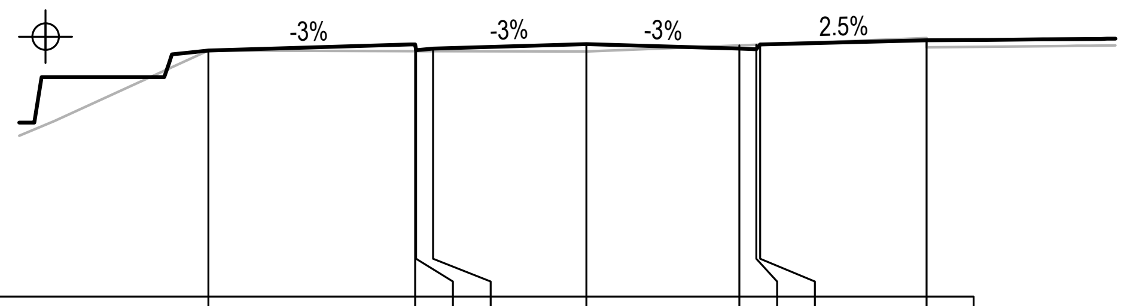
KTP CH 582.323



DATUM R.L. 680

W.A.E.									
DESIGN LEVEL	686.65	686.81	686.66	686.7	686.822	686.7	686.685	686.81	686.919
BEW CC LEVEL	686.65	686.634	686.634	686.633	686.622	686.785	686.803	686.807	686.734
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

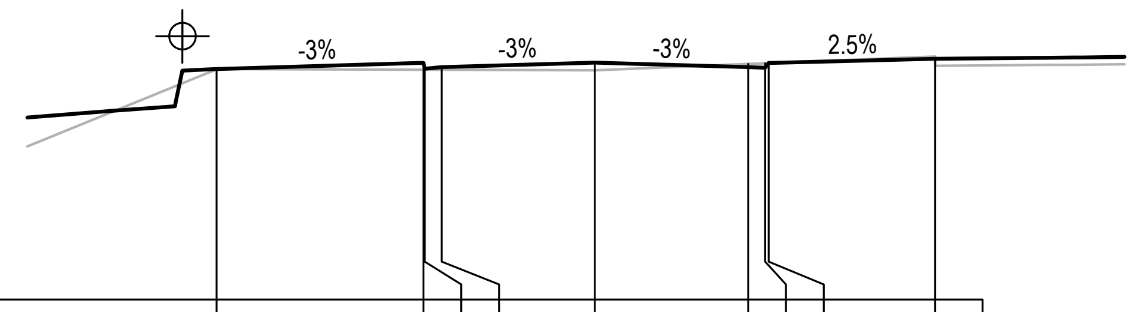
CH 570



DATUM R.L. 680

W.A.E.									
DESIGN LEVEL	686.5	686.66	686.51	686.55	686.672	686.55	686.535	686.66	686.769
BEW CC LEVEL	686.5	686.484	686.484	686.483	686.472	686.635	686.653	686.657	686.584
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

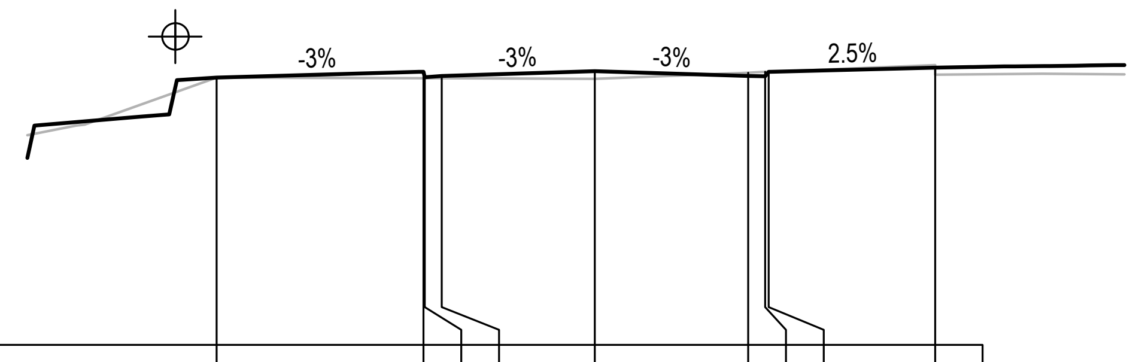
CH 555



DATUM R.L. 681

W.A.E.									
DESIGN LEVEL	687.075	687.235	687.085	687.125	687.247	687.125	687.11	687.235	687.344
BEW CC LEVEL	687.075	687.06	687.059	687.058	687.047	687.21	687.228	687.232	687.159
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

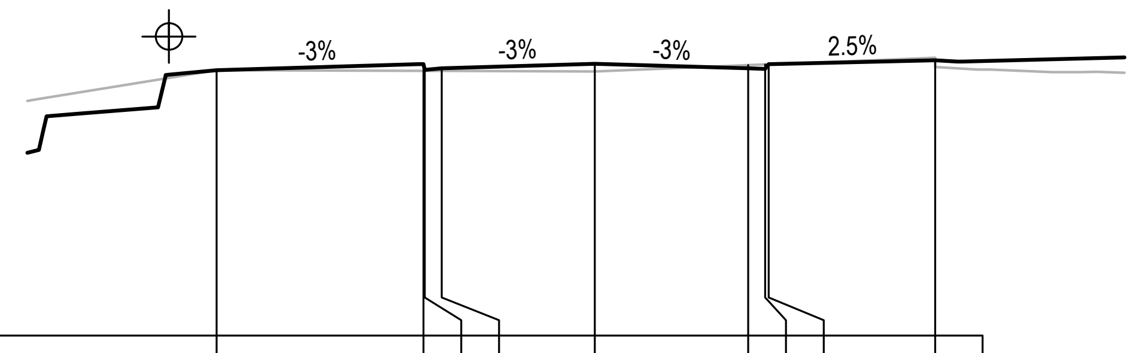
CH 620.02



DATUM R.L. 680

W.A.E.									
DESIGN LEVEL	687.066	687.227	687.077	687.117	687.238	687.117	687.102	687.227	687.336
BEW CC LEVEL	687.066	687.051	687.051	687.05	687.038	687.202	687.22	687.224	687.151
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

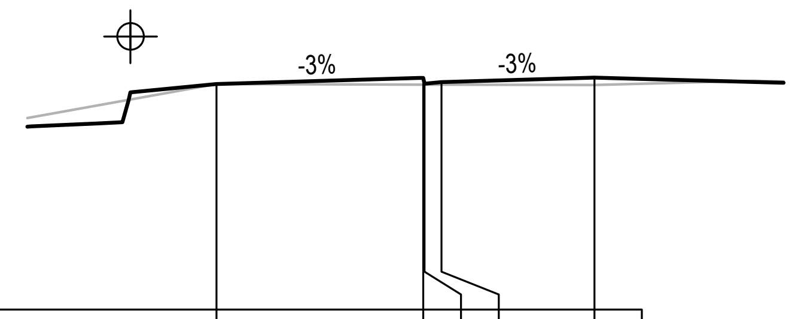
CH 615



DATUM R.L. 680

W.A.E.									
DESIGN LEVEL	687.012	687.173	687.023	687.063	687.184	687.063	687.048	687.173	687.282
BEW CC LEVEL	687.012	686.997	686.997	686.996	686.984	687.147	687.166	687.17	687.097
OFFSET	-10	-4.53	-4.5	-4.05	0	4.05	4.5	4.6	9

KTP CH 606.323



DATUM R.L. 681

W.A.E.					
DESIGN LEVEL	686.95	687.11	686.96	687	687.122
BEW CC LEVEL	686.95	686.934	686.934	686.933	686.922
OFFSET	-10	-4.53	-4.5	-4.05	0

CH 600

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

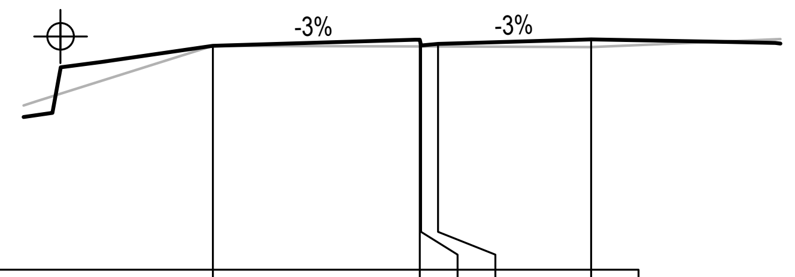
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 21 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	350	A

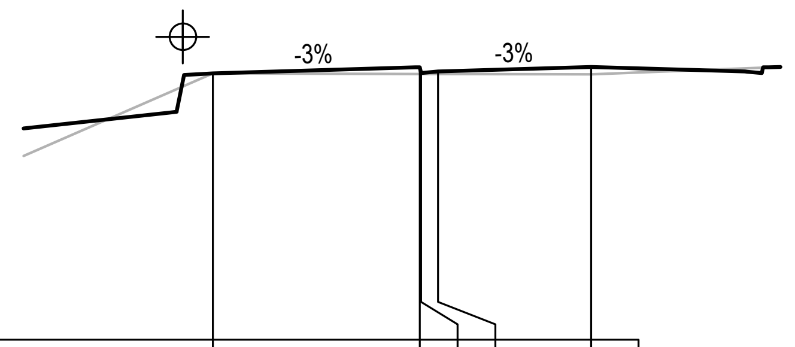
ROAD No.04



DATUM R.L. 681

W.A.E.						
DESIGN LEVEL	686.91	687.07	686.92	686.96	687.082	
BEW CC LEVEL	686.91	686.895	686.894	686.893	686.882	
OFFSET	-10	-4.53	-4.5	-4.05	0	

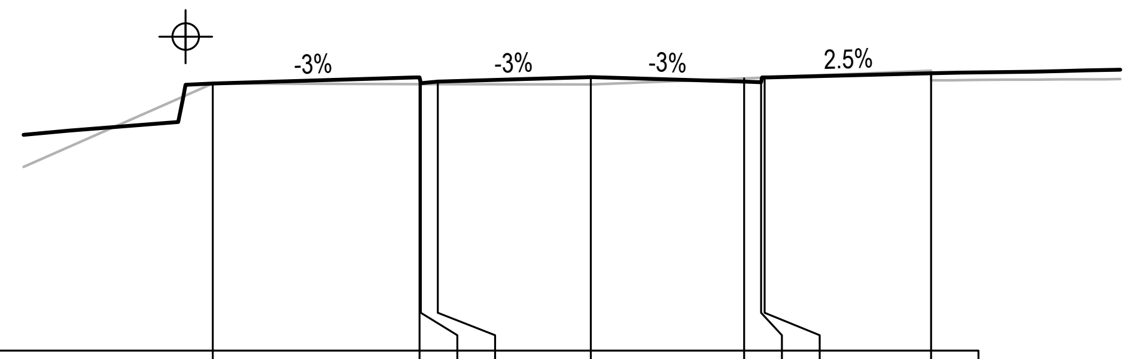
CH 642.266



DATUM R.L. 680

W.A.E.						
DESIGN LEVEL	687.042	687.202	687.052	687.092	687.214	
BEW CC LEVEL	687.042	687.026	687.026	687.025	687.014	
OFFSET	-10	-4.53	-4.5	-4.05	0	

CH 630



DATUM R.L. 680

W.A.E.										
DESIGN LEVEL	687.051	687.211	687.061	687.101	687.223	687.101	687.086	687.211	687.32	
BEW CC LEVEL	687.051	687.036	687.035	687.034	687.023	687.186	687.204	687.208	687.135	
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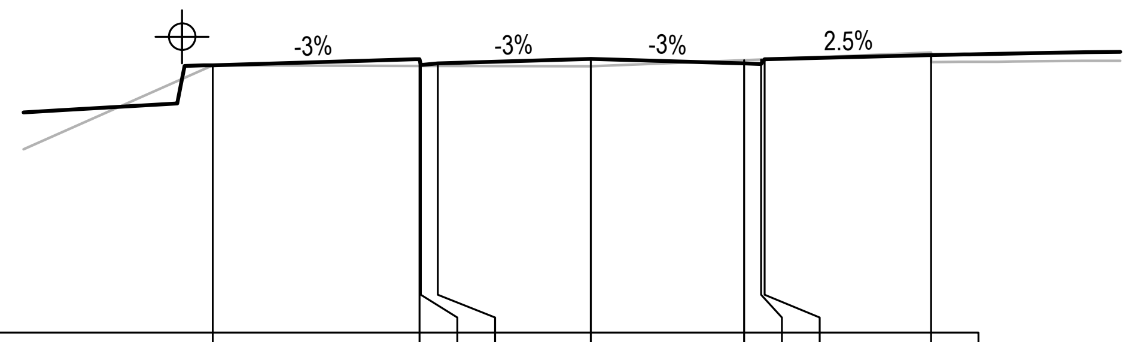
KTP CH 628.493



DATUM R.L. 680

W.A.E.										
DESIGN LEVEL	687.061	687.221	687.071	687.111	687.233	687.111	687.096	687.221	687.33	
BEW CC LEVEL	687.061	687.045	687.045	687.044	687.033	687.196	687.214	687.218	687.145	
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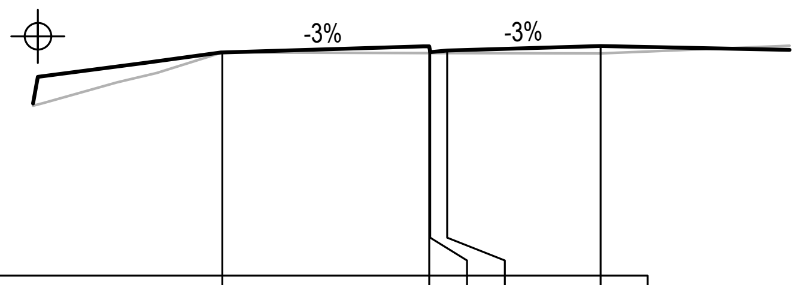
CH 626.557



DATUM R.L. 681

W.A.E.						
DESIGN LEVEL	686.882	687.042	686.892	686.932	687.054	
BEW CC LEVEL	686.882	686.866	686.866	686.865	686.854	
OFFSET	-10	-4.53	-4.5	-4.05	0	

KTP CH 644.095

LEGEND

FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 22 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	351	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-351.dwg

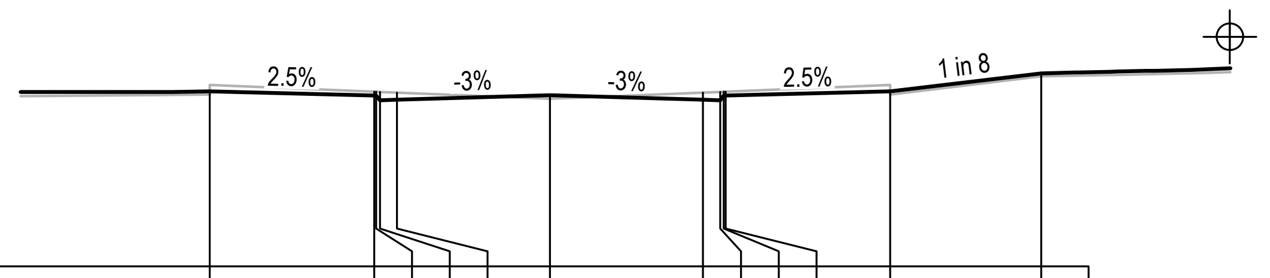
ROAD No.05

LEGEND

FINISHED DESIGN SURFACE ────

EXISTING SURFACE ────

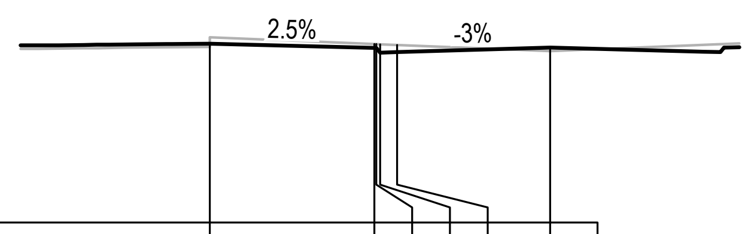
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 688

W.A.E.												
DESIGN LEVEL	692.621	692.513	692.513	692.388	692.403	692.524	692.403	692.388	692.513	692.513	692.621	693.101
BEW CC LEVEL	692.54	692.615	692.613	692.609	692.591	692.428	692.591	692.609	692.613	692.615	692.54	693.02
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

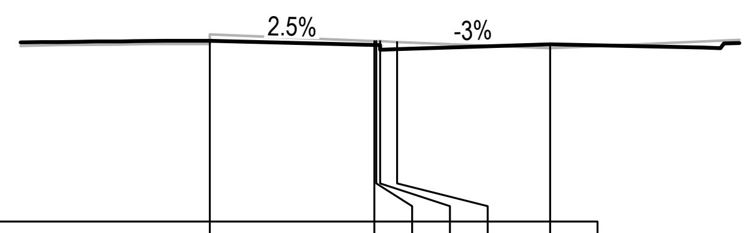
KTP CH 18



DATUM R.L. 688

W.A.E.						
DESIGN LEVEL	692.711	692.603	692.603	692.478	692.493	692.614
BEW CC LEVEL	692.63	692.705	692.703	692.699	692.681	692.518
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0

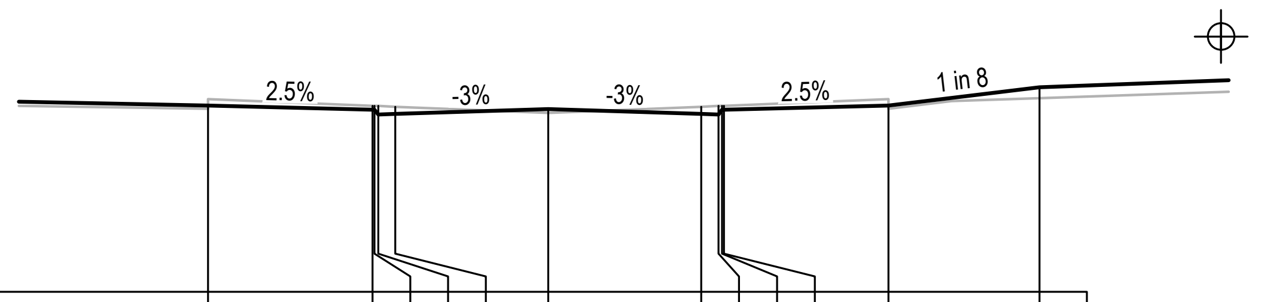
CH 15



DATUM R.L. 688

W.A.E.						
DESIGN LEVEL	692.771	692.663	692.663	692.538	692.553	692.674
BEW CC LEVEL	692.69	692.765	692.763	692.759	692.741	692.578
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0

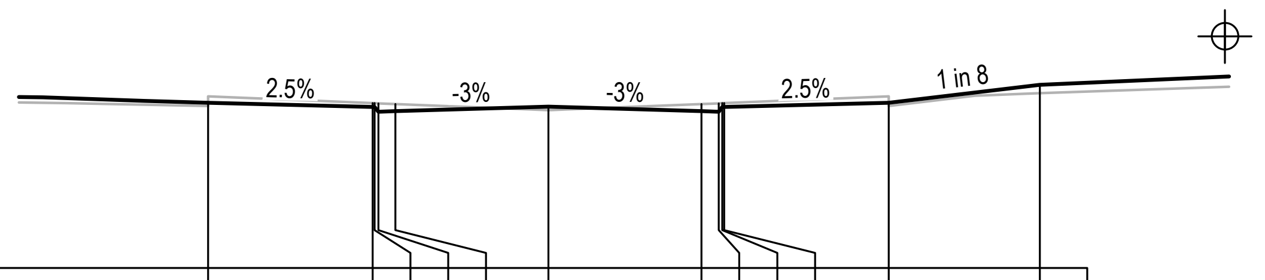
KTP CH 13



DATUM R.L. 686

W.A.E.												
DESIGN LEVEL	690.916	690.807	690.807	690.682	690.697	690.819	690.697	690.682	690.807	690.807	690.916	691.396
BEW CC LEVEL	690.835	690.91	690.908	690.903	690.885	690.722	690.885	690.903	690.908	690.91	690.835	691.111
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

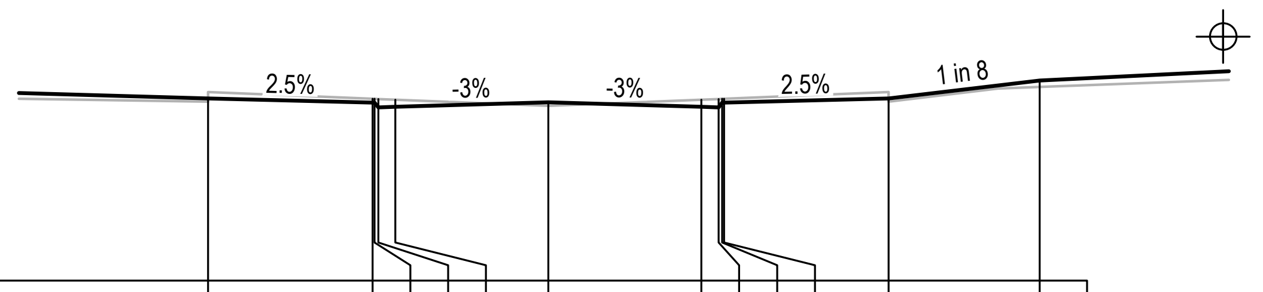
CH 75



DATUM R.L. 687

W.A.E.												
DESIGN LEVEL	691.361	691.253	691.253	691.128	691.143	691.264	691.143	691.128	691.253	691.253	691.361	691.841
BEW CC LEVEL	691.28	691.355	691.353	691.349	691.331	691.168	691.331	691.349	691.353	691.355	691.28	691.614
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

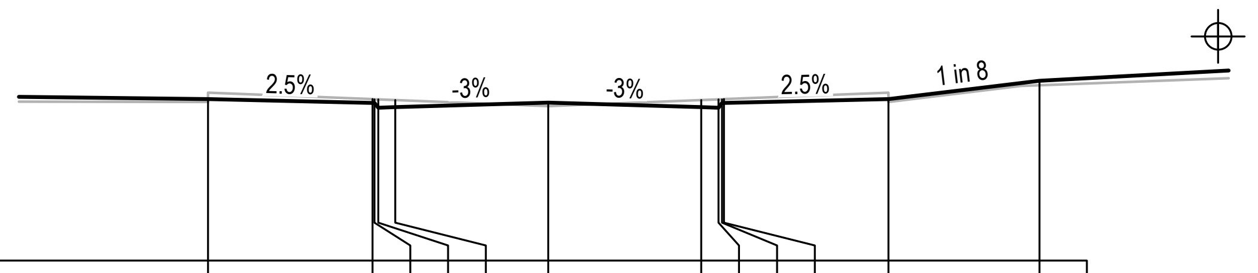
CH 60



DATUM R.L. 687

W.A.E.												
DESIGN LEVEL	691.811	691.703	691.703	691.578	691.593	691.714	691.593	691.578	691.703	691.703	691.811	692.291
BEW CC LEVEL	691.73	691.805	691.803	691.799	691.781	691.618	691.781	691.799	691.803	691.805	691.73	692.118
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

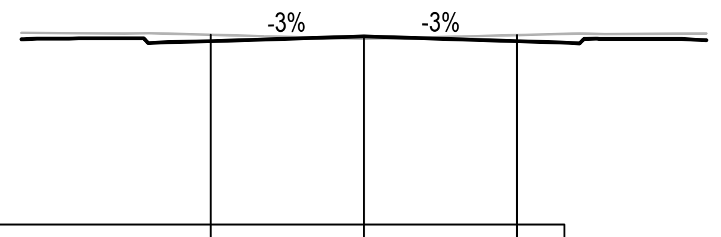
CH 45



DATUM R.L. 688

W.A.E.												
DESIGN LEVEL	692.261	692.153	692.153	692.028	692.043	692.164	692.043	692.028	692.153	692.153	692.261	692.741
BEW CC LEVEL	692.18	692.255	692.253	692.249	692.231	692.068	692.231	692.249	692.253	692.255	692.18	692.62
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

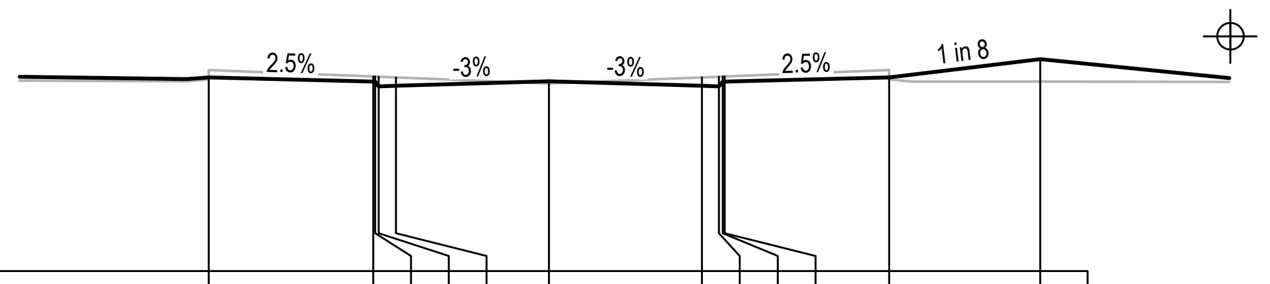
CH 30



DATUM R.L. 685

W.A.E.			
DESIGN LEVEL	689.838	689.959	689.838
BEW CC LEVEL	690.003	689.899	689.997
OFFSET	-4.05	0	4.05

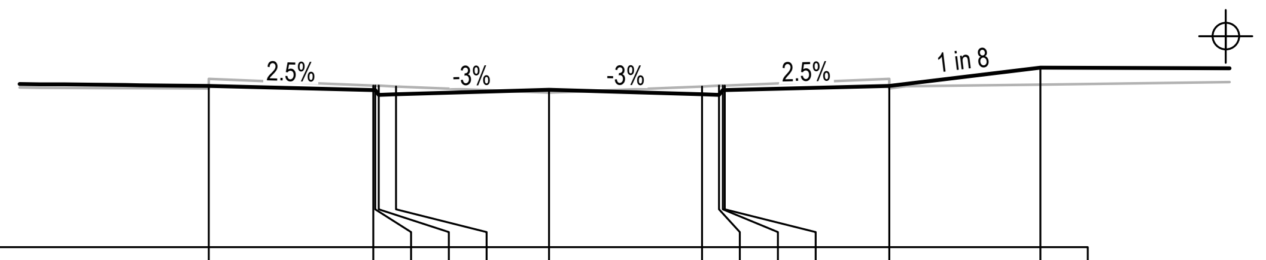
CH 120



DATUM R.L. 685

W.A.E.												
DESIGN LEVEL	690.114	690.005	690.005	689.88	689.895	690.017	689.895	689.88	690.005	690.005	690.114	690.594
BEW CC LEVEL	690.064	690.138	690.136	690.132	690.114	689.951	690.114	690.132	690.136	690.138	690.064	690.001
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

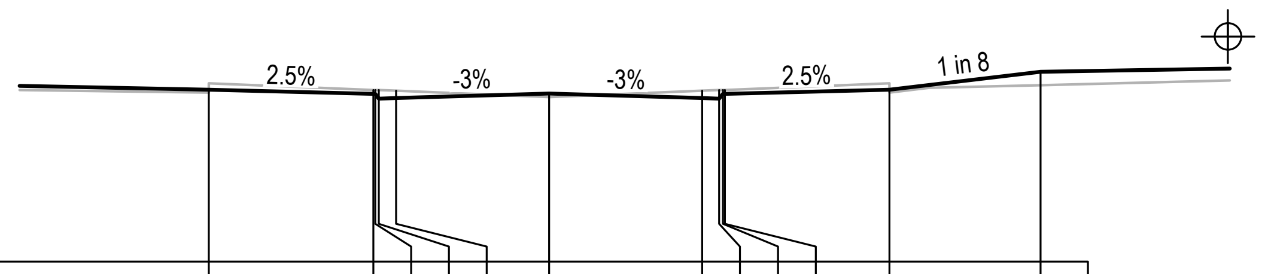
KTP CH 115.664



DATUM R.L. 686

W.A.E.												
DESIGN LEVEL	690.261	690.152	690.152	690.027	690.042	690.164	690.042	690.027	690.152	690.152	690.261	690.741
BEW CC LEVEL	690.198	690.273	690.271	690.267	690.249	690.086	690.249	690.267	690.271	690.273	690.198	690.296
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

CH 105



DATUM R.L. 686

W.A.E.												
DESIGN LEVEL	690.541	690.433	690.433	690.308	690.323	690.444	690.323	690.308	690.433	690.433	690.541	691.021
BEW CC LEVEL	690.466	690.541	690.539	690.535	690.517	690.353	690.517	690.535	690.539	690.541	690.466	690.664
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

CH 90

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Disclaimer and Copyright:
ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 23 OF 30

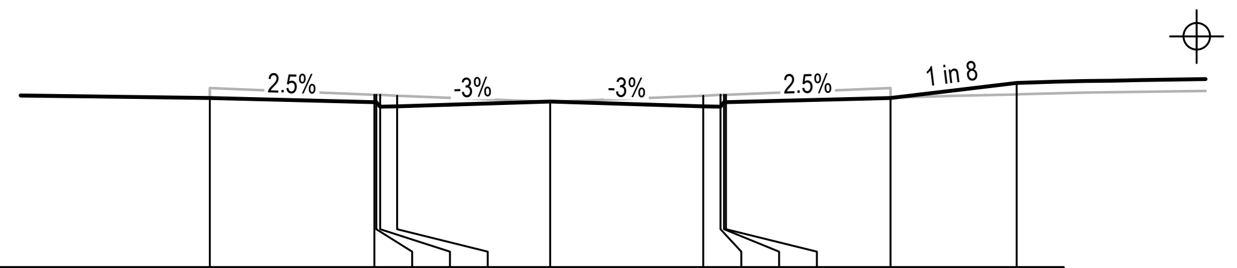
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	352	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN0182-CC-Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-352.dwg

ROAD No.05

LEGEND

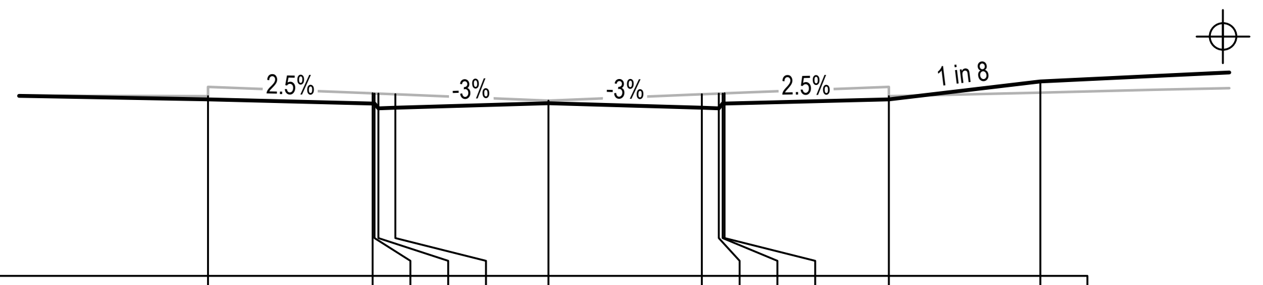
FINISHED DESIGN SURFACE	—
EXISTING SURFACE	—
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 685

W.A.E.												
DESIGN LEVEL	689.461	689.352	689.352	689.227	689.242	689.363	689.242	689.227	689.352	689.352	689.461	689.861
BEW CC LEVEL	689.472	689.546	689.544	689.54	689.522	689.359	689.522	689.54	689.544	689.546	689.472	689.555
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	12.334

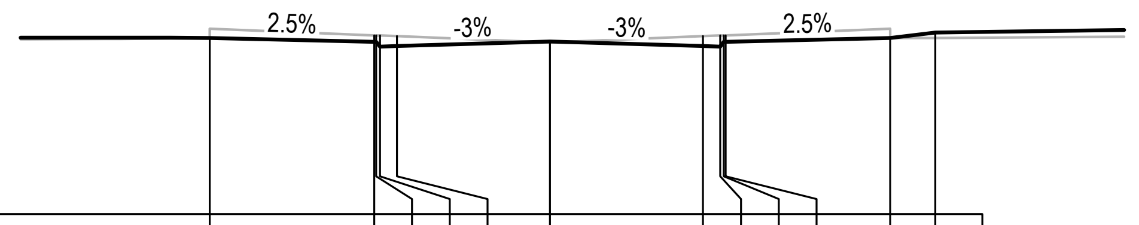
CH 165



DATUM R.L. 684

W.A.E.												
DESIGN LEVEL	688.667	688.558	688.558	688.433	688.448	688.569	688.448	688.433	688.558	688.558	688.667	689.147
BEW CC LEVEL	688.752	688.826	688.824	688.82	688.802	688.639	688.802	688.82	688.824	688.826	688.752	688.848
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

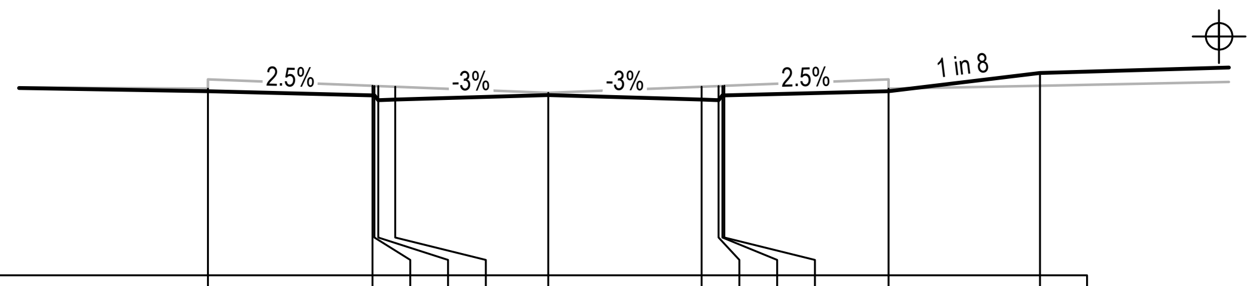
CH 225



DATUM R.L. 685

W.A.E.												
DESIGN LEVEL	689.659	689.551	689.551	689.426	689.441	689.562	689.441	689.426	689.551	689.551	689.659	689.802
BEW CC LEVEL	689.652	689.726	689.724	689.72	689.702	689.539	689.702	689.72	689.724	689.726	689.652	689.659
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	10.191

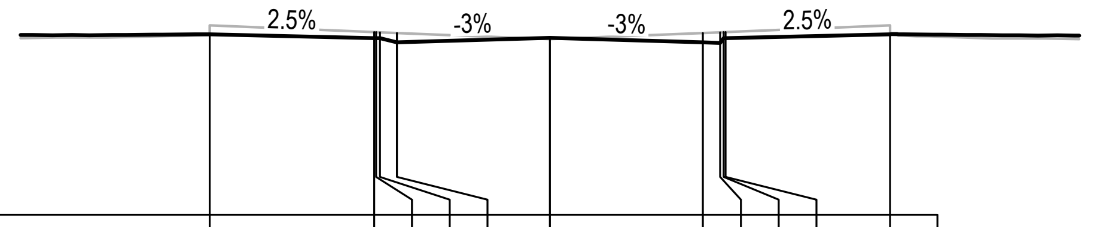
CH 150



DATUM R.L. 684

W.A.E.												
DESIGN LEVEL	688.865	688.756	688.756	688.631	688.646	688.768	688.646	688.631	688.756	688.756	688.865	689.345
BEW CC LEVEL	688.932	689.006	689.004	689	688.982	688.819	688.982	689	689.004	689.006	688.932	689.011
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

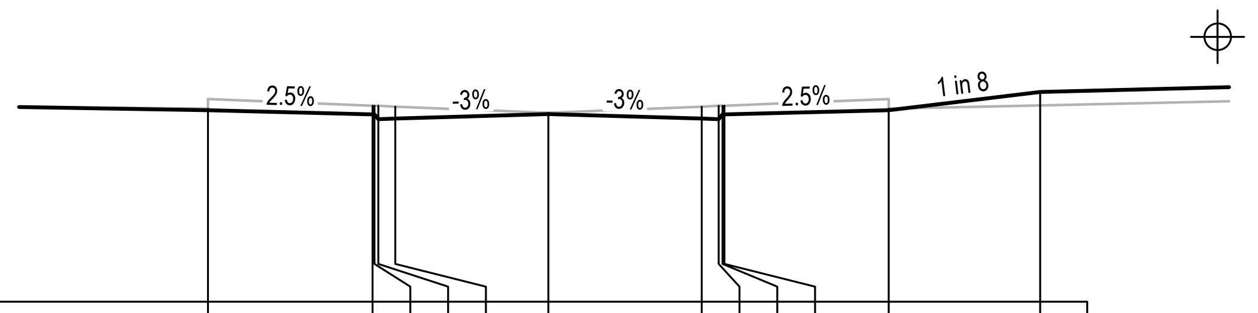
CH 210



DATUM R.L. 685

W.A.E.											
DESIGN LEVEL	689.77	689.661	689.661	689.536	689.551	689.672	689.551	689.536	689.661	689.661	689.77
BEW CC LEVEL	689.752	689.826	689.824	689.82	689.802	689.639	689.802	689.82	689.824	689.826	689.752
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9

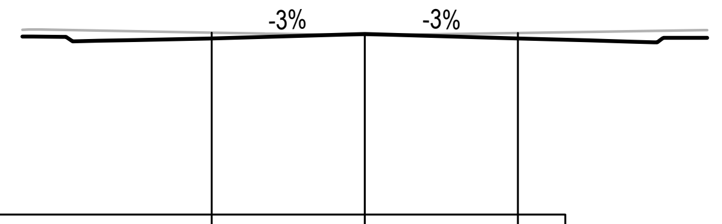
KTP CH 141.664



DATUM R.L. 684

W.A.E.												
DESIGN LEVEL	689.064	688.955	688.955	688.83	688.845	688.966	688.845	688.83	688.955	688.955	689.064	689.544
BEW CC LEVEL	689.112	689.186	689.184	689.18	689.162	688.999	689.162	689.18	689.184	689.186	689.112	689.196
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

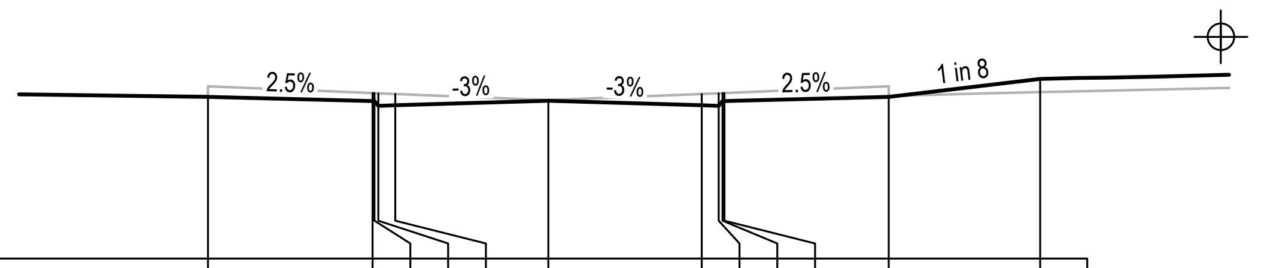
CH 195



DATUM R.L. 685

W.A.E.			
DESIGN LEVEL	689.639	689.761	689.639
BEW CC LEVEL	689.792	689.719	689.784
OFFSET	-4.05	0	4.05

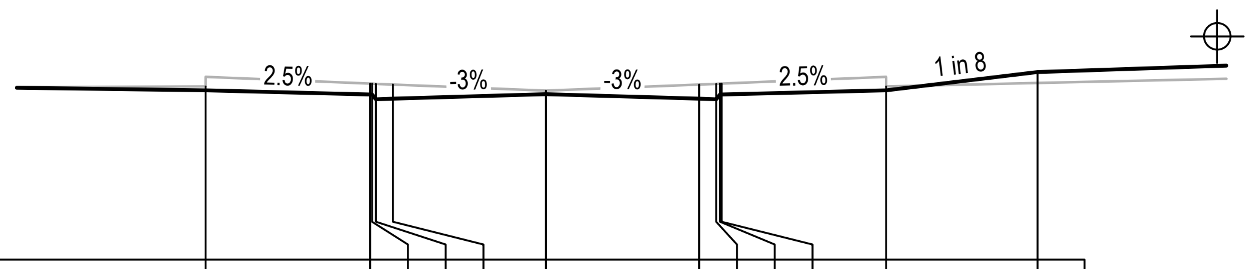
CH 135



DATUM R.L. 685

W.A.E.												
DESIGN LEVEL	689.262	689.153	689.153	689.028	689.043	689.165	689.043	689.028	689.153	689.153	689.262	689.742
BEW CC LEVEL	689.292	689.366	689.364	689.36	689.342	689.179	689.342	689.36	689.364	689.366	689.292	689.391
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

CH 180



DATUM R.L. 684

W.A.E.												
DESIGN LEVEL	688.468	688.359	688.359	688.234	688.249	688.371	688.249	688.234	688.359	688.359	688.468	688.948
BEW CC LEVEL	688.572	688.646	688.644	688.64	688.622	688.459	688.622	688.64	688.644	688.646	688.572	688.66
OFFSET	-9	-4.65	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	4.65	9	13

CH 240

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 24 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	353	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-353.dwg

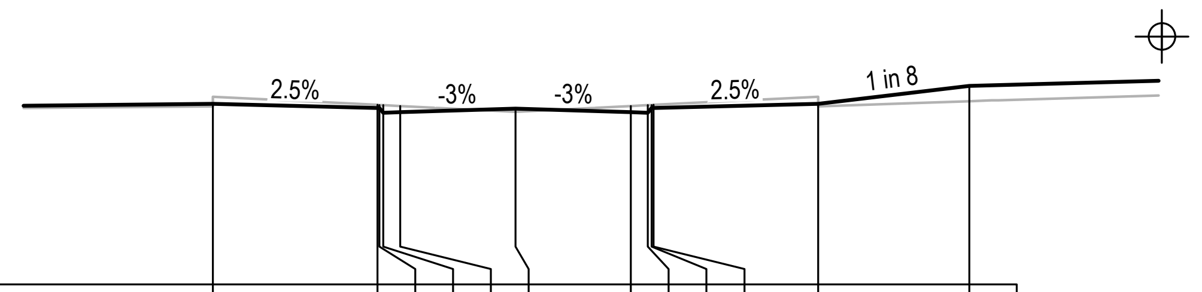
ROAD No.05

LEGEND

FINISHED DESIGN SURFACE —

EXISTING SURFACE —

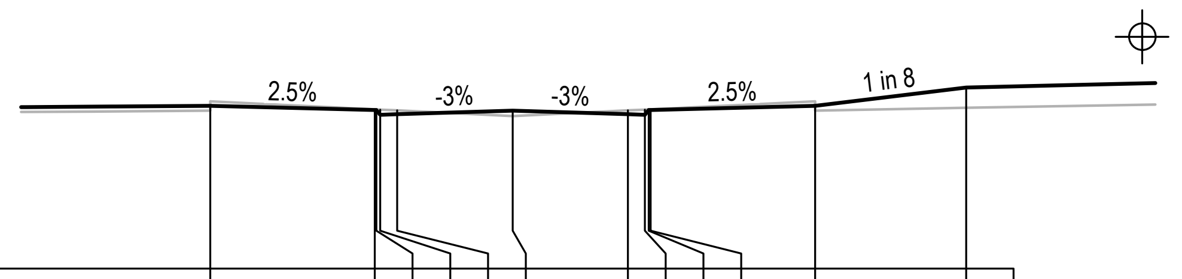
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	687.769	687.66	687.66	687.535	687.55	687.642	687.55	687.535	687.66	687.66	687.769	688.249			
BEW CC LEVEL	687.708	687.744	687.742	687.737	687.715	687.565	687.715	687.737	687.742	687.744	687.708	687.843			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

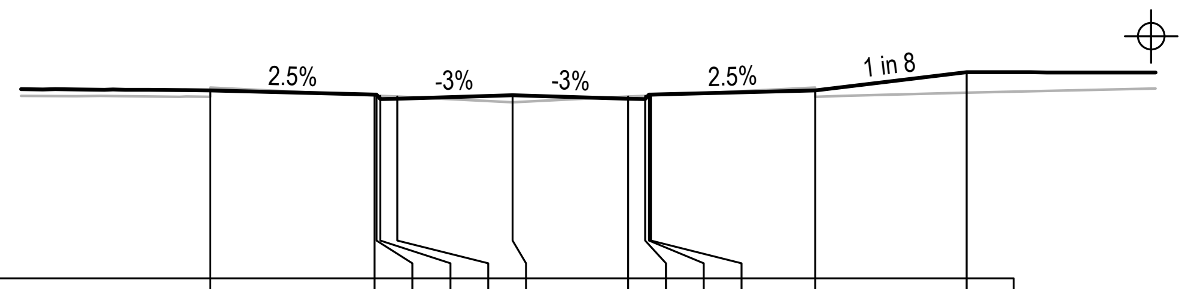
CH 330



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	687.295	687.187	687.187	687.062	687.077	687.168	687.077	687.062	687.187	687.187	687.295	687.775			
BEW CC LEVEL	687.168	687.204	687.202	687.197	687.175	687.025	687.175	687.197	687.202	687.204	687.168	687.241			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

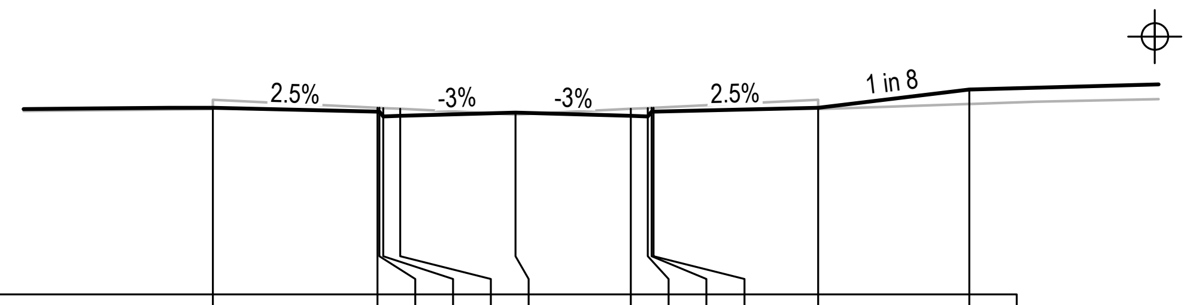
CH 375



DATUM R.L. 682

W.A.E.															
DESIGN LEVEL	686.973	686.864	686.864	686.739	686.754	686.845	686.754	686.739	686.864	686.864	686.973	687.453			
BEW CC LEVEL	686.799	686.836	686.834	686.829	686.807	686.657	686.807	686.829	686.834	686.836	686.799	686.909			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

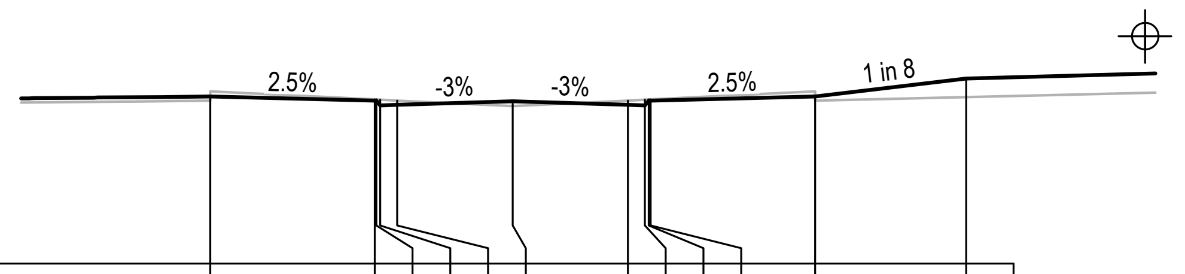
KTP CH 405.689



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	687.927	687.818	687.818	687.693	687.708	687.799	687.708	687.693	687.818	687.818	687.927	688.407			
BEW CC LEVEL	687.888	687.924	687.922	687.917	687.895	687.745	687.895	687.917	687.922	687.924	687.888	688.023			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

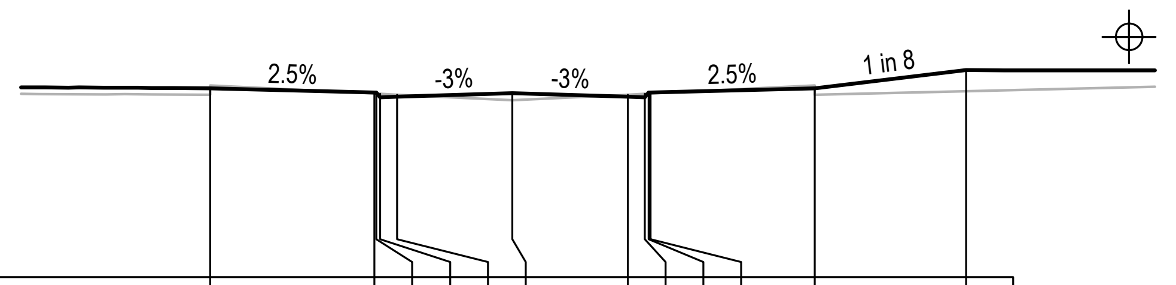
CH 315



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	687.413	687.305	687.305	687.18	687.195	687.286	687.195	687.18	687.305	687.305	687.413	687.893			
BEW CC LEVEL	687.302	687.339	687.336	687.331	687.309	687.16	687.309	687.331	687.336	687.339	687.302	687.396			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

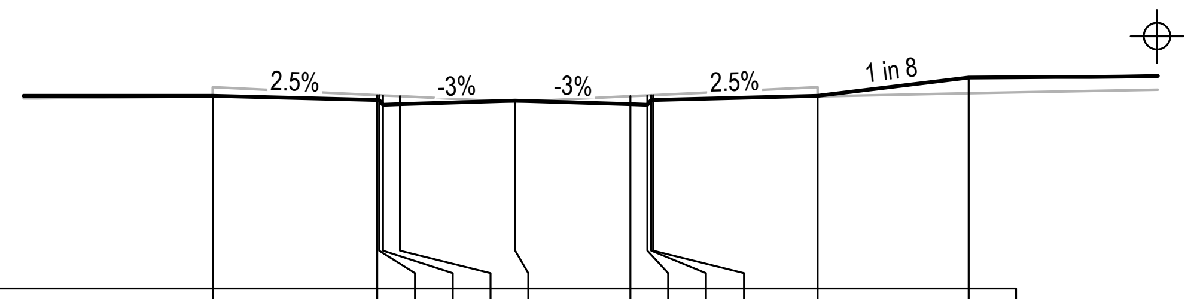
CH 363.792



DATUM R.L. 682

W.A.E.															
DESIGN LEVEL	686.98	686.871	686.871	686.746	686.761	686.853	686.761	686.746	686.871	686.871	686.98	687.46			
BEW CC LEVEL	686.808	686.844	686.842	686.837	686.815	686.665	686.815	686.837	686.842	686.844	686.808	686.902			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

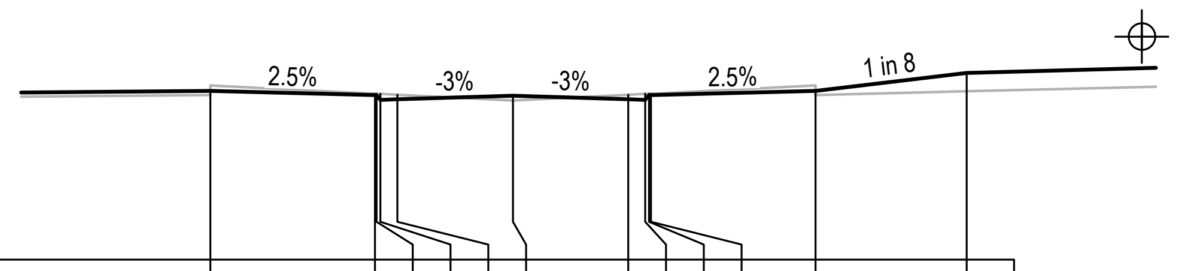
CH 405



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	688.085	687.976	687.976	687.851	687.866	687.957	687.866	687.851	687.976	687.976	688.085	688.565			
BEW CC LEVEL	688.068	688.104	688.102	688.097	688.075	687.925	688.075	688.097	688.102	688.104	688.068	688.149			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

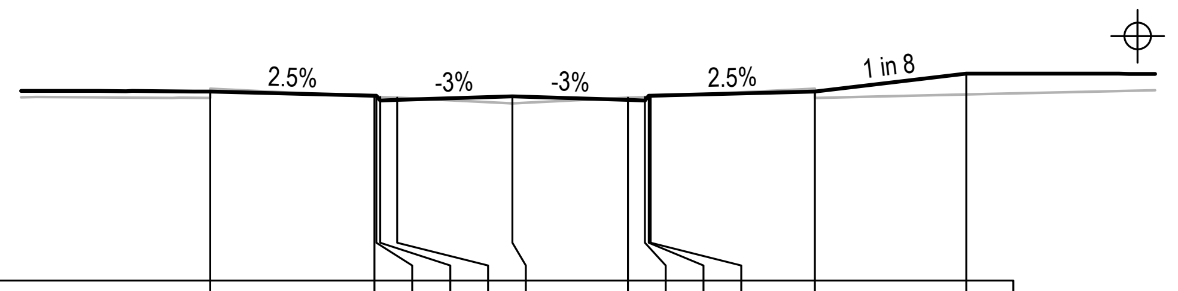
CH 300



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	687.453	687.344	687.344	687.219	687.234	687.326	687.234	687.219	687.344	687.344	687.453	687.933			
BEW CC LEVEL	687.348	687.384	687.382	687.377	687.355	687.205	687.355	687.377	687.382	687.384	687.348	687.444			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

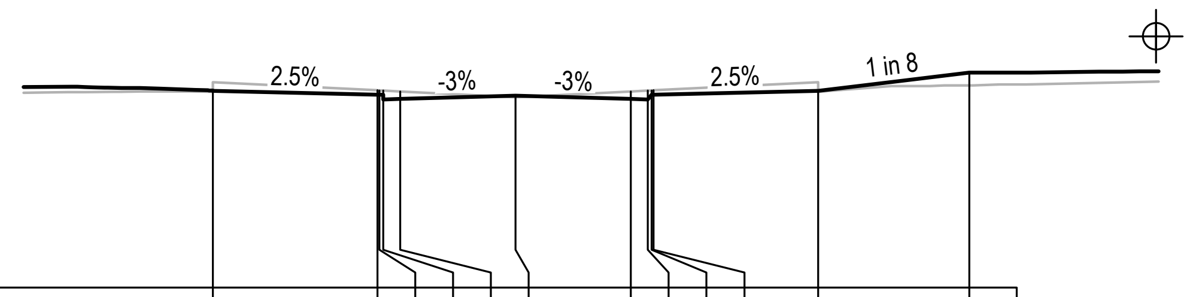
CH 360



DATUM R.L. 682

W.A.E.															
DESIGN LEVEL	686.996	686.887	686.887	686.762	686.777	686.869	686.777	686.762	686.887	686.887	686.996	687.476			
BEW CC LEVEL	686.826	686.863	686.86	686.855	686.833	686.684	686.833	686.855	686.86	686.863	686.826	686.919			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

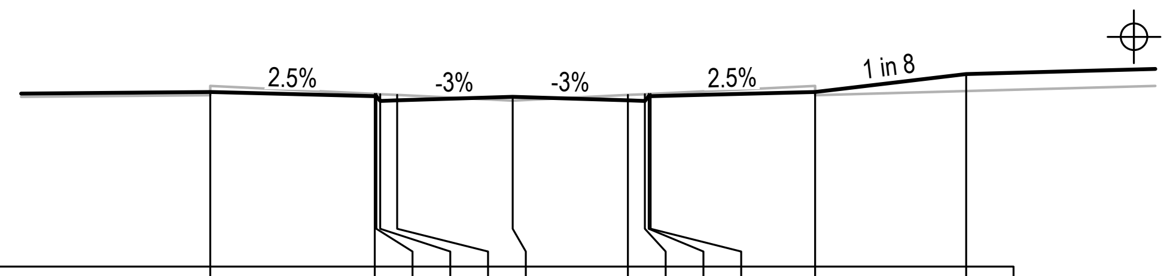
CH 403.461



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	688.201	688.092	688.092	687.967	687.982	688.074	687.982	687.967	688.092	688.092	688.201	688.681			
BEW CC LEVEL	688.174	688.211	688.208	688.203	688.181	688.032	688.181	688.203	688.208	688.211	688.174	688.341			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

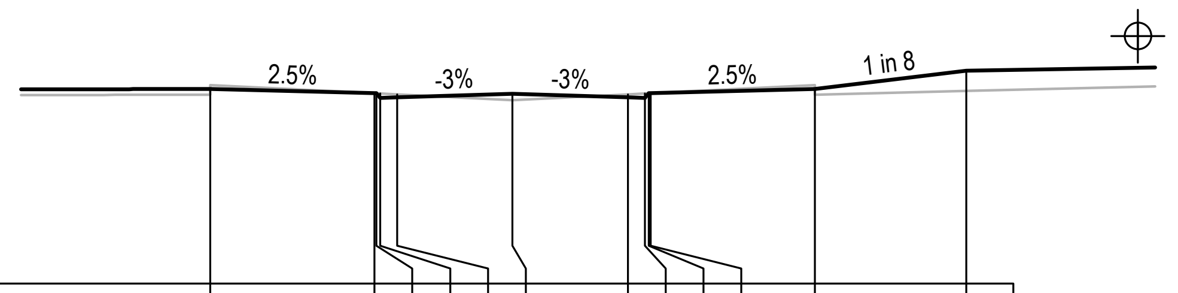
KTP CH 289.664



DATUM R.L. 683

W.A.E.															
DESIGN LEVEL	687.611	687.502	687.502	687.377	687.392	687.484	687.392	687.377	687.502	687.502	687.611	688.091			
BEW CC LEVEL	687.528	687.564	687.562	687.557	687.535	687.385	687.535	687.557	687.562	687.564	687.528	687.636			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

CH 345



DATUM R.L. 682

W.A.E.															
DESIGN LEVEL	687.138	687.029	687.029	686.904	686.919	687.01	686.919	686.904	687.029	687.029	687.138	687.618			
BEW CC LEVEL	686.988	687.024	687.022	687.017	686.995	686.845	686.995	687.017	687.022	687.024	686.988	687.085			
OFFSET	-8	-3.65	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	3.65	8	12			

CH 390

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 25 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	354	A

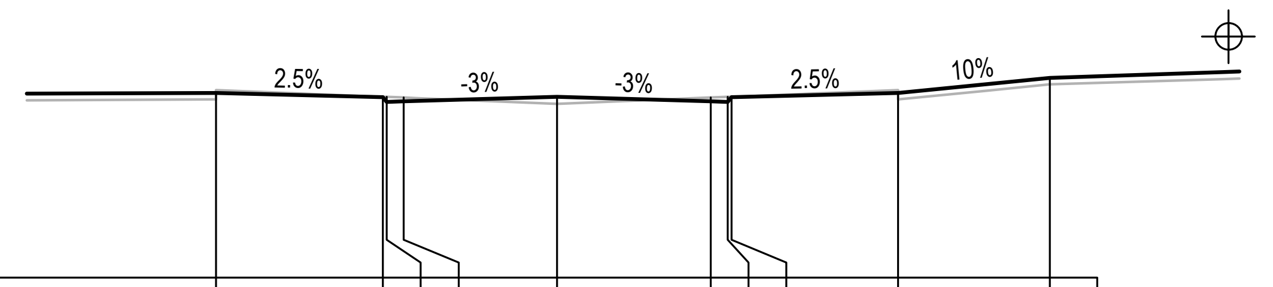
ROAD No.06

LEGEND

FINISHED DESIGN SURFACE ───

EXISTING SURFACE ───

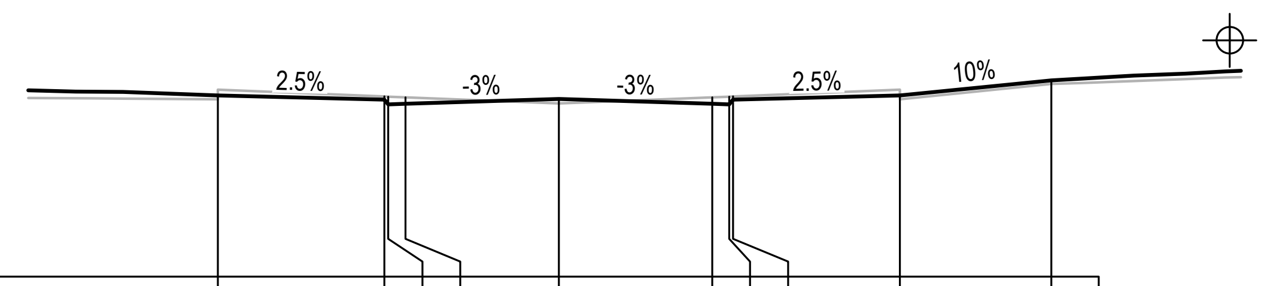
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.864	689.755	689.63	689.645	689.767	689.645	689.63	689.755	689.864	690.264
BEW CC LEVEL	689.695	689.768	689.764	689.746	689.582	689.746	689.764	689.768	689.695	690.095
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

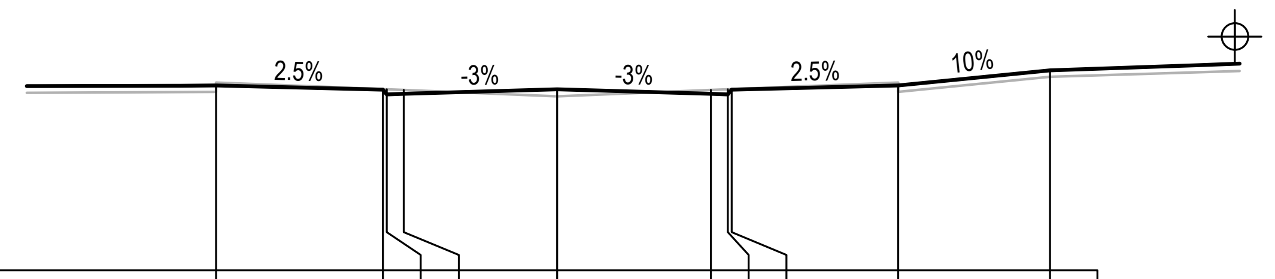
KTP CH 46.039



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.784	689.675	689.55	689.565	689.686	689.565	689.55	689.675	689.784	690.184
BEW CC LEVEL	689.684	689.757	689.753	689.735	689.572	689.735	689.753	689.757	689.684	690.084
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

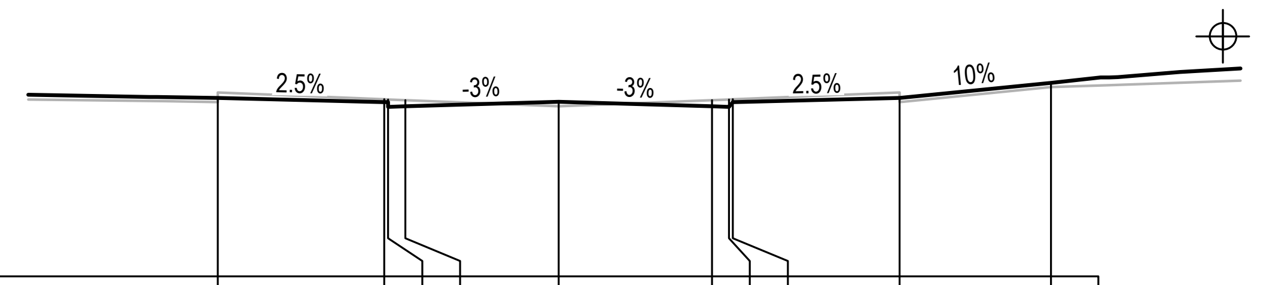
CH 105



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.864	689.755	689.63	689.645	689.767	689.645	689.63	689.755	689.864	690.264
BEW CC LEVEL	689.693	689.766	689.762	689.744	689.581	689.744	689.762	689.766	689.693	690.093
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

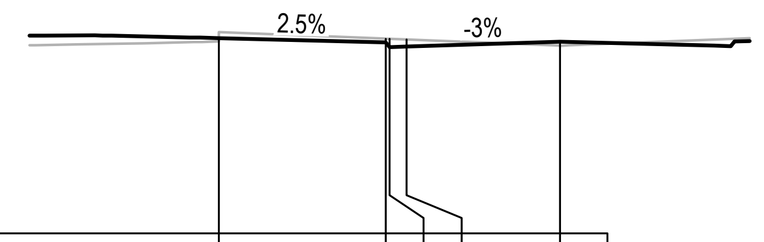
CH 45



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.701	689.592	689.467	689.482	689.604	689.482	689.467	689.592	689.701	690.101
BEW CC LEVEL	689.594	689.667	689.663	689.645	689.482	689.645	689.663	689.667	689.594	689.994
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

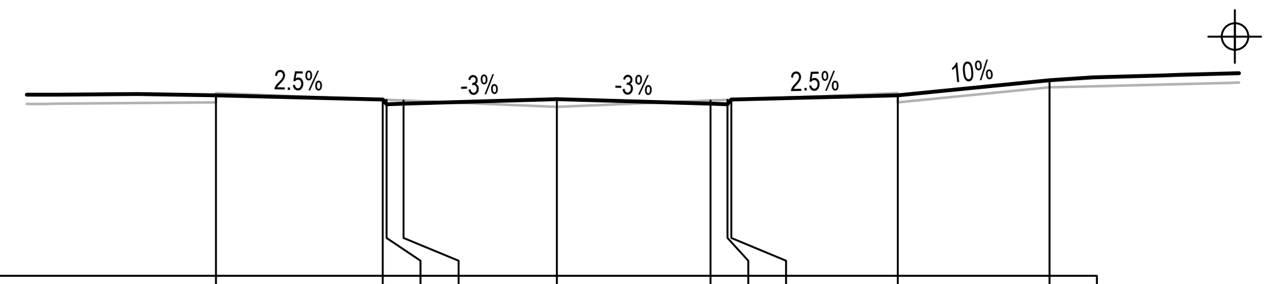
KTP CH 96.001



DATUM R.L. 685

W.A.E.					
DESIGN LEVEL	690.144	690.035	689.91	689.925	690.046
BEW CC LEVEL	690.056	690.129	690.125	690.107	689.944
OFFSET	-9	-4.6	-4.5	-4.05	0

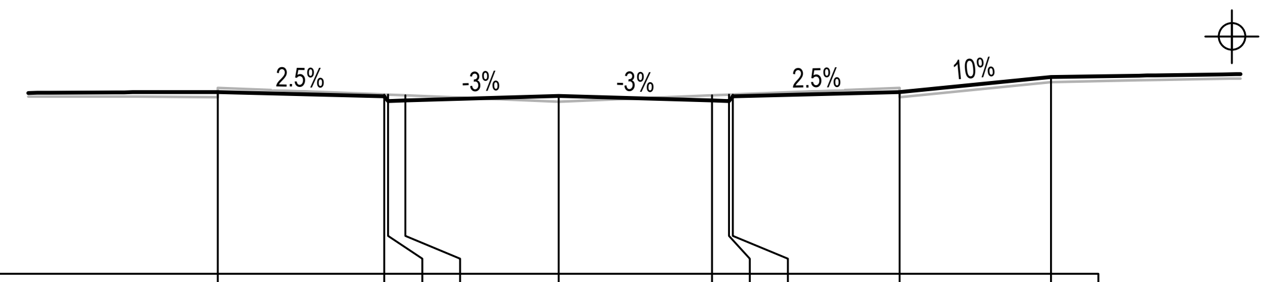
KTP CH 143.001



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.757	689.649	689.524	689.539	689.66	689.539	689.524	689.649	689.757	690.157
BEW CC LEVEL	689.571	689.644	689.64	689.622	689.459	689.622	689.64	689.644	689.571	689.971
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

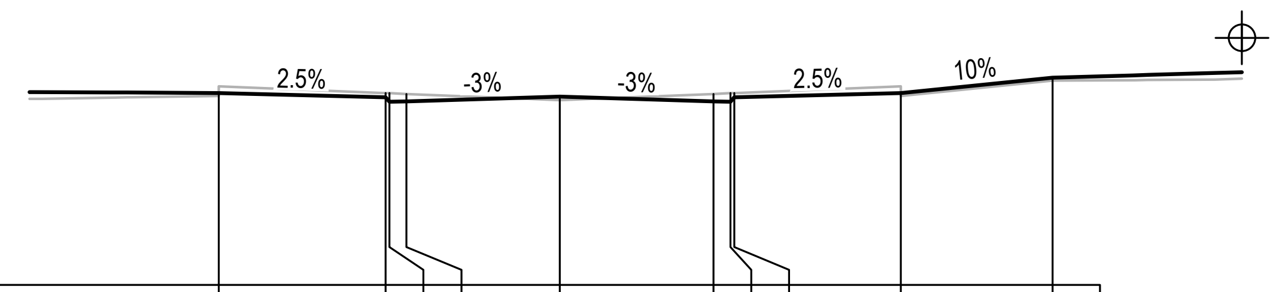
CH 30



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.783	689.675	689.55	689.565	689.686	689.565	689.55	689.675	689.783	690.183
BEW CC LEVEL	689.648	689.721	689.717	689.699	689.535	689.699	689.717	689.721	689.648	690.048
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

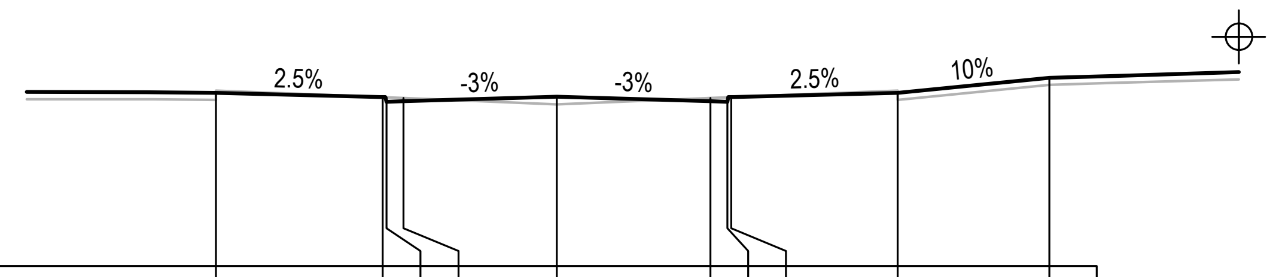
KTP CH 60.001



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	690.059	689.951	689.826	689.841	689.962	689.841	689.826	689.951	690.059	690.459
BEW CC LEVEL	689.984	690.057	690.053	690.035	689.872	690.035	690.053	690.057	689.984	690.384
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

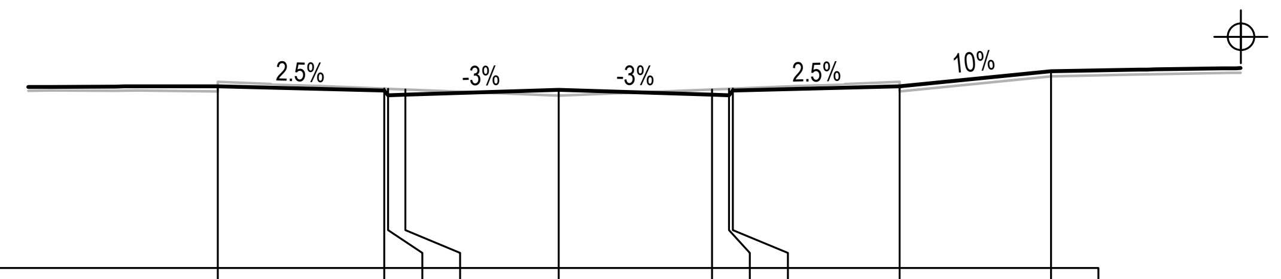
CH 135



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.57	689.461	689.336	689.351	689.473	689.351	689.336	689.461	689.57	689.97
BEW CC LEVEL	689.383	689.456	689.452	689.434	689.271	689.434	689.452	689.456	689.383	689.783
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

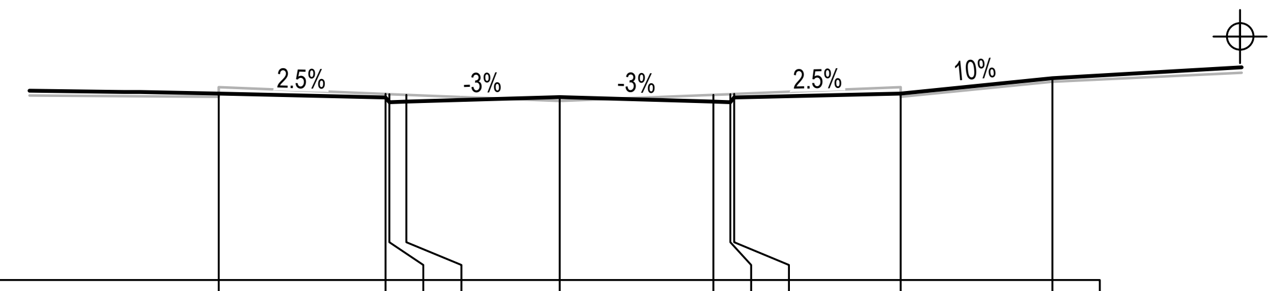
KTP CH 18



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.783	689.675	689.55	689.565	689.686	689.565	689.55	689.675	689.783	690.183
BEW CC LEVEL	689.648	689.721	689.717	689.699	689.535	689.699	689.717	689.721	689.648	690.048
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 60



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	689.921	689.813	689.688	689.703	689.824	689.703	689.688	689.813	689.921	690.321
BEW CC LEVEL	689.834	689.907	689.903	689.885	689.722	689.885	689.903	689.907	689.834	690.234
OFFSET	-9	-4.6	-4.5	-4.05	0	4.05	4.5	4.6	9	13

CH 120

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

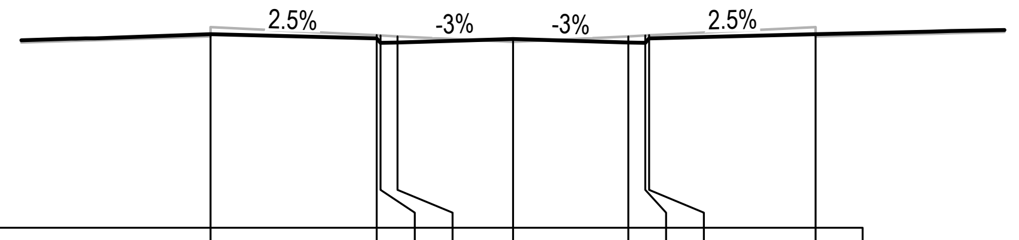
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 26 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	355	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-355.dwg

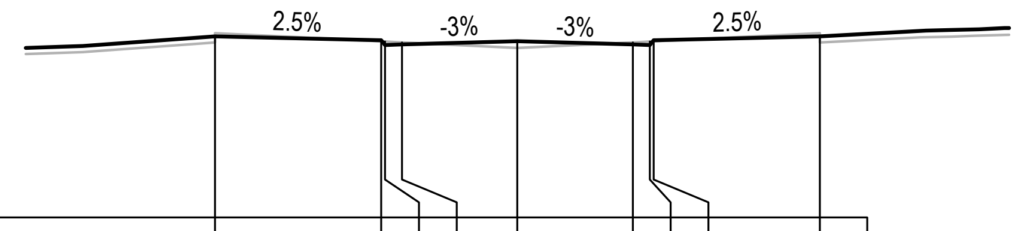
ROAD No.07



DATUM R.L. 688

W.A.E.									
DESIGN LEVEL	693.108	693	692.875	692.89	692.981	692.89	692.875	693	693.108
BEW CC LEVEL	693.043	693.077	693.072	693.05	692.9	693.05	693.072	693.077	693.043
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

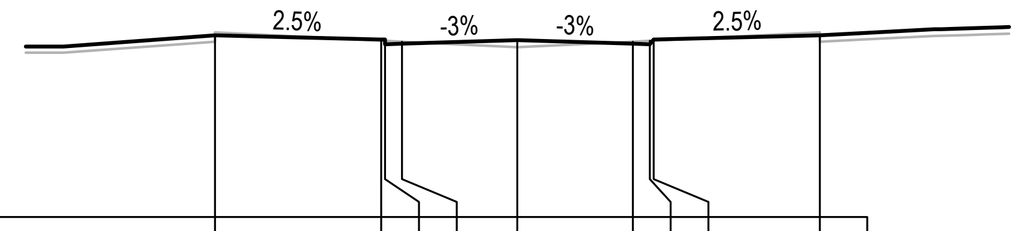
CH 30



DATUM R.L. 689

W.A.E.									
DESIGN LEVEL	693.778	693.67	693.545	693.56	693.651	693.56	693.545	693.67	693.778
BEW CC LEVEL	693.61	693.644	693.64	693.617	693.468	693.617	693.64	693.644	693.61
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

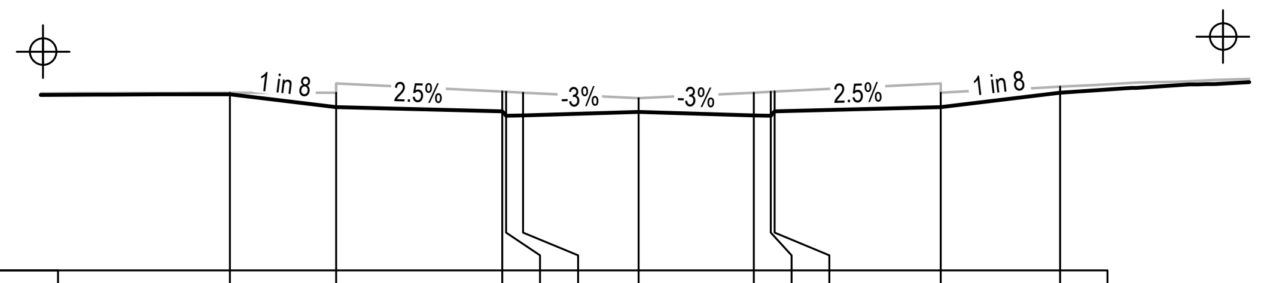
CH 15



DATUM R.L. 689

W.A.E.									
DESIGN LEVEL	693.791	693.682	693.557	693.572	693.664	693.572	693.557	693.682	693.791
BEW CC LEVEL	693.622	693.656	693.652	693.629	693.48	693.629	693.652	693.656	693.622
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

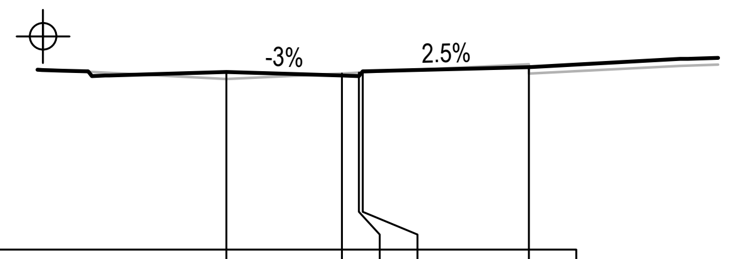
KTP CH 14.64



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	691.66	691.323	691.214	691.089	691.104	691.195	691.104	691.089	691.214	691.323	691.701
BEW CC LEVEL	691.7	691.699	691.733	691.728	691.706	691.556	691.706	691.728	691.733	691.699	691.863
OFFSET	-10.812	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	11.155

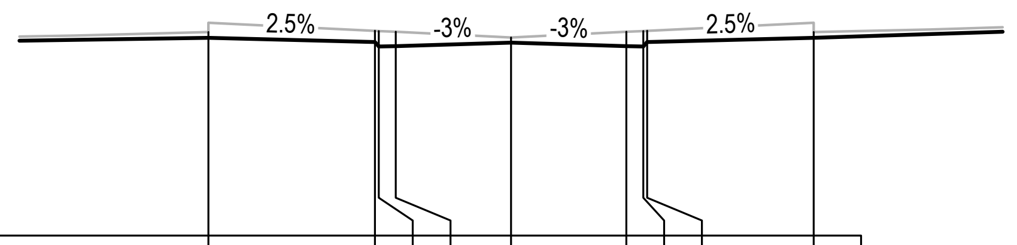
CH 60



DATUM R.L. 689

W.A.E.					
DESIGN LEVEL	693.696	693.604	693.589	693.714	693.823
BEW CC LEVEL	693.51	693.659	693.682	693.686	693.652
OFFSET	0	3.05	3.5	3.6	8

KTP CH 13.725

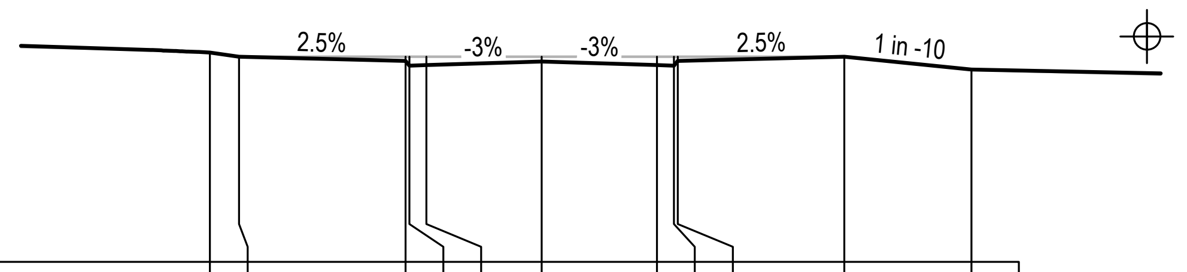


DATUM R.L. 687

W.A.E.									
DESIGN LEVEL	692.224	692.115	691.99	692.005	692.097	692.005	691.99	692.115	692.224
BEW CC LEVEL	692.374	692.408	692.403	692.381	692.231	692.381	692.403	692.408	692.374
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8

CH 45

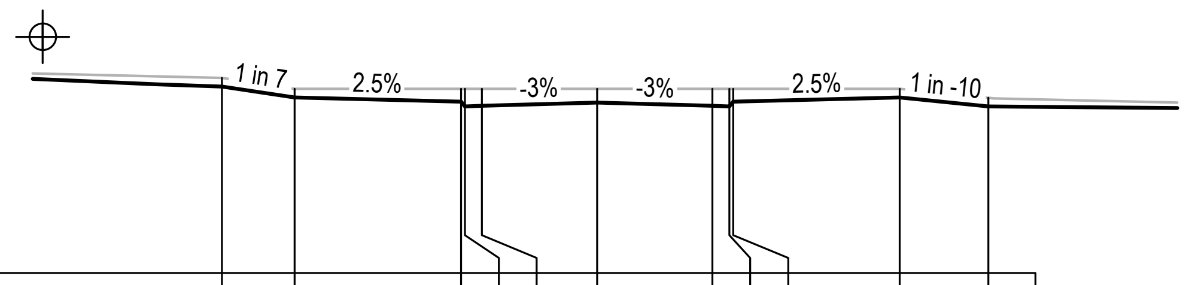
ROAD No.08



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	691.534	691.418	691.31	691.185	691.2	691.291	691.2	691.185	691.31	691.418	691.082
BEW CC LEVEL	691.534	691.418	691.418	691.418	691.418	691.418	691.418	691.418	691.418	691.418	691.082
OFFSET	-8.769	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	11.364

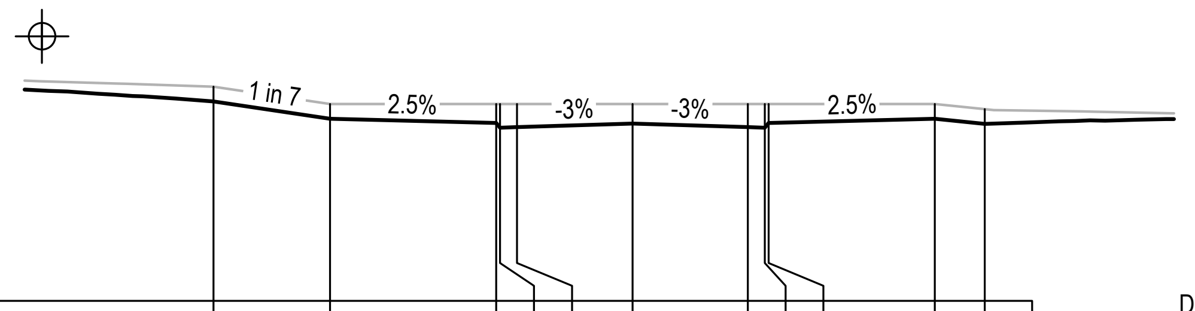
CH 60



DATUM R.L. 686

W.A.E.											
DESIGN LEVEL	690.923	690.634	690.526	690.401	690.416	690.507	690.416	690.401	690.526	690.634	690.4
BEW CC LEVEL	691.154	690.865	690.865	690.865	690.865	690.865	690.865	690.865	690.865	690.865	690.631
OFFSET	-9.923	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	10.341

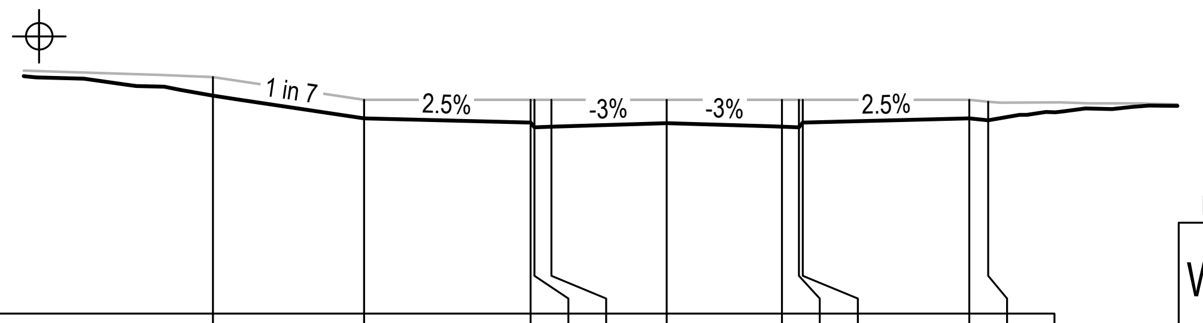
CH 45



DATUM R.L. 685

W.A.E.											
DESIGN LEVEL	690.272	689.81	689.701	689.576	689.591	689.683	689.591	689.576	689.701	689.81	689.678
BEW CC LEVEL	690.659	690.198	690.198	690.198	690.198	690.198	690.198	690.198	690.198	690.198	690.066
OFFSET	-11.077	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	9.318

CH 30



DATUM R.L. 684

W.A.E.											
DESIGN LEVEL	689.762	689.162	689.053	688.928	688.943	689.035	688.943	688.928	689.053	689.162	689.112
BEW CC LEVEL	690.258	689.658	689.658	689.658	689.658	689.658	689.658	689.658	689.658	689.658	689.608
OFFSET	-12	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	8.5

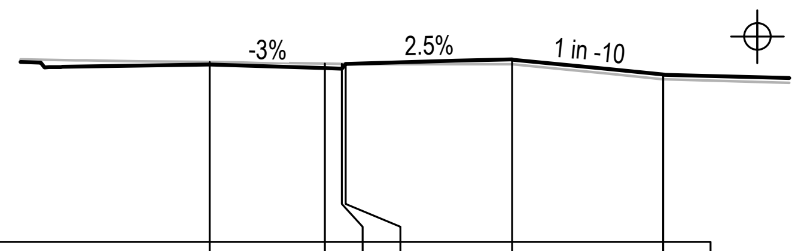
KTP CH 18

LEGEND

FINISHED DESIGN SURFACE ―

EXISTING SURFACE ―

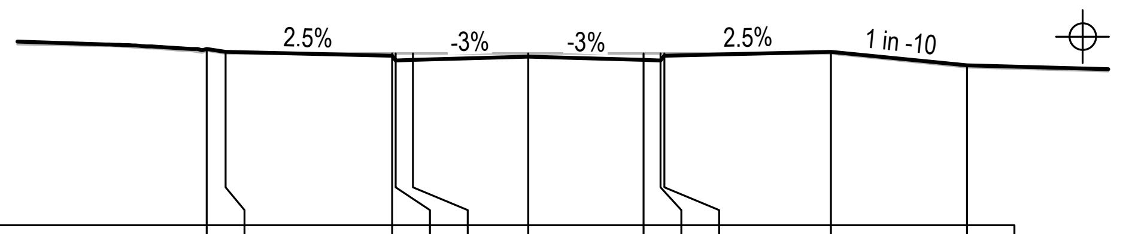
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 687

W.A.E.						
DESIGN LEVEL	691.676	691.585	691.57	691.695	691.804	691.404
BEW CC LEVEL	691.747	691.699	691.691	691.69	691.687	691.287
OFFSET	0	3.05	3.5	3.6	8	12

KTP CH 69.32



DATUM R.L. 687

W.A.E.											
DESIGN LEVEL	691.648	691.573	691.465	691.34	691.355	691.446	691.355	691.34	691.465	691.573	691.213
BEW CC LEVEL	691.601	691.526	691.526	691.526	691.526	691.526	691.526	691.526	691.526	691.526	691.166
OFFSET	-8.5	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	11.603

KTP CH 63.504

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 27 OF 30

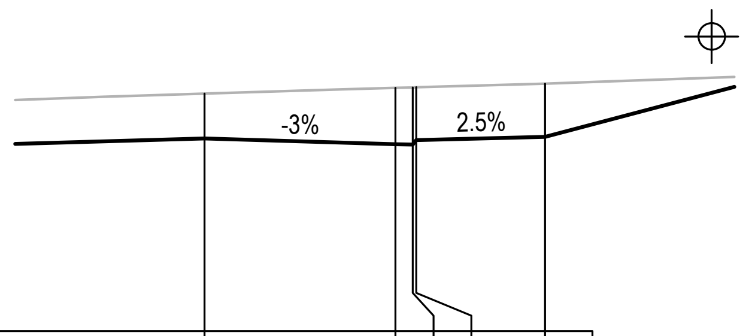
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	356	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN

LEGEND

FINISHED DESIGN SURFACE —
EXISTING SURFACE —
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖

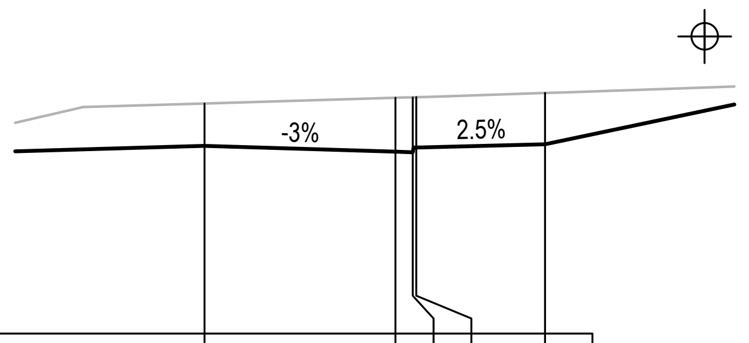
ROAD No.09



DATUM R.L. 692

W.A.E.						
DESIGN LEVEL	697.087	696.936	696.921	697.046	697.13	
BEW CC LEVEL	698.269	698.421	698.433	698.436	698.535	
OFFSET	0	5.05	5.5	5.6	9	

KTP CH 43.724

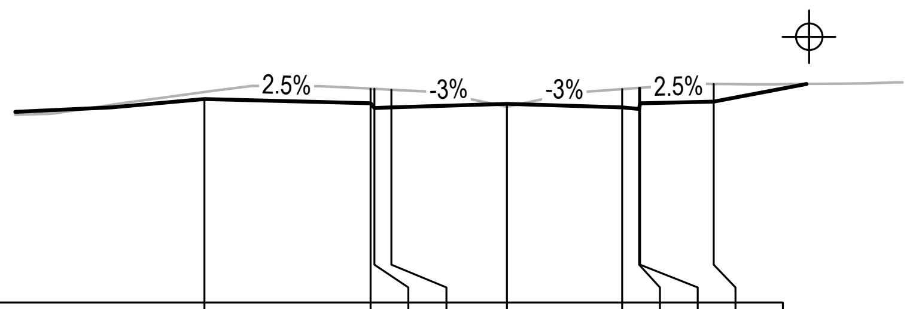


DATUM R.L. 692

W.A.E.						
DESIGN LEVEL	696.95	696.798	696.783	696.908	696.992	
BEW CC LEVEL	698.073	698.22	698.233	698.235	698.345	
OFFSET	0	5.05	5.5	5.6	9	

KTP CH 40.022

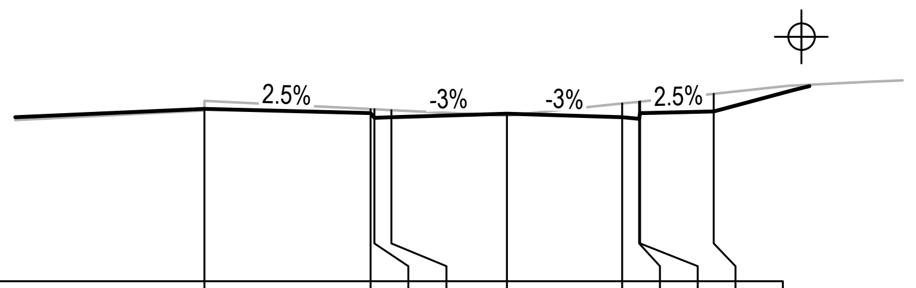
ROAD No.10



DATUM R.L. 691

W.A.E.										
DESIGN LEVEL	696.378	696.27	696.145	696.16	696.251	696.16	696.12	696.27	696.315	
BEW CC LEVEL	696.317	696.653	696.648	696.626	696.175	696.643	696.676	696.678	696.778	
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.53	5.47	

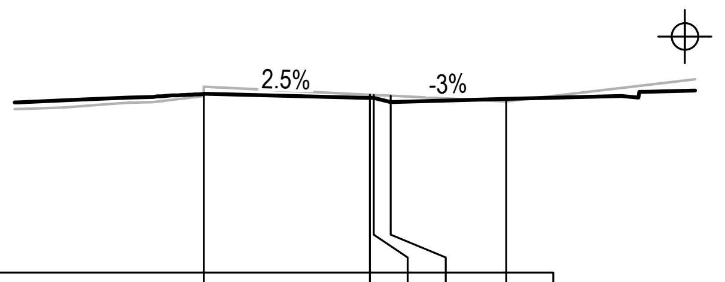
CH 42.5



DATUM R.L. 691

W.A.E.										
DESIGN LEVEL	695.556	695.447	695.322	695.337	695.428	695.337	695.297	695.447	695.492	
BEW CC LEVEL	695.517	695.551	695.546	695.524	695.375	695.698	695.745	695.749	695.954	
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.53	5.47	

CH 30

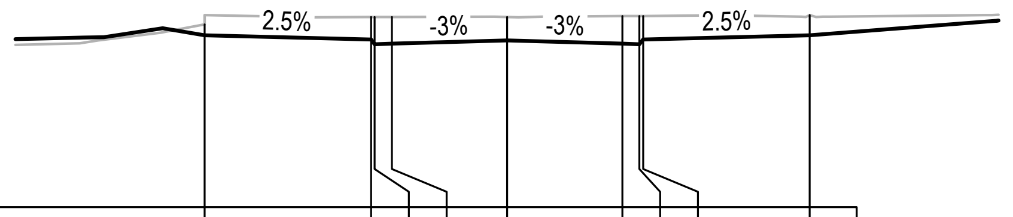


DATUM R.L. 690

W.A.E.						
DESIGN LEVEL	694.71	694.602	694.477	694.492	694.583	
BEW CC LEVEL	694.654	694.689	694.684	694.662	694.512	
OFFSET	-8	-3.6	-3.5	-3.05	0	

KTP CH 16

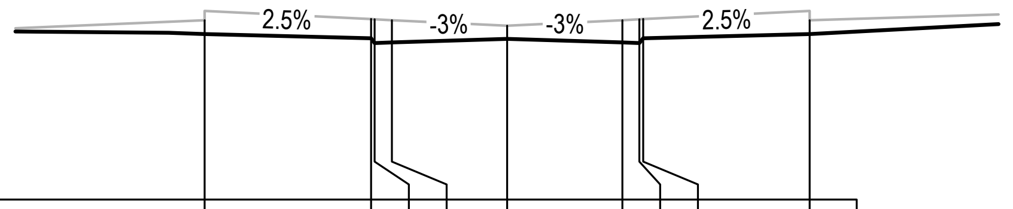
ROAD No.11



DATUM R.L. 689

W.A.E.										
DESIGN LEVEL	693.531	693.422	693.297	693.312	693.403	693.312	693.297	693.422	693.531	
BEW CC LEVEL	693.82	694.014	694.015	694.017	694.02	694.042	694.045	694.045	694.07	
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	

LIMIT OF WORKS CH 42.5

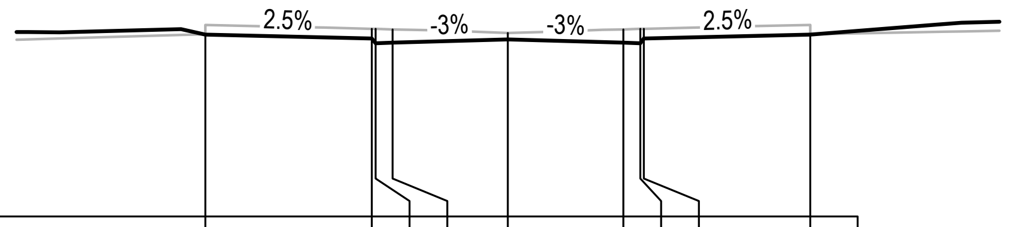


DATUM R.L. 688

W.A.E.										
DESIGN LEVEL	692.355	692.247	692.122	692.137	692.228	692.137	692.122	692.247	692.355	
BEW CC LEVEL	692.72	692.754	692.749	692.727	692.578	692.727	692.749	692.754	692.72	
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	

CH 30

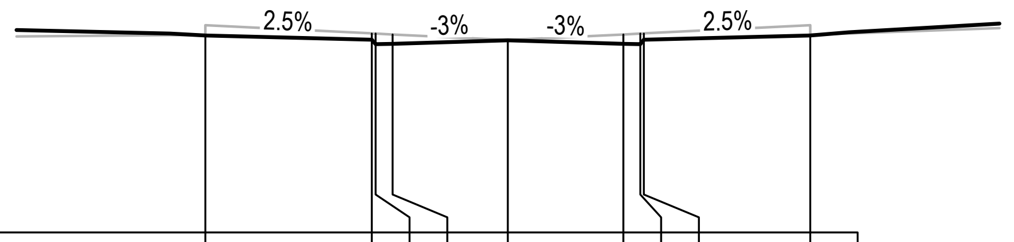
ROAD No.12



DATUM R.L. 686

W.A.E.										
DESIGN LEVEL	690.792	690.684	690.559	690.574	690.665	690.574	690.559	690.684	690.792	
BEW CC LEVEL	690.797	690.941	690.938	690.927	690.834	690.927	690.938	690.941	690.797	
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	

LIMIT OF WORKS CH 42.5



DATUM R.L. 685

W.A.E.										
DESIGN LEVEL	690.192	690.083	689.958	689.973	690.064	689.973	689.958	690.083	690.192	
BEW CC LEVEL	690.209	690.243	690.238	690.216	690.067	690.216	690.238	690.243	690.209	
OFFSET	-8	-3.6	-3.5	-3.05	0	3.05	3.5	3.6	8	

CH 30

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

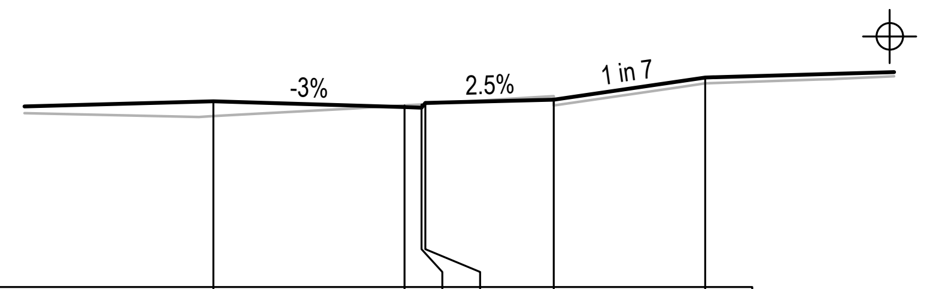
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 28 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	357	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-357.dwg

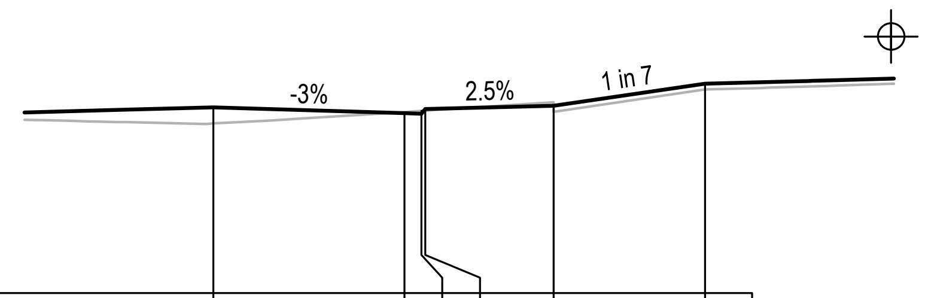
ROAD No.13



DATUM R.L. 681

W.A.E.						
DESIGN LEVEL	685.903	685.751	685.736	685.861	685.945	686.529
BEW CC LEVEL	685.511	685.794	685.821	685.828	685.792	686.377
OFFSET	0	5.05	5.5	5.6	9	13

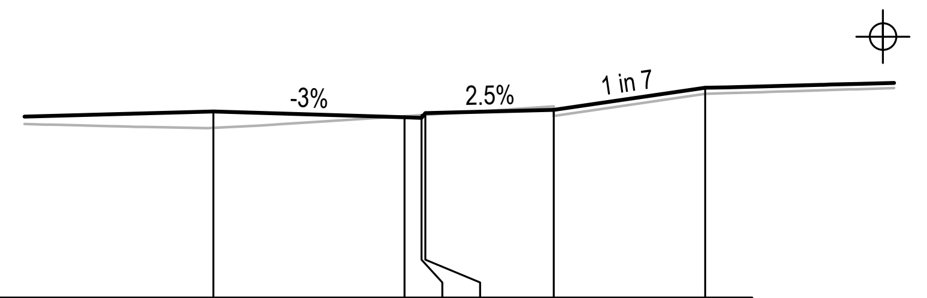
CH 32.304



DATUM R.L. 681

W.A.E.						
DESIGN LEVEL	685.907	685.755	685.74	685.865	685.949	686.534
BEW CC LEVEL	685.48	685.784	685.813	685.82	685.792	686.378
OFFSET	0	5.05	5.5	5.6	9	13

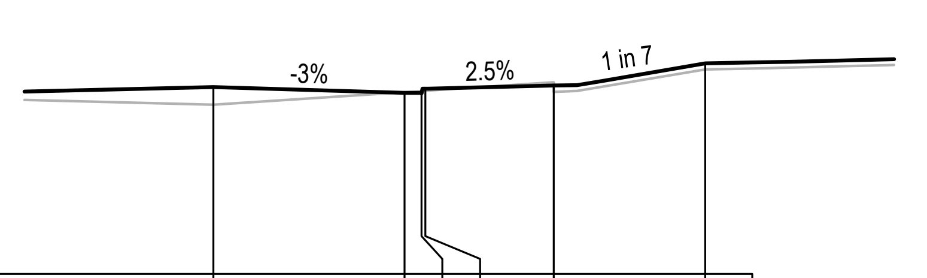
CH 30



DATUM R.L. 681

W.A.E.						
DESIGN LEVEL	685.908	685.756	685.741	685.866	685.95	686.536
BEW CC LEVEL	685.475	685.784	685.813	685.82	685.792	686.379
OFFSET	0	5.05	5.5	5.6	9	13

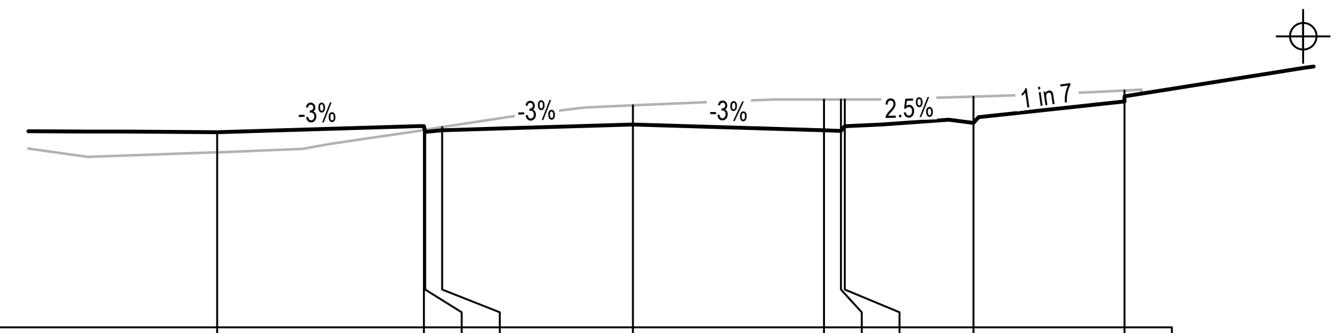
CH 29.631



DATUM R.L. 681

W.A.E.						
DESIGN LEVEL	685.931	685.779	685.764	685.889	685.973	686.56
BEW CC LEVEL	685.466	685.798	685.828	685.834	685.808	686.396
OFFSET	0	5.05	5.5	5.6	9	13

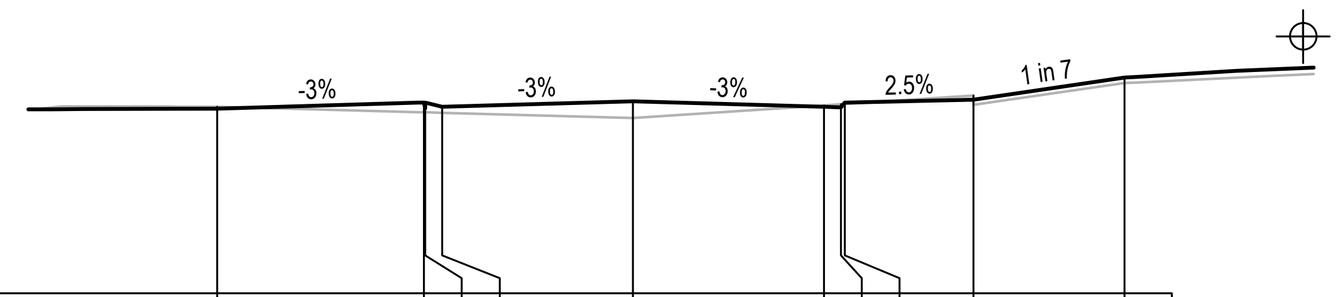
KTP CH 25.999



DATUM R.L. 681

W.A.E.										
DESIGN LEVEL	686.161	686.32	686.17	686.21	686.362	686.21	686.195	686.32	686.404	686.975
BEW CC LEVEL	685.63	686.219	686.224	686.292	686.867	687.023	687.021	687.021	687.102	687.261
OFFSET	-11	-5.53	-5.5	-5.05	0	5.05	5.5	5.6	9	13

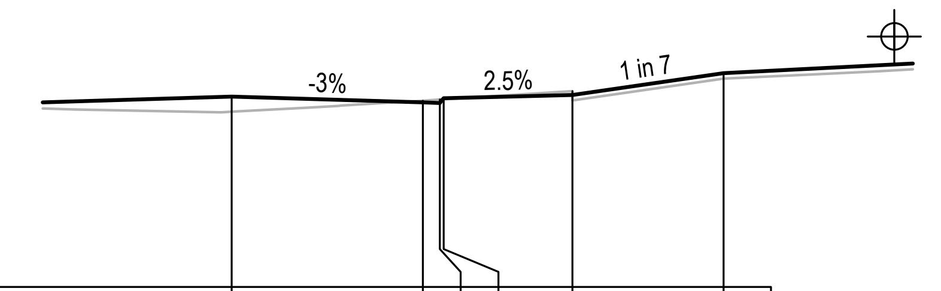
CH 60



DATUM R.L. 681

W.A.E.										
DESIGN LEVEL	685.868	686.028	685.878	685.918	686.069	685.918	685.903	686.028	686.112	686.688
BEW CC LEVEL	685.925	685.776	685.776	685.763	685.626	685.959	685.988	685.995	686.219	686.547
OFFSET	-11	-5.53	-5.5	-5.05	0	5.05	5.5	5.6	9	13

KTP CH 47.726



DATUM R.L. 681

W.A.E.						
DESIGN LEVEL	686.016	685.864	685.849	685.974	686.058	686.636
BEW CC LEVEL	685.618	685.913	685.942	685.948	686.165	686.494
OFFSET	0	5.05	5.5	5.6	9	13

CH 45

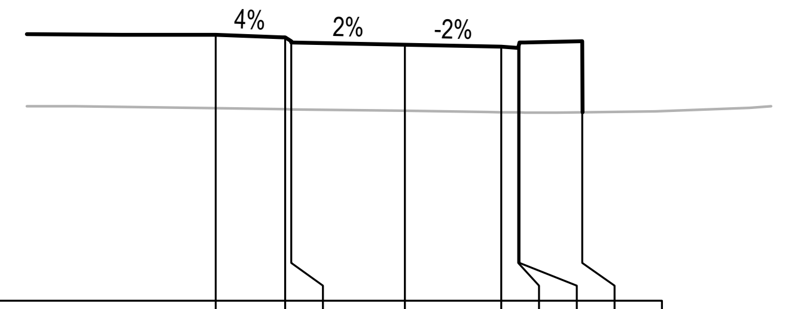
ROAD No.15

LEGEND

FINISHED DESIGN SURFACE ―

EXISTING SURFACE ―

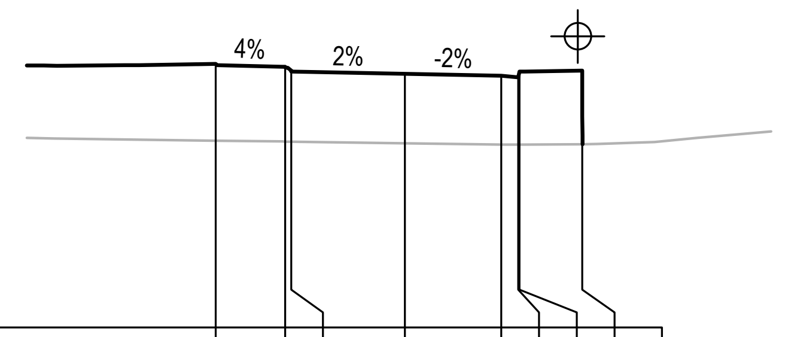
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION. ⌖



DATUM R.L. 681

W.A.E.									
DESIGN LEVEL	688.03	687.96	687.83	687.77	687.719	687.679	687.829	687.859
BEW CC LEVEL	686.087	686.062	686.06	686.019	685.983	685.977	685.976	685.98
OFFSET	-5	-3.163	-3	0	2.55	3	3.03	4.69

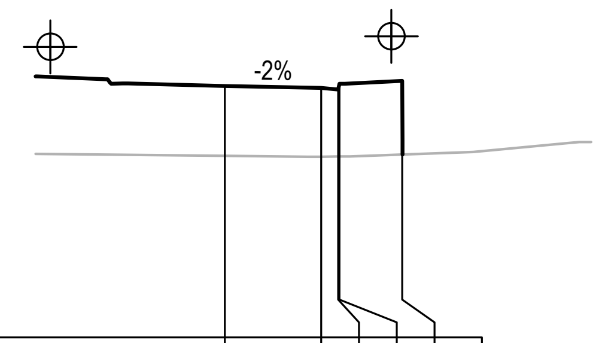
CH 30



DATUM R.L. 681

W.A.E.								
DESIGN LEVEL	687.962	687.891	687.761	687.701	687.65	687.61	687.76	687.791
BEW CC LEVEL	685.938	685.912	685.91	685.869	685.834	685.83	685.83	685.842
OFFSET	-5	-3.163	-3	0	2.55	3	3.03	4.69

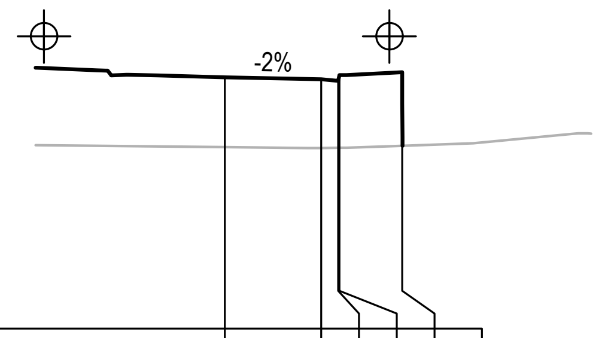
KTP CH 20.263



DATUM R.L. 681

W.A.E.					
DESIGN LEVEL	687.644	687.593	687.553	687.703	687.734
BEW CC LEVEL	685.797	685.777	685.781	685.781	685.832
OFFSET	0	2.55	3	3.03	4.69

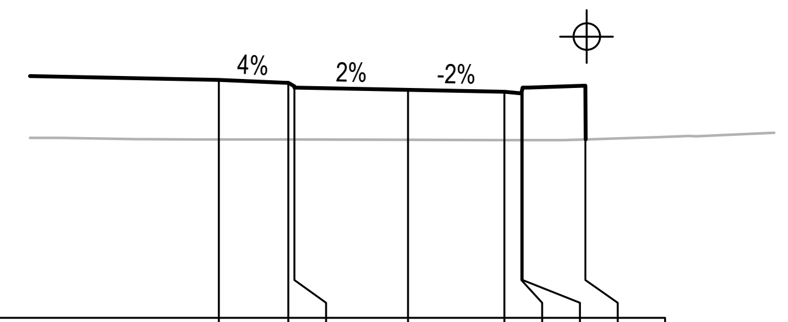
KTP CH 15.463



DATUM R.L. 681

W.A.E.					
DESIGN LEVEL	687.642	687.591	687.551	687.701	687.731
BEW CC LEVEL	685.795	685.776	685.779	685.779	685.832
OFFSET	0	2.55	3	3.03	4.691

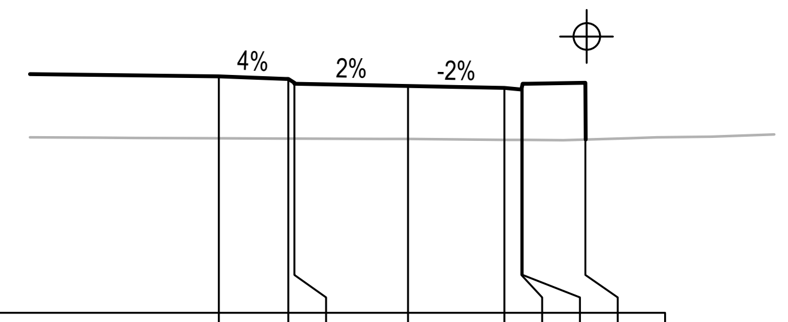
CH 15.316



DATUM R.L. 682

W.A.E.								
DESIGN LEVEL	688.288	688.217	688.087	688.027	687.976	687.936	688.086	688.116
BEW CC LEVEL	686.715	686.712	686.711	686.706	686.701	686.7	686.7	686.715
OFFSET	-5	-3.163	-3	0	2.55	3	3.03	4.69

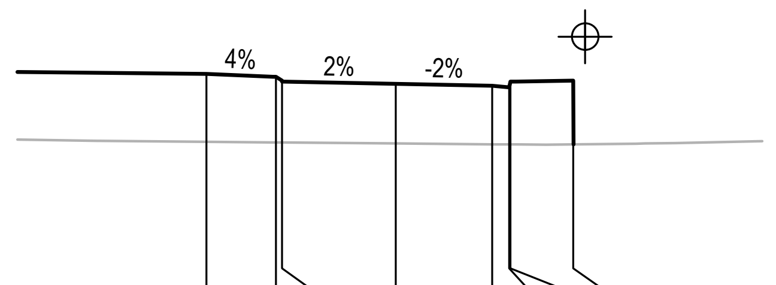
CH 66.747



DATUM R.L. 682

W.A.E.								
DESIGN LEVEL	688.24	688.17	688.04	687.98	687.929	687.889	688.039	688.069
BEW CC LEVEL	686.602	686.596	686.596	686.584	686.565	686.562	686.562	686.571
OFFSET	-5	-3.163	-3	0	2.55	3	3.03	4.69

CH 60



DATUM R.L. 682

W.A.E.								
DESIGN LEVEL	688.135	688.065	687.935	687.875	687.824	687.784	687.934	687.964
BEW CC LEVEL	686.348	686.331	686.33	686.303	686.28	686.276	686.275	686.275
OFFSET	-5	-3.163	-3	0	2.55	3	3.03	4.69

CH 45

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1)
SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
JAS-ANZ
SUSTAINABLE CERTIFICATION ISO 9001
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

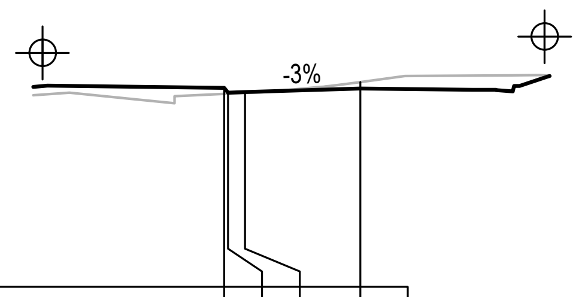
Title:
ROAD CROSS
SECTIONS
SHEET 29 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	358	A

YARRAWA ROAD

LEGEND

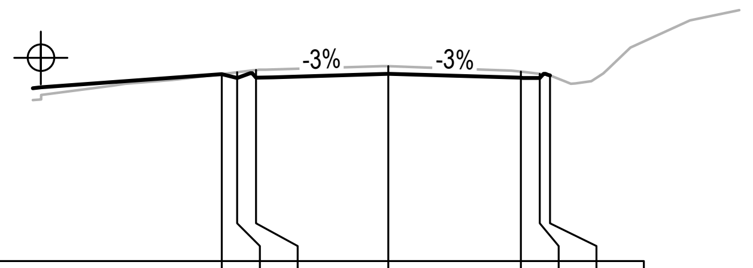
FINISHED DESIGN SURFACE	▬
EXISTING SURFACE	─
REFER TO ENGINEERING PLANS CC-200 TO CC-206 FOR LOT REGRADING BEYOND SECTION.	⌖



DATUM R.L. 689

W.A.E.				
DESIGN LEVEL	694.253	694.128	694.143	694.234
BEW CC LEVEL	694.092	694.097	694.117	694.408
OFFSET	-3.6	-3.5	-3.05	0

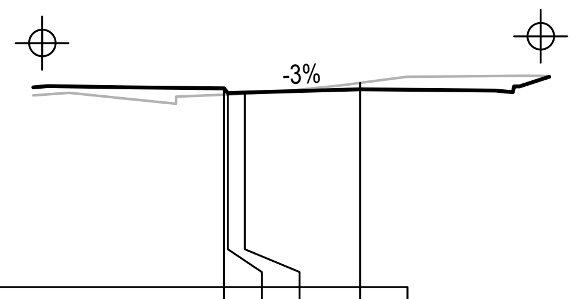
CH 105



DATUM R.L. 691

W.A.E.							
DESIGN LEVEL	695.944	695.844	695.849	695.954	695.849	695.844	695.912
BEW CC LEVEL	695.944	695.992	696.051	696.155	696.009	695.952	695.912
OFFSET	-4.402	-4	-3.5	0	3.5	4	4.275

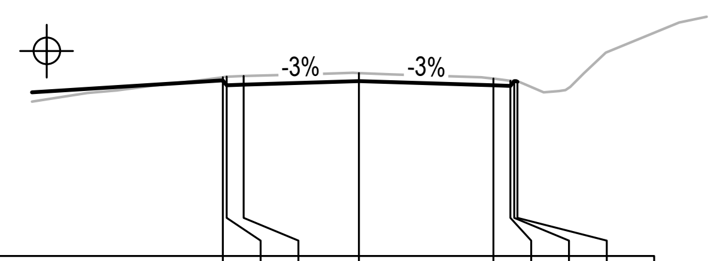
CH 135



DATUM R.L. 689

W.A.E.				
DESIGN LEVEL	694.245	694.12	694.135	694.226
BEW CC LEVEL	694.084	694.088	694.109	694.395
OFFSET	-3.6	-3.5	-3.05	0

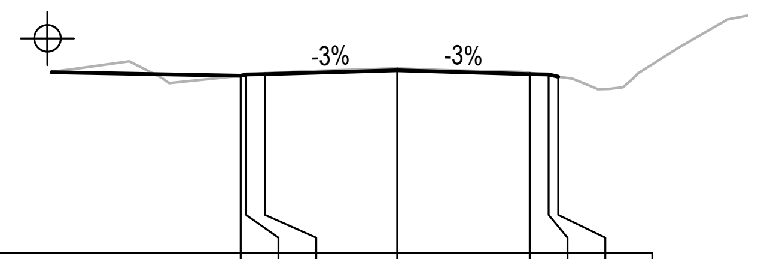
CH 104.876



DATUM R.L. 691

W.A.E.								
DESIGN LEVEL	695.636	695.511	695.526	695.617	695.511	695.496	695.621	695.602
BEW CC LEVEL	695.721	695.734	695.752	695.831	695.686	695.626	695.613	695.602
OFFSET	-3.6	-3.5	-3.05	0	3.55	4	4.1	4.188

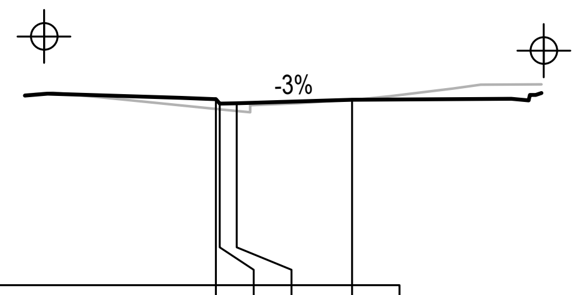
CH 128.579



DATUM R.L. 693

W.A.E.							
DESIGN LEVEL	697.68	697.716	697.721	697.826	697.721	697.716	697.652
BEW CC LEVEL	697.68	697.695	697.743	697.873	697.752	697.689	697.652
OFFSET	-4.143	-4	-3.5	0	3.5	4	4.255

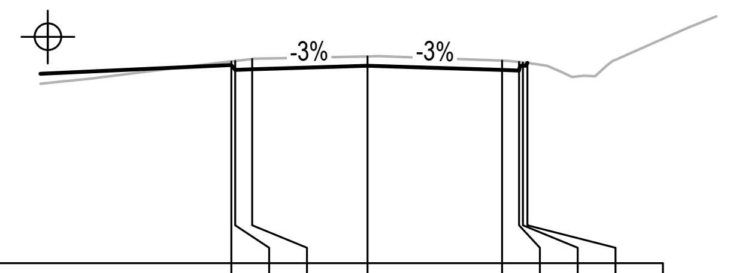
CH 180



DATUM R.L. 689

W.A.E.				
DESIGN LEVEL	693.911	693.786	693.801	693.892
BEW CC LEVEL	693.65	693.64	693.595	693.896
OFFSET	-3.6	-3.5	-3.05	0

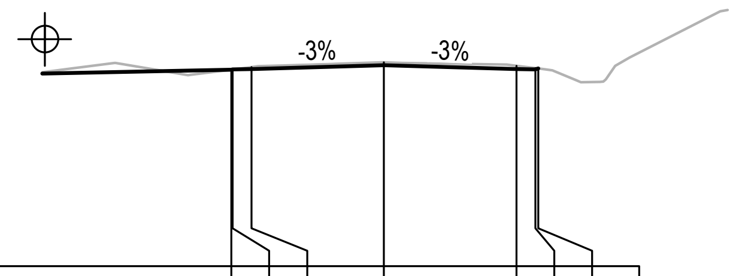
CH 99.704



DATUM R.L. 690

W.A.E.								
DESIGN LEVEL	695.221	695.096	695.111	695.202	695.096	695.081	695.206	695.276
BEW CC LEVEL	695.318	695.329	695.382	695.452	695.338	695.302	695.291	695.276
OFFSET	-3.6	-3.5	-3.05	0	3.55	4	4.1	4.221

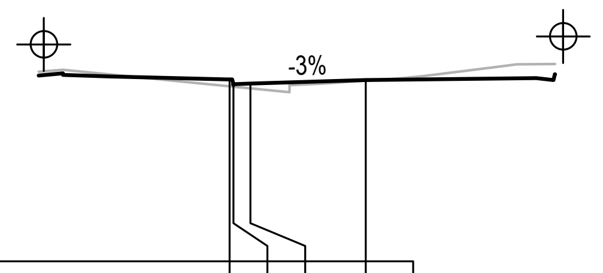
KTP CH 121.074



DATUM R.L. 692

W.A.E.							
DESIGN LEVEL	697.181	697.188	697.193	697.298	697.193	697.188	697.208
BEW CC LEVEL	697.181	697.184	697.247	697.371	697.281	697.218	697.208
OFFSET	-4.029	-4	-3.5	0	3.5	4	4.081

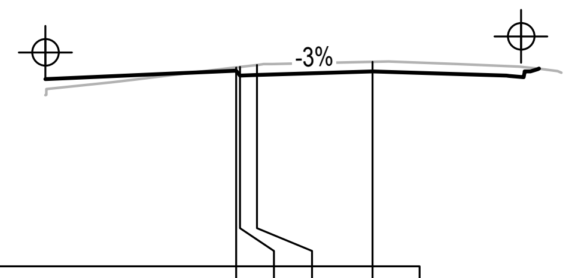
CH 165



DATUM R.L. 689

W.A.E.				
DESIGN LEVEL	693.806	693.681	693.696	693.787
BEW CC LEVEL	693.625	693.615	693.57	693.771
OFFSET	-3.6	-3.5	-3.05	0

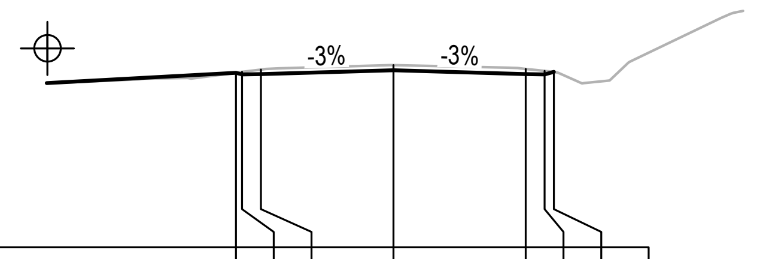
KTP CH 98.096



DATUM R.L. 690

W.A.E.				
DESIGN LEVEL	695.159	695.034	695.049	695.141
BEW CC LEVEL	695.25	695.261	695.313	695.394
OFFSET	-3.6	-3.5	-3.05	0

CH 120



DATUM R.L. 692

W.A.E.							
DESIGN LEVEL	696.603	696.563	696.568	696.673	696.568	696.563	696.624
BEW CC LEVEL	696.603	696.624	696.688	696.806	696.706	696.651	696.624
OFFSET	-4.163	-4	-3.5	0	3.5	4	4.245

CH 150

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

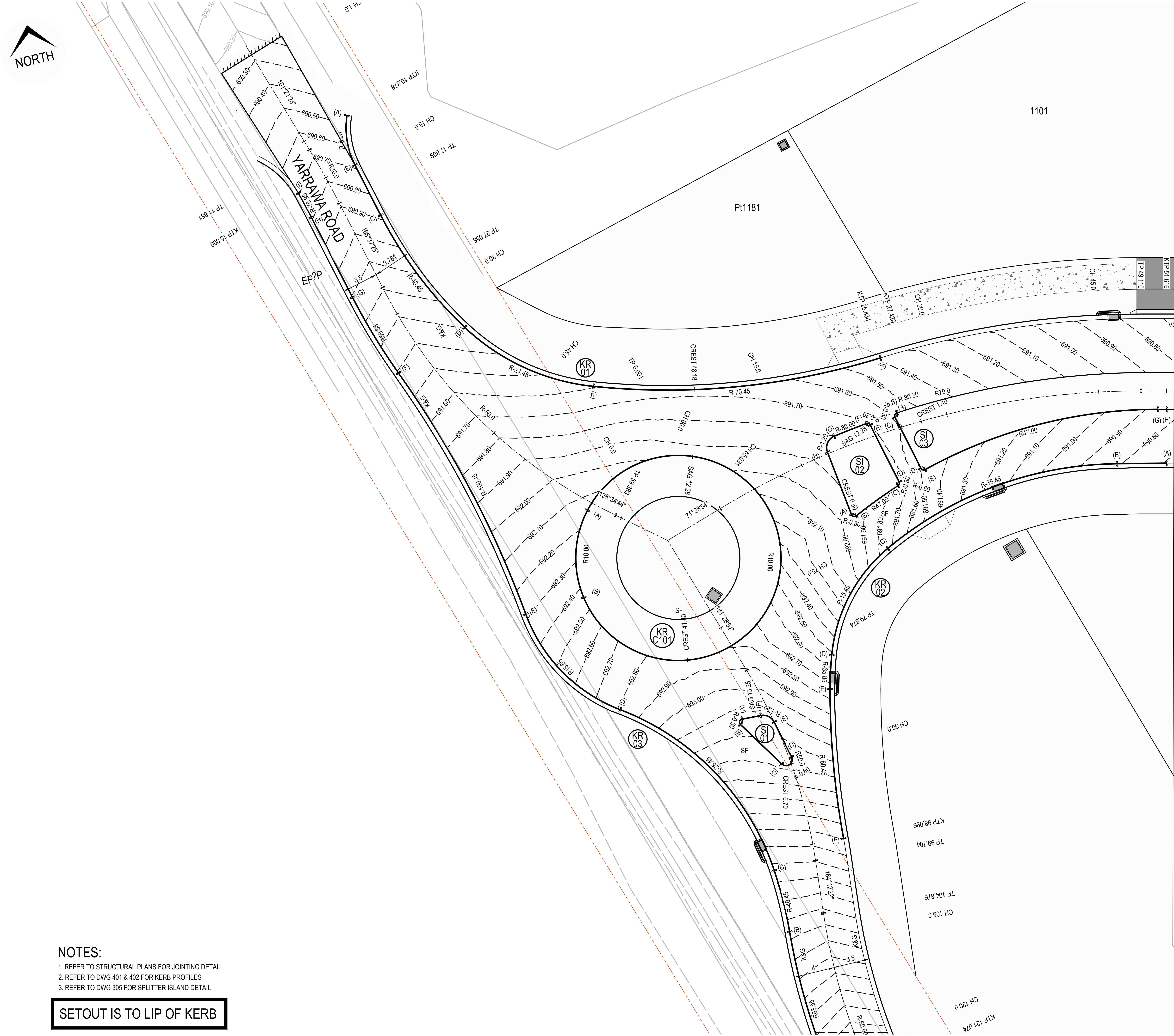
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

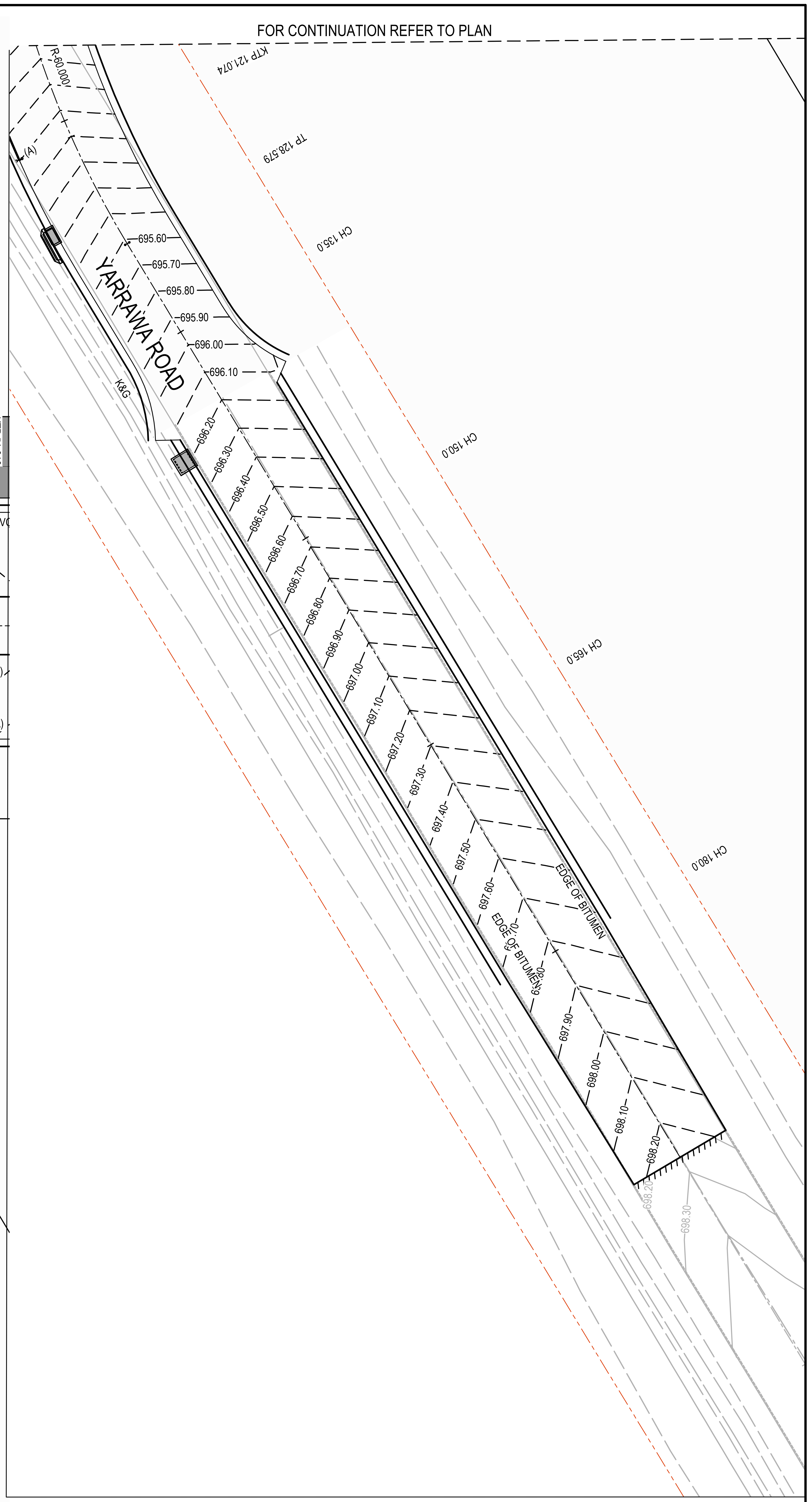
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS
SECTIONS
SHEET 30 OF 30

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	359	A





INSET A
SCALE: 1:200

NOTES:

1. REFER TO STRUCTURAL PLANS FOR JOINTING DETAIL
2. REFER TO DWG 401 & 402 FOR KERB PROFILES
3. REFER TO DWG 305 FOR SPLITTER ISLAND DETAIL

SETOUT IS TO LIP OF KERB

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

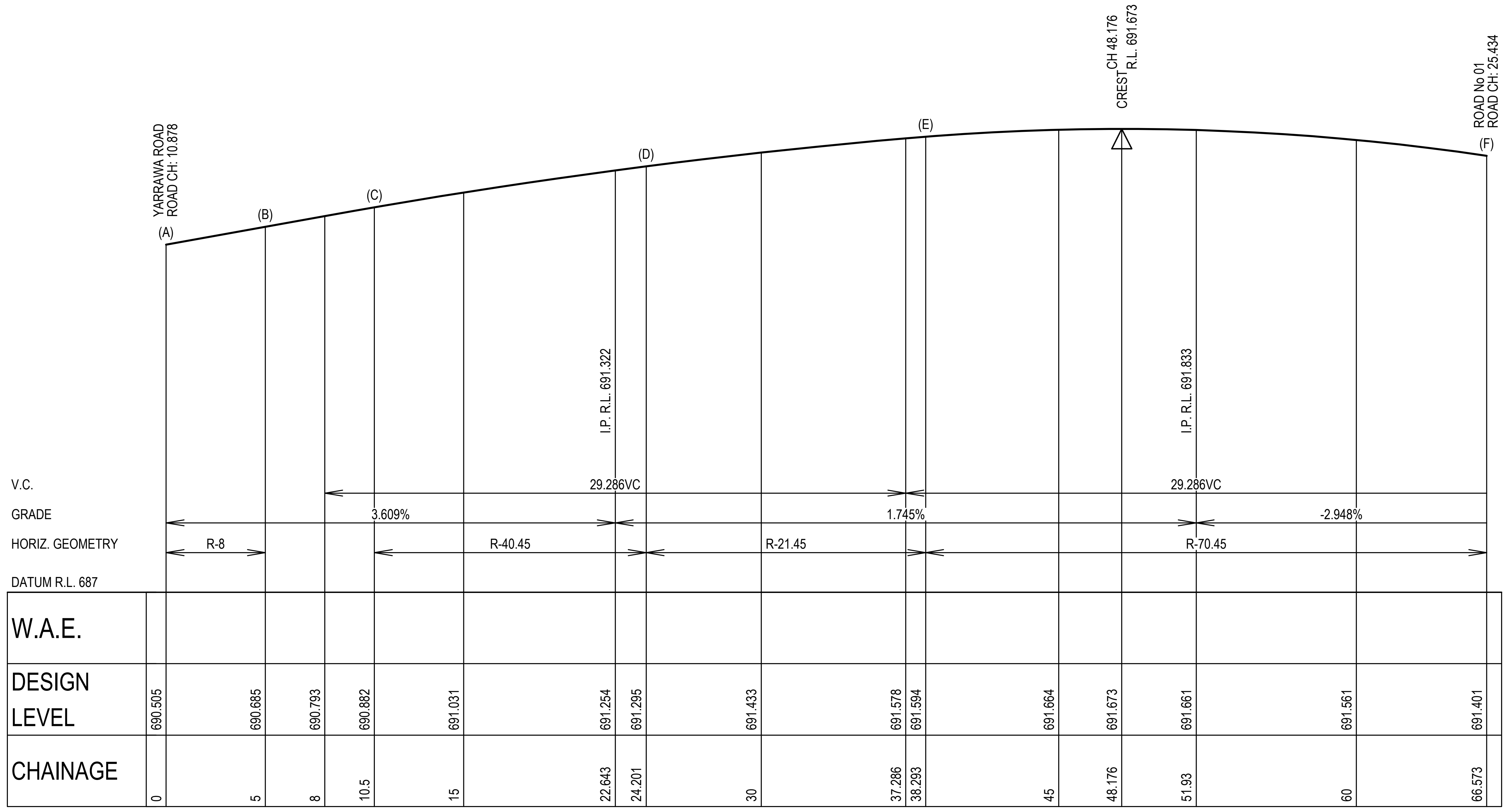
By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 01 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	400	A

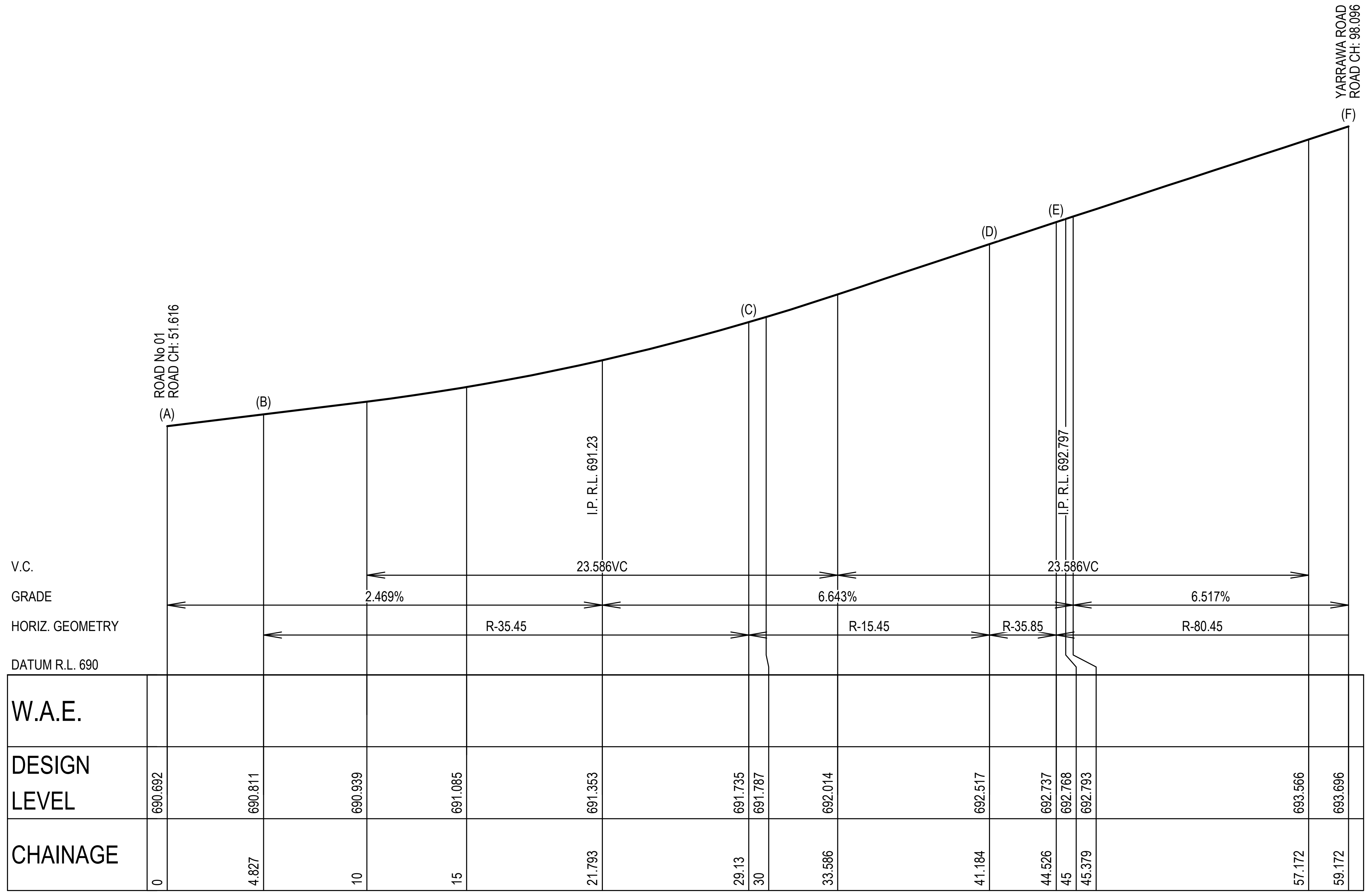
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-400.dwg



CHAINAGE	DESIGN LEVEL	W.A.E.
0	690.505	
5	690.685	
8	690.793	
10.5	690.882	
15	691.031	
22.643	691.254	
24.201	691.295	
30	691.433	
37.286	691.578	
38.293	691.594	
45	691.664	
48.176	691.673	
51.93	691.661	
60	691.561	
66.573	691.401	

KERB RETURN KR01

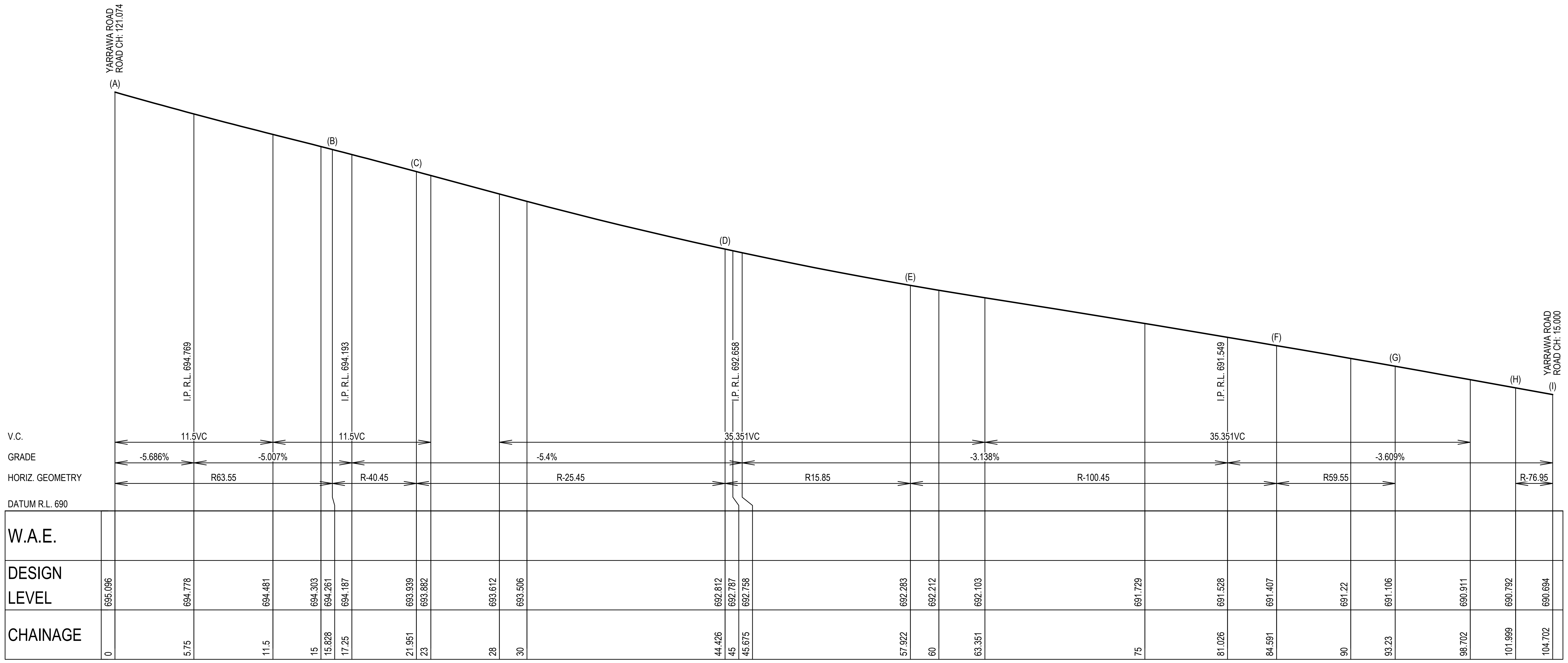
SCALE 1:200 (H)
SCALE 1:40 (V)



CHAINAGE	DESIGN LEVEL	W.A.E.
0	690.692	
4.827	690.811	
10	690.939	
15	691.085	
21.793	691.353	
29.13	691.735	
30	691.787	
33.586	692.014	
41.184	692.517	
44.526	692.737	
45	692.768	
45.379	692.793	
57.172	693.566	
59.172	693.696	

KERB RETURN KR02

SCALE 1:200 (H)
SCALE 1:40 (V)



CHAINAGE	DESIGN LEVEL	W.A.E.
0	695.096	
5.75	694.778	
11.5	694.481	
15	694.303	
15.828	694.261	
17.25	694.187	
21.951	693.939	
23	693.882	
28	693.612	
30	693.506	
44.426	692.812	
45	692.787	
45.675	692.758	
57.922	692.283	
60	692.212	
63.351	692.103	
75	691.729	
81.026	691.528	
84.591	691.407	
90	691.22	
93.23	691.106	
98.702	690.911	
101.999	690.792	
104.702	690.694	

KERB RETURN KR03

SCALE 1:200 (H)
SCALE 1:40 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

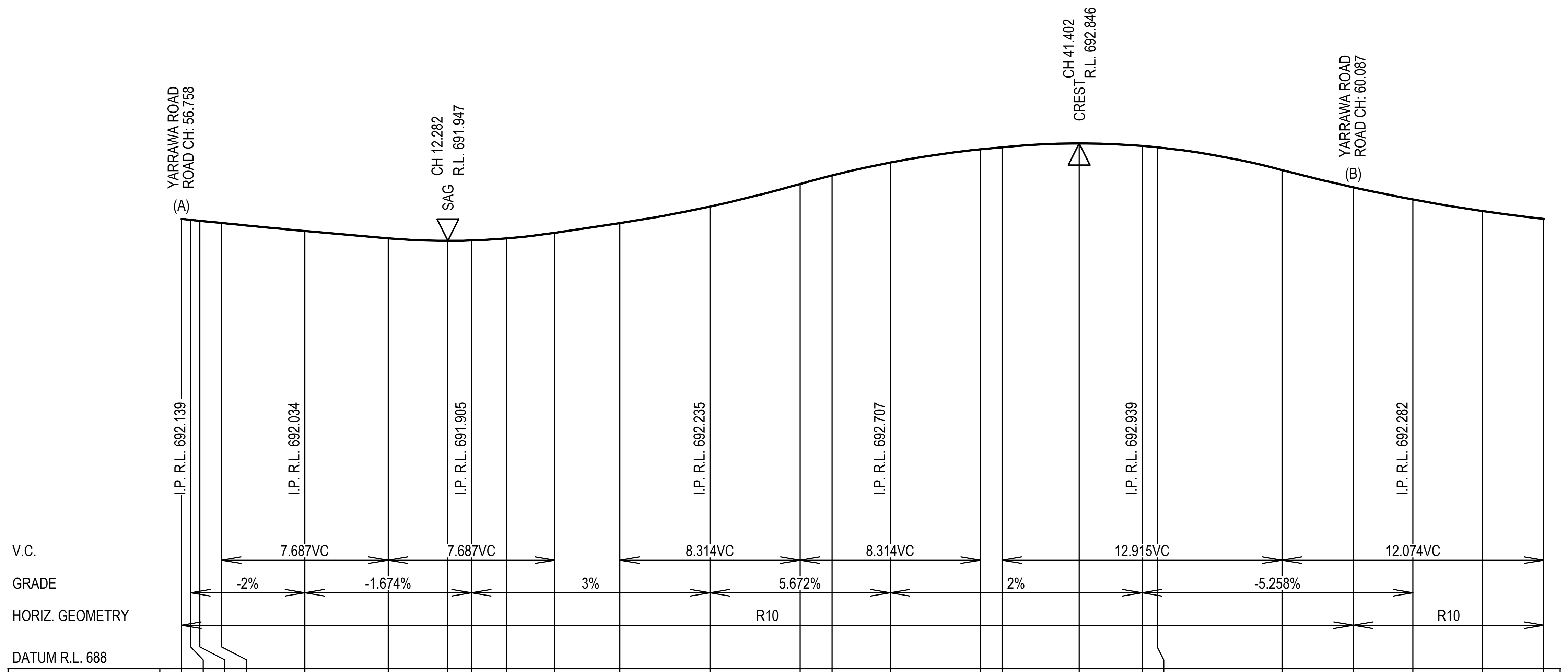
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 02 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	401	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Sdata\ORION-SYN



W.A.E.																									
DESIGN LEVEL	692.149	692.14	692.131	692.111	692.037	691.97	691.947	691.95	691.969	692.021	692.111	692.263	692.471	692.55	692.669	692.79	692.81	692.846	692.822	692.809	692.6	692.44	692.328	692.221	692.149
CHAINAGE	0	0.421	0.842	1.842	5.685	9.529	12.282	13.372	15	17.216	20.216	24.372	28.529	30	32.686	36.843	37.843	41.402	44.301	45	50.758	54.046	56.795	60	62.832

KERB RETURN C101 OUTER

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258671.86	6171839	201°26'00.19"		
2.5	258670.91	6171836.6		-8	5
5	258671.55	6171834.09	165°37'24.68"		
10.5	258672.92	6171828.77	165°37'24.68"		
17.35	258674.64	6171822.07		-40.45	13.701
24.2	258678.48	6171816.32	146°12'58.72"		
31.25	258682.55	6171810.24		-21.45	14.092
38.29	258689.48	6171807.91	108°34'30.50"		
52.43	258703.06	6171803.35		-70.45	28.28
66.57	258717.35	6171804.45	85°34'32.45"		

SETOUT TABLE KR02

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258742.31	6171788.28	282°06'58.24"		
4.83	258737.59	6171789.3	282°06'58.24"		
16.98	258725.22	6171791.95		-35.45	24.303
29.13	258713.97	6171786.18	242°50'09.97"		
35.16	258708.32	6171783.28		-15.45	12.054
41.18	258706.34	6171777.24	198°08'01.53"		
42.86	258705.82	6171775.65		-35.85	3.341
44.53	258705.45	6171774.02	192°47'36.33"		
51.85	258703.82	6171766.86		-80.45	14.646
59.17	258703.52	6171759.52	182°21'45.59"		

SETOUT TABLE KR03

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258697.51	6171736.07	348°44'16.22"		
7.91	258695.96	6171743.87		63.55	15.828
15.83	258696.38	6171751.82	3°00'30.88"		
18.89	258696.54	6171754.88		-40.45	6.123
21.95	258696.23	6171757.93	354°20'08.75"		
33.19	258695.05	6171769.9		-25.45	22.475
44.43	258685.04	6171776.59	303°44'14.39"		
51.17	258679.07	6171780.58		15.85	13.496
57.92	258678.13	6171787.7	352°31'24.62"		
71.26	258676.39	6171801		-100.45	26.669
84.59	258671.21	6171813.38	337°18'42.32"		
88.91	258669.54	6171817.37		59.55	8.639
93.23	258668.47	6171821.56	345°37'24.68"		
102	258666.29	6171830.06	345°37'24.68"		
103.35	258665.96	6171831.37		-76.95	2.702
104.7	258665.57	6171832.66	343°36'41.70"		

SETOUT TABLE SI01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258696.42	6171773.06			
0.16	258696.24	6171773.06		-0.3	0.32
0.32	258696.15	6171772.91	210°43'17.81"		
0.48	258696.06	6171772.76		-0.3	0.32
0.64	258696.15	6171772.61			
6.24	258699.24	6171767.93			
6.66	258699.52	6171767.51		-0.6	0.84
7.08	258699.98	6171767.71	66°31'54.21"		
7.5	258700.44	6171767.91		-0.6	0.84
7.92	258700.32	6171768.4	346°20'28.76"		
11.71	258699.43	6171772.08	346°20'28.76"		
12.49	258699.21	6171772.97		-1.2	1.562
13.27	258698.3	6171773	271°45'43.10"		

SETOUT TABLE SI02

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258711.24	6171790.17			
0.28	258711.3	6171789.76		-0.3	0.565
0.56	258711.67	6171789.94	63°54'22.70"		
3.07	258713.92	6171791.04		47	5.012
5.58	258716.28	6171791.9	70°00'57.33"		
5.8	258716.54	6171791.99		-0.3	0.441
6.02	258716.47	6171792.26	345°52'08.48"		
12.24	258714.95	6171798.29	345°52'08.48"		
12.46	258714.89	6171798.55		-0.3	0.437
12.67	258714.62	6171798.51	262°25'15.01"		
14.36	258712.95	6171798.29		-80	3.38
16.05	258711.28	6171798	260°00'00.78"		
16.98	258710.13	6171797.79		-1.2	1.849
17.9	258710.3	6171796.64	171°43'50.62"		

SETOUT TABLE SI03

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258717.79	6171798.87	264°42'06.36"		
0.02	258717.76	6171798.87		-80	0.045
0.04	258717.74	6171798.87			
0.3	258717.39	6171798.83		-0.3	0.517
0.56	258717.48	6171798.49	165°52'08.48"		
6.15	258718.84	6171793.08	165°52'08.48"		
6.39	258718.92	6171792.77		-0.3	0.482
6.63	258719.22	6171792.86	73°46'50.71"		
18.47	258730.83	6171796.24		47	23.677
30.31	258742.63	6171793.59			
30.32	258742.64	6171793.59			
31.17	258743.47	6171793.4	102°41'19.87"		

SETOUT TABLE C101 OUTER

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258686.23	6171796.25			
9.01	258694.41	6171805.86		10	18.015
18.02	258701.9	6171795.7	143°36'26.89"		
27.02	258709.38	6171785.54		10	18.015
36.03	258697.78	6171780.57	246°49'42.32"		
45.04	258686.18	6171775.61		10	18.015
54.05	258684	6171788.04	350°02'57.74"		
58.44	258683.18	6171792.67		10	8.785

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-402.dwg

A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

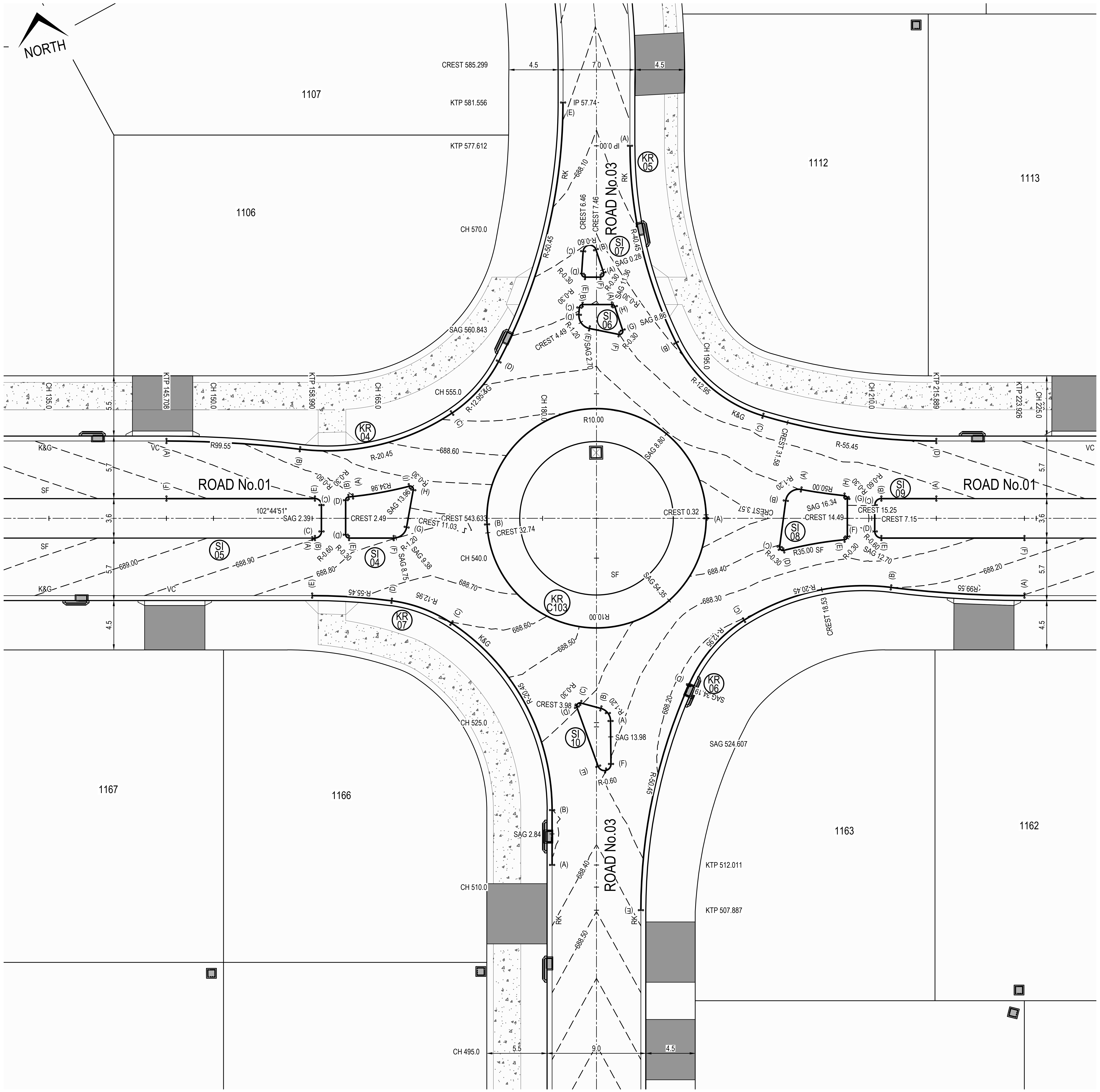
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 03 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	402	A

SETOUT IS TO LIP OF KERB



NOTES:

1. REFER TO STRUCTURAL PLANS FOR JOINTING DETAIL
2. REFER TO DWG 404 & 405 FOR KERB PROFILES
3. REFER TO DWG 305 FOR SPLITTER ISLAND DETAIL

KERB RETURN PLAN - KR04, KR05, KR06, KR07, KR08, KR09, KR10, KR11, C103, SI04, SI05, SI06, SI07, SI08, SI09 & SI10

SCALE 1:200

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

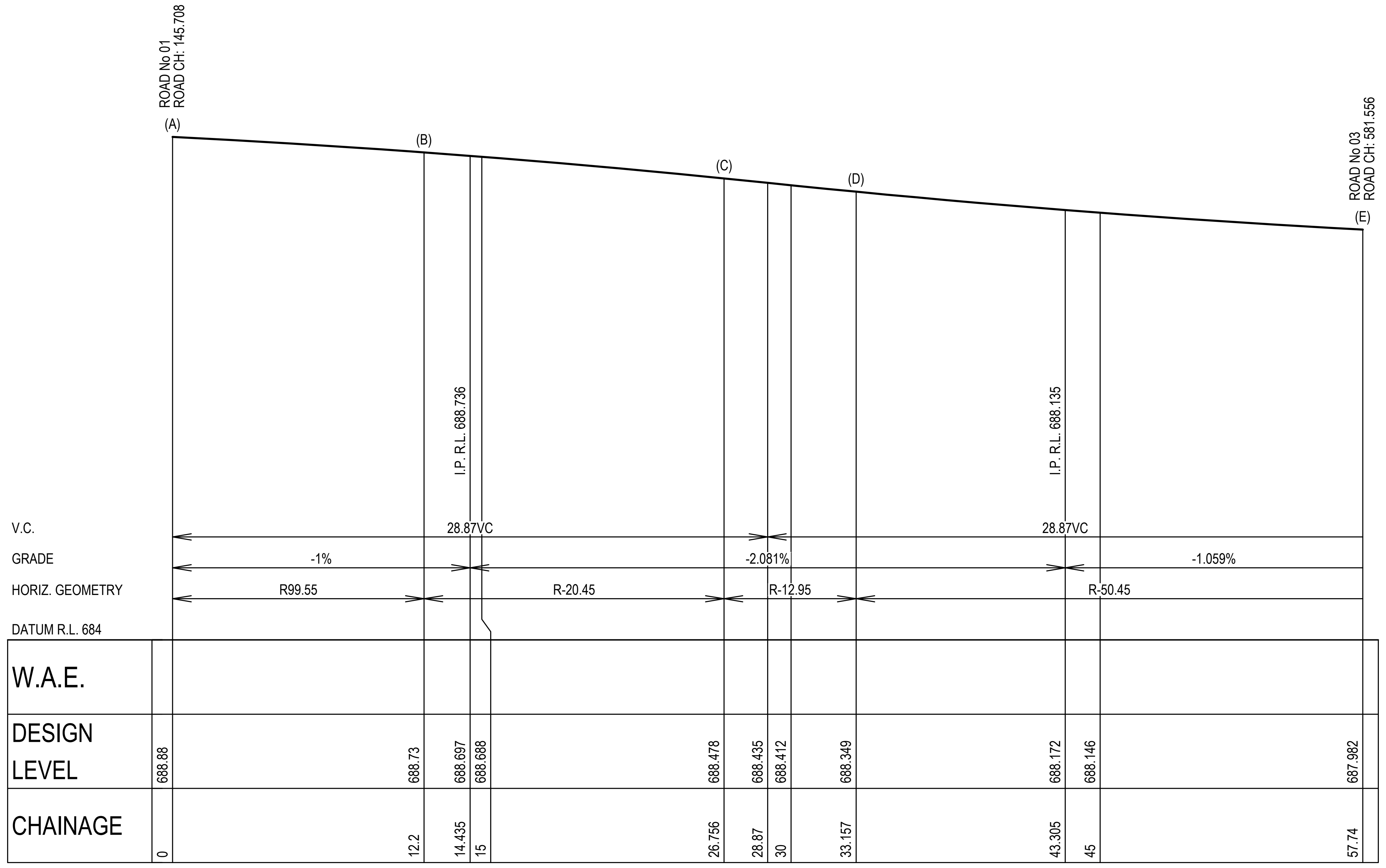
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 04 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	403	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-403.dwg



DESIGN LEVEL	688.88	688.73	688.697	688.688	688.478	688.435	688.412	688.349	688.172	688.146	687.982
CHAINAGE	0	12.2	14.435	15	26.756	28.87	30	33.157	43.305	45	57.74

KERB RETURN KR04
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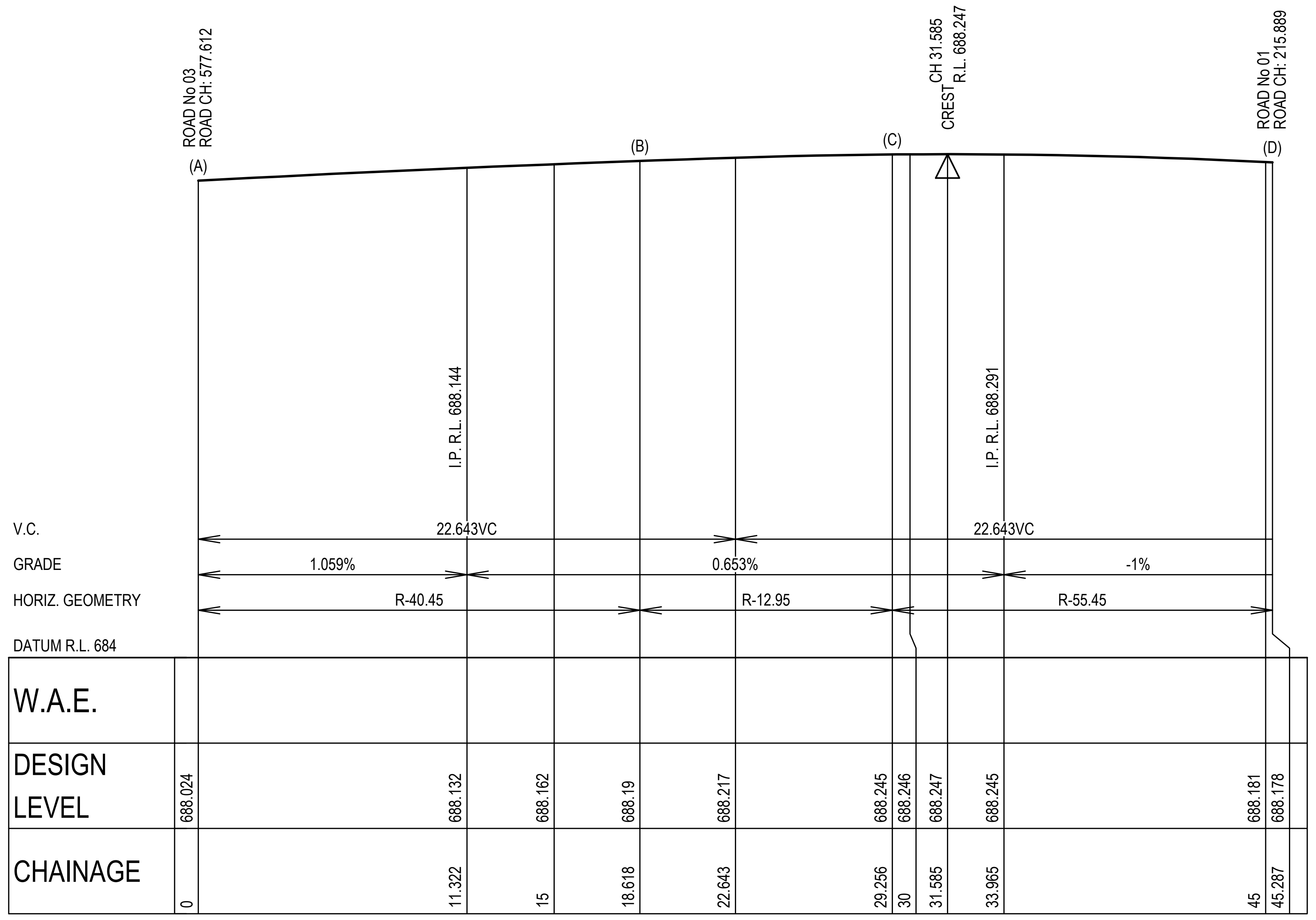
SCALE 1:40 (V)



DESIGN LEVEL	688.024	688.132	688.162	688.19	688.217	688.245	688.246	688.247	688.245	688.181	688.178
CHAINAGE	0	11.322	15	18.618	22.643	29.256	30	31.585	33.965	45	45.287

KERB RETURN KR05
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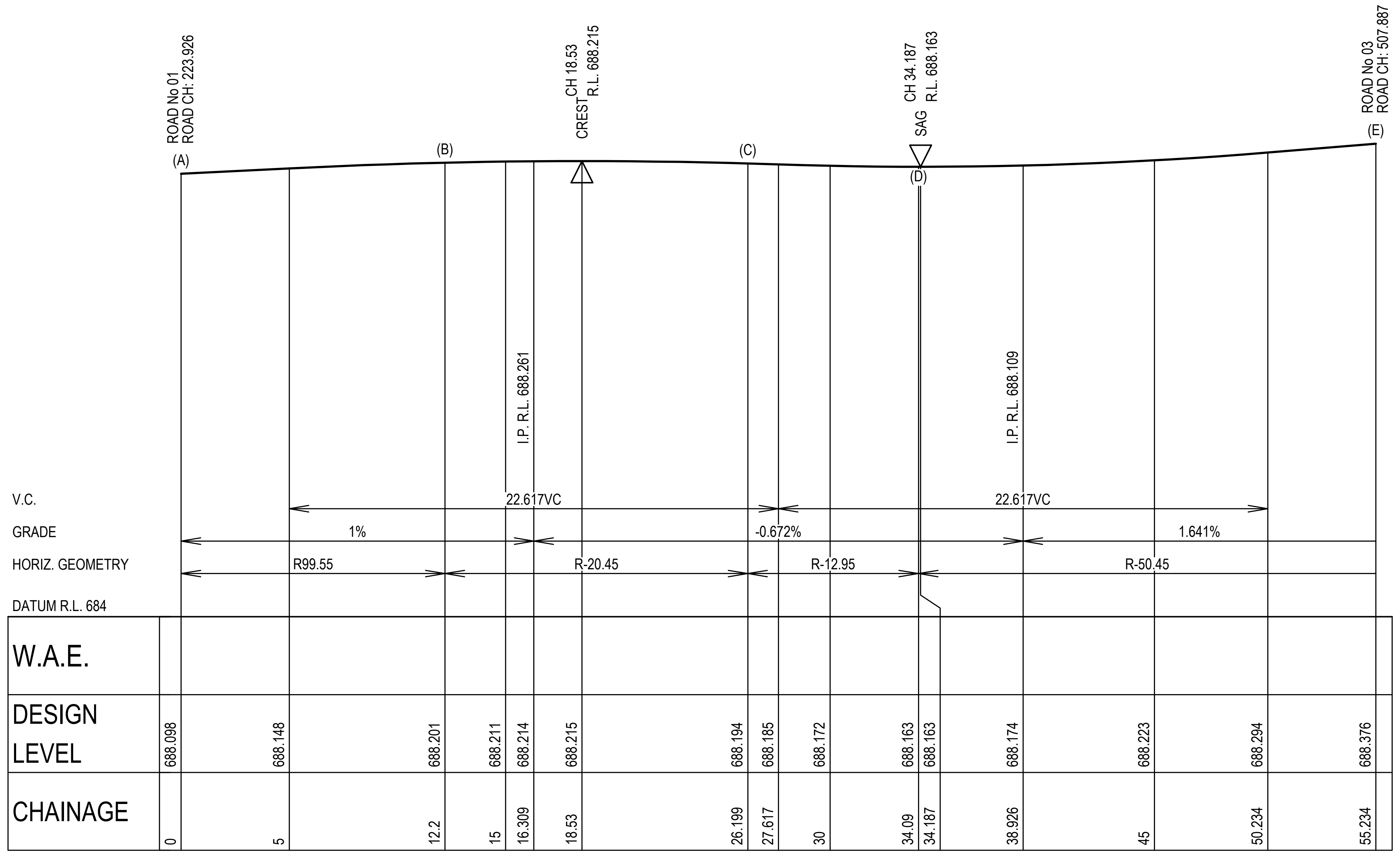
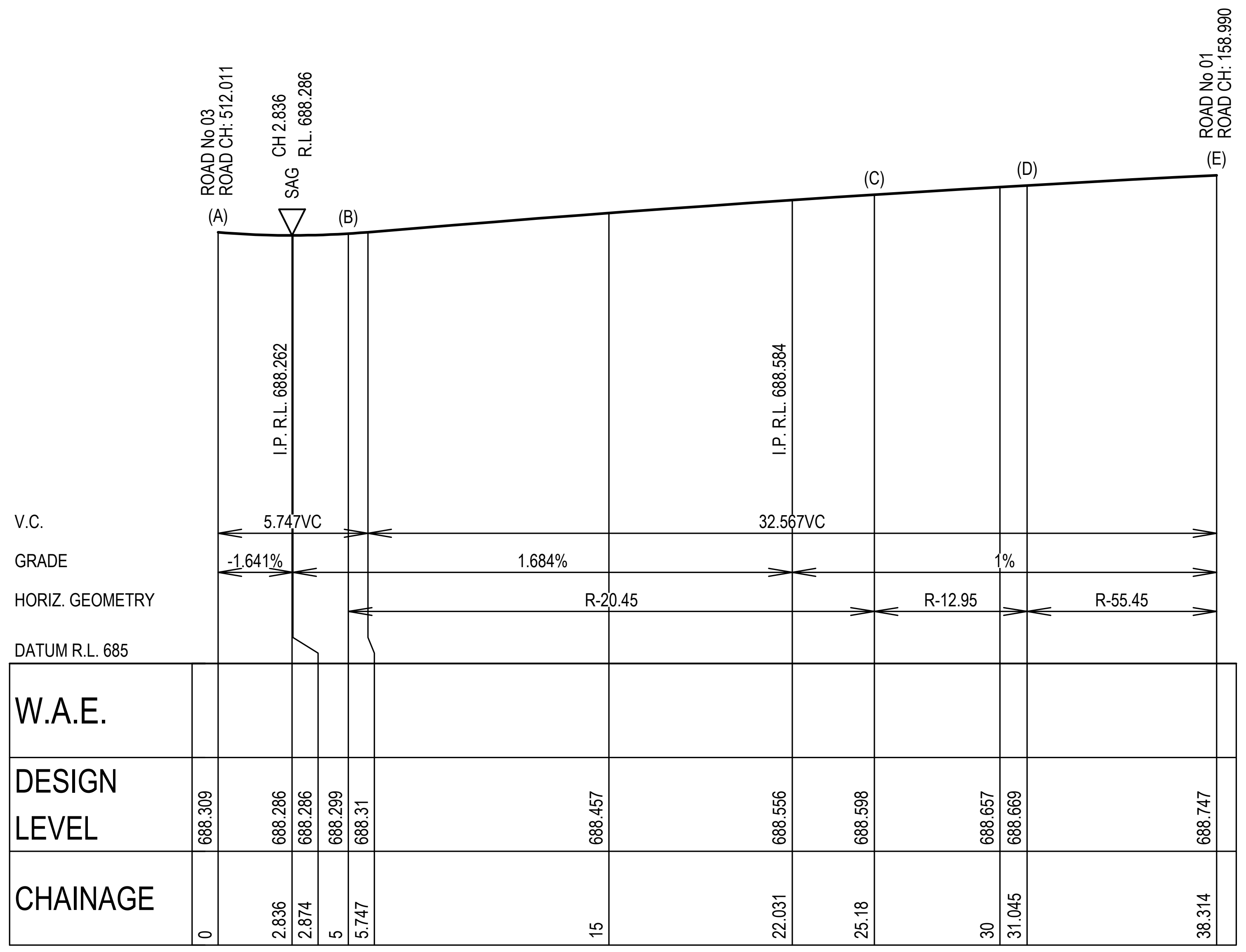
SCALE 1:40 (V)



DESIGN LEVEL	688.098	688.148	688.201	688.211	688.214	688.215	688.194	688.185	688.172	688.163	688.163	688.174	688.223	688.294	688.376
CHAINAGE	0	5	12.2	15	16.309	18.53	26.199	27.617	30	34.09	34.187	38.926	45	50.234	55.234

KERB RETURN KR06
SCALE 1:200 (H)
SCALE 1:40 (V)



DESIGN LEVEL	688.309	688.286	688.286	688.299	688.31	688.457	688.556	688.598	688.657	688.669	688.747
CHAINAGE	0	2.836	2.874	5	5.747	15	22.031	25.18	30	31.045	38.314

KERB RETURN KR07
SCALE 1:200 (H)
SCALE 1:40 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 05 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	404	A

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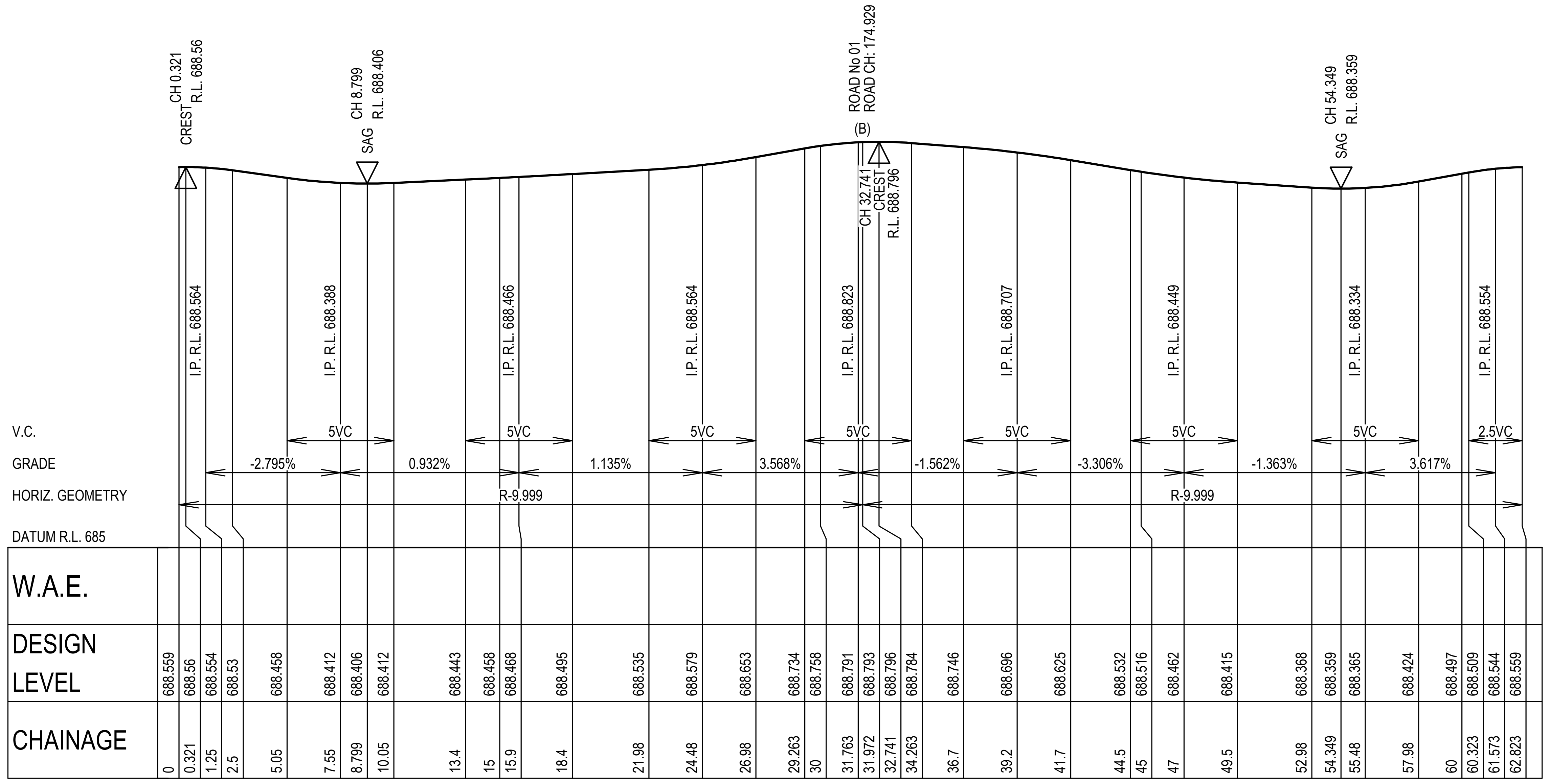

KERB RETURN C103 OUTER

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR04

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258837.2	6171781.27	102°44'50.56"		
6.1	258843.15	6171779.93		99.55	12.2
12.2	258848.9	6171777.86	109°46'09.01"		
19.48	258856.05	6171775.29		-20.45	14.556
26.76	258863.15	6171778.01	68°59'17.10"		
29.96	258866.2	6171779.19		-12.95	6.401
33.16	258868.33	6171781.66	40°39'59.11"		
45.45	258876.5	6171791.18		-50.45	24.583
57.74	258879.27	6171803.41	12°44'50.45"		

SETOUT TABLE KR05

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258884.35	6171798.22	192°44'50.45"		
9.31	258882.26	6171788.97		-40.45	18.618
18.62	258884.49	6171779.76	166°22'30.05"		
23.94	258885.82	6171774.28		-12.95	10.637
29.26	258890.74	6171771.52	119°18'44.91"		
37.27	258897.77	6171767.57		-55.45	16.031
45.29	258905.65	6171765.79	102°44'51.02"		

SETOUT TABLE SI05

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258852.66	6171772.59			
0.4	258852.26	6171772.64	276°35'10.12"		
0.62	258852	6171772.67		-0.3	0.439
0.83	258851.94	6171772.41	192°41'30.45"		
3.99	258851.24	6171769.33	192°41'30.45"		
4.22	258851.18	6171769.04		-0.3	0.471
4.46	258851.47	6171768.97	102°44'56.36"		
8.53	258855.44	6171768.07	102°44'56.36"		
9.37	258856.42	6171767.85		-1.2	1.673
10.21	258856.81	6171768.77	22°53'26.54"		
13.66	258858.16	6171771.96	22°53'26.54"		
13.96	258858.34	6171772.39		-0.3	0.601
14.26	258857.87	6171772.37	268°08'16.14"		
16.87	258855.26	6171772.29		34.983	5.225
19.49	258852.66	6171772.59	276°41'42.30"		

SETOUT TABLE SI06

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258879.54	6171784.46			
2.66	258876.95	6171785.04	282°44'50.45"		
2.88	258876.67	6171785.1		-0.3	0.451
3.11	258876.59	6171784.84	196°35'03.25"		
3.75	258876.41	6171784.22	196°35'03.25"		
4.62	258876.11	6171783.21		-1.2	1.726
5.48	258877.07	6171782.78	114°09'22.89"		
8.22	258879.57	6171781.66	114°09'22.89"		
8.53	258880.04	6171781.45		-0.3	0.627
8.85	258879.99	6171781.96	354°23'40.78"		
11.09	258879.77	6171784.19	354°23'40.78"		
11.28	258879.75	6171784.41		-0.3	0.375
11.46	258879.54	6171784.46	282°44'50.45"		

SETOUT TABLE KR06

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258910.37	6171750.26	282°44'51.02"		
6.1	258904.42	6171751.61		99.55	12.2
12.2	258898.67	6171753.67	289°46'09.01"		
19.2	258891.81	6171756.14		-20.45	13.999
26.2	258884.94	6171753.71			
30.14	258881.1	6171752.36		-12.95	7.891
34.09	258878.73	6171749.05			
44.66	258872.31	6171740.45		-50.45	21.144
55.23	258869.94	6171729.99	192°44'50.37"		

SETOUT TABLE KR07

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258862.95	6171735.8	12°44'45.06"		
5	258864.05	6171740.68	12°44'45.06"		
15.09	258866.48	6171751.4		-20.45	20.179
25.18	258858.87	6171759.34	316°12'32.19"		
28.11	258856.8	6171761.49		-12.95	5.865
31.04	258854	6171762.53	290°15'30.77"		
34.68	258850.59	6171763.79		-55.45	7.269
38.31	258847.04	6171764.59	282°44'51.02"		

SETOUT TABLE SI04

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258848.2	6171769.71	102°44'51.02"		
0.25	258848.44	6171769.66	102°44'51.02"		
0.72	258849.03	6171769.52		-0.6	0.942
1.19	258849.16	6171770.11	12°44'52.05"		
3.59	258849.69	6171772.45	12°44'52.05"		
4.06	258849.82	6171773.03		-0.6	0.942
4.53	258849.23	6171773.17	282°44'51.02"		
18.06	258836.04	6171776.15	282°44'51.02"		

SETOUT TABLE SI07

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258879.45	6171787.44			
2.22	258879.24	6171789.66	354°23'40.78"		
2.64	258879.19	6171790.15		-0.6	0.826
3.05	258878.7	6171790.2	275°29'22.02"		
3.46	258878.2	6171790.24		-0.6	0.826
3.88	258878.06	6171789.77	196°35'03.25"		
5.92	258877.48	6171787.81	196°35'03.25"		
6.16	258877.39	6171787.51		-0.3	0.491
6.41	258877.7	6171787.44	102°44'50.45"		
7.83	258879.09	6171787.12	102°44'50.45"		
8.11	258879.49	6171787.03		-0.3	0.567
8.4	258879.45	6171787.44	354°23'40.78"		

SETOUT TABLE SI08

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258892.66	6171764.19			
0.97	258891.5	6171764.69		-1.2	1.946
1.95	258891.06	6171763.51	200°15'32.92"		
6.19	258889.59	6171759.52	200°15'32.92"		
6.48	258889.43	6171759.11		-0.3	0.587
6.78	258889.88	6171759.12	88°08'20.95"		
9.59	258892.69	6171759.21		35	5.615
12.39	258895.48	6171758.85	97°19'49.45"		
12.61	258895.75	6171758.82		-0.3	0.443
12.84	258895.81	6171759.08	12°44'51.02"		
16.26	258896.57	6171762.42	12°44'51.02"		
16.48	258896.63	6171762.69		-0.3	0.44
16.7	258896.37	6171762.77	288°38'20.52"		
18.69	258894.49	6171763.41		50	3.978

SETOUT TABLE SI09

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258904.49	6171760.67	282°44'51.02"		
5.01	258899.6	6171761.77	282°44'51.02"		
5.48	258899.01	6171761.91		-0.6	0.942
5.95	258898.88	6171761.32	192°44'53.14"		
8.35	258898.35	6171758.98	192°44'53.14"		
8.83	258898.22	6171758.39		-0.6	0.942
9.3	258898.81	6171758.26	102°44'48.47"		
22.35	258911.53	6171755.38	102°44'48.47"		

SETOUT TABLE SI10

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258871.05	6171747.43			
0.78	258871.24	6171748.32		-1.2	1.554
1.55	258870.44	6171748.74	297°59'40.75"		
3.45	258868.77	6171749.63	297°59'40.75"		
3.61	258868.61	6171749.72		-0.3	0.328
3.77	258868.46	6171749.61	235°25'54.00"		
3.94	258868.31	6171749.51		-0.3	0.328
4.1	258868.33	6171749.33	172°52'07.26"		
9.82	258869.04	6171743.65	172°52'07.26"		
10.25	258869.1	6171743.15		-0.6	0.841
10.67	258869.61	6171743.13	92°31'19.83"		
11.09	258870.11	6171743.1		-0.6	0.841
11.51	258870.22	6171743.6	12°10'32.39"		

SETOUT TABLE C103 OUTER

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258883.63	6171763.54			
7.99	258885.9	6171773.57		-9.999	15.986
15.99	258875.81	6171775.56	281°09'01.23"		
23.98	258865.72	6171777.55		-9.999	15.986
31.97	258864.02	6171767.41	189°32'40.90"		
39.68	258862.41	6171757.82		-9.999	15.425
47.4	258871.94	6171755.94	101°09'01.23"		
55.11	258881.48	6171754.06		-9.999	15.425

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 06 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	405	A

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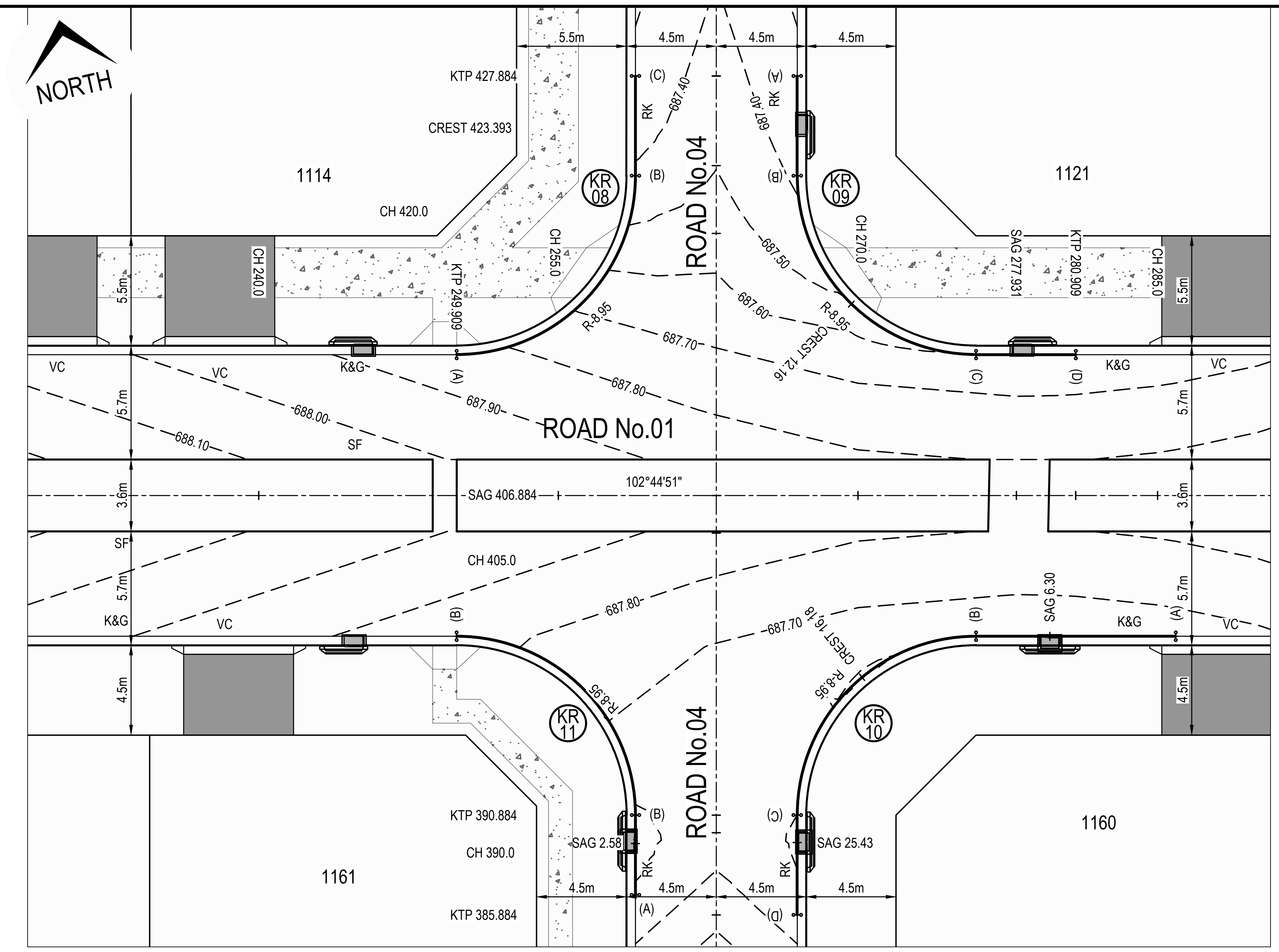

KERB RETURN PLAN - KR08, KR09, KR10 & KR11

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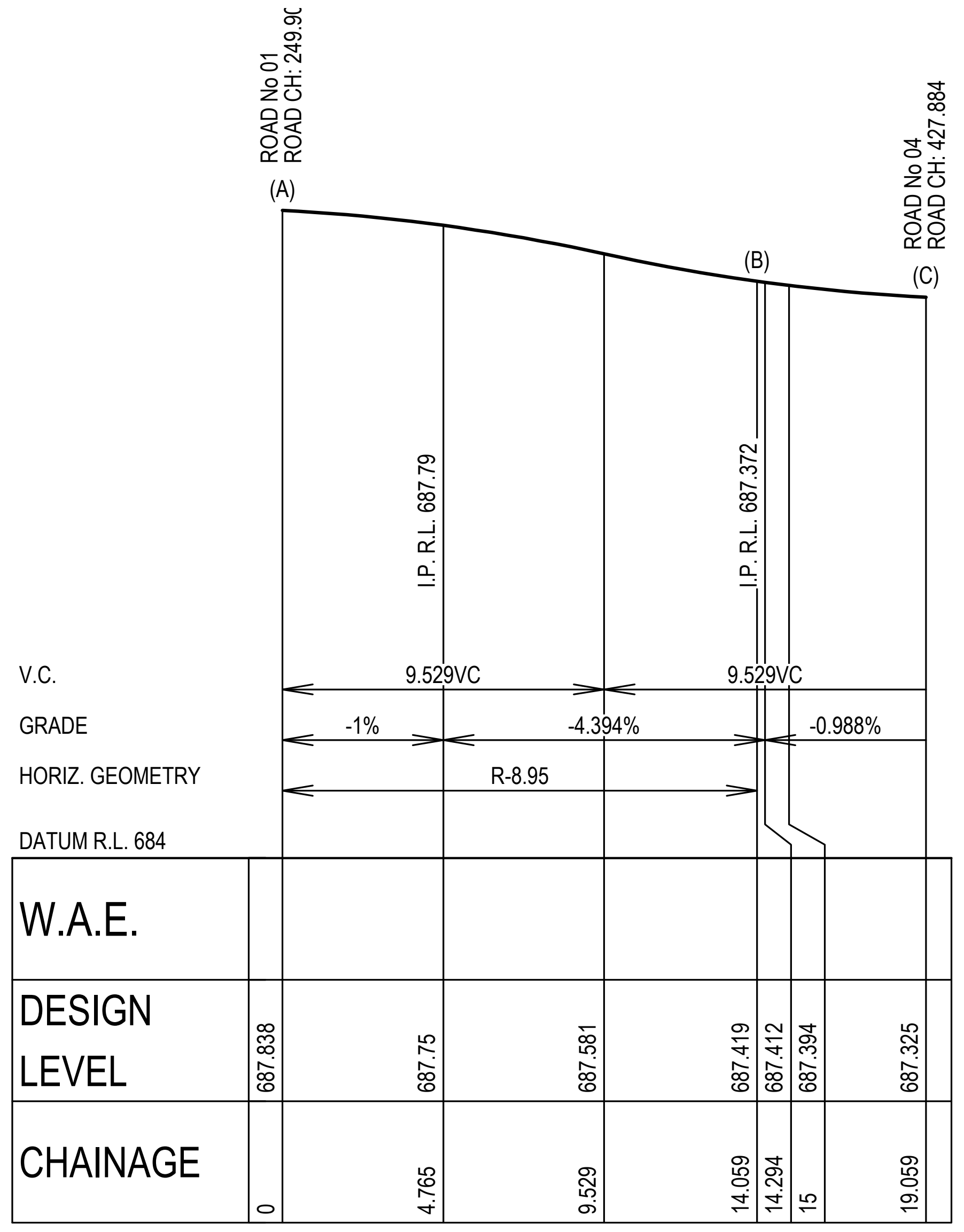

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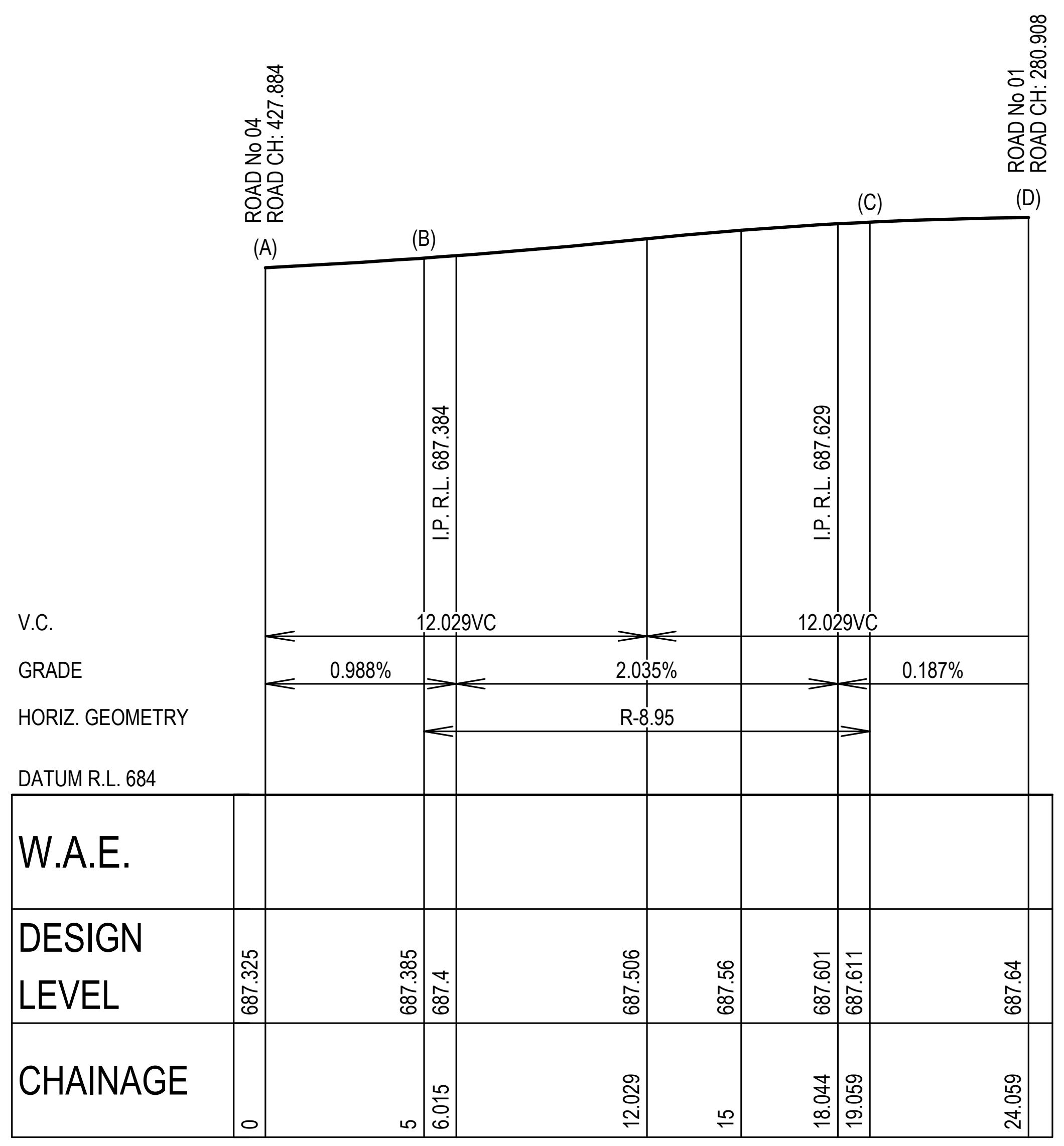

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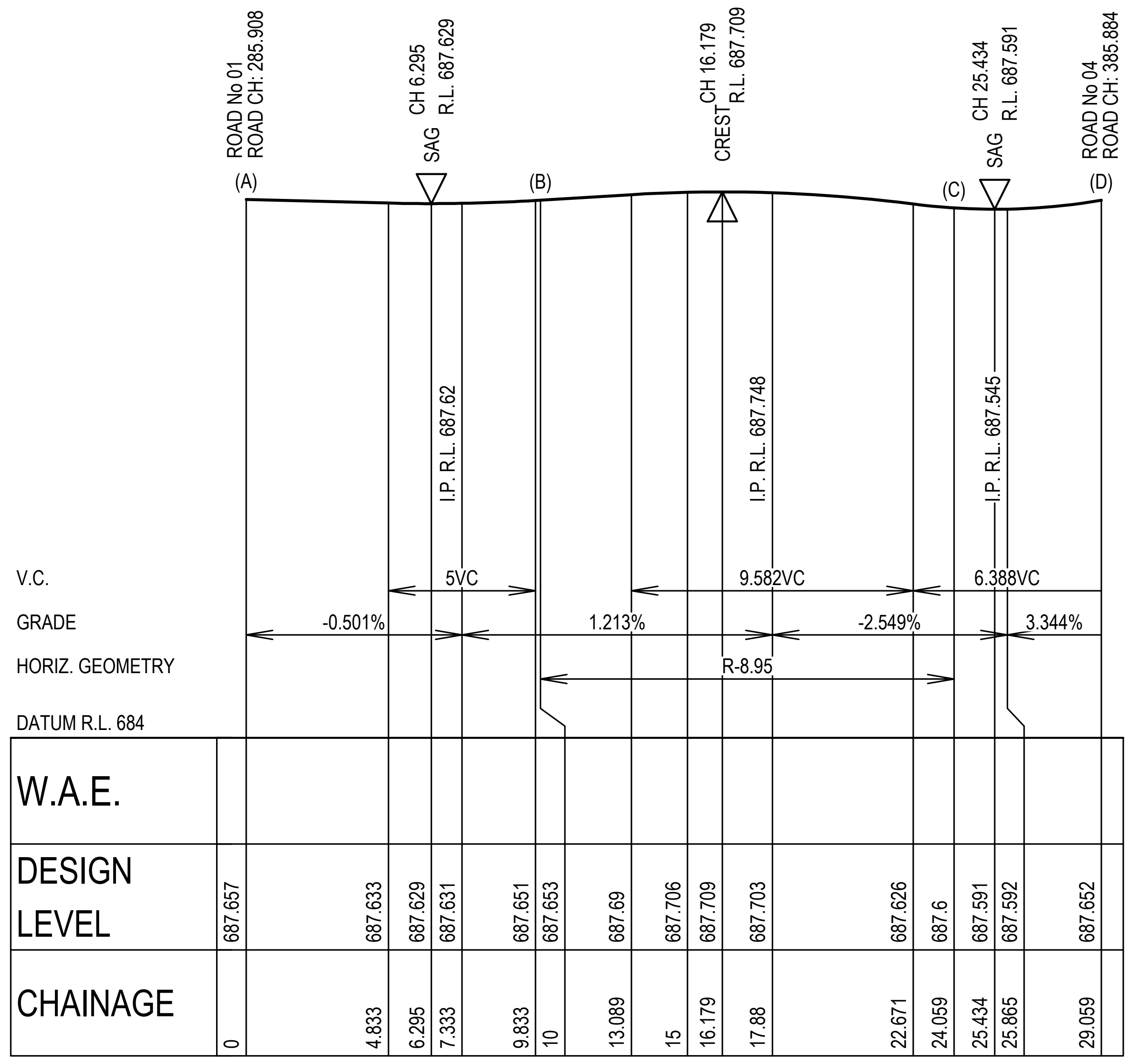

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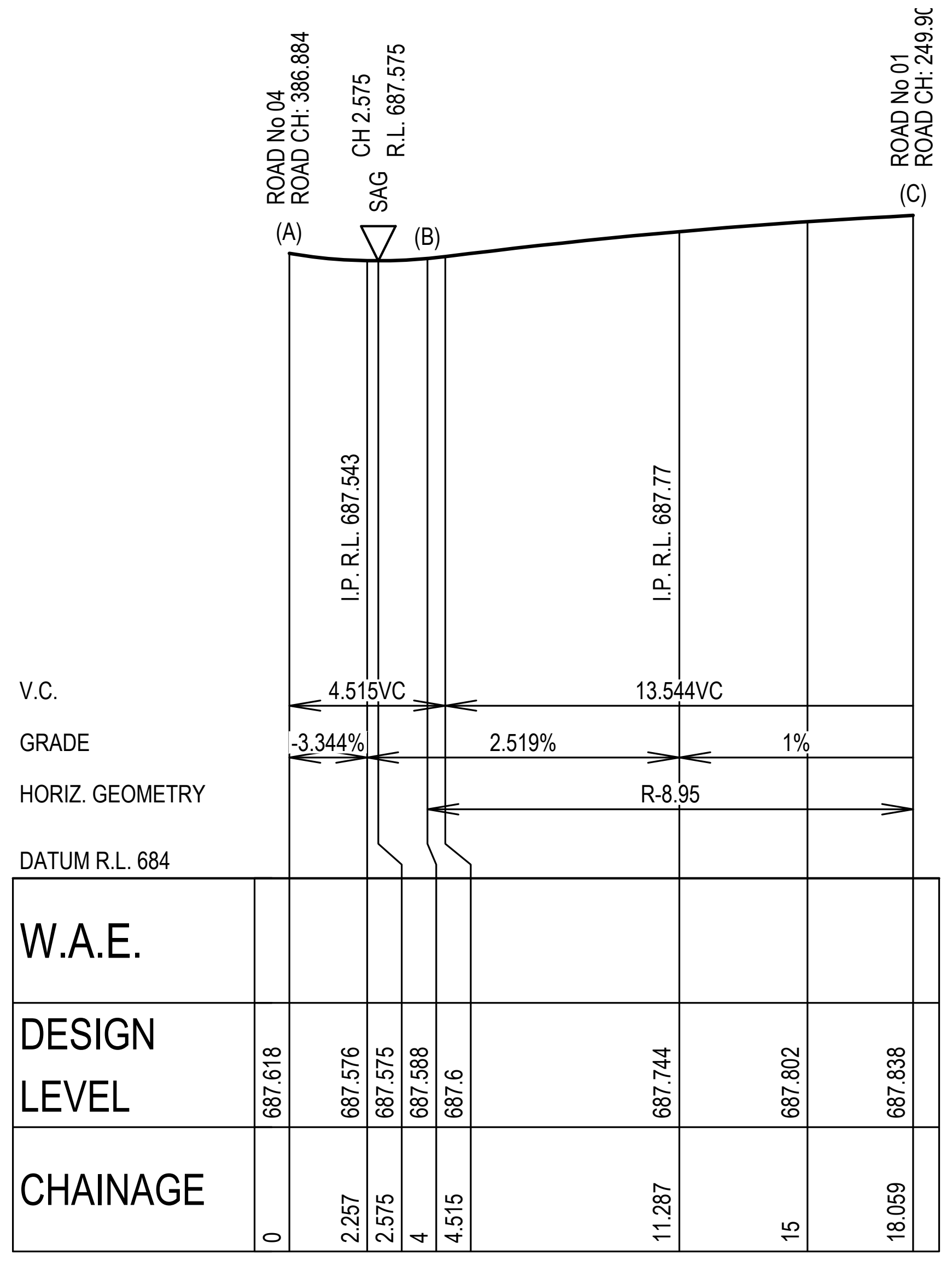

KERB RETURN KR11

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SETOUT TABLE KR08

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258938.83	6171758.28	102°44'51.02"		
7.03	258947.56	6171756.31		-8.95	14.059
14.06	258949.53	6171765.04	12°44'49.09"		
19.06	258950.64	6171769.91	12°44'49.09"		

SETOUT TABLE KR09

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258958.54	6171768.12	192°44'49.09"		
5	258957.43	6171763.25	192°44'49.09"		
12.03	258955.46	6171754.52		-8.95	14.059
19.06	258964.19	6171752.54	102°44'51.02"		
24.06	258969.06	6171751.44	102°44'51.02"		

SETOUT TABLE KR10

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258970.83	6171736.58	282°44'51.02"		
10	258961.08	6171738.79	282°44'51.02"		
17.03	258952.35	6171740.77		-8.95	14.059
24.06	258950.37	6171732.04	192°44'49.09"		
29.06	258949.27	6171727.16	192°44'49.09"		

SETOUT TABLE KR11

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258941.59	6171729.92	12°44'49.09"		
4	258942.47	6171733.82	12°44'49.09"		
11.03	258944.45	6171742.55		-8.95	14.059
18.06	258935.72	6171744.53	282°44'51.02"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 07 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	406	A

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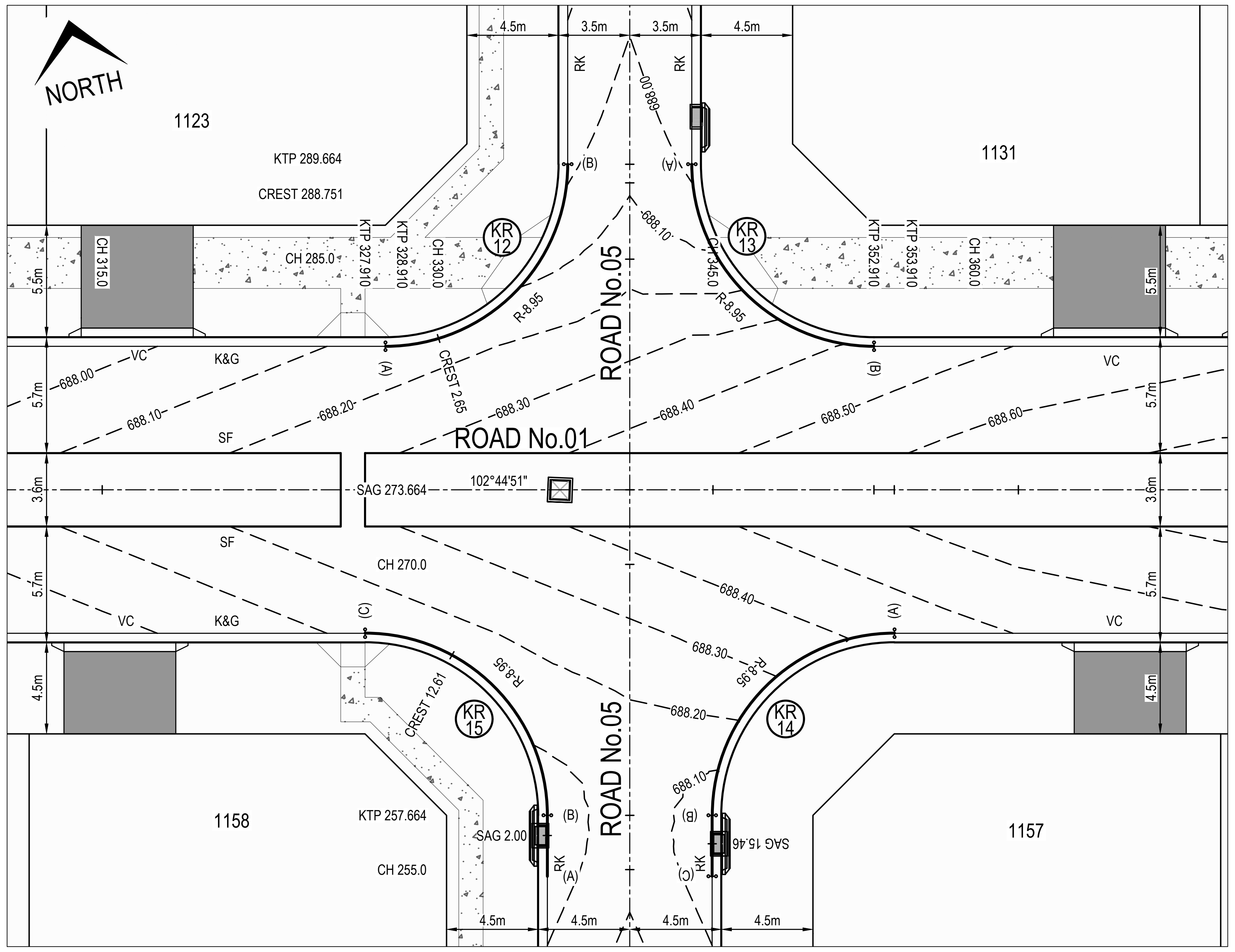

KERB RETURN PLAN - KR12, KR13, KR14 & KR15

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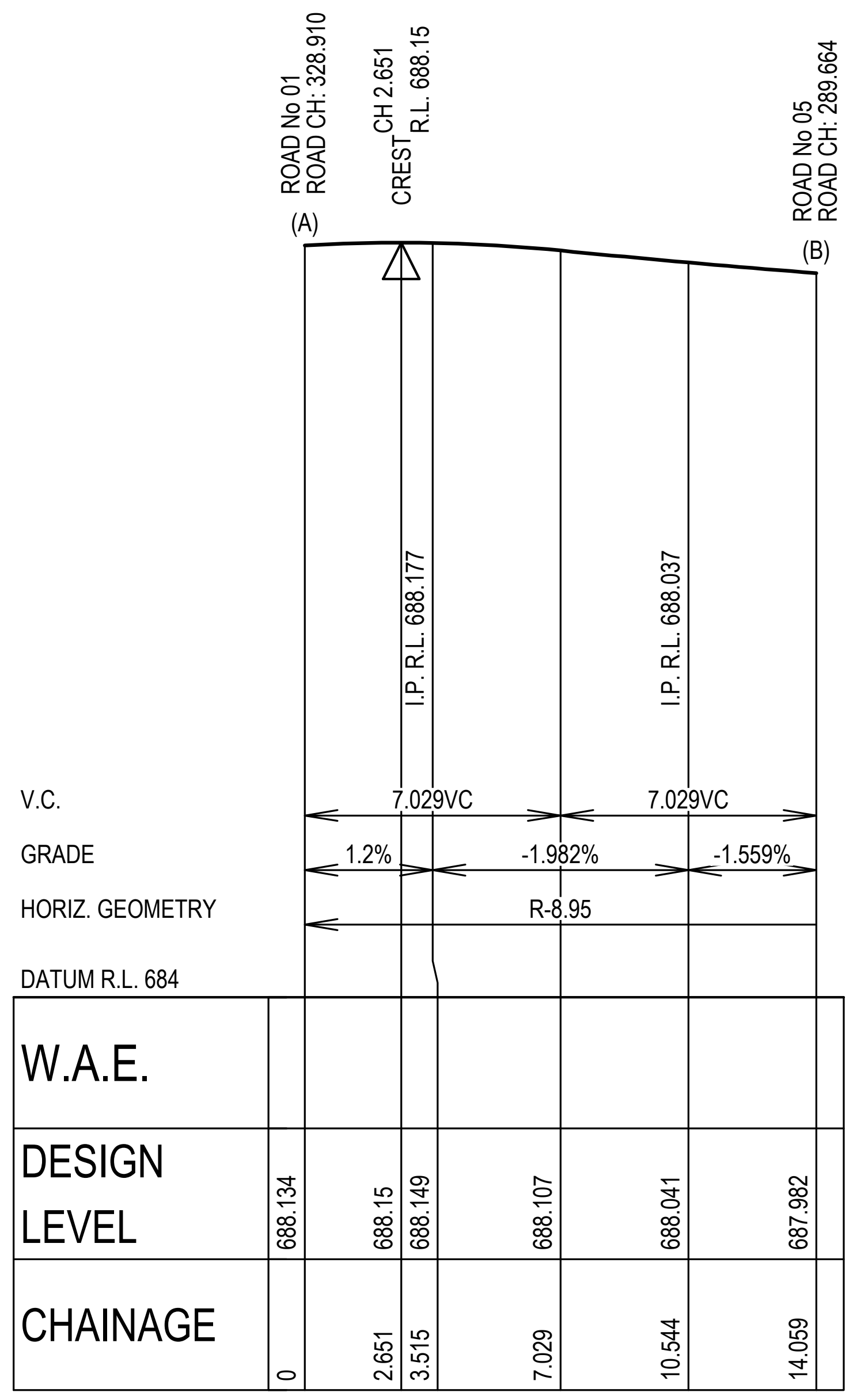

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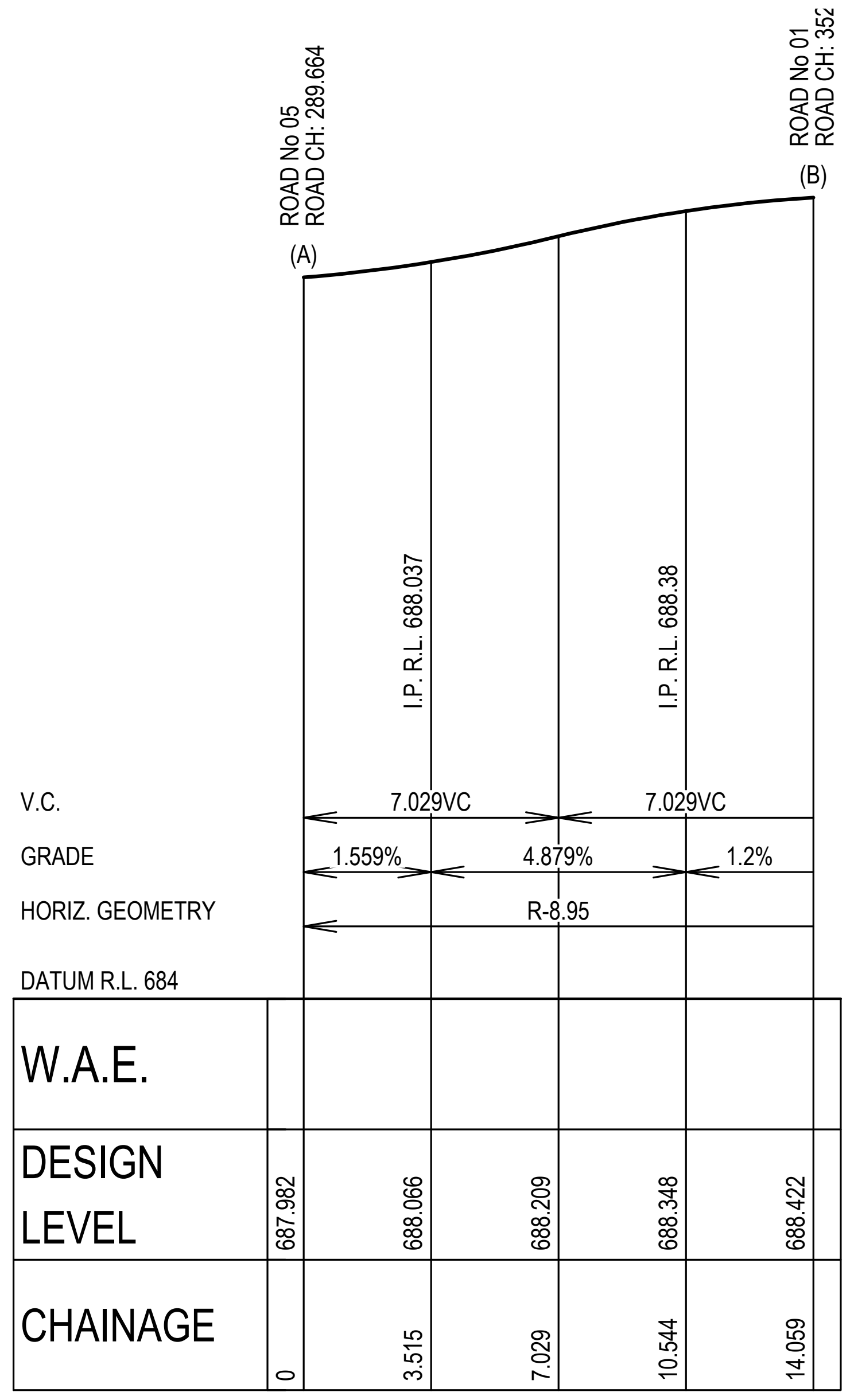

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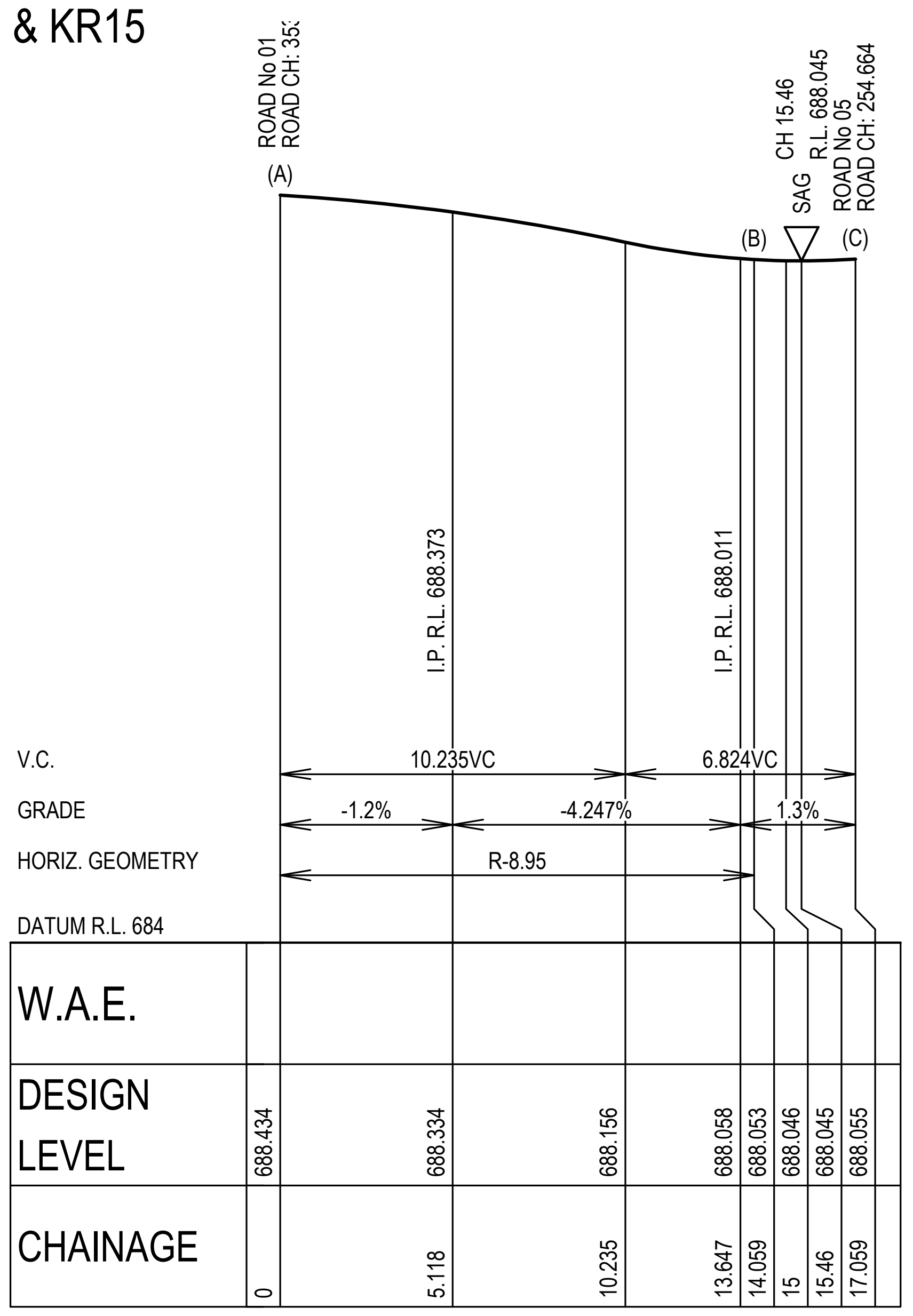

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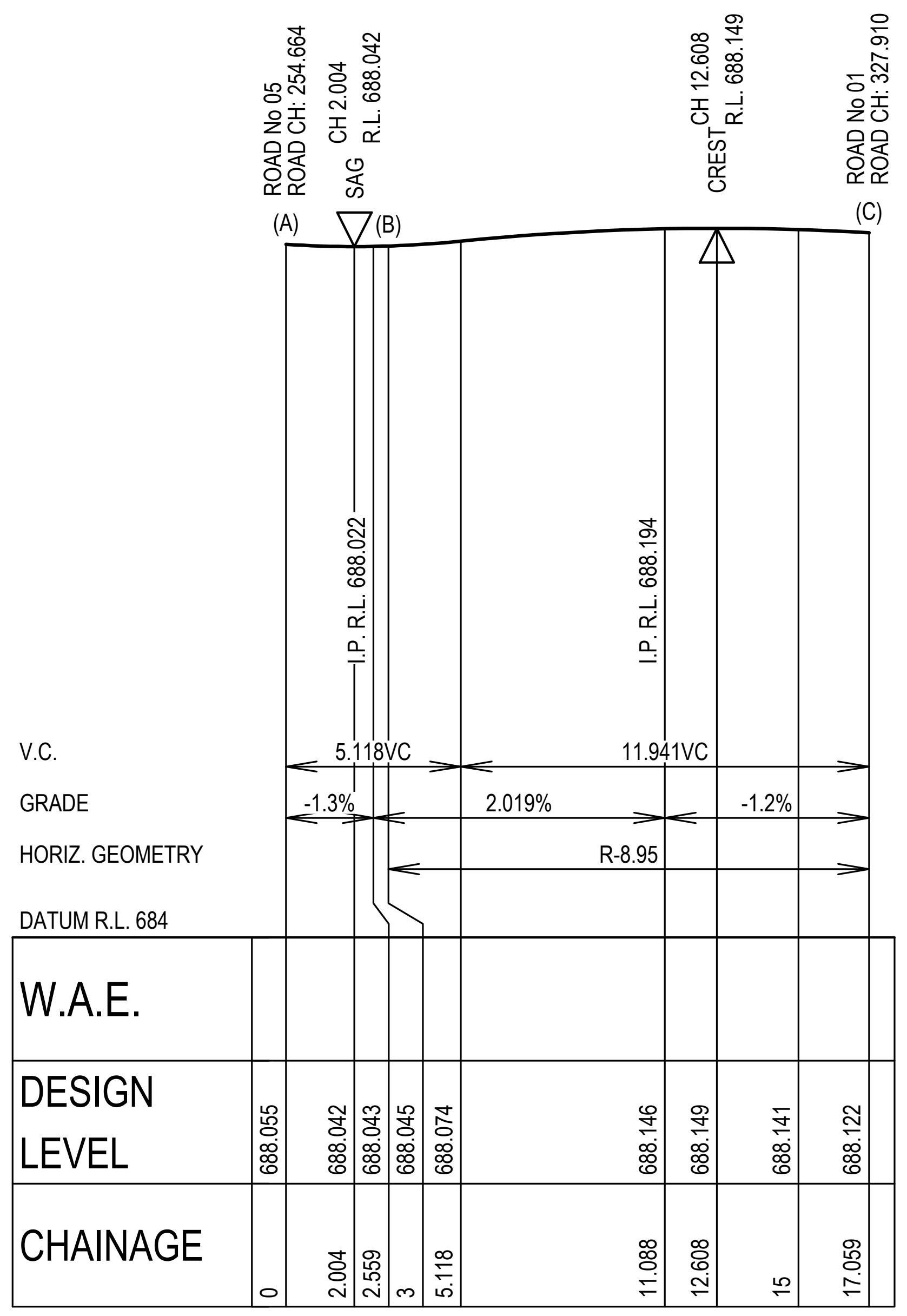

KERB RETURN KR15

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR12

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259015.88	6171740.85	102°44'51.02"		
7.03	259024.61	6171738.87		-8.95	14.059
14.06	259026.59	6171747.6	12°44'51.02"		

SETOUT TABLE KR13

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259032.54	6171746.26	192°44'51.02"		
7.03	259030.56	6171737.53		-8.95	14.059
14.06	259039.29	6171735.55	102°44'51.02"		

SETOUT TABLE KR14

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259037.16	6171721.58	282°44'51.02"		
7.03	259028.43	6171723.55		-8.95	14.059
14.06	259026.45	6171714.83	192°44'51.02"		
17.06	259025.79	6171711.9	192°44'51.02"		

SETOUT TABLE KR15

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259017.89	6171713.69	12°44'51.02"		
3	259018.55	6171716.61	12°44'51.02"		
10.03	259020.53	6171725.34		-8.95	14.059
17.06	259011.8	6171727.32	282°44'51.02"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

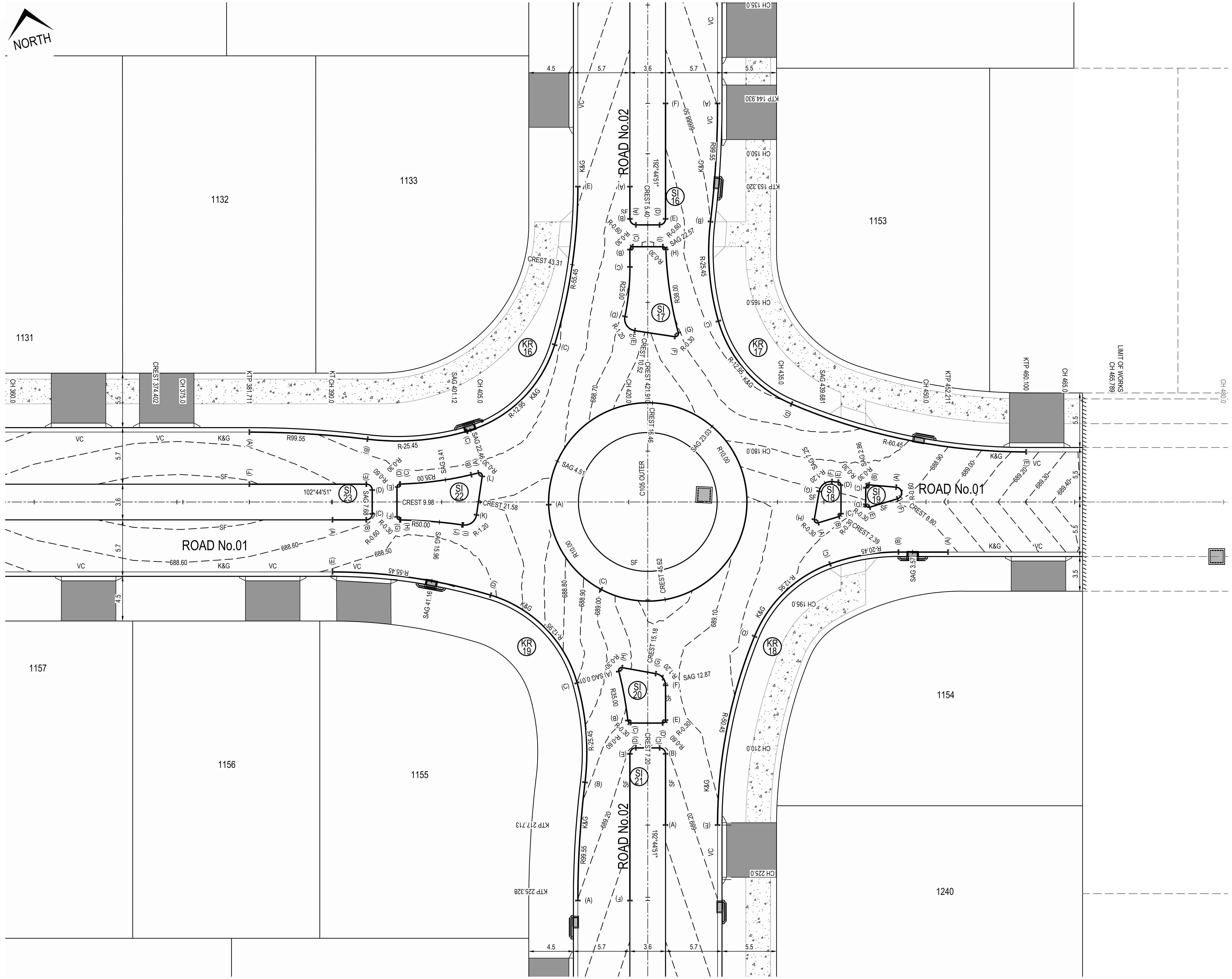
Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 08 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	407	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-407.dwg

SETOUT IS TO LIP OF KERB

NOTES:
1. REFER TO STRUCTURAL PLANS FOR JOINTING DETAIL
2. REFER TO DWG 409 & 410 FOR KERB PROFILES
3. REFER TO DWG 305 FOR SPLITTER ISLAND DETAIL



KERB RETURN PLAN - KR16, KR17, KR18, KR19, C105, SI16, SI17, SI18, SI19, SI20, SI21, SI22 & SI23
SCALE 1:200

ISSUED FOR CONSTRUCTION CERTIFICATE

A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)

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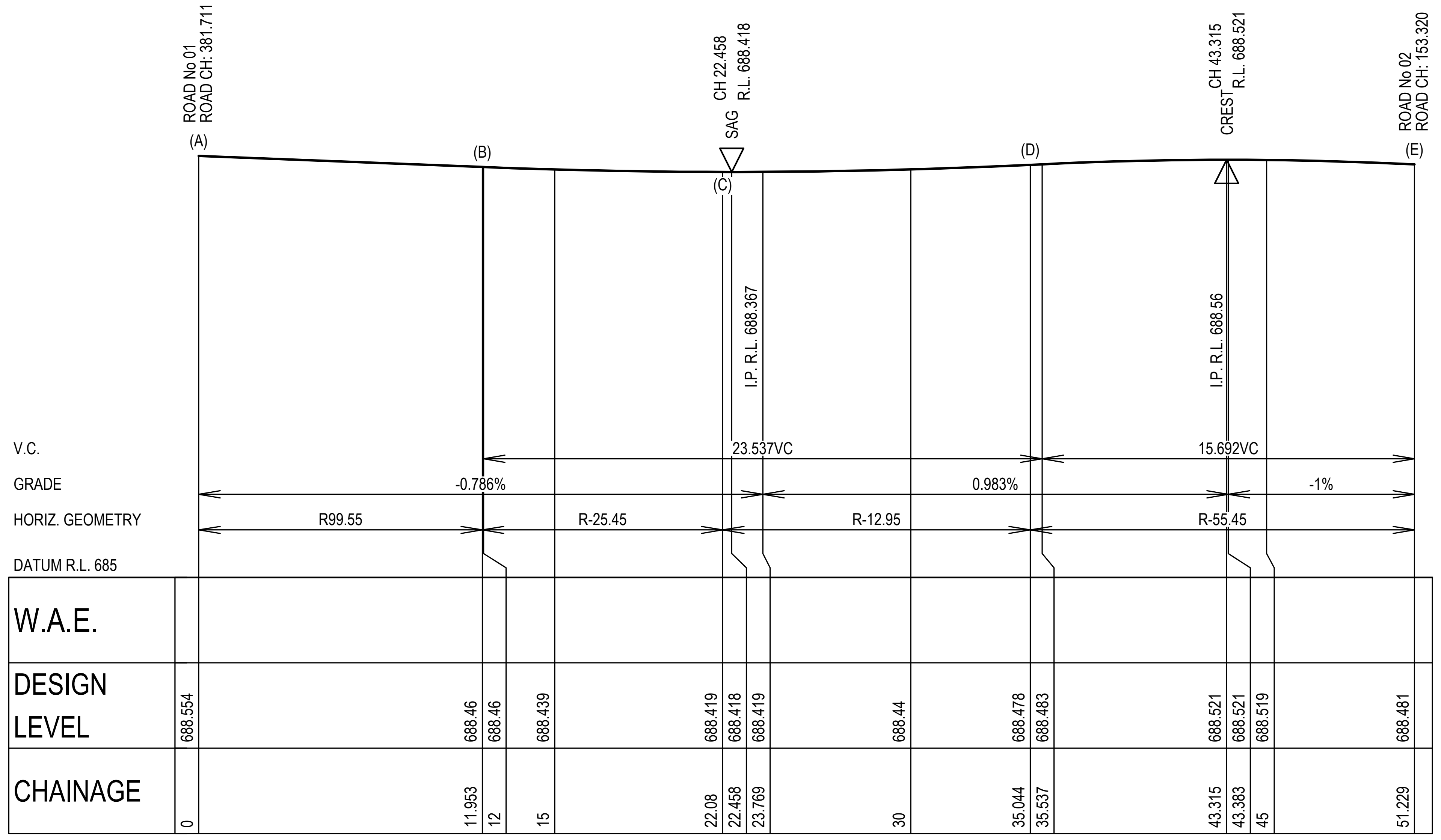
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 09 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	408	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-408.dwg



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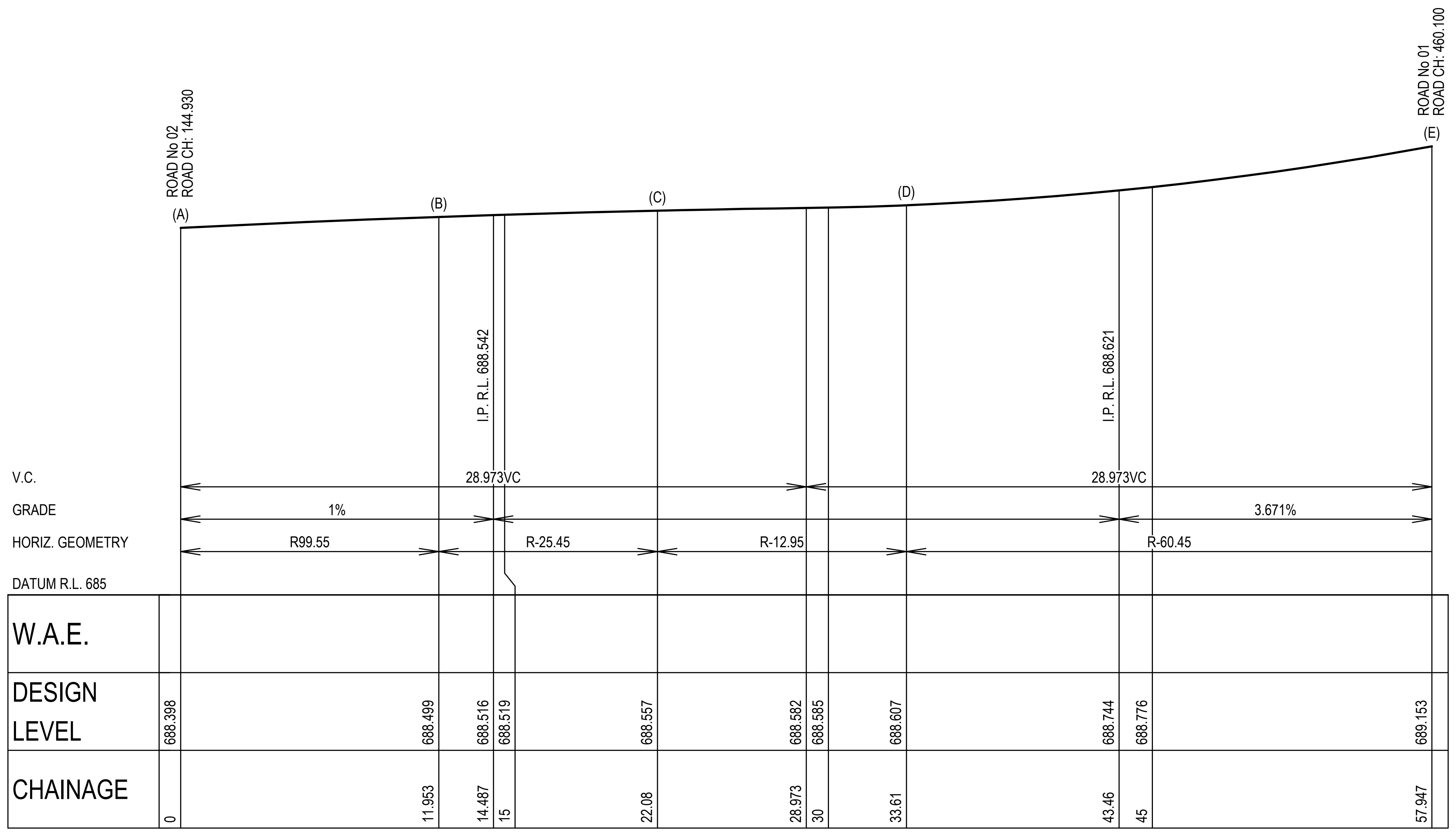
SCALE 1:40 (V)



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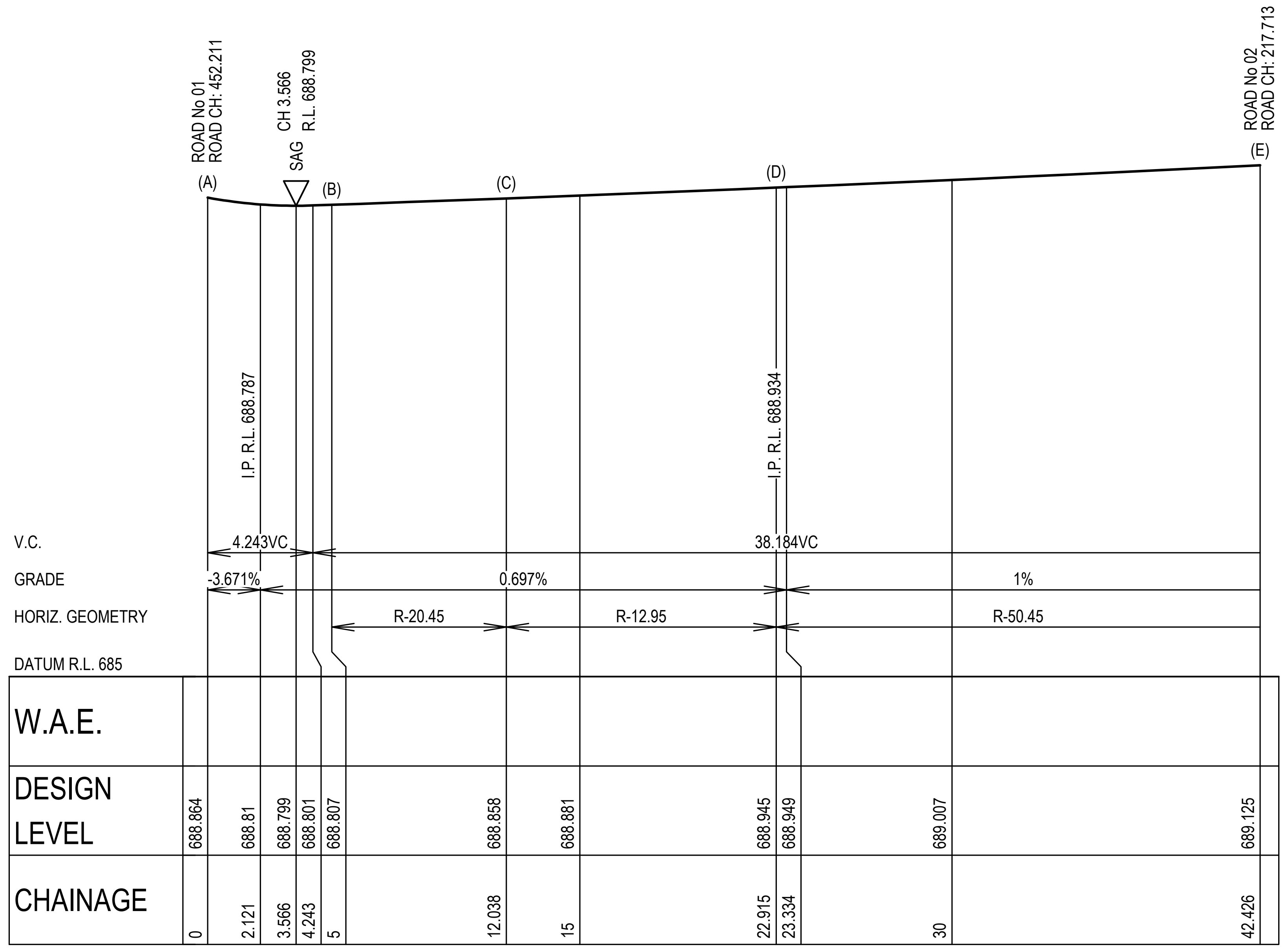
SCALE 1:40 (V)



KERB RETURN KR18
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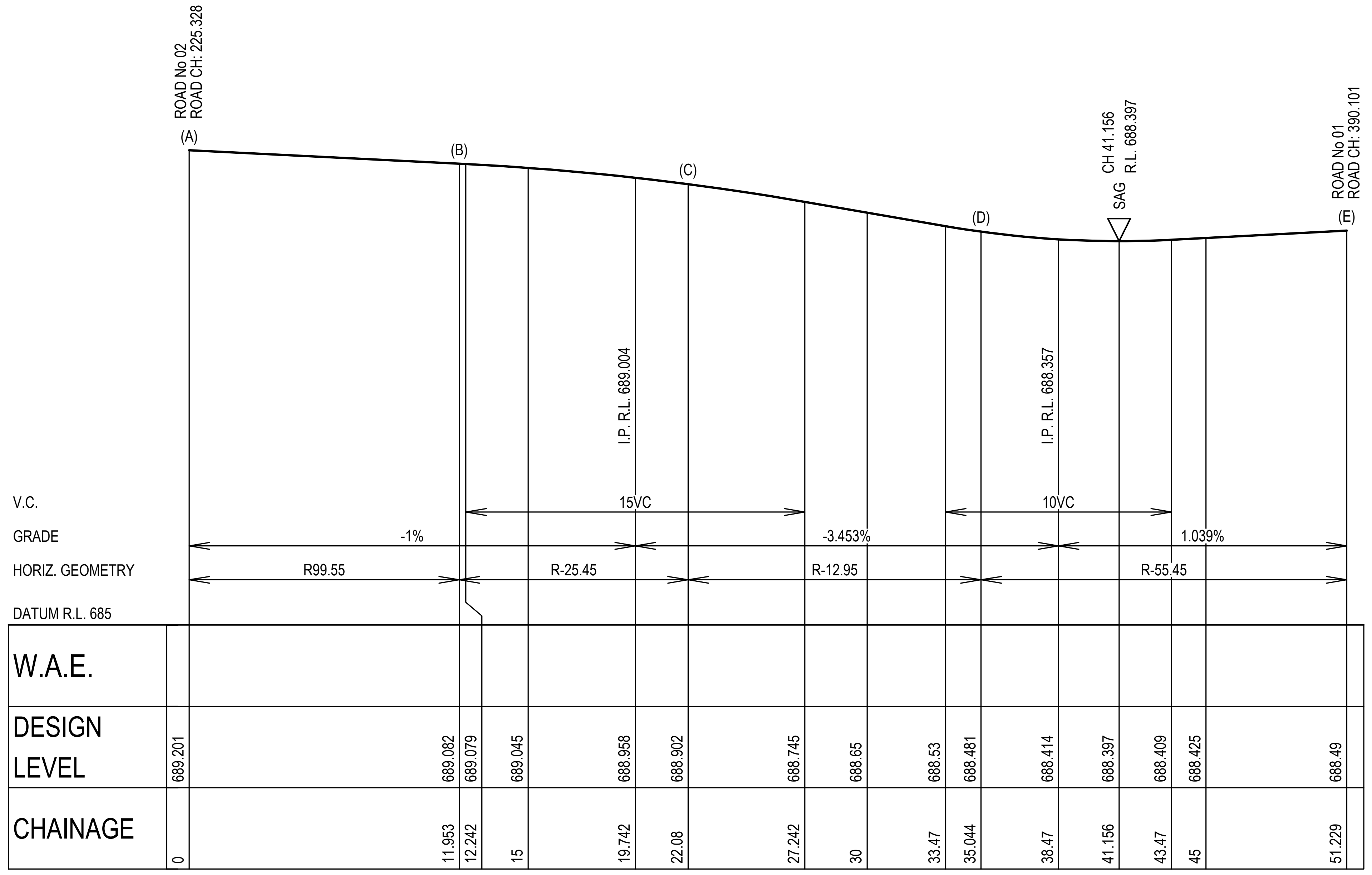
SCALE 1:40 (V)



KERB RETURN KR19
SCALE 1:200 (H)
SCALE 1:40 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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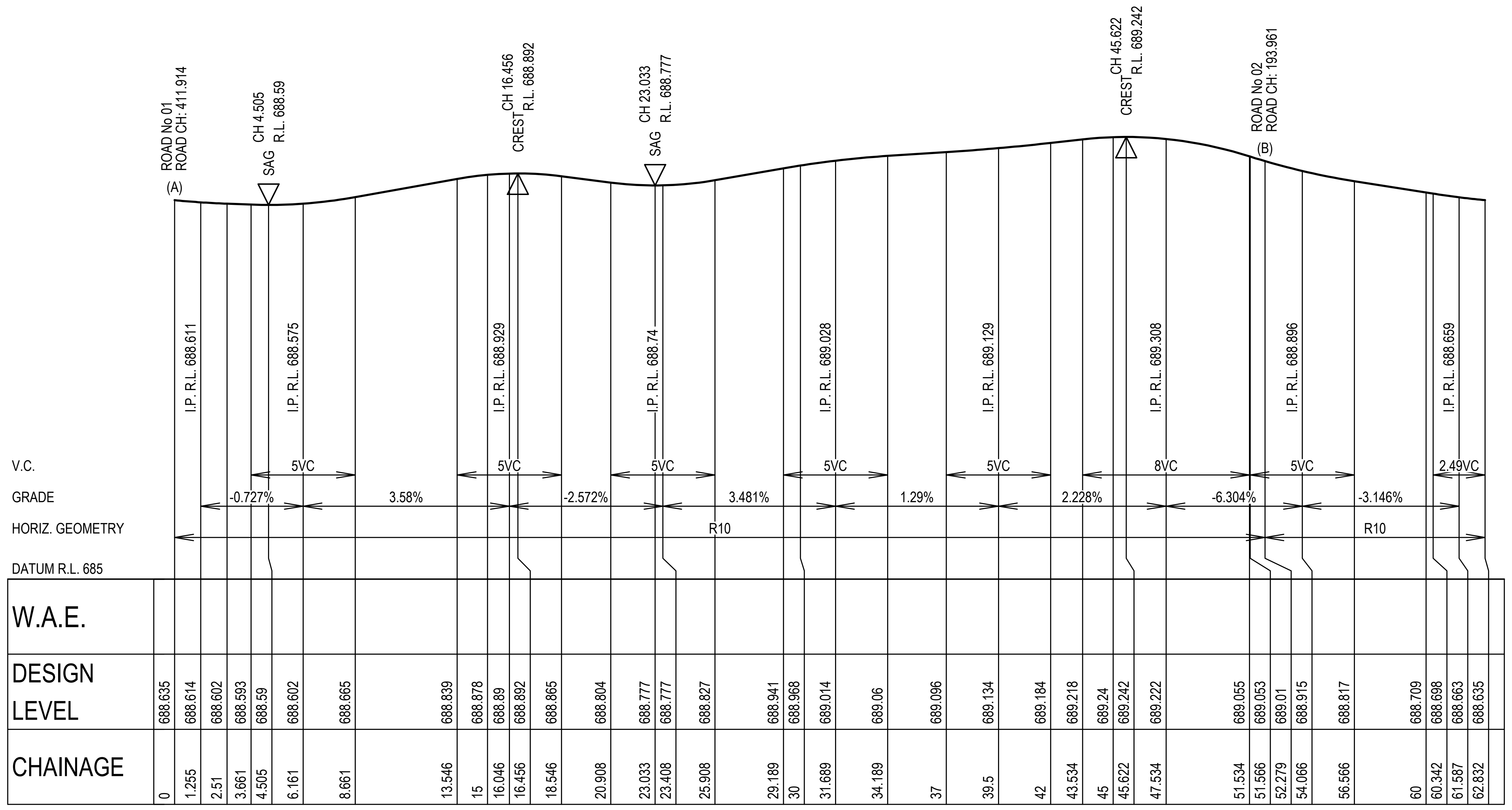
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 10 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	409	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\S\data\ORION-SYN



KERB RETURN C105 OUTER

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE C105 OUTER

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259095.22	6171715.39			
8.71	259097.53	6171727.05		10	17.426
17.43	259108.62	6171722.79	111°01'41.40"		
26.14	259119.72	6171718.52		10	17.426
34.85	259113.62	6171708.32	210°52'25.44"		
43.57	259107.52	6171698.12		10	17.426
52.28	259098.51	6171705.87	310°43'09.48"		
57.56	259094.09	6171709.67		10	10.553

SETOUT TABLE KR16

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259067.38	6171729.2	102°44'51.01"		
5.98	259073.22	6171727.88		99.55	11.953
11.95	259078.85	6171725.87	109°37'37.64"		
17.02	259083.69	6171724.14		-25.45	10.127
22.08	259088.81	6171724.43	86°49'41.74"		
28.56	259095.88	6171724.82		-12.95	12.964
35.04	259099.37	6171730.99	29°28'17.00"		
43.14	259103.38	6171738.08		-55.45	16.185
51.23	259105.18	6171746.03	12°44'51.02"		

SETOUT TABLE KR17

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259120.78	6171751.1	192°44'51.02"		
5.98	259119.46	6171745.27		99.55	11.953
11.95	259117.45	6171739.63	199°37'37.67"		
17.02	259115.73	6171734.8		-25.45	10.127
22.08	259116.01	6171729.68	176°49'41.48"		
27.85	259116.35	6171723.51		-12.95	11.53
33.61	259121.36	6171719.89	125°48'51.07"		
45.78	259131.37	6171712.67		-60.45	24.337
57.95	259143.4	6171709.95	102°44'51.02"		

SETOUT TABLE SI17

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259109.25	6171738.9			
0.24	259108.96	6171738.96		-0.3	0.471
0.47	259108.89	6171738.67	192°44'51.02"		
2.22	259108.51	6171736.97	192°44'51.02"		
4.73	259107.95	6171734.51		25	5.033
7.25	259106.91	6171732.2	204°16'56.72"		
8.22	259106.39	6171731.05		-1.2	1.949
9.2	259107.57	6171730.59	111°12'51.19"		
13.3	259111.39	6171729.11	111°12'51.19"		
13.59	259111.82	6171728.94		-0.3	0.594
13.89	259111.8	6171729.4	357°49'45.03"		
18.15	259111.64	6171733.68		38	8.523
22.41	259112.43	6171737.88	10°40'49.39"		
22.64	259112.49	6171738.17		-0.3	0.46
22.87	259112.2	6171738.23	282°44'14.73"		

SETOUT TABLE SI18

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259121.34	6171707.6			
2.19	259123.52	6171707.76	85°51'42.90"		
2.38	259123.74	6171707.78		-0.3	0.383
2.57	259123.79	6171707.99	12°44'51.02"		
5.46	259124.43	6171710.81	12°44'51.02"		
5.68	259124.49	6171711.08		-0.3	0.445
5.9	259124.23	6171711.16	287°40'25.21"		
6.55	259123.61	6171711.36	287°40'25.21"		
7.44	259122.56	6171711.69		-1.2	1.783
8.33	259122.14	6171710.67	202°33'15.99"		
11.21	259121.04	6171708.02	202°33'15.99"		
11.51	259120.85	6171707.57		-0.3	0.611
11.82	259121.34	6171707.6	85°51'42.90"		

SETOUT TABLE KR18

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259133.47	6171701.84	282°44'50.05"		
5	259128.6	6171702.94	282°44'50.05"		
8.52	259125.13	6171703.73		-20.45	7.038
12.04	259121.6	6171703.3	263°01'39.02"		
17.48	259115.86	6171702.59		-12.95	10.876
22.91	259112.55	6171697.85	214°54'24.11"		
32.67	259106.9	6171689.75		-50.45	19.512
42.43	259104.72	6171680.11	192°44'51.02"		

SETOUT TABLE KR19

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259089.29	6171675.8	12°44'51.02"		
5.98	259090.61	6171681.64		99.55	11.953
11.95	259092.62	6171687.27	19°37'37.67"		
17.02	259094.34	6171692.1		-25.45	10.127
22.08	259094.06	6171697.23	356°49'41.74"		
28.56	259093.67	6171704.3		-12.95	12.964
35.04	259087.5	6171707.79	299°28'17.26"		
43.14	259080.4	6171711.8		-55.45	16.185
51.23	259072.45	6171713.59	282°44'51.01"		

SETOUT TABLE SI16

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259110.3	6171744.87	192°44'51.02"		
3.26	259109.58	6171741.69	192°44'51.02"		
3.73	259109.45	6171741.11		-0.6	0.942
4.2	259110.03	6171740.98	102°44'48.35"		
6.6	259112.37	6171740.45	102°44'48.35"		
7.07	259112.96	6171740.32		-0.6	0.942
7.54	259113.09	6171740.9	12°44'51.02"		
19.19	259115.66	6171752.26	12°44'51.02"		

SETOUT TABLE SI22

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259089.03	6171720.08			
0.77	259088.26	6171720.07	269°18'46.92"		
4.39	259084.63	6171720.02		35	7.24
8.01	259081.07	6171720.73			
8.03	259081.04	6171720.73			
8.26	259080.76	6171720.79		-0.3	0.463
8.5	259080.69	6171720.5	192°44'47.37"		
11.51	259080.03	6171717.57	192°44'47.37"		
11.74	259079.96	6171717.28		-0.3	0.466
11.97	259080.25	6171717.21	103°45'18.21"		
12.03	259080.3	6171717.2	103°45'18.21"		
15.15	259083.34	6171716.45		50	6.249
18.28	259086.26	6171715.33	110°54'59.17"		
18.37	259086.35	6171715.3	110°54'59.17"		
19.31	259087.46	6171714.88		-1.2	1.879
20.25	259087.89	6171715.99	21°11'25.62"		
24.19	259089.32	6171719.67	21°11'25.62"		
24.49	259089.48	6171720.09		-0.3	0.592
24.79	259089.03	6171720.08	268°08'20.96"		

SETOUT TABLE SI19

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259129.82	6171709.38			
2.76	259127.19	6171710.22	287°40'25.21"		
3.01	259126.88	6171710.31		-0.3	0.497
3.26	259126.81	6171710	192°44'51.02"		
4.93	259126.44	6171708.36	192°44'51.02"		
5.21	259126.35	6171707.97		-0.3	0.56
5.49	259126.75	6171708	85°51'42.90"		
8.43	259129.68	6171708.21	85°51'42.90"		
8.84	259130.18	6171708.24		-0.6	0.828
9.26	259130.24	6171708.74	6°46'04.06"		
9.67	259130.29	6171709.23		-0.6	0.828
10.09	259129.82	6171709.38	287°40'25.21"		

SETOUT TABLE SI20

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259098.41	6171697.45			
2.52	259098.49	6171694.92		35	5.05
5.05	259098.21	6171692.41	186°24'21.05"		
5.27	259098.18	6171692.14		-0.3	0.438
5.49	259098.44	6171692.08	102°44'51.02"		
8.7	259101.58	6171691.37	102°44'51.02"		
8.94	259101.87	6171691.3		-0.3	0.471
9.18	259101.94	6171691.6	12°44'51.02"		
12.68	259102.71	6171695.02	12°44'51.02"		
13.52	259102.93	6171696		-1.2	1.672
14.36	259102.01	6171696.39	292°53'33.10"		
17.81	259098.83	6171697.73	292°53'33.10"		
18.11	259098.39	6171697.92		-0.3	0.601

SETOUT TABLE SI21

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259099.6	6171681.27	12°44'51.02"		
7.18	259101.19	6171688.28	12°44'51.02"		
7.66	259101.32	6171688.87		-0.6	0.942
8.13	259100.73	6171689	282°44'49.43"		
10.53	259098.39	6171689.53	282°44'49.43"		
11	259097.81	6171689.66		-0.6	0.942
11.47	259097.67	6171689.07	192°44'51.02"		
26.27	259094.41	6171674.64	192°44'51.02"		

SETOUT TABLE SI23

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259073.61	6171718.71	102°44'51.02"		
3.41	259076.94	6171717.96	102°44'51.02"		
3.88	259077.52	6171717.83		-0.6	0.942
4.35	259077.66	6171718.42	12°44'53.14"		
6.75	259078.18	6171720.76	12°44'53.14"		
7.22	259078.32	6171721.34		-0.6	0.942
7.69	259077.73	6171721.47	282°44'51.02"		
19.49	259066.22	6171724.08	282°44'51.02"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
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Project:
STAGE 1
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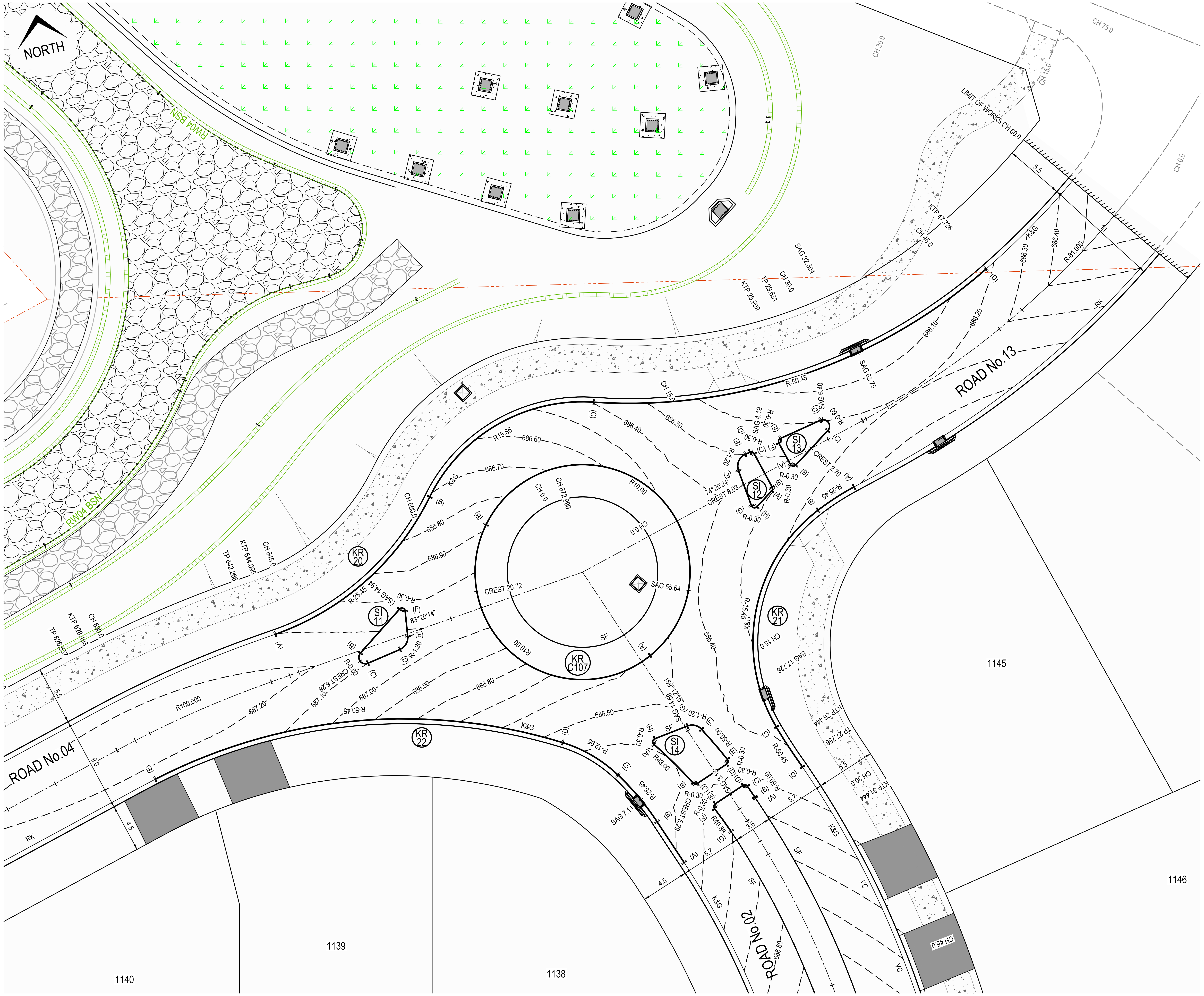
Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 11 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	410	A

SETOUT IS TO LIP OF KERB

NOTES:

1. REFER TO STRUCTURAL PLANS FOR JOINTING DETAIL
2. REFER TO DWG 412 & 413 FOR KERB PROFILES
3. REFER TO DWG 305 FOR SPLITTER ISLAND DETAIL



KERB RETURN PLAN - KR20, KR21, KR22, C107, SI11, SI12, SI13 & SI14

SCALE 1:200

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
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ROAD & DRAINAGE DESIGN

Title:
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SECTIONS & SETOUT TABLES
SHEET 12 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	411	B

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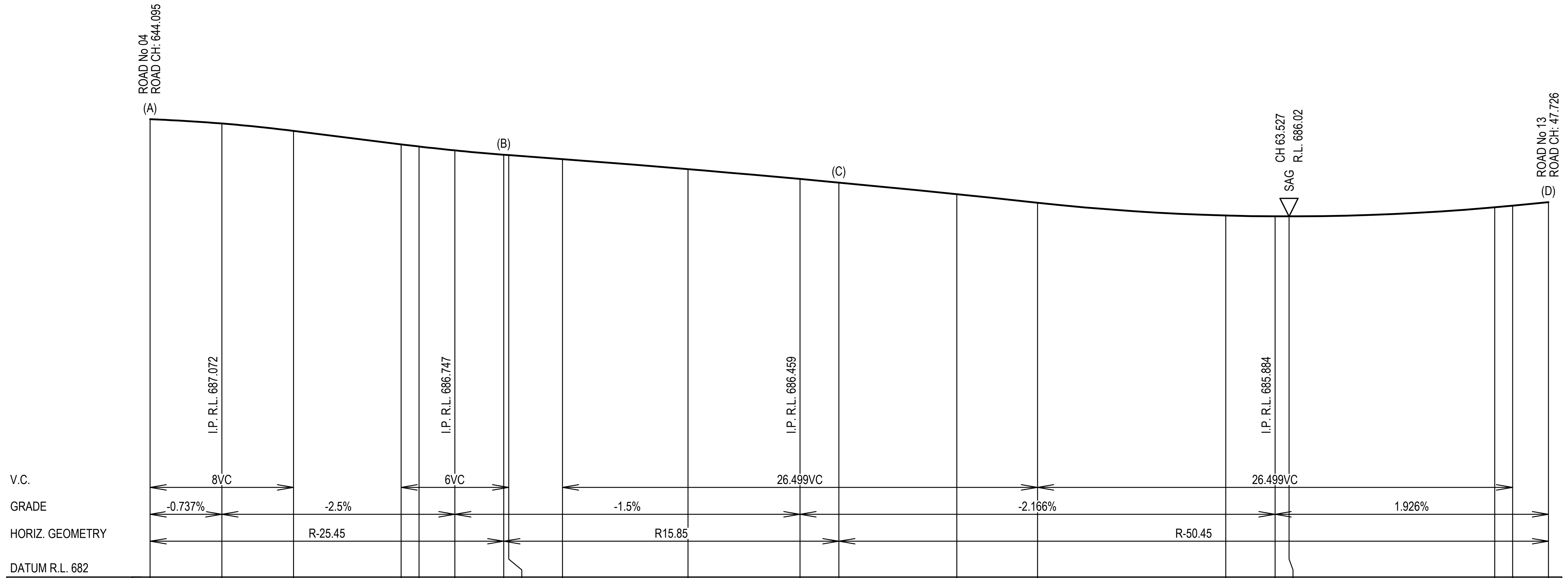

W.A.E.																				
DESIGN LEVEL	687.102	687.055	686.972	686.822	686.798	686.755	686.706	686.702	686.657	686.546	686.436	686.396	686.266	686.172	686.029	686.02	686.02	686.121	686.14	686.178
CHAINAGE	0	4	8	14	15	17	19.729	20	23	30	36.25	38.42	45	49.499	60	62.749	63.527	75	75.999	77.999

KERB RETURN KR20
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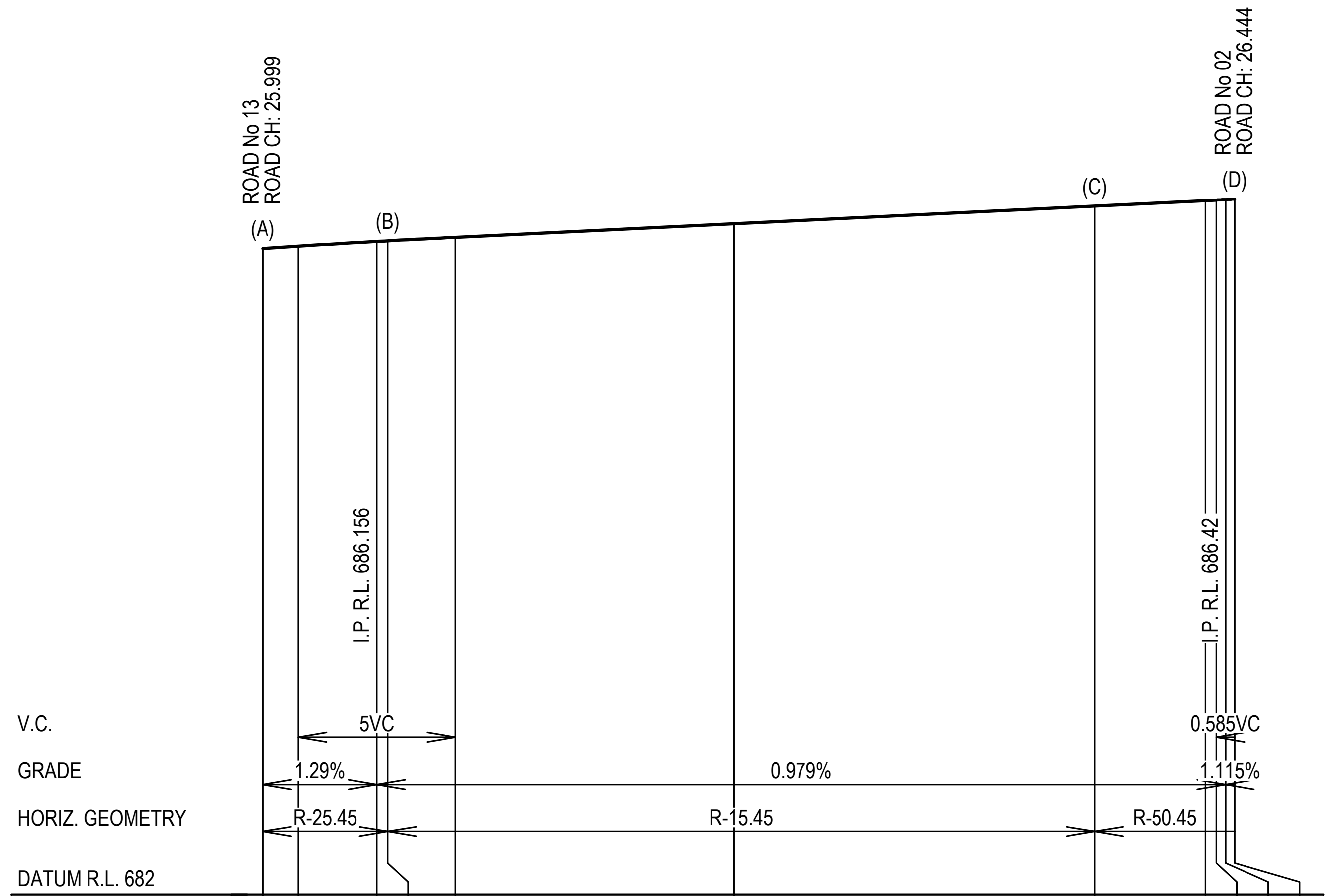
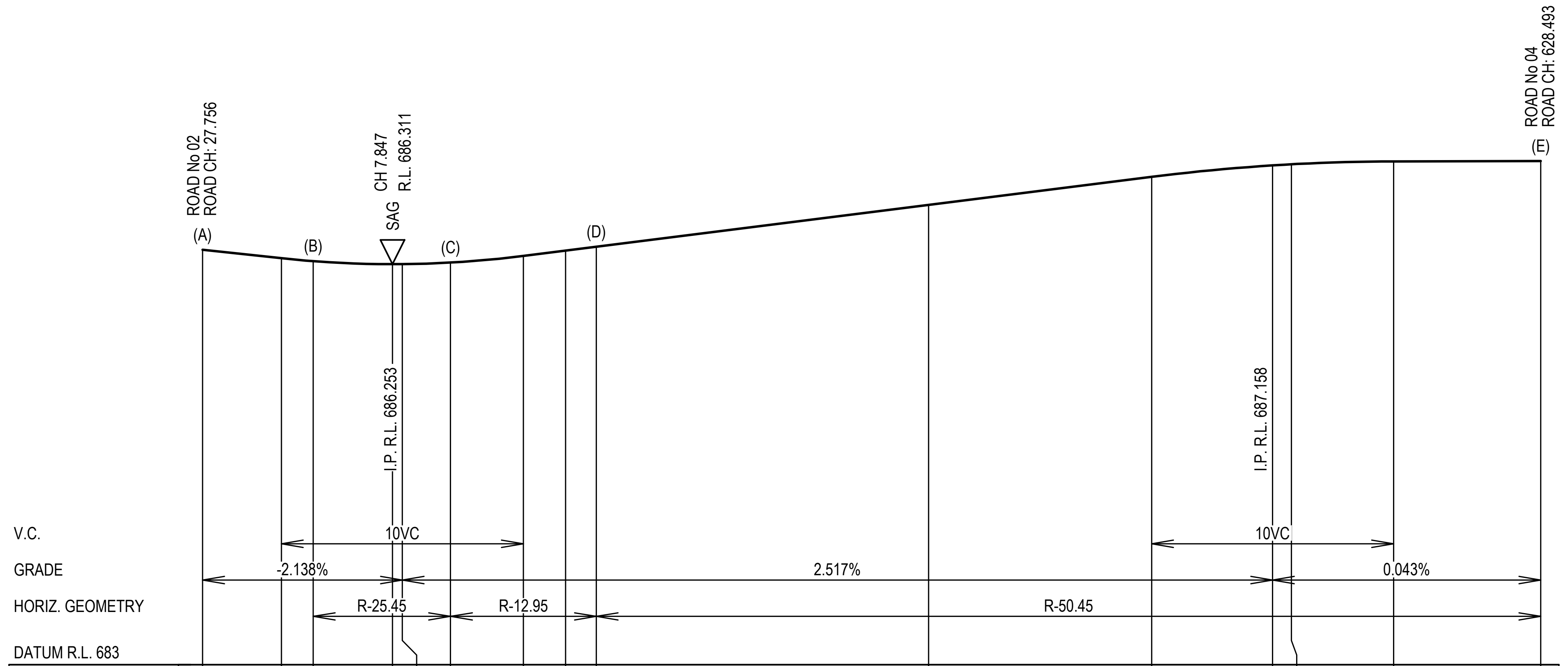
SCALE 1:40 (V)



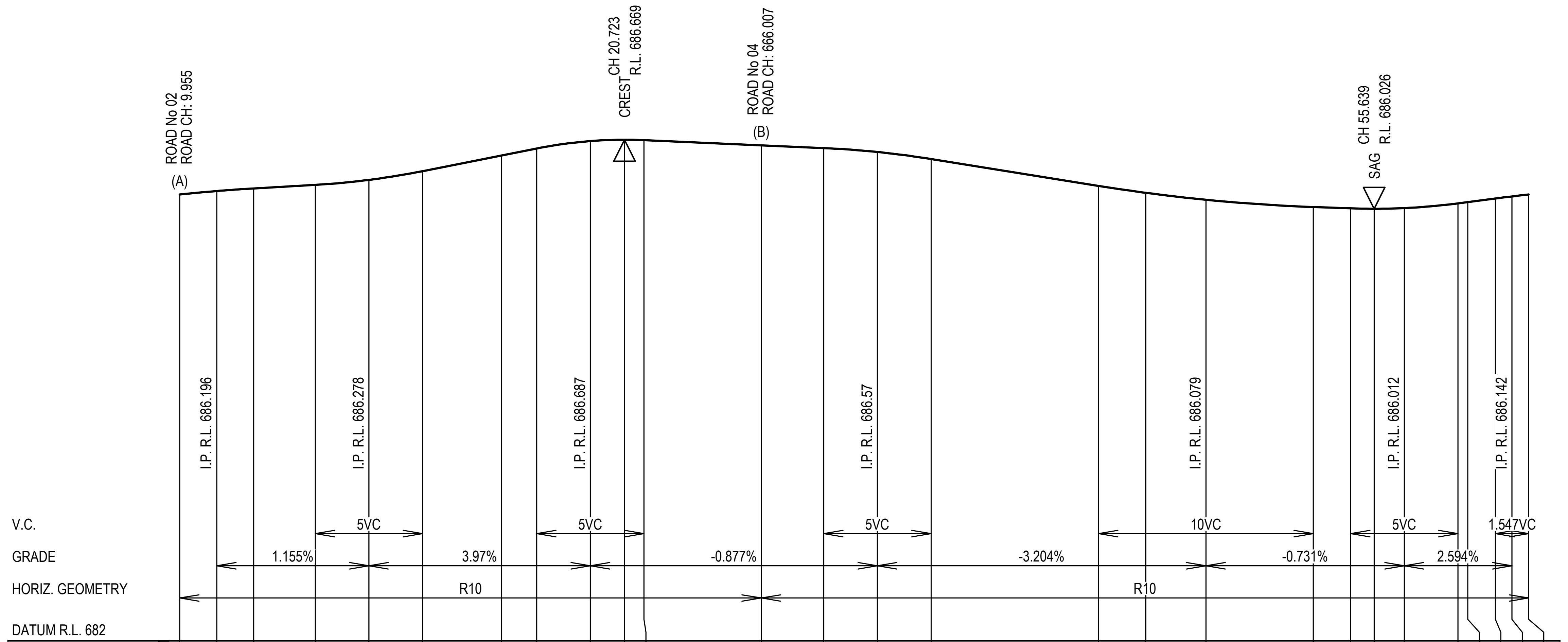
W.A.E.												
DESIGN LEVEL	686.109	686.124	686.154	686.158	686.18	686.267	686.38	686.414	686.418	686.421	686.424
CHAINAGE	0	1.131	3.631	3.978	6.131	15	26.479	30	30.35	30.642	30.935

KERB RETURN KR21
SCALE 1:200 (H)
SCALE 1:40 (V)



W.A.E.															
DESIGN LEVEL	686.429	686.36	686.335	686.311	686.311	686.324	686.379	686.422	686.454	686.8	687.032	687.127	687.136	687.16	687.163
CHAINAGE	0	3.254	4.572	7.847	8.254	10.246	13.254	15	16.271	30	39.219	44.219	45	49.219	55.301

KERB RETURN KR22
SCALE 1:200 (H)
SCALE 1:40 (V)



W.A.E.																											
DESIGN LEVEL	686.159	686.192	686.216	686.249	686.295	686.377	686.523	686.588	686.657	686.669	686.665	686.617	686.592	686.555	686.49	686.24	686.175	686.11	686.043	686.03	686.026	686.033	686.077	686.089	686.122	686.141	686.159
CHAINAGE	0	1.726	3.453	6.316	8.816	11.316	15	16.627	19.127	20.723	21.627	27.093	30	32.5	35	42.803	45	47.803	52.803	54.54	55.639	57.04	59.54	60	61.285	62.058	62.832

KERB RETURN C107 OUTER
SCALE 1:200 (H)
SCALE 1:40 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 13 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	412	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-412.dwg

SETOUT TABLE KR20

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259087.24	6171893.93	83°20'15.50"		
9.86	259097.56	6171895.14		-25.45	19.729
19.73	259104.08	6171903.22	38°55'19.07"		
29.07	259110.75	6171911.47		15.85	18.692
38.42	259120.91	6171908.46	106°29'22.80"		
58.21	259140.93	6171902.54		-50.45	39.579
78	259159.28	6171912.49	61°32'25.95"		

SETOUT TABLE KR21

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259142.81	6171895.42	254°20'25.09"		
1.99	259140.89	6171894.88		-25.45	3.978
3.98	259139.08	6171894.05	245°23'08.24"		
15.23	259126.56	6171888.32		-15.45	22.502
26.48	259130.83	6171875.22	161°56'20.18"		
28.71	259131.52	6171873.1		-50.45	4.456
30.93	259132.4	6171871.05	156°52'43.81"		

SETOUT TABLE KR22

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259119.68	6171864.82	339°12'15.10"		
4.57	259118.06	6171869.09			
7.41	259117.04	6171871.75		-25.45	5.675
10.25	259115.47	6171874.13			
13.26	259113.77	6171876.68		-12.95	6.025
16.27	259111.11	6171878.21	299°46'18.41"		
35.79	259093.27	6171888.41		-50.45	39.03
55.3	259073.38	6171883.25	255°26'45.62"		

SETOUT TABLE SI11

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259099.04	6171893.67			
5.47	259094.59	6171890.48	234°25'05.09"		
5.88	259094.2	6171890.2		-0.6	0.811
6.28	259094.39	6171889.76	156°57'21.48"		
6.69	259094.58	6171889.32		-0.6	0.811
7.1	259095.05	6171889.4	79°29'37.88"		
10.35	259098.25	6171890	79°29'37.88"		
11.11	259099.12	6171890.16		-1.2	1.518
11.87	259099.23	6171891.03	6°59'28.26"		
14.24	259099.51	6171893.39	6°59'28.26"		
14.42	259099.54	6171893.58		-0.3	0.347
14.59	259099.37	6171893.68	300°42'16.67"		
14.76	259099.2	6171893.78		-0.3	0.347
14.94	259099.04	6171893.67	234°25'05.09"		

SETOUT TABLE SI12

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259135.27	6171896.76			
0.19	259135.45	6171896.88		-0.3	0.374
0.37	259135.39	6171897.09	344°20'24.27"		
3.92	259134.43	6171900.5	344°20'24.27"		
4.14	259134.36	6171900.77		-0.3	0.45
4.37	259134.08	6171900.71	258°24'35.40"		
4.85	259133.61	6171900.62	258°24'35.40"		
5.75	259132.52	6171900.39		-1.2	1.8
6.65	259132.67	6171899.28	172°29'23.63"		
10.14	259133.12	6171895.82	172°29'23.63"		
10.45	259133.19	6171895.34		-0.3	0.612
10.75	259133.59	6171895.61	55°41'23.04"		

SETOUT TABLE SI13

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259137.51	6171898.77			
0.28	259137.62	6171898.36		-0.3	0.569
0.57	259137.97	6171898.6	55°41'23.04"		
4.96	259141.6	6171901.08	55°41'23.04"		
5.37	259142	6171901.35		-0.6	0.824
5.79	259141.81	6171901.81	337°02'59.22"		
6.2	259141.62	6171902.26		-0.6	0.824
6.61	259141.14	6171902.16	258°24'35.40"		
10.71	259137.12	6171901.34	258°24'35.40"		
10.96	259136.8	6171901.27		-0.3	0.493
11.2	259136.89	6171900.96	164°16'25.53"		

SETOUT TABLE SI14

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259119.36	6171876.19			
2.57	259120.87	6171874.1		43	5.145
5.14	259122.13	6171871.86	150°48'46.15"		
5.36	259122.26	6171871.63		-0.3	0.427
5.57	259122.5	6171871.72	69°12'15.10"		
8.85	259125.56	6171872.88	69°12'15.10"		
9.1	259125.87	6171873		-0.3	0.497
9.35	259125.72	6171873.3	334°13'31.47"		
11.19	259124.92	6171874.96		-50	3.695
13.04	259124	6171876.56	329°59'27.45"		
13.76	259123.59	6171877.27		-1.2	1.437
14.48	259122.78	6171877.15	261°23'54.58"		
17.74	259119.56	6171876.66	261°23'54.59"		
18.04	259119.07	6171876.59		-0.3	0.615

SETOUT TABLE SI15

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259127.49	6171869.18	339°12'15.55"		
0.13	259127.44	6171869.31	339°12'15.55"		
0.74	259127.22	6171869.88		-50	1.221
1.35	259126.99	6171870.44	337°48'19.13"		
1.58	259126.88	6171870.71		-0.3	0.464
1.82	259126.61	6171870.61	249°12'15.10"		
4.92	259123.71	6171869.51	249°12'15.10"		
5.17	259123.4	6171869.39		-0.3	0.494
5.41	259123.54	6171869.1			
6.73	259124.1	6171867.9		40.883	2.636
8.05	259124.58	6171866.68	158°34'04.73"		

SETOUT TABLE C107 OUTER

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259120.84	6171884.3			
6.77	259113.63	6171880.74		10	13.546
13.55	259108.61	6171887.02	321°21'35.46"		
20.32	259103.58	6171893.3		10	13.546
27.09	259108.64	6171899.56	38°58'29.86"		
36.03	259116.46	6171909.22		10	17.87
44.96	259124.23	6171899.51	141°21'35.46"		
53.9	259131.99	6171889.8		10	17.87

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

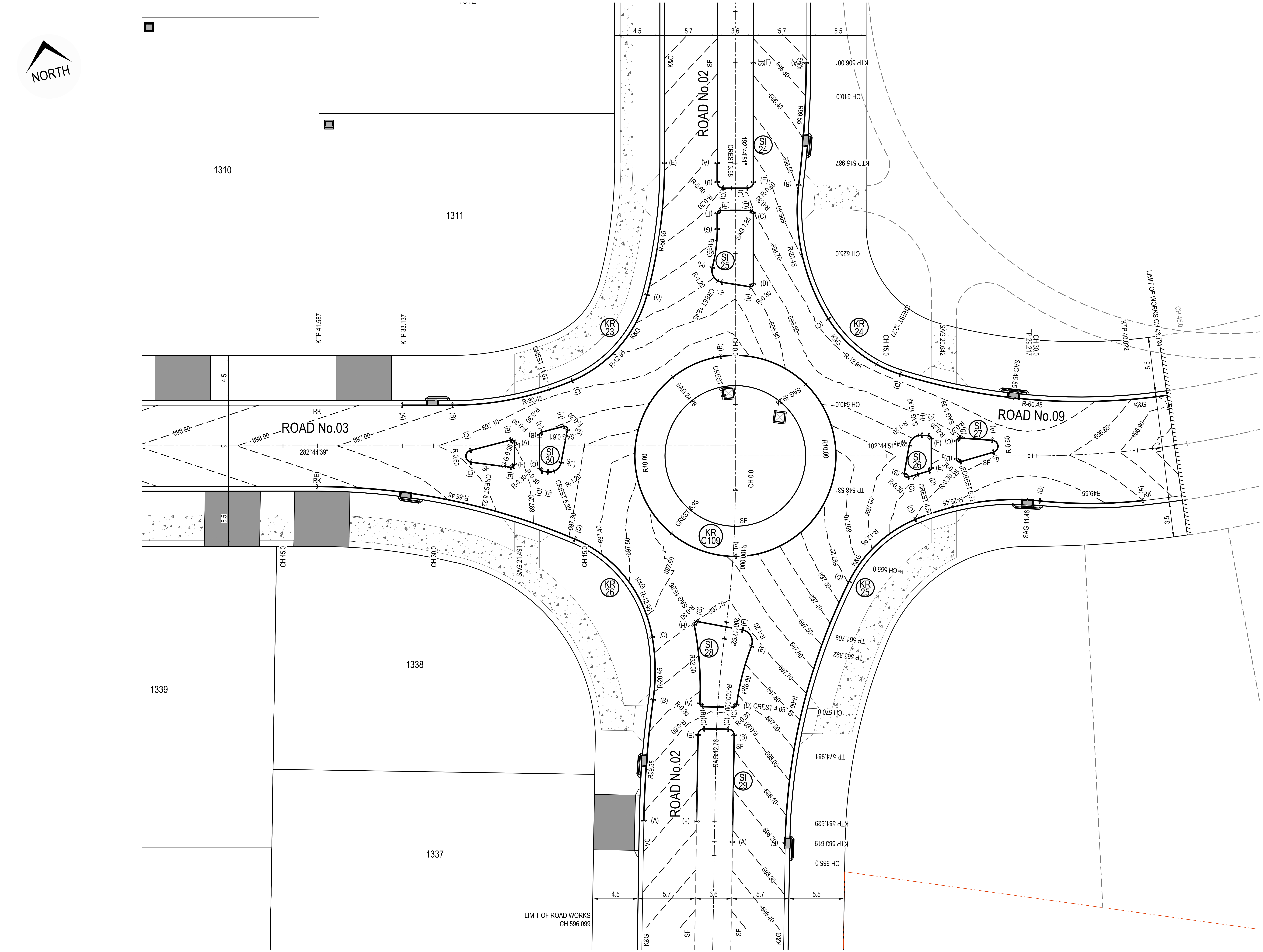
Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 14 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	413	A

SETOUT IS TO LIP OF KERB

NOTES:

1. REFER TO STRUCTURAL PLANS FOR JOINTING DETAIL
2. REFER TO DWG 415 & 416 FOR KERB PROFILES
3. REFER TO DWG 305 FOR SPLITTER ISLAND DETAIL



KERB RETURN PLAN - KR23, KR24, KR25, KR26, C109, SI25, SI26, SI27, SI28, SI29 & SI30

SCALE 1:200

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
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building a healthy lifestyle

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Project:
STAGE 1
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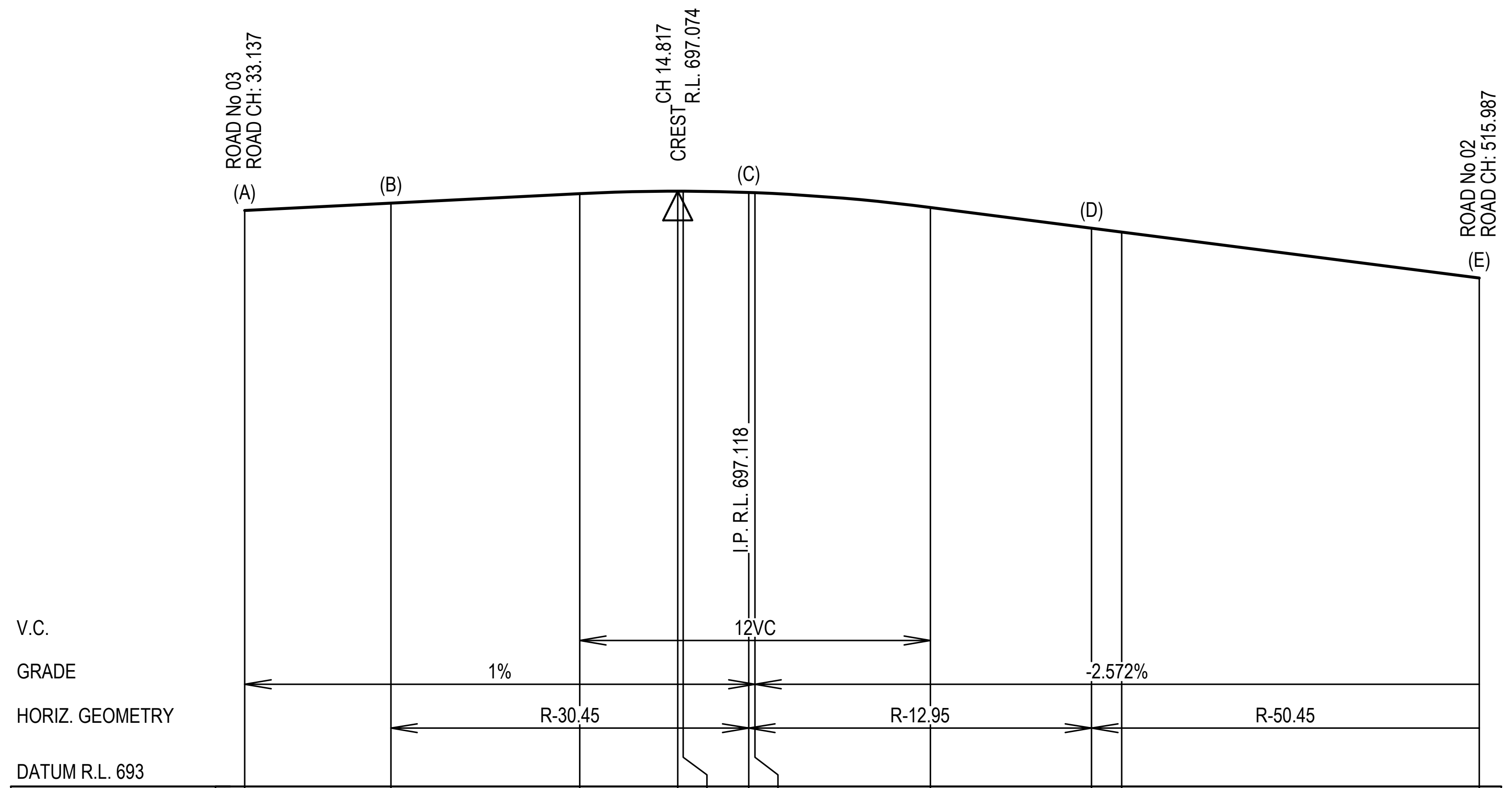
Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 15 OF 28

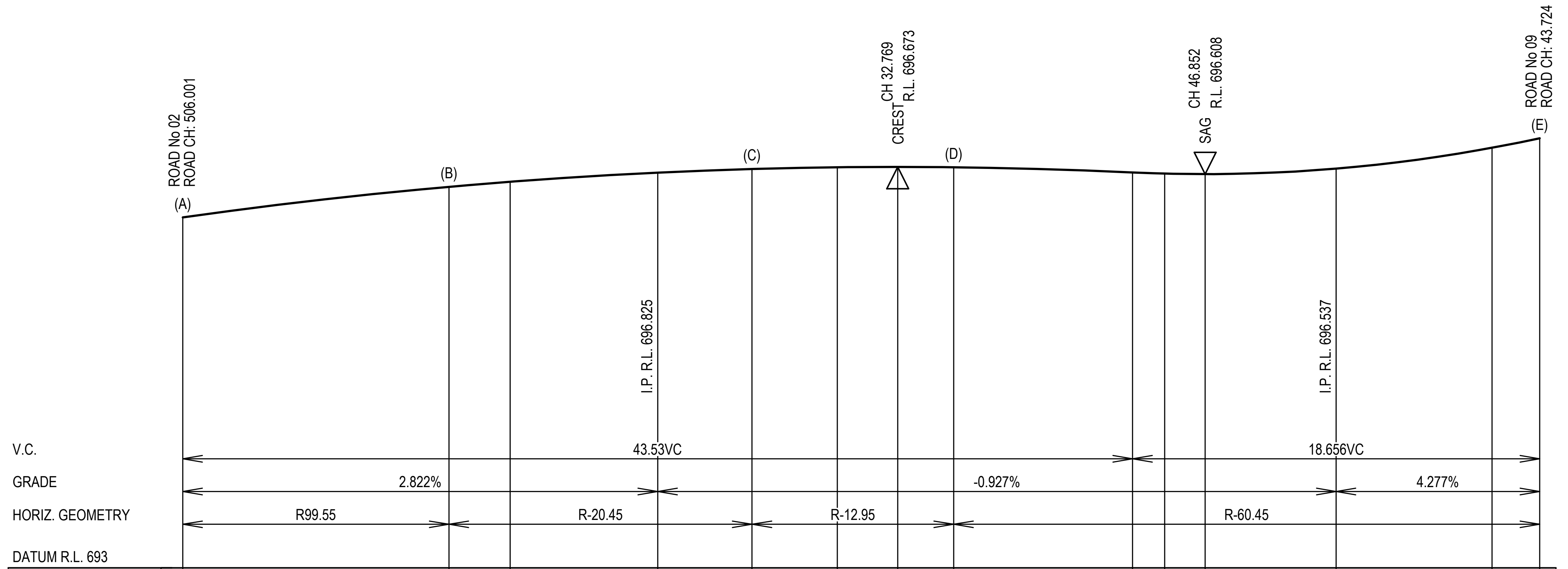
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	414	A



W.A.E.											
DESIGN LEVEL	696.943	696.993	697.058	697.074	697.074	697.066	697.064	696.963	696.821	696.795	696.48
CHAINAGE	0	5	11.457	14.817	15	17.245	17.457	23.457	28.974	30	42.237

KERB RETURN KR23

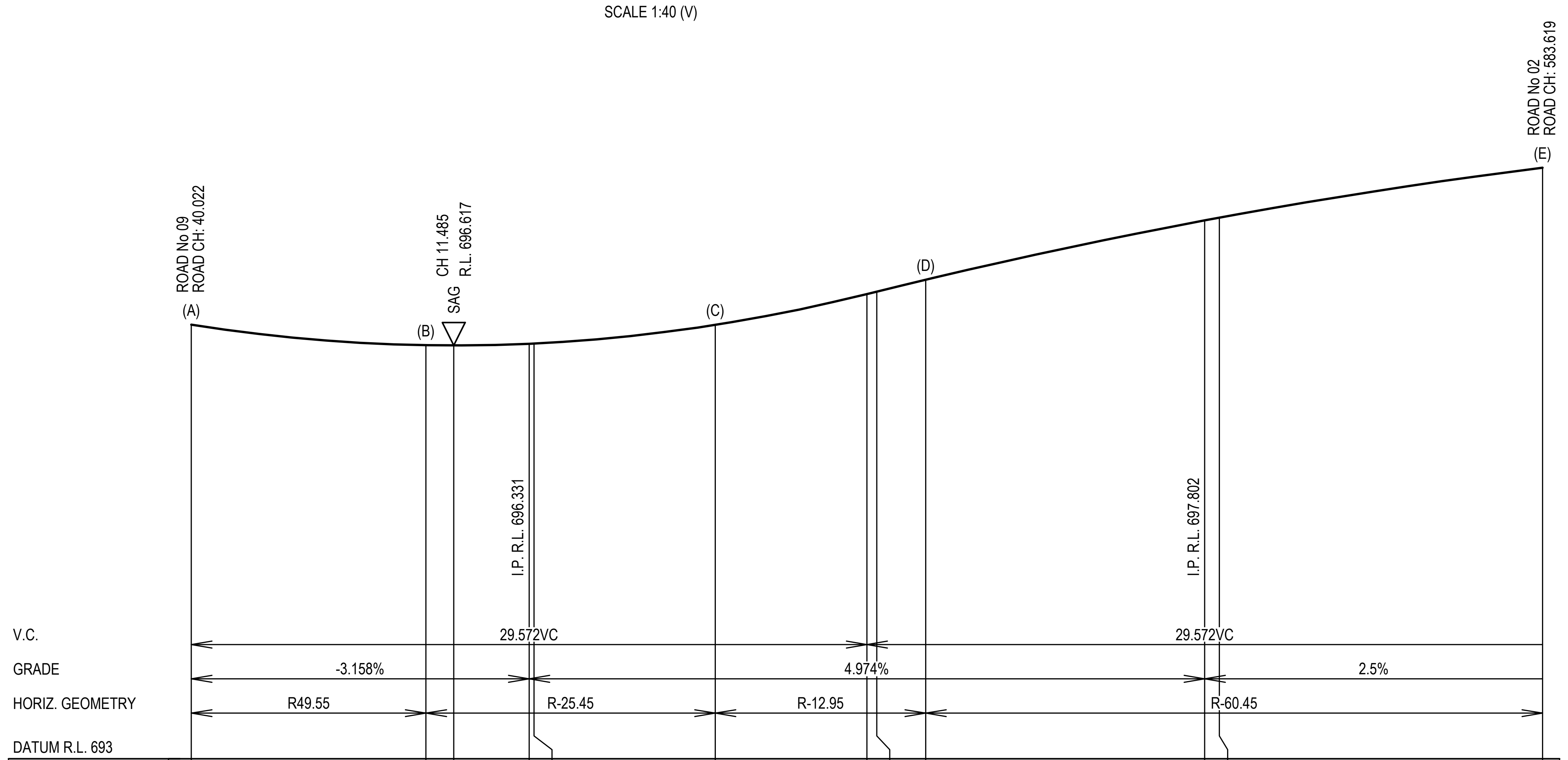
SCALE 1:200 (H)
SCALE 1:40 (V)



W.A.E.															
DESIGN LEVEL	696.211	696.491	696.537	696.621	696.654	696.67	696.673	696.67	696.623	696.613	696.608	696.658	696.849	696.936
CHAINAGE	0	12.2	15	21.765	26.09	30	32.769	35.329	43.53	45	46.852	52.858	60	62.186

KERB RETURN KR24

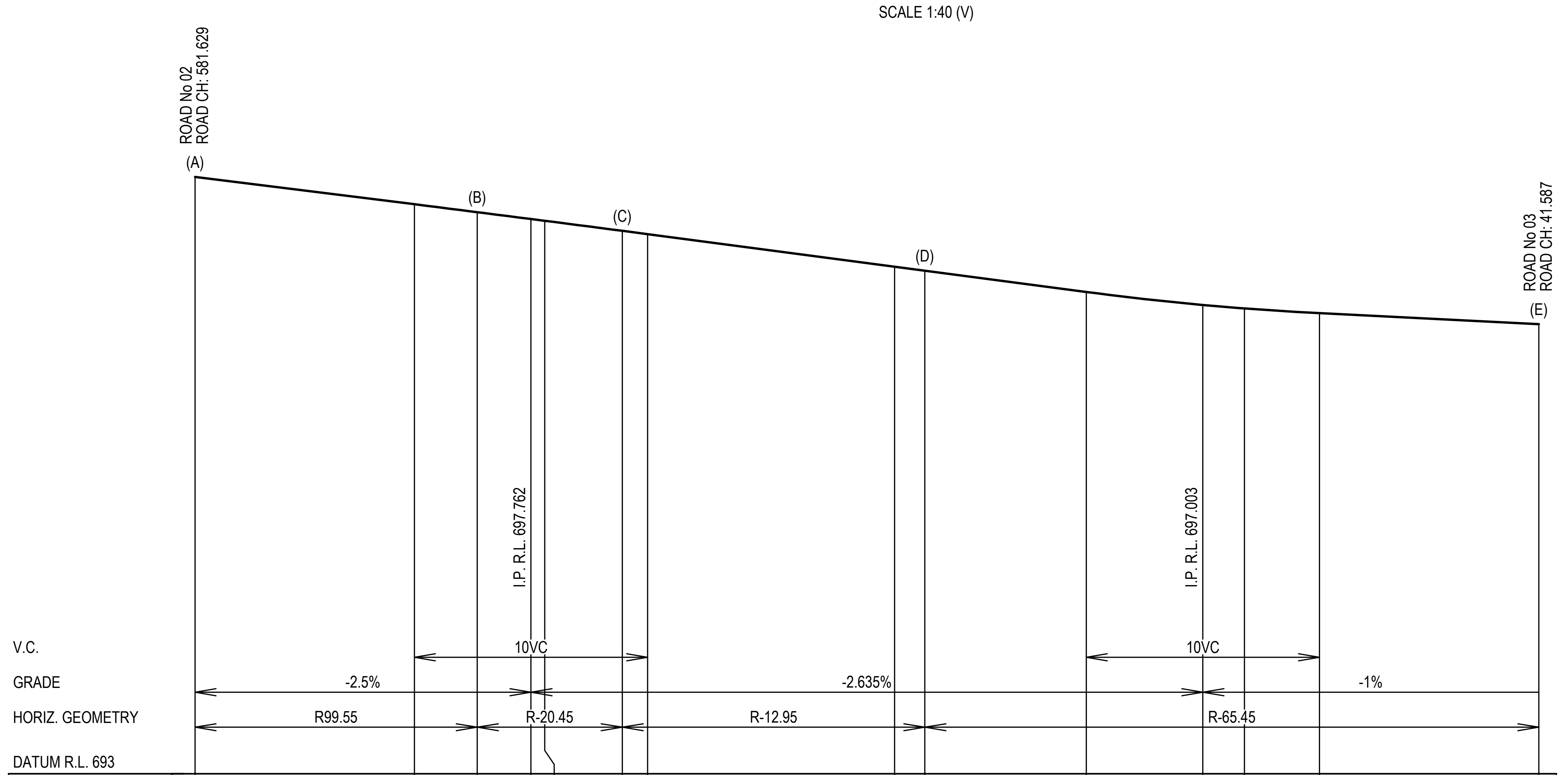
SCALE 1:200 (H)
SCALE 1:40 (V)



W.A.E.												
DESIGN LEVEL	696.798	696.619	696.617	696.632	696.634	696.797	697.067	697.088	697.192	697.711	697.735	698.172
CHAINAGE	0	10.271	11.485	14.786	15	22.935	29.572	30	32.141	44.358	45	59.143

KERB RETURN KR25

SCALE 1:200 (H)
SCALE 1:40 (V)



W.A.E.														
DESIGN LEVEL	698.122	697.887	697.819	697.76	697.745	697.659	697.63	697.351	697.317	697.134	697.023	696.993	696.953	696.858
CHAINAGE	0	9.406	12.103	14.406	15	18.321	19.406	30	31.297	38.219	43.219	45	48.219	57.626

KERB RETURN KR26

SCALE 1:200 (H)
SCALE 1:40 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
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Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 16 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	415	A

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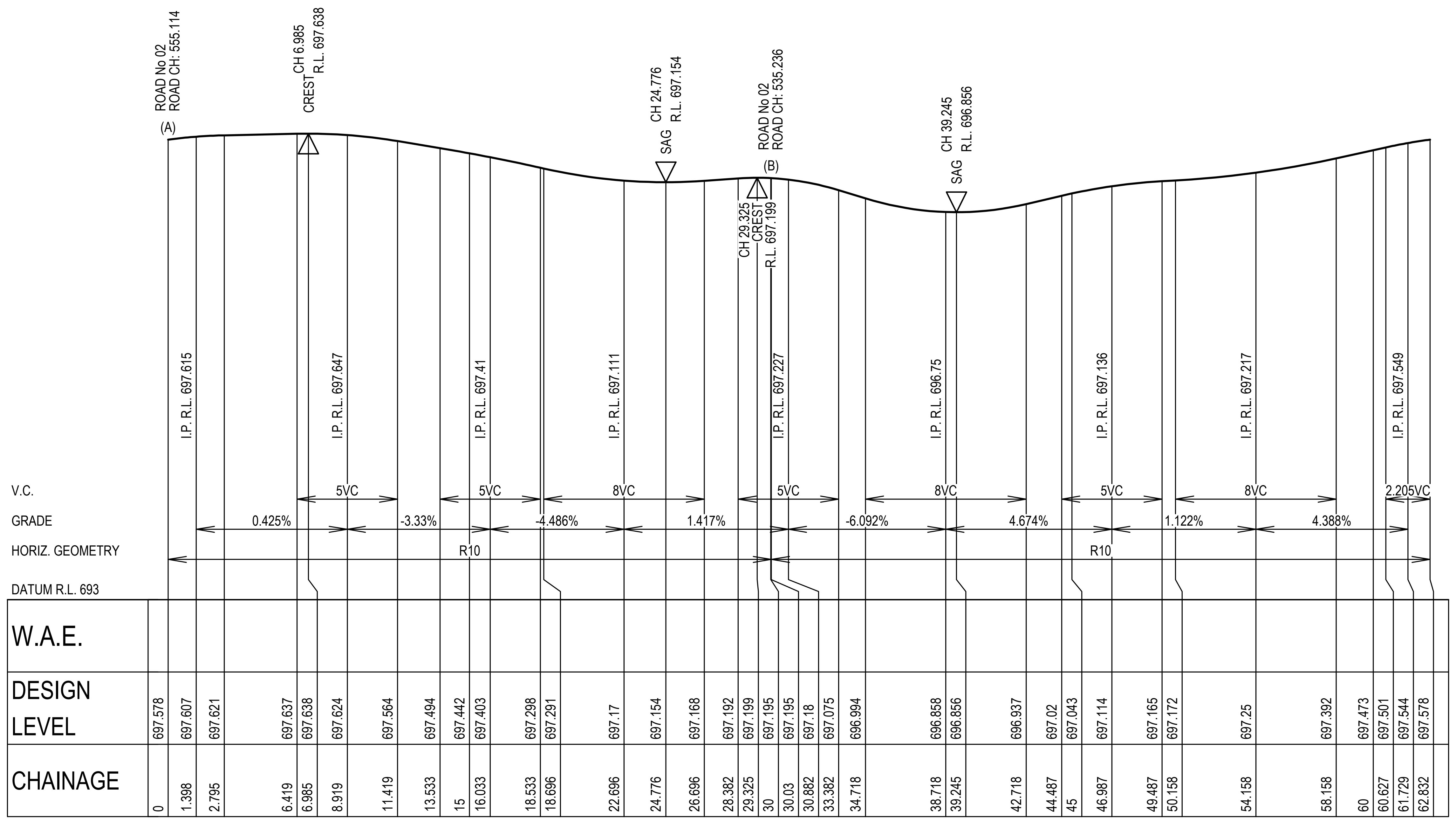

KERB RETURN C109 OUTER

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE C109 OUTER

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259023.47	6171352.55			
7.51	259014.35	6171354.54		10	15.015
15.02	259015.7	6171363.77	8°20'13.75"		
22.52	259017.06	6171373.01		10	15.015
30.03	259026.36	6171372.3	94°22'04.28"		
38.23	259037.05	6171371.48		10	16.401
46.43	259035.49	6171360.87	188°20'13.75"		
54.63	259033.94	6171350.27		10	16.401

SETOUT TABLE KR23

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258994.39	6171374.56	102°44'38.56"		
5	258999.27	6171373.46	102°44'38.56"		
11.12	259005.32	6171372.09		-30.45	12.245
17.25	259011.43	6171373.2	79°42'11.77"		
23.11	259017.63	6171374.33		-12.95	11.729
28.97	259020.57	6171379.9	27°48'37.86"		
35.61	259023.68	6171385.8		-50.45	13.263
42.24	259025.15	6171392.3	12°44'51.02"		

SETOUT TABLE KR24

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259041.11	6171398.93	192°44'51.02"		
6.1	259039.76	6171392.98		99.55	12.2
12.2	259037.7	6171387.23	199°46'09.01"		
19.14	259035.25	6171380.43		-20.45	13.89
26.09	259037.62	6171373.6	160°51'12.49"		
30.71	259039.2	6171369.04		-12.95	9.24
35.33	259043.39	6171366.63			
48.76	259055.21	6171359.81		-60.45	26.857
62.19	259068.82	6171358.74	94°31'04.47"		

SETOUT TABLE KR25

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259064.16	6171349.04	276°37'04.86"		
5.14	259059.04	6171349.64		49.55	10.271
10.27	259054.15	6171351.27	288°29'41.01"		
16.6	259048.02	6171353.32		-25.45	12.664
22.93	259041.65	6171352.2	259°59'06.80"		
27.54	259036.92	6171351.36		-12.95	9.207
32.14	259033.88	6171347.64	219°15'01.88"		
45.64	259025.19	6171337.01		-60.45	27.002
59.14	259021.95	6171323.67	193°39'27.00"		

SETOUT TABLE KR26

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259008.72	6171328.93	13°39'27.00"		
6.05	259010.15	6171334.82		99.55	12.103
12.1	259012.28	6171340.49	20°37'24.73"		
15.21	259013.39	6171343.42		-20.45	6.217
18.32	259013.56	6171346.55	3°12'14.63"		
24.81	259013.96	6171353.63		-12.95	12.976
31.3	259008.2	6171357.78	305°47'34.91"		
44.46	258997.38	6171365.58		-65.45	26.329
57.63	258984.36	6171368.53	282°44'39.17"		

SETOUT TABLE SI24

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259030.27	6171391.15	192°44'51.02"		
1.89	259029.86	6171389.3	192°44'51.02"		
2.36	259029.72	6171388.71		-0.6	0.942
2.84	259030.31	6171388.58	102°44'53.14"		
5.24	259032.65	6171388.05	102°44'53.14"		
5.71	259033.23	6171387.92		-0.6	0.942
6.18	259033.37	6171388.51	12°44'51.02"		
18.06	259035.99	6171400.09	12°44'51.02"		

SETOUT TABLE SI25

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259030.73	6171378.43			
0.26	259031.06	6171378.3		-0.3	0.519
0.52	259031.14	6171378.64	12°44'51.02"		
7.53	259032.68	6171385.48	12°44'51.02"		
7.77	259032.75	6171385.77		-0.3	0.471
8.01	259032.46	6171385.84	282°44'51.02"		
11.01	259029.53	6171386.5	282°44'51.02"		
11.24	259029.24	6171386.57		-0.3	0.471
11.48	259029.17	6171386.28	192°44'51.02"		
13.05	259028.82	6171384.74	192°44'51.02"		
14.98	259028.4	6171382.85		15	3.844
16.9	259027.51	6171381.14	207°25'55.87"		
17.9	259026.9	6171379.96		-1.2	2.003
18.9	259028.13	6171379.47	111°48'58.10"		

SETOUT TABLE SI26

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259042.71	6171359.55			
2.88	259041.6	6171356.89	202°32'34.52"		
3.18	259041.42	6171356.45		-0.3	0.608
3.48	259041.9	6171356.48	86°26'40.27"		
5.67	259044.08	6171356.61	86°26'40.27"		
5.86	259044.3	6171356.63		-0.3	0.386
6.05	259044.35	6171356.85	12°44'51.02"		
8.97	259045	6171359.69	12°44'51.02"		
9.2	259045.06	6171359.97		-0.3	0.45
9.42	259044.79	6171360.05	286°51'22.06"		
10.08	259044.16	6171360.24	286°51'22.06"		
10.96	259043.12	6171360.55		-1.2	1.766
11.85	259042.71	6171359.55	202°32'34.52"		

SETOUT TABLE SI27

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259050.88	6171358.2			
3.26	259047.77	6171359.15	286°51'22.06"		
3.5	259047.46	6171359.24		-0.3	0.493
3.75	259047.39	6171358.92	192°44'51.02"		
5.54	259046.99	6171357.18	192°44'51.02"		
5.82	259046.9	6171356.79		-0.3	0.557
6.1	259047.3	6171356.81	86°26'40.27"		
9.55	259050.75	6171357.03	86°26'40.27"		
9.96	259051.25	6171357.06		-0.6	0.836
10.38	259051.3	6171357.56	6°39'01.16"		
10.8	259051.36	6171358.06		-0.6	0.836
11.22	259050.88	6171358.2	286°51'22.06"		

SETOUT TABLE SI28

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259016.71	6171339.07			
0.24	259016.63	6171338.77		-0.3	0.482
0.48	259016.93	6171338.7	103°39'27.00"		
3.55	259019.91	6171337.98	103°39'27.00"		
3.77	259020.17	6171337.91		-0.3	0.437
3.99	259020.27	6171338.16	20°06'06.74"		
7	259021.3	6171341		25	6.015
10	259022.99	6171343.51	33°53'14.39"		
11.06	259023.79	6171344.71		-1.2	2.106
12.11	259022.47	6171345.28	293°21'10.50"		
16.63	259018.31	6171347.07	293°21'10.50"		
16.93	259017.91	6171347.25		-0.3	0.585
17.22	259017.9	6171346.81	181°40'10.36"		
21.14	259017.78	6171342.87		32	7.845

SETOUT TABLE SI29

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259016.84	6171324.91	13°42'30.79"		
10.62	259019.35	6171335.23	13°42'30.79"		
11.09	259019.5	6171335.81		-0.6	0.943
11.57	259018.91	6171335.95	283°39'23.05"		
13.96	259016.58	6171336.52	283°39'23.05"		
14.44	259016	6171336.66		-0.6	0.942
14.91	259015.86	6171336.08	193°39'27.00"		
23.54	259013.82	6171327.69	193°39'27.00"		

SETOUT TABLE SI30

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259007.35	6171368.89			
0.2	259007.12	6171368.89		-0.3	0.396
0.4	259007.07	6171368.66	192°44'45.22"		
3.72	259006.33	6171365.42	192°44'45.22"		
3.93	259006.28	6171365.17		-0.3	0.433
4.15	259006.52	6171365.07	110°00'34.77"		
4.72	259007.06	6171364.88	110°00'34.77"		
5.62	259008.12	6171364.49		-1.2	1.81
6.53	259008.57	6171365.53	23°34'01.65"		
9.82	259009.88	6171368.54	23°34'01.65"		
10.12	259010.07	6171368.98		-0.3	0.604
10.42	259009.6	6171368.96	268°17'43.46"		

SETOUT TABLE SI31

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259004.45	6171368.43			
0.27	259004.54	6171368.81		-0.3	0.547
0.55	259004.15	6171368.8	268°17'43.46"		
4.68	259000.02	6171368.68	268°17'43.46"		
5.1	258999.52	6171368.66		-0.6	0.829
5.51	258999.44	6171368.17	189°09'09.12"		
5.93	258999.36	6171367.68		-0.6	0.829
6.34	258999.83	6171367.51	110°00'34.77"		
10.34	259003.59	6171366.14	110°00'34.77"		
10.59	259003.91	6171366.03		-0.3	0.509
10.85	259003.98	6171366.36	12°44'39.17"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 17 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	416	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN\0102-CC-Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-416.dwg

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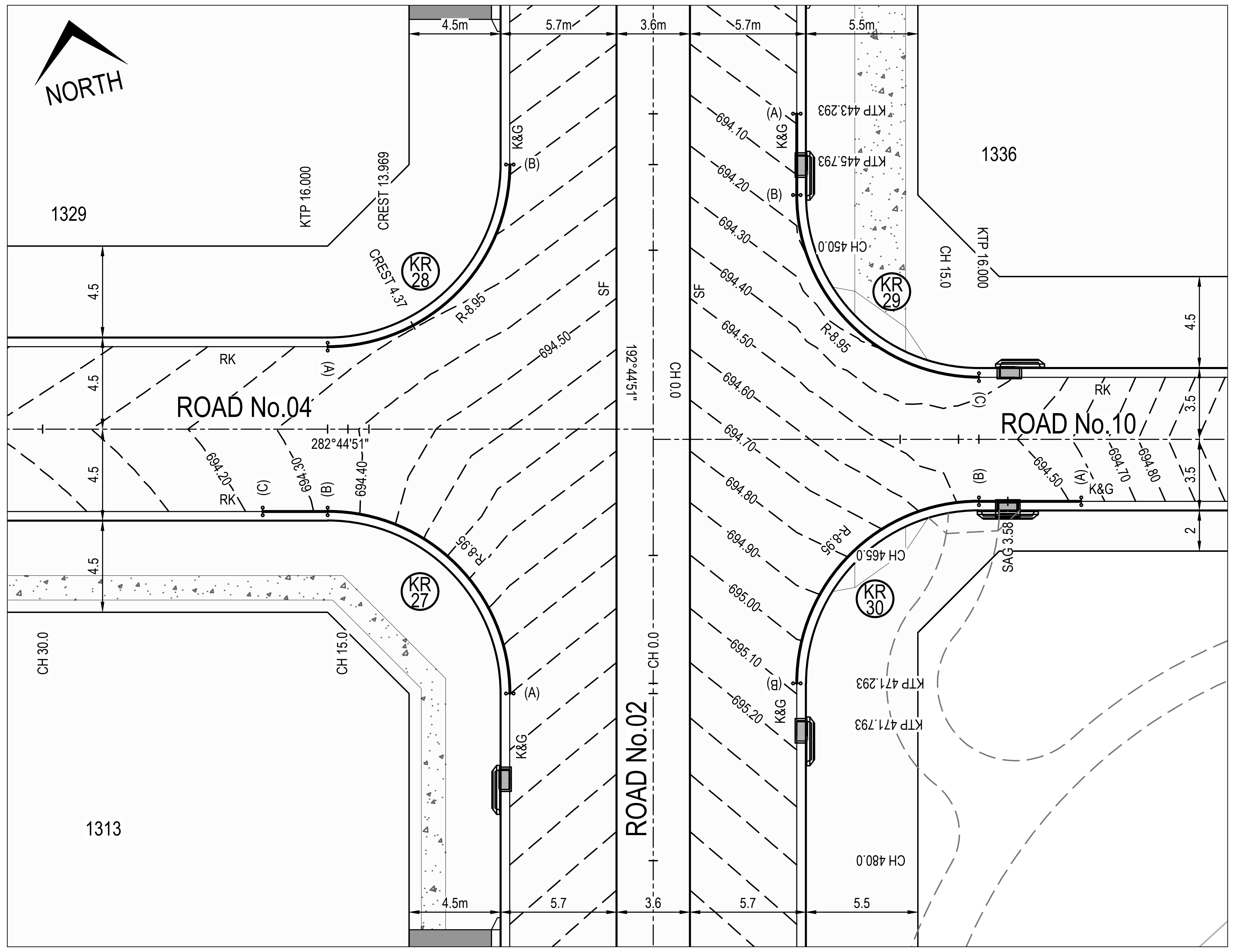

KERB RETURN PLAN - KR27, KR28, KR29 & KR30

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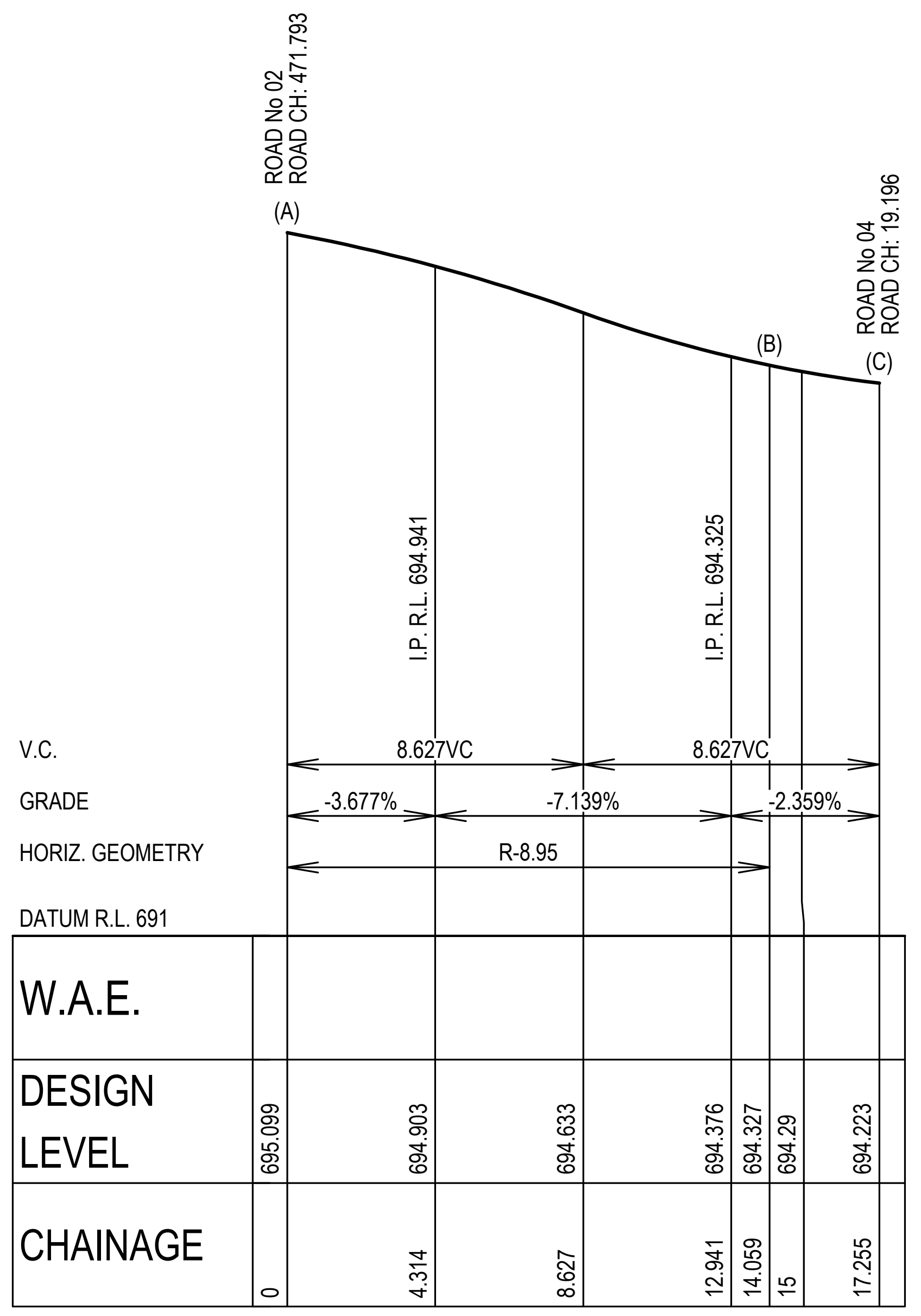
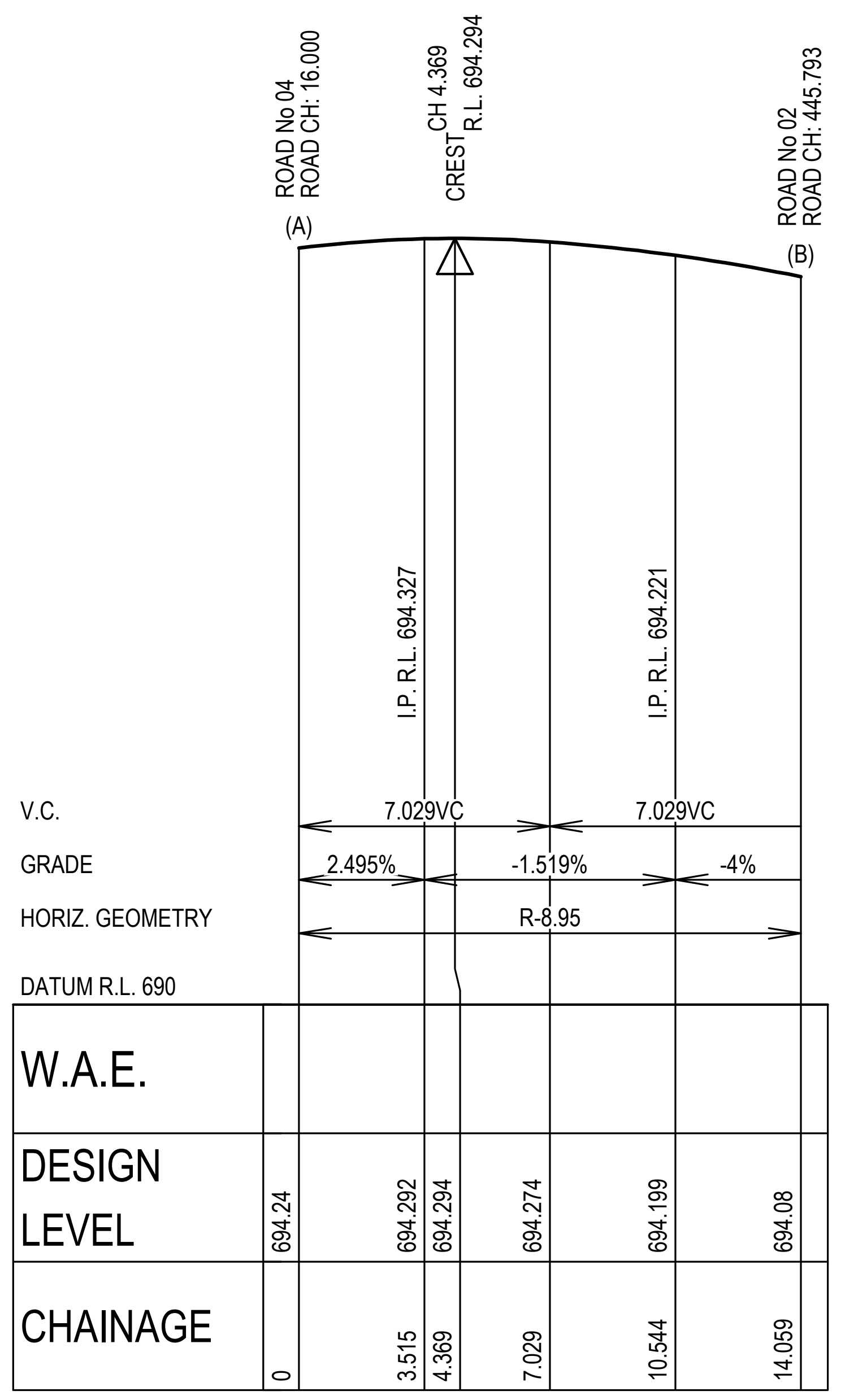


KERB RETURN KR27

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR27

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259034.9	6171435.41	12°44'51.02"		
7.03	259036.88	6171444.14		-8.95	14.059
14.06	259028.15	6171446.11	282°44'51.02"		
17.25	259025.03	6171446.82	282°44'51.02"		

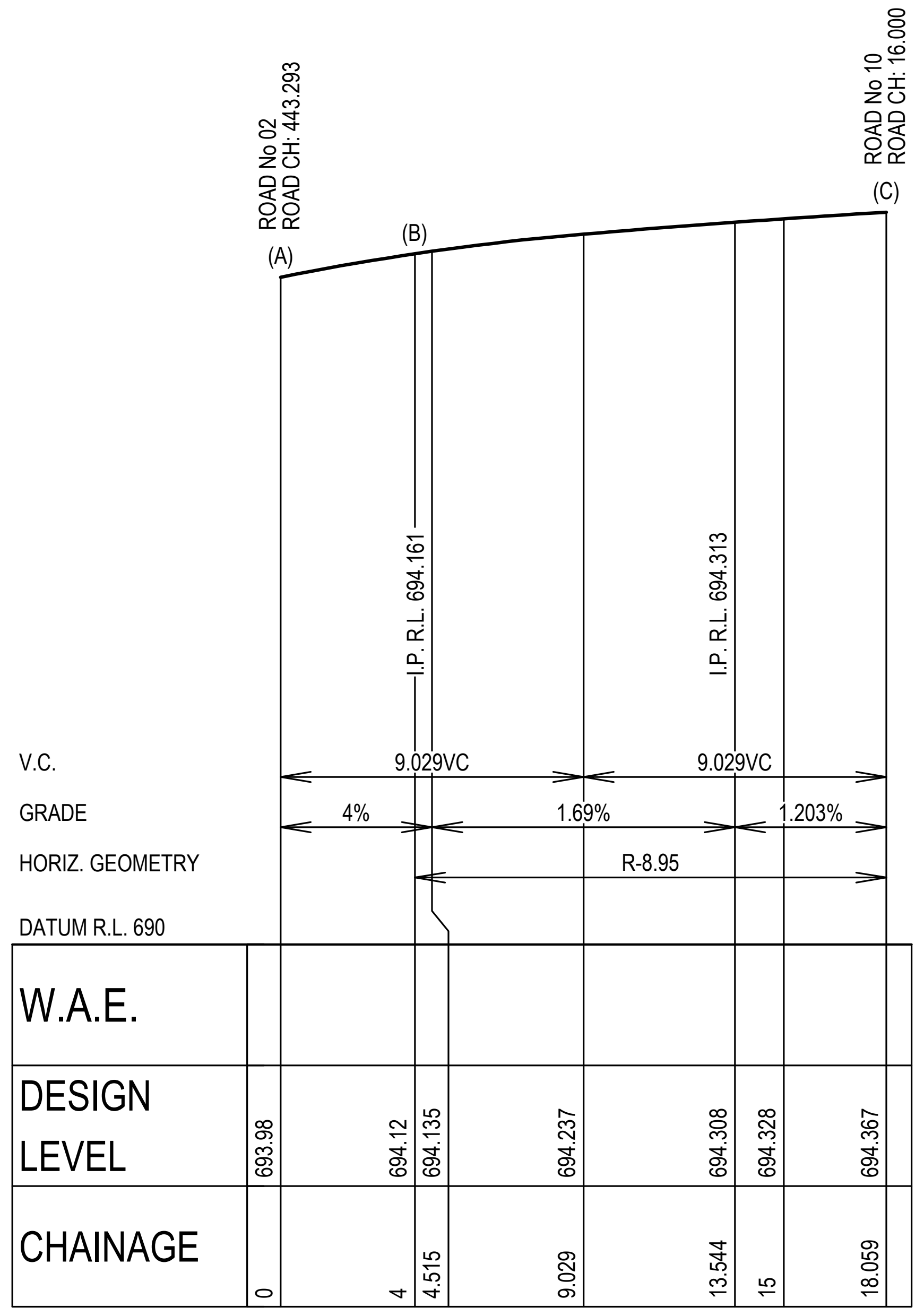


KERB RETURN KR28

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR28

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259029.94	6171454.01	102°44'51.02"		
7.03	259038.67	6171452.04		-8.95	14.059
14.06	259040.64	6171460.77	12°44'51.02"		

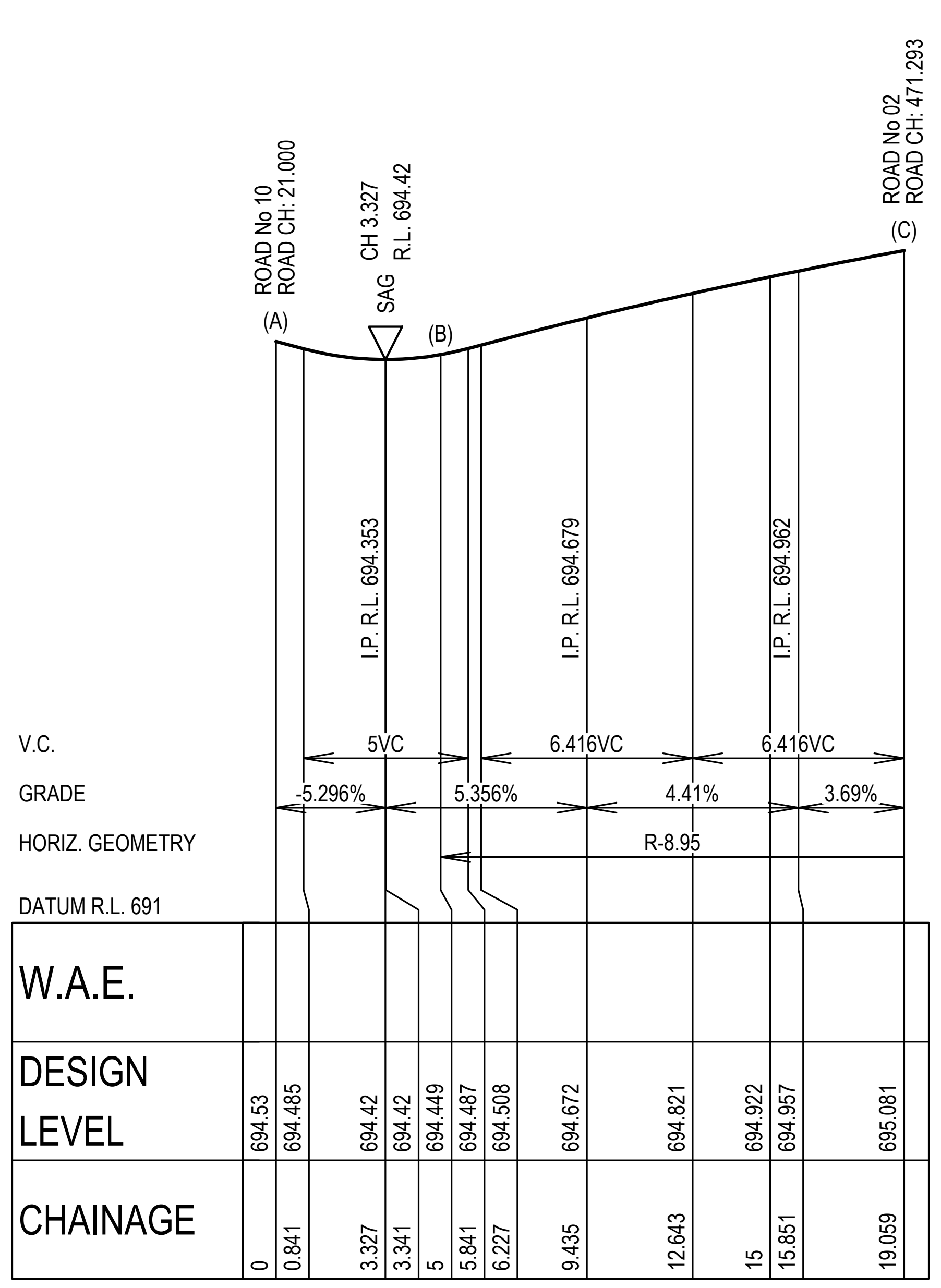


KERB RETURN KR29

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR29

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259054.95	6171460.09	192°44'51.02"		
4	259054.06	6171456.19	192°44'51.02"		
11.03	259052.09	6171447.46		-8.95	14.059
18.06	259060.82	6171445.49	102°44'51.02"		



KERB RETURN KR30

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR30

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259064.35	6171438.44	282°44'51.02"		
5	259059.47	6171439.54	282°44'51.02"		
12.03	259050.74	6171441.51		-8.95	14.059
19.06	259048.77	6171432.79	192°44'51.02"		

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A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
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0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

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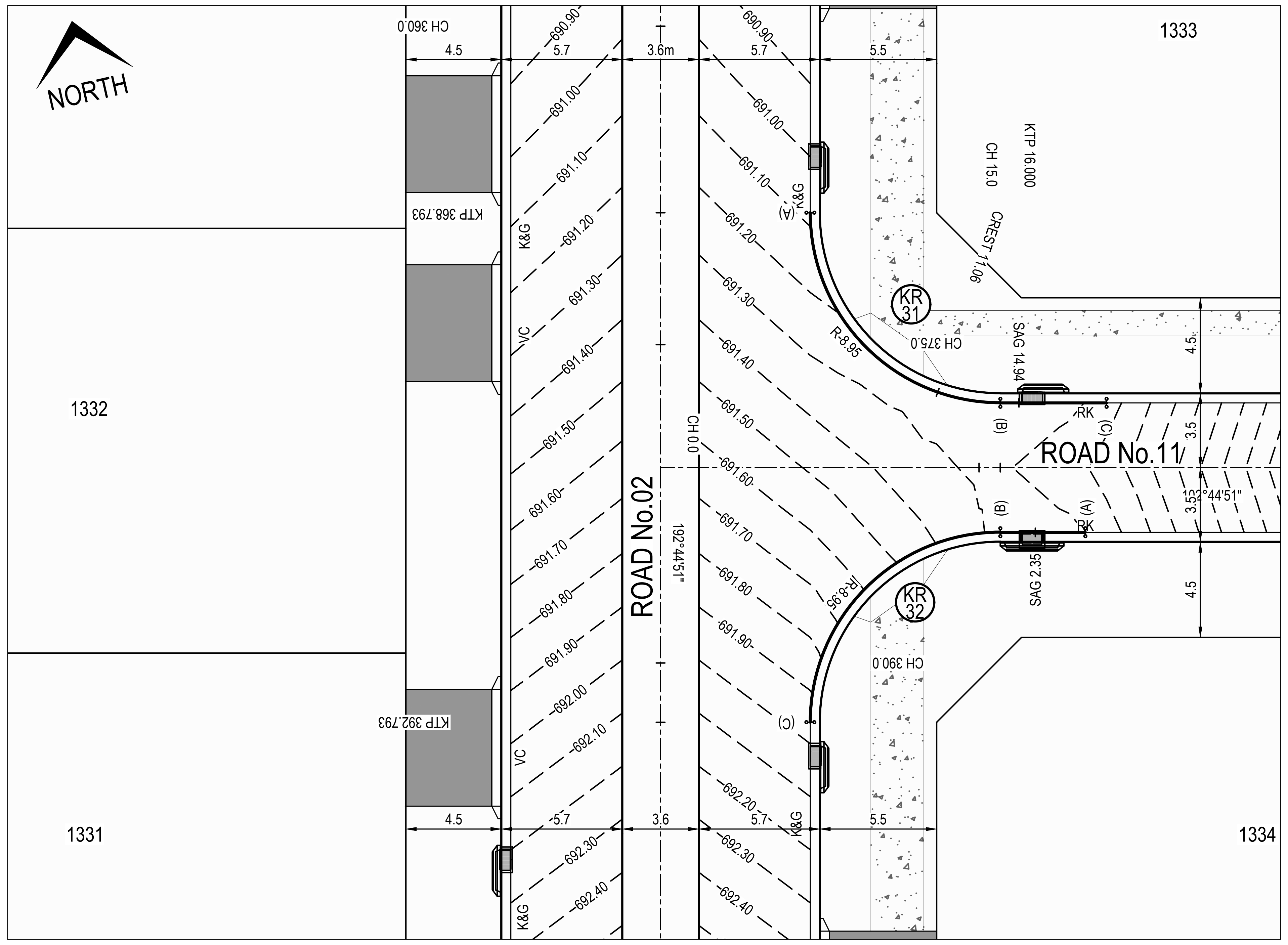
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 18 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	417	A

SETOUT IS TO LIP OF KERB



KERB RETURN PLAN - KR31 & KR32

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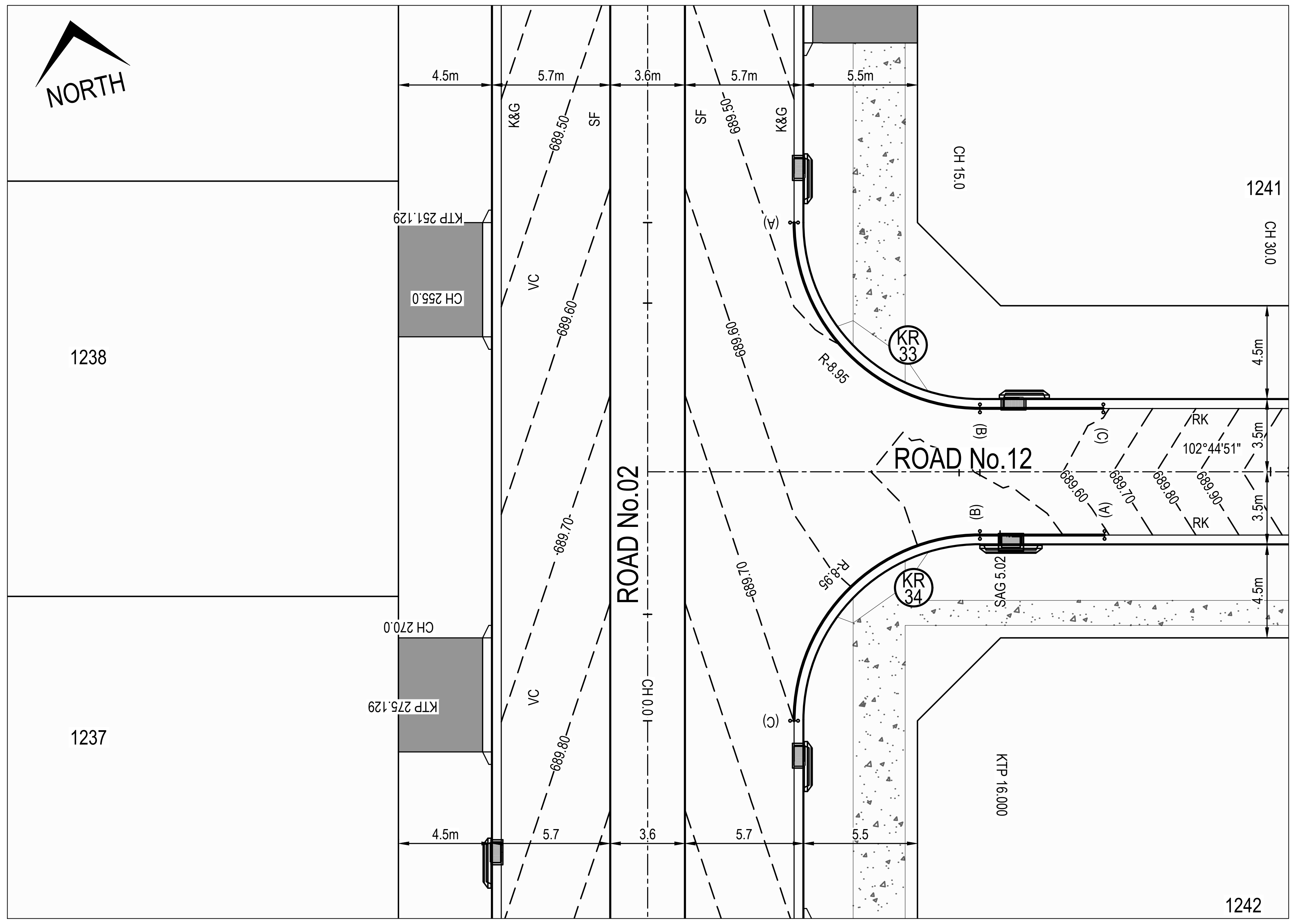

KERB RETURN PLAN - KR33 & KR34

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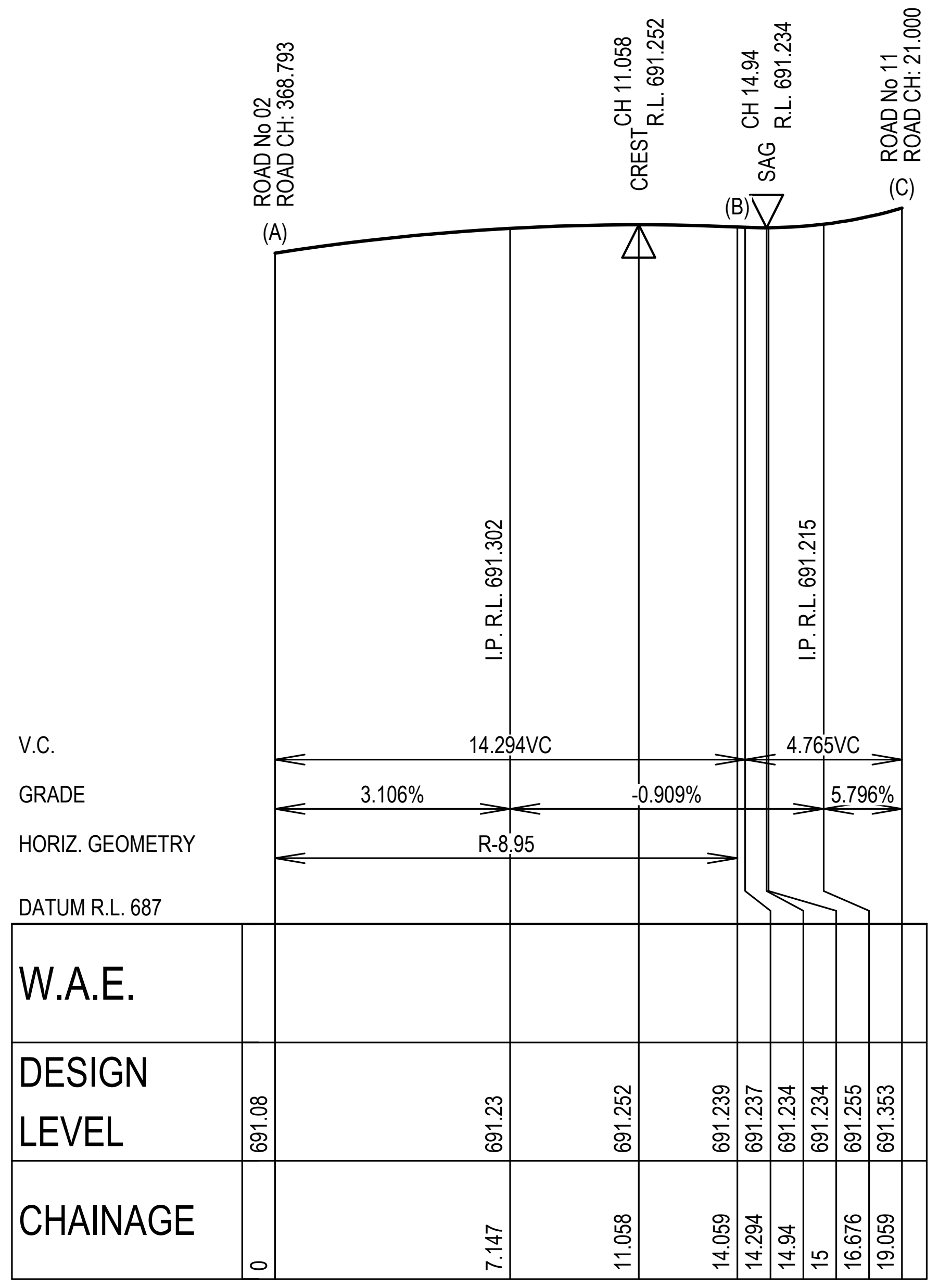

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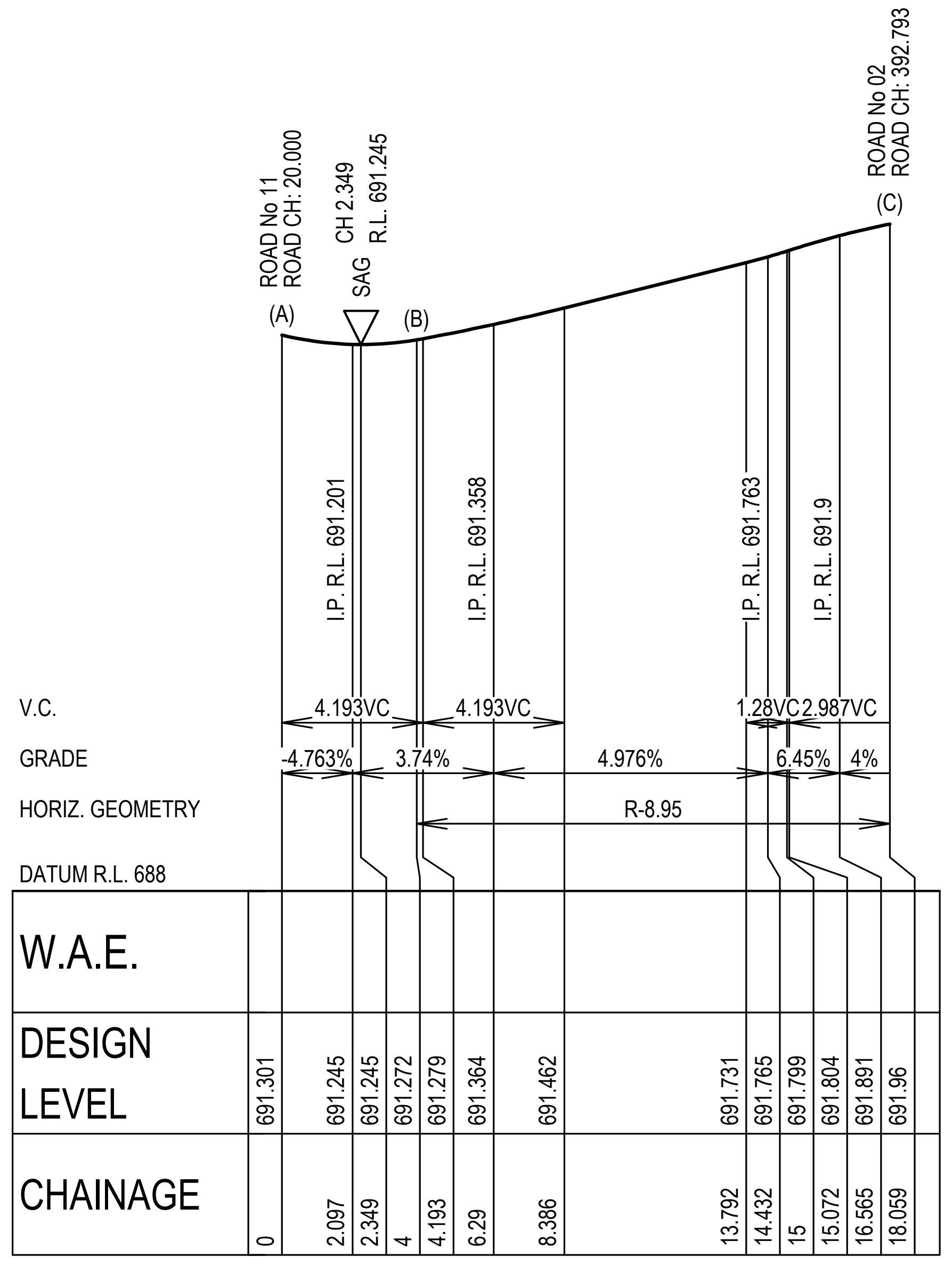

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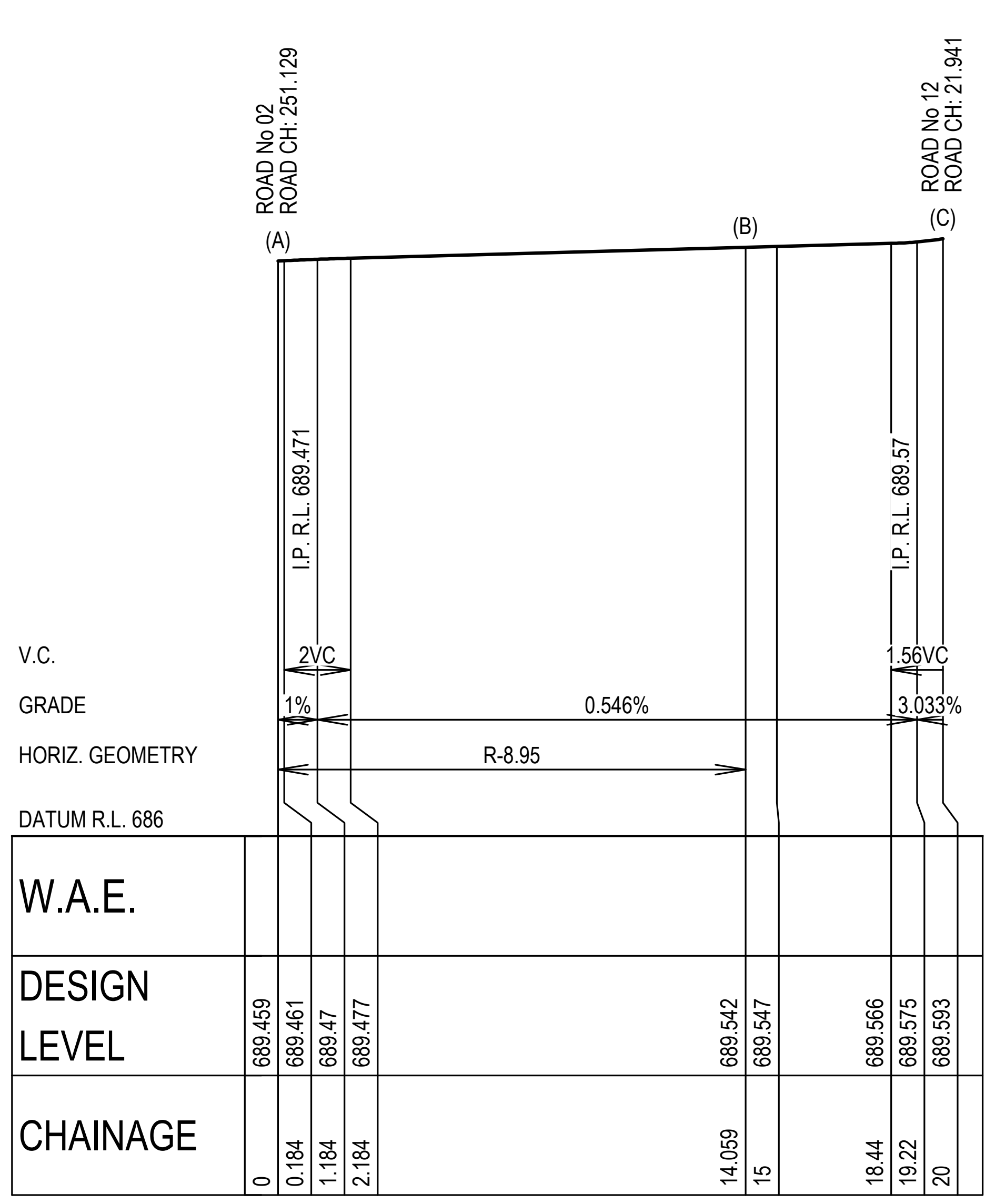

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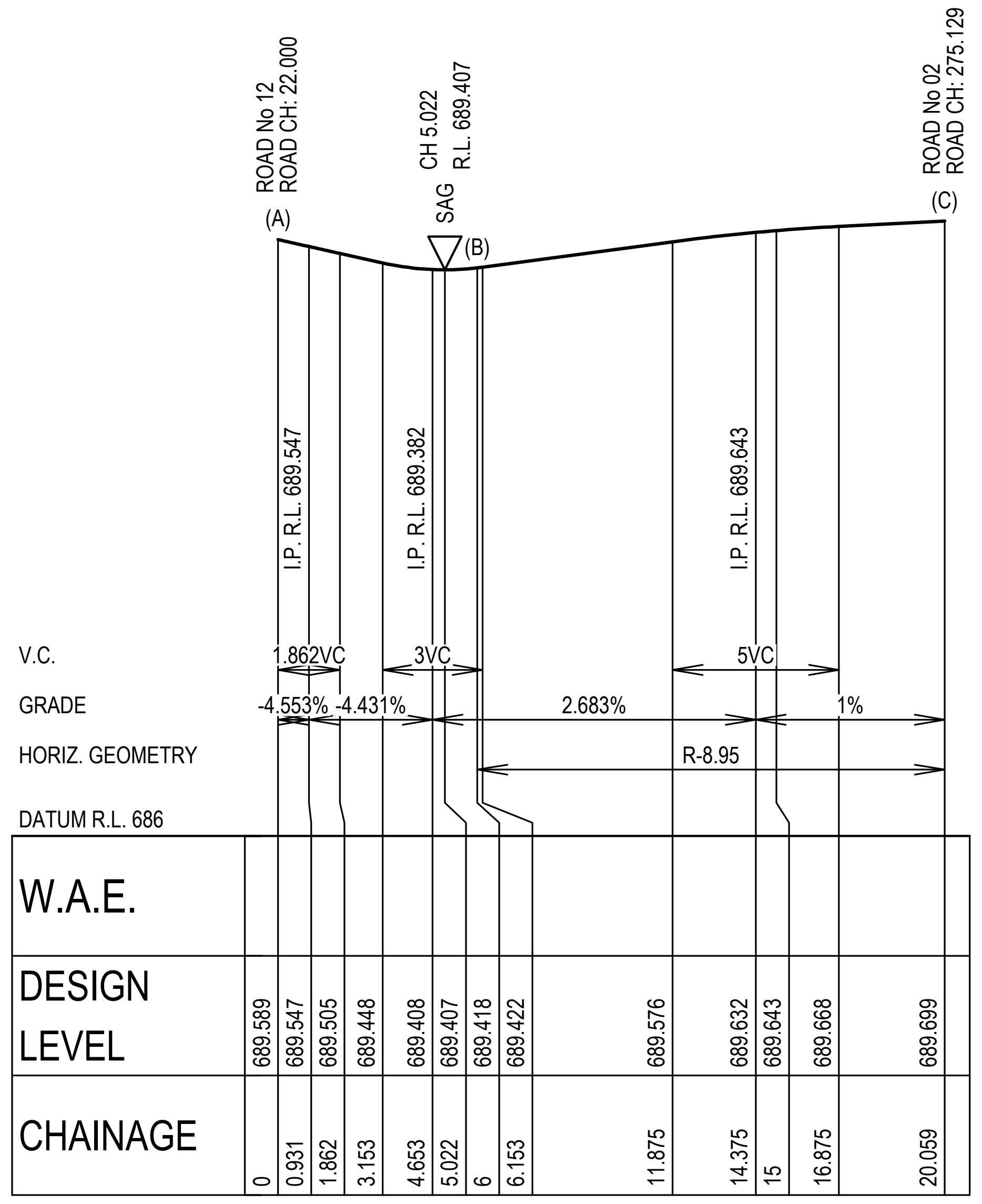

KERB RETURN KR34

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR31

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259071.38	6171532.76	192°44'51.02"		
7.03	259069.41	6171524.03		-8.95	14.059
14.06	259078.14	6171522.05	102°44'51.02"		
19.06	259083.02	6171520.95	102°44'51.02"		

SETOUT TABLE KR32

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259080.69	6171515.22	282°44'51.02"		
4	259076.79	6171516.1	282°44'51.02"		
11.03	259068.06	6171518.08		-8.95	14.059
18.06	259066.09	6171509.35	192°44'51.02"		

SETOUT TABLE KR33

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259097.35	6171647.52	192°44'51.02"		
7.03	259095.37	6171638.79		-8.95	14.059
14.06	259104.1	6171636.82	102°44'51.02"		
20	259109.9	6171635.51	102°44'51.02"		

SETOUT TABLE KR34

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259108.61	6171629.54	282°44'51.02"		
6	259102.76	6171630.87	282°44'51.02"		
13.03	259094.03	6171632.84		-8.95	14.059
20.06	259092.05	6171624.11	192°44'51.02"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 19 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	418	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN

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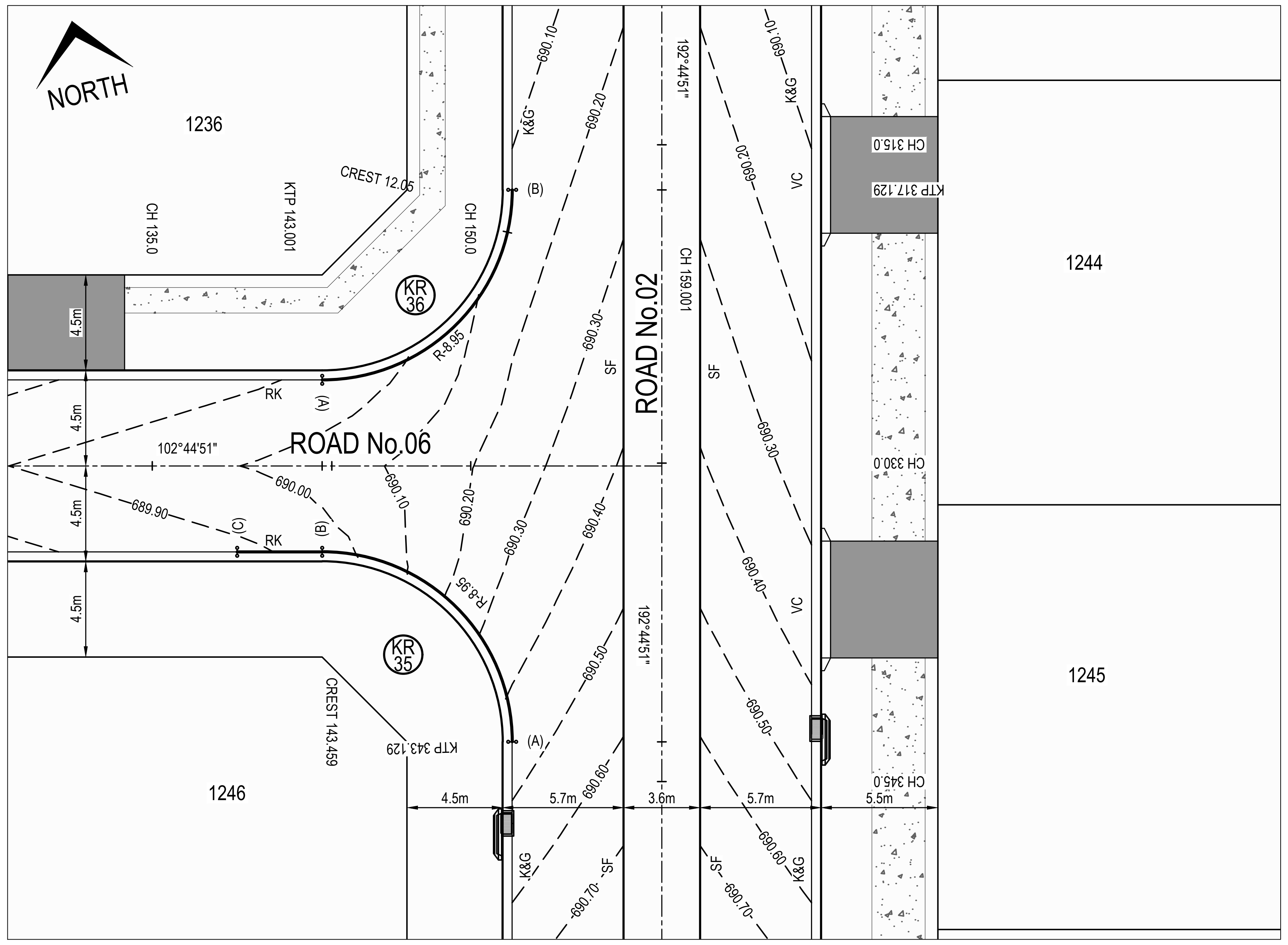

KERB RETURN PLAN - KR35 & KR36

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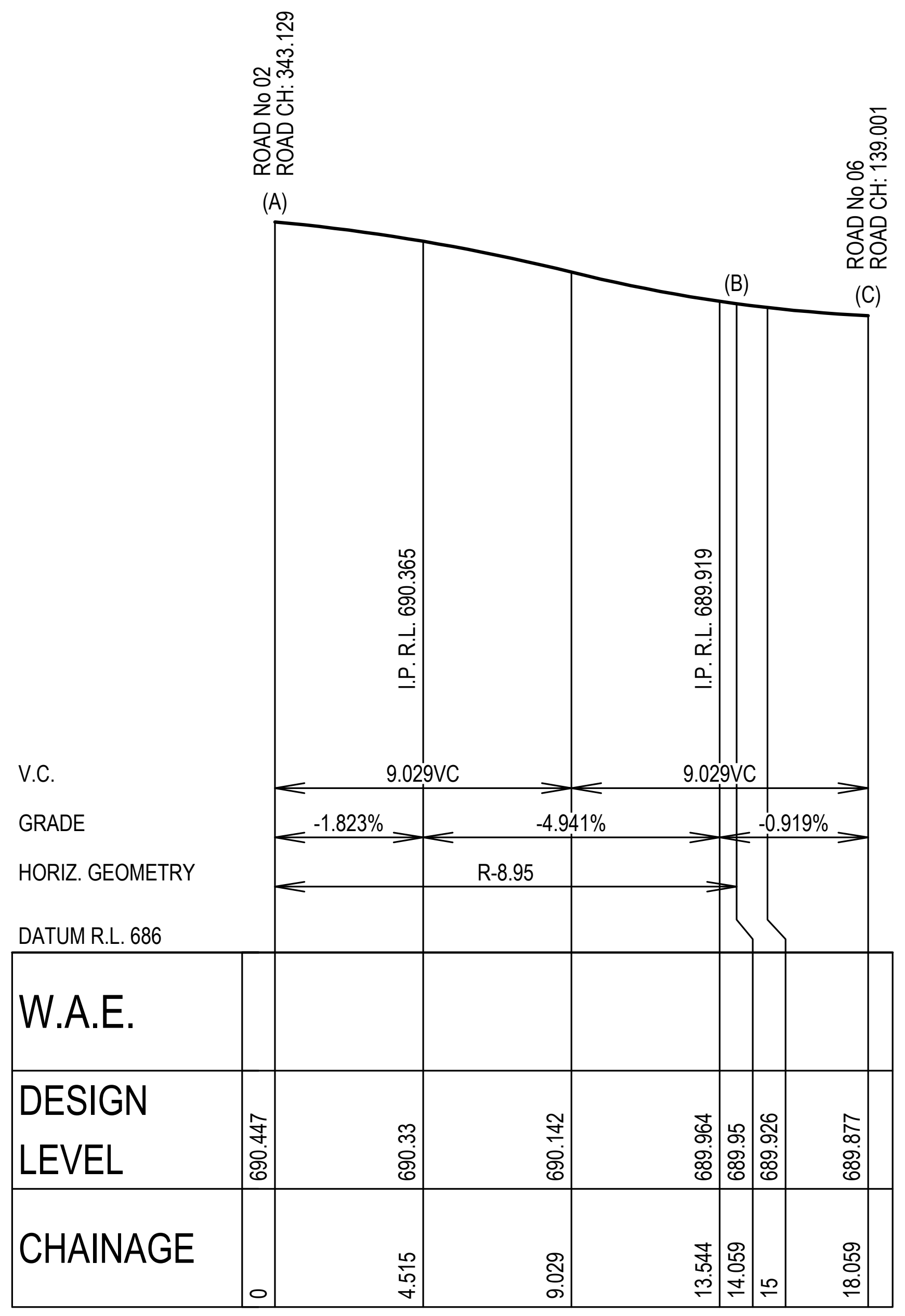

KERB RETURN KR35

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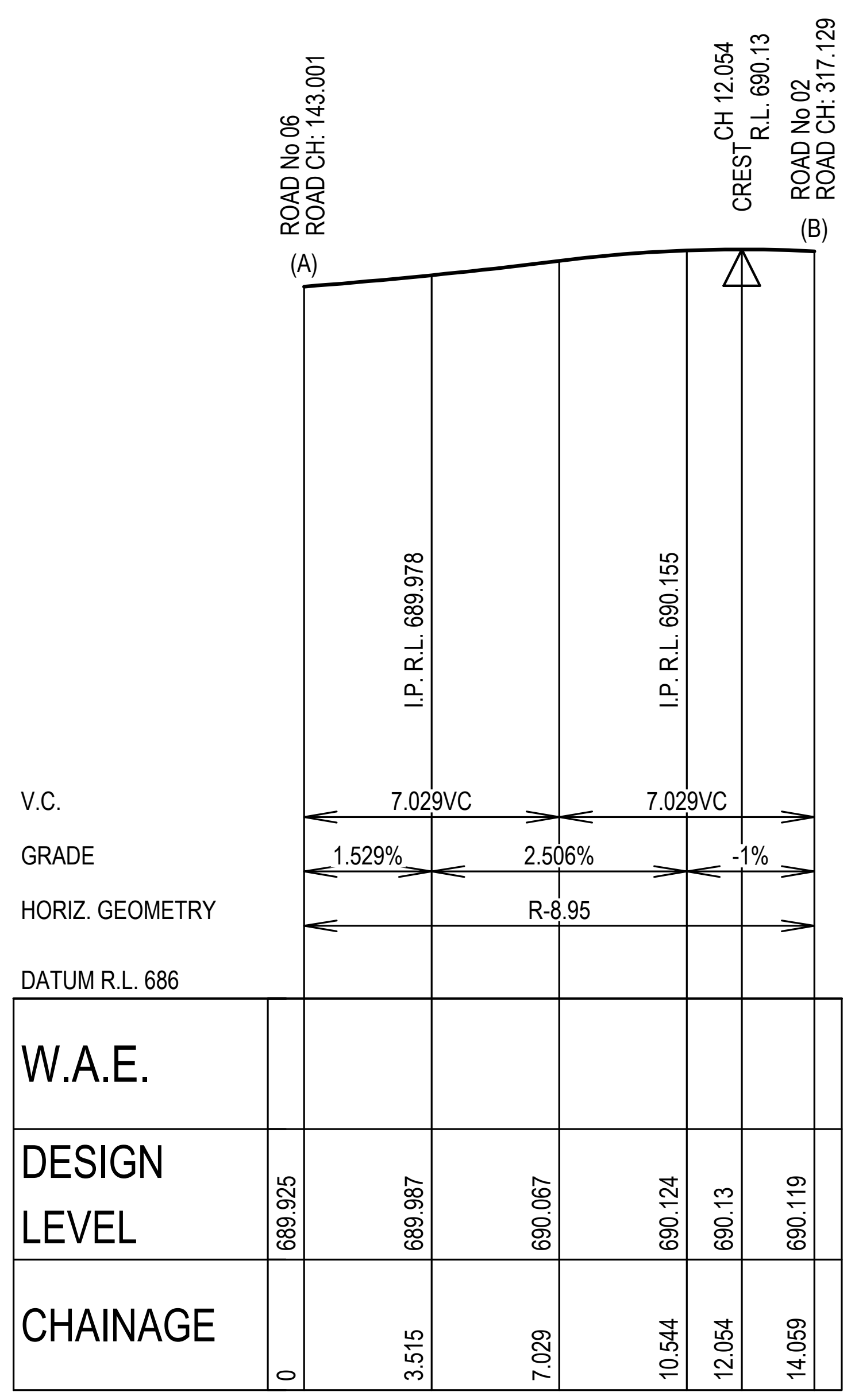

KERB RETURN KR36

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR35

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259063.29	6171560.9	12°44'51.02"		
7.03	259065.27	6171569.63		-8.95	14.059
14.06	259056.54	6171571.61	282°44'51.02"		
18.06	259052.64	6171572.49	282°44'51.02"		

SETOUT TABLE KR36

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259058.33	6171579.51	102°44'51.02"		
7.03	259067.06	6171577.53		-8.95	14.059
14.06	259069.03	6171586.26	12°44'51.02"		

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-419.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

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SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 20 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	419	A

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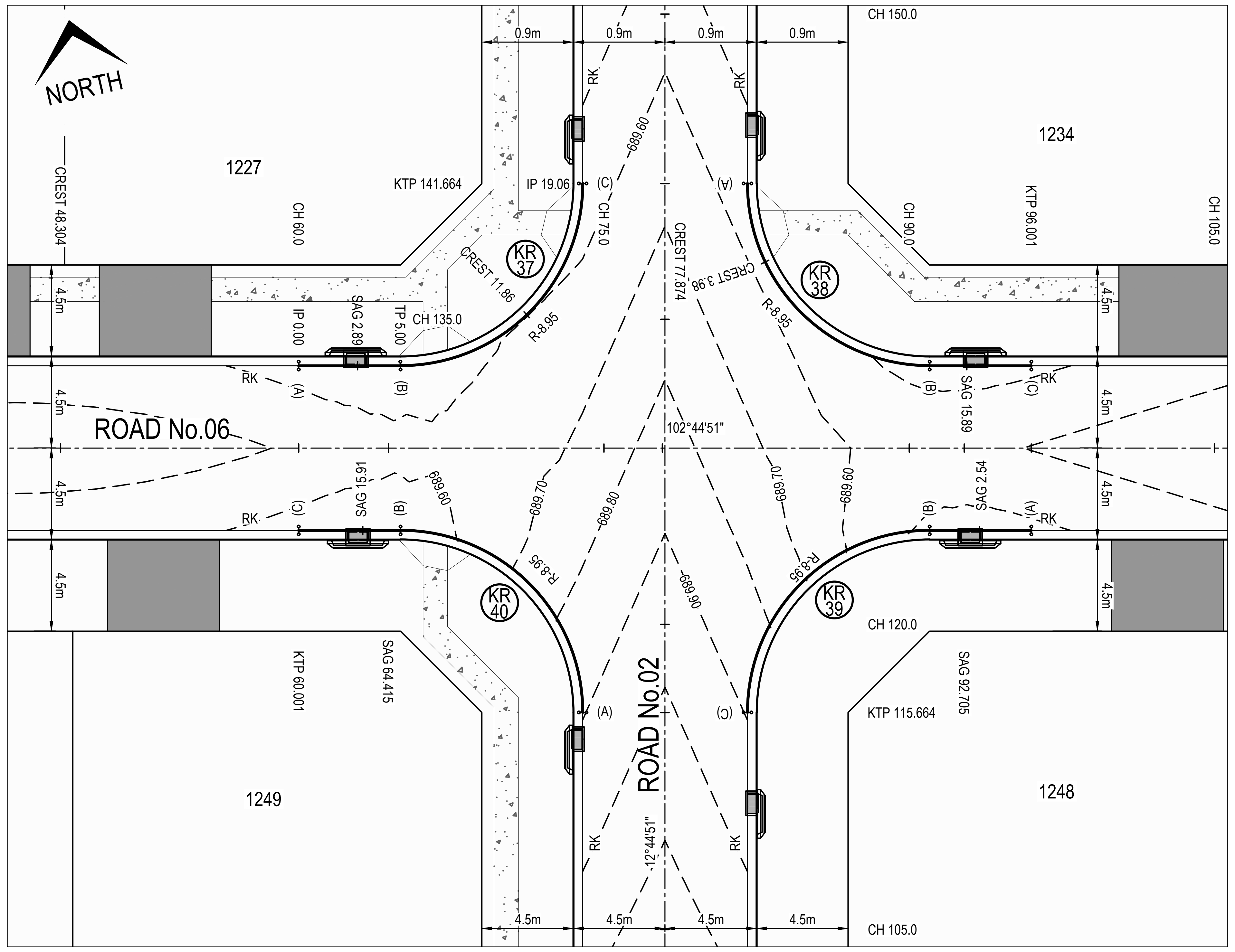

KERB RETURN PLAN - KR37, KR38, KR39 & KR40

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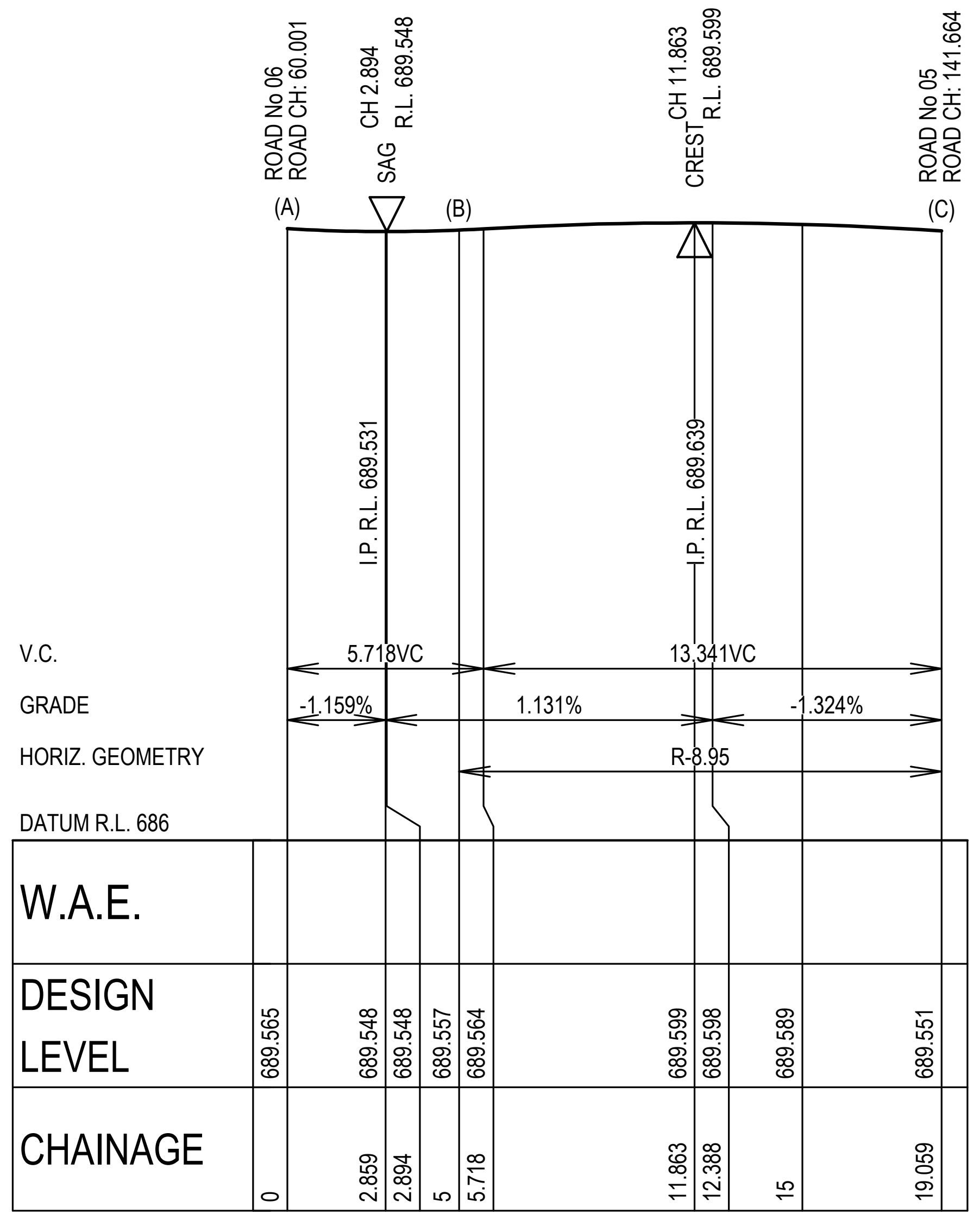

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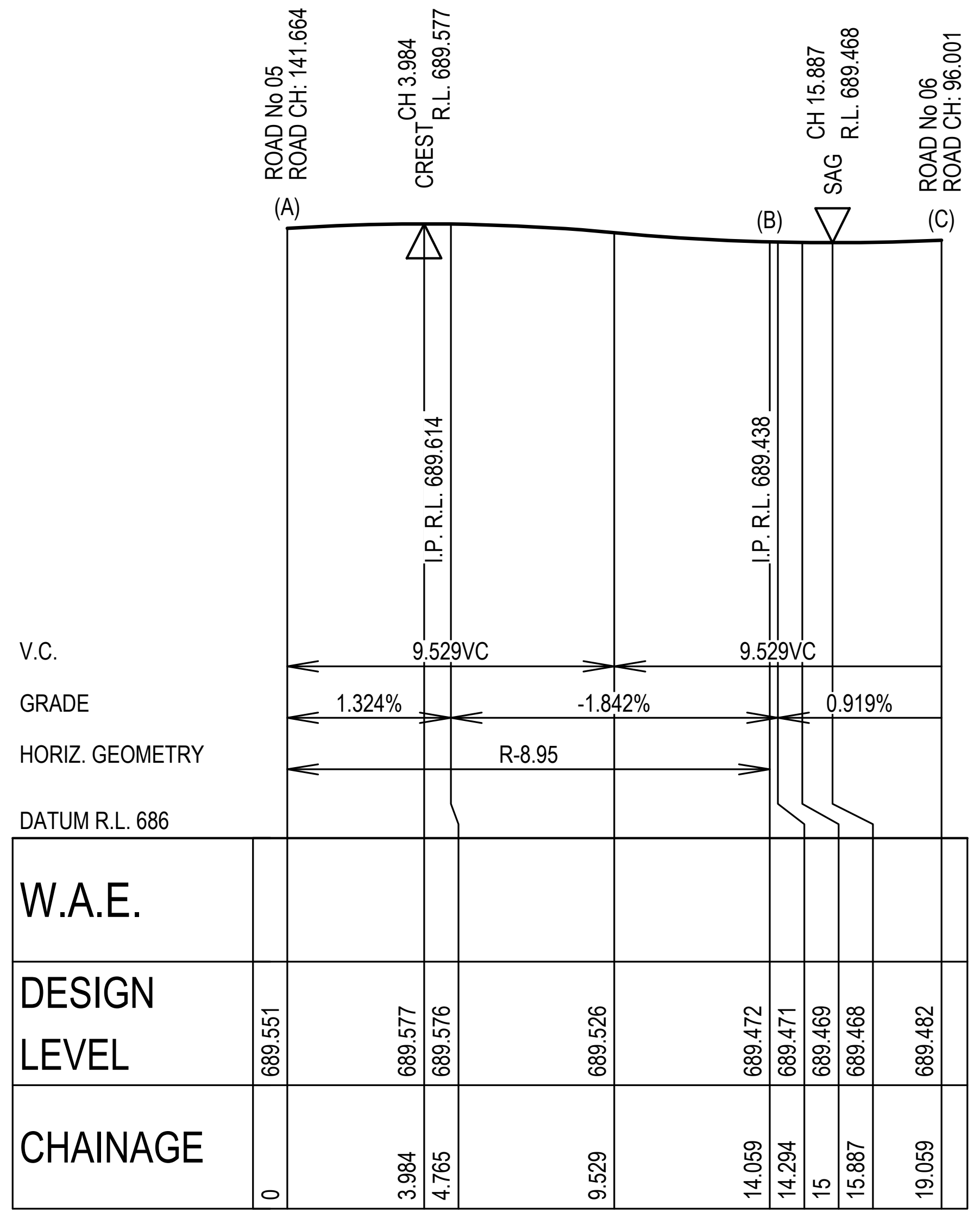

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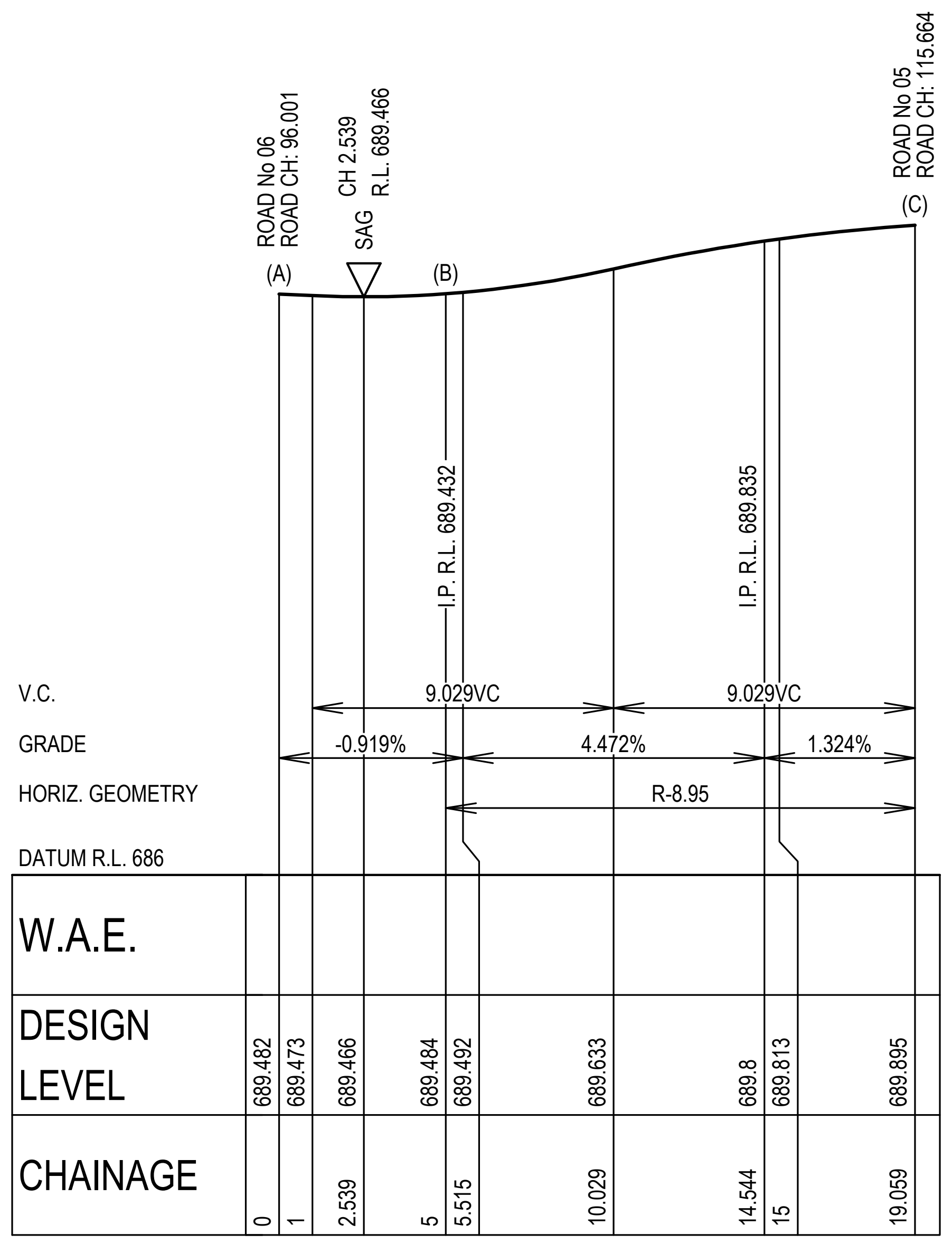

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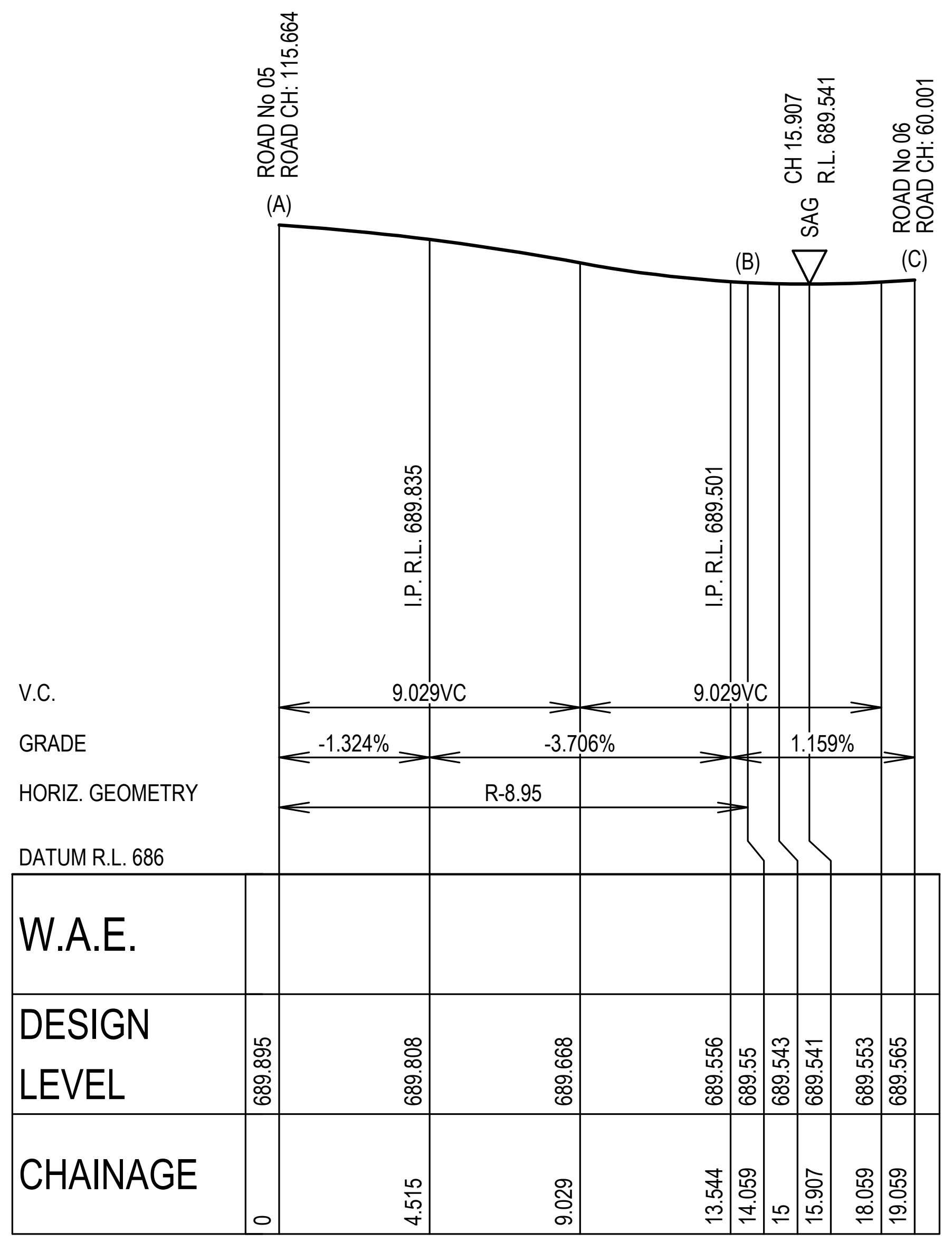

KERB RETURN KR40

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR37

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258977.37	6171597.82	102°44'51.02"		
5	258982.25	6171596.72	102°44'51.02"		
12.03	258990.98	6171594.74		-8.95	14.059
19.06	258992.95	6171603.47	12°44'51.02"		

SETOUT TABLE KR38

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259000.85	6171601.68	192°44'51.02"		
7.03	258998.88	6171592.95		-8.95	14.059
14.06	259007.61	6171590.98	102°44'51.02"		
19.06	259012.49	6171589.88	102°44'51.02"		

SETOUT TABLE KR39

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259010.7	6171581.98	282°44'51.02"		
5	259005.82	6171583.08	282°44'51.02"		
12.03	258997.09	6171585.05		-8.95	14.059
19.06	258995.12	6171576.33	192°44'51.02"		

SETOUT TABLE KR40

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258987.22	6171578.11	12°44'51.02"		
7.03	258989.19	6171586.84		-8.95	14.059
14.06	258980.46	6171588.82	282°44'51.02"		
19.06	258975.59	6171589.92	282°44'51.02"		

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-420.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
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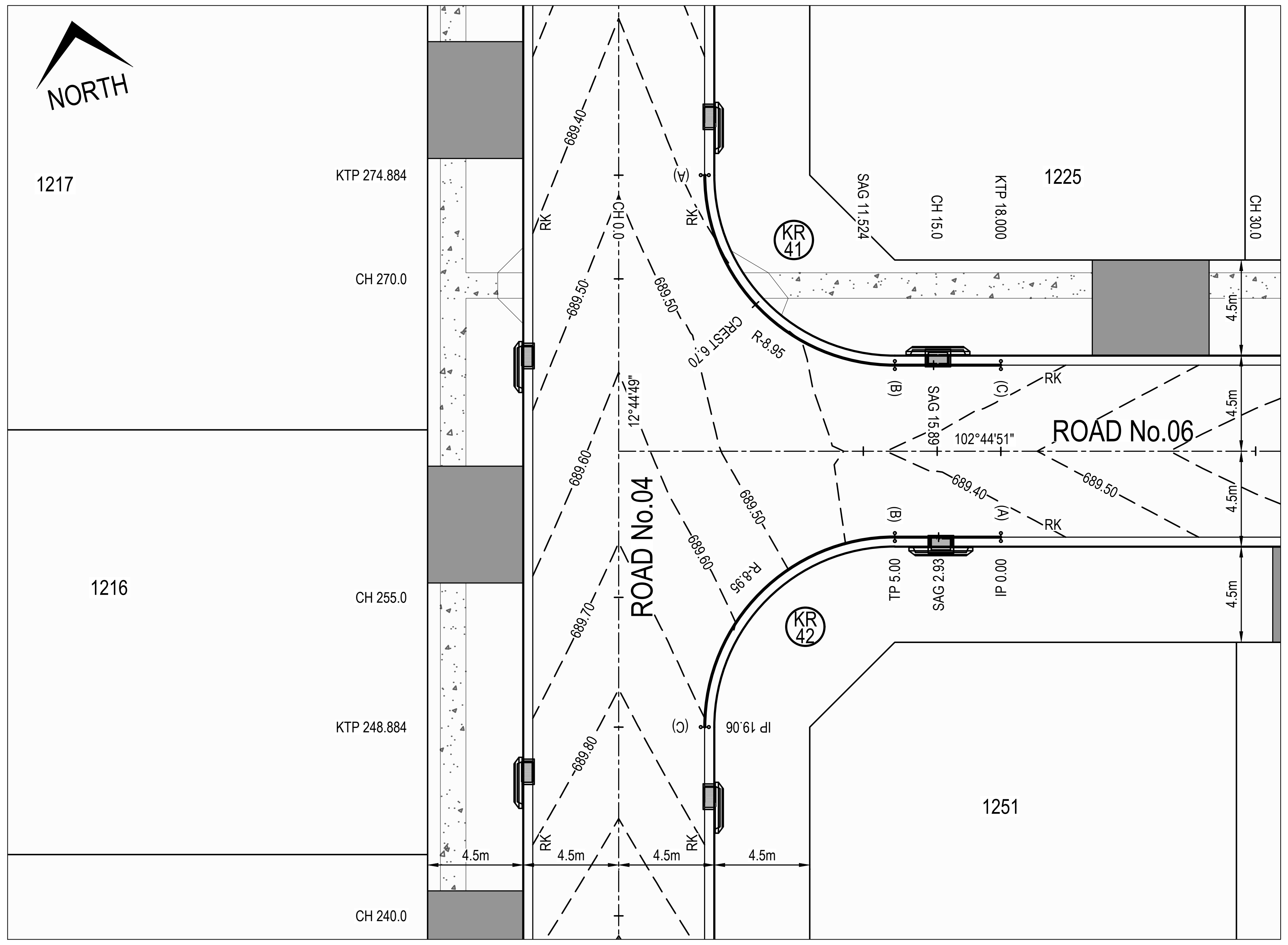
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 21 OF 28

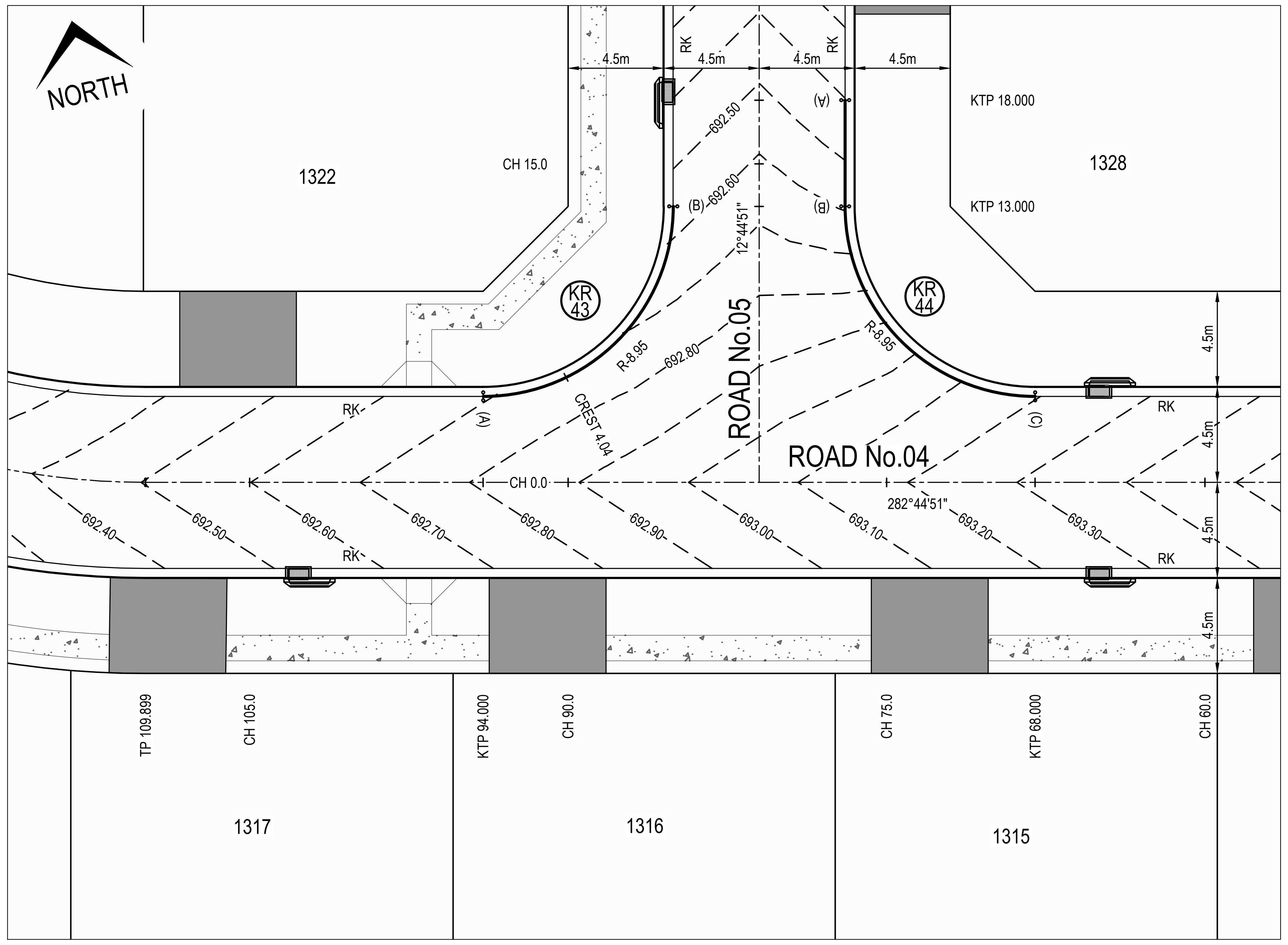
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	420	A

SETOUT IS TO LIP OF KERB



KERB RETURN PLAN - KR41 & KR42

SCALE 1:200



KERB RETURN PLAN - KR43 & KR44

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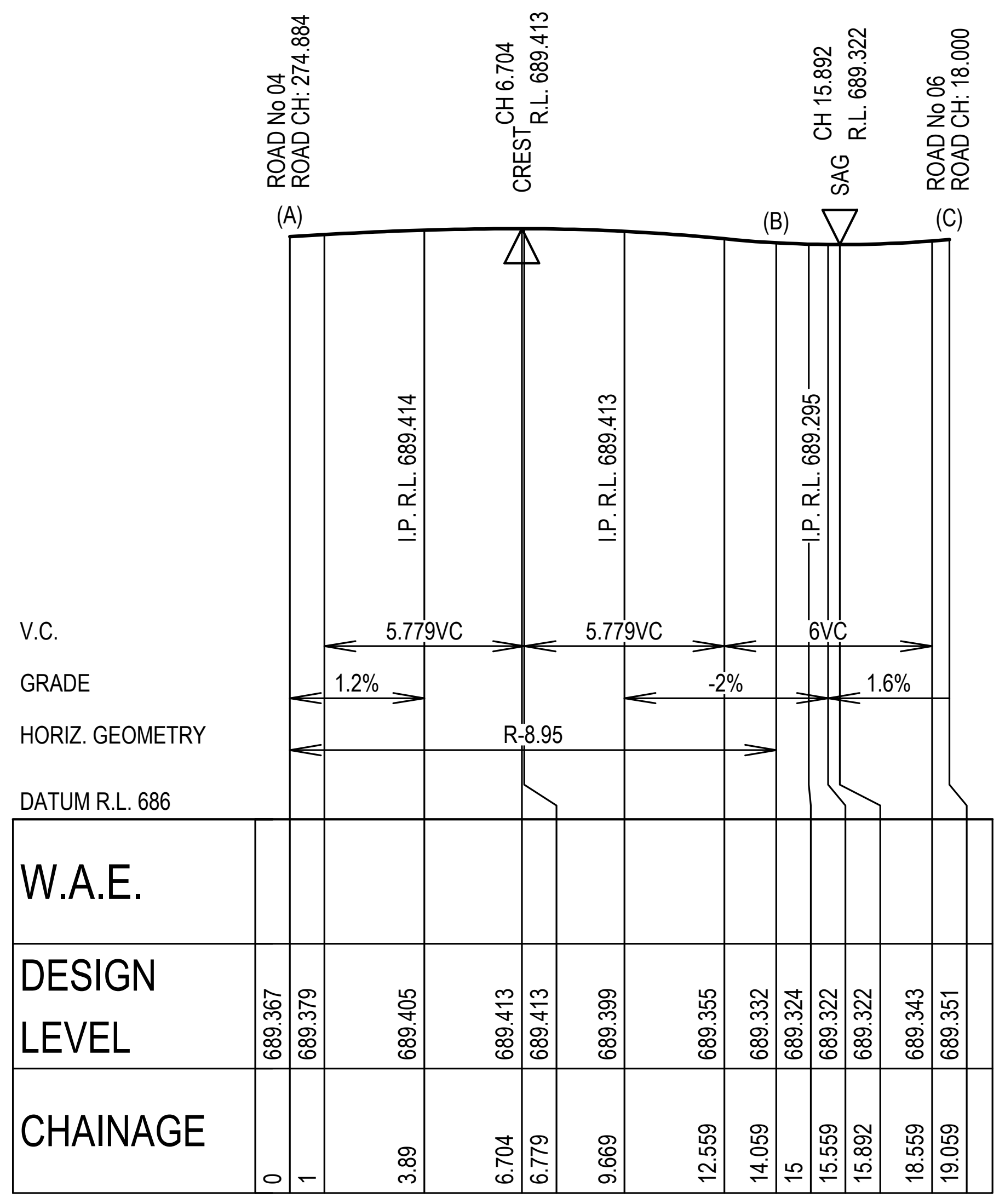
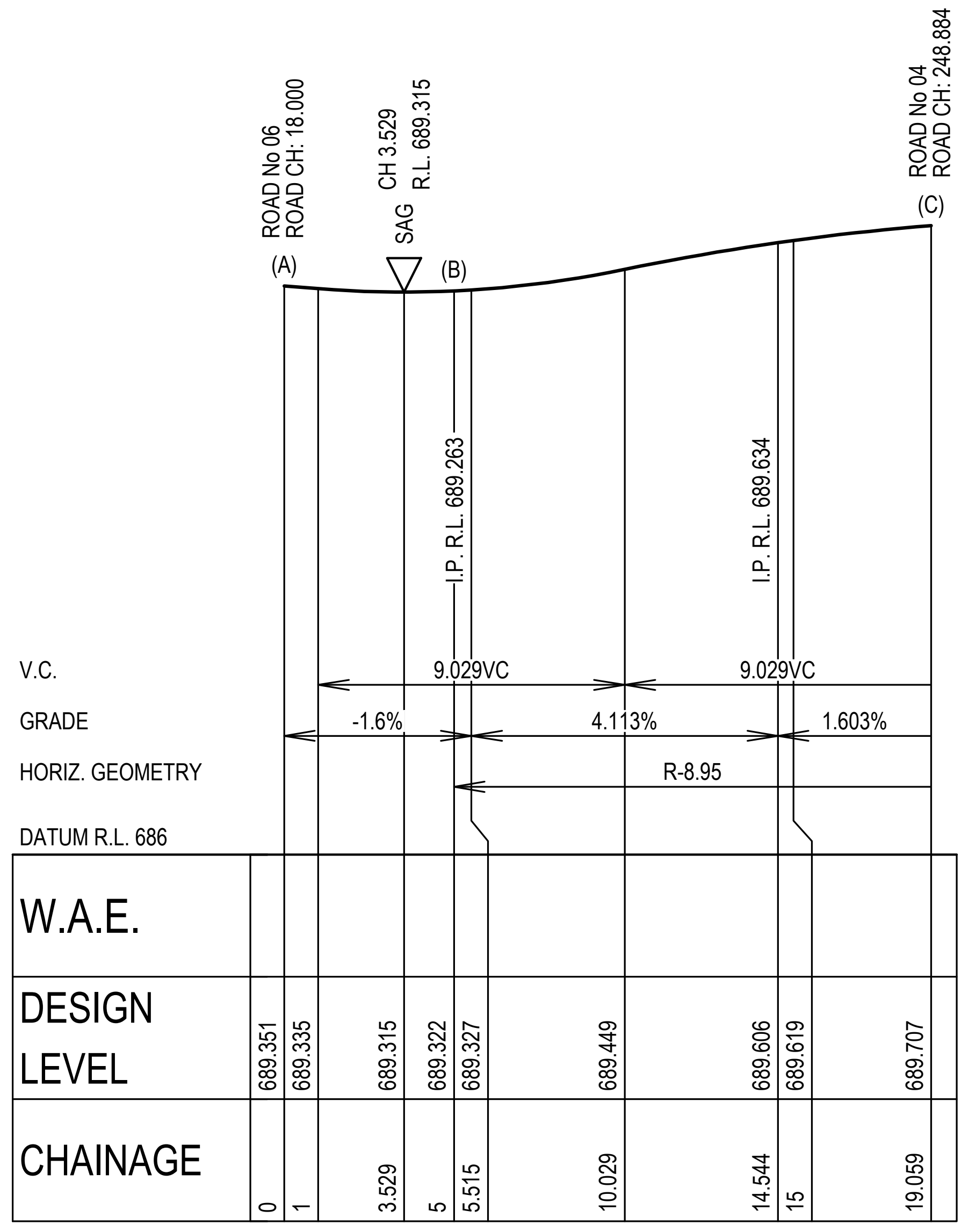


KERB RETURN KR41

SCALE 1:200 (H)

SCALE 1:40 (V)



KERB RETURN KR42

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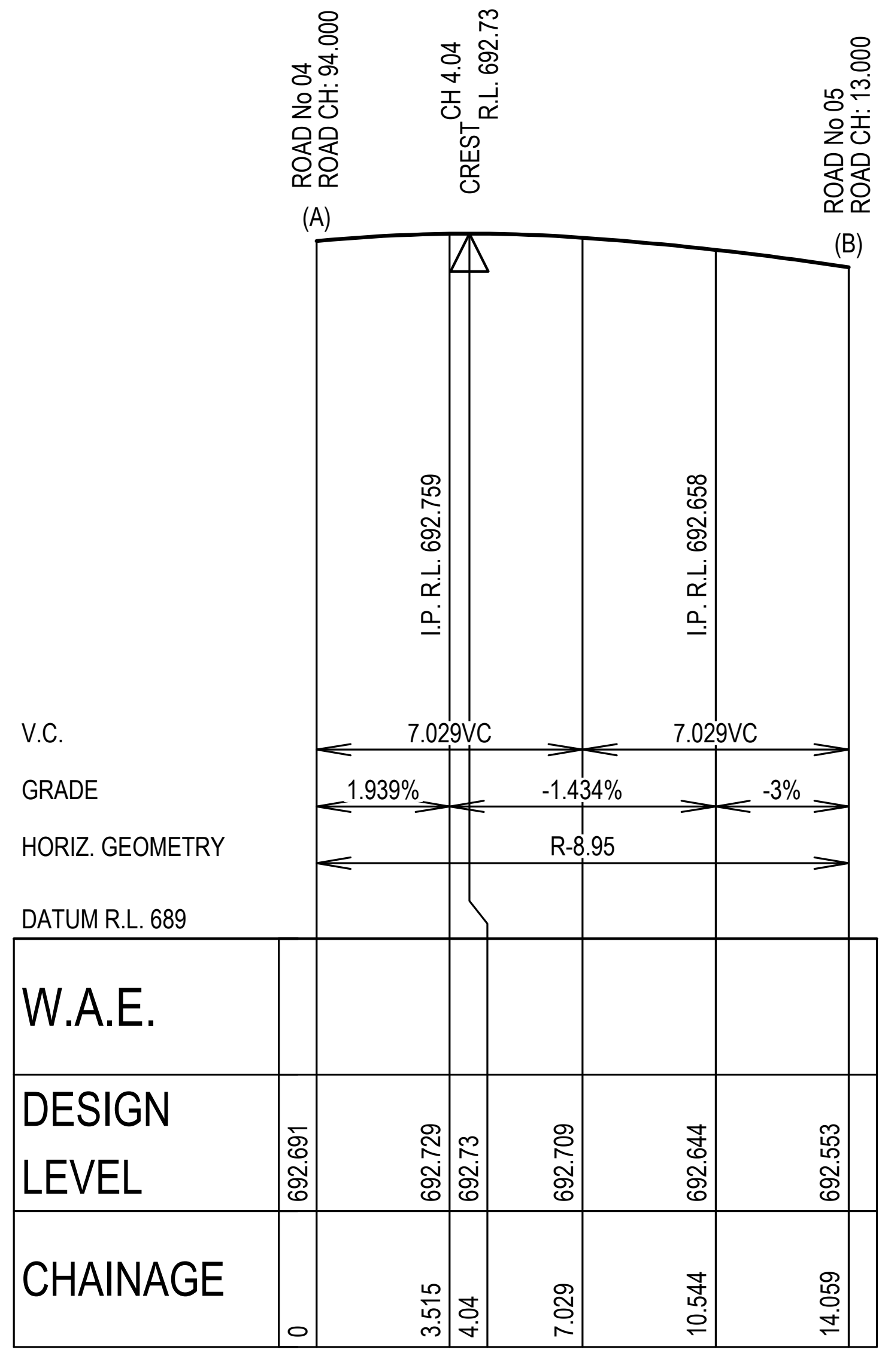

KERB RETURN KR43

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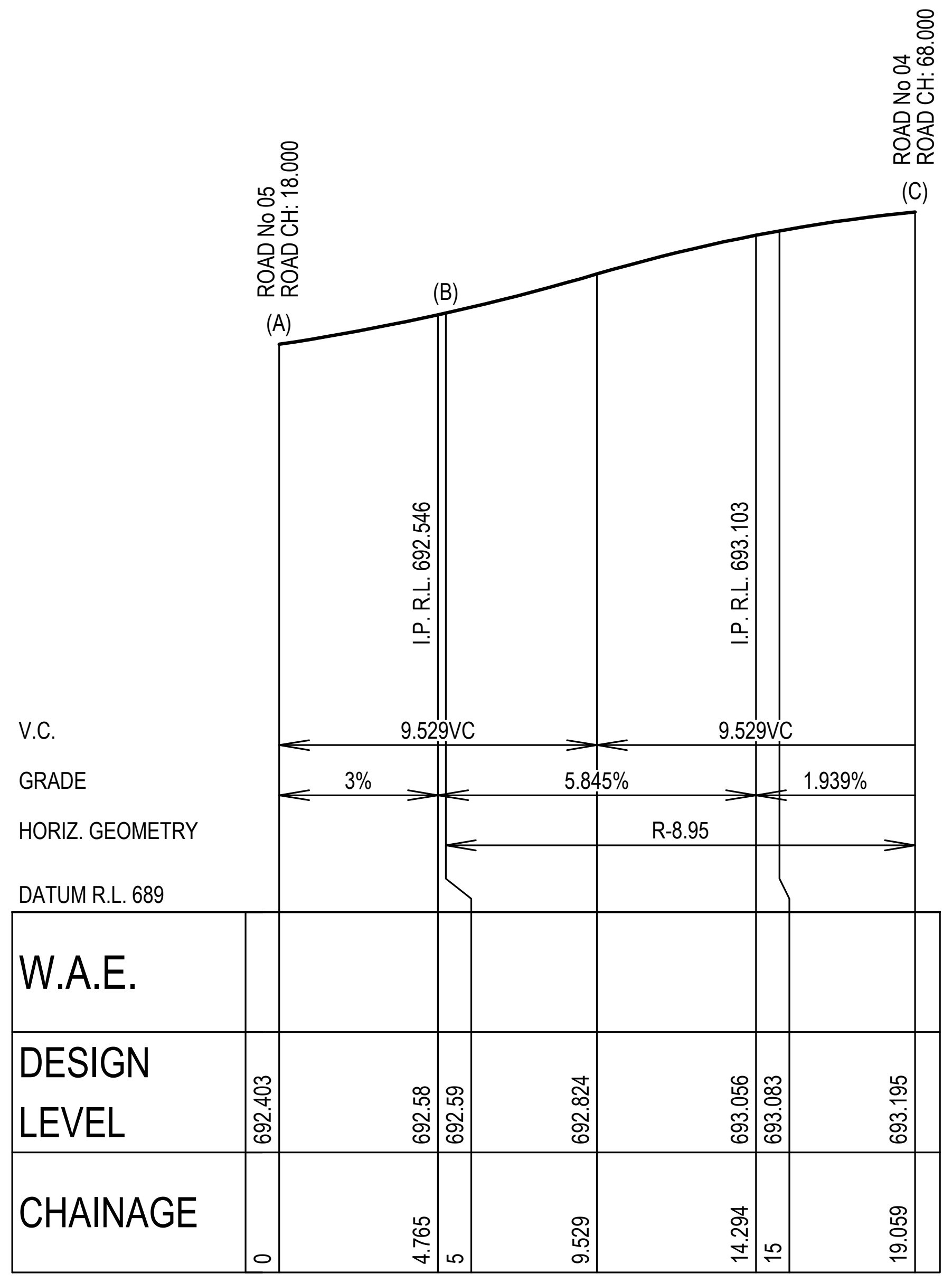

KERB RETURN KR44

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR41

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258924.78	6171618.9	192°44'49.09"		
7.03	258922.8	6171610.17		-8.95	14.059
14.06	258931.53	6171608.19	102°44'51.02"		
19.06	258936.41	6171607.09	102°44'51.02"		

SETOUT TABLE KR42

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258934.62	6171599.19	282°44'51.02"		
5	258929.74	6171600.29	282°44'51.02"		
12.03	258921.01	6171602.27		-8.95	14.059
19.06	258919.04	6171593.54	192°44'49.09"		

SETOUT TABLE KR43

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258953.86	6171471.22	102°44'51.02"		
7.03	258962.59	6171469.25		-8.95	14.059
14.06	258964.56	6171477.98	12°44'51.02"		

SETOUT TABLE KR44

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258973.57	6171481.07	192°44'51.02"		
5	258972.46	6171476.19	192°44'51.02"		
12.03	258970.49	6171467.46		-8.95	14.059
19.06	258979.22	6171465.49	102°44'51.02"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
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By:
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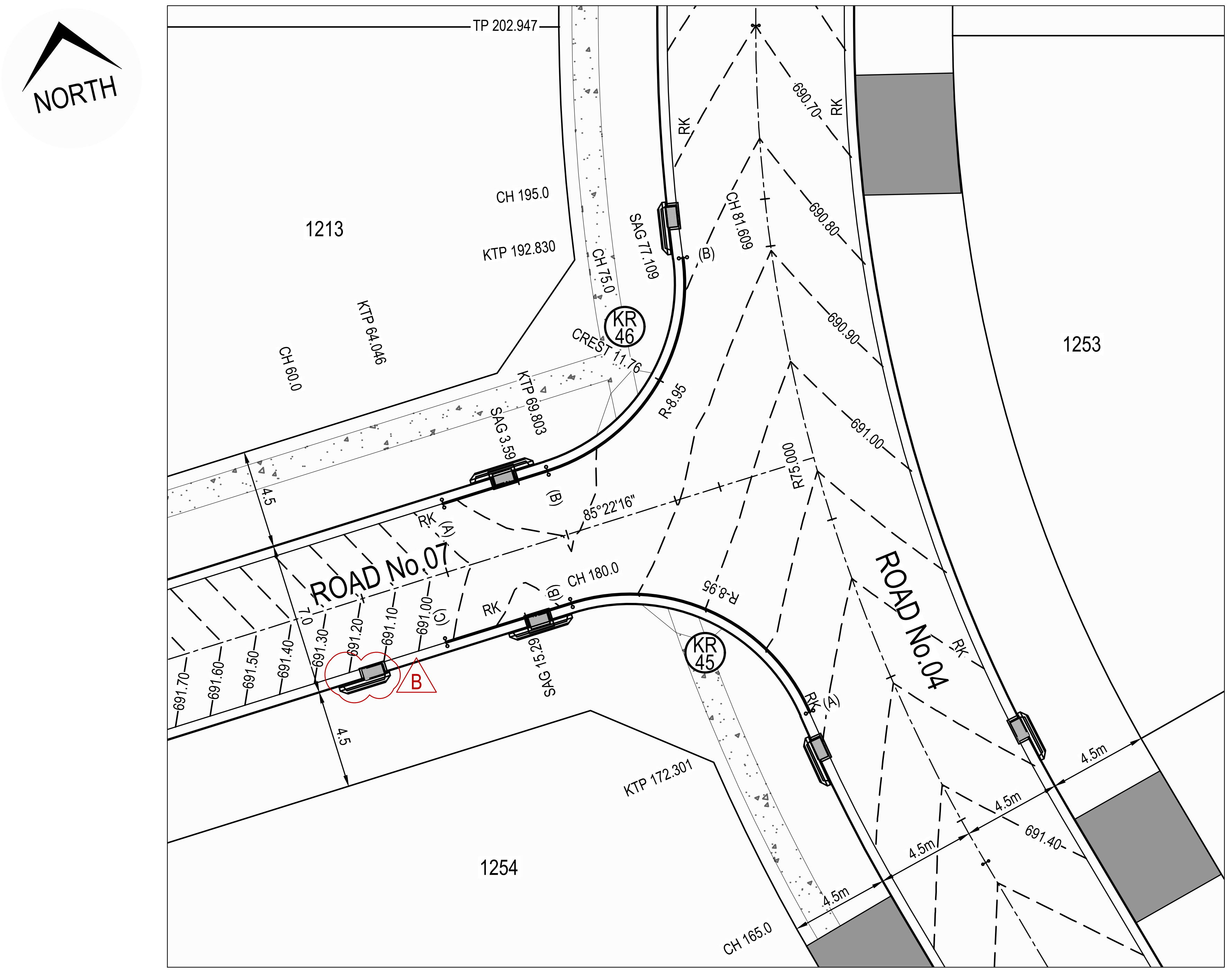
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 22 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	421	A

SETOUT IS TO LIP OF KERB



KERB RETURN PLAN - KR45 & KR46

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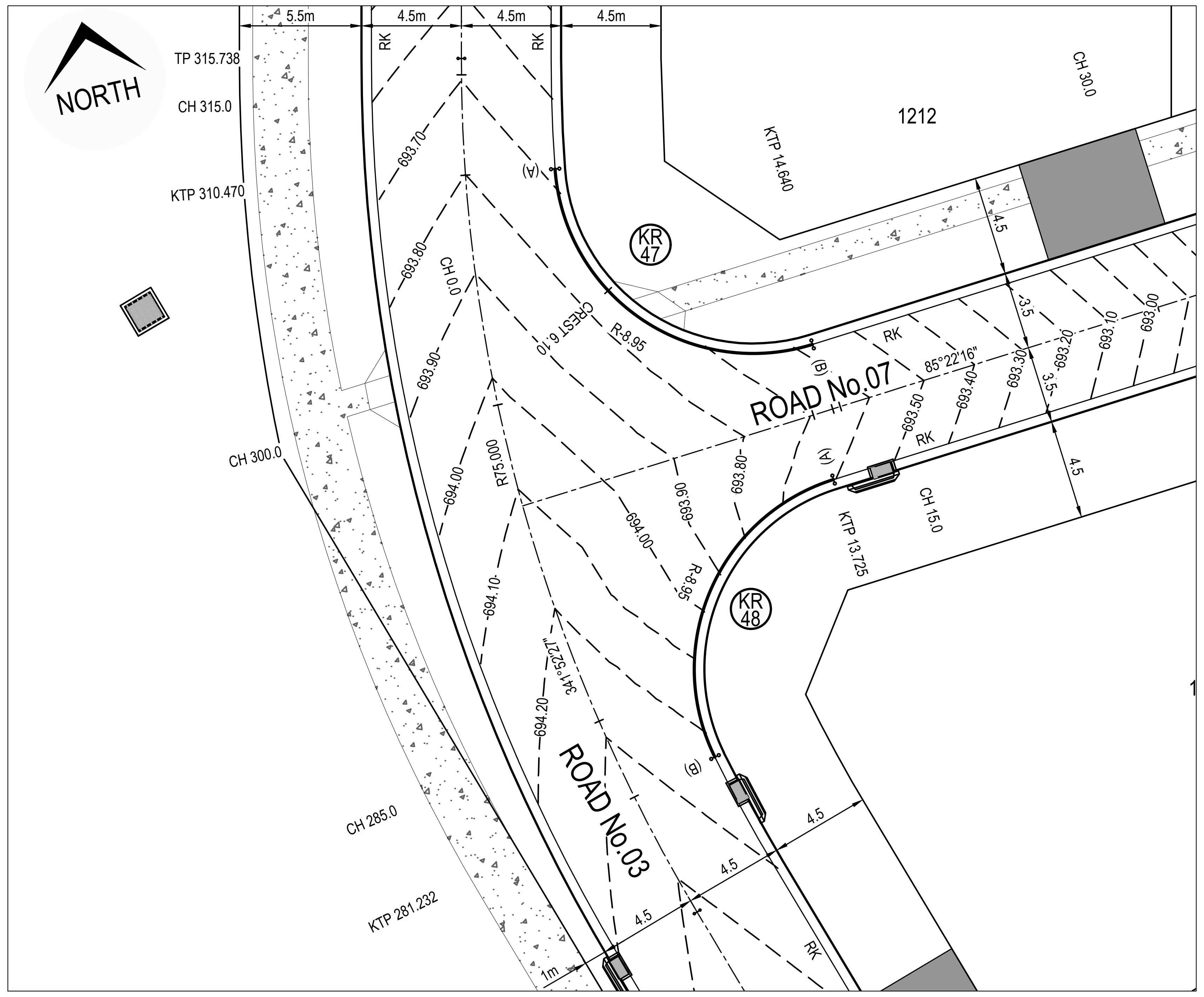

KERB RETURN PLAN - KR47 & KR48

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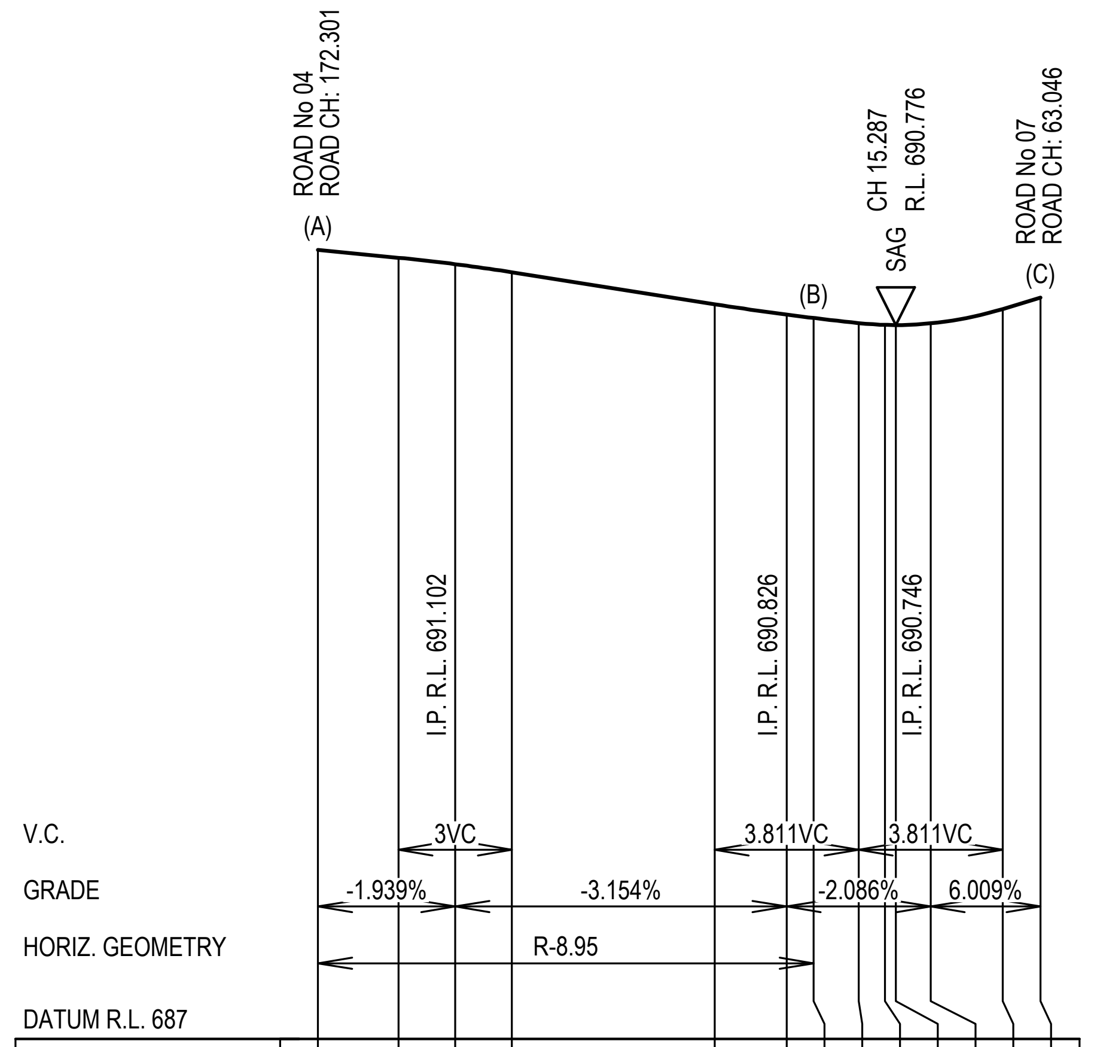


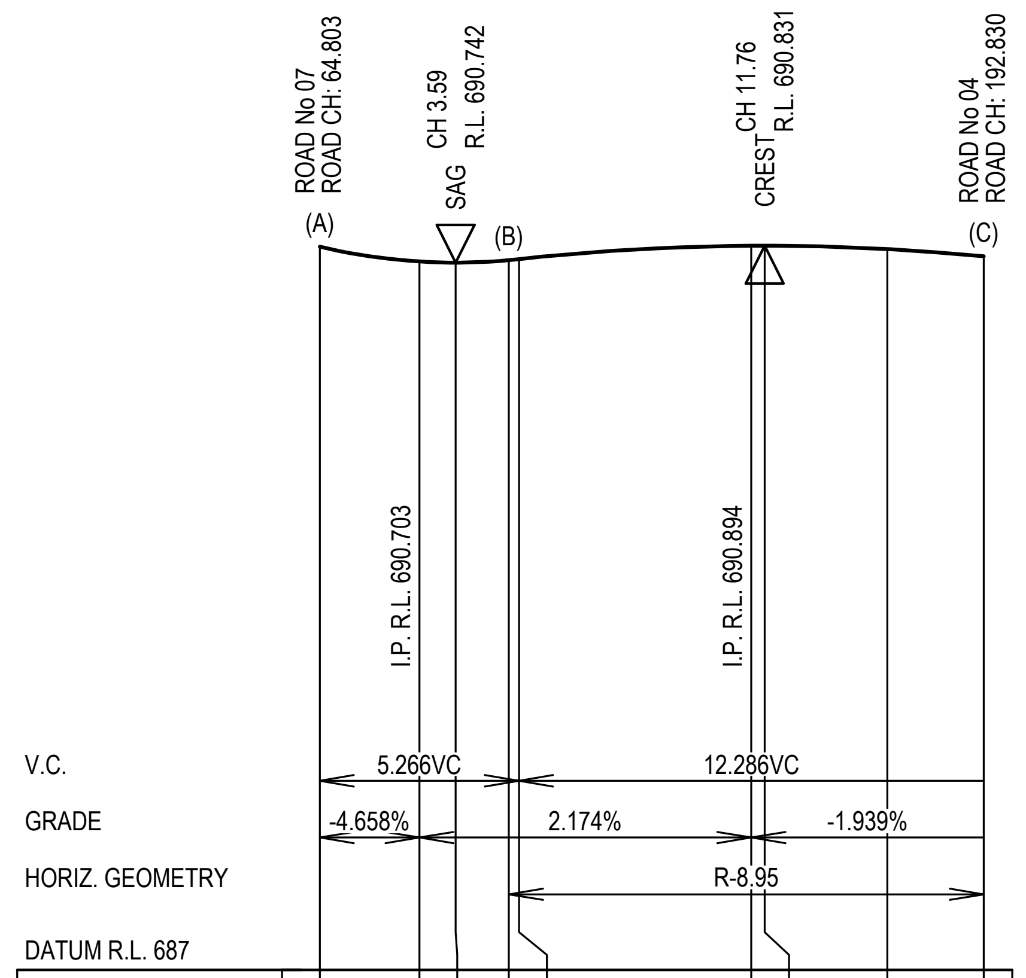
W.A.E.													
DESIGN LEVEL	691.173	691.131	691.098	691.055	690.886	690.831	690.813	690.786	690.777	690.776	690.785	690.861	690.921
CHAINAGE	0	2.133	3.633	5.133	10.493	12.399	13.116	14.305	15	15.287	16.21	18.116	19.116

KERB RETURN KR45

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR45

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258900.42	6171518.45	349°20'07.61"		
6.56	258898.93	6171526.36		-8.95	13.116
13.12	258890.9	6171525.71	265°22'16.36"		
19.12	258884.92	6171525.23	265°22'16.36"		



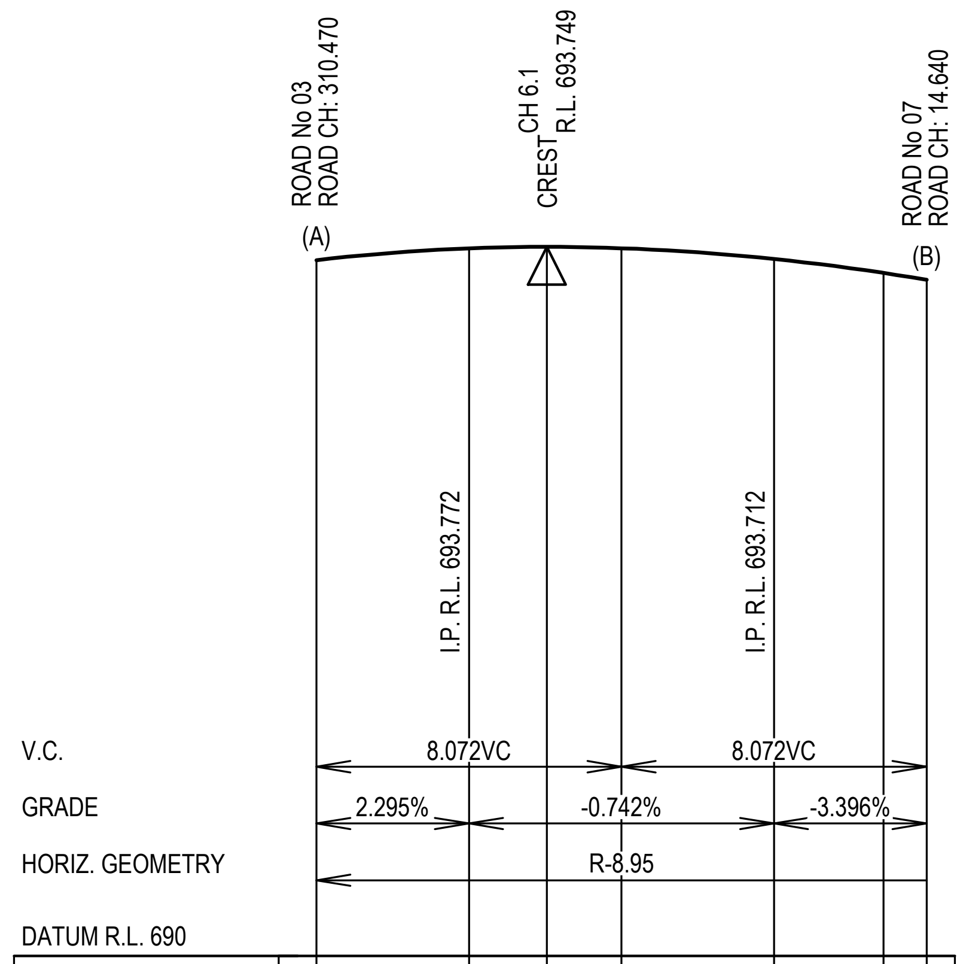
W.A.E.									
DESIGN LEVEL	690.825	690.748	690.742	690.755	690.76	690.83	690.831	690.813	690.774
CHAINAGE	0	2.633	3.59	5	5.266	11.409	11.76	15	17.552

KERB RETURN KR46

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR46

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258886.18	6171531.45	85°22'16.36"		
5	258891.16	6171531.85	85°22'16.36"		
11.28	258898.7	6171532.46		-8.95	12.552
17.55	258899.36	6171539.99	5°01'05.67"		



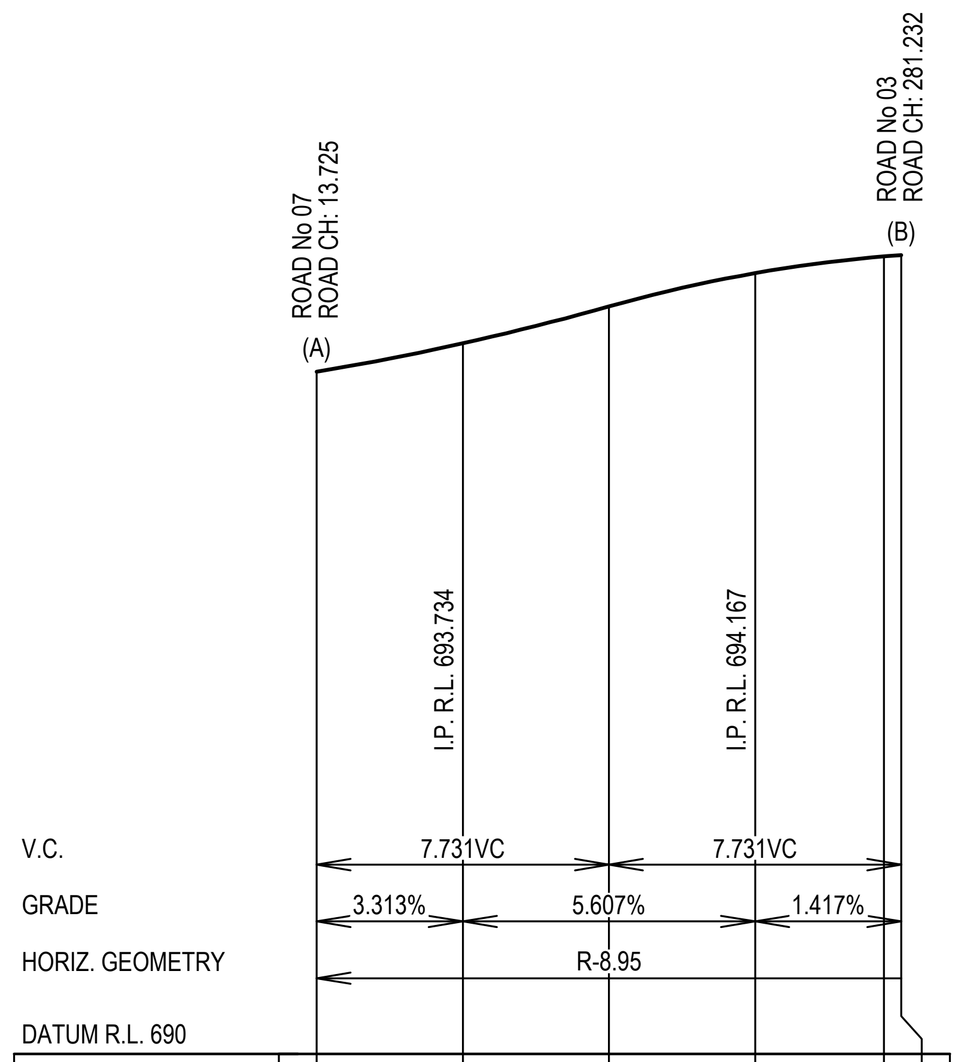
W.A.E.							
DESIGN LEVEL	693.679	693.741	693.749	693.742	693.685	693.612	693.575
CHAINAGE	0	4.036	6.1	8.072	12.108	15	16.144

KERB RETURN KR47

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR47

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258826.61	6171537.68	188°43'22.19"		
8.07	258824.9	6171526.49		-8.95	16.144
16.14	258836.18	6171527.4	85°22'16.36"		



W.A.E.						
DESIGN LEVEL	693.606	693.756	693.951	694.127	694.215	694.222
CHAINAGE	0	3.866	7.731	11.597	15	15.462

KERB RETURN KR48

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR48

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258835.76	6171521.25	265°22'16.36"		
7.73	258825.32	6171520.4		-8.95	15.462
15.46	258827.79	6171510.22	166°23'11.51"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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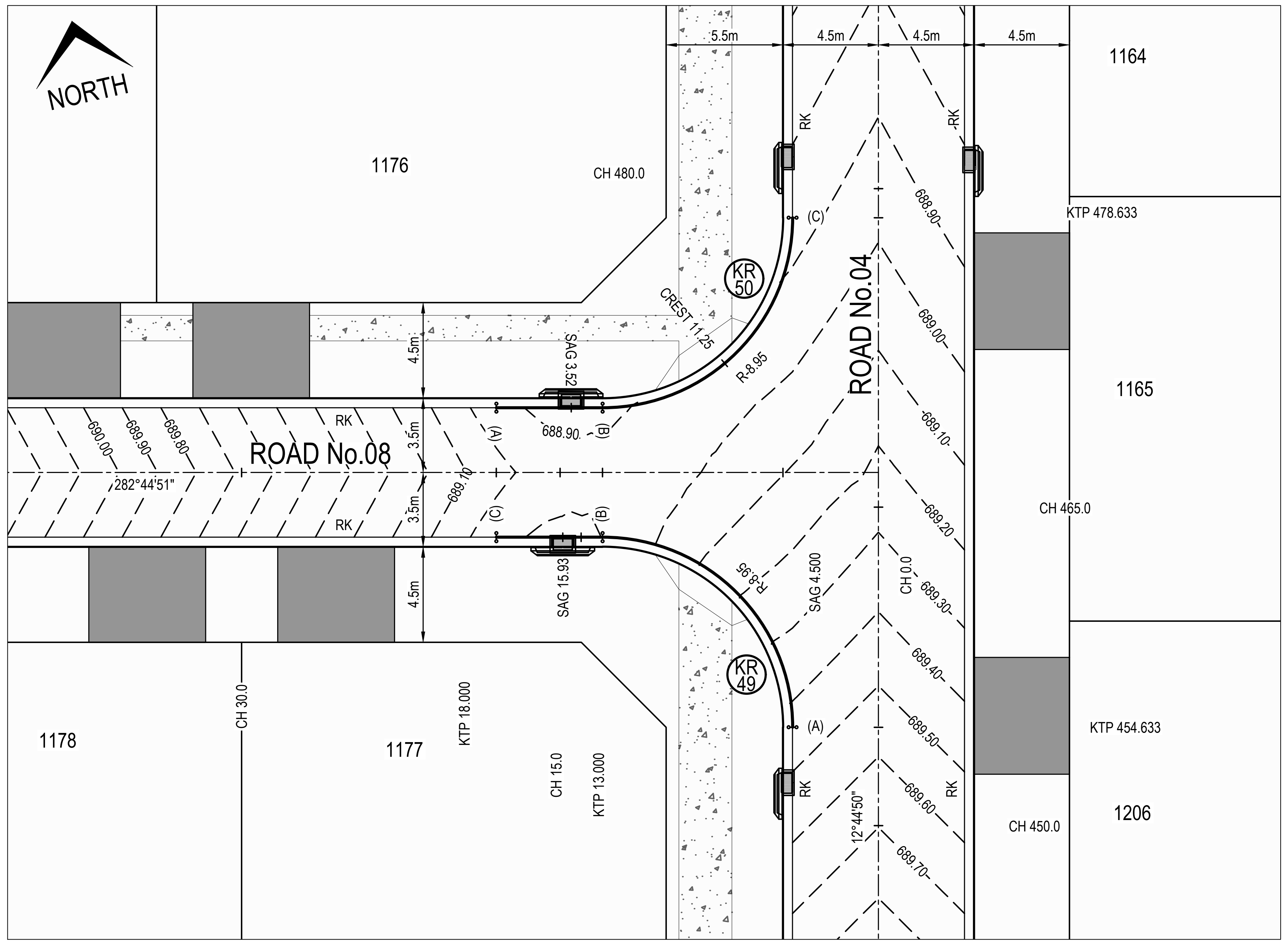
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 23 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	422	a

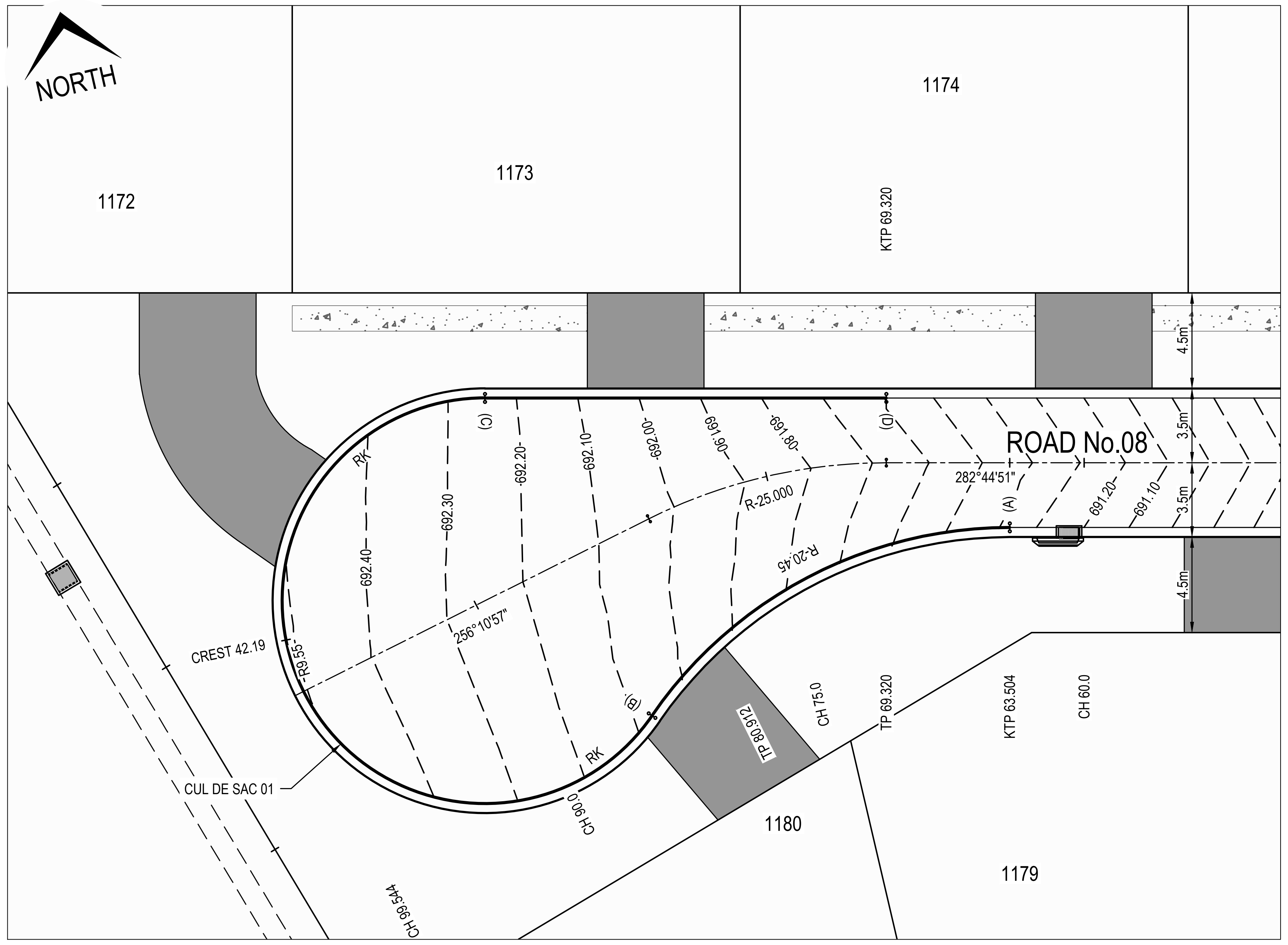
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC-Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-422.dwg

SETOUT IS TO LIP OF KERB



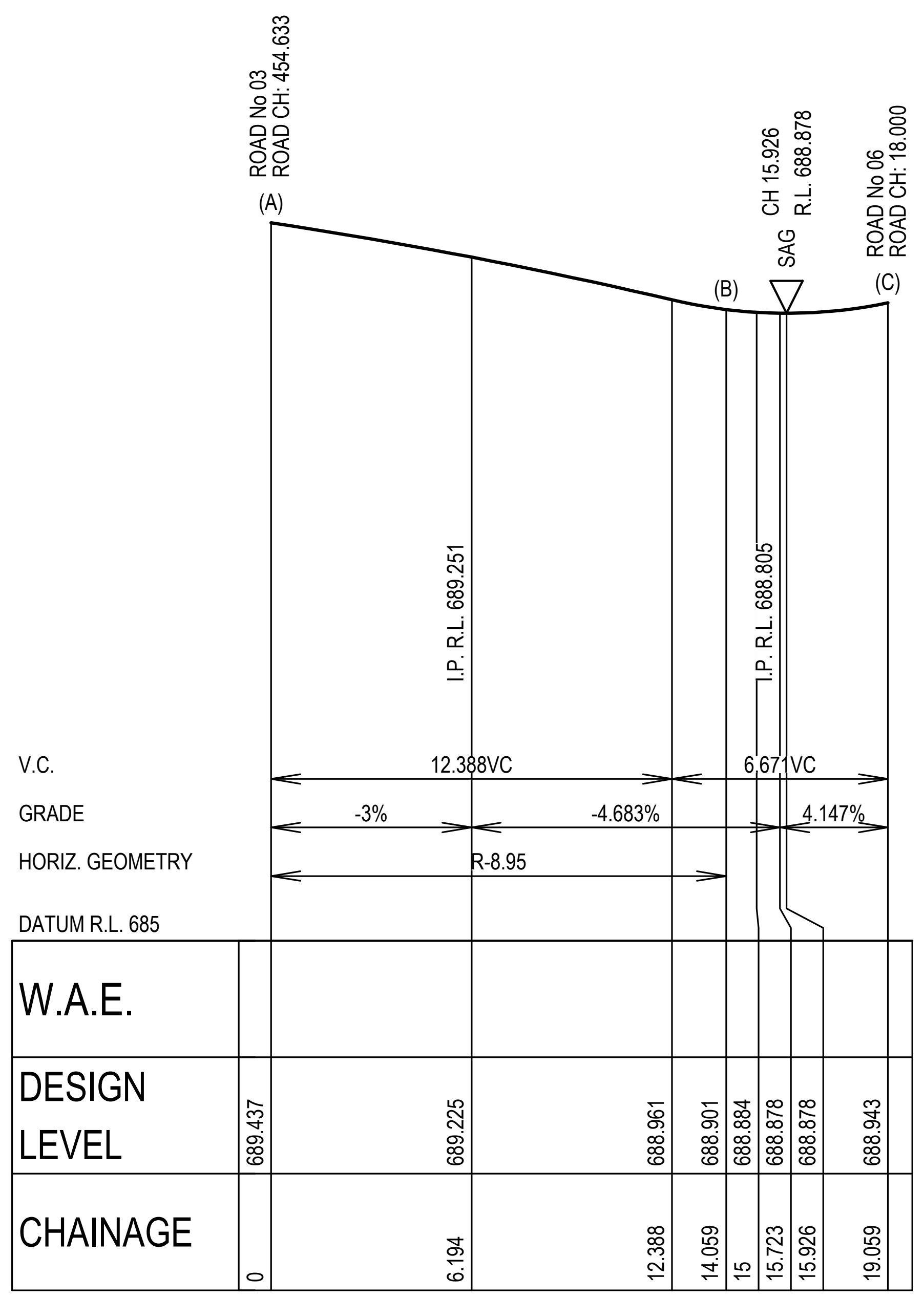
KERB RETURN PLAN - KR49 & KR50

SCALE 1:200



KERB RETURN PLAN - CUL DE SAC 01

SCALE 1:200



KERB RETURN KR49

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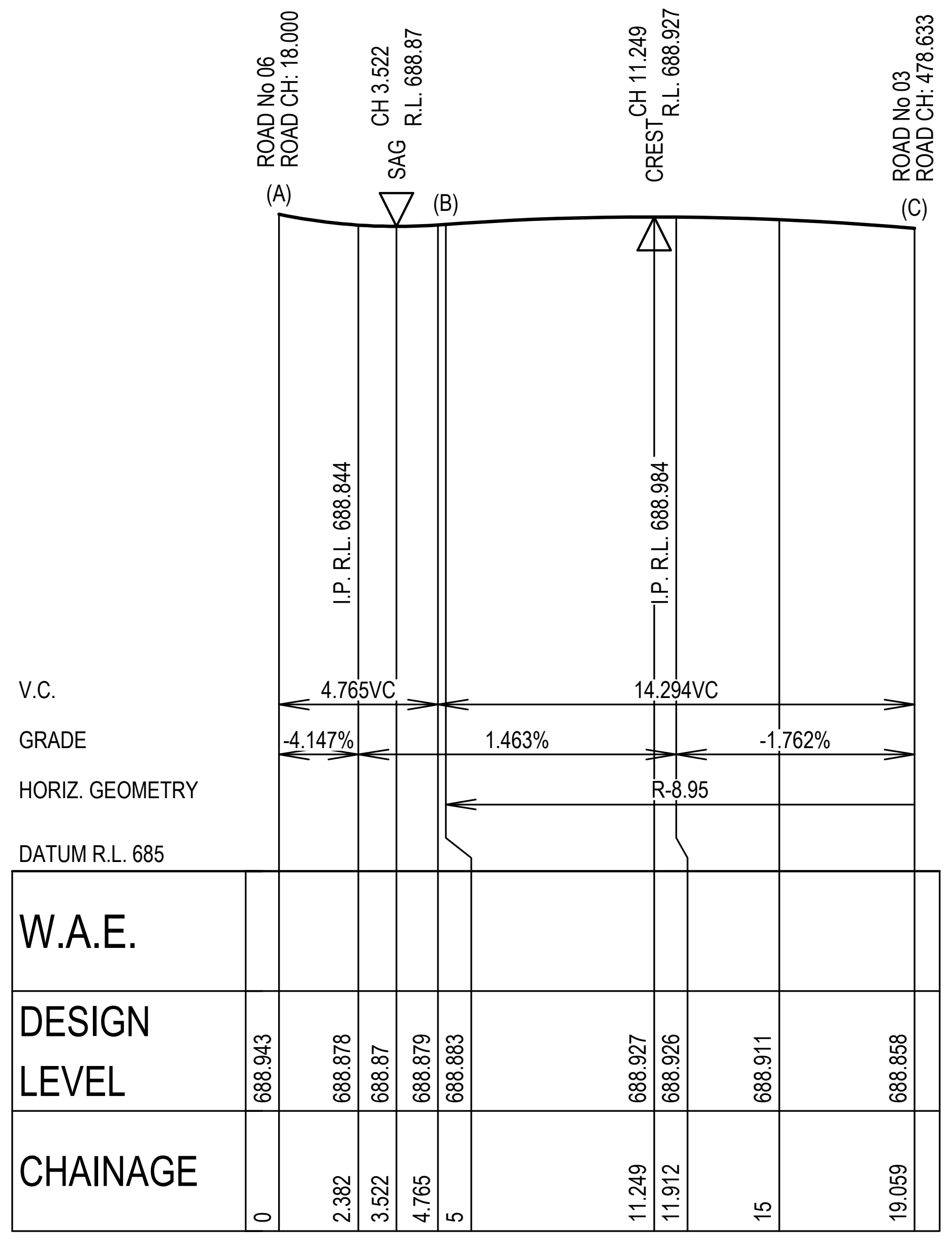

KERB RETURN KR50

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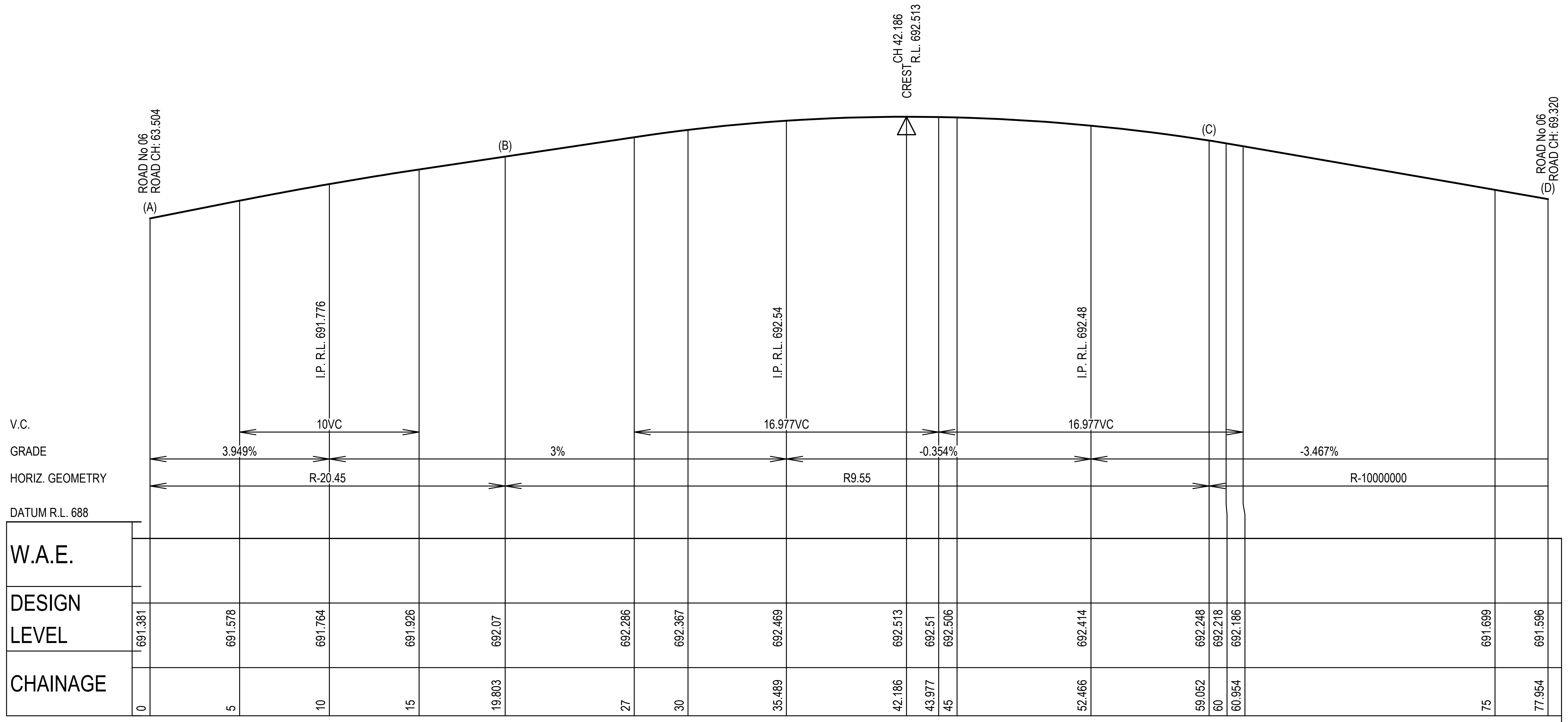

KERB RETURN CUL DE SAC 01

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE CUL DE SAC 01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258794.27	6171701.68	282°44'51.02"		
9.9	258783.78	6171704.06		-20.45	19.803
19.8	258775.88	6171696.76	227°15'56.21"		
29.62	258764.27	6171686.03		9.55	19.625
39.43	258760.18	6171701.3	345°00'23.71"		
49.24	258756.09	6171716.58		9.55	19.625
59.05	258771.51	6171713.09	102°44'51.22"		
68.5	258780.73	6171711		-10000000	18.902
77.95	258789.95	6171708.92	102°44'50.83"		

SETOUT TABLE KR49

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258850.29	6171679.83	12°44'50.48"		
7.03	258852.26	6171688.56		-8.95	14.059
14.06	258843.53	6171690.54	282°44'51.02"		
19.06	258838.66	6171691.64	282°44'51.02"		

SETOUT TABLE KR50

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258840	6171697.59	102°44'51.02"		
5	258844.88	6171696.49	102°44'51.02"		
12.03	258853.61	6171694.51		-8.95	14.059
19.06	258855.58	6171703.24	12°44'50.48"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
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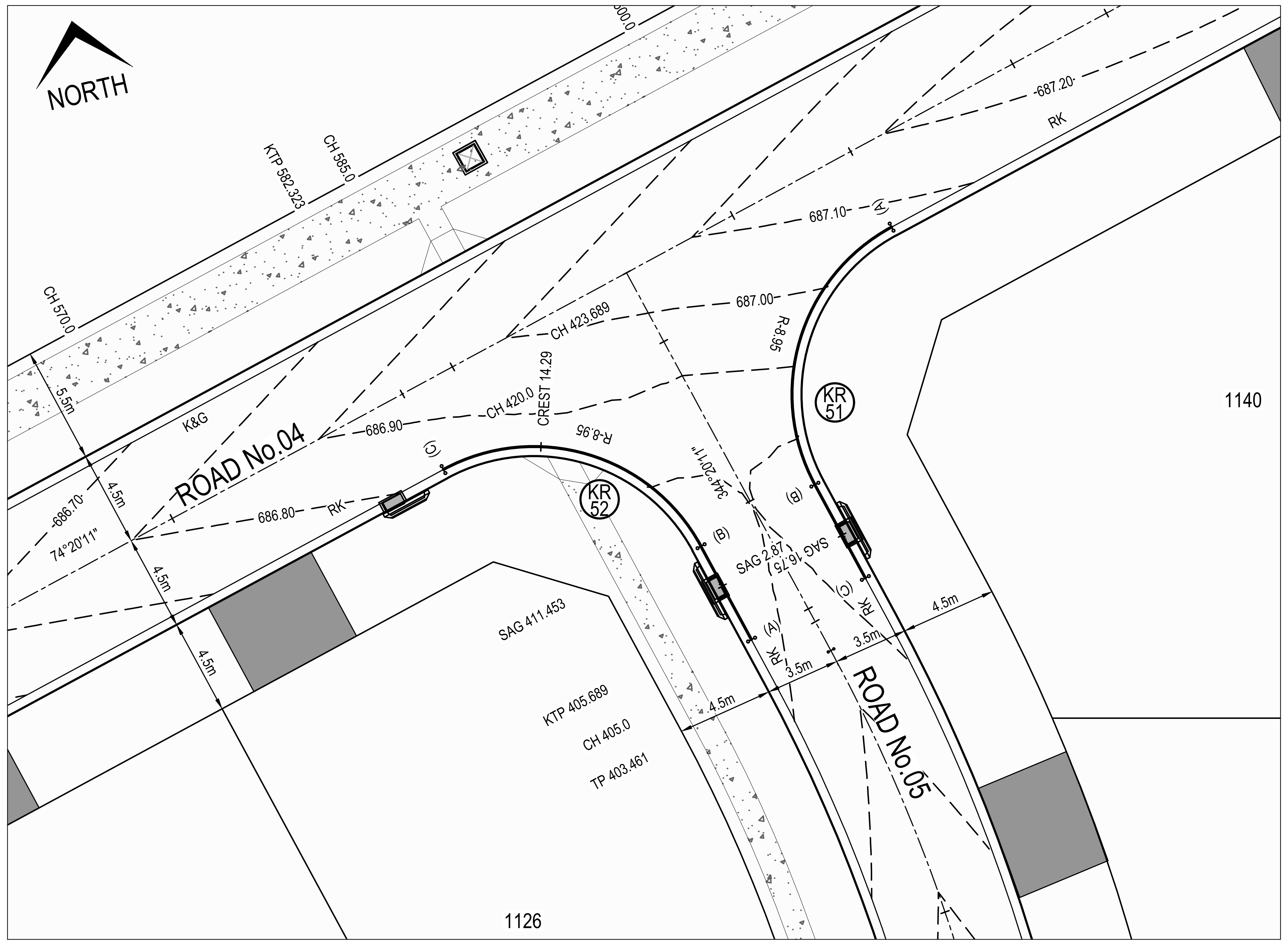
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 24 OF 28

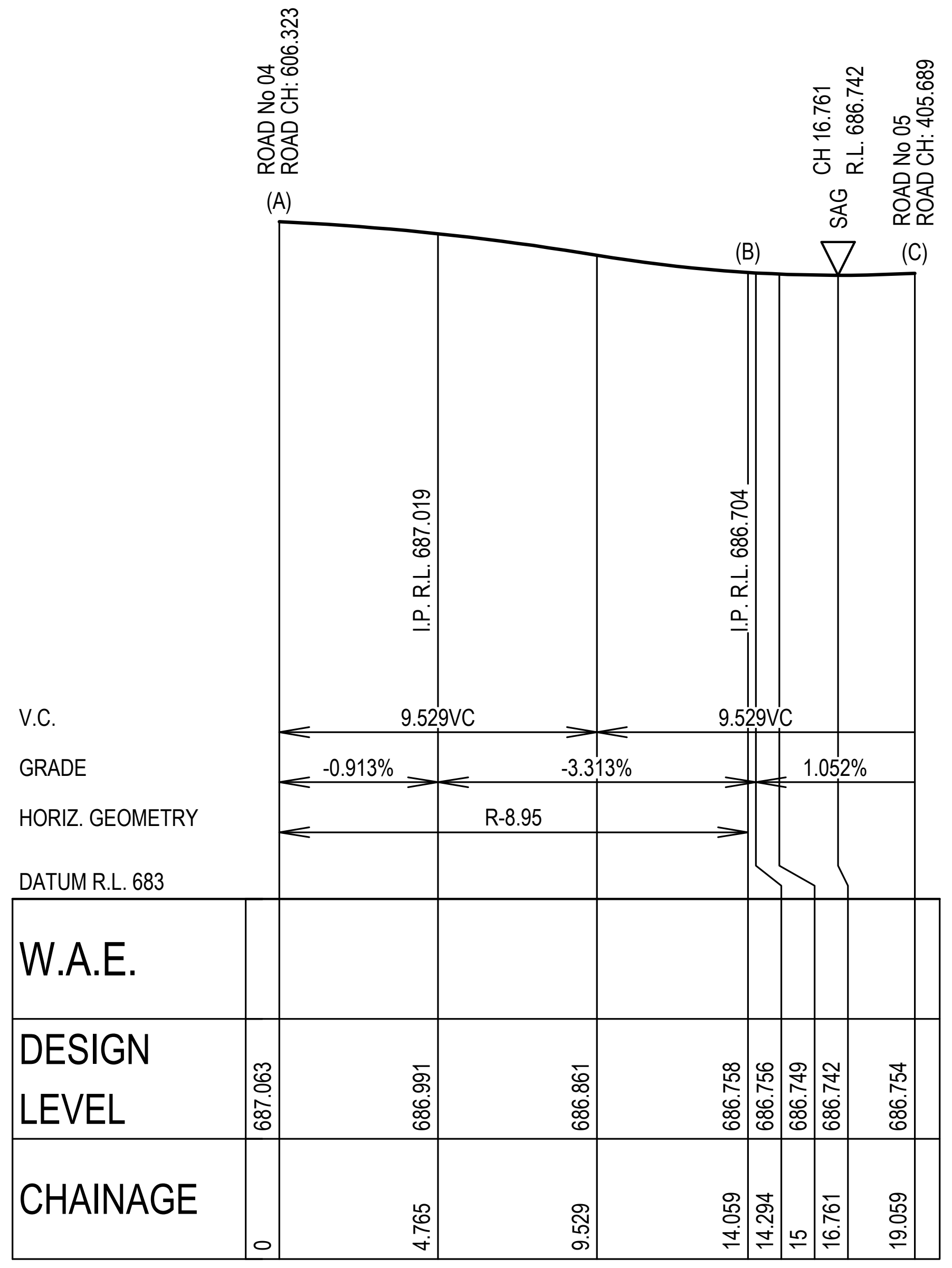
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	423	A

SETOUT IS TO LIP OF KERB



KERB RETURN PLAN - KR51 & KR52

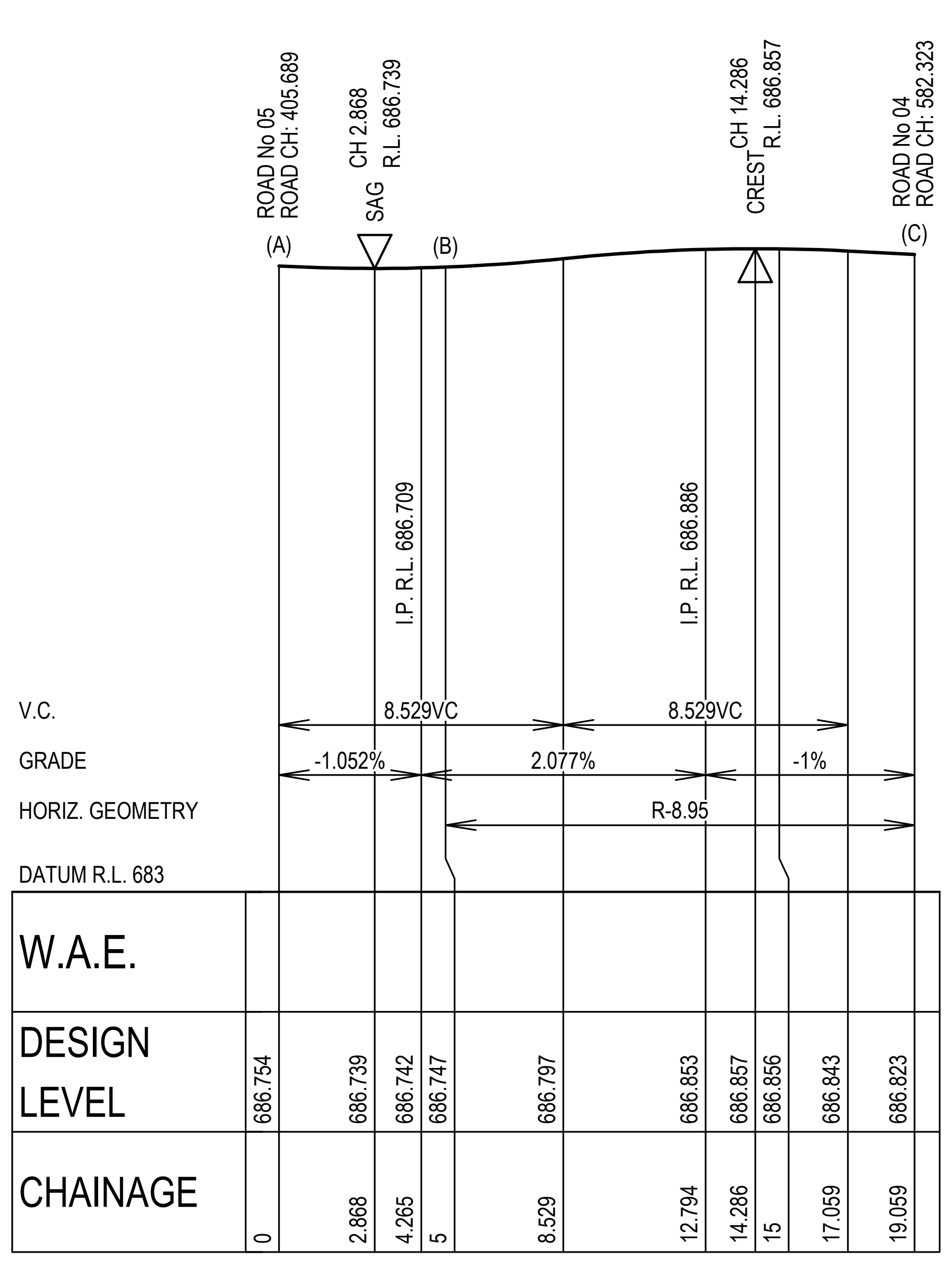
SCALE 1:200



W.A.E.								
DESIGN LEVEL	687.063	686.991	686.861	686.758	686.756	686.749	686.742	686.754
CHAINAGE	0	4.765	9.529	14.059	14.294	15	16.761	19.059

KERB RETURN KR51

SCALE 1:200 (H)
SCALE 1:40 (V)



W.A.E.										
DESIGN LEVEL	686.754	686.739	686.742	686.747	686.797	686.853	686.857	686.856	686.843	686.823
CHAINAGE	0	2.868	4.265	5	8.529	12.794	14.286	15	17.059	19.059

KERB RETURN KR52

SCALE 1:200 (H)
SCALE 1:40 (V)

SETOUT TABLE KR51

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259052.11	6171877.3	254°20'10.76"		
7.03	259043.49	6171874.88		-8.95	14.059
14.06	259045.9	6171866.27	164°20'10.74"		
19.06	259047.25	6171861.45	164°20'10.74"		

SETOUT TABLE KR52

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259041.38	6171859.8	344°20'10.74"		
5	259040.03	6171864.62	344°20'10.74"		
12.03	259037.61	6171873.24		-8.95	14.059
19.06	259029	6171870.82	254°20'10.76"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:40 (A1) SCALE 1:80 (A3)

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Project:
STAGE 1
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141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 25 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	424	A

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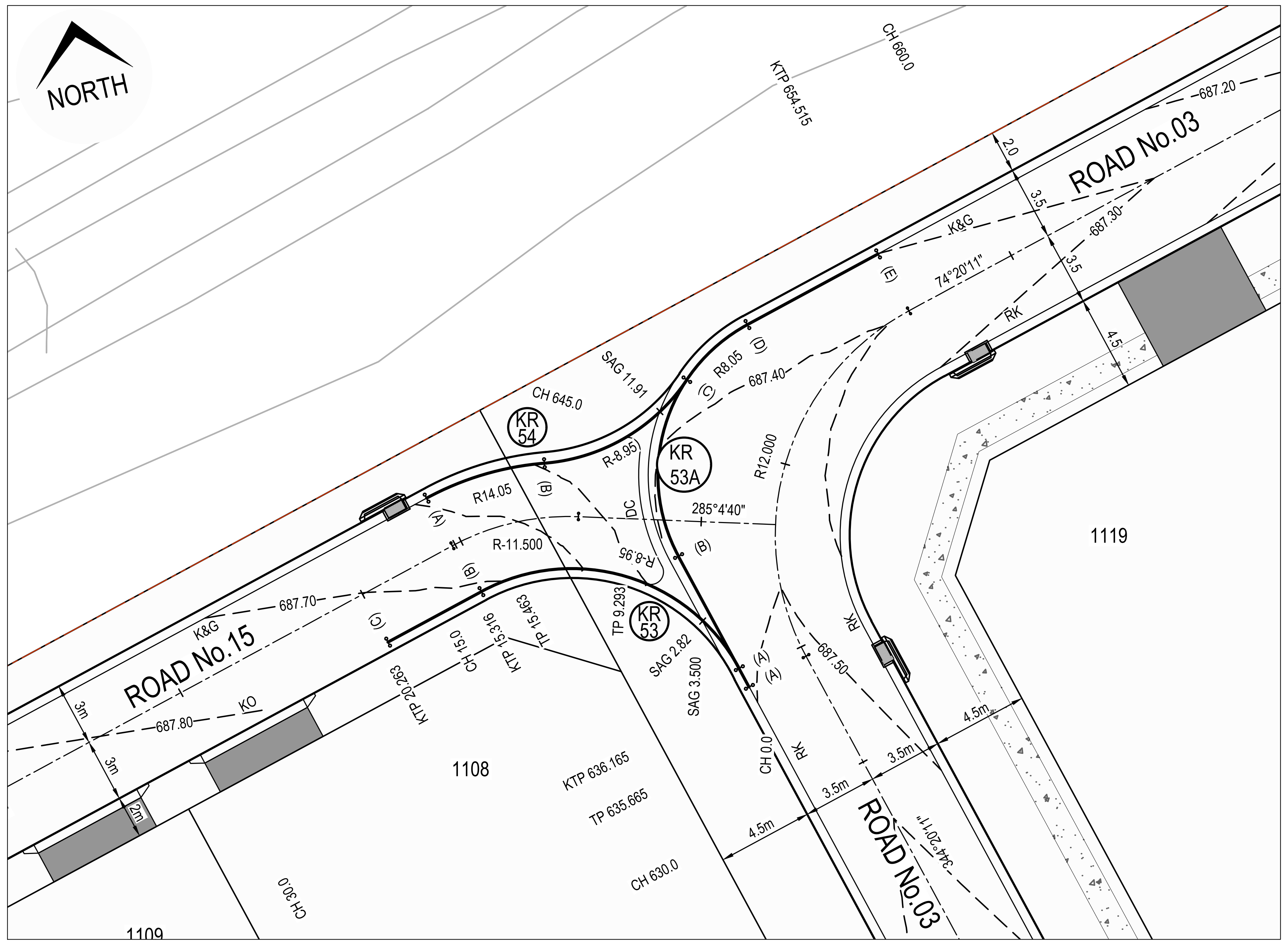

KERB RETURN PLAN - KR53 & KR54

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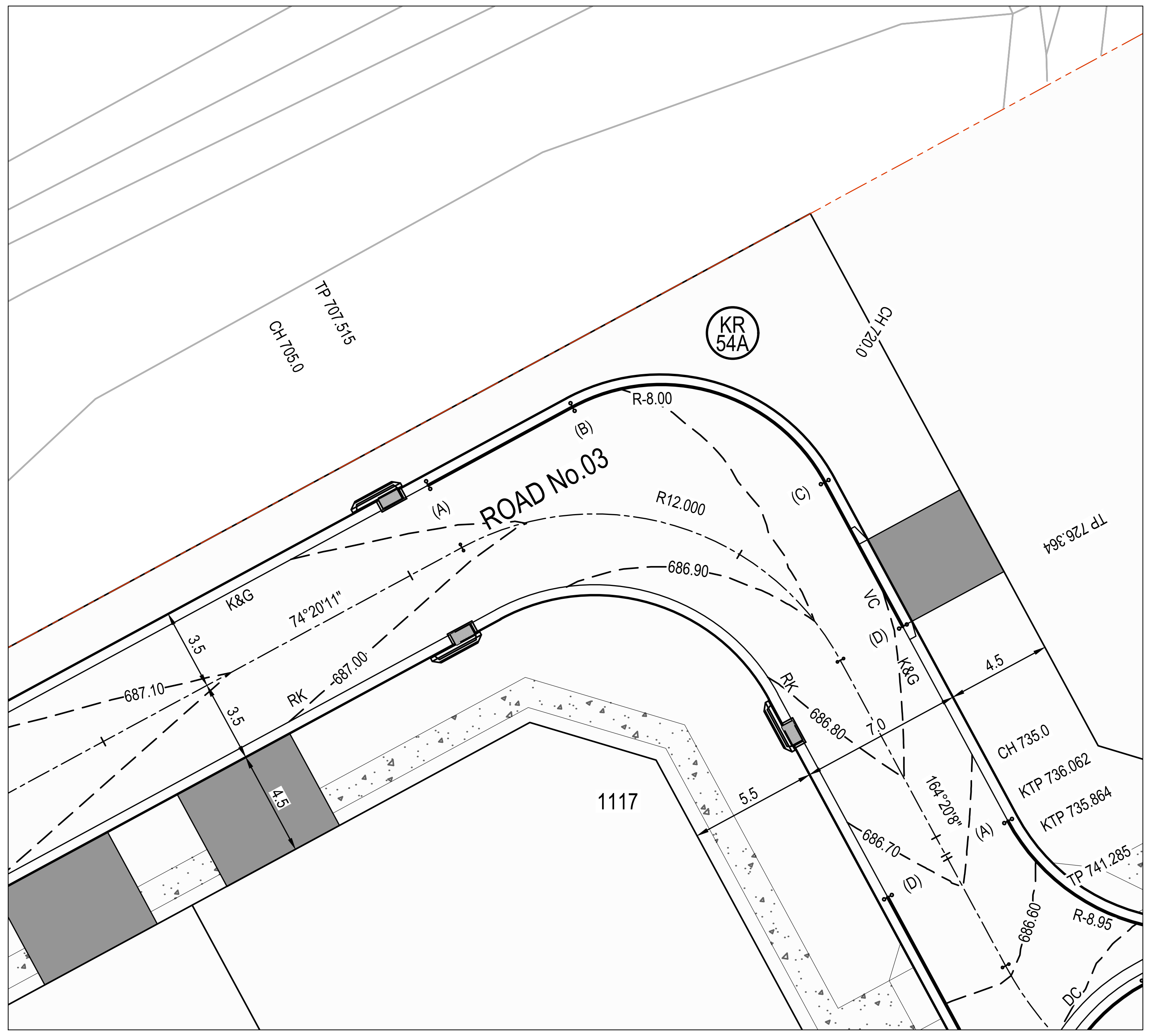

KERB RETURN PLAN - KR54A

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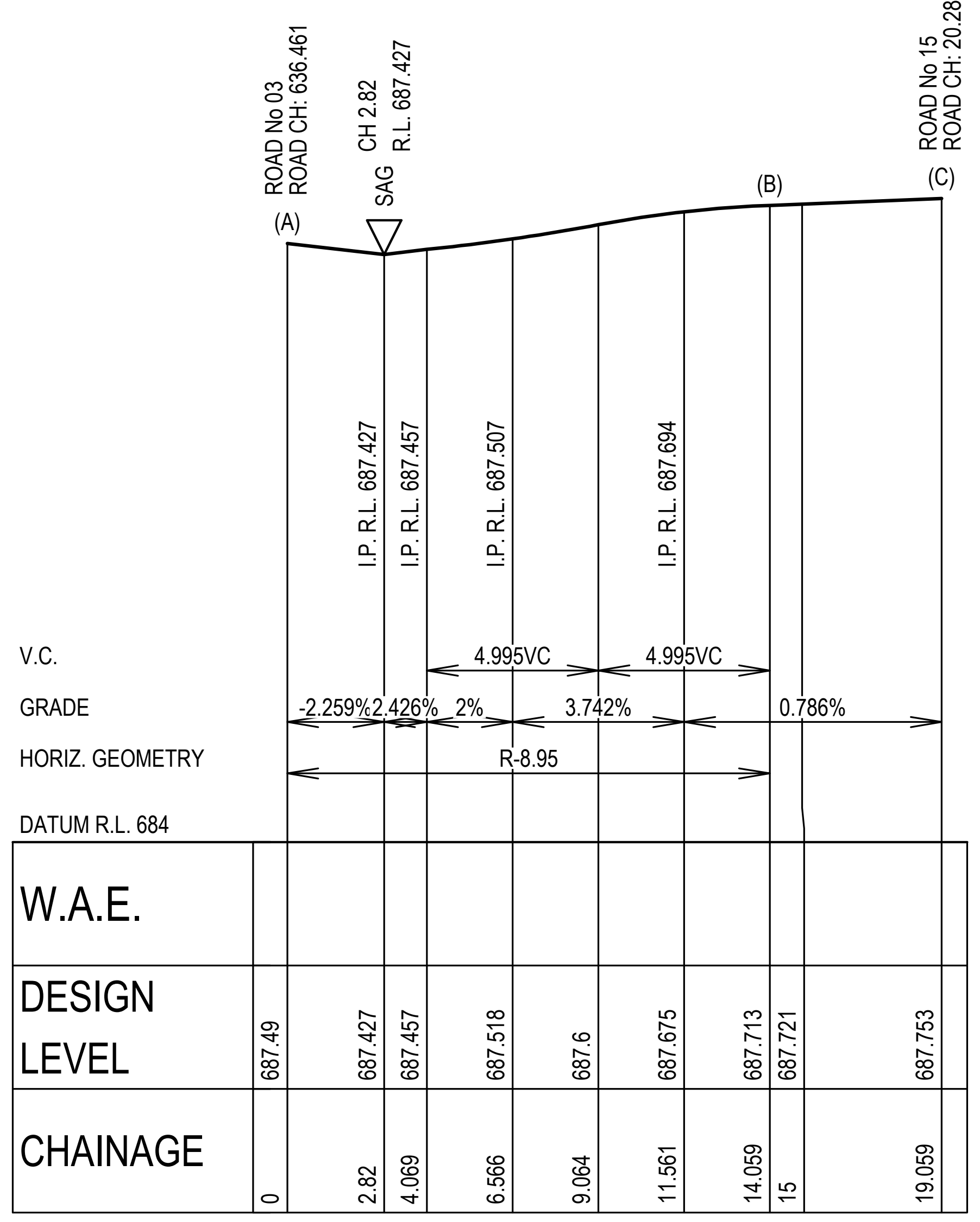


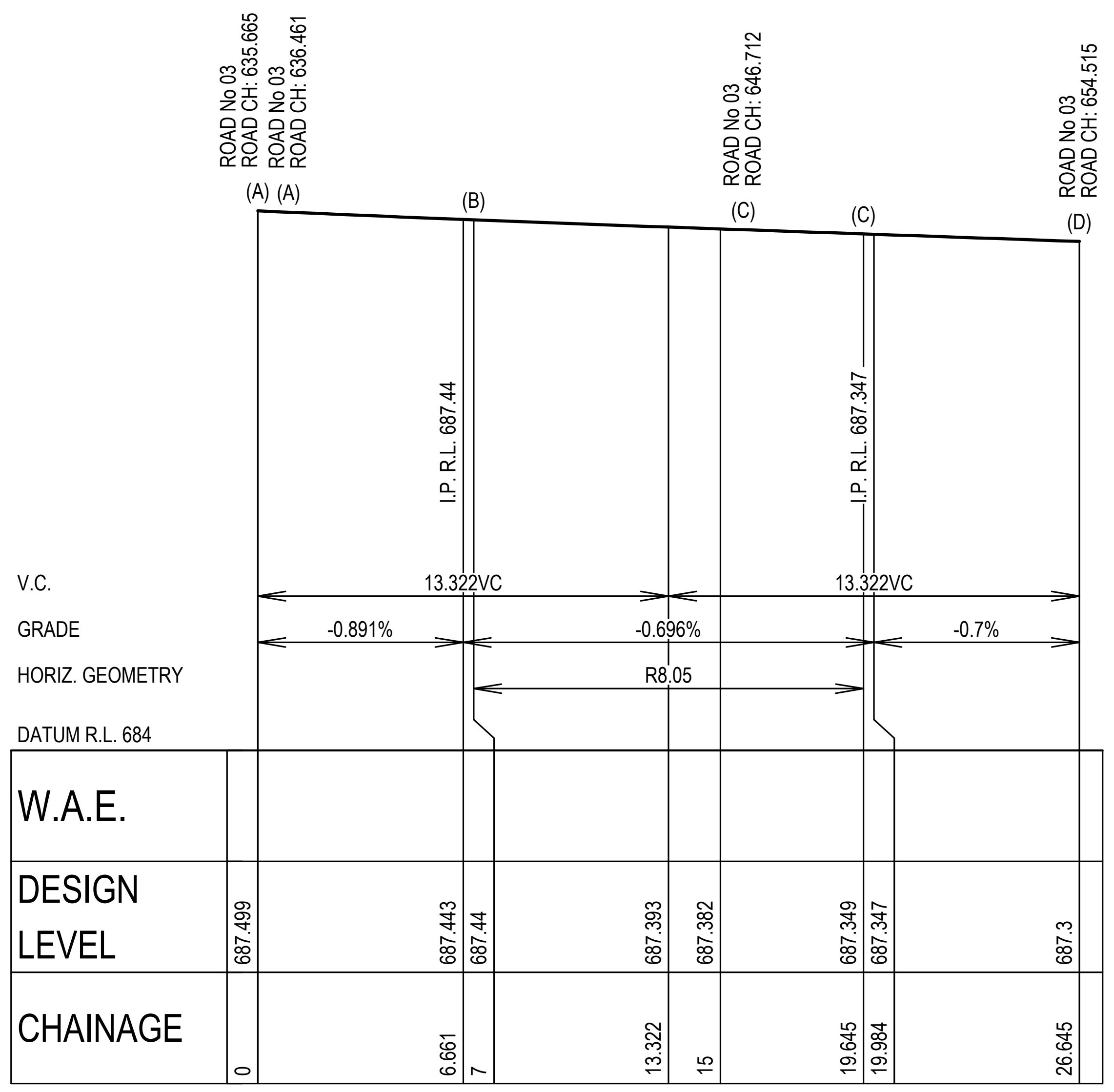
KERB RETURN KR53

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR53

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258873.43	6171855.81	344°20'10.74"		
7.03	258871.01	6171864.43		-8.95	14.059
14.06	258862.39	6171862.01	254°20'10.75"		
19.06	258857.58	6171860.66	254°20'10.75"		



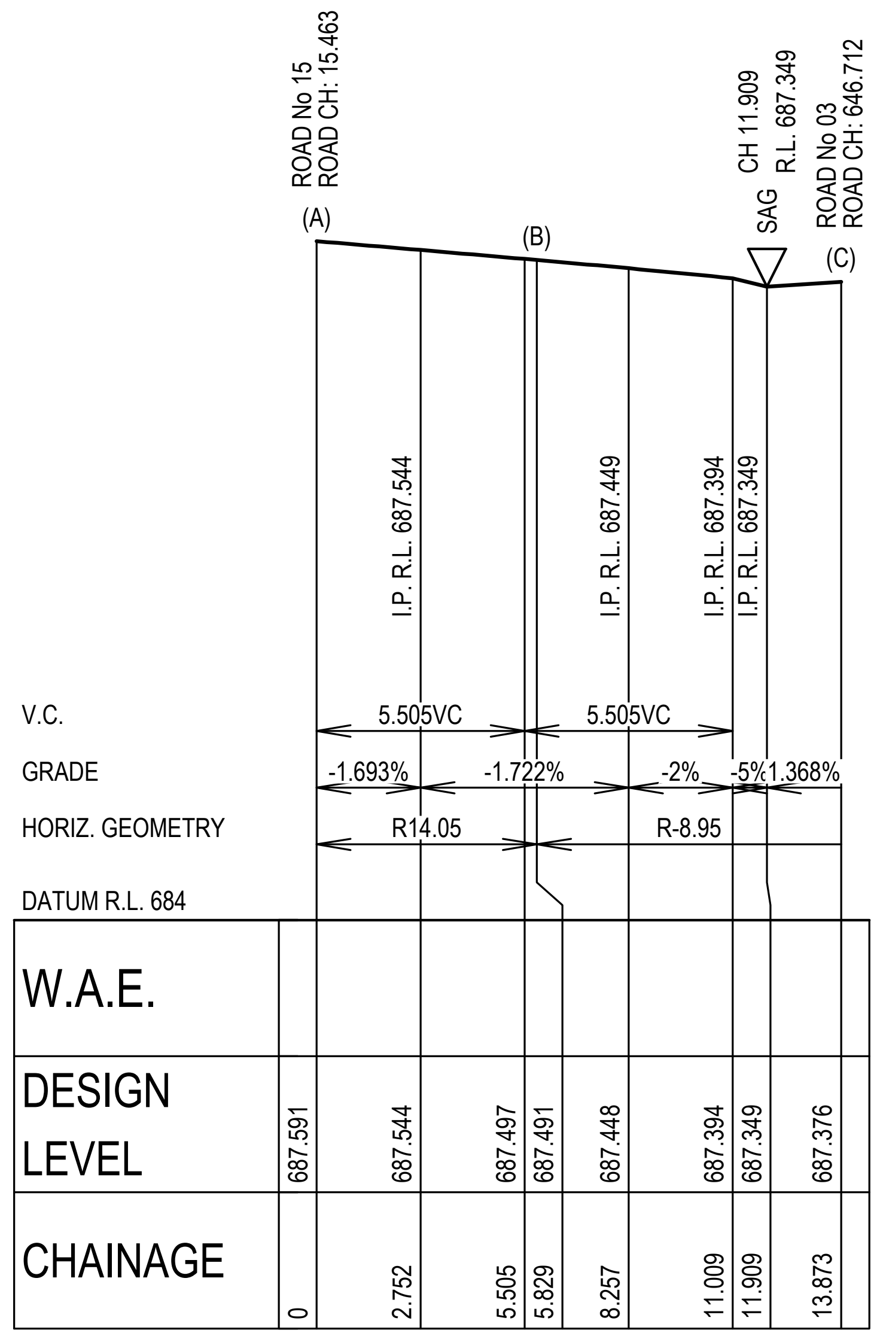
KERB RETURN KR53A

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR53A

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258873.7	6171854.85	344°20'10.74"		
7	258871.81	6171861.59	344°20'10.74"		
13.32	258869.63	6171869.34		8.05	12.645
19.64	258877.38	6171871.51	74°20'10.74"		
26.64	258884.12	6171873.4	74°20'10.74"		



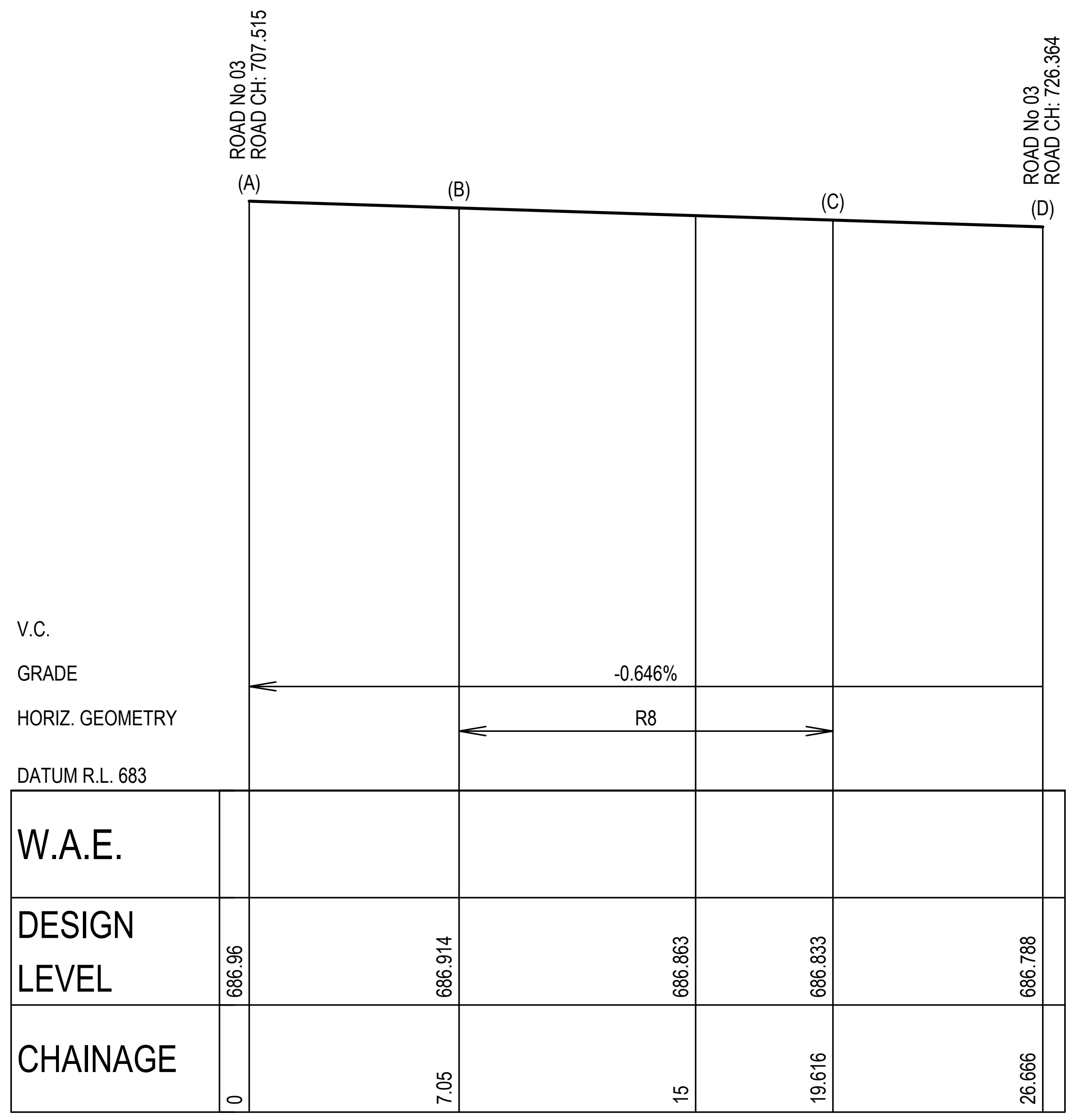
KERB RETURN KR54

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR54

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258860.84	6171866.87	74°20'10.75"		
2.91	258863.69	6171867.67		14.05	5.829
5.83	258866.62	6171867.25	98°06'28.18"		
9.85	258870.89	6171866.65		-8.95	8.044
13.87	258874.03	6171869.61	46°36'52.29"		



KERB RETURN KR54A

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR54A

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258935.16	6171887.71	74°20'10.74"		
7.05	258941.94	6171889.61	74°20'10.74"		
13.33	258949.65	6171891.77		8	12.566
19.62	258951.81	6171884.07	164°20'08.13"		
26.67	258953.71	6171877.28	164°20'08.13"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

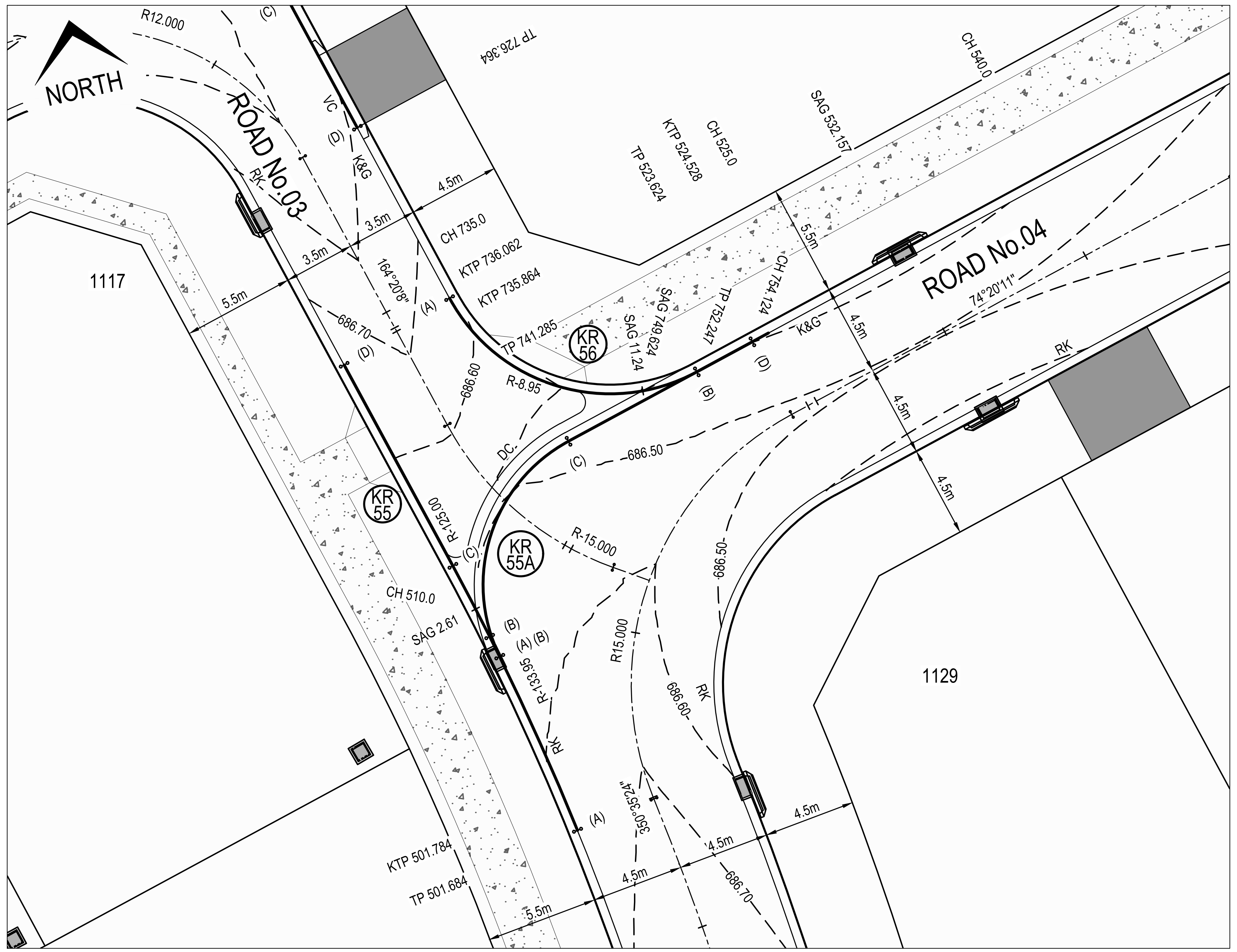
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 26 OF 28

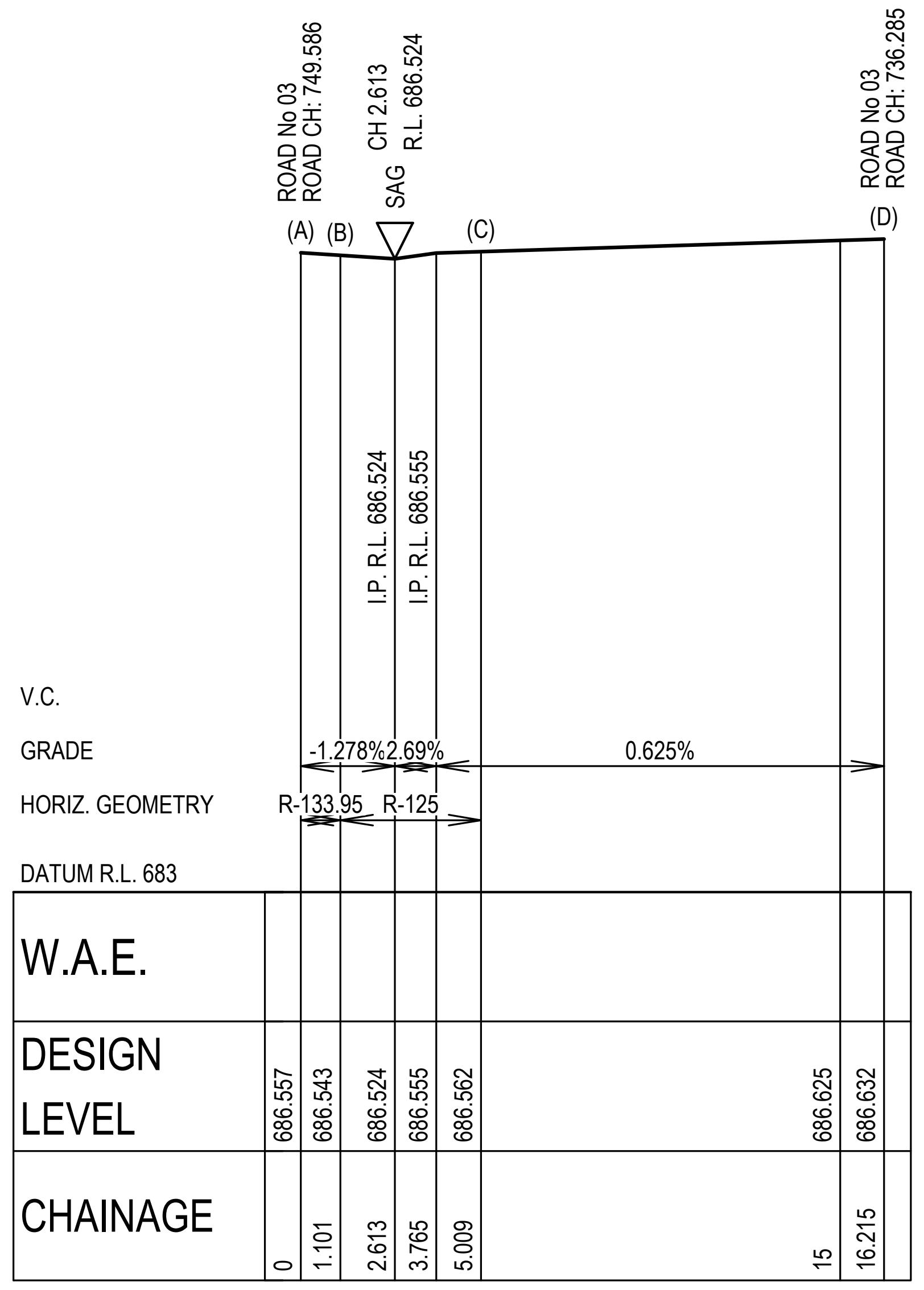
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	425	B

SETOUT IS TO LIP OF KERB



KERB RETURN PLAN - KR55 & KR56

SCALE 1:200



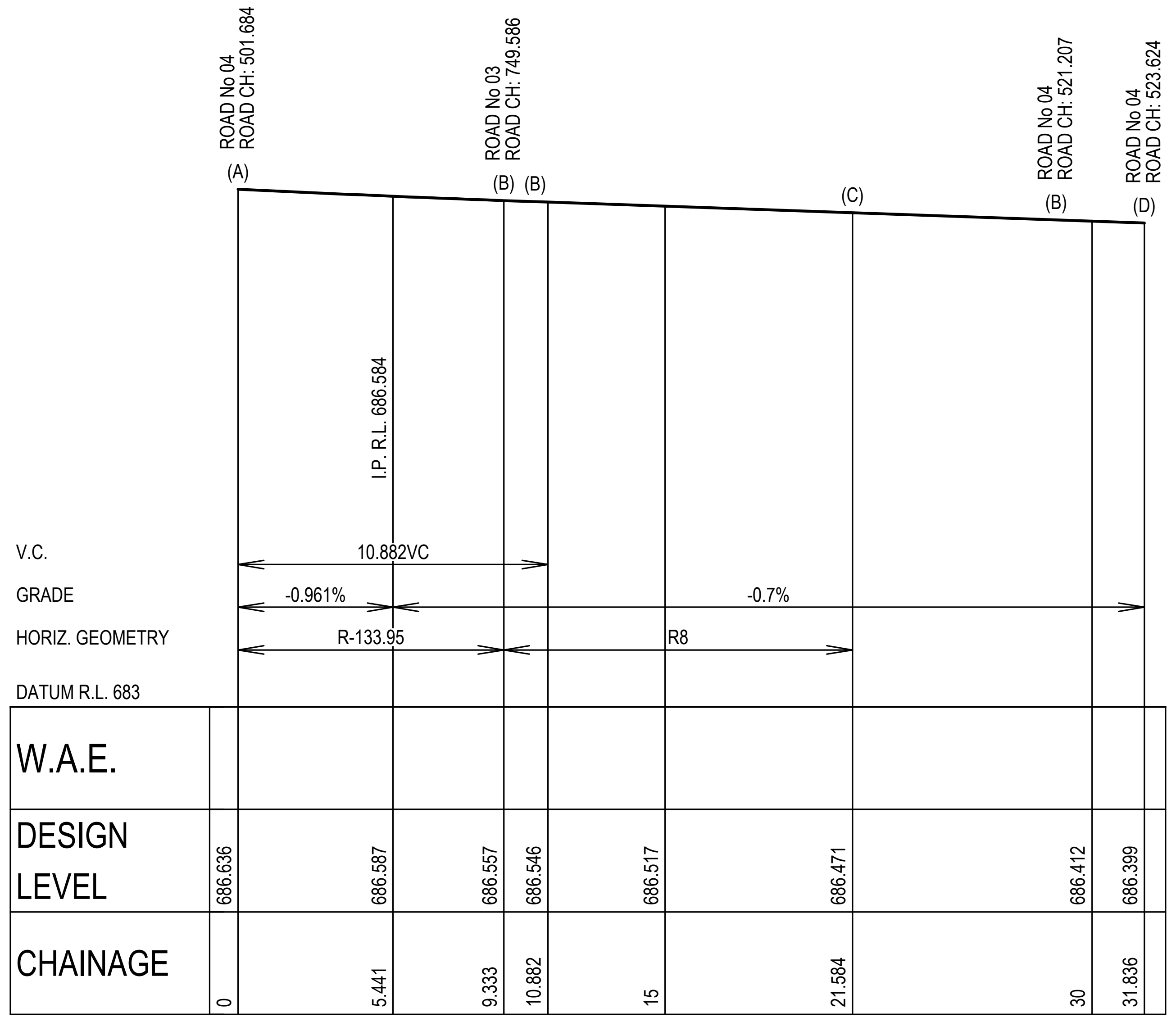
KERB RETURN KR55

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR55

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258954.8	6171850.44	346°35'52.14"		
0.55	258954.67	6171850.98		-133.95	1.101
1.1	258954.54	6171851.52	346°07'36.59"		
3.06	258954.07	6171853.41		-125	3.908
5.01	258953.54	6171855.29	344°20'08.13"		
16.21	258950.52	6171866.08	344°20'08.13"		



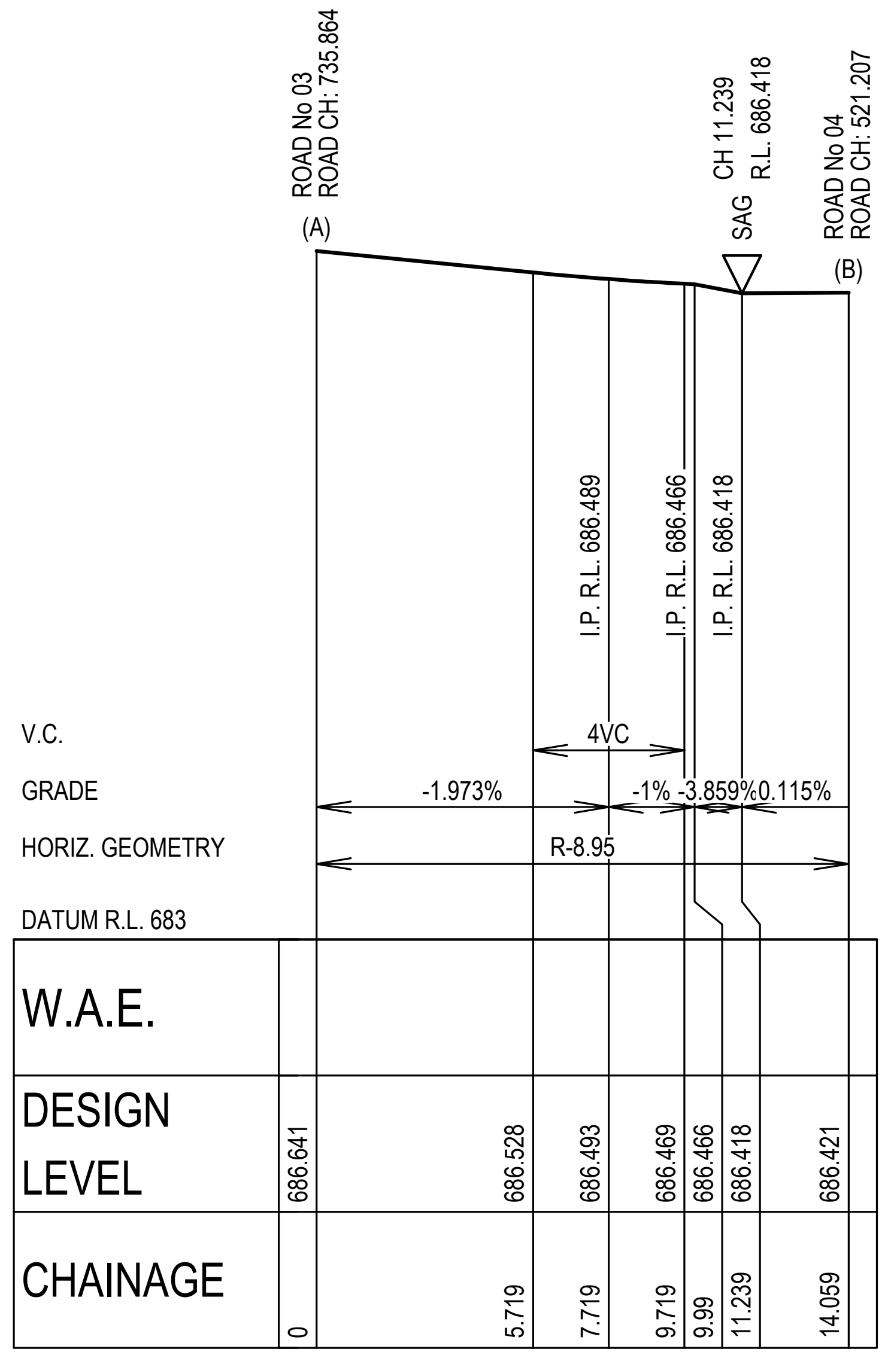
KERB RETURN KR55A

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR55A

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258956.64	6171841.3	350°35'23.69"		
4.67	258955.88	6171845.9		-133.95	9.333
9.33	258954.8	6171850.45	346°35'51.72"		
15.46	258953.01	6171857.93		8	12.251
21.58	258960.42	6171860	74°20'10.76"		
31.84	258970.29	6171862.77	74°20'10.76"		



KERB RETURN KR56

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR56

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258956.28	6171868.14	164°20'08.13"		
7.03	258958.69	6171859.52		-8.95	14.059
14.06	258967.31	6171861.93	74°20'10.76"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

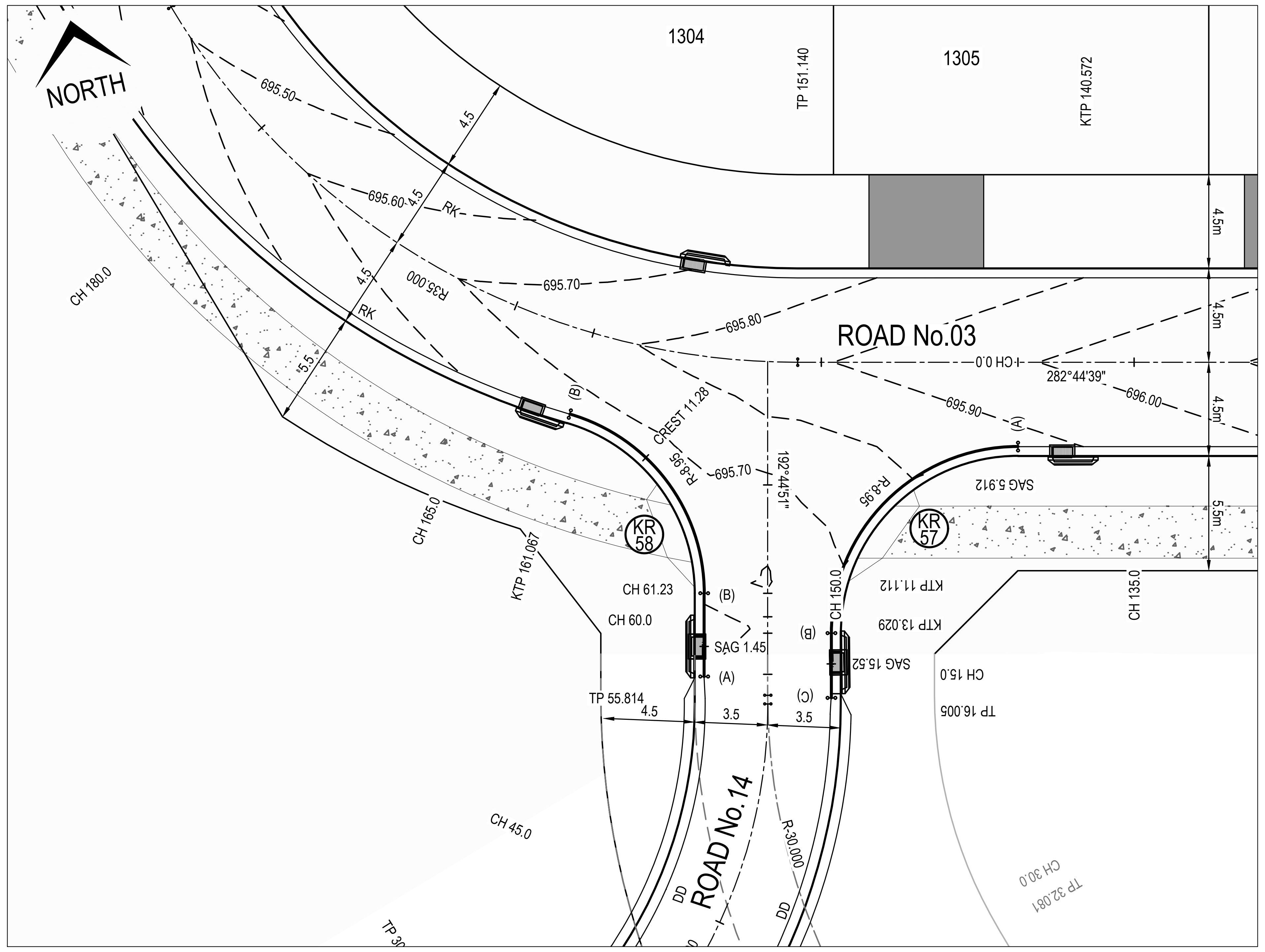
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 27 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	426	B

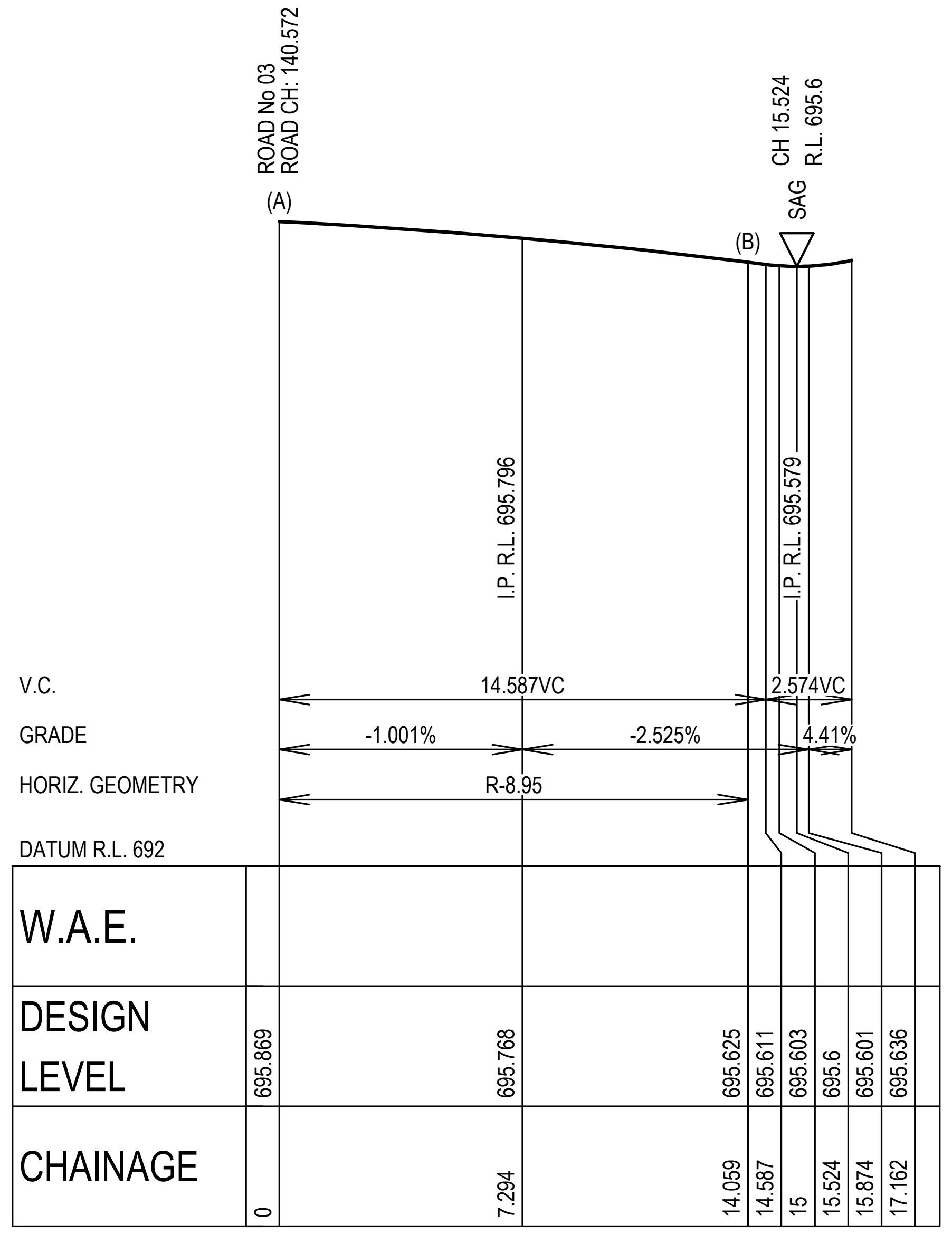
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:D:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-426.dwg

SETOUT IS TO LIP OF KERB



KERB RETURN PLAN - KR57 & KR58

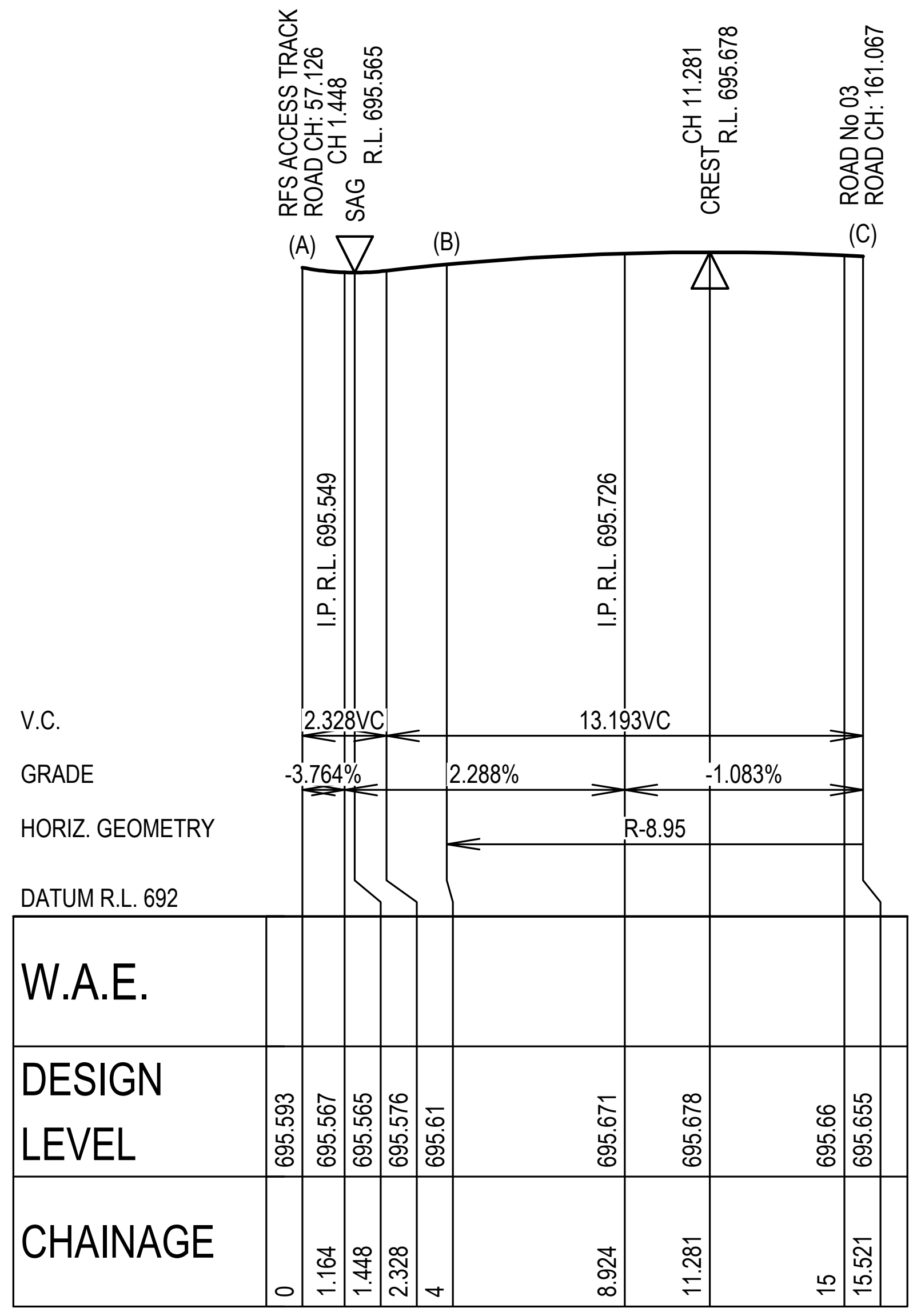
SCALE 1:200



KERB RETURN KR57

SCALE 1:200 (H)

SCALE 1:40 (V)



KERB RETURN KR58

SCALE 1:200 (H)

SCALE 1:40 (V)

SETOUT TABLE KR57

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258887.82	6171390.36	282°44'39.46"		
7.03	258879.09	6171392.34		-8.95	14.059
14.06	258877.11	6171383.61	192°44'32.25"		
17.16	258876.43	6171380.58	192°44'32.25"		

SETOUT TABLE KR58

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258870.7	6171382.92	12°44'51.02"		
4	258871.59	6171386.82	12°44'51.02"		
9.76	258873.07	6171393.37		-8.95	11.521
15.52	258867.2	6171396.63	298°59'40.96"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.4 0.8 1.2 1.6 2 2.4 2.8 3.2 3.6 4
SCALE 1:40 (A1) SCALE 1:80 (A3)

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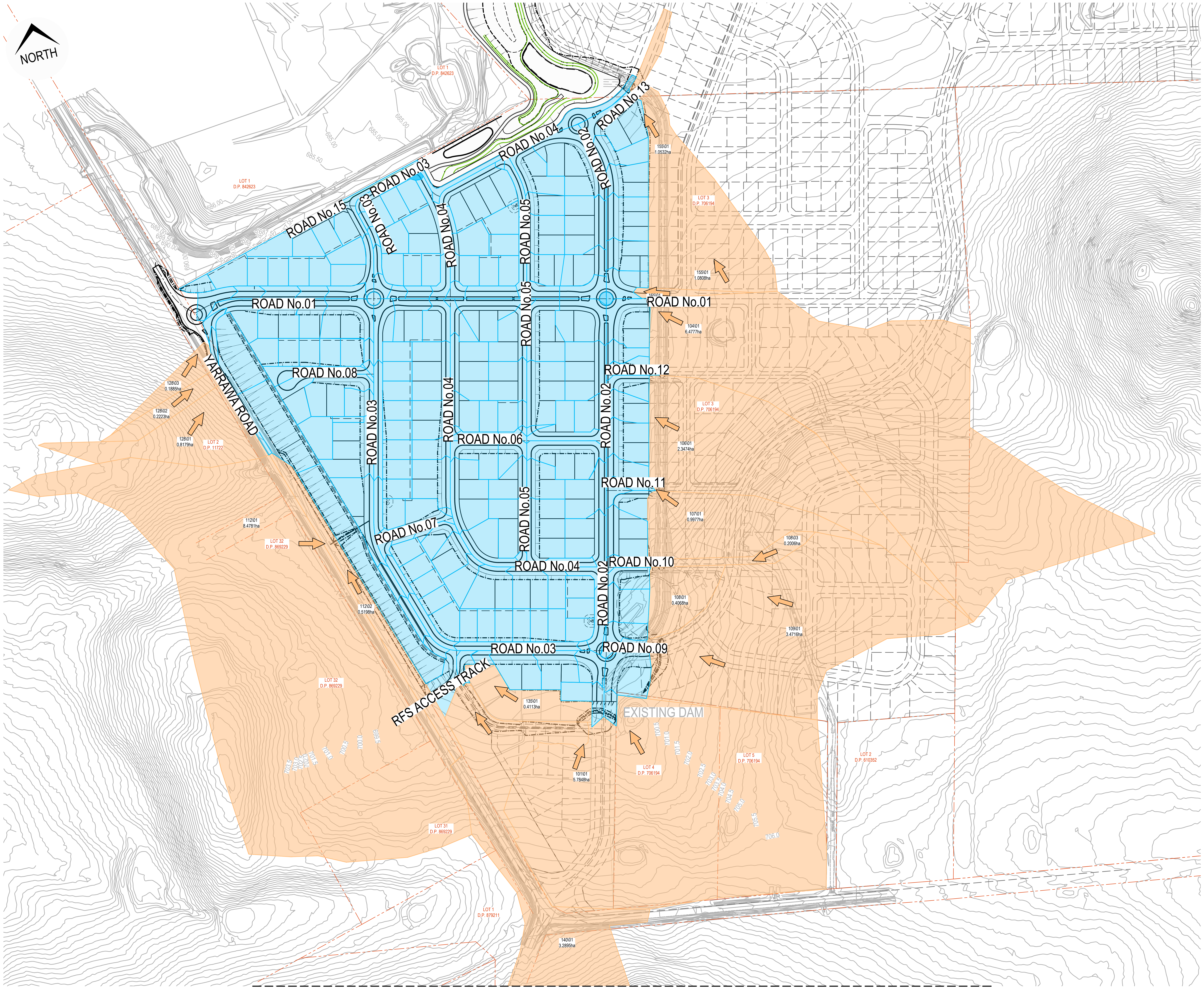
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

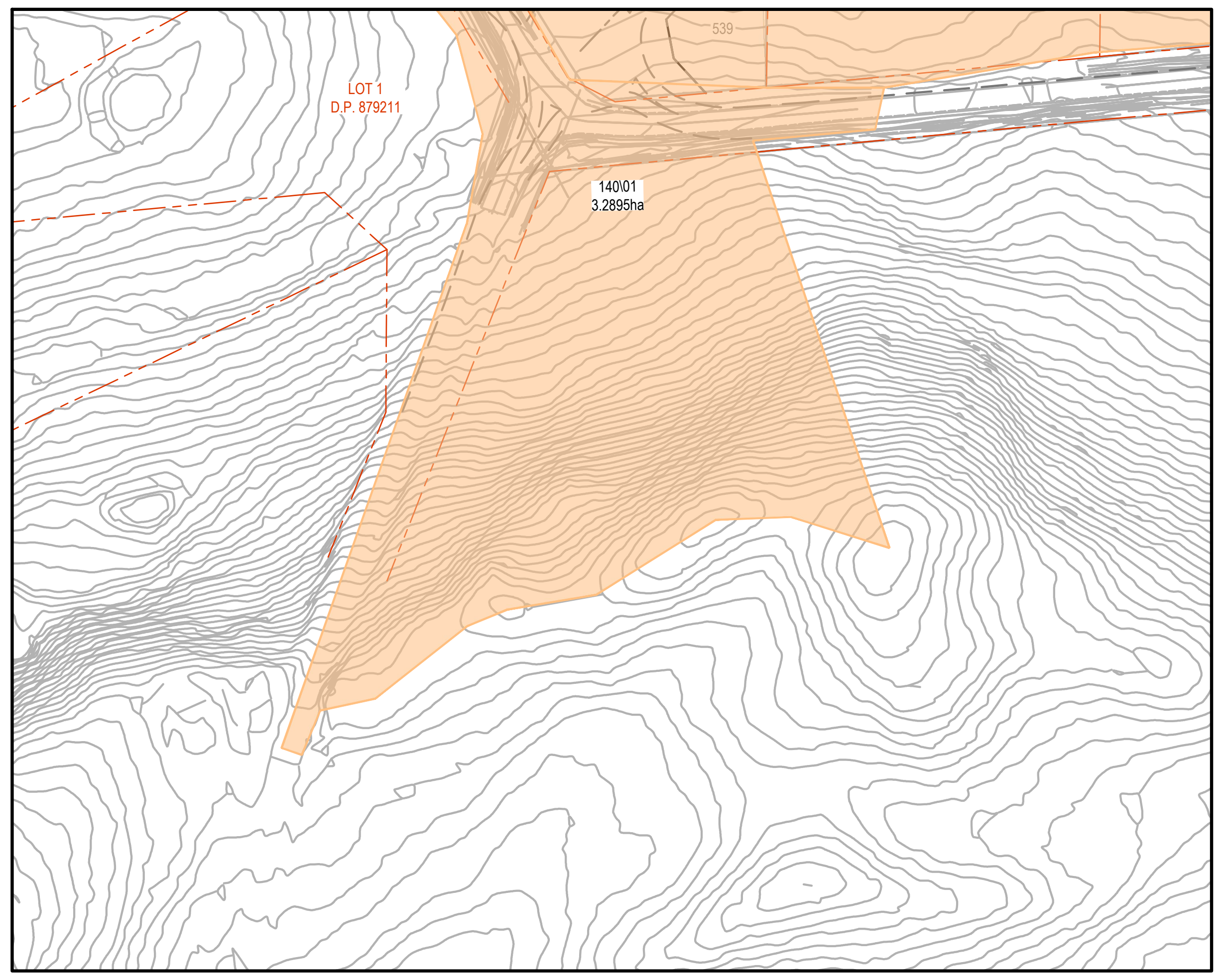
Title:
KERB RETURN PLAN,
SECTIONS & SETOUT TABLES
SHEET 28 OF 28

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	427	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN\102-CC-Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-427.dwg



FOR CONTINUATION REFER INSET 'A'



INSET 'A'
SCALE 1:2000

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN ➡
CONTOURS (EXISTING & DESIGN)	——10.0——
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN ➡
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT ⇨

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
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SCALE 1:2000 (A1) SCALE 1:4000 (A3)

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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

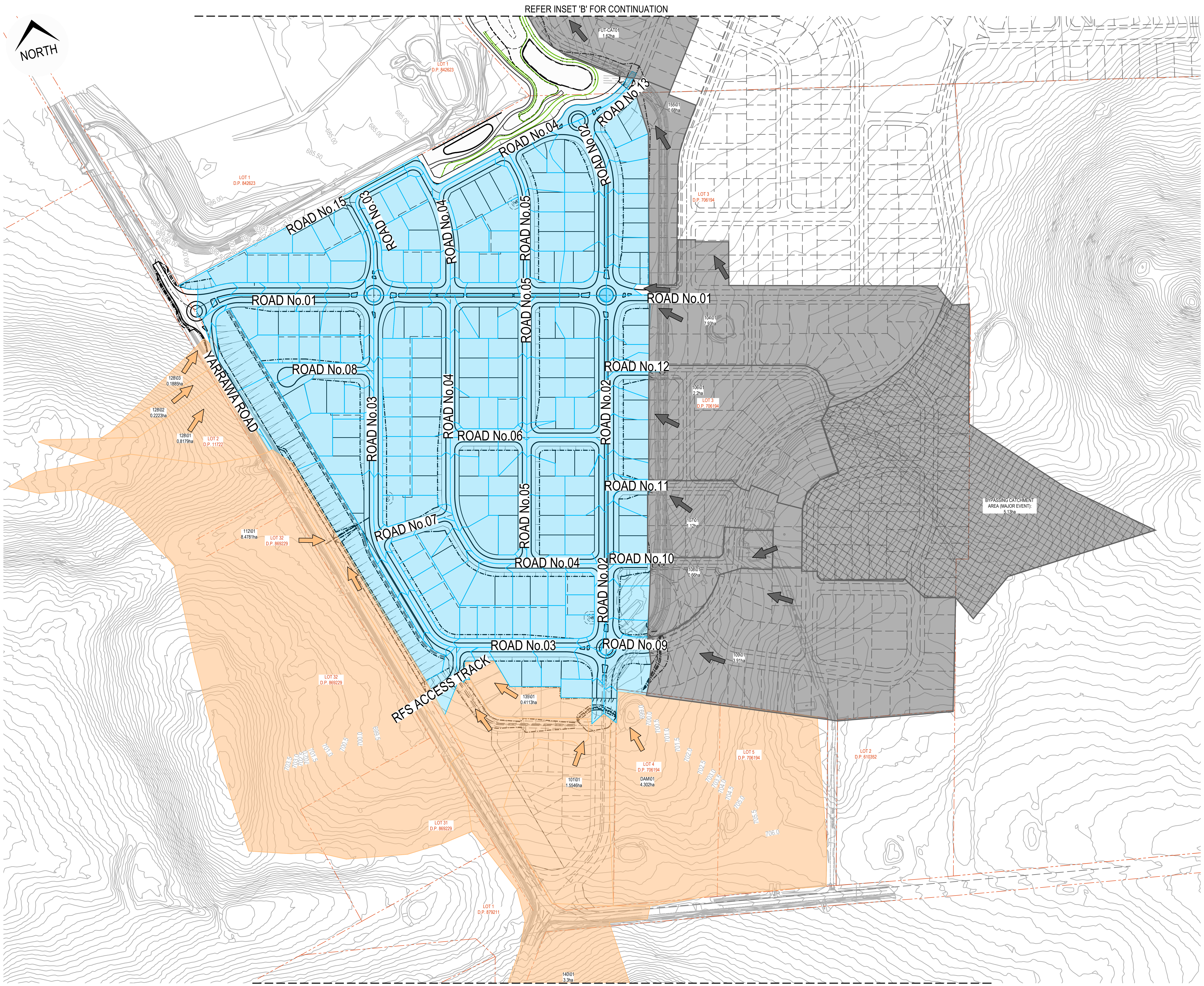
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
EXTERNAL CATCHMENT
PLAN - SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	500	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-500.dwg

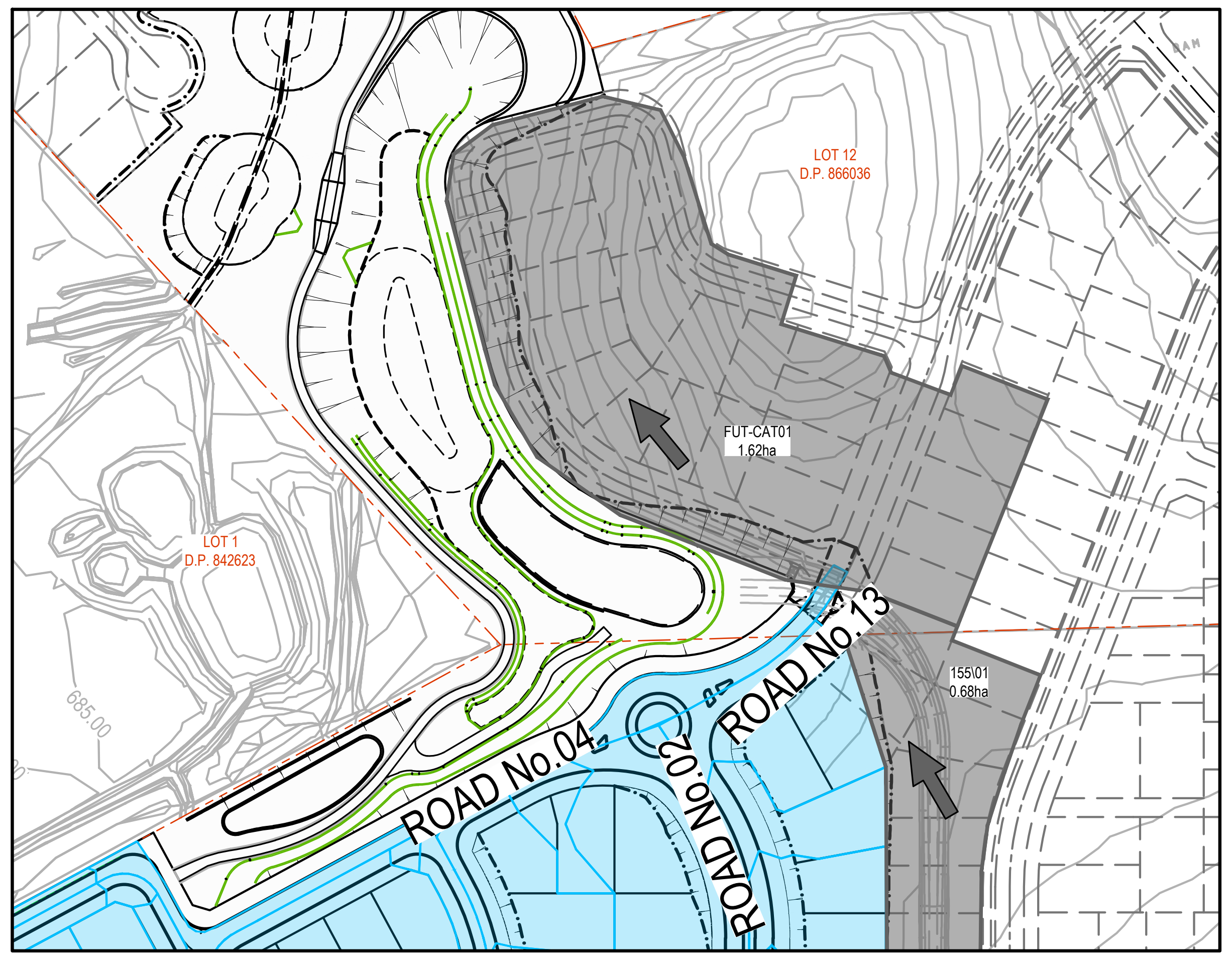
REFER INSET 'B' FOR CONTINUATION



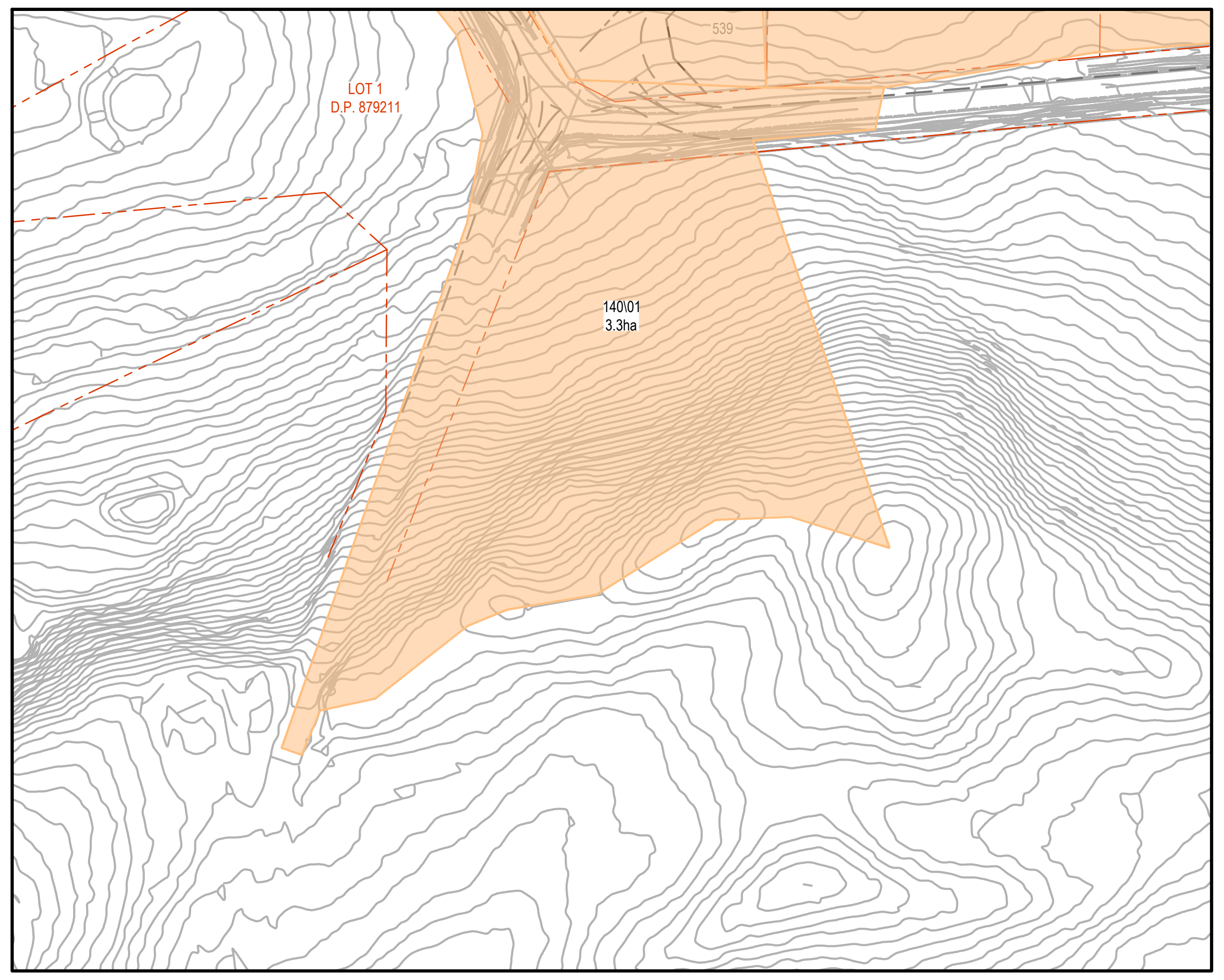
FOR CONTINUATION REFER INSET 'A'

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN ➡
CONTOURS (EXISTING & DESIGN)	—10.0—
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN ➡
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT ⇨
FUTURE DEVELOPED EXTERNAL CATCHMENT AND BOUNDARY. MAJOR FLOWS TO BYPASS STAGE 1	EXT ➡
FUTURE DEVELOPED EXTERNAL CATCHMENT AND BOUNDARY	EXT ➡



INSET 'B'
SCALE 1:2000



INSET 'A'
SCALE 1:2000

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 20 40 60 80 100 120 140 160 180 200
SCALE 1:2000 (A1)
SCALE 1:4000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
EXTERNAL CATCHMENT
PLAN - SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	500A	C

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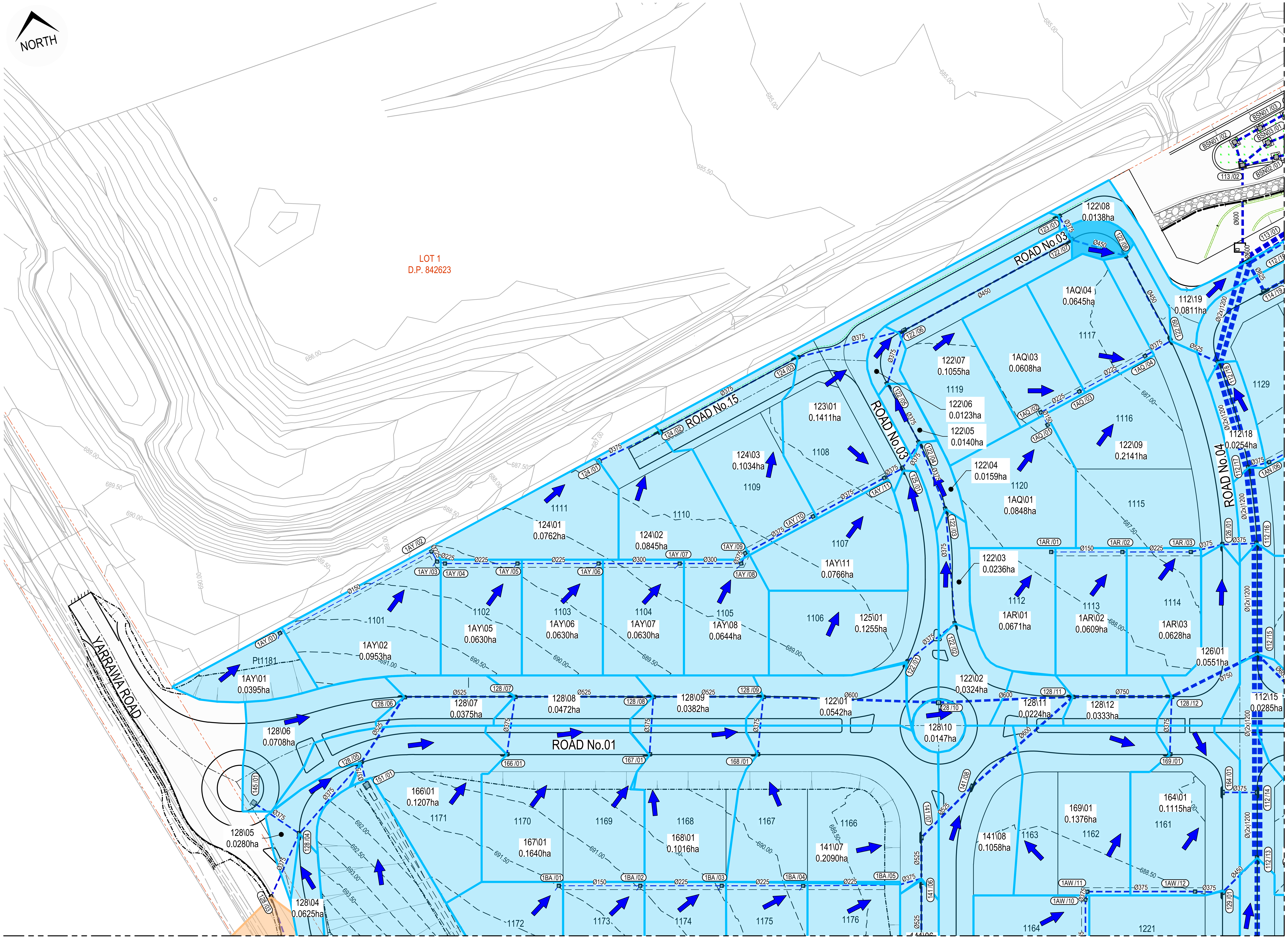

REFER TO DRAWING 503 FOR CONTINUATION

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN ➡
CONTOURS (EXISTING & DESIGN)	10.0 — -20.0-
DRAINAGE (EXISTING, FUTURE & DESIGN)	- - -
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN ➡
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT ⇨

NOTE:
REFER TO PLANS 500 AND 500A FOR EXTERNAL CATCHMENTS PLANS
B

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

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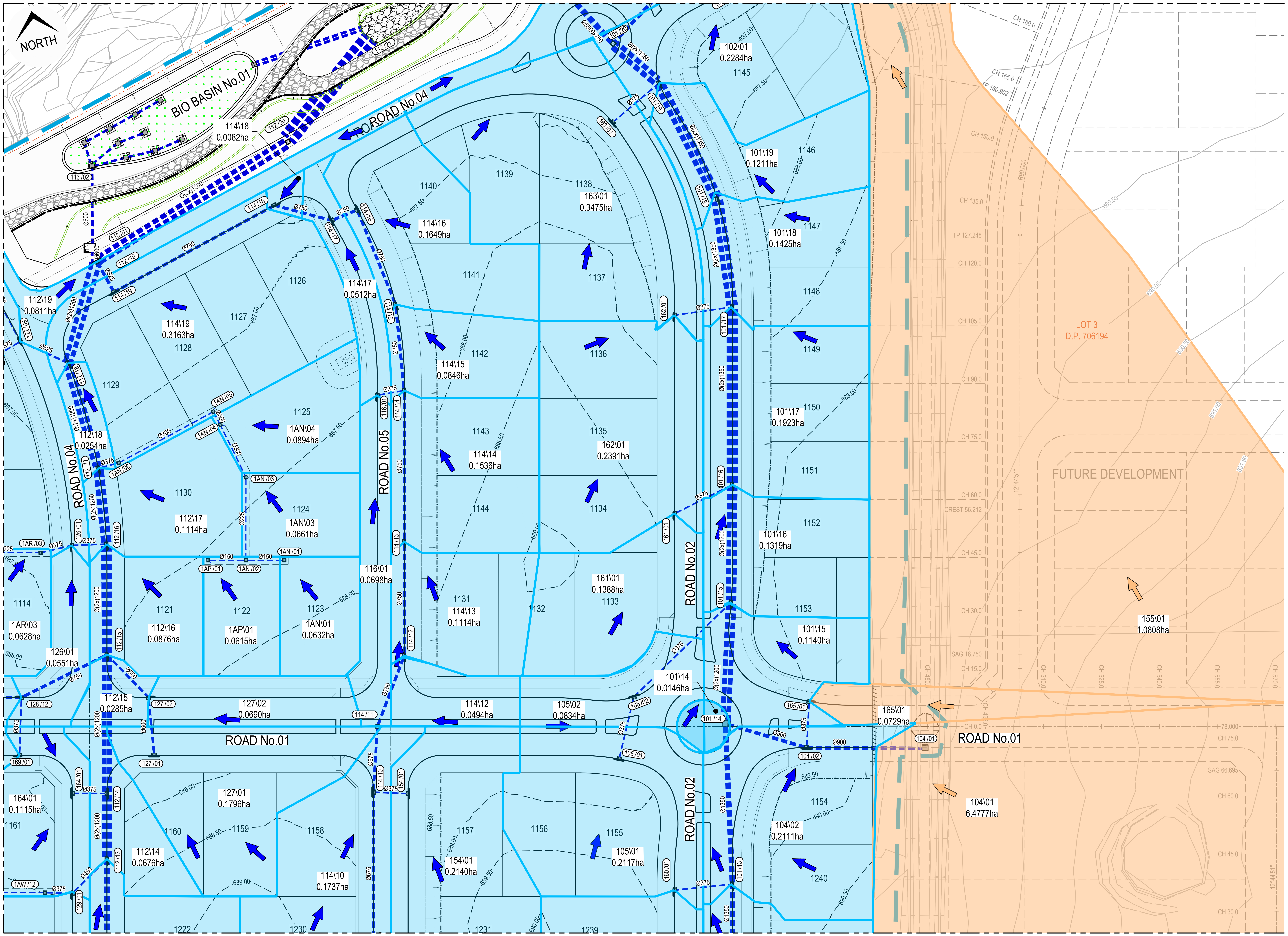
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
STORMWATER CATCHMENT
PLAN - SHEET 01 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	501	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-501.dwg

REFER TO DRAWING 506 FOR CONTINUATION



REFER TO DRAWING 501 FOR CONTINUATION

REFER TO DRAWING 504 FOR CONTINUATION

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN ➡
CONTOURS (EXISTING & DESIGN)	—10.0— — -20.0- —
DRAINAGE (EXISTING, FUTURE & DESIGN)	▬ ▬ ▬ ▬ ▬ ▬
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN ➡
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT ⇨

NOTE:

REFER TO PLANS 500 AND 500A FOR EXTERNAL CATCHMENTS PLANS

B

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
STORMWATER CATCHMENT
PLAN - SHEET 02 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	502	B

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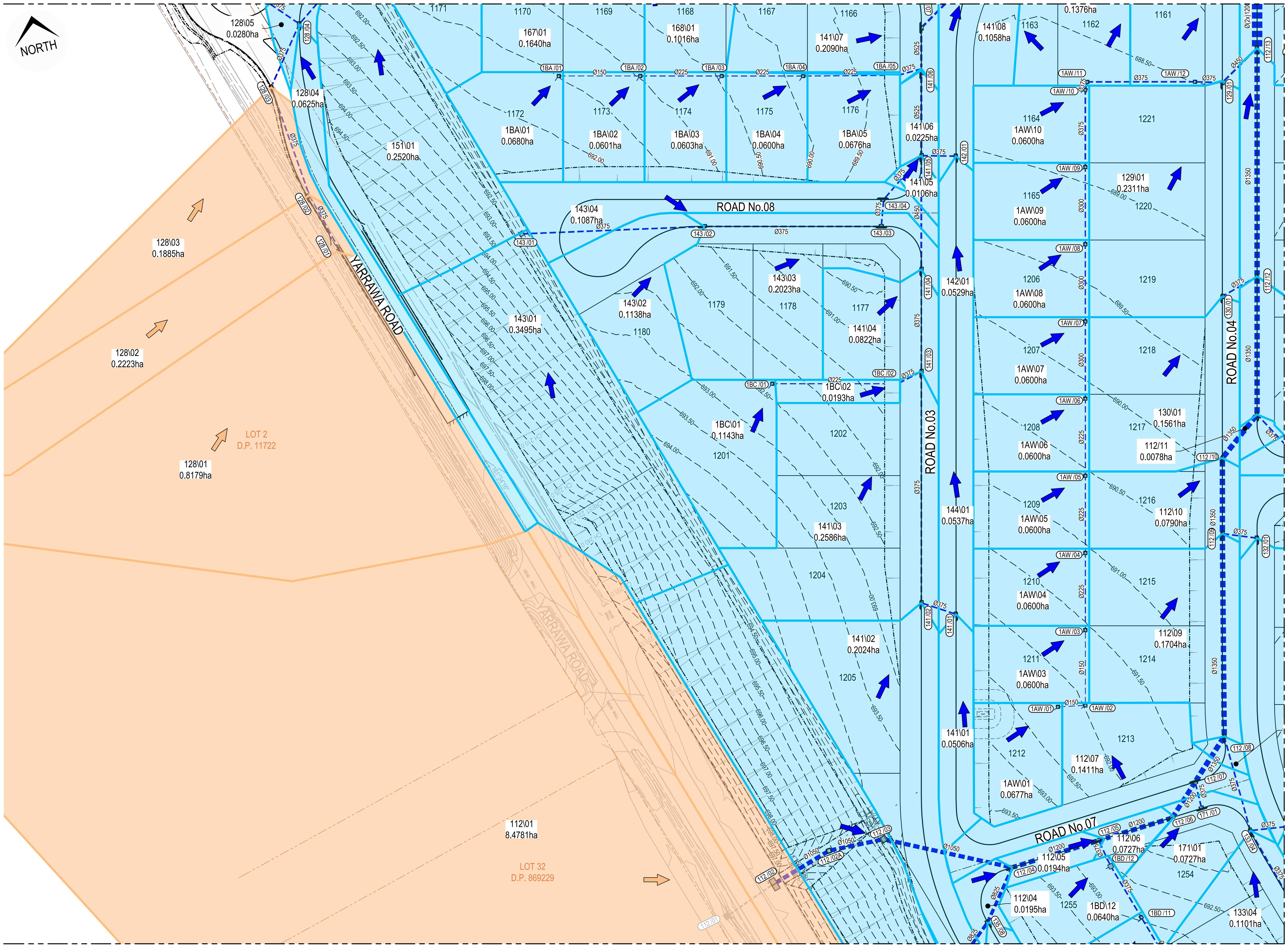
REFER TO DRAWING 501 FOR CONTINUATION



REFER TO DRAWING 504 FOR CONTINUATION

REFER TO DRAWING 505 FOR CONTINUATION

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN ➡
CONTOURS (EXISTING & DESIGN)	—10.0— — -20.0- —
DRAINAGE (EXISTING, FUTURE & DESIGN)	‒ ‒ ‒ ‒ ‒ ‒
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN ➡
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT ⇨

NOTE:

REFER TO PLANS 500 AND 500A FOR EXTERNAL CATCHMENTS PLANS

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	FM	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
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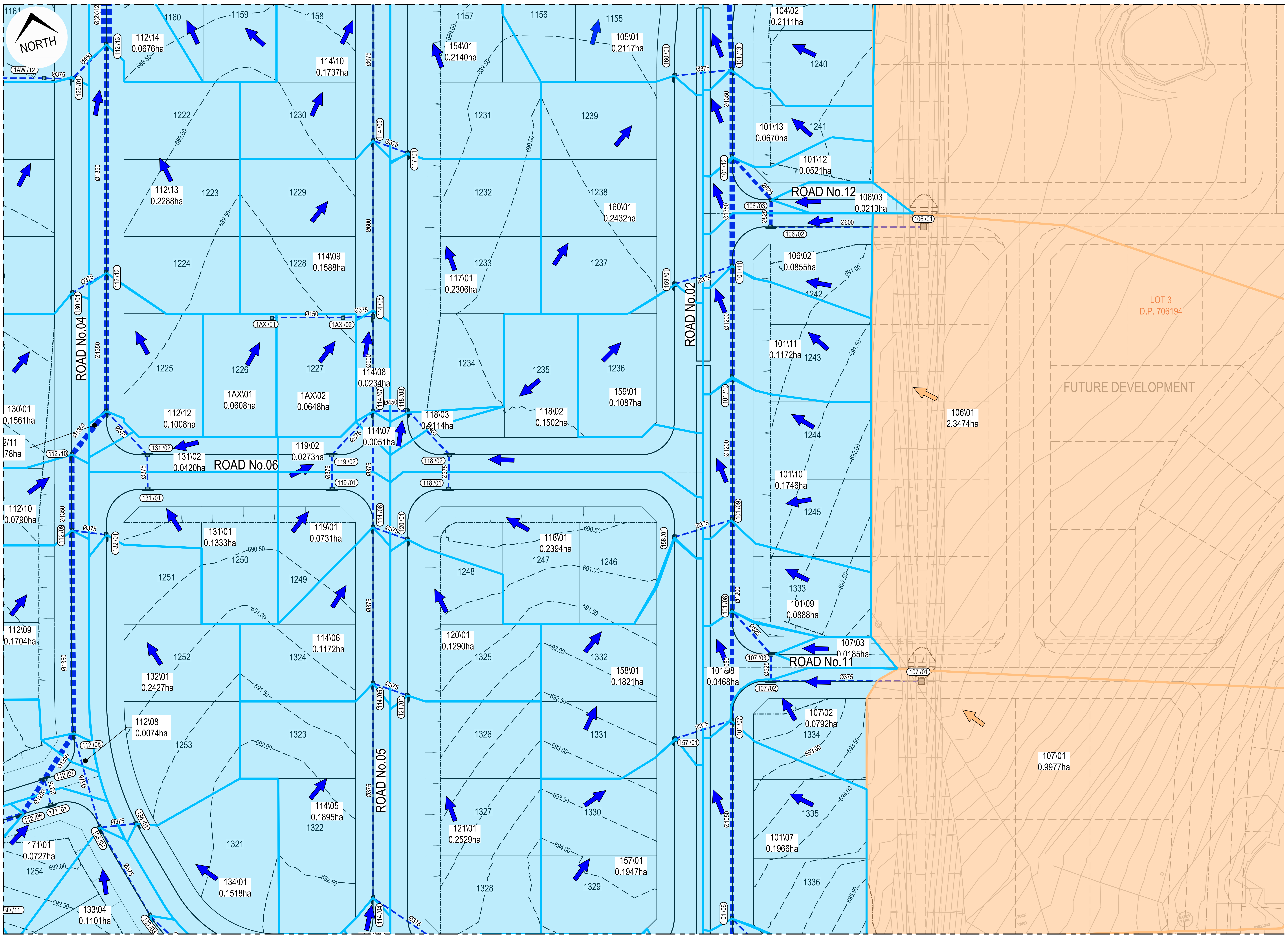
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
STORMWATER CATCHMENT
PLAN - SHEET 03 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	503	C

REFER TO DRAWING 502 FOR CONTINUATION

REFER TO DRAWING 503 FOR CONTINUATION



REFER TO DRAWING 505 FOR CONTINUATION

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN ➡
CONTOURS (EXISTING & DESIGN)	10.0 -20.0-
DRAINAGE (EXISTING, FUTURE & DESIGN)	▬ ▬ ▬ ▬ ▬ ▬
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN ➡
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT ⇨

NOTE:

REFER TO PLANS 500 AND 500A FOR EXTERNAL CATCHMENTS PLANS

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1)
SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

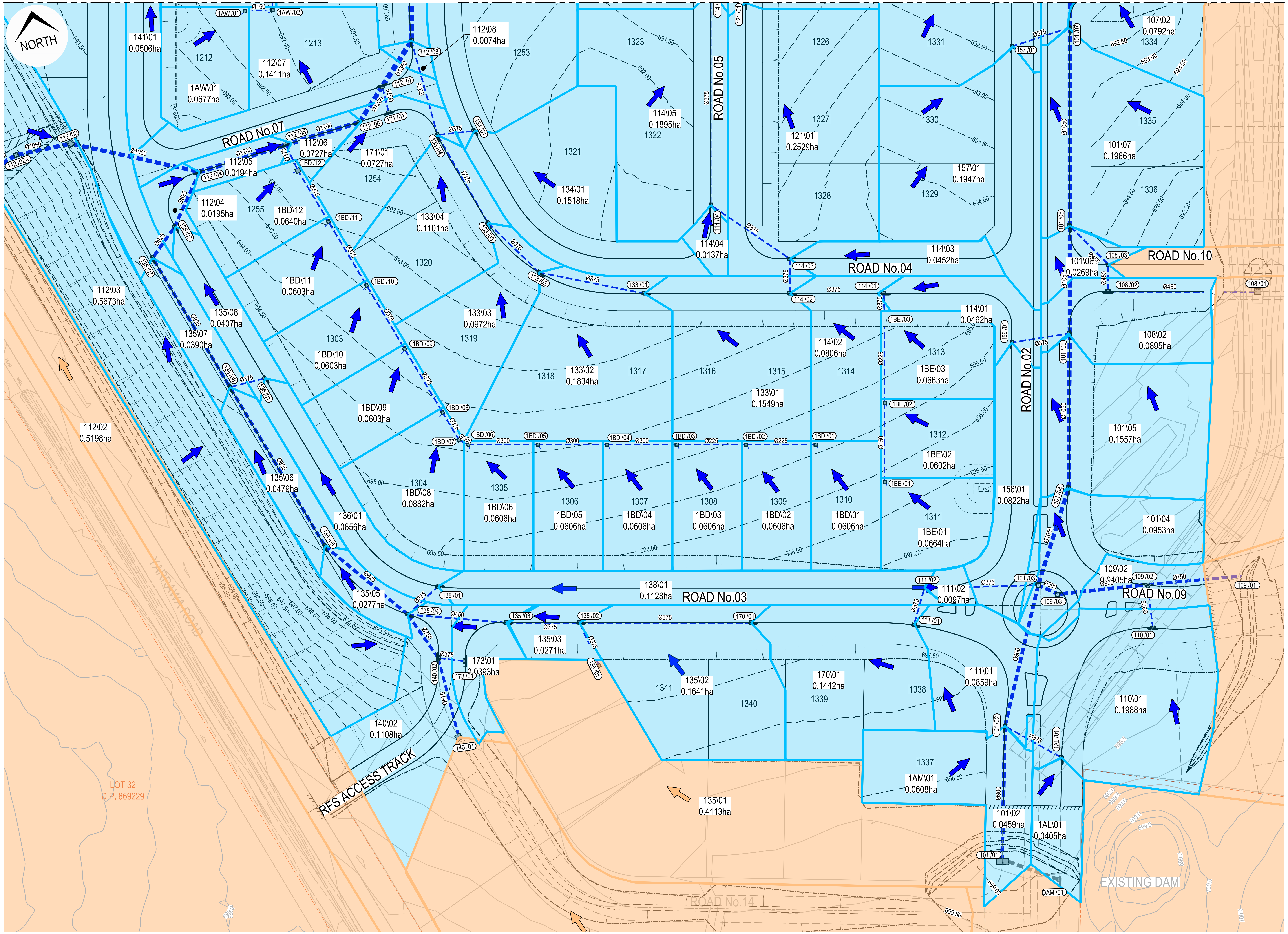
Title:
STORMWATER CATCHMENT
PLAN - SHEET 04 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	504	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-504.dwg

REFER TO DRAWING 503 FOR CONTINUATION

REFER TO DRAWING 504 FOR CONTINUATION



LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN
CONTOURS (EXISTING & DESIGN)	10.0 — -20.0-
DRAINAGE (EXISTING, FUTURE & DESIGN)	
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT

NOTE:

REFER TO PLANS 500 AND 500A FOR EXTERNAL CATCHMENTS PLANS

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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SCALE 1:500 (A1) SCALE 1:1000 (A3)

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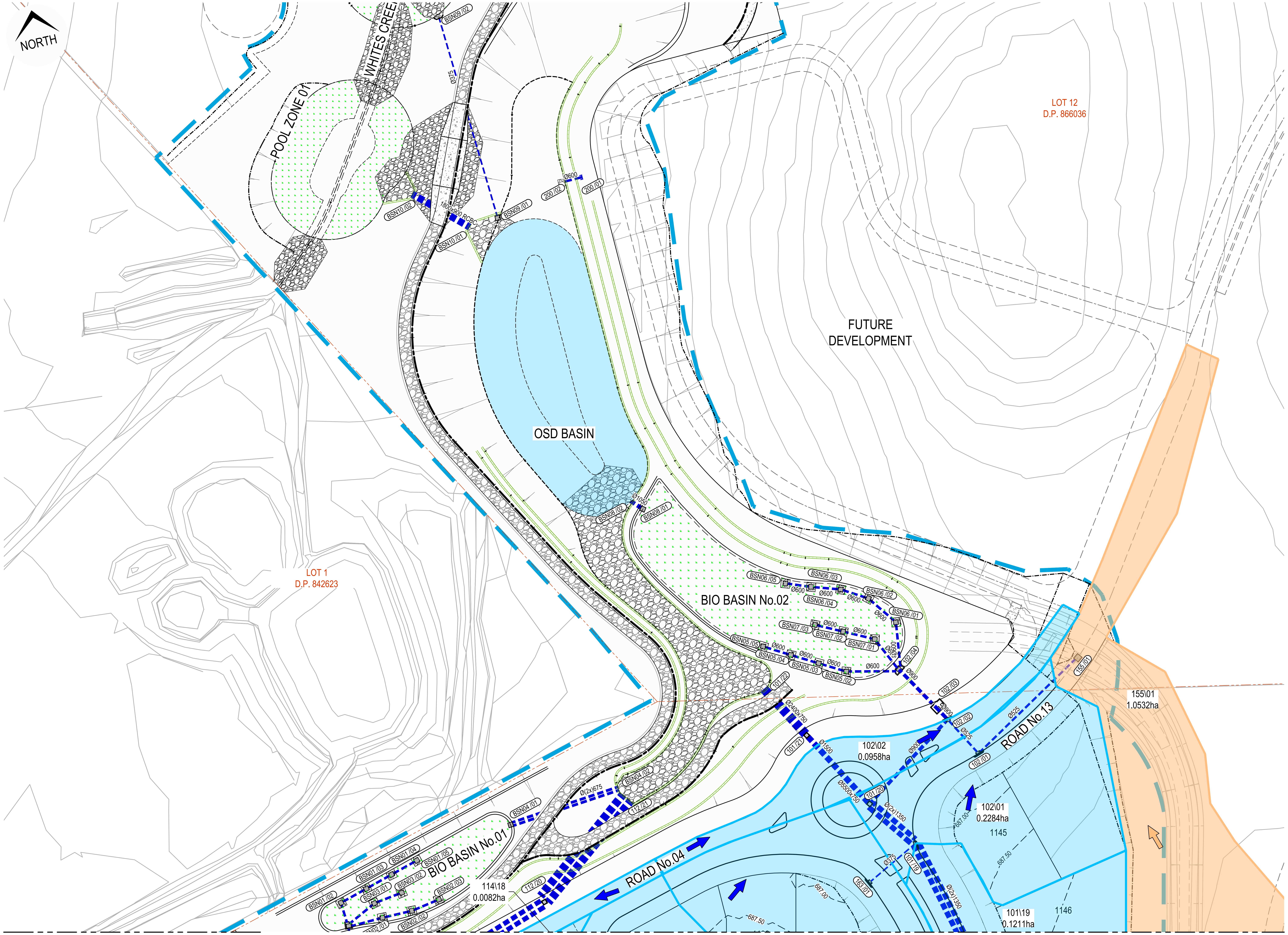
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
STORMWATER CATCHMENT
PLAN - SHEET 05 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	505	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Sdata\ORION-SYN



REFER TO DRAWING 501 FOR CONTINUATION

REFER TO DRAWING 502 FOR CONTINUATION

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN ➡
CONTOURS (EXISTING & DESIGN)	—10.0— — -20.0- —
DRAINAGE (EXISTING, FUTURE & DESIGN)	‒ ‒ ‒ ‒ ‒ ‒
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	DESIGN ➡
EXTERNAL UNDEVELOPED CATCHMENT AND BOUNDARY	EXT ⇨

NOTE:

REFER TO PLANS 500 AND 500A FOR EXTERNAL CATCHMENTS PLANS

ISSUED FOR CONSTRUCTION CERTIFICATE

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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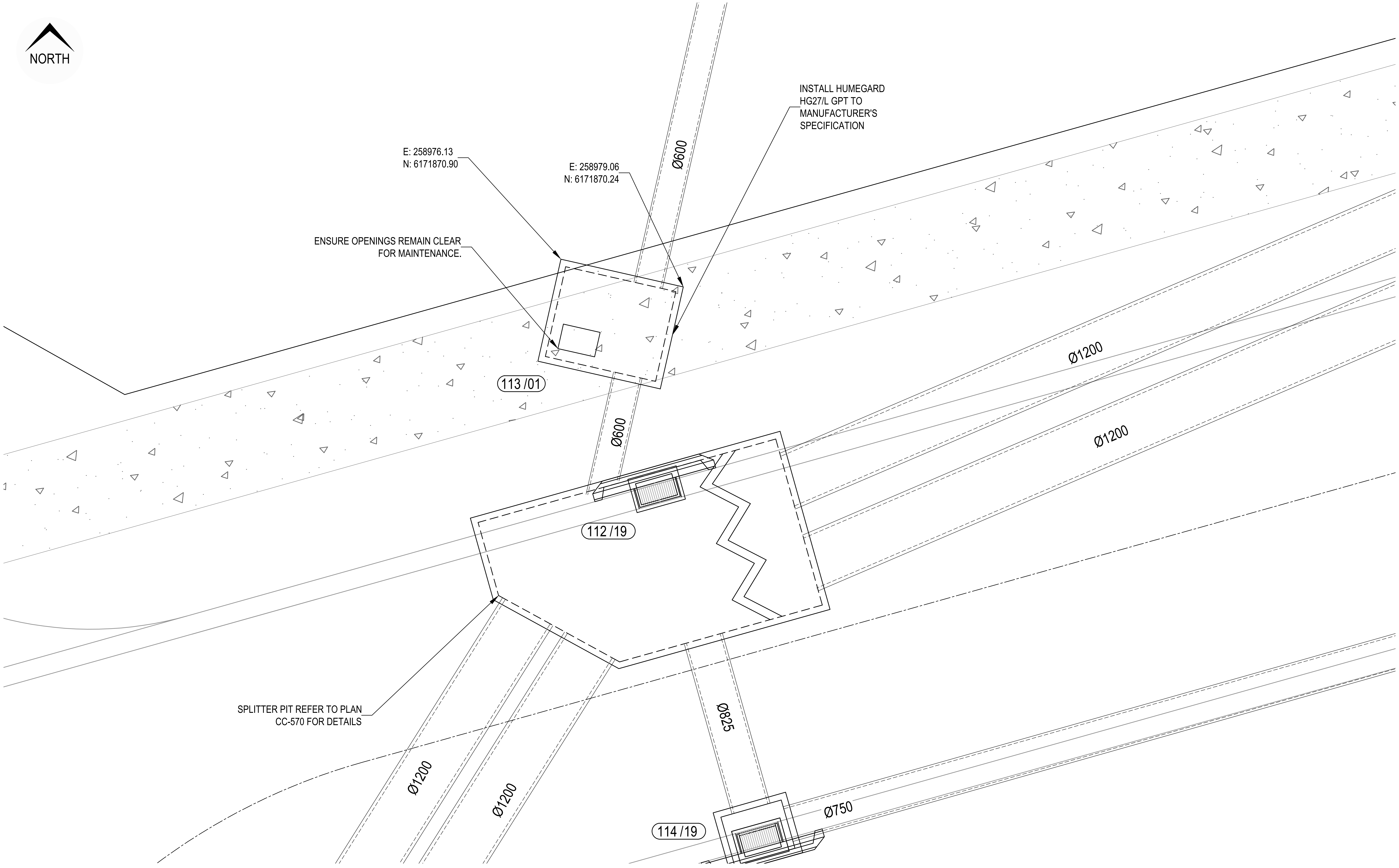
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
STORMWATER CATCHMENT PLAN - SHEET 06 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	506	C


NORTH
INSTALL HUMEGARD HG27/L GPT TO MANUFACTURER'S SPECIFICATION
E: 258976.13
N: 6171870.90
E: 258979.06
N: 6171870.24
Ø600
ENSURE OPENINGS REMAIN CLEAR FOR MAINTENANCE.
113 /01
Ø600
Ø1200
Ø1200
112 /19
SPLITTER PIT REFER TO PLAN CC-570 FOR DETAILS
Ø825
Ø1200
Ø1200
Ø750
114 /19

GPT DETAIL PLAN (PIT 113/01)

SCALE: 1:50

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
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By:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
GPT SETOUT PLAN
PIT 113/01

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	507	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-507.dwg

GPT DETAIL PLAN (PIT 102/03)

SCALE: 1:50

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
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By:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
GPT SETOUT PLAN
102/03

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	508	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-508.dwg

LEGEND

DESIGN SURFACE LEVEL	▬
100 YR ARI HGL LEVEL	▬
5 YR ARI HGL LEVEL	- - -

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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SCALE 1:100 (A1) SCALE 1:200 (A3)

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By:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL SECTIONS
SHEET 01 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	510	B

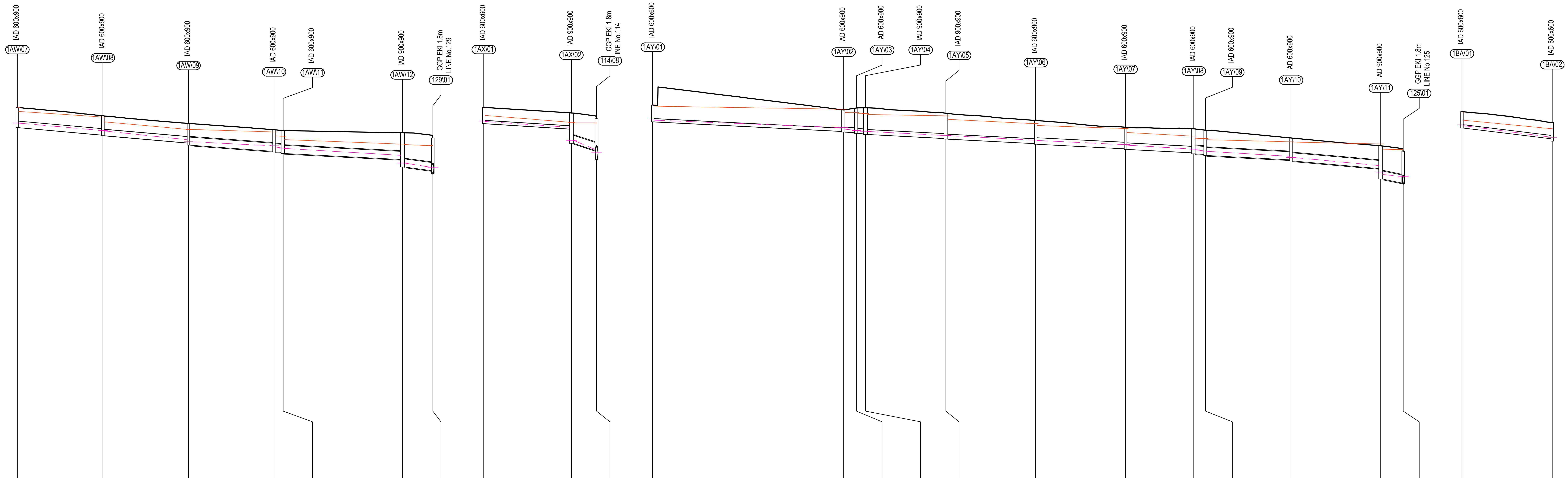
LEGEND

DESIGN SURFACE LEVEL	───
100 YR ARI HGL LEVEL	───
5 YR ARI HGL LEVEL	— — —

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



LINE 1AW

PIPE MAX. VELOCITY (m/s)		1.46		2.33		1.94		1.63		1.77		2.31		
DISCHARGE (cu.m/s)		0.07		0.08		0.09		0.1		0.1		0.1		
PIPE SIZE (mm) & CLASS		300uPVC		300uPVC		375RRJ2		375RRJ2		375RRJ2		375RRJ2		
DESIGN GRADE		1.75%		1.69%		1.43%		1.03%		1%		2.41%		
DATUM R.L		668.0												
DEPTH TO INVERT	0.91	0.94	0.9	0.93	0.92	1.02	1.01	1.04	1.02	1.07	1.24	1.59	1.53	1.66
5 YR HGL LEVEL	688.96	688.95	688.61	688.58	688.17	688.08	687.89	687.84	687.79	687.77	687.45	687.09	686.89	686.86
INVERT LEVEL	688.77	688.74	688.39	688.36	688.02	687.92	687.63	687.61	687.58	687.53	687.25	686.9	686.73	686.6
SURFACE LEVEL		689.68		689.29		688.94		688.64		688.6		688.5		688.26
ROAD CHAINAGE														363.67
PIPE CHAINAGE		106.63	20	126.63	20	146.63	20	166.63	2.14	168.77	27.88	196.65	7.1	203.75

LINE 1AX

PIPE MAX. VELOCITY (m/s)	1.29		2.45		
DISCHARGE (cu.m/s)	0.01		0.03		
PIPE SIZE (mm) & CLASS	150uPVC		375RRJ2		
DESIGN GRADE	1.22%		5.66%		
DATUM R.L	668.0				
DEPTH TO INVERT	0.76	0.75	1.42	1.48	1.93
5 YR HGL LEVEL	689.03	688.76	688.15	687.73	687.59
INVERT LEVEL	688.92	688.67	688.01	687.67	687.23
SURFACE LEVEL	689.68		689.43		689.16
ROAD CHAINAGE					170.46
PIPE CHAINAGE	0	20.5	20.5	5.88	26.38

LINE 1AY

PIPE MAX. VELOCITY (m/s)	0.81		1.34		1.26		1.09		1.25		1.25		1.58		1.6		1.61		1.93		1.32		
DISCHARGE (cu.m/s)	0.01		0.03		0.03		0.03		0.04		0.05		0.06		0.07		0.07		0.07		0.09		
PIPE SIZE (mm) & CLASS	150uPVC		225uPVC		225uPVC		225uPVC		225uPVC		300uPVC		300uPVC		375RRJ2		375RRJ2		375RRJ2		375RRJ2		
DESIGN GRADE	1%		1%		0.99%		1%		1%		1%		1%		0.99%		1%		1.7%		3.49%		
DATUM R.L	668.0																						
DEPTH TO INVERT	0.79	1	1.03	1.16	1.19	1.21	1.24	1.18	1.21	1.08	1.11	1.01	1.04	1.12	1.17	1.13	1.18	1.02	1.07	1.06	1.55	1.48	1.51
5 YR HGL LEVEL	689.09	688.74	688.67		688.61	688.57	688.56	688.38	688.37	688.16	688.14	687.95	687.92	687.74	687.71	687.65	687.63	687.4	687.35	686.97	686.55	686.47	686.39
INVERT LEVEL	689.01	688.56	688.53	688.5	688.47	688.45	688.42	688.23	688.2	687.99	687.96	687.75	687.72	687.56	687.51	687.49	687.44	687.24	687.19	686.83	686.34	686.15	686.12
SURFACE LEVEL	689.8		689.57		689.66		689.66		689.41		689.07		688.76		688.68		688.62		688.26		687.89		687.64
ROAD CHAINAGE																					612.4		612.81
PIPE CHAINAGE	0	44.63	44.63	3	47.63	2.11	49.74	18.79	68.53	21	89.53	21	110.53	15.96	126.49	2.73	129.22	20	149.22	20.96	170.18	5.27	175.44

LINE 1BA

PIPE MAX. VELOCITY (m/s)	1.69		
DISCHARGE (cu.m/s)	0.01		
PIPE SIZE (mm) & CLASS	150uPVC		
DESIGN GRADE	2.36%		
DATUM R.L	670.0		
DEPTH TO INVERT	0.77	0.75	
5 YR HGL LEVEL	690.83	690.3	
INVERT LEVEL	690.72	690.22	
SURFACE LEVEL	691.49		690.98
ROAD CHAINAGE			
PIPE CHAINAGE	0	21.1	21.1

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B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
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By:
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ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 02 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	511	B

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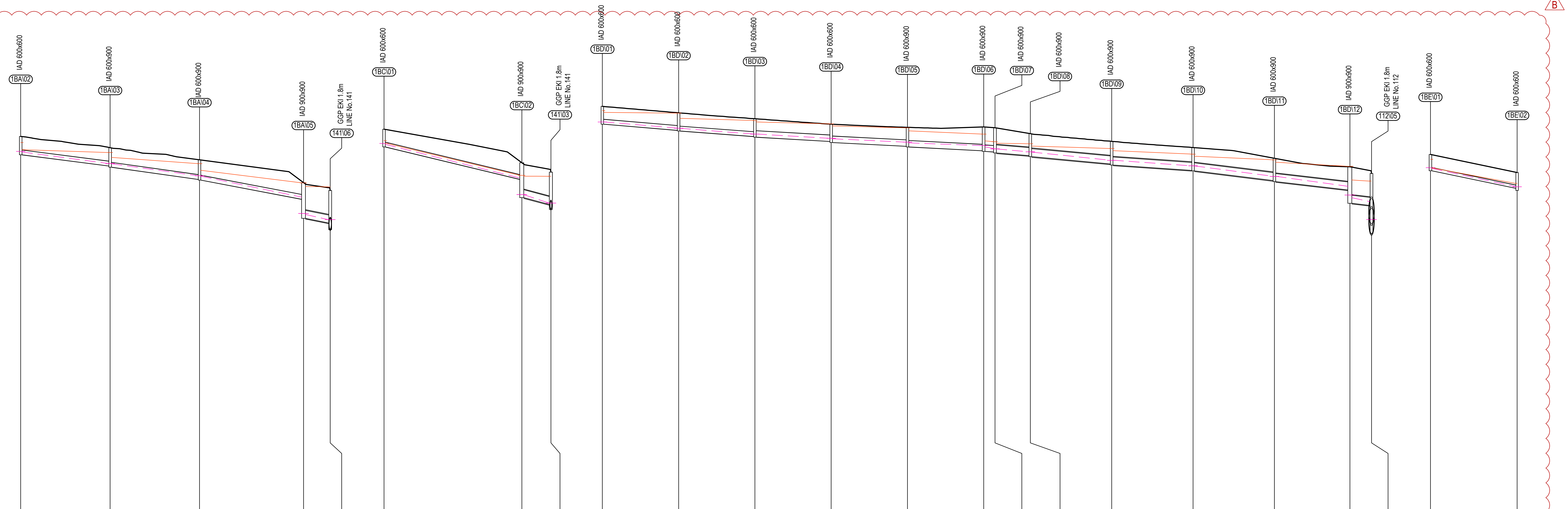
LEGEND

DESIGN SURFACE LEVEL	━━━
100 YR ARI HGL LEVEL	───
5 YR ARI HGL LEVEL	– – – –

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B

B



PIPE MAX. VELOCITY (m/s)			1.37			1.26			2.7			1.46		
DISCHARGE (cu.m/s)			0.03			0.04			0.05			0.06		
PIPE SIZE (mm) & CLASS			225uPVC			225uPVC			225uPVC			375RRJ2		
DESIGN GRADE			2.5%			2.74%			3.7%			3.49%		
DATUM R.L		669.0												
DEPTH TO INVERT	0.75	0.87		0.86	0.92		0.93	0.96		0.79	1.69		1.54	1.85
5 YR HGL LEVEL	690.3	690.25		689.7	689.69		689.12	689.1		688.11	687.29		687.04	686.97
INVERT LEVEL	690.22	690.11		689.58	689.52		688.95	688.92		688.01	687.11		686.89	686.57
SURFACE LEVEL		690.98			690.45			689.87			688.8			688.43
ROAD CHAINAGE														504
PIPE CHAINAGE		21.1	21.1		42.2	21.1		63.3	24.54		87.84	6.3		94.14

LINE 1BA

PIPE MAX. VELOCITY (m/s)			2.48			2.04		
DISCHARGE (cu.m/s)			0.02			0.03		
PIPE SIZE (mm) & CLASS			225uPVC			375RRJ2		
DESIGN GRADE			4.71%			4.7%		
DATUM R.L		670.0						
DEPTH TO INVERT		0.84		0.79	1.65		1.53	1.76
5 YR HGL LEVEL		691.6		690.01	689.23		688.83	688.78
INVERT LEVEL		691.48		689.95	689.09		688.76	688.53
SURFACE LEVEL		692.32			690.74			690.29
ROAD CHAINAGE								425.55
PIPE CHAINAGE		0	32.52		32.52	6.86		39.37

LINE 1BC

PIPE MAX. VELOCITY (m/s)			0.77			1.13			1.17			1.23			1.32		
DISCHARGE (cu.m/s)			0.01			0.02			0.04			0.05			0.06		
PIPE SIZE (mm) & CLASS			225uPVC			225uPVC			300uPVC			300uPVC			300uPVC		
DESIGN GRADE			1.63%			1.46%			1.12%			1%			1%		
DATUM R.L		672.0															
DEPTH TO INVERT		0.84		0.83	0.86		0.84	0.87		0.82	0.87		0.89	0.92		1.12	1.15
5 YR HGL LEVEL		694.66		694.37	694.36			694.09		693.89	693.87		693.71	693.67		693.55	693.48
INVERT LEVEL		694.56		694.27	694.24		693.97	693.94		693.74	693.69		693.51	693.48		693.3	693.27
SURFACE LEVEL		695.4			695.09			694.81			694.56			694.41			694.43
ROAD CHAINAGE																	
PIPE CHAINAGE		0	18		18	18		36	18		54	18		72	18		90

PIPE MAX. VELOCITY (m/s)	1.84			1.34			1.66			1.51			1.8			2.44			2.42		
DISCHARGE (cu.m/s)	0.07			0.07			0.09			0.1			0.11			0.12			0.13		
PIPE SIZE (mm) & CLASS	300uPVC			375RRJ2			375RRJ2			375RRJ2			375RRJ2			375RRJ2			375RRJ2		
DESIGN GRADE	1.01%			1.5%			1.8%			1.33%			2.39%			2.2%			2%		
DATUM R.L																					
DEPTH TO INVERT		1.14	1.19		1.03	1.08		1.07	1.12		1.08	1.1		1.05	1.1		1.09	1.72		1.51	2.84
5 YR HGL LEVEL		693.41	693.39		693.25	693.24			692.86			692.59			692.09		691.62	691.09		690.9	690.05
INVERT LEVEL		693.25	693.2		693.08	693.02		692.68	692.63		692.37	692.35		691.89	691.85		691.45	690.82		690.72	689.39
SURFACE LEVEL			694.39			694.11			693.74			693.45			692.95			692.54			692.23
ROAD CHAINAGE																		39.86			40.99
PIPE CHAINAGE	2.67		92.67	8.32		100.99	19.2		120.19	19.2		139.39	19.2		158.59	17.82		176.41	5.1		181.51

LINE 1BD

PIPE MAX. VELOCITY (m/s)			1.62		
DISCHARGE (cu.m/s)			0.01		
PIPE SIZE (mm) & CLASS			150uPVC		
DESIGN GRADE			4.06%		
DATUM R.L		675.0			
DEPTH TO INVERT		0.77		0.74	
5 YR HGL LEVEL		695.47		694.6	
INVERT LEVEL		695.36		694.53	
SURFACE LEVEL		696.13			695.27
ROAD CHAINAGE					
PIPE CHAINAGE		0	20.46		20.46

LINE 1BE

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
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By:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 03 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	512	B

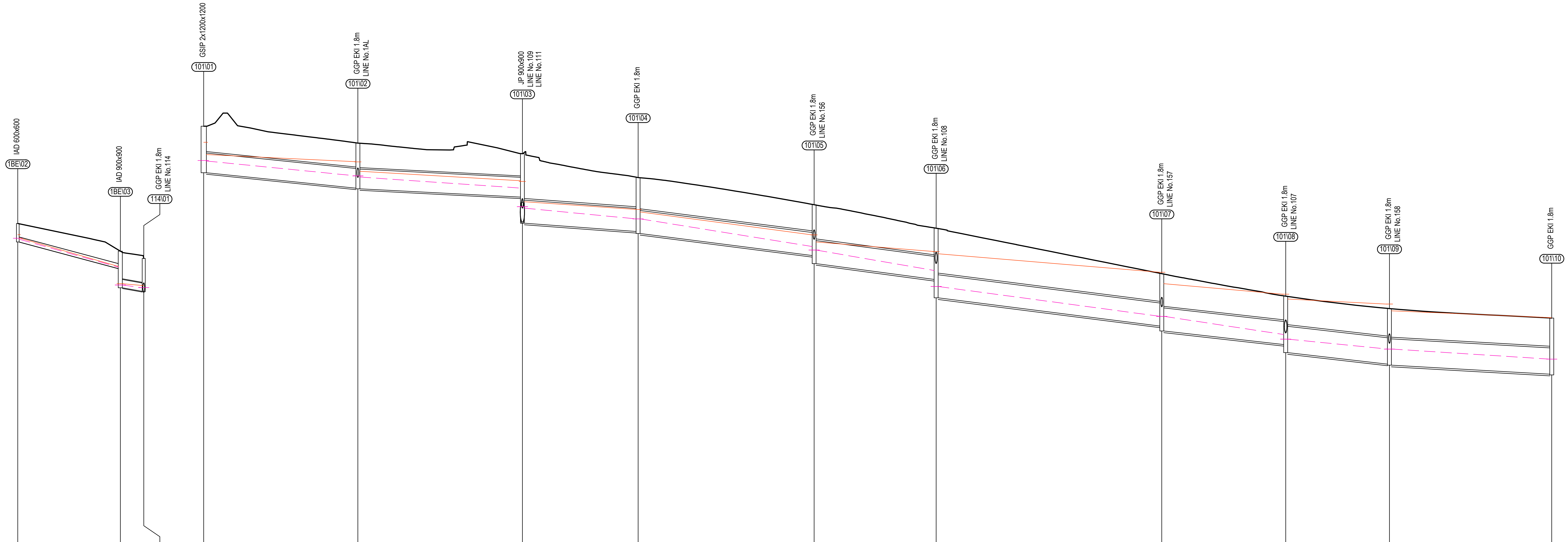
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-512.dwg

LEGEND

DESIGN SURFACE LEVEL	━━
100 YR ARI HGL LEVEL	──
5 YR ARI HGL LEVEL	– – –

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS



LINE 1BE

PIPE CHAINAGE	PIPE MAX. VELOCITY (m/s)	DISCHARGE (cu.m/s)	PIPE SIZE (mm) & CLASS	DESIGN GRADE	DATUM R.L	DEPTH TO INVERT	5 YR HGL LEVEL	INVERT LEVEL	SURFACE LEVEL	ROAD CHAINAGE
20.46					674.0	0.74 0.84	694.6 694.56	694.53 694.43	695.27	
23.37	2.62	0.02	225uPVC	5.18%						
43.83						0.79 1.67	693.28 692.47	693.22 692.34	694.01	40.42
5.33	1.14	0.04	375RRJ2	3%						
49.17						1.5 1.52	692.35	692.18 692.16	693.68	42.2

LINE 101

PIPE CHAINAGE	PIPE MAX. VELOCITY (m/s)	DISCHARGE (cu.m/s)	PIPE SIZE (mm) & CLASS	DESIGN GRADE	DATUM R.L	DEPTH TO INVERT	5 YR HGL LEVEL	INVERT LEVEL	SURFACE LEVEL	ROAD CHAINAGE
0					673.0	2.12	697.12	696.58	698.7	610.74
35.13	2.11	0.84	900RRJ2	2%						
35.13						2.05 2.08	696.44 696.39	695.88 695.85	697.93	575.63
37.5	2.97	0.85	900RRJ2	1%						
72.63						1.98 3.17	695.88 694.97	695.47 694.29	697.45	538.9
26.37	3.02	1.48	1050RRJ2	1.43%						
99						2.46 2.55	694.48	693.91 693.82	696.37	513.7
40.11	4.72	1.49	1050RRJ2	2.5%						
139.12						2.31 2.68	693.22 693.06	692.81 692.45	695.13	473.62
27.8	4.83	1.53	1050RRJ2	2.6%						
166.92						2.34 3.17	692.13 691.4	691.72 690.89	694.06	445.82
51.43	4.87	1.7	1050RRJ2	2.5%						
218.35						2.38 2.61	690.04	689.6 689.37	691.98	394.38
28.24	4.72	1.72	1050RRJ2	2.18%						
246.59						2.2 2.57	689.21 689	688.76 688.39	690.96	366.14
23.64	3.26	1.93	1200RRJ2	2.21%						
270.24						2.53 2.58	688.55	687.87 687.82	690.4	342.5
36.99	2.91	1.97	1200RRJ2	1.11%						
307.23						2.56	688.09	687.4	689.96	305.51

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 04 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	513	B

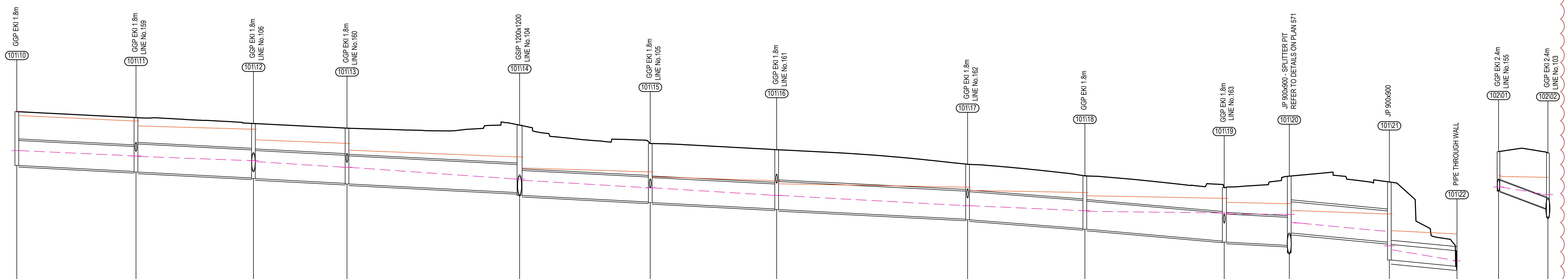
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-513.dwg

LEGEND

DESIGN SURFACE LEVEL	▬
100 YR ARI HGL LEVEL	▬
5 YR ARI HGL LEVEL	- - -

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



	101\10		101\11		101\12		101\13		101\14		101\15	
PIPE MAX. VELOCITY (m/s)		2.81		2.46		2.82		3.56		2.66		2.88
DISCHARGE (cu.m/s)		2.01		2.05		2.41		2.45		3.6		3.66
PIPE SIZE (mm) & CLASS		1200RRJ2		1350RRJ2		1350RRJ2		1350RRJ2		(2x)1200RRJ2		(2x)1200RRJ2
DESIGN GRADE		1%		1%		1%		1%		1%		1%
DATUM R.L	666.0											
DEPTH TO INVERT	2.56 2.59		2.59 2.62		2.62 2.65		2.65 2.68		3.25 3.38		2.81 2.84	
5 YR HGL LEVEL	688.09		687.84 687.81		687.61 687.56		687.29		686.72 686.66		686.3	
INVERT LEVEL	687.4 687.37		687.09 687.06		686.77 686.74		686.52 686.49		686.07 685.93		685.62 685.59	
SURFACE LEVEL	689.96		689.68		689.39		689.17		689.32		688.43	
ROAD CHAINAGE	305.51		276.81		248.49		225.96		427.6		152.92	
PIPE CHAINAGE	307.23	28.7	335.93	28.31	364.24	22.54	386.78	41.59	428.37	31.48	459.85	30.46

	101\16		101\17		101\18		101\19		101\20		101\21		101\22
PIPE MAX. VELOCITY (m/s)		2.69		2.58		1.93		1.3		4.96		4.15	
DISCHARGE (cu.m/s)		3.69		3.75		3.77		3.84		2.66		2.66	
PIPE SIZE (mm) & CLASS		(2x)1350RRJ2		(2x)1350RRJ2		(2x)1350RRJ2		(2x)1350RRJ2		1500RRJ2		2400x750RCBC	
DESIGN GRADE		1%		1.5%		1.7%		1%		1.86%		1.88%	
DATUM R.L													
DEPTH TO INVERT	2.85 2.88		2.64 2.67		2.55 2.58		2.57 2.62		3.33 3.69 2.8		2.89 3.75		0.75 0.75
5 YR HGL LEVEL	685.93 685.93		685.44		685.2 685.17		685.09 685.04		685.02 684.61		684.2 683.33		682.79
INVERT LEVEL	685.28 685.25		684.79 684.76		684.34 684.31		683.74 683.69		683.53 683.17 684.1		683.69 682.83		682.52 682.52
SURFACE LEVEL	688.13		687.43		686.89		686.31		686.9		686.58		683.27
ROAD CHAINAGE	122.5		76.5		50.38		18.72		3.57				
PIPE CHAINAGE	490.31	46	536.31	28.26	564.57	33.58	598.15	15.67	615.78	22.15	637.94	16.31	654.24

LINE 101

	102\01		102\02
PIPE MAX. VELOCITY (m/s)		1.84	
DISCHARGE (cu.m/s)		0.15	
PIPE SIZE (mm) & CLASS		525RRJ2	
DESIGN GRADE		7.1%	
DATUM R.L	664.0		
DEPTH TO INVERT	1.9		2.69 3.11
5 YR HGL LEVEL	684.35		683.97
INVERT LEVEL	684.14		683.29 682.87
SURFACE LEVEL	686.04		685.98
ROAD CHAINAGE	34.71		32.39
PIPE CHAINAGE	0	11.9	11.9

LINE 102

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-514.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 05 OF 17

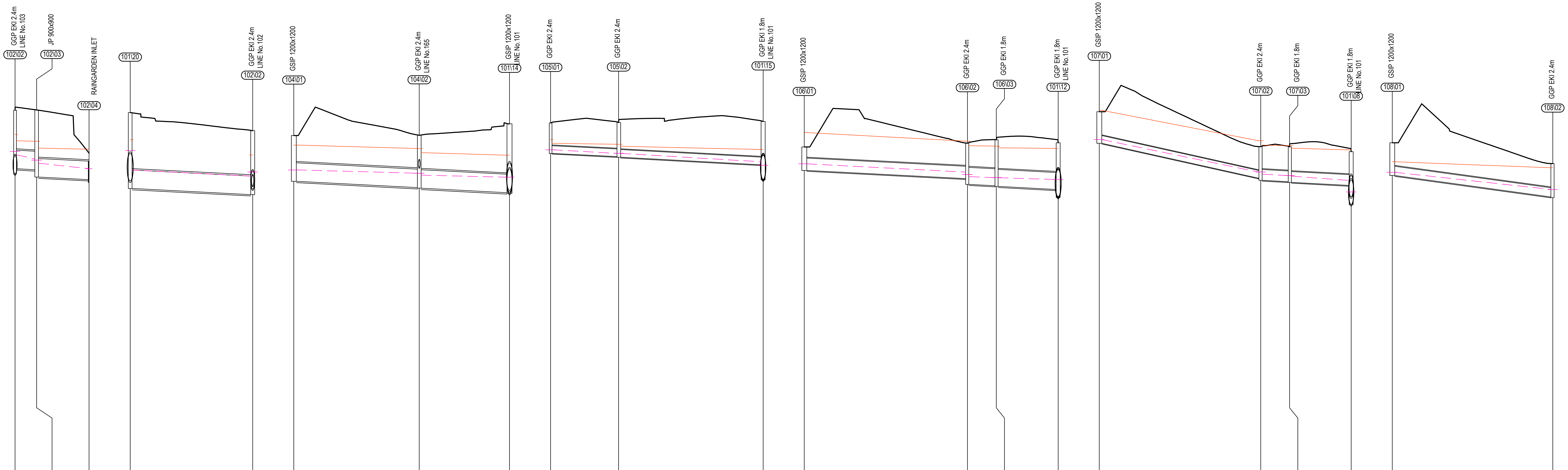
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	514	B

LEGEND

DESIGN SURFACE LEVEL	───
100 YR ARI HGL LEVEL	───
5 YR ARI HGL LEVEL	– – –

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



PIPE MAX. VELOCITY (m/s)		3.35	3.3	
DISCHARGE (cu.m/s)		1.31	1.31	
PIPE SIZE (mm) & CLASS		900RRJ2	900RRJ2	
DESIGN GRADE		0.99%	1%	
DATUM R.L		664.0		
DEPTH TO INVERT	2.69 3.11	2.85 2.91	3.26 0.9	0.9
5 YR HGL LEVEL	683.97	683.8 683.61	683.4	683.13
INVERT LEVEL	683.29 682.87	683.13 683.08	682.73 682.6	682.6
SURFACE LEVEL		685.98	685.99	683.5
ROAD CHAINAGE		32.39		
PIPE CHAINAGE		11.9 5.25	17.15 12.73	29.88

LINE 102

PIPE MAX. VELOCITY (m/s)	2.61	
DISCHARGE (cu.m/s)	1.02	
PIPE SIZE (mm) & CLASS	900RRJ2	
DESIGN GRADE	1%	
DATUM R.L	665.0	
DEPTH TO INVERT	3.69 3.11	2.85
5 YR HGL LEVEL	684.234 683.971	683.8
INVERT LEVEL	683.17 682.87	683.13
SURFACE LEVEL	686.86	685.98
ROAD CHAINAGE	4.04	32.39
PIPE CHAINAGE	0 29.78	29.78

LINE 103

PIPE MAX. VELOCITY (m/s)	2.77	2.37	
DISCHARGE (cu.m/s)	1.15	1.15	
PIPE SIZE (mm) & CLASS	900RRJ2	900RRJ2	
DESIGN GRADE	1.01%	1%	
DATUM R.L	668.0		
DEPTH TO INVERT	2.23 2.55	2.58 3.35	3.38
5 YR HGL LEVEL	687.07 686.91	686.82 686.72	686.66
INVERT LEVEL	686.52 686.21	686.18 685.96	685.93
SURFACE LEVEL	688.74	688.76	689.32
ROAD CHAINAGE	479.14	448.65	427.6
PIPE CHAINAGE	0 30.5	30.5 21.95	52.44

LINE 104

PIPE MAX. VELOCITY (m/s)	0.92	1.51	
DISCHARGE (cu.m/s)	0.04	0.06	
PIPE SIZE (mm) & CLASS	375RRJ2	375RRJ2	
DESIGN GRADE	0.95%	1.05%	
DATUM R.L	667.0		
DEPTH TO INVERT	1.48 1.66	1.69 2.11	2.84
5 YR HGL LEVEL	687.05	686.88 686.47	686.3
INVERT LEVEL	686.88 686.72	686.69 686.32	685.59
SURFACE LEVEL	688.36	688.38	688.43
ROAD CHAINAGE	400.12	404.02	152.92
PIPE CHAINAGE	0 16.52	16.52 35.15	51.67

LINE 105

PIPE MAX. VELOCITY (m/s)	2.44	1.59	1.37	
DISCHARGE (cu.m/s)	0.38	0.38	0.38	
PIPE SIZE (mm) & CLASS	600RRJ2	825RRJ2	825RRJ2	
DESIGN GRADE	1%	1%	1%	
DATUM R.L	669.0			
DEPTH TO INVERT	1.14 1.72	2 2.23	2.26 2.27	2.65
5 YR HGL LEVEL	688.37 687.97	687.75 687.7	687.69 687.61	687.56
INVERT LEVEL	688.05 687.65	687.37 687.3	687.27 687.12	686.74
SURFACE LEVEL	689.19	689.37	689.54	689.39
ROAD CHAINAGE	57.18	17.5	17.62	248.49
PIPE CHAINAGE	0 39.68	39.68 7	46.68 15.05	61.73

LINE 106

PIPE MAX. VELOCITY (m/s)	3.56	1.55	2.07	
DISCHARGE (cu.m/s)	0.19	0.2	0.2	
PIPE SIZE (mm) & CLASS	375RRJ2	525RRJ2	525RRJ2	
DESIGN GRADE	4.33%	1%	0.99%	
DATUM R.L	671.0			
DEPTH TO INVERT	1.54 1.54	1.64 1.7	1.73 1.64	2.57
5 YR HGL LEVEL	691.55 689.97	689.87 689.8	689.77 689.56	689
INVERT LEVEL	691.37 689.67	689.57 689.5	689.47 689.32	688.39
SURFACE LEVEL	692.9	691.21	691.2	690.96
ROAD CHAINAGE	56.76	17.5	17.5	366.14
PIPE CHAINAGE	0 39.26	39.26 7	46.26 14.98	61.24

LINE 107

PIPE MAX. VELOCITY (m/s)	2.66	
DISCHARGE (cu.m/s)	0.13	
PIPE SIZE (mm) & CLASS	450RRJ2	
DESIGN GRADE	2.69%	
DATUM R.L	675.0	
DEPTH TO INVERT	1.59 1.63	
5 YR HGL LEVEL	693.96 693.12	
INVERT LEVEL	693.8 692.75	
SURFACE LEVEL	695.39	694.38
ROAD CHAINAGE	56.44	17.42
PIPE CHAINAGE	0 39.02	39.02

LINE 108

ISSUED FOR CONSTRUCTION CERTIFICATE

B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
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By:
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JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 06 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	515	B

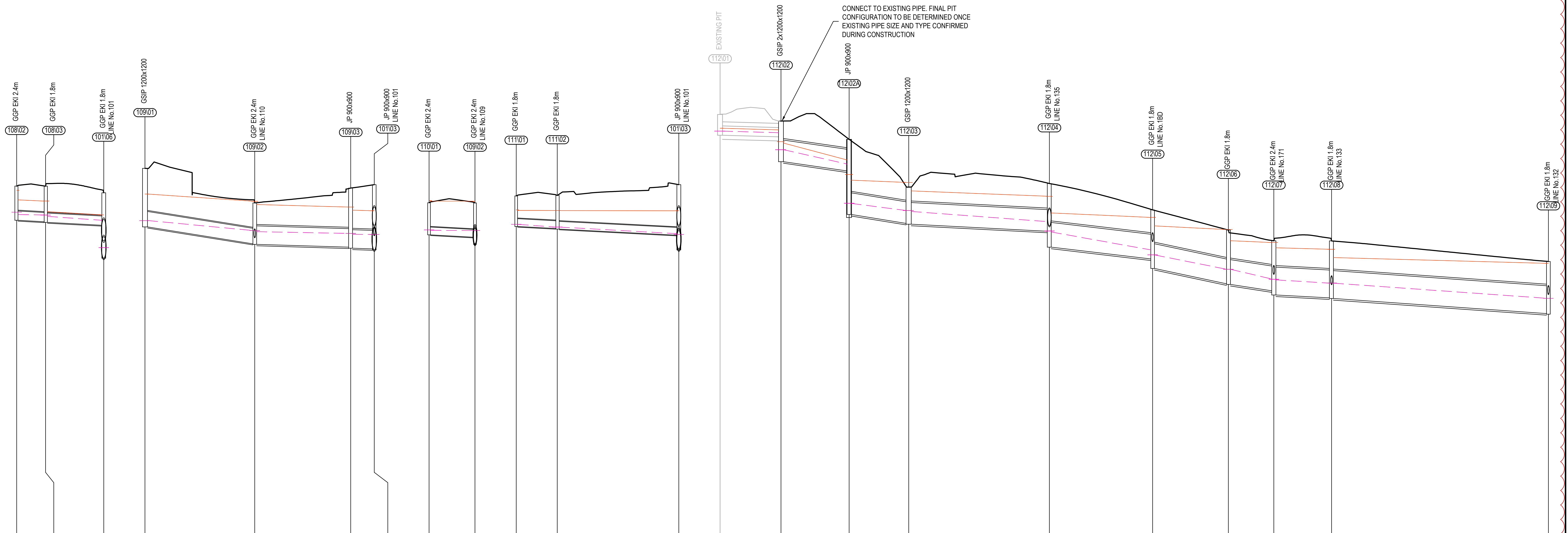
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01102-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-515.dwg

LEGEND

DESIGN SURFACE LEVEL	———
100 YR ARI HGL LEVEL	———
5 YR ARI HGL LEVEL	– – – –

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



CONNECT TO EXISTING PIPE. FINAL PIT CONFIGURATION TO BE DETERMINED ONCE EXISTING PIPE SIZE AND TYPE CONFIRMED DURING CONSTRUCTION

PIPE MAX. VELOCITY (m/s)			1.35			2.03		
DISCHARGE (cu.m/s)			0.14			0.18		
PIPE SIZE (mm) & CLASS			450RRJ2			450RRJ2		
DESIGN GRADE			1%			1%		
DATUM R.L		673.0						
DEPTH TO INVERT	1.63	1.66		1.73	1.76		1.57	3.17
5 YR HGL LEVEL	693.12	693		692.98	692.92		692.72	691.4
INVERT LEVEL	692.75	692.72		692.65	692.62		692.48	690.89
SURFACE LEVEL		694.38			694.38			694.06
ROAD CHAINAGE		17.42			17.5			445.82
PIPE CHAINAGE		39.02	7		46.02	14.13		60.15

LINE 108

PIPE MAX. VELOCITY (m/s)		4.37			1.66			1.49		
DISCHARGE (cu.m/s)		0.77			0.79			0.78		
PIPE SIZE (mm) & CLASS		750RRJ2			900RRJ2			900RRJ2		
DESIGN GRADE		3.07%			0.58%			0.59%		
DATUM R.L	676.0									
DEPTH TO INVERT	2.84		1.98	2.01		2.87	2.92		3.12	3.17
5 YR HGL LEVEL	695.72		695.23	695.17		695.09	695.05		695.03	694.97
INVERT LEVEL	695.4		694.58	694.55		694.42	694.37		694.34	694.29
SURFACE LEVEL	698.24			696.57			697.29			697.45
ROAD CHAINAGE	55.95			27.66			4.55			538.9
PIPE CHAINAGE	0	26.63		26.63	23.27		49.9	5.72		55.62

LINE 109

PIPE MAX. VELOCITY (m/s)		0.51		
DISCHARGE (cu.m/s)		0.04		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		1.02%		
DATUM R.L	676.0			
DEPTH TO INVERT	1.56		1.66	2.01
5 YR HGL LEVEL	695.24		695.23	695.17
INVERT LEVEL	695.02		694.9	694.55
SURFACE LEVEL	696.58			696.57
ROAD CHAINAGE	29.08			27.66
PIPE CHAINAGE	0	11.14		11.14

LINE 110

PIPE MAX. VELOCITY (m/s)		1.13			1.22		
DISCHARGE (cu.m/s)		0.02			0.02		
PIPE SIZE (mm) & CLASS		375RRJ2			375RRJ2		
DESIGN GRADE		0.99%			1%		
DATUM R.L	676.0						
DEPTH TO INVERT	1.48		1.61	1.64		2.45	3.17
5 YR HGL LEVEL	695.53			695.4		695.08	694.97
INVERT LEVEL	695.43		695.33	695.3		695	694.29
SURFACE LEVEL	696.91			696.93			697.45
ROAD CHAINAGE	32.77			30.14			538.9
PIPE CHAINAGE	0	9.96		9.96	29.48		39.44

LINE 111

PIPE MAX. VELOCITY (m/s)			4.84			2.56			3.25			4.84	
DISCHARGE (cu.m/s)			1.16			1.16			1.22			1.84	
PIPE SIZE (mm) & CLASS			1050RRJ2			1050RRJ2			1050RRJ2			1200RRJ2	
DESIGN GRADE			2.72%			2.99%			1%			2.28%	
DATUM R.L	672.0												
DEPTH TO INVERT		1.98		1.53	3.64		1.76	1.8		2.32	3.09		2.38
5 YR HGL LEVEL		695.15		694.45	692.55		692.2	692.15		691.66	691.16		690.29
INVERT LEVEL		694.57		694.12	692.01		691.57	691.53		691.19	690.42		689.85
SURFACE LEVEL		696.54			695.65			693.34			693.51		
ROAD CHAINAGE											15.95		
PIPE CHAINAGE	0	14.78	16.53		31.31	14.46		45.78	34.12		79.89	25.04	

PIPE MAX. VELOCITY (m/s)		2.99			3.61			2.51			2.59		
DISCHARGE (cu.m/s)		1.93			1.93			1.96			2.12		
PIPE SIZE (mm) & CLASS		1200RRJ2			1200RRJ2			1350RRJ2			1350RRJ2		
DESIGN GRADE		4.04%			2.8%			1%			1.39%		
DATUM R.L													
DEPTH TO INVERT	2.84		2.61	2.64		2.42	2.63		2.76	2.79		2.53	
5 YR HGL LEVEL	690.05			689.35		688.88	688.84			688.68		687.94	
INVERT LEVEL	689.39		688.64	688.62		688.31	688.1		687.96	687.93		687.2	
SURFACE LEVEL	692.23			691.25			690.73			690.73			689.73
ROAD CHAINAGE	40.99			63.05			67.8			194.68			246.78
PIPE CHAINAGE	104.93	18.38		123.31	11.02		134.33	14.01		148.34	52.59		200.92

LINE 112

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 07 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	516	B

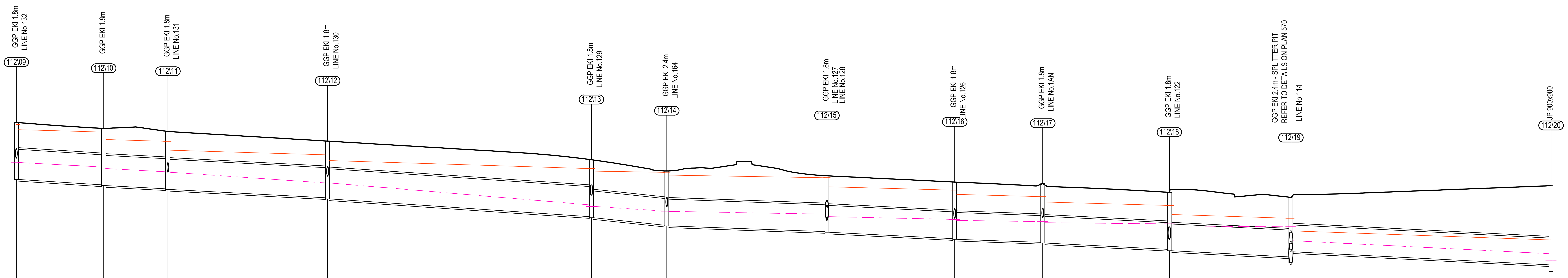
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-516.dwg

LEGEND

DESIGN SURFACE LEVEL	▬
100 YR ARI HGL LEVEL	▬
5 YR ARI HGL LEVEL	– – –

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



PIPE MAX. VELOCITY (m/s)		2.48		2.5		3		4.11		2.47		1.81		2.16		1.75		1.65		1.48		3.43	
DISCHARGE (cu.m/s)		2.09		2.1		2.13		2.15		2.27		2.3		2.99		3.04		3.09		3.32		3.06	
PIPE SIZE (mm) & CLASS		1350RRJ2		1350RRJ2		1350RRJ2		1350RRJ2		(2x)1200RRJ2		(2x)1200RRJ2		(2x)1200RRJ2		(2x)1200RRJ2		(2x)1200RRJ2		(2x)1200RRJ2		(2x)1200RRJ2	
DESIGN GRADE		1.24%		1%		1.05%		1.34%		2%		0.7%		1%		0.7%		1%		1%		1%	
DATUM R.L	666.0																						
DEPTH TO INVERT	2.53 2.56		2.53 2.56		2.57 2.6		2.54 2.59		2.55 2.6		2.44 2.47		2.5 2.53		2.53 2.56		2.64 2.67		2.56 2.62		2.65 2.92 2.6		3.55
5 YR HGL LEVEL	687.94 687.93		687.73 687.66		687.51 687.49		687.01		686.03 685.96		685.75 685.74		685.62 685.5		685.38 685.34		685.28 685.23		685.18 685.09		685.05 684.4		683.84
INVERT LEVEL	687.2 687.17		686.93 686.9		686.75 686.72		686.35 686.3		685.5 685.45		685.12 685.09		684.84 684.8		684.52 684.49		684.35 684.32		684.04 683.97		683.7 683.42 683.9		683.35
SURFACE LEVEL	689.73		689.45		689.32		688.89		688.05		687.55		687.34		687.05		686.99		686.59		686.5		686.89
ROAD CHAINAGE	246.78		266.37		277.63		313.45		372.62		389.54		425.46		453.93		473.08		500.62		535		590.35
PIPE CHAINAGE	200.92	19.59	220.51	14.42	234.93	35.82	270.75	59.17	329.92	16.92	346.83	35.93	382.76	28.65	411.41	19.76	431.17	28.41	459.58	27.26	489.69	55.5	545.19

LINE 112

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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SUSTAINABLE CERTIFICATION ✓ISO 9001
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 08 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	517	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-517.dwg

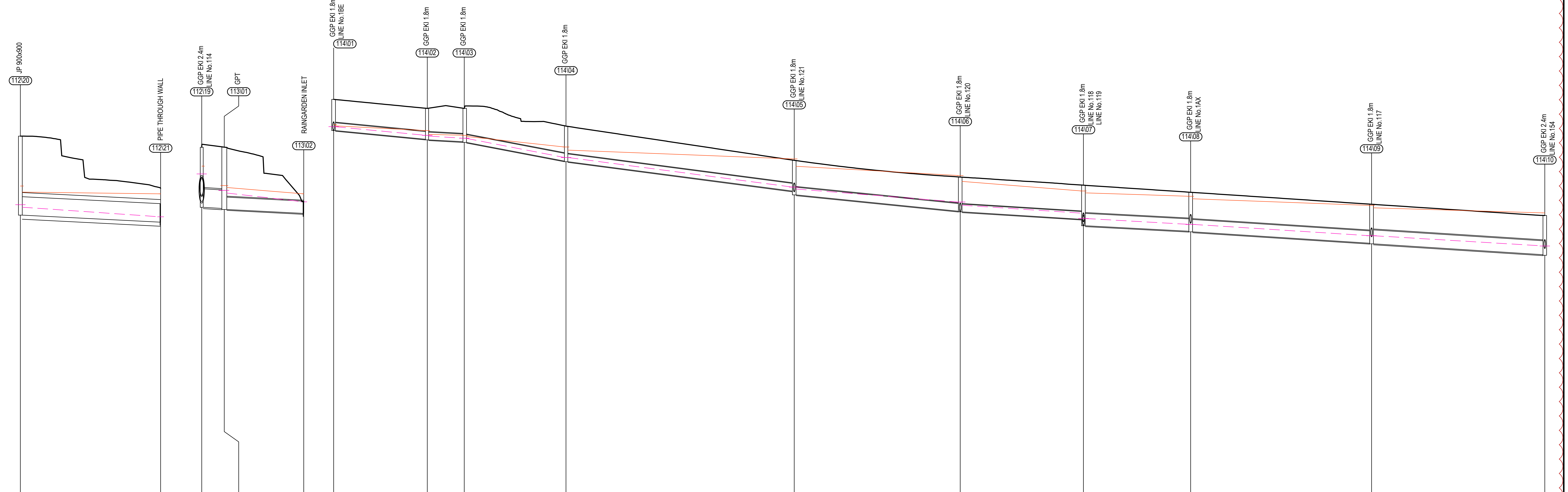
LEGEND

DESIGN SURFACE LEVEL ——
100 YR ARI HGL LEVEL ——
5 YR ARI HGL LEVEL – – –

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



LINE 112

	112\20		112\21
PIPE MAX. VELOCITY (m/s)		2.92	
DISCHARGE (cu.m/s)		3.16	
PIPE SIZE (mm) & CLASS		(2x)2100x900RCBC	
DESIGN GRADE		1%	
DATUM R.L	665.0		
DEPTH TO INVERT	3.55 3.85		0.9 0.9
5 YR HGL LEVEL	683.84 683.43		682.96
INVERT LEVEL	683.35 683.04		682.7 682.7
SURFACE LEVEL	686.89		683.6
ROAD CHAINAGE	590.35		
PIPE CHAINAGE	545.19	34.13	579.32

LINE 113

	112\19		113\01		113\02
PIPE MAX. VELOCITY (m/s)				2.94	
DISCHARGE (cu.m/s)		0		0.83	
PIPE SIZE (mm) & CLASS		900RRJ2		600RRJ2	
DESIGN GRADE		1%		1%	
DATUM R.L	665.0				
DEPTH TO INVERT	2.92		2.98 3.03		0.6 0.6
5 YR HGL LEVEL			684.12		683.69
INVERT LEVEL	683.42		683.37 683.32		683.13 683.13
SURFACE LEVEL	686.35		686.35		683.73
ROAD CHAINAGE	532.16		534.53		
PIPE CHAINAGE	0	5.49	5.49	19.35	24.84

LINE 114

	114\01		114\02		114\03		114\04		114\05
PIPE MAX. VELOCITY (m/s)		0.84		1.25		1.43		1.34	
DISCHARGE (cu.m/s)		0.05		0.06		0.07		0.08	
PIPE SIZE (mm) & CLASS		375RRJ2		375RRJ2		375RRJ2		375RRJ2	
DESIGN GRADE		1.86%		1%		3.68%		2.58%	
DATUM R.L	670.0								
DEPTH TO INVERT	1.52		1.5 1.53		1.62 1.65		1.7 1.73		1.5 1.69
5 YR HGL LEVEL	692.35		691.93 691.89		691.79 691.78		690.85		689.41 689.32
INVERT LEVEL	692.16		691.74 691.71		691.62 691.59		690.67 690.64		689.21 689.03
SURFACE LEVEL	693.68		693.24		693.24		692.38		690.71
ROAD CHAINAGE	42.2		65		65		18.4		73.95
PIPE CHAINAGE	0	22.8	22.8	9	31.8	24.77	56.57	55.55	112.12

		114\06		114\07		114\08		114\09		114\10
PIPE MAX. VELOCITY (m/s)	1.68		2.15		1.88		1.86		1.83	
DISCHARGE (cu.m/s)	0.15		0.21		0.31		0.34		0.4	
PIPE SIZE (mm) & CLASS	375RRJ2		375RRJ2		600RRJ2		600RRJ2		675RRJ2	
DESIGN GRADE	1.97%		1.2%		1.02%		1.26%		1.25%	
DATUM R.L										
DEPTH TO INVERT		1.67 1.7		1.66 1.97		1.9 1.93		1.9 1.93		1.91
5 YR HGL LEVEL		688.68 688.52		688.14 687.88		687.59		687.04		686.54
INVERT LEVEL		688.23 688.2		687.84 687.53		687.26 687.23		686.68 686.65		686.12
SURFACE LEVEL		689.9		689.5		689.16		688.57		688.03
ROAD CHAINAGE		114.36		144.35		170.46		214.49		256.66
PIPE CHAINAGE	40.41	152.53	29.99	182.52	26.11	208.63	44.03	252.66	42.17	294.83

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-518.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
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JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL SECTIONS
SHEET 09 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	518	B

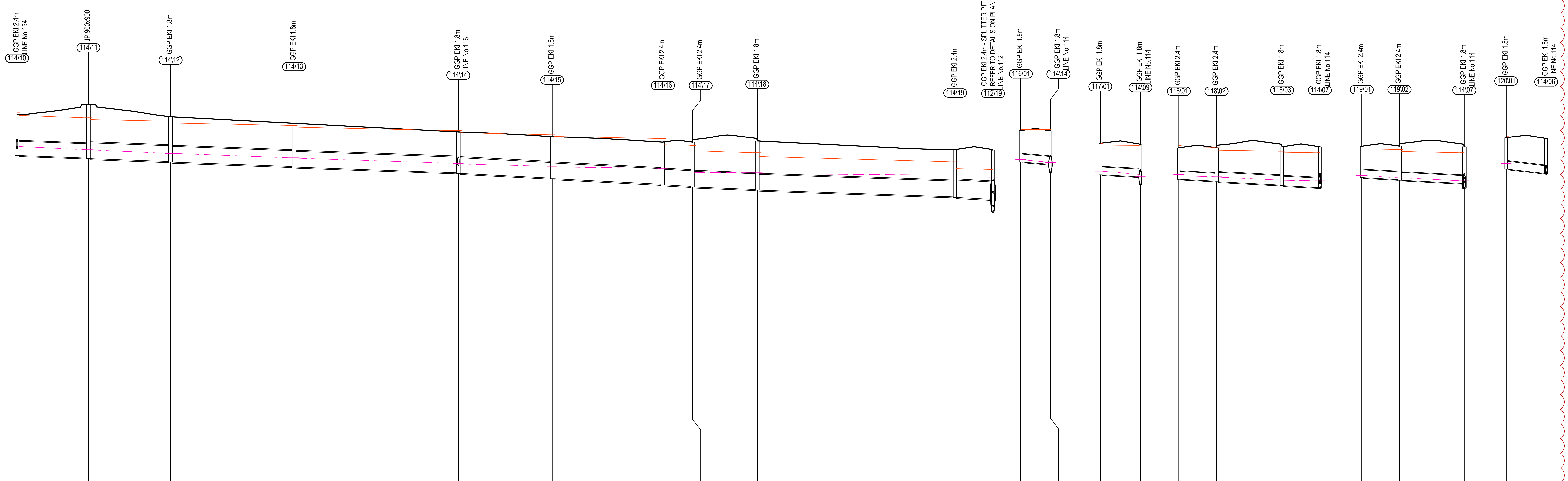
LEGEND

DESIGN SURFACE LEVEL	▬
100 YR ARI HGL LEVEL	▬
5 YR ARI HGL LEVEL	– – –

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



PIPE MAX. VELOCITY (m/s)		2.1		1.97		1.88		1.86		1.81		1.43		1.27		1.26		1.22		1.07	
DISCHARGE (cu.m/s)		0.46		0.46		0.47		0.49		0.51		0.52		0.54		0.55		0.56		0.59	
PIPE SIZE (mm) & CLASS		675RRJ2		750RRJ2		750RRJ2		750RRJ2		750RRJ2		750RRJ2		750RRJ2		750RRJ2		750RRJ2		825RRJ2	
DESIGN GRADE		0.7%		0.7%		0.7%		0.7%		1%		1%		1%		0.77%		0.67%		1%	
DATUM R.L	666.0																				
DEPTH TO INVERT	1.91 1.94		2.56 2.59		2.13 2.16		2.06 2.09		1.95 1.98		1.98 2.01		2.01 2.04		2.11 2.14		2.32 2.35		2.25 2.28		2.35 2.92 2.68
5 YR HGL LEVEL	686.54 686.51		686.36 686.35		686.19		685.98 685.96		685.71 685.68		685.58 685.54		685.48 685.36		685.35 685.28		685.26 685.21		685.15 685.06		685.05
INVERT LEVEL	686.12 686.09		685.97 685.94		685.8 685.77		685.57 685.54		685.26 685.23		685.01 684.98		684.71 684.68		684.61 684.58		684.47 684.43		684.12 684.09		684 683.42 683.67
SURFACE LEVEL	688.03		688.52		687.94		687.62		687.21		686.99		686.73		686.72		686.78		686.37		686.35
ROAD CHAINAGE	256.66		337.46		292		321.49		360.67		382.33		407.94		408.62		579.51		532.27		532.16
PIPE CHAINAGE	294.83	17.03	311.87	19.61	331.48	29.49	360.96	39.18	400.15	22.41	422.55	26.44	448.99	7.03	456.03	15.49	471.51	47.23	518.75	9	527.75

LINE 114

PIPE MAX. VELOCITY (m/s)		0.88	
DISCHARGE (cu.m/s)		0.02	
PIPE SIZE (mm) & CLASS		375RRJ2	
DESIGN GRADE		1.51%	
DATUM R.L	666.0		
DEPTH TO INVERT	1.5		1.59 1.98
5 YR HGL LEVEL	685.84		685.71 685.68
INVERT LEVEL	685.73		685.62 685.23
SURFACE LEVEL	687.23		687.21
ROAD CHAINAGE	359.43		360.67
PIPE CHAINAGE	0	7.11	7.11

LINE 116

PIPE MAX. VELOCITY (m/s)		1.39	
DISCHARGE (cu.m/s)		0.04	
PIPE SIZE (mm) & CLASS		375RRJ2	
DESIGN GRADE		1%	
DATUM R.L	668.0		
DEPTH TO INVERT	1.5		1.55 1.93
5 YR HGL LEVEL	687.29		687.13 687.04
INVERT LEVEL	687.11		687.02 686.65
SURFACE LEVEL	688.62		688.57
ROAD CHAINAGE	211.25		214.49
PIPE CHAINAGE	0	9.57	9.57

LINE 117

PIPE MAX. VELOCITY (m/s)		1.05		1.05		0.85	
DISCHARGE (cu.m/s)		0.05		0.08		0.08	
PIPE SIZE (mm) & CLASS		375RRJ2		450RRJ2		450RRJ2	
DESIGN GRADE		1%		1%		1%	
DATUM R.L	669.0						
DEPTH TO INVERT	1.5		1.59 1.62		1.82 1.85		1.94 1.97
5 YR HGL LEVEL	688.12		688.07 688.05		687.9		687.88
INVERT LEVEL	687.95		687.86 687.83		687.68 687.65		687.56 687.53
SURFACE LEVEL	689.45		689.45		689.5		689.5
ROAD CHAINAGE	93		93.26		144.54		144.35
PIPE CHAINAGE	0	9	9	15.66	24.66	9	33.66

LINE 118

PIPE MAX. VELOCITY (m/s)		0.8		0.7	
DISCHARGE (cu.m/s)		0.01		0.02	
PIPE SIZE (mm) & CLASS		375RRJ2		375RRJ2	
DESIGN GRADE		1%		1%	
DATUM R.L	669.0				
DEPTH TO INVERT	1.5		1.6 1.63		1.75 1.97
5 YR HGL LEVEL	688.13		688.02		687.88
INVERT LEVEL	688.03		687.94 687.91		687.75 687.53
SURFACE LEVEL	689.53		689.53		689.5
ROAD CHAINAGE	62.92		62.81		144.35
PIPE CHAINAGE	0	9	9	15.48	24.48

LINE 119

PIPE MAX. VELOCITY (m/s)		0.43	
DISCHARGE (cu.m/s)		0.03	
PIPE SIZE (mm) & CLASS		375RRJ2	
DESIGN GRADE		2.17%	
DATUM R.L	669.0		
DEPTH TO INVERT	1.5		1.67 1.7
5 YR HGL LEVEL	688.68		688.68 688.52
INVERT LEVEL	688.44		688.23 688.2
SURFACE LEVEL	689.94		689.9
ROAD CHAINAGE	111.2		114.36
PIPE CHAINAGE	0	9.54	9.54

LINE 120

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
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By:
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JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 10 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	519	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-519.dwg

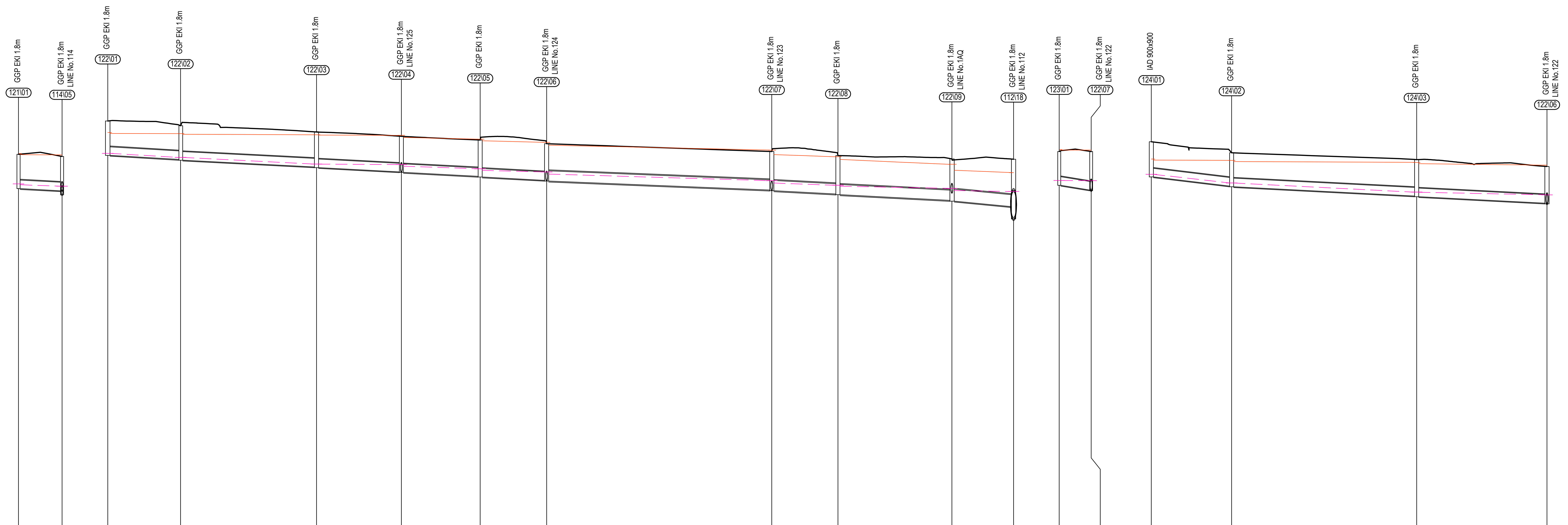
LEGEND

DESIGN SURFACE LEVEL	—
100 YR ARI HGL LEVEL	—
5 YR ARI HGL LEVEL	– – – –

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



PIPE MAX. VELOCITY (m/s)	0.86	
DISCHARGE (cu.m/s)	0.04	
PIPE SIZE (mm) & CLASS	375RRJ2	
DESIGN GRADE	1.01%	
DATUM R.L	670.0	
DEPTH TO INVERT	1.5 1.51	1.69
5 YR HGL LEVEL	689.47 689.41	689.32
INVERT LEVEL	689.3 689.21	689.03
SURFACE LEVEL	690.8	690.71
ROAD CHAINAGE	70.79	73.95
PIPE CHAINAGE	0 9.54	9.54

LINE 121

PIPE MAX. VELOCITY (m/s)	0.63	0.69	0.6	1.6	1.5	1.66	1.81	1.65	1.51	
DISCHARGE (cu.m/s)	0.01	0.02	0.03	0.14	0.14	0.19	0.23	0.23	0.31	
PIPE SIZE (mm) & CLASS	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	450RRJ2	450RRJ2	450RRJ2	525RRJ2	
DESIGN GRADE	1.12%	1%	1%	1%	1%	0.8%	1%	1%	1.79%	
DATUM R.L	666.0									
DEPTH TO INVERT	1.51 1.48	1.51 1.55	1.58 1.56	1.58 1.59	1.62 1.61	1.64 1.69	1.72 1.69	1.72 1.82	1.85 2.08	2.62
5 YR HGL LEVEL	686.85	686.67	686.38 686.36	686.29 686.17	686.1 686.03	685.94 685.65	685.55 685.45	685.41 685.32	685.22 685.18	685.09
INVERT LEVEL	686.76 686.58	686.55 686.25	686.22 686.04	686.01 685.84	685.81 685.66	685.63 685.24	685.21 685.07	685.03 684.78	684.75 684.51	683.97
SURFACE LEVEL	688.27	688.06	687.8	687.59	687.43	687.27	686.93	686.75	686.6	686.59
ROAD CHAINAGE	560	570	599.08	616.8	634.06	656.49	705.79	728.15	749.59	500.62
PIPE CHAINAGE	0 15.95	15.95 29.78	45.73 18.58	64.31 17.25	81.56 14.56	96.12 49.3	145.42 14.5	159.92 24.95	184.87 13.5	198.37

LINE 122

PIPE MAX. VELOCITY (m/s)	0.38	
DISCHARGE (cu.m/s)	0.02	
PIPE SIZE (mm) & CLASS	375RRJ2	
DESIGN GRADE	2.99%	
DATUM R.L	666.0	
DEPTH TO INVERT	1.48 1.69	1.72
5 YR HGL LEVEL	685.66 685.65	685.55
INVERT LEVEL	685.45 685.24	685.21
SURFACE LEVEL	686.93	686.93
ROAD CHAINAGE	705.83	705.79
PIPE CHAINAGE	0 7	7

LINE 123

PIPE MAX. VELOCITY (m/s)	0.52	0.67	0.87	
DISCHARGE (cu.m/s)	0.01	0.03	0.05	
PIPE SIZE (mm) & CLASS	375RRJ2	375RRJ2	375RRJ2	
DESIGN GRADE	2.29%	1%	1%	
DATUM R.L	667.0			
DEPTH TO INVERT	1.54 1.46	1.49 1.59	1.62 1.61	1.64
5 YR HGL LEVEL	686.93	686.55 686.15	686.14 686.03	685.94
INVERT LEVEL	686.82 686.41	686.38 685.98	685.95 685.66	685.63
SURFACE LEVEL	688.36	687.87	687.57	687.27
ROAD CHAINAGE	66.75	57.5	16.98	656.49
PIPE CHAINAGE	0 17.59	17.59 40.52	58.1 28.55	86.65

LINE 124

ISSUED FOR CONSTRUCTION CERTIFICATE

B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 11 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	520	B

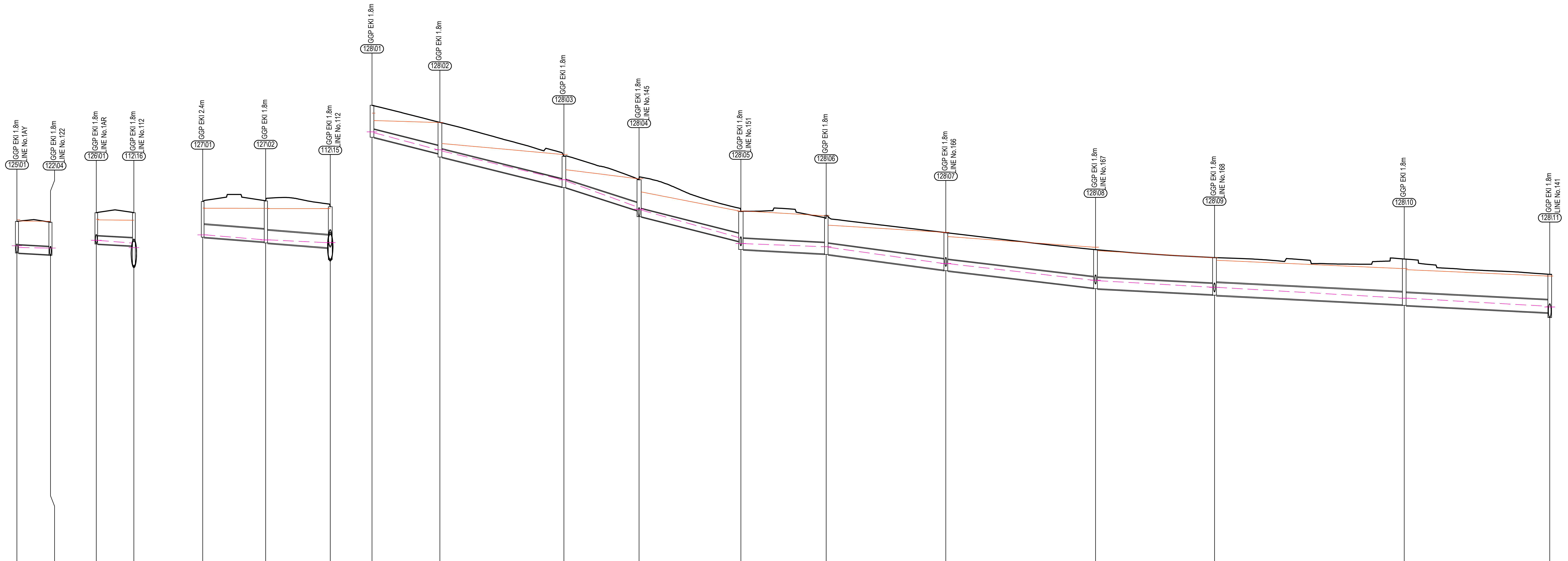
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-520.dwg

LEGEND

DESIGN SURFACE LEVEL	—
100 YR ARI HGL LEVEL	—
5 YR ARI HGL LEVEL	– – –

NOTE:
FLOW INFORMATION SHOWN FOR
ULTIMATE FLOW CONDITIONS

B



PIPE MAX. VELOCITY (m/s)		1.38		
DISCHARGE (cu.m/s)		0.12		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		1%		
DATUM R.L	667.0			
DEPTH TO INVERT	1.51		1.55	1.58
5 YR HGL LEVEL	686.39		686.36	686.29
INVERT LEVEL	686.12		686.04	686.01
SURFACE LEVEL	687.64			687.59
ROAD CHAINAGE	612.81			616.8
PIPE CHAINAGE	0	8.03		8.03

LINE 125

PIPE MAX. VELOCITY (m/s)		1.47		
DISCHARGE (cu.m/s)		0.05		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		1%		
DATUM R.L	666.0			
DEPTH TO INVERT	1.5		1.59	2.56
5 YR HGL LEVEL	685.73		685.6	685.34
INVERT LEVEL	685.55		685.46	684.49
SURFACE LEVEL	687.05			687.05
ROAD CHAINAGE	453.97			453.93
PIPE CHAINAGE	0	9		9

LINE 126

PIPE MAX. VELOCITY (m/s)		1			0.78		
DISCHARGE (cu.m/s)		0.03			0.04		
PIPE SIZE (mm) & CLASS		600RRJ2			600RRJ2		
DESIGN GRADE		1.49%			1.5%		
DATUM R.L	666.0						
DEPTH TO INVERT	1.71		1.96	2.01		1.96	2.53
5 YR HGL LEVEL	685.99			685.75		685.62	685.5
INVERT LEVEL	685.88		685.66	685.61		685.37	684.8
SURFACE LEVEL	687.59			687.61			687.34
ROAD CHAINAGE	279.61			278.21			425.46
PIPE CHAINAGE	0	15.07		15.07	15.48		30.54

LINE 127

PIPE MAX. VELOCITY (m/s)		1.73			1.71			4.08			3.73			2.09			1.97			1.91			2.07			2.25			2.37		
DISCHARGE (cu.m/s)		0.09			0.16			0.2			0.2			0.26			0.27			0.29			0.32			0.34			0.34		
PIPE SIZE (mm) & CLASS		375RRJ2			375RRJ2			375RRJ2			375RRJ2			525RRJ2			525RRJ2			525RRJ2			525RRJ2			600RRJ2			600RRJ2		
DESIGN GRADE		4.77%			4.81%			6.09%			4.85%			1.01%			2.61%			2.31%			1%			1%			1%		
DATUM R.L	670.0																														
DEPTH TO INVERT	1.53		1.49	1.66		1.46	1.5		1.47	1.76		1.42	1.82		1.84	1.87		1.79	1.82		1.84	1.87		1.77	1.8		2.19	2.22		1.83	2.07
5 YR HGL LEVEL	694.88		694.06	694.01		692.63	692.58		691.33	691.18		689.86	689.58		689.42	689.4			688.62		687.82	687.8			687.48			686.96		686.57	686.53
INVERT LEVEL	694.66		693.88	693.71		692.28	692.25		691.16	690.86		689.68	689.29		689.08	689.05		688.3	688.27		687.45	687.42		687.13	687.1		686.65	686.62		686.27	686.03
SURFACE LEVEL	696.19			695.37			693.75			692.62			691.11			690.93			690.09			689.28			688.9			688.84			688.1
ROAD CHAINAGE	142.04			125.95			97.17			84.13			33.51			46.72			75.14			110.99			139.47			549.62			219.69
PIPE CHAINAGE	0	16.26		16.26	29.7		45.95	17.99		63.94	24.38		88.31	20.43		108.74	28.65		137.4	35.84		173.24	28.49		201.72	45.43		247.15	34.85		282

LINE 128

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 12 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	521	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-521.dwg

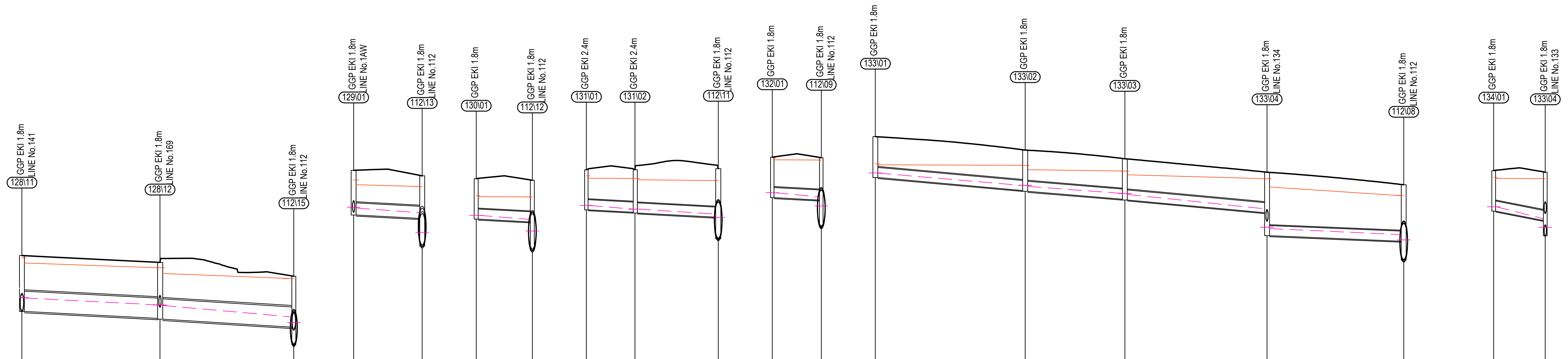
LEGEND

DESIGN SURFACE LEVEL	———
100 YR ARI HGL LEVEL	———
5 YR ARI HGL LEVEL	– – – –

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



PIPE MAX. VELOCITY (m/s)		2.1			3.02		
DISCHARGE (cu.m/s)		0.66			0.69		
PIPE SIZE (mm) & CLASS		750RRJ2			750RRJ2		
DESIGN GRADE		1%			1.2%		
DATUM R.L							
DEPTH TO INVERT	2.07		2.07	2.1		1.89	2.53
5 YR HGL LEVEL	686.53		686.27	686.25		685.83	685.5
INVERT LEVEL	686.03		685.77	685.75		685.45	684.8
SURFACE LEVEL	688.1			687.85			687.34
ROAD CHAINAGE	219.69			245.24			425.46
PIPE CHAINAGE	282	25.55		307.56	24.78		332.33

PIPE MAX. VELOCITY (m/s)		1.9		
DISCHARGE (cu.m/s)		0.14		
PIPE SIZE (mm) & CLASS		450RRJ2		
DESIGN GRADE		1%		
DATUM R.L	667.0			
DEPTH TO INVERT	1.66		1.58	2.6
5 YR HGL LEVEL	686.86		686.69	685.96
INVERT LEVEL	686.6		686.48	685.45
SURFACE LEVEL	688.26			688.05
ROAD CHAINAGE	363.67			372.62
PIPE CHAINAGE	0	12.69		12.69

LINE 129

PIPE MAX. VELOCITY (m/s)		1.33		
DISCHARGE (cu.m/s)		0.03		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		1%		
DATUM R.L	668.0			
DEPTH TO INVERT	1.5		1.54	2.59
5 YR HGL LEVEL	687.59		687.44	687.01
INVERT LEVEL	687.45		687.35	686.3
SURFACE LEVEL	688.95			688.89
ROAD CHAINAGE	308.26			313.45
PIPE CHAINAGE	0	10.39		10.39

LINE 130

PIPE MAX. VELOCITY (m/s)		1.08			1.38		
DISCHARGE (cu.m/s)		0.03			0.04		
PIPE SIZE (mm) & CLASS		375RRJ2			375RRJ2		
DESIGN GRADE		1%			1%		
DATUM R.L	668.0						
DEPTH TO INVERT	1.49		1.58	1.61		1.8	2.6
5 YR HGL LEVEL	687.96			687.83		687.64	687.49
INVERT LEVEL	687.8		687.71	687.68		687.52	686.72
SURFACE LEVEL	689.28			689.28			689.32
ROAD CHAINAGE	15.17			15.04			277.63
PIPE CHAINAGE	0	9		9	15.41		24.41

LINE 131

PIPE MAX. VELOCITY (m/s)		1.41		
DISCHARGE (cu.m/s)		0.04		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		1%		
DATUM R.L	668.0			
DEPTH TO INVERT	1.5		1.57	2.56
5 YR HGL LEVEL	688.43		688.27	687.93
INVERT LEVEL	688.25		688.15	687.17
SURFACE LEVEL	689.75			689.73
ROAD CHAINAGE	245.61			246.78
PIPE CHAINAGE	0	9.08		9.08

LINE 132

PIPE MAX. VELOCITY (m/s)		0.62			1.2			2.02			1.72		
DISCHARGE (cu.m/s)		0.03			0.07			0.08			0.13		
PIPE SIZE (mm) & CLASS		375RRJ2			375RRJ2			375RRJ2			375RRJ2		
DESIGN GRADE		1.74%			1.58%			1.79%			0.81%		
DATUM R.L	670.0												
DEPTH TO INVERT	1.52		1.5	1.53		1.5	1.53		1.5	2.35		2.09	2.79
5 YR HGL LEVEL	691.16		690.7	690.66		690.4	690.37		689.83	689.1		688.88	688.68
INVERT LEVEL	690.99		690.51	690.48		690.19	690.16		689.69	688.84		688.63	687.93
SURFACE LEVEL	692.51			692.01			691.69			691.19			690.73
ROAD CHAINAGE	102.7			128.49			145			170.7			194.68
PIPE CHAINAGE	0	27.75		27.75	18.46		46.2	26.31		72.51	25.31		97.82

LINE 133

PIPE MAX. VELOCITY (m/s)		2.27		
DISCHARGE (cu.m/s)		0.03		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		3.65%		
DATUM R.L	670.0			
DEPTH TO INVERT	1.5		1.79	2.35
5 YR HGL LEVEL	689.91		689.47	689.1
INVERT LEVEL	689.75		689.4	688.84
SURFACE LEVEL	691.25			691.19
ROAD CHAINAGE	167.5			170.7
PIPE CHAINAGE	0	9.55		9.55

LINE 134

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 13 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	522	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-522.dwg

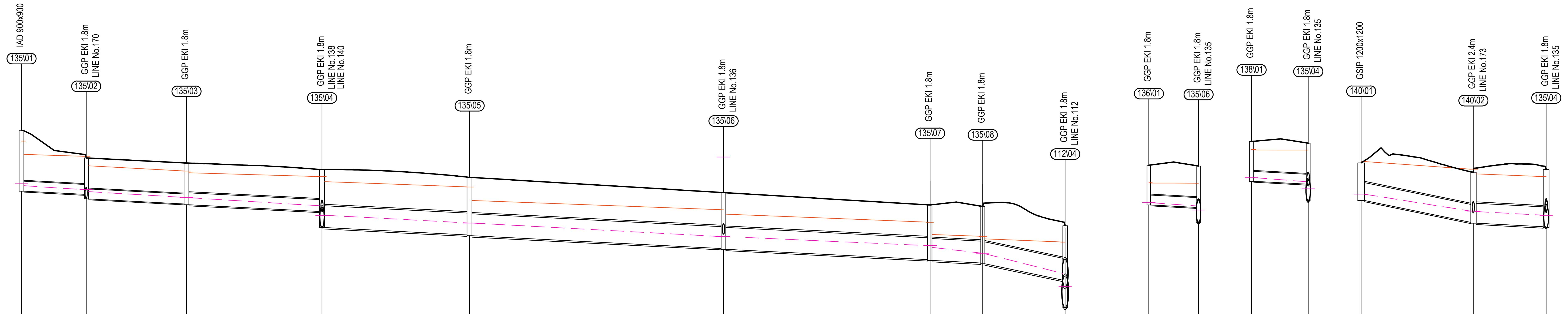
LEGEND

DESIGN SURFACE LEVEL	———
100 YR ARI HGL LEVEL	———
5 YR ARI HGL LEVEL	– – –

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



PIPE MAX. VELOCITY (m/s)		1.55			1.8			1.92			2.15			2.15			2.04			2.8			4.69		
DISCHARGE (cu.m/s)		0.08			0.14			0.15			0.66			0.65			0.66			0.68			0.67		
PIPE SIZE (mm) & CLASS		375RRJ2			375RRJ2			450RRJ2			825RRJ2			825RRJ2			825RRJ2			825RRJ2			825RRJ2		
DESIGN GRADE		1%			1%			1%			1%			1%			1%			1%			3.97%		
DATUM R.L	675.0																672.0									
DEPTH TO INVERT	2.3		1.37	1.54		1.54	1.57		1.58	2.19		2.17	2.2		2.11			2.06	2.09		2.13	2.16		2.06	3.09
5 YR HGL LEVEL	695.02		694.87	694.79		694.58	694.57		694.26	693.9			693.61		693.1			692.76	692.69		692.48	692.45		691.71	691.16
INVERT LEVEL	694.81		694.69	694.52		694.33	694.3		694.04	693.44		693.16	693.13		692.65			692.23	692.2		692.1	692.07		691.45	690.42
SURFACE LEVEL	697.11			696.06			695.87			695.62			695.33			694.76			694.29			694.23			693.51
ROAD CHAINAGE				119.51			138.45			162.71			188.03			235.98			275			279.25			15.95
PIPE CHAINAGE	0	12.22		12.22	18.93		31.15	25.6		56.76	27.87		84.62	47.95		132.57	39.01		171.59	9.94		181.53	15.57		197.1

LINE 135

PIPE MAX. VELOCITY (m/s)		1.1		
DISCHARGE (cu.m/s)		0.01		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		1%		
DATUM R.L	674.0			
DEPTH TO INVERT	1.5		1.56	2.14
5 YR HGL LEVEL	693.38		693.25	693.1
INVERT LEVEL	693.29		693.2	692.62
SURFACE LEVEL	694.79			694.76
ROAD CHAINAGE	233.32			235.98
PIPE CHAINAGE	0	9.38		9.38

LINE 136

PIPE MAX. VELOCITY (m/s)		1.33		
DISCHARGE (cu.m/s)		0.03		
PIPE SIZE (mm) & CLASS		375RRJ2		
DESIGN GRADE		1%		
DATUM R.L	674.0			
DEPTH TO INVERT	1.5		1.55	2.19
5 YR HGL LEVEL	694.32		694.17	693.9
INVERT LEVEL	694.18		694.08	693.44
SURFACE LEVEL	695.69			695.62
ROAD CHAINAGE	156.86			162.71
PIPE CHAINAGE	0	10.71		10.71

LINE 138

PIPE MAX. VELOCITY (m/s)		4.27			1.9		
DISCHARGE (cu.m/s)		0.49			0.51		
PIPE SIZE (mm) & CLASS		675RRJ2			750RRJ2		
DESIGN GRADE		3.89%			1%		
DATUM R.L	675.0						
DEPTH TO INVERT	1.42		1.89	1.92		2.16	2.19
5 YR HGL LEVEL	694.7		694.06	694.04			693.9
INVERT LEVEL	694.46		693.64	693.61		693.47	693.44
SURFACE LEVEL	695.88			695.53			695.62
ROAD CHAINAGE	33.31			58.57			162.71
PIPE CHAINAGE	0	21.18		21.18	13.76		34.95

LINE 140

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 14 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	523	B

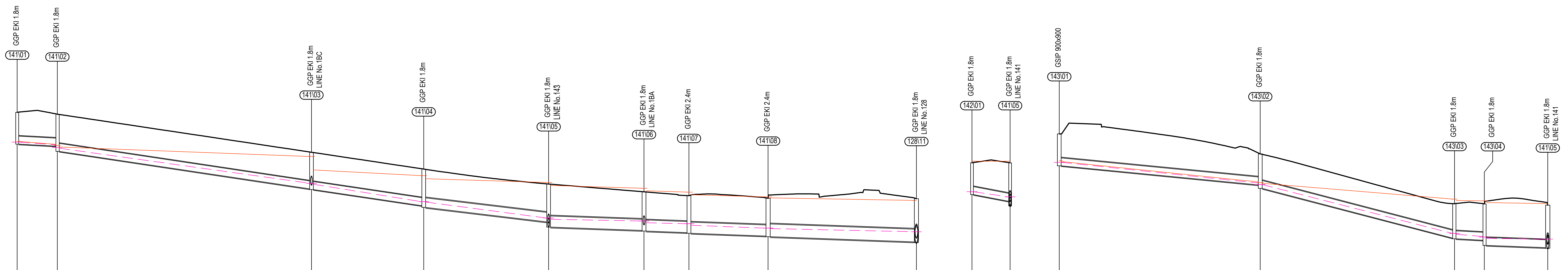
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-523.dwg

LEGEND

DESIGN SURFACE LEVEL	▬
100 YR ARI HGL LEVEL	▬
5 YR ARI HGL LEVEL	– – –

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



	141\01		141\02		141\03		141\04		141\05		141\06		141\07		141\08		128\11
PIPE MAX. VELOCITY (m/s)		1.13		1.03		2.06		2.19		1.46		1.68		1.91		1.73	
DISCHARGE (cu.m/s)		0.01		0.04		0.12		0.13		0.24		0.3		0.32		0.33	
PIPE SIZE (mm) & CLASS		375RRJ2		375RRJ2		375RRJ2		450RRJ2		525RRJ2		525RRJ2		525RRJ2		600RRJ2	
DESIGN GRADE		1%		2.96%		2.89%		2.32%		0.7%		0.7%		0.7%		0.7%	
DATUM R.L	669.0																
DEPTH TO INVERT	1.51 1.5		1.51 1.76		1.73 1.76		1.73 1.81		1.79 2.04		1.82 1.85		1.75 1.78		1.79 1.82		2.04 2.07
5 YR HGL LEVEL	690.65 690.77		690.65 690.49		688.83 688.78		687.96 687.94		687.18 687.13		687.04 686.97		686.92 686.85		686.71 686.69		686.54 686.53
INVERT LEVEL	690.59 690.68		690.59 690.34		688.56 688.53		687.77 687.69		687 686.76		686.6 686.57		686.5 686.47		686.34 686.31		686.06 686.03
SURFACE LEVEL	692.18		692.09		690.29		689.5		688.79		688.43		688.25		688.12		688.1
ROAD CHAINAGE	362.63		365.59		425.55		452.03		481.5		504		514.61		528.03		219.69
PIPE CHAINAGE	0	9.47	9.47	59.96	69.43	26.48	95.91	29.47	125.38	22.5	147.89	10.61	158.49	18.66	177.16	34.99	212.15

LINE 141

	142\01		141\05
PIPE MAX. VELOCITY (m/s)		0.58	
DISCHARGE (cu.m/s)		0.02	
PIPE SIZE (mm) & CLASS		375RRJ2	
DESIGN GRADE		3.56%	
DATUM R.L	668.0		
DEPTH TO INVERT	1.5		1.82 2.04
5 YR HGL LEVEL	687.43		687.18 687.13
INVERT LEVEL	687.3		686.98 686.76
SURFACE LEVEL	688.8		688.79
ROAD CHAINAGE	481.36		481.5
PIPE CHAINAGE	0	9	9

LINE 142

	143\01		143\02		143\03		143\04		141\05
PIPE MAX. VELOCITY (m/s)		1.81		1.01		1.68		0.98	
DISCHARGE (cu.m/s)		0.04		0.06		0.09		0.1	
PIPE SIZE (mm) & CLASS		375RRJ2		375RRJ2		375RRJ2		375RRJ2	
DESIGN GRADE		1.9%		5.12%		1%		0.7%	
DATUM R.L	670.0								
DEPTH TO INVERT	1.51		1.47 1.63		1.63 1.66		1.72 1.96		2.01 2.04
5 YR HGL LEVEL	690.82		689.84 689.77		687.46 687.42		687.31 687.23		687.18 687.13
INVERT LEVEL	690.65		689.75 689.59		687.24 687.21		687.14 686.89		686.79 686.76
SURFACE LEVEL	692.16		691.22		688.86		688.86		688.79
ROAD CHAINAGE			60.71		14.87		14.23		481.5
PIPE CHAINAGE	0	47.42	47.42	45.84	93.26	7.03	100.29	14.96	115.25

LINE 143

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 15 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	524	B

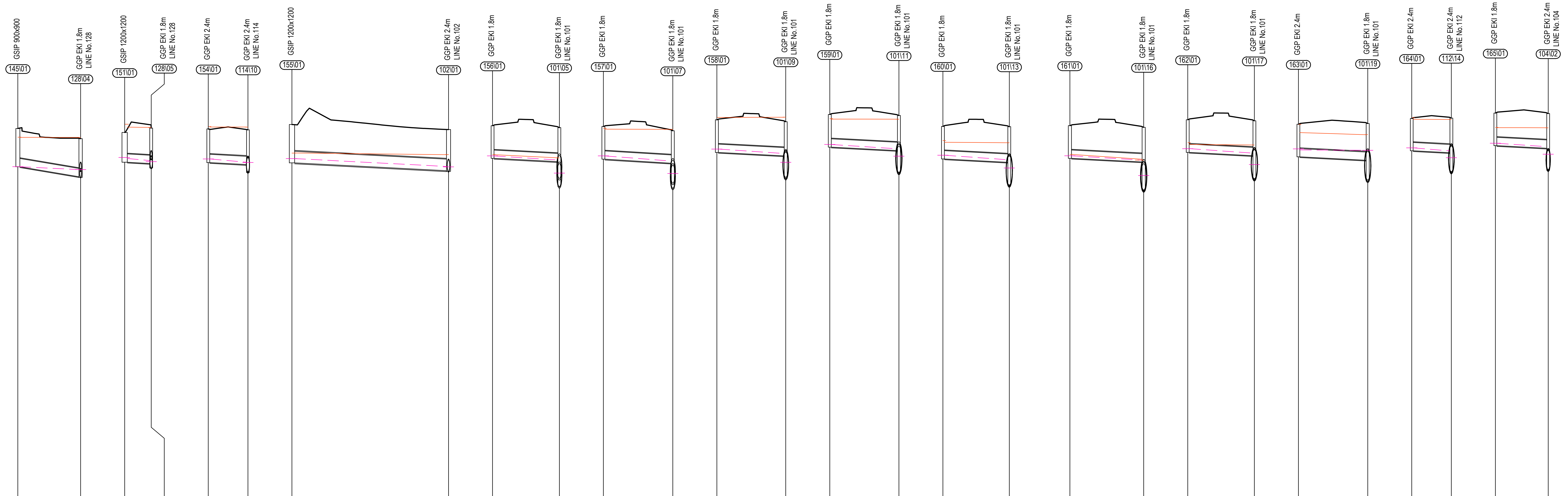
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-524.dwg

LEGEND	
DESIGN SURFACE LEVEL	▬
100 YR ARI HGL LEVEL	▬
5 YR ARI HGL LEVEL	– – –

B

NOTE:
FLOW INFORMATION SHOWN FOR
ULTIMATE FLOW CONDITIONS

B



	LINE 145	LINE 151	LINE 154	LINE 155	LINE 156	LINE 157	LINE 158	LINE 159	LINE 160	LINE 161	LINE 162	LINE 163	LINE 164	LINE 165
PIPE MAX. VELOCITY (m/s)	0	1.47	1.37	1.85	1.23	1.46	1.36	1.26	1.39	1.27	1.39	0.72	1.29	1.21
DISCHARGE (cu.m/s)	0	0.05	0.04	0.14	0.02	0.04	0.04	0.02	0.04	0.02	0.04	0.07	0.03	0.02
PIPE SIZE (mm) & CLASS	375RRJ2	375RRJ2	375RRJ2	525RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2
DESIGN GRADE	3.18%	0.99%	1%	1%	1%	1.17%	1%	1%	1%	1%	1%	1%	1%	1%
DATUM R.L	672.0	670.0	667.0	665.0	674.0	671.0	669.0	668.0	668.0	667.0	666.0	665.0	666.0	667.0
DEPTH TO INVERT	1.74 1.73 1.76	1.35 1.61 1.82	1.53 1.58 1.94	1.74 1.87 1.9	1.48 1.55 2.68	1.49 1.48 2.61	1.48 1.55 2.58	1.48 1.59 2.62	1.48 1.62 2.68	1.48 1.58 2.88	1.48 1.59 2.67	1.48 1.67 2.62	1.47 1.57 2.47	1.48 1.58 2.58
5 YR HGL LEVEL	691.35 691.22 691.18	689.72 689.63 689.58	686.7 686.55 686.51	684.72 684.36 684.35	693.84 693.65 693.06	690.84 690.61 690.04	689.15 688.95 688.55	688.36 688.16 687.81	687.87 687.67 687.29	686.84 686.64 685.93	686.16 685.96 685.44	685.1 685.09 685.04	686.2 686.06 685.74	687.41 687.25 686.82
INVERT LEVEL	691.35 690.89 690.86	689.55 689.5 689.29	686.54 686.45 686.09	684.52 684.17 684.14	693.73 693.58 692.45	690.69 690.51 689.37	689 688.84 687.82	688.24 688.08 687.06	687.7 687.55 686.49	686.73 686.56 685.25	685.99 685.84 684.76	684.79 684.63 683.69	686.07 685.98 685.09	687.3 687.18 686.18
SURFACE LEVEL	693.09 692.62	690.91 691.11	688.07 688.03	686.27 686.04	695.21 695.13	692.18 691.98	690.48 690.4	689.72 689.68	689.18 689.17	688.21 688.13	687.48 687.43	686.27 686.31	687.54 687.55	688.78 688.76
ROAD CHAINAGE	71.98 84.13	33.51	256.26 256.66	68.3 34.71	476 473.62	399.26 394.38	346.97 342.5	281.46 276.81	227.5 225.96	130 122.5	78.61 76.5	20.65 18.72	389.58 389.54	449.21 448.65
PIPE CHAINAGE	0 14.26 14.26	0 6.04 6.04	0 9.01 9.01	0 35.57 35.57	0 15.19 15.19	0 15.77 15.77	0 15.65 15.65	0 15.71 15.71	0 15.08 15.08	0 16.77 16.77	0 15.15 15.15	0 15.75 15.75	0 9 9	0 12 12

B

ISSUED FOR CONSTRUCTION CERTIFICATE

B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 16 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	525	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-525.dwg

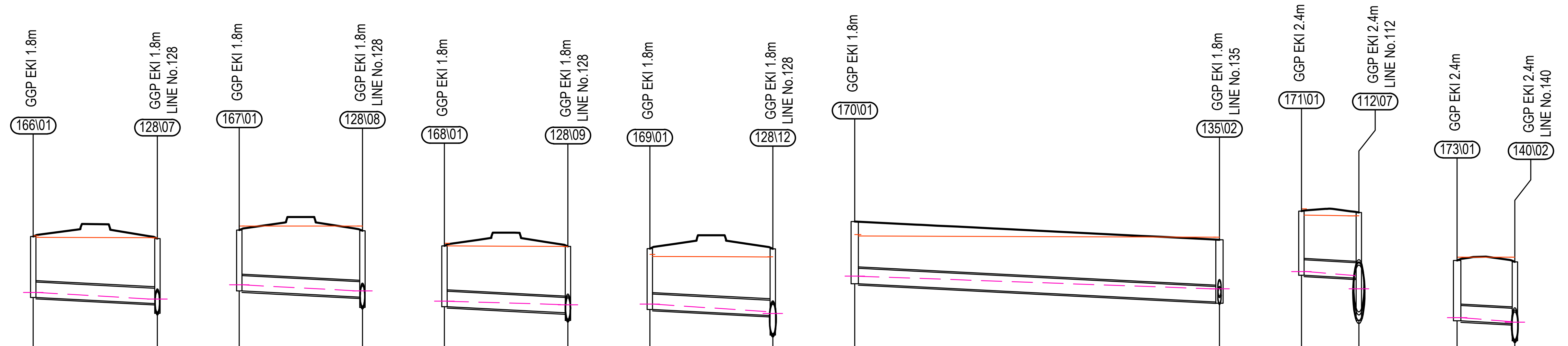
LEGEND

DESIGN SURFACE LEVEL	―
100 YR ARI HGL LEVEL	―
5 YR ARI HGL LEVEL	– – – –

B

NOTE:
FLOW INFORMATION SHOWN FOR ULTIMATE FLOW CONDITIONS

B



	LINE 166	LINE 167	LINE 168	LINE 169	LINE 170	LINE 171	LINE 173
PIPE MAX. VELOCITY (m/s)	0.96	0.75	0.58	1.32	0.61	1.12	0.99
DISCHARGE (cu.m/s)	0.03	0.03	0.02	0.03	0.03	0.01	0.01
PIPE SIZE (mm) & CLASS	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2
DESIGN GRADE	1%	1%	1%	1%	1%	1%	0.99%
DATUM R.L	669.0	668.0	668.0	667.0	675.0	669.0	675.0
DEPTH TO INVERT	1.48 1.58 1.82	1.48 1.62 1.87	1.48 1.62 1.8	1.48 1.63 2.1	1.51 1.51 1.54	1.56 1.6 2.63	1.47 1.51 1.92
5 YR HGL LEVEL	688.78 688.62	687.97 687.82 687.8	687.57 687.48	686.5 686.31 686.25	695.18 694.87 694.79	689.29 689.19 688.84	694.17 694.07 694.04
INVERT LEVEL	688.66 688.51 688.27	687.82 687.67 687.42	687.44 687.28 687.1	686.37 686.22 685.75	695 694.55 694.52	689.2 689.13 688.1	694.09 694.02 693.61
SURFACE LEVEL	690.14 690.09	689.3 689.28	688.92 688.9	687.85 687.85	696.51 696.06	690.76 690.73	695.56 695.53
ROAD CHAINAGE	73.05 75.14	110 110.99	137.98 139.47	244.77 245.24	75 119.51	67.4 67.8	14.49 58.57
PIPE CHAINAGE	0 15.15 15.15	0 15.03 15.03	0 15.07 15.07	0 15.01 15.01	0 44.51 44.51	0 7.01 7.01	0 7.05 7.05

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
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SCALE 1:100 (A1) SCALE 1:200 (A3)

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32 LOVELLE STREET &
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ROAD & DRAINAGE DESIGN

Title:
DRAINAGE LONGITUDINAL
SECTIONS
SHEET 17 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	526	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-526.dwg

PIT SCHEDULE

PIT NAME	PIT TYPE	EASTING	NORTHING	SETOUT RL	PIT DEPTH	COMMENTS
(-)	(-)	(m)	(m)	(m)	(m)	(-)
1AL\01	GGP EKI 1.8m	259021.95	6171323.67	698.13	1.57	
1AN\01	IAD 600x600			687.73	0.76	
1AN\02	IAD 600x900			687.63	0.98	
1AN\03	IAD 600x900			687.42	1.01	
1AN\04	IAD 600x900			687.24	1.01	
1AN\05	IAD 600x900			687.19	1.03	
1AN\06	IAD 900x900			687.1	1.56	
1AP\01	IAD 600x600			687.54	0.75	
1AQ\01	IAD 600x600			687.44	0.72	
1AQ\02	IAD 600x600			687.41	0.8	
1AQ\03	IAD 600x600			687.2	0.8	
1AQ\04	IAD 900x900			686.85	1.45	
1AR\01	IAD 600x600			687.85	0.76	
1AR\02	IAD 600x600			687.6	0.84	
1AR\03	IAD 900x900			687.36	1.55	
1AW\01	IAD 600x600			692.18	0.76	
1AW\02	IAD 600x600			691.99	0.78	
1AW\03	IAD 600x600			691.55	0.85	
1AW\04	IAD 600x600			691.05	0.86	
1AW\05	IAD 600x600			690.54	0.86	
1AW\06	IAD 600x900			690.1	0.92	
1AW\07	IAD 600x900			689.68	0.94	
1AW\08	IAD 600x900			689.29	0.93	
1AW\09	IAD 600x900			688.94	1.02	
1AW\10	IAD 600x900			688.64	1.04	
1AW\11	IAD 600x900			688.6	1.07	
1AW\12	IAD 900x900			688.5	1.59	
1AX\01	IAD 600x600			689.68	0.76	
1AX\02	IAD 900x900			689.43	1.42	
1AY\01	IAD 600x600			689.8	0.79	
1AY\02	IAD 600x900			689.57	1.03	
1AY\03	IAD 600x900			689.66	1.19	
1AY\04	IAD 900x900			689.66	1.24	
1AY\05	IAD 900x900			689.41	1.21	
1AY\06	IAD 600x900			689.07	1.11	
1AY\07	IAD 600x900			688.76	1.04	
1AY\08	IAD 600x900			688.68	1.17	
1AY\09	IAD 600x900			688.62	1.18	
1AY\10	IAD 600x900			688.26	1.07	
1AY\11	IAD 900x900			687.89	1.55	
1BA\01	IAD 600x600			691.49	0.77	
1BA\02	IAD 600x600			690.98	0.87	
1BA\03	IAD 600x900			690.45	0.92	
1BA\04	IAD 600x900			689.87	0.96	
1BA\05	IAD 900x900			688.8	1.69	
1BC\01	IAD 600x600			692.32	0.84	
1BC\02	IAD 900x900			690.74	1.65	
1BD\01	IAD 600x600			695.4	0.84	
1BD\02	IAD 600x600			695.09	0.86	
1BD\03	IAD 600x600			694.81	0.87	
1BD\04	IAD 600x600			694.56	0.87	
1BD\05	IAD 600x900			694.41	0.92	
1BD\06	IAD 600x900			694.43	1.15	
1BD\07	IAD 600x900			694.39	1.19	
1BD\08	IAD 600x900			694.11	1.08	
1BD\09	IAD 600x900			693.74	1.12	
1BD\10	IAD 600x900			693.45	1.1	
1BD\11	IAD 600x900			692.95	1.1	
1BD\12	IAD 900x900			692.54	1.72	
1BE\01	IAD 600x600			696.13	0.77	
1BE\02	IAD 600x600			695.27	0.84	
1BE\03	IAD 900x900			694.01	1.67	
101\01	GSIP 2x1200x1200	259001.39	6171300.75	698.7	2.12	
101\02	GGP EKI 1.8m	259010.31	6171334.71	697.93	2.08	
101\03	JP 900x900	259026.32	6171368.55	697.45	3.17	
101\04	GGP EKI 1.8m	259039.12	6171391.49	696.37	2.55	

NOTE:
1. REFER TO STRUCTURAL PLANS FOR SPECIAL PIT DETAIL
2. REFER TO PLAN 305 FOR PIT SETOUT DETAILS

PIT SCHEDULE

PIT NAME	PIT TYPE	EASTING	NORTHING	SETOUT RL	PIT DEPTH	COMMENTS
(-)	(-)	(m)	(m)	(m)	(m)	(-)
101\05	GGP EKI 1.8m	259048.25	6171430.52	695.13	2.68	
101\06	GGP EKI 1.8m	259054.39	6171457.63	694.06	3.17	
101\07	GGP EKI 1.8m	259065.74	6171507.8	691.98	2.61	
101\08	GGP EKI 1.8m	259071.97	6171535.34	690.96	2.57	
101\09	GGP EKI 1.8m	259077.19	6171558.4	690.4	2.58	
101\10	GGP EKI 1.8m	259085.35	6171594.48	689.96	2.59	
101\11	GGP EKI 1.8m	259091.68	6171622.48	689.68	2.62	
101\12	GGP EKI 1.8m	259097.93	6171650.09	689.39	2.65	
101\13	GGP EKI 1.8m	259102.9	6171672.07	689.17	2.68	
101\14	GSIP 1200x1200	259110.74	6171712.9	689.32	3.38	
101\15	GGP EKI 1.8m	259118.7	6171743.38	688.43	2.84	
101\16	GGP EKI 1.8m	259125.73	6171772.98	688.13	2.88	
101\17	GGP EKI 1.8m	259135.88	6171817.85	687.43	2.67	
101\18	GGP EKI 1.8m	259138.23	6171845.87	686.89	2.58	
101\19	GGP EKI 1.8m	259130.15	6171878.45	686.31	2.62	
101\20	JP 900x900	259121.23	6171891.07	686.86	3.69	
101\21	JP 900x900	259109.23	6171911.99	686.58	3.75	
101\22	PIPE THROUGH WALL	259101.12	6171926.13	683.27	0.75	
102\01	GGP EKI 2.4m	259151.46	6171898.02	686.04	1.9	
102\02	GGP EKI 2.4m	259145.85	6171907.52	685.98	3.11	
102\03	GPT	259143.03	6171912.44	685.99	3.26	REFER TO PLAN 508 FOR GPT DETAILS
102\04	RAINGARDEN INLET	259136.36	6171923.29	683.5	0.9	
104\01	GSIP 1200x1200	259159.6	6171695.29	688.74	2.23	
104\02	GGP EKI 2.4m	259130	6171702.63	688.76	2.58	
105\01	GGP EKI 2.4m	259082.02	6171710.49	688.36	1.48	
105\02	GGP EKI 2.4m	259089.18	6171724.45	688.38	1.69	
106\01	GSIP 1200x1200	259142.82	6171621.31	689.19	1.14	
106\02	GGP EKI 2.4m	259104.22	6171630.54	689.37	2	
106\03	GGP EKI 1.8m	259105.68	6171636.46	689.54	2.26	
107\01	GSIP 1200x1200	259116.48	6171506.8	692.9	1.54	
107\02	GGP EKI 2.4m	259078.26	6171515.77	691.21	1.64	
107\03	GGP EKI 1.8m	259079.6	6171521.72	691.2	1.73	
108\01	GSIP 1200x1200	259098.89	6171430.52	695.39	1.59	
108\02	GGP EKI 2.4m	259060.86	6171439.23	694.38	1.66	
108\03	GGP EKI 1.8m	259062.28	6171445.16	694.38	1.76	
109\01	GSIP 1200x1200	259080.41	6171358.93	698.24	2.84	
109\02	GGP EKI 2.4m	259053.85	6171361.86	696.57	2.01	
109\03	JP 900x900	259030.9	6171365.13	697.29	2.92	
110\01	GGP EKI 2.4m	259052.99	6171351.63	696.58	1.56	
111\01	GGP EKI 1.8m	258992.83	6171366	696.91	1.48	
111\02	GGP EKI 1.8m	258997.32	6171373.9	696.93	1.64	
112\02	GSIP 2x1200x1200	258777	6171530.49	696.54	1.98	GRATE CLEARANCE TO BE 250mm, REFER PLAN 305 FOR TYPICAL 250mm RAISED GRATE DETAIL
112\03	GSIP 1200x1200	258807.14	6171535.49	693.34	1.8	
112\04	GGP EKI 1.8m	258837.98	6171521.43	693.51	3.09	
112\05	GGP EKI 1.8m	258861.41	6171523.32	692.23	2.84	
112\06	GGP EKI 1.8m	258884.92	6171525.23	691.25	2.64	
112\07	GGP EKI 2.4m	258889.17	6171531.69	690.73	2.63	
112\08	GGP EKI 1.8m	258899.55	6171541.93	690.73	2.79	
112\09	GGP EKI 1.8m	258910.68	6171593.27	689.73	2.56	
112\10	GGP EKI 1.8m	258915	6171612.38	689.45	2.56	
112\11	GGP EKI 1.8m	258925.38	6171621.57	689.32	2.6	
112\12	GGP EKI 1.8m	258933.29	6171656.51	688.89	2.59	
112\13	GGP EKI 1.8m	258946.34	6171714.22	688.05	2.6	
112\14	GGP EKI 2.4m	258950.07	6171730.72	687.55	2.47	
112\15	GGP EKI 1.8m	258958	6171765.76	687.34	2.53	
112\16	GGP EKI 1.8m	258964.2	6171793.72	687.05	2.56	
112\17	GGP EKI 1.8m	258966.41	6171813.28	686.99	2.67	
112\18	GGP EKI 1.8m	258964.81	6171841.54	686.59	2.62	
112\19	GGP EKI 2.4m	258978.51	6171865.07	686.35	2.92	
112\20	JP 900x900	259033.47	6171884.867	686.89	3.85	
112\21	PIPE THROUGH WALL	259060.1	6171906.41	683.6	0.9	
113\01	GPT			686.35	3.03	REFER TO PLAN 507 FOR GPT DETAILS
113\02	RAINGARDEN INLET	258982.66	6171889.98	683.73	0.6	
114\01	GGP EKI 1.8m	259004.09	6171451.56	693.68	1.52	
114\02	GGP EKI 1.8m	258980.36	6171456.93	693.24	1.53	
114\03	GGP EKI 1.8m	258982.14	6171464.83	693.24	1.65	
114\04	GGP EKI 1.8m	258965.76	6171483.24	692.38	1.73	
114\05	GGP EKI 1.8m	258978.01	6171537.43	690.71	1.69	
114\06	GGP EKI 1.8m	258986.93	6171576.84	689.9	1.7	
114\07	GGP EKI 1.8m	258993.55	6171606.09	689.5	1.97	

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	FM	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
PIT SCHEDULE
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	528	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-528.dwg

PIT SCHEDULE

PIT NAME	PIT TYPE	EASTING	NORTHING	SETOUT RL	PIT DEPTH	COMMENTS
(-)	(-)	(m)	(m)	(m)	(m)	(-)
114\08	GGP EKI 1.8m	258998.99	6171630.13	689.16	1.93	
114\09	GGP EKI 1.8m	259009.02	6171674.5	688.57	1.93	
114\10	GGP EKI 2.4m	259018.33	6171715.64	688.03	1.94	
114\11	JP 900x900	259022.67	6171732.08	688.52	2.59	
114\12	GGP EKI 1.8m	259033.05	6171748.54	687.94	2.16	
114\13	GGP EKI 1.8m	259039.56	6171777.3	687.62	2.09	
114\14	GGP EKI 1.8m	259048.2	6171815.51	687.21	1.98	
114\15	GGP EKI 1.8m	259050.94	6171837.65	686.99	2.01	
114\16	GGP EKI 2.4m	259046.65	6171863.62	686.73	2.04	
114\17	GGP EKI 2.4m	259040.59	6171862.62	686.72	2.14	
114\18	GGP EKI 1.8m	259026.29	6171870.06	686.78	2.35	
114\19	GGP EKI 2.4m	258980.81	6171857.31	686.37	2.28	
116\01	GGP EKI 1.8m	259041.98	6171815.65	687.23	1.5	
117\01	GGP EKI 1.8m	259016.21	6171669.55	688.62	1.5	
118\01	GGP EKI 2.4m	259007.77	6171582.64	689.45	1.5	
118\02	GGP EKI 2.4m	259009.82	6171590.48	689.45	1.62	
118\03	GGP EKI 1.8m	259001.49	6171604.49	689.5	1.85	
119\01	GGP EKI 2.4m	258978.43	6171589.28	689.53	1.5	
119\02	GGP EKI 2.4m	258980.11	6171597.2	689.53	1.63	
120\01	GGP EKI 1.8m	258994.13	6171571.98	689.94	1.5	
121\01	GGP EKI 1.8m	258985.22	6171532.55	690.8	1.5	
122\01	GGP EKI 1.8m	258869.79	6171783.45	688.27	1.51	
122\02	GGP EKI 1.8m	258883.37	6171790.63	688.06	1.51	
122\03	GGP EKI 1.8m	258887.54	6171820.09	687.8	1.58	
122\04	GGP EKI 1.8m	258884.66	6171838.33	687.59	1.58	
122\05	GGP EKI 1.8m	258880	6171854.95	687.43	1.62	
122\06	GGP EKI 1.8m	258887.68	6171868.06	687.27	1.64	
122\07	GGP EKI 1.8m	258935.15	6171881.37	686.93	1.72	
122\08	GGP EKI 1.8m	258948.32	6171873.91	686.75	1.72	
122\09	GGP EKI 1.8m	258954.8	6171850.44	686.6	1.85	
123\01	GGP EKI 1.8m	258933.53	6171887.26	686.93	1.48	
124\01	IAD 900x900			688.36	1.54	
124\02	GGP EKI 1.8m	258820.37	6171855.52	687.87	1.49	
124\03	GGP EKI 1.8m	258859.38	6171866.46	687.57	1.62	
125\01	GGP EKI 1.8m	258879.81	6171832.93	687.64	1.51	
126\01	GGP EKI 1.8m	258956.24	6171795.22	687.05	1.5	
127\01	GGP EKI 2.4m	258964.69	6171737.97	687.59	1.71	
127\02	GGP EKI 1.8m	258966.44	6171752.04	687.61	2.01	
128\01	GGP EKI 1.8m	258703.38	6171715.47	696.19	1.53	
128\02	GGP EKI 1.8m	258698.72	6171731.05	695.37	1.66	
128\03	GGP EKI 1.8m	258695.81	6171760.68	693.75	1.5	
128\04	GGP EKI 1.8m	258705.71	6171775.1	692.62	1.76	
128\05	GGP EKI 1.8m	258725.77	6171789.81	691.11	1.82	
128\06	GGP EKI 1.8m	258740.43	6171803.08	690.93	1.87	
128\07	GGP EKI 1.8m	258768.37	6171796.84	690.09	1.82	
128\08	GGP EKI 1.8m	258803.33	6171788.93	689.28	1.87	
128\09	GGP EKI 1.8m	258831.11	6171782.65	688.9	1.8	
128\10	GGP EKI 1.8m	258875.16	6171771.59	688.84	2.22	
128\11	GGP EKI 1.8m	258909.35	6171764.95	688.1	2.07	
128\12	GGP EKI 1.8m	258934.28	6171759.31	687.85	2.1	
129\01	GGP EKI 1.8m	258936.47	6171707.28	688.26	1.66	
130\01	GGP EKI 1.8m	258924.24	6171653.23	688.95	1.5	
131\01	GGP EKI 2.4m	258931.87	6171599.81	689.28	1.49	
131\02	GGP EKI 2.4m	258933.52	6171607.74	689.28	1.61	
132\01	GGP EKI 1.8m	258918.32	6171590.34	689.75	1.5	
133\01	GGP EKI 1.8m	258943.58	6171465.24	692.51	1.52	
133\02	GGP EKI 1.8m	258918.46	6171476.45	692.01	1.53	
133\03	GGP EKI 1.8m	258908.44	6171491.7	691.69	1.53	
133\04	GGP EKI 1.8m	258900.75	6171516.79	691.19	2.35	
134\01	GGP EKI 1.8m	258909.36	6171515.51	691.25	1.5	
135\01	IAD 900x900			697.11	2.3	
135\02	GGP EKI 1.8m	258908.36	6171385.72	696.06	1.54	
135\03	GGP EKI 1.8m	258889.89	6171389.89	695.87	1.57	
135\04	GGP EKI 1.8m	258865.61	6171397.55	695.62	2.19	
135\05	GGP EKI 1.8m	258848.77	6171419.37	695.33	2.2	
135\06	GGP EKI 1.8m	258833.85	6171464.94	694.76	2.14	
135\07	GGP EKI 1.8m	258821.72	6171502.02	694.29	2.09	
135\08	GGP EKI 1.8m	258828.25	6171508.41	694.23	2.16	
136\01	GGP EKI 1.8m	258842.38	6171464.93	694.79	1.5	
138\01	GGP EKI 1.8m	258874.48	6171402.11	695.69	1.5	

PIT SCHEDULE

PIT NAME	PIT TYPE	EASTING	NORTHING	SETOUT RL	PIT DEPTH	COMMENTS
(-)	(-)	(m)	(m)	(m)	(m)	(-)
140\01	GSIP 1200x1200	258871.25	6171363.26	696.38	1.42	
140\02	GGP EKI 2.4m	258871.02	6171384.33	695.53	1.92	
141\01	GGP EKI 1.8m	258837.89	6171588.31	692.18	1.5	
141\02	GGP EKI 1.8m	258830.64	6171592.98	692.09	1.76	
141\03	GGP EKI 1.8m	258843.87	6171651.46	690.29	1.76	
141\04	GGP EKI 1.8m	258849.71	6171677.29	689.5	1.81	
141\05	GGP EKI 1.8m	258856.22	6171706.03	688.79	2.04	
141\06	GGP EKI 1.8m	258861.18	6171727.98	688.43	1.85	
141\07	GGP EKI 2.4m	258863.52	6171738.33	688.25	1.78	
141\08	GGP EKI 2.4m	258878.47	6171748.71	688.12	1.82	
142\01	GGP EKI 1.8m	258864.09	6171704.11	688.8	1.5	
143\01	GSIP 900x900	258750.26	6171709.21	692.16	1.51	
143\02	GGP EKI 1.8m	258797	6171701.07	691.22	1.63	
143\03	GGP EKI 1.8m	258841.71	6171690.95	688.86	1.66	
143\04	GGP EKI 1.8m	258843.68	6171696.76	688.86	1.96	
145\01	GSIP 900x900	258696.42	6171785.41	693.09	1.74	
151\01	GSIP 1200x1200	258725.99	6171783.33	690.91	1.35	
154\01	GGP EKI 2.4m	259026.14	6171713.46	688.07	1.53	
155\01	GSIP 1200x1200	259181.94	6171916.17	686.27	1.74	
156\01	GGP EKI 1.8m	259033.98	6171431.3	695.21	1.48	
157\01	GGP EKI 1.8m	259050.91	6171506.15	692.18	1.49	
158\01	GGP EKI 1.8m	259062.45	6171557.16	690.48	1.48	
159\01	GGP EKI 1.8m	259076.9	6171621.05	689.72	1.48	
160\01	GGP EKI 1.8m	259088.81	6171673.68	689.18	1.48	
161\01	GGP EKI 1.8m	259110.32	6171768.78	688.21	1.48	
162\01	GGP EKI 1.8m	259121.66	6171818.9	687.48	1.48	
163\01	GGP EKI 2.4m	259117.04	6171871.41	686.27	1.48	
164\01	GGP EKI 2.4m	258942.18	6171732.55	687.54	1.47	
165\01	GGP EKI 1.8m	259133	6171713.32	688.78	1.48	
166\01	GGP EKI 1.8m	258763.22	6171783.55	690.14	1.48	
167\01	GGP EKI 1.8m	258799.26	6171775.4	689.3	1.48	
168\01	GGP EKI 1.8m	258826.55	6171769.23	688.92	1.48	
169\01	GGP EKI 1.8m	258930.71	6171745.66	687.85	1.48	
170\01	GGP EKI 1.8m	258951.77	6171375.9	696.51	1.51	
171\01	GGP EKI 2.4m	258889.26	6171525.58	690.76	1.56	
173\01	GGP EKI 2.4m	258877.23	6171382.08	695.56	1.47	

NOTE:

1. REFER TO STRUCTURAL PLANS FOR SPECIAL PIT DETAIL
2. REFER TO PLAN 305 FOR PIT SETOUT DETAILS

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	DH	DH	AS	30/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
PIT SCHEDULE
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	529	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-529.dwg

MINOR 5YR CALCULATIONS

PIT / NODE DETAILS

Name	Type	Size	Inlet Family	Pressure Coeff. Ku	Water Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor -	Bolt-down lid -	Max Pit HGL (RL)	Max Pond HGL (RL)	Max Surface Flow Arriving (cu.m/s)	Min Freeboard (m)	Overflow (cu.m/s)
101\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.2	698.931			0.2	No	697.14			1.79	
101\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1	697.932			0.2	No	696.44		0.016	1.49	
101\03	OnGrade	0.9x0.9m	JP	1.2	697.451			0.2	No	695.04			2.42	
101\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	696.368			0.2	No	694.48		0.012	1.89	
101\05	OnGrade	1.8m Lintel	GGP EKI, 3% grade	0.5	695.126			0.2	No	693.06		0.023	2.07	0.002
101\06	OnGrade	1.8m Lintel	GGP EKI, 3% grade	0.1	694.057			0.2	No	691.4		0.017	2.66	
101\07	OnGrade	1.8m Lintel	GGP EKI, 3% grade	0.5	691.984			0.2	No	690.04		0.029	1.94	0.004
101\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.3	690.96			0.2	No	689		0.016	1.96	
101\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	690.396			0.2	No	688.55		0.013	1.84	
101\10	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.3	689.963			0.2	No	688.09		0.026	1.87	0.002
101\11	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.676			0.2	No	687.83		0.02	1.84	
101\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	689.393			0.2	No	687.61		0.015	1.79	
101\13	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.168			0.2	No	687.29		0.01	1.88	
101\14	OnGrade	1.2x1.2m + GSIP	GSIP, 1% grade	1.2	689.317			0.2	No	686.72		0.004	2.6	
101\15	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.429			0.2	No	686.3		0.036	2.13	
101\16	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.133			0.2	No	685.94		0.021	2.2	
101\17	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	687.431			0.2	No	685.44		0.029	1.99	0.002
101\18	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	686.893			0.2	No	685.2		0.026	1.69	0.001
101\19	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	686.308			0.2	No	685.09		0.019	1.22	
101\20	OnGrade	0.9x0.9m	JP	2.3	686.86			0.2	No	685.02			1.84	2.657
101\21	OnGrade	0.9x0.9m	JP	1.2	686.581				Yes	683.51			3.07	
101\22	Node				684.5					682.79				
102\01	Sag	2.4m Lintel	GGP EKI, 1% grade	0.5	686.038	0.16		0.5	No	684.34	686.09	0.048	1.69	
102\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.5	685.98	0.15		0.5	No	683.97	686.01	0.03	2.01	
102\03	OnGrade	0.9x0.9m	JP	1.6	685.99			0.2	No	683.55			2.44	
102\04	Node				684.5					683.13				
104\01	Node				689.066					687.07		0.496		
104\02	Sag	2.4m Lintel	GGP EKI, 1% grade	0.7	688.759	0.12		0.5	No	686.91	688.79	0.018	1.85	
105\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	688.357	0.16		0.5	No	687.05	688.42	0.064	1.3	
105\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.5	688.38	0.1		0.5	No	686.88	688.42	0.028	1.5	
106\01	Node				689.769					688.37		0.407		
106\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.2	689.373	0.14		0.5	No	687.85	689.41	0.002	1.52	
106\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	689.536			0.2	No	687.7		0.007	1.84	
107\01	Node				692.908					691.55		0.211		
107\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.4	691.206	0.08		0.5	No	689.97	691.24	0.012	1.24	
107\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	691.198			0.2	No	689.8		0.006	1.4	
108\01	Node				696.709					693.96		0.19		
108\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.8	694.381	0.08		0.5	No	693.12	694.42	0.007	1.26	0.003
108\03	OnGrade	1.8m Lintel	GGP EKI, 3% grade	2.4	694.38			0.2	No	692.98		0.056	1.4	0.005
109\01	Node				698.237					695.71		1.128		
109\02	Sag	2.4m Lintel	GGP EKI, 1% grade	0.6	696.569	0.07		0.5	No	695.23	696.59	0.006	1.34	
109\03	OnGrade	0.9x0.9m	JP	0.6	697.289			0.2	No	695.09			2.2	
110\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	696.577	0.19		0.5	No	695.26	696.63	0.043	1.32	0.002
111\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	696.907			0.2	No	695.53		0.013	1.38	
111\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.9	696.933			0.2	No	695.4		0.003	1.54	
112\01	Node				696.875					696.05		1.246		
112\02	Sag	2 x 1.2x1.2m + GSIP (sag only)	GSIP, 1% grade	0.9	696.545	0.355		0.5	No	695.15	696.6	0.132	1.39	
112\03	Sag	1.2x1.2m + GSIP	GSIP, 1% grade	0.9	693.336	0.56		0.5	No	692.2	693.41	0.102	1.14	
112\04	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.3	693.51			0.2	No	691.21		0.003	2.3	
112\05	OnGrade	1.8m Lintel	GGP EKI, 5% grade	0.6	692.231			0.2	No	690.05		0.003	2.18	
112\06	OnGrade	1.8m Lintel	GGP EKI, 5% grade	0.9	691.142			0.2	No	689.35		0.003	1.79	
112\07	Sag	2.4m Lintel	GGP EKI, 1% grade	0.6	690.729	0.08		0.5	No	688.87	690.78	0.025	1.85	
112\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	690.726			0.2	No	688.68		0.002	2.05	
112\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.726			0.2	No	687.94		0.025	1.78	0.002
112\10	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	689.454			0.2	No	687.73		0.016	1.72	
112\11	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	689.319			0.2	No	687.51		0.003	1.81	
112\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.889			0.2	No	687.01		0.015	1.87	
112\13	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.053			0.2	No	685.96		0.033	2.09	0.004
112\14	Sag	2.4m Lintel	GGP EKI, 1% grade	0.5	687.551	0.12		0.5	No	685.75	687.59	0.02	1.8	0.012
112\15	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.1	687.336			0.2	No	685.62		0.01	1.72	
112\16	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	687.052			0.2	No	685.38		0.013	1.67	0.001
112\17	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	686.988			0.2	No	685.28		0.015	1.71	
112\18	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	686.592			0.2	No	685.18		0.004	1.41	
112\19	Sag	2.4m Lintel	GGP EKI, 1% grade	1.9	686.346	0.15		0.5	No	685.05	686.38	0.02	1.3	3.06
112\20	OnGrade	0.9x0.9m	JP	1.6	686.89			0.2	No	683.55			3.34	
112\21	Node				684.5					682.96				
113\01	OnGrade	0.9x0.9m	JP	0.2	686.353			0.2	Yes	684.25			2.11	

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 01 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	530	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-530.dwg

MINOR 5YR CALCULATIONS

PIT / NODE DETAILS

Name	Type	Size	Inlet Family	Pressure Coeff. Ku	Water Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor -	Bolt-down lid -	Max Pit HGL (RL)	Max Pond HGL (RL)	Max Surface Flow Arriving (cu.m/s)	Min Freeboard (m)	Overflow (cu.m/s)
113\02	Node				685.5					683.69				
114\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.2	693.68			0.2	No	692.35		0.008	1.33	
114\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.8	693.238			0.2	No	691.93		0.012	1.31	
114\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.8	693.238			0.2	No	691.79		0.015	1.45	
114\04	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.3	692.376			0.2	No	690.85		0.005	1.52	
114\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.1	690.712			0.2	No	689.41		0.028	1.3	0.003
114\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.2	689.897			0.2	No	688.68		0.022	1.22	
114\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.5			0.2	No	687.88		0.002	1.62	
114\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	689.155			0.2	No	687.59		0.004	1.56	
114\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	688.572			0.2	No	687.04		0.024	1.53	0.001
114\10	Sag	2.4m Lintel	GGP EKI, 1% grade	0.7	688.027	0.11		0.5	No	686.54	688.08	0.022	1.48	
114\11	OnGrade	0.9x0.9m	JP	0.6	688.525			0.2	No	686.36			2.16	
114\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	687.935			0.2	No	686.19		0.016	1.74	
114\13	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	687.625			0.2	No	685.98		0.017	1.65	
114\14	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	687.212			0.2	No	685.71		0.023	1.5	0.001
114\15	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	686.987			0.2	No	685.58		0.015	1.41	
114\16	Sag	2.4m Lintel	GGP EKI, 1% grade	2	686.727	0.07		0.5	No	685.48	686.79	0.025	1.25	
114\17	Sag	2.4m Lintel	GGP EKI, 1% grade	1.2	686.724	0.1		0.5	No	685.35	686.75	0.008	1.38	
114\18	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	686.76			0.2	No	685.26		0.003	1.5	
114\19	Sag	2.4m Lintel	GGP EKI, 1% grade	1.8	686.369	0.135		0.5	No	685.15	686.43	0.071	1.22	0.002
116\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.226			0.2	No	685.84		0.023	1.39	
117\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.615			0.2	No	687.29		0.041	1.33	0.003
118\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	689.452	0.13		0.5	No	688.18	689.52	0.038	1.27	0.006
118\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.4	689.451	0.11		0.5	No	688.07	689.51	0.043	1.38	
118\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	689.498			0.2	No	687.91		0.003	1.58	
119\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	689.526	0.07		0.5	No	688.13	689.56	0.023	1.4	0.002
119\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.5	689.525	0.07		0.5	No	688.02	689.54	0.007	1.5	
120\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.939			0.2	No	688.7		0.036	1.24	0.001
121\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	690.804			0.2	No	689.51		0.038	1.29	0.009
122\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.266			0.2	No	686.85		0.017	1.42	
122\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.6	688.06			0.2	No	686.67		0.011	1.39	
122\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	687.797			0.2	No	686.38		0.008	1.42	
122\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.4	687.594			0.2	No	686.36		0.003	1.24	
122\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1	687.433			0.2	No	686.17		0.002	1.26	
122\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.5	687.272			0.2	No	686.03		0.002	1.24	
122\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.5	686.927			0.2	No	685.65		0.016	1.28	
122\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	686.751			0.2	No	685.45		0.002	1.3	
122\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.4	686.604			0.2	No	685.31		0.065	1.29	0.003
123\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4.2	686.93			0.2	No	685.66		0.022	1.27	
124\01	OnGrade	0.9x0.9m + IAD	IAD	4	688.355			0.2	No	686.93		0.022	1.43	
124\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.872			0.2	No	686.55		0.025	1.32	
124\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.8	687.574			0.2	No	686.15		0.016	1.43	
125\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.7	687.636			0.2	No	686.47		0.042	1.17	
126\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.3	687.052			0.2	No	685.73		0.018	1.33	
127\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	687.594	0.2		0.5	No	685.99	687.64	0.052	1.6	
127\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.9	687.614			0.2	No	685.75		0.023	1.86	
128\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	696.193			0.2	No	694.92		0.149	1.27	0.041
128\02	OnGrade	1.8m Lintel	GGP EKI, 5% grade	3.7	695.372			0.2	No	694.06		0.074	1.31	0.02
128\03	OnGrade	1.8m Lintel	GGP EKI, 5% grade	2	693.749			0.2	No	692.63		0.046	1.11	0.007
128\04	OnGrade	1.8m Lintel	GGP EKI, 5% grade	1.1	692.624			0.2	No	691.22		0.026	1.4	
128\05	OnGrade	1.8m Lintel	GGP EKI, 3% grade		691.105			0.2	No	689.58		0.005	1.53	
128\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	690.926			0.2	No	689.42		0.024	1.51	
128\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	690.094			0.2	No	688.62		0.006	1.48	
128\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	689.283			0.2	No	687.82		0.008	1.47	
128\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.902			0.2	No	687.48		0.006	1.42	
128\10	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.2	688.835			0.2	No	686.96		0.003	1.87	
128\11	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	688.1			0.2	No	686.54		0.007	1.56	
128\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	687.845			0.2	No	686.27		0.011	1.57	
129\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	688.258			0.2	No	686.89		0.041	1.37	0.003
130\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.952			0.2	No	687.59		0.023	1.36	0.001
131\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	689.278	0.12		0.5	No	687.96	689.33	0.048	1.32	0.002
131\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.7	689.277	0.09		0.5	No	687.82	689.3	0.011	1.45	
132\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.746			0.2	No	688.43		0.037	1.32	0.005
133\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	692.508			0.2	No	691.16		0.023	1.35	0.001
133\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	692.012			0.2	No	690.7		0.028	1.32	0.003
133\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.7	691.688			0.2	No	690.4		0.021	1.28	
133\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	691.19			0.2	No	689.15		0.017	2.04	
134\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	691.251			0.2	No	689.91		0.047	1.34	0.001
135\01	OnGrade	0.9x0.9m + IAD	IAD	5.7	697.351			0.2	No	695.11		0.119	2.25	
135\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.3	696.064			0.2	No	694.87		0.028	1.2	0.002

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION
ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 02 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	531	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-531.dwg

MINOR 5YR CALCULATIONS

PIT / NODE DETAILS														
Name	Type	Size	Inlet Family	Pressure Coeff. Ku	Water Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor -	Bolt-down lid -	Max Pit HGL (RL)	Max Pond HGL (RL)	Max Surface Flow Arriving (cu.m/s)	Min Freeboard (m)	Overflow (cu.m/s)
135\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	695.875			0.2	No	694.58		0.01	1.3	
135\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	695.623			0.2	No	693.9			1.72	
135\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	695.333			0.2	No	693.61		0.005	1.72	
135\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	694.758			0.2	No	693.1		0.008	1.66	
135\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.5	694.29			0.2	No	692.76		0.006	1.53	
135\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.3	694.235			0.2	No	692.45		0.007	1.79	
136\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	694.79			0.2	No	693.38		0.011	1.41	
138\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	695.685			0.2	No	694.32		0.038	1.36	
140\01	Node				695.878					694.7		0.561		
140\02	Sag	2.4m Lintel	GGP EKI, 1% grade	0.6	695.525	0.12		0.5	No	694.06	695.56	0.029	1.47	
141\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	692.182			0.2	No	690.77		0.017	1.41	
141\02	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	692.094			0.2	No	690.53		0.03	1.56	0.003
141\03	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	690.295			0.2	No	688.83		0.039	1.46	0.01
141\04	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.2	689.5			0.2	No	687.96		0.031	1.54	0.001
141\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1	688.794			0.2	No	687.19		0.004	1.61	
141\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	688.426			0.2	No	687.05		0.004	1.38	
141\07	Sag	2.4m Lintel	GGP EKI, 1% grade	1	688.242	0.08		0.5	No	686.92	688.29	0.028	1.33	
141\08	Sag	2.4m Lintel	GGP EKI, 1% grade	0.5	688.123	0.06		0.5	No	686.71	688.16	0.018	1.42	
142\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.797			0.2	No	687.43		0.018	1.37	
143\01	OnGrade	0.9x0.9m + GSIP	GSIP, 1% grade	4	692.161			0.2	No	690.82		0.063	1.34	0.016
143\02	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.8	691.218			0.2	No	689.77		0.035	1.45	
143\03	Sag	1.8m Lintel	GGP EKI, 1% grade	2	688.846	0.08		0.5	No	687.46	688.9	0.012	1.39	0.003
143\04	Sag	1.8m Lintel	GGP EKI, 1% grade	1.5	688.856	0.05		0.5	No	687.29	688.91	0.04	1.57	
145\01	OnGrade	0.9x0.9m + GSIP	GSIP, 1% grade	2	693.077			0.2	No	691.35			1.73	
151\01	Sag	1.2x1.2m + GSIP	GSIP, 1% grade	4	690.908	0.5		0.5	No	689.77	690.96	0.042	1.13	
154\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	688.065	0.11		0.5	No	686.7	688.13	0.038	1.36	0.005
155\01	Node				686.277					684.72		0.187		
156\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	695.212			0.2	No	693.84		0.027	1.37	
157\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	692.179			0.2	No	690.84		0.058	1.34	0.004
158\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	690.481			0.2	No	689.15		0.042	1.33	0.001
159\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.723			0.2	No	688.36		0.032	1.37	
160\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.183			0.2	No	687.87		0.044	1.31	0.004
161\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.208			0.2	No	686.84		0.031	1.37	
162\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.476			0.2	No	686.16		0.043	1.31	0.004
163\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	686.272	0.18		0.5	No	685.15	686.35	0.049	1.13	
164\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	687.596	0.09		0.5	No	686.2	687.64	0.037	1.4	
165\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.782			0.2	No	687.41		0.024	1.38	
166\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	690.143			0.2	No	688.78		0.036	1.36	
167\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.3			0.2	No	687.97		0.026	1.33	0.002
168\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.917			0.2	No	687.57		0.018	1.35	
169\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.849			0.2	No	686.5		0.041	1.35	0.001
170\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	696.509			0.2	No	695.18		0.047	1.33	0.002
171\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	690.765	0.06		0.5	No	689.29	690.8	0.009	1.47	0.001
173\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	695.56	0.06		0.5	No	694.17	695.59	0.006	1.39	0.002
1AL\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	698.132			0.2	No	696.64		0.013	1.49	
1AN\01	OnGrade	0.6x0.6m + IAD	IAD	3.7	687.726			0.2	No	687.12		0.018	0.6	
1AN\02	OnGrade	0.6x0.9m + IAD	IAD	2.3	687.631			0.2	No	686.81			0.82	
1AN\03	OnGrade	0.6x0.9m + IAD	IAD	2	687.419			0.2	No	686.6		0.019	0.82	
1AN\04	OnGrade	0.6x0.9m + IAD	IAD	1.7	687.235			0.2	No	686.46		0.026	0.77	
1AN\05	OnGrade	0.6x0.9m + IAD	IAD	1	687.19			0.2	No	686.36			0.83	
1AN\06	OnGrade	0.9x0.9m + IAD	IAD	1.3	687.1			0.2	No	685.71			1.39	
1AP\01	OnGrade	0.6x0.6m + IAD	IAD	3.6	687.535			0.2	No	686.96		0.018	0.57	
1AQ\01	OnGrade	0.6x0.6m + IAD	IAD	2.9	687.475			0.2	No	686.99		0.024	0.49	
1AQ\02	OnGrade	0.6x0.6m + IAD	IAD	2.3	687.446			0.2	No	686.74			0.71	
1AQ\03	OnGrade	0.6x0.6m + IAD	IAD	2	687.255			0.2	No	686.57		0.018	0.69	
1AQ\04	OnGrade	0.9x0.9m + IAD	IAD	4.1	686.929			0.2	No	685.58		0.019	1.35	
1AR\01	OnGrade	0.6x0.6m + IAD	IAD	3.6	687.846			0.2	No	687.22		0.019	0.63	
1AR\02	OnGrade	0.6x0.6m + IAD	IAD	4	687.6			0.2	No	686.92		0.018	0.68	
1AR\03	OnGrade	0.9x0.9m + IAD	IAD	4	687.364			0.2	No	685.95		0.018	1.41	
1AW\01	OnGrade	0.6x0.6m + IAD	IAD	3.5	692.183			0.2	No	691.56		0.02	0.62	
1AW\02	OnGrade	0.6x0.6m + IAD	IAD		691.986			0.2	No	691.28			0.7	
1AW\03	OnGrade	0.6x0.6m + IAD	IAD	4.8	691.55			0.2	No	690.86		0.017	0.69	
1AW\04	OnGrade	0.6x0.6m + IAD	IAD	1.5	691.054			0.2	No	690.37		0.017	0.68	
1AW\05	OnGrade	0.6x0.6m + IAD	IAD	1.2	690.54			0.2	No	689.9		0.017	0.64	
1AW\06	OnGrade	0.6x0.9m + IAD	IAD	0.6	690.105			0.2	No	689.36		0.017	0.74	
1AW\07	OnGrade	0.6x0.9m + IAD	IAD	1	689.68			0.2	No	688.96		0.017	0.72	
1AW\08	OnGrade	0.6x0.9m + IAD	IAD	0.9	689.292			0.2	No	688.61		0.017	0.68	
1AW\09	OnGrade	0.6x0.9m + IAD	IAD		688.936			0.2	No	688.08		0.017	0.85	
1AW\10	OnGrade	0.6x0.9m + IAD	IAD	1.6	688.641			0.2	No	687.89		0.017	0.75	
1AW\11	OnGrade	0.6x0.9m + IAD	IAD	1.4	688.605			0.2	No	687.79			0.82	
1AW\12	OnGrade	0.9x0.9m + IAD	IAD	0.2	688.497			0.2	No	687.09			1.41	

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 03 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	532	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-532.dwg

MINOR 5YR CALCULATIONS

PIT / NODE DETAILS														
Name	Type	Size	Inlet	Pressure	Water Surface	Max Pond	Base	Blocking	Bolt-down	Max Pit	Max Pond	Max Surface	Min	Overflow
			Family	Coeff.	Elev	Depth	Inflow	Factor	lid	HGL	HGL	Flow Arriving	Freeboard	(cu.m/s)
				Ku	(m)	(m)	(cu.m/s)	-	-	(RL)	(RL)	(cu.m/s)	(m)	
1AX\01	OnGrade	0.6x0.6m + IAD	IAD	3.8	689.684			0.2	No	689.05		0.018	0.64	
1AX\02	OnGrade	0.9x0.9m + IAD	IAD	4	689.426			0.2	No	688.15		0.019	1.28	
1AY\01	OnGrade	0.6x0.6m + IAD	IAD	5.2	689.795			0.2	No	689.14		0.011	0.65	
1AY\02	OnGrade	0.6x0.9m + IAD	IAD	4.9	689.566			0.2	No	688.74		0.027	0.82	
1AY\03	OnGrade	0.6x0.9m + IAD	IAD	0.7	689.658			0.2	No	688.61			1.04	
1AY\04	OnGrade	0.9x0.9m + IAD	IAD	1.6	689.664			0.2	No	688.57			1.09	
1AY\05	OnGrade	0.9x0.9m + IAD	IAD	1.6	689.414			0.2	No	688.38		0.018	1.04	
1AY\06	OnGrade	0.6x0.9m + IAD	IAD	0.9	689.072			0.2	No	688.16		0.018	0.92	
1AY\07	OnGrade	0.6x0.9m + IAD	IAD	1.2	688.759			0.2	No	687.95		0.018	0.81	
1AY\08	OnGrade	0.6x0.9m + IAD	IAD	1.4	688.682			0.2	No	687.74		0.019	0.94	
1AY\09	OnGrade	0.6x0.9m + IAD	IAD	0.7	688.621			0.2	No	687.65			0.98	
1AY\10	OnGrade	0.6x0.9m + IAD	IAD	0.2	688.257			0.2	No	687.35			0.91	
1AY\11	OnGrade	0.9x0.9m + IAD	IAD	5.4	687.888			0.2	No	686.67		0.022	1.22	
1BA\01	OnGrade	0.6x0.6m + IAD	IAD	3.5	691.489			0.2	No	690.87		0.02	0.62	
1BA\02	OnGrade	0.6x0.6m + IAD	IAD	4.9	690.977			0.2	No	690.27		0.017	0.71	
1BA\03	OnGrade	0.6x0.9m + IAD	IAD	1.5	690.432			0.2	No	689.7		0.017	0.74	
1BA\04	OnGrade	0.6x0.9m + IAD	IAD	1.2	689.833			0.2	No	689.12		0.017	0.72	
1BA\05	OnGrade	0.9x0.9m + IAD	IAD	4	688.796			0.2	No	687.34		0.019	1.46	
1BC\01	OnGrade	0.6x0.6m + IAD	IAD	5.7	692.324			0.2	No	691.65		0.033	0.67	
1BC\02	OnGrade	0.9x0.9m + IAD	IAD	4	690.736			0.2	No	689.23		0.006	1.51	
1BD\01	OnGrade	0.6x0.6m + IAD	IAD	4	695.399			0.2	No	694.66		0.017	0.74	
1BD\02	OnGrade	0.6x0.6m + IAD	IAD	4	695.094			0.2	No	694.37		0.017	0.73	
1BD\03	OnGrade	0.6x0.6m + IAD	IAD	1	694.815			0.2	No	694.09		0.017	0.72	
1BD\04	OnGrade	0.6x0.6m + IAD	IAD	1.4	694.56			0.2	No	693.89		0.017	0.67	
1BD\05	OnGrade	0.6x0.9m + IAD	IAD	1.2	694.407			0.2	No	693.71		0.017	0.7	
1BD\06	OnGrade	0.6x0.9m + IAD	IAD	1.7	694.425			0.2	No	693.55		0.017	0.88	
1BD\07	OnGrade	0.6x0.9m + IAD	IAD	1.4	694.389			0.2	No	693.39			1	
1BD\08	OnGrade	0.6x0.9m + IAD	IAD	1.2	694.108			0.2	No	693.25		0.025	0.86	
1BD\09	OnGrade	0.6x0.9m + IAD	IAD	0.8	693.745			0.2	No	692.85		0.017	0.89	
1BD\10	OnGrade	0.6x0.9m + IAD	IAD	0.7	693.453			0.2	No	692.59		0.017	0.86	
1BD\11	OnGrade	0.6x0.9m + IAD	IAD	0.7	692.947			0.2	No	692.09		0.017	0.85	
1BD\12	OnGrade	0.9x0.9m + IAD	IAD	4.1	692.543			0.2	No	691.21		0.018	1.34	
1BE\01	OnGrade	0.6x0.6m + IAD	IAD	3.6	696.128			0.2	No	695.5		0.019	0.63	
1BE\02	OnGrade	0.6x0.6m + IAD	IAD	4	695.271			0.2	No	694.6		0.017	0.67	
1BE\03	OnGrade	0.9x0.9m + IAD	IAD	0.6	694.012			0.2	No	692.47		0.019	1.54	

ISSUED FOR CONSTRUCTION CERTIFICATE

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 04 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	533	B

MINOR 5YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use									
Name	Pit	Sub-Cat.	Paved	Grass	Supp.	Peak	Paved	Grassed	Paved	Grass	Supp.	Due to Storm
	Name	Area	Area	Area	Area	Flow Q	Max Q	Max Q	Tc	Tc	Tc	
		(ha)	%	%	%	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)	
C 101\01	NODE1	1.5546	80	20		0.354	0.354	0.028	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\02	101\02	0.1067	75	25		0.023	0.023	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\03	-	-	-	-	-	-	-	-	-	-	-	-
C 101\04	101\04	0.0953	85	15		0.023	0.023	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\05	101\05	0.1557	75	25		0.033	0.033	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\06	101\06	0.0269	95	5		0.007	0.007	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\07	101\07	0.1966	75	25		0.042	0.042	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\08	101\08	0.0468	95	5		0.013	0.013	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\09	101\09	0.0888	75	25		0.019	0.019	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\10	101\10	0.1746	75	25		0.037	0.037	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\11	101\11	0.1172	75	25		0.025	0.025	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\12	101\12	0.0521	75	15		0.011	0.011	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\13	101\13	0.067	75	25		0.014	0.014	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\14	101\14	0.0146	50	50		0.002	0.002	0.001	5	0	10	0.2EY AEP, 20 min burst, Storm 5
C 101\15	101\15	0.114	85	15		0.028	0.028	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\16	101\16	0.1319	75	25		0.028	0.028	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\17	101\17	0.1923	75	25		0.041	0.041	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\18	101\18	0.1425	75	25		0.03	0.03	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\19	101\19	0.1211	75	25		0.026	0.026	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\20	-	-	-	-	-	-	-	-	-	-	-	-
C 101\21	-	-	-	-	-	-	-	-	-	-	-	-
C 101\22	-	-	-	-	-	-	-	-	-	-	-	-
C 102\01	102\01	0.2284	75	25		0.049	0.049	0.005	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 102\02	102\02	0.0963	100			0.027	0.027	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 102\03	-	-	-	-	-	-	-	-	-	-	-	-
C 102\04	-	-	-	-	-	-	-	-	-	-	-	-
C 104\01	104\01	2.8	70	30		0.468	0.438	0.045	12.7	0	16.8	0.2EY AEP, 15 min burst, Storm 2
C 104\02	104\02	0.2111	75	15		0.045	0.045	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 105\01	105\01	0.2117	70	30		0.042	0.038	0.008	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 105\02	105\02	0.0834	95	5		0.023	0.023	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 106\01	106\01	2.2	70	30		0.375	0.328	0.047	12.7	0	12.7	0.2EY AEP, 15 min burst, Storm 10
C 106\02	106\02	0.0855	85	15		0.021	0.021	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 106\03	106\03	0.0213	95	5		0.006	0.006	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 107\01	107\01	1.12	70	30		0.193	0.178	0.025	12.1	0	12.1	0.2EY AEP, 15 min burst, Storm 2
C 107\02	107\02	0.0792	95	5		0.021	0.021	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 107\03	107\03	0.0185	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 108\01	108\01	0.66	70	30		0.13	0.118	0.026	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 108\02	108\02	0.0895	75	25		0.019	0.019	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 108\03	108\03	0.2006	85	15		0.049	0.049	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 109\01	109\01	3.91	70	30		0.773	0.701	0.154	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 109\02	109\02	0.0405	90	10		0.01	0.01	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 109\03	-	-	-	-	-	-	-	-	-	-	-	-
C 110\01	110\01	0.1988	70	30		0.039	0.036	0.008	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 111\01	111\01	0.0859	72.9	27.1		0.018	0.018	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 111\02	111\02	0.0097	95	5		0.003	0.003	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\01	112\01	8.4781	5	95		1.11	0.086	1.069	10	0	16.5	0.2EY AEP, 45 min burst, Storm 7
C 112\02	112\02	0.5198	50	50		0.085	0.064	0.034	5	0	10	0.2EY AEP, 20 min burst, Storm 5
C 112\03	112\03	0.5673		100		0.088	0	0.088	5	0	10	0.2EY AEP, 45 min burst, Storm 9
C 112\04	112\04	0.0195	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\05	112\05	0.0194	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\06	112\06	0.0191	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\07	112\07	0.1411	90	10		0.036	0.036	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\08	112\08	0.0074	80.8	19.2		0.002	0.002	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\09	112\09	0.1704	75	25		0.036	0.036	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\10	112\10	0.079	75	25		0.017	0.017	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\11	112\11	0.0078	95	5		0.002	0.002	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\12	112\12	0.1008	71.1	28.9		0.02	0.018	0.004	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\13	112\13	0.2288	67.5	32.5		0.045	0.04	0.01	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\14	112\14	0.0676	95	5		0.018	0.018	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\15	112\15	0.0285	95	5		0.008	0.008	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\16	112\16	0.0876	69.8	30.2		0.017	0.016	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\17	112\17	0.1114	65.9	34.1		0.022	0.019	0.005	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\18	112\18	0.0254	95	5		0.007	0.007	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\19	112\19	0.0812	95	5		0.022	0.022	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\20	-	-	-	-	-	-	-	-	-	-	-	-
C 112\21	-	-	-	-	-	-	-	-	-	-	-	-
C 113\01	-	-	-	-	-	-	-	-	-	-	-	-

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 05 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	534	B

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MINOR 5YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use									
Name	Pit	Sub-Cat.	Paved	Grass	Supp.	Peak	Paved	Grassed	Paved	Grass	Supp.	Due to Storm
	Name	Area	Area	Area	Area	Flow Q	Max Q	Max Q	Tc	Tc	Tc	
		(ha)	%	%	%	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)	
C 101\01	NODE1	1.5546	80	20		0.354	0.354	0.028	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\02	101\02	0.1067	75	25		0.023	0.023	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\03	-	-	-	-	-	-	-	-	-	-	-	-
C 101\04	101\04	0.0953	85	15		0.023	0.023	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\05	101\05	0.1557	75	25		0.033	0.033	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\06	101\06	0.0269	95	5		0.007	0.007	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\07	101\07	0.1966	75	25		0.042	0.042	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\08	101\08	0.0468	95	5		0.013	0.013	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\09	101\09	0.0888	75	25		0.019	0.019	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\10	101\10	0.1746	75	25		0.037	0.037	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\11	101\11	0.1172	75	25		0.025	0.025	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\12	101\12	0.0521	75	15		0.011	0.011	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\13	101\13	0.067	75	25		0.014	0.014	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\14	101\14	0.0146	50	50		0.002	0.002	0.001	5	0	10	0.2EY AEP, 20 min burst, Storm 5
C 101\15	101\15	0.114	85	15		0.028	0.028	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\16	101\16	0.1319	75	25		0.028	0.028	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\17	101\17	0.1923	75	25		0.041	0.041	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\18	101\18	0.1425	75	25		0.03	0.03	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\19	101\19	0.1211	75	25		0.026	0.026	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 101\20	-	-	-	-	-	-	-	-	-	-	-	-
C 101\21	-	-	-	-	-	-	-	-	-	-	-	-
C 101\22	-	-	-	-	-	-	-	-	-	-	-	-
C 102\01	102\01	0.2284	75	25		0.049	0.049	0.005	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 102\02	102\02	0.0963	100			0.027	0.027	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 102\03	-	-	-	-	-	-	-	-	-	-	-	-
C 102\04	-	-	-	-	-	-	-	-	-	-	-	-
C 104\01	104\01	2.8	70	30		0.468	0.438	0.045	12.7	0	16.8	0.2EY AEP, 15 min burst, Storm 2
C 104\02	104\02	0.2111	75	15		0.045	0.045	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 105\01	105\01	0.2117	70	30		0.042	0.038	0.008	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 105\02	105\02	0.0834	95	5		0.023	0.023	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 106\01	106\01	2.2	70	30		0.375	0.328	0.047	12.7	0	12.7	0.2EY AEP, 15 min burst, Storm 10
C 106\02	106\02	0.0855	85	15		0.021	0.021	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 106\03	106\03	0.0213	95	5		0.006	0.006	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 107\01	107\01	1.12	70	30		0.193	0.178	0.025	12.1	0	12.1	0.2EY AEP, 15 min burst, Storm 2
C 107\02	107\02	0.0792	95	5		0.021	0.021	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 107\03	107\03	0.0185	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 108\01	108\01	0.66	70	30		0.13	0.118	0.026	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 108\02	108\02	0.0895	75	25		0.019	0.019	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 108\03	108\03	0.2006	85	15		0.049	0.049	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 109\01	109\01	3.91	70	30		0.773	0.701	0.154	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 109\02	109\02	0.0405	90	10		0.01	0.01	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 109\03	-	-	-	-	-	-	-	-	-	-	-	-
C 110\01	110\01	0.1988	70	30		0.039	0.036	0.008	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 111\01	111\01	0.0859	72.9	27.1		0.018	0.018	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 111\02	111\02	0.0097	95	5		0.003	0.003	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\01	112\01	8.4781	5	95		1.11	0.086	1.069	10	0	16.5	0.2EY AEP, 45 min burst, Storm 7
C 112\02	112\02	0.5198	50	50		0.085	0.064	0.034	5	0	10	0.2EY AEP, 20 min burst, Storm 5
C 112\03	112\03	0.5673		100		0.088	0	0.088	5	0	10	0.2EY AEP, 45 min burst, Storm 9
C 112\04	112\04	0.0195	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\05	112\05	0.0194	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\06	112\06	0.0191	95	5		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\07	112\07	0.1411	90	10		0.036	0.036	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\08	112\08	0.0074	80.8	19.2		0.002	0.002	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\09	112\09	0.1704	75	25		0.036	0.036	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\10	112\10	0.079	75	25		0.017	0.017	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\11	112\11	0.0078	95	5		0.002	0.002	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\12	112\12	0.1008	71.1	28.9		0.02	0.018	0.004	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\13	112\13	0.2288	67.5	32.5		0.045	0.04	0.01	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\14	112\14	0.0676	95	5		0.018	0.018	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\15	112\15	0.0285	95	5		0.008	0.008	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\16	112\16	0.0876	69.8	30.2		0.017	0.016	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\17	112\17	0.1114	65.9	34.1		0.022	0.019	0.005	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 112\18	112\18	0.0254	95	5		0.007	0.007	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\19	112\19	0.0812	95	5		0.022	0.022	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 112\20	-	-	-	-	-	-	-	-	-	-	-	-
C 112\21	-	-	-	-	-	-	-	-	-	-	-	-
C 113\01	-	-	-	-	-	-	-	-	-	-	-	-

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 06 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	535	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-535.dwg

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-536.dwg

MINOR 5YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use									
Name	**Pit**	**Sub-Cat.**	**Paved**	**Grass**	**Supp.**	**Peak**	**Paved**	**Grassed**	**Paved**	**Grass**	**Supp.**	**Due to Storm**
	Name	**Area**	**Area**	**Area**	**Area**	**Flow Q**	**Max Q**	**Max Q**	**Tc**	**Tc**	**Tc**	
		(ha)	**%**	**%**	**%**	**(cu.m/s)**	**(cu.m/s)**	**(cu.m/s)**	**(min)**	**(min)**	**(min)**	
C 135\06	135\06	0.0479	95	5		0.013	0.013	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 135\07	135\07	0.039	95	5		0.011	0.011	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 135\08	135\08	0.0407	95	5		0.011	0.011	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 136\01	136\01	0.0656	95	5		0.018	0.018	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 138\01	138\01	0.1128	95	5		0.031	0.031	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 140\01	140\01	3.2895	15	85		0.49	0.08	0.41	10	0	12	0.2EY AEP, 45 min burst, Storm 9
C 140\02	140\02	0.1108	70	30		0.022	0.02	0.004	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 141\01	141\01	0.0506	95	5		0.014	0.014	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 141\02	141\02	0.2024	75	25		0.043	0.043	0.005	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 141\03	141\03	0.2586	75	25		0.055	0.055	0.006	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 141\04	141\04	0.0822	78.1	21.9		0.018	0.018	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 141\05	141\05	0.0106	95	5		0.003	0.003	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 141\06	141\06	0.0225	95	5		0.006	0.006	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 141\07	141\07	0.209	95	5		0.057	0.057	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 141\08	141\08	0.1058	95	5		0.029	0.029	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 142\01	142\01	0.1066	95	5		0.029	0.029	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 143\01	143\01	0.3495		100		0.054	0	0.054	5	0	10	0.2EY AEP, 45 min burst, Storm 9
C 143\02	143\02	0.1138	81.3	18.7		0.026	0.026	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 143\03	143\03	0.2023	75.3	24.7		0.043	0.043	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 143\04	143\04	0.1217	95	5		0.033	0.033	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 145\01	-	-	-	-	-	-	-	-	-	-	-	-
C 151\01	151\01	0.252		100		0.039	0	0.039	5	0	10	0.2EY AEP, 45 min burst, Storm 9
C 154\01	154\01	0.214	75	25		0.046	0.046	0.005	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 155\01	155\01	0.63	75	25		0.135	0.135	0.014	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 156\01	156\01	0.0822	90	10		0.021	0.021	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 157\01	157\01	0.1947	75	25		0.042	0.042	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 158\01	158\01	0.1821	75	25		0.039	0.039	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 159\01	159\01	0.1087	75	25		0.023	0.023	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 160\01	160\01	0.2432	75	25		0.052	0.052	0.005	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 161\01	161\01	0.1388	75	25		0.03	0.03	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 162\01	162\01	0.2391	75	25		0.051	0.051	0.005	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 163\01	163\01	0.3476	75	25		0.074	0.074	0.008	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 164\01	164\01	0.1115	80	20		0.025	0.025	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 165\01	165\01	0.0729	90	10		0.019	0.019	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 166\01	166\01	0.1207	75	25		0.026	0.026	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 167\01	167\01	0.164	75	25		0.035	0.035	0.004	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 168\01	168\01	0.1016	75	25		0.022	0.022	0.002	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 169\01	169\01	0.1376	75	25		0.029	0.029	0.003	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 170\01	170\01	0.1442	90	10		0.037	0.037	0.001	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 171\01	171\01	0.0727	70.4	29.6		0.014	0.013	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 173\01	173\01	0.0393	90	10		0.01	0.01	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 1AL\01	1AL\01	0.0405	90	10		0.01	0.01	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 1AN\01	1AN\01	0.0632	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AN\02	-	-	-	-	-	-	-	-	-	-	-	-
C 1AN\03	1AN\03	0.0661	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AN\04	1AN\04	0.0894	70	30		0.018	0.016	0.004	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AN\05	-	-	-	-	-	-	-	-	-	-	-	-
C 1AN\06	-	-	-	-	-	-	-	-	-	-	-	-
C 1AP\01	1AP\01	0.0615	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AQ\01	1AQ\01	0.0848	70	30		0.017	0.015	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AQ\02	-	-	-	-	-	-	-	-	-	-	-	-
C 1AQ\03	1AQ\03	0.0608	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AQ\04	1AQ\04	0.0645	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AR\01	1AR\01	0.0671	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AR\02	1AR\02	0.0609	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AR\03	1AR\03	0.0628	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\01	1AW\01	0.0677	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\02	-	-	-	-	-	-	-	-	-	-	-	-
C 1AW\03	1AW\03	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\04	1AW\04	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\05	1AW\05	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\06	1AW\06	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\07	1AW\07	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\08	1AW\08	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\09	1AW\09	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\10	1AW\10	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AW\11	-	-	-	-	-	-	-	-	-	-	-	-
C 1AW\12	-	-	-	-	-	-	-	-	-	-	-	-
C 1AX\01	1AX\01	0.0608	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AX\02	1AX\02	0.0648	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AY\01	1AY\01	0.0395	70	30		0.008	0.007	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AY\02	1AY\02	0.0953	70	30		0.019	0.017	0.004	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AY\03	-	-	-	-	-	-	-	-	-	-	-	-
C 1AY\04	-	-	-	-	-	-	-	-	-	-	-	-

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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building a healthy lifestyle

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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 07 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	536	B

MINOR 5YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use									
Name	Pit	Sub-Cat.	Paved	Grass	Supp.	Peak	Paved	Grassed	Paved	Grass	Supp.	Due to Storm
	Name	Area	Area	Area	Area	Flow Q	Max Q	Max Q	Tc	Tc	Tc	
		(ha)	%	%	%	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)	
C 1AY\05	1AY\05	0.063	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AY\06	1AY\06	0.063	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AY\07	1AY\07	0.063	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AY\08	1AY\08	0.0644	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1AY\09	-	-	-	-	-	-	-	-	-	-	-	-
C 1AY\10	-	-	-	-	-	-	-	-	-	-	-	-
C 1AY\11	1AY\11	0.0766	70	30		0.015	0.014	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BA\01	1BA\01	0.068	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BA\02	1BA\02	0.0601	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BA\03	1BA\03	0.0603	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BA\04	1BA\04	0.06	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BA\05	1BA\05	0.0676	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BC\01	1BC\01	0.1143	70	30		0.023	0.02	0.005	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BC\02	1BC\02	0.0193	85	15		0.005	0.005	0	5	0	10	0.2EY AEP, 15 min burst, Storm 2
C 1BD\01	1BD\01	0.0606	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\02	1BD\02	0.0606	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\03	1BD\03	0.0606	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\04	1BD\04	0.0606	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\05	1BD\05	0.0606	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\06	1BD\06	0.0606	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\07	-	-	-	-	-	-	-	-	-	-	-	-
C 1BD\08	1BD\08	0.0882	70	30		0.017	0.016	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\09	1BD\09	0.0603	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\10	1BD\10	0.0603	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\11	1BD\11	0.0603	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BD\12	1BD\12	0.064	70	30		0.013	0.011	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BE\01	1BE\01	0.0664	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BE\02	1BE\02	0.0602	70	30		0.012	0.011	0.002	5	0	10	0.2EY AEP, 20 min burst, Storm 6
C 1BE\03	1BE\03	0.0663	70	30		0.013	0.012	0.003	5	0	10	0.2EY AEP, 20 min burst, Storm 6

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For:
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building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

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32 LOVELLE STREET &
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Title:
MINOR 5 YEAR CALCULATIONS
SHEET 08 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	537	B

MINOR 5YR CALCULATIONS

PIPE DETAILS															
Name	From Pit	To Pit	Reach Length (m)	Pipe U/S IL (m)	Pipe D/S IL (m)	Pipe Slope (%)	Pipe Type	Pipe Diameter (mm)	Pipe Rough n	No. of Pipes	Max Pipe Flow (cu.m/s)	Max Pipe Vel. (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P 101\01	101\01	101\02	35.135	696.582	695.879	2	RRJ2	900	0.012	1	0.843	2.11	697.118	696.441	0.2EY AEP, 45 min burst, Storm 5
P 101\02	101\02	101\03	37.495	695.849	695.474	1	RRJ2	900	0.012	1	0.849	2.97	696.387	695.885	0.2EY AEP, 45 min burst, Storm 5
P 101\03	101\03	101\04	26.373	694.286	693.909	1.43	RRJ2	1050	0.012	1	1.478	3.02	694.97	694.482	0.2EY AEP, 45 min burst, Storm 5
P 101\04	101\04	101\05	40.113	693.816	692.813	2.5	RRJ2	1050	0.012	1	1.488	4.72	694.482	693.222	0.2EY AEP, 45 min burst, Storm 5
P 101\05	101\05	101\06	27.804	692.445	691.722	2.6	RRJ2	1050	0.012	1	1.53	4.83	693.06	692.132	0.2EY AEP, 45 min burst, Storm 5
P 101\06	101\06	101\07	51.433	690.886	689.6	2.5	RRJ2	1050	0.012	1	1.704	4.87	691.401	690.042	0.2EY AEP, 45 min burst, Storm 4
P 101\07	101\07	101\08	28.239	689.373	688.758	2.18	RRJ2	1050	0.012	1	1.715	4.72	690.042	689.212	0.2EY AEP, 20 min burst, Storm 5
P 101\08	101\08	101\09	23.644	688.387	687.865	2.21	RRJ2	1200	0.012	1	1.929	3.26	689.003	688.552	0.2EY AEP, 20 min burst, Storm 5
P 101\09	101\09	101\10	36.99	687.815	687.404	1.11	RRJ2	1200	0.012	1	1.973	2.91	688.552	688.092	0.2EY AEP, 20 min burst, Storm 5
P 101\10	101\10	101\11	28.702	687.374	687.087	1	RRJ2	1200	0.012	1	2.006	2.81	688.092	687.835	0.2EY AEP, 20 min burst, Storm 5
P 101\11	101\11	101\12	28.315	687.057	686.774	1	RRJ2	1350	0.012	1	2.048	2.46	687.811	687.605	0.2EY AEP, 20 min burst, Storm 5
P 101\12	101\12	101\13	22.535	686.741	686.516	1	RRJ2	1350	0.012	1	2.409	2.82	687.56	687.286	0.2EY AEP, 20 min burst, Storm 6
P 101\13	101\13	101\14	41.592	686.486	686.07	1	RRJ2	1350	0.012	1	2.45	3.56	687.286	686.718	0.2EY AEP, 20 min burst, Storm 6
P 101\14	101\14	101\15	31.484	685.933	685.618	1	RRJ2	1200	0.012	2	3.596	2.66	686.662	686.303	0.2EY AEP, 45 min burst, Storm 9
P 101\15	101\15	101\16	30.459	685.588	685.283	1	RRJ2	1200	0.012	2	3.656	2.88	686.303	685.935	0.2EY AEP, 45 min burst, Storm 9
P 101\16	101\16	101\17	45.999	685.253	684.793	1	RRJ2	1350	0.012	2	3.694	2.69	685.935	685.441	0.2EY AEP, 45 min burst, Storm 9
P 101\17	101\17	101\18	28.26	684.763	684.339	1.5	RRJ2	1350	0.012	2	3.752	2.58	685.441	685.199	0.2EY AEP, 45 min burst, Storm 9
P 101\18	101\18	101\19	33.58	684.309	683.738	1.7	RRJ2	1350	0.012	2	3.774	1.93	685.169	685.091	0.2EY AEP, 45 min burst, Storm 9
P 101\19	101\19	101\20	15.67	683.688	683.531	1	RRJ2	1350	0.012	2	3.842	1.3	685.039	685.024	0.2EY AEP, 45 min burst, Storm 9
P 101\20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 101\21	101\21	101\22	16.307	682.827	682.52	1.88	RCBC	2.4W x 0.75H	0.012	1	2.658	4.15	683.327	682.787	0.2EY AEP, 45 min burst, Storm 9
P 101\22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 102\01	102\01	102\02	11.899	684.137	683.292	7.1	RRJ2	525	0.012	1	0.148	1.84	684.345	683.971	0.2EY AEP, 20 min burst, Storm 6
P 102\02	102\02	102\03	5.251	683.133	683.081	0.99	RRJ2	900	0.012	1	1.313	3.35	683.805	683.609	0.2EY AEP, 45 min burst, Storm 9
P 102\03	102\03	102\04	12.732	682.727	682.6	1	RRJ2	900	0.012	1	1.313	3.3	683.399	683.134	0.2EY AEP, 45 min burst, Storm 9
P 102\04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 104\01	104\01	104\02	30.683	686.519	686.212	1	RRJ2	900	0.012	1	1.148	2.77	687.072	686.913	0.2EY AEP, 15 min burst, Storm 10
P 104\02	104\02	101\14	21.949	686.182	685.963	1	RRJ2	900	0.012	1	1.154	2.37	686.818	686.718	0.2EY AEP, 15 min burst, Storm 10
P 105\01	105\01	105\02	15.724	686.876	686.719	1	RRJ2	375	0.012	1	0.041	0.92	687.052	686.878	0.2EY AEP, 20 min burst, Storm 2
P 105\02	105\02	101\15	36.798	686.689	686.321	1	RRJ2	375	0.012	1	0.062	1.51	686.878	686.468	0.2EY AEP, 20 min burst, Storm 5
P 106\01	106\01	106\02	39.585	688.047	687.651	1	RRJ2	600	0.012	1	0.376	2.44	688.368	687.968	0.2EY AEP, 15 min burst, Storm 2
P 106\02	106\02	106\03	7.001	687.371	687.301	1	RRJ2	825	0.012	1	0.382	1.59	687.748	687.696	0.2EY AEP, 15 min burst, Storm 9
P 106\03	106\03	101\12	15.049	687.271	687.12	1	RRJ2	825	0.012	1	0.381	1.37	687.693	687.605	0.2EY AEP, 15 min burst, Storm 1
P 107\01	107\01	107\02	39.071	691.368	689.666	4.36	RRJ2	375	0.012	1	0.192	3.56	691.551	689.965	0.2EY AEP, 15 min burst, Storm 2
P 107\02	107\02	107\03	7	689.568	689.498	1	RRJ2	525	0.012	1	0.199	1.55	689.866	689.797	0.2EY AEP, 15 min burst, Storm 2
P 107\03	107\03	101\08	14.977	689.468	689.319	1	RRJ2	525	0.012	1	0.203	2.07	689.769	689.56	0.2EY AEP, 15 min burst, Storm 10
P 108\01	108\01	108\02	38.808	693.802	692.754	2.7	RRJ2	450	0.012	1	0.129	2.66	693.956	693.123	0.2EY AEP, 20 min burst, Storm 5
P 108\02	108\02	108\03	7	692.724	692.654	1	RRJ2	450	0.012	1	0.142	1.35	693.004	692.984	0.2EY AEP, 20 min burst, Storm 5
P 108\03	108\03	101\06	14.126	692.624	692.483	1	RRJ2	450	0.012	1	0.178	2.03	692.917	692.724	0.2EY AEP, 20 min burst, Storm 5
P 109\01	109\01	109\02	27.247	695.402	694.584	3	RRJ2	750	0.012	1	0.771	4.37	695.715	695.228	0.2EY AEP, 20 min burst, Storm 6
P 109\02	109\02	109\03	22.449	694.555	694.42	0.6	RRJ2	900	0.012	1	0.785	1.66	695.174	695.089	0.2EY AEP, 20 min burst, Storm 5
P 109\03	109\03	101\03	5.716	694.37	694.336	0.59	RRJ2	900	0.012	1	0.777	1.49	695.049	695.035	0.2EY AEP, 20 min burst, Storm 5
P 110\01	110\01	109\02	11.374	695.019	694.905	1	RRJ2	375	0.012	1	0.035	0.51	695.241	695.228	0.2EY AEP, 20 min burst, Storm 5
P 111\01	111\01	111\02	9.964	695.426	695.327	0.99	RRJ2	375	0.012	1	0.016	1.13	695.527	695.397	0.2EY AEP, 20 min burst, Storm 5
P 111\02	111\02	101\03	29.475	695.297	695.002	1	RRJ2	375	0.012	1	0.019	1.22	695.397	695.077	0.2EY AEP, 20 min burst, Storm 5
P 112\01	112\01	112\02	15.436	695.85	695.773	0.5	RCBC	3W x 0.45H	0.012	1	1.11	1.85	696.051	695.973	0.2EY AEP, 45 min burst, Storm 7
P 112\02	112\02	112\02A	14.972	694.567	694.117	3.01	RRJ2	1050	0.012	1	1.162	4.84	695.151	694.452	0.2EY AEP, 45 min burst, Storm 7
P 112\03	112\03	112\04	34.115	691.534	691.193	1	RRJ2	1050	0.012	1	1.224	3.25	692.155	691.66	0.2EY AEP, 45 min burst, Storm 7
P 112\04	112\04	112\05	25.037	690.421	689.849	2.28	RRJ2	1200	0.012	1	1.837	4.84	691.158	690.289	0.2EY AEP, 45 min burst, Storm 5
P 112\05	112\05	112\06	18.553	689.387	688.645	4	RRJ2	1200	0.012	1	1.925	2.99	690.047	689.352	0.2EY AEP, 45 min burst, Storm 5
P 112\06	112\06	112\07	10.864	688.615	688.306	2.84	RRJ2	1200	0.012	1	1.927	3.61	689.352	688.875	0.2EY AEP, 45 min burst, Storm 5
P 112\07	112\07	112\08	14.006	688.101	687.961	1	RRJ2	1350	0.012	1	1.955	2.51	688.837	688.676	0.2EY AEP, 45 min burst, Storm 5
P 112\08	112\08	112\09	52.587	687.931	687.199	1.39	RRJ2	1350	0.012	1	2.117	2.59	688.676	687.943	0.2EY AEP, 45 min burst, Storm 5
P 112\09	112\09	112\10	19.586	687.169	686.927	1.24	RRJ2	1350	0.012	1	2.089	2.48	687.931	687.73	0.2EY AEP, 45 min burst, Storm 5
P 112\10	112\10	112\11	14.416	686.897	686.753	1	RRJ2	1350	0.012	1	2.099	2.5	687.66	687.513	0.2EY AEP, 45 min burst, Storm 5
P 112\11	112\11	112\12	35.82	686.723	686.348	1.05	RRJ2	1350	0.012	1	2.133	3	687.493	687.014	0.2EY AEP, 45 min burst, Storm 5
P 112\12	112\12	112\13	59.17	686.298	685.504	1.34	RRJ2	1350	0.012	1	2.154	4.11	687.014	686.032	0.2EY AEP, 45 min burst, Storm 5
P 112\13	112\13	112\14	16.916	685.454	685.116	2	RRJ2	1200	0.012	2	2.273	2.47	685.962	685.751	0.2EY AEP, 45 min burst, Storm 5
P 112\14	112\14	112\15	35.926	685.086	684.835	0.7	RRJ2	1200	0.012	2	2.304	1.81	685.74	685.615	0.2EY AEP, 45 min burst, Storm 5
P 112\15	112\15	112\16	28.653	684.805	684.518	1	RRJ2	1200	0.012	2	2.991	2.16	685.503	685.38	0.2EY AEP, 45 min burst, Storm 5
P 112\16	112\16	112\17	19.76	684.488	684.35	0.7	RRJ2	1200	0.012	2	3.035	1.75	685.335	685.282	0.2EY AEP, 45 min burst, Storm 5
P 112\17	112\17	112\18	28.406	684.32	684.036	1	RRJ2	1200	0.012	2	3.087	1.65	685.233	685.178	0.2EY AEP, 45 min burst, Storm 5
P 112\18	112\18	112\19	27.264	683.973	683.7	1	RRJ2	1200	0.012	2	3.316	1.48	685.087	685.048	0.2EY AEP, 45 min burst, Storm 5
P 112\19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 112\20	112\20	112\21	34.135	683.041	682.7	1	RCBC	2.1W x 0.9H	0.012	2	3.159	2.92	683.428	682.958	0.2EY AEP, 45 min burst, Storm 5
P 112\21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 113\01	113\01	113\02	19.345	683.319	683.125	1	RRJ2	600	0.012	1	0.831	2.94	684.119	683.689	0.2EY AEP, 45 min burst, Storm 5

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 09 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	538	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-538.dwg

MINOR 5YR CALCULATIONS

PIPE DETAILS															
Name	From	To	Reach	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	No. of	Max Pipe	Max Pipe	Max U/S	Max D/S	Due to Storm
	Pit	Pit	Length	U/S IL	D/S IL	Slope	Type	Diameter	Rough	Pipes	Flow	Vel.	HGL	HGL	
			(m)	(m)	(m)	(%)		(mm)	n		(cu.m/s)	(m/s)	(m)	(m)	
P 113\02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 114\01	114\01	114\02	22.802	692.161	691.737	1.86	RRJ2	375	0.012	1	0.046	0.84	692.346	691.931	0.2EY AEP, 20 min burst, Storm 2
P 114\02	114\02	114\03	9	691.707	691.617	1	RRJ2	375	0.012	1	0.063	1.25	691.889	691.79	0.2EY AEP, 20 min burst, Storm 5
P 114\03	114\03	114\04	24.767	691.587	690.675	3.68	RRJ2	375	0.012	1	0.074	1.43	691.784	690.852	0.2EY AEP, 20 min burst, Storm 5
P 114\04	114\04	114\05	55.552	690.645	689.213	2.58	RRJ2	375	0.012	1	0.079	1.34	690.849	689.408	0.2EY AEP, 15 min burst, Storm 5
P 114\05	114\05	114\06	40.409	689.027	688.231	1.97	RRJ2	375	0.012	1	0.155	1.68	689.315	688.678	0.2EY AEP, 20 min burst, Storm 5
P 114\06	114\06	114\07	29.994	688.201	687.84	1.2	RRJ2	375	0.012	1	0.207	2.15	688.525	688.139	0.2EY AEP, 20 min burst, Storm 5
P 114\07	114\07	114\08	26.105	687.526	687.259	1.02	RRJ2	600	0.012	1	0.309	1.88	687.878	687.593	0.2EY AEP, 20 min burst, Storm 5
P 114\08	114\08	114\09	44.034	687.229	686.676	1.26	RRJ2	600	0.012	1	0.339	1.86	687.593	687.04	0.2EY AEP, 20 min burst, Storm 2
P 114\09	114\09	114\10	42.172	686.646	686.118	1.25	RRJ2	675	0.012	1	0.401	1.83	687.04	686.544	0.2EY AEP, 20 min burst, Storm 5
P 114\10	114\10	114\11	17.033	686.088	685.969	0.7	RRJ2	675	0.012	1	0.46	2.1	686.514	686.362	0.2EY AEP, 20 min burst, Storm 2
P 114\11	114\11	114\12	19.608	685.939	685.802	0.7	RRJ2	750	0.012	1	0.46	1.97	686.353	686.191	0.2EY AEP, 20 min burst, Storm 2
P 114\12	114\12	114\13	29.487	685.772	685.566	0.7	RRJ2	750	0.012	1	0.468	1.88	686.189	685.975	0.2EY AEP, 20 min burst, Storm 2
P 114\13	114\13	114\14	39.185	685.536	685.262	0.7	RRJ2	750	0.012	1	0.488	1.86	685.962	685.714	0.2EY AEP, 20 min burst, Storm 2
P 114\14	114\14	114\15	22.406	685.232	685.008	1	RRJ2	750	0.012	1	0.511	1.81	685.684	685.576	0.2EY AEP, 20 min burst, Storm 2
P 114\15	114\15	114\16	26.44	684.978	684.714	1	RRJ2	750	0.012	1	0.519	1.43	685.544	685.481	0.2EY AEP, 20 min burst, Storm 1
P 114\16	114\16	114\17	7.033	684.684	684.614	1	RRJ2	750	0.012	1	0.544	1.27	685.359	685.348	0.2EY AEP, 20 min burst, Storm 1
P 114\17	114\17	114\18	17.008	684.584	684.465	0.7	RRJ2	750	0.012	1	0.553	1.26	685.282	685.258	0.2EY AEP, 20 min burst, Storm 1
P 114\18	114\18	114\19	45.226	684.435	684.118	0.7	RRJ2	750	0.012	1	0.558	1.22	685.214	685.15	0.2EY AEP, 15 min burst, Storm 3
P 114\19	114\19	112\19	9.002	684.088	683.998	1	RRJ2	825	0.012	1	0.591	1.07	685.059	685.048	0.2EY AEP, 15 min burst, Storm 3
P 116\01	116\01	114\14	7.109	685.726	685.619	1.51	RRJ2	375	0.012	1	0.02	0.88	685.835	685.714	0.2EY AEP, 15 min burst, Storm 2
P 117\01	117\01	114\09	9.567	687.114	687.018	1	RRJ2	375	0.012	1	0.041	1.39	687.29	687.134	0.2EY AEP, 20 min burst, Storm 2
P 118\01	118\01	118\02	9.003	687.952	687.862	1	RRJ2	375	0.012	1	0.05	1.05	688.118	688.071	0.2EY AEP, 15 min burst, Storm 2
P 118\02	118\02	118\03	15.66	687.832	687.676	1	RRJ2	450	0.012	1	0.082	1.05	688.052	687.914	0.2EY AEP, 20 min burst, Storm 5
P 118\03	118\03	114\07	9.002	687.646	687.556	1	RRJ2	450	0.012	1	0.082	0.85	687.905	687.878	0.2EY AEP, 20 min burst, Storm 5
P 119\01	119\01	119\02	9.001	688.027	687.937	1	RRJ2	375	0.012	1	0.015	0.8	688.128	688.022	0.2EY AEP, 15 min burst, Storm 2
P 119\02	119\02	114\07	15.476	687.907	687.752	1	RRJ2	375	0.012	1	0.02	0.7	688.022	687.878	0.2EY AEP, 15 min burst, Storm 1
P 120\01	120\01	114\06	9.537	688.438	688.231	2.17	RRJ2	375	0.012	1	0.033	0.43	688.685	688.678	0.2EY AEP, 20 min burst, Storm 5
P 121\01	121\01	114\05	9.539	689.302	689.206	1.01	RRJ2	375	0.012	1	0.043	0.86	689.472	689.408	0.2EY AEP, 15 min burst, Storm 2
P 122\01	122\01	122\02	15.95	686.759	686.58	1.12	RRJ2	375	0.012	1	0.013	0.63	686.848	686.669	0.2EY AEP, 15 min burst, Storm 2
P 122\02	122\02	122\03	29.777	686.55	686.252	1	RRJ2	375	0.012	1	0.021	0.69	686.669	686.375	0.2EY AEP, 20 min burst, Storm 3
P 122\03	122\03	122\04	18.582	686.222	686.036	1	RRJ2	375	0.012	1	0.026	0.6	686.375	686.357	0.2EY AEP, 15 min burst, Storm 2
P 122\04	122\04	122\05	17.253	686.013	685.84	1	RRJ2	375	0.012	1	0.141	1.6	686.286	686.172	0.2EY AEP, 15 min burst, Storm 2
P 122\05	122\05	122\06	14.56	685.81	685.664	1	RRJ2	375	0.012	1	0.141	1.5	686.103	686.031	0.2EY AEP, 15 min burst, Storm 2
P 122\06	122\06	122\07	49.3	685.634	685.24	0.8	RRJ2	450	0.012	1	0.193	1.66	685.94	685.651	0.2EY AEP, 15 min burst, Storm 2
P 122\07	122\07	122\08	14.502	685.21	685.065	1	RRJ2	450	0.012	1	0.235	1.81	685.548	685.448	0.2EY AEP, 20 min burst, Storm 5
P 122\08	122\08	122\09	24.95	685.035	684.785	1	RRJ2	450	0.012	1	0.235	1.65	685.407	685.315	0.2EY AEP, 15 min burst, Storm 1
P 122\09	122\09	112\18	13.501	684.755	684.513	1.79	RRJ2	525	0.012	1	0.31	1.51	685.217	685.178	0.2EY AEP, 15 min burst, Storm 1
P 123\01	123\01	122\07	7	685.449	685.24	2.99	RRJ2	375	0.012	1	0.024	0.38	685.657	685.651	0.2EY AEP, 15 min burst, Storm 4
P 124\01	124\01	124\02	17.585	686.816	686.414	2.29	RRJ2	375	0.012	1	0.015	0.52	686.929	686.551	0.2EY AEP, 20 min burst, Storm 5
P 124\02	124\02	124\03	40.519	686.384	685.979	1	RRJ2	375	0.012	1	0.032	0.67	686.551	686.147	0.2EY AEP, 20 min burst, Storm 5
P 124\03	124\03	122\06	28.548	685.949	685.664	1	RRJ2	375	0.012	1	0.051	0.87	686.143	686.031	0.2EY AEP, 15 min burst, Storm 2
P 125\01	125\01	122\04	8.027	686.123	686.043	1	RRJ2	375	0.012	1	0.117	1.38	686.388	686.357	0.2EY AEP, 15 min burst, Storm 2
P 126\01	126\01	112\16	9	685.553	685.463	1	RRJ2	375	0.012	1	0.053	1.47	685.726	685.598	0.2EY AEP, 15 min burst, Storm 2
P 127\01	127\01	127\02	15.003	685.881	685.656	1.5	RRJ2	600	0.012	1	0.03	1	685.994	685.753	0.2EY AEP, 20 min burst, Storm 4
P 127\02	127\02	112\15	15.476	685.606	685.374	1.5	RRJ2	600	0.012	1	0.043	0.78	685.753	685.615	0.2EY AEP, 20 min burst, Storm 6
P 128\01	128\01	128\02	16.257	694.661	693.885	4.77	RRJ2	375	0.012	1	0.091	1.73	694.88	694.063	0.2EY AEP, 45 min burst, Storm 9
P 128\02	128\02	128\03	29.695	693.713	692.285	4.81	RRJ2	375	0.012	1	0.161	1.71	694.006	692.635	0.2EY AEP, 45 min burst, Storm 9
P 128\03	128\03	128\04	17.985	692.253	691.157	6.09	RRJ2	375	0.012	1	0.201	4.08	692.575	691.327	0.2EY AEP, 45 min burst, Storm 9
P 128\04	128\04	128\05	24.376	690.863	689.681	4.85	RRJ2	375	0.012	1	0.197	3.73	691.183	689.86	0.2EY AEP, 45 min burst, Storm 9
P 128\05	128\05	128\06	20.428	689.289	689.082	1.01	RRJ2	525	0.012	1	0.256	2.09	689.575	689.421	0.2EY AEP, 45 min burst, Storm 9
P 128\06	128\06	128\07	28.655	689.052	688.303	2.61	RRJ2	525	0.012	1	0.269	1.97	689.399	688.616	0.2EY AEP, 45 min burst, Storm 9
P 128\07	128\07	128\08	35.841	688.273	687.446	2.31	RRJ2	525	0.012	1	0.289	1.91	688.616	687.817	0.2EY AEP, 45 min burst, Storm 9
P 128\08	128\08	128\09	28.486	687.416	687.131	1	RRJ2	525	0.012	1	0.324	2.07	687.798	687.484	0.2EY AEP, 45 min burst, Storm 9
P 128\09	128\09	128\10	45.429	687.101	686.647	1	RRJ2	600	0.012	1	0.343	2.25	687.48	686.962	0.2EY AEP, 45 min burst, Storm 9
P 128\10	128\10	128\11	34.847	686.617	686.269	1	RRJ2	600	0.012	1	0.344	2.37	686.962	686.572	0.2EY AEP, 45 min burst, Storm 9
P 128\11	128\11	128\12	25.555	686.031	685.775	1	RRJ2	750	0.012	1	0.663	2.1	686.53	686.273	0.2EY AEP, 45 min burst, Storm 9
P 128\12	128\12	112\15	24.778	685.745	685.448	1.2	RRJ2	750	0.012	1	0.687	3.02	686.253	685.828	0.2EY AEP, 45 min burst, Storm 9
P 129\01	129\01	112\13	12.691	686.602	686.475	1	RRJ2	450	0.012	1	0.141	1.9	686.863	686.687	0.2EY AEP, 15 min burst, Storm 6
P 130\01	130\01	112\12	10.391	687.45	687.346	1	RRJ2	375	0.012	1	0.029	1.33	687.591	687.439	0.2EY AEP, 15 min burst, Storm 2
P 131\01	131\01	131\02	9.001	687.796	687.706	1	RRJ2	375	0.012	1	0.033	1.08	687.956	687.825	0.2EY AEP, 20 min burst, Storm 5
P 131\02	131\02	112\11	15.413	687.676	687.522	1	RRJ2	375	0.012	1	0.04	1.38	687.825	687.637	0.2EY AEP, 20 min burst, Storm 1
P 132\01	132\01	112\09	9.076	688.246	688.155	1	RRJ2	375	0.012	1	0.043	1.41	688.429	688.274	0.2EY AEP, 20 min burst, Storm 5
P 133\01	133\01	133\02	27.748	690.991	690.509	1.74	RRJ2	375	0.012	1	0.029	0.62	691.156	690.696	0.2EY AEP, 20 min burst, Storm 5
P 133\02	133\02	133\03	18.456	690.479	690.188	1.58	RRJ2	375	0.012	1	0.066	1.2	690.665	690.403	0.2EY AEP, 15 min burst, Storm 6
P 133\03	133\03	133\04	26.307	690.158	689.688	1.79	RRJ2	375	0.012	1	0.081	2.02	690.365	689.834	0.2EY AEP, 15 min burst, Storm 6
P 133\04	133\04	112\08	25.307	688.836	688.631	0.81	RRJ2	375	0.012	1	0.133	1.72	689.102	688.876	0.2EY AEP, 20 min burst, Storm 5
P 134\01	134\01	133\04	9.55	689.749	689.4	3.65	RRJ2	375	0.012	1	0.032	2.27	689.91	689.469	0.2EY AEP, 15 min burst, Storm 2
P 135\01	135\01	135\02	12.217	694.813	694.691	1	RRJ2	375	0.012	1	0.08	1.55	695.018	694.868	0.2EY AEP, 20 min burst, Storm 5
P 135\02	135\02	135\03	18.934	694.52	694.33	1	RRJ2	375	0.012	1	0.141	1.8	694.794	694.577	0.2EY AEP, 20 min burst, Storm 5
P 135\03	135\03	135\04	25.605	694.3	694.044	1	RRJ2	450	0.012	1	0.147	1.92	694.566	694.261	0.2EY AEP, 20 min burst, Storm 5
P 135\04	135\04	135\05	27.868	693.438	693.16	1	RRJ2	825	0.012	1	0.657	2.15	693.904	693.614	0.2EY AEP, 45 min burst, Storm 5
P 135\05	135\05	135\06	47.952	693.13	692.65	1	RRJ2	825	0.012	1	0.647	2.15	693.61	693.099	0.2EY AEP, 45 min burst, Storm 5

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 10 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	539	B

MINOR 5YR CALCULATIONS

PIPE DETAILS																
Name	From	To	Reach	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	No. of	Max Pipe	Max Pipe	Max U/S	Max D/S	Due to Storm
	Pit	Pit	Length	U/S IL	D/S IL	Slope	Type	Diameter	Rough	Pipes	Flow	Vel.	HGL	HGL	
			(m)	(m)	(m)	(%)		(mm)	n		(cu.m/s)	(m/s)	(m)	(m)	
P 135\06	135\06	135\07	39.014	692.62	692.23	1	RRJ2	825	0.012	1	0.663	2.04	693.099	692.757	0.2EY AEP, 45 min burst, Storm 5
P 135\07	135\07	135\08	9.944	692.2	692.101	1	RRJ2	825	0.012	1	0.675	2.8	692.69	692.479	0.2EY AEP, 45 min burst, Storm 5
P 135\08	135\08	112\04	15.565	692.071	691.453	3.97	RRJ2	825	0.012	1	0.674	4.69	692.45	691.71	0.2EY AEP, 45 min burst, Storm 5
P 136\01	136\01	135\06	9.385	693.29	693.196	1	RRJ2	375	0.012	1	0.012	1.1	693.376	693.255	0.2EY AEP, 15 min burst, Storm 4
P 138\01	138\01	135\04	10.705	694.183	694.076	1	RRJ2	375	0.012	1	0.029	1.33	694.324	694.17	0.2EY AEP, 15 min burst, Storm 2
P 140\01	140\01	140\02	21.186	694.46	693.636	3.89	RRJ2	675	0.012	1	0.49	4.27	694.699	694.059	0.2EY AEP, 45 min burst, Storm 9
P 140\02	140\02	135\04	13.76	693.606	693.468	1	RRJ2	750	0.012	1	0.514	1.9	694.044	693.904	0.2EY AEP, 45 min burst, Storm 9
P 141\01	141\01	141\02	9.474	690.68	690.585	1	RRJ2	375	0.012	1	0.014	1.13	690.771	690.647	0.2EY AEP, 15 min burst, Storm 2
P 141\02	141\02	141\03	59.958	690.337	688.564	2.96	RRJ2	375	0.012	1	0.043	1.03	690.486	688.83	0.2EY AEP, 15 min burst, Storm 4
P 141\03	141\03	141\04	26.48	688.534	687.77	2.89	RRJ2	375	0.012	1	0.116	2.06	688.782	687.958	0.2EY AEP, 20 min burst, Storm 2
P 141\04	141\04	141\05	29.47	687.688	687.003	2.32	RRJ2	450	0.012	1	0.134	2.19	687.942	687.185	0.2EY AEP, 20 min burst, Storm 2
P 141\05	141\05	141\06	22.505	686.758	686.601	0.7	RRJ2	525	0.012	1	0.243	1.46	687.13	687.045	0.2EY AEP, 20 min burst, Storm 6
P 141\06	141\06	141\07	10.607	686.571	686.497	0.7	RRJ2	525	0.012	1	0.298	1.68	686.966	686.916	0.2EY AEP, 15 min burst, Storm 4
P 141\07	141\07	141\08	18.665	686.467	686.336	0.7	RRJ2	525	0.012	1	0.317	1.91	686.845	686.708	0.2EY AEP, 20 min burst, Storm 6
P 141\08	141\08	128\11	34.994	686.306	686.061	0.7	RRJ2	600	0.012	1	0.333	1.73	686.688	686.54	0.2EY AEP, 20 min burst, Storm 6
P 142\01	142\01	141\05	9.001	687.297	686.977	3.56	RRJ2	375	0.012	1	0.02	0.58	687.426	687.185	0.2EY AEP, 15 min burst, Storm 4
P 143\01	143\01	143\02	47.419	690.653	689.751	1.9	RRJ2	375	0.012	1	0.038	1.81	690.819	689.841	0.2EY AEP, 45 min burst, Storm 5
P 143\02	143\02	143\03	46.568	689.586	687.237	5.04	RRJ2	375	0.012	1	0.055	1.01	689.77	687.458	0.2EY AEP, 45 min burst, Storm 5
P 143\03	143\03	143\04	7.001	687.207	687.137	1	RRJ2	375	0.012	1	0.086	1.68	687.42	687.312	0.2EY AEP, 45 min burst, Storm 9
P 143\04	143\04	141\05	14.962	686.893	686.788	0.7	RRJ2	375	0.012	1	0.104	0.98	687.226	687.185	0.2EY AEP, 20 min burst, Storm 6
P 145\01	145\01	128\04	14.259	691.347	690.893	3.18	RRJ2	375	0.012	1			691.347	691.219	0.2EY AEP, 15 min burst, Storm 5
P 151\01	151\01	128\05	6.037	689.555	689.495	0.99	RRJ2	375	0.012	1	0.054	1.47	689.723	689.631	0.2EY AEP, 45 min burst, Storm 9
P 154\01	154\01	114\10	9.009	686.536	686.446	1	RRJ2	375	0.012	1	0.036	1.37	686.701	686.554	0.2EY AEP, 20 min burst, Storm 1
P 155\01	155\01	102\01	35.724	684.524	684.167	1	RRJ2	525	0.012	1	0.135	1.85	684.718	684.36	0.2EY AEP, 15 min burst, Storm 2
P 156\01	156\01	101\05	15.188	693.729	693.577	1	RRJ2	375	0.012	1	0.021	1.23	693.838	693.655	0.2EY AEP, 15 min burst, Storm 2
P 157\01	157\01	101\07	15.774	690.691	690.507	1.17	RRJ2	375	0.012	1	0.036	1.46	690.838	690.609	0.2EY AEP, 15 min burst, Storm 2
P 158\01	158\01	101\09	15.651	688.998	688.842	1	RRJ2	375	0.012	1	0.035	1.36	689.149	688.948	0.2EY AEP, 15 min burst, Storm 6
P 159\01	159\01	101\11	15.705	688.241	688.084	1	RRJ2	375	0.012	1	0.022	1.26	688.356	688.165	0.2EY AEP, 15 min burst, Storm 2
P 160\01	160\01	101\13	15.079	687.702	687.551	1	RRJ2	375	0.012	1	0.041	1.39	687.869	687.667	0.2EY AEP, 20 min burst, Storm 2
P 161\01	161\01	101\16	16.771	686.725	686.558	1	RRJ2	375	0.012	1	0.023	1.27	686.84	686.64	0.2EY AEP, 20 min burst, Storm 6
P 162\01	162\01	101\17	15.148	685.994	685.843	1	RRJ2	375	0.012	1	0.042	1.39	686.162	685.96	0.2EY AEP, 20 min burst, Storm 2
P 163\01	163\01	101\19	15.746	684.791	684.634	1	RRJ2	375	0.012	1	0.072	0.72	685.104	685.091	0.2EY AEP, 20 min burst, Storm 5
P 164\01	164\01	112\14	9	686.067	685.977	1	RRJ2	375	0.012	1	0.025	1.29	686.198	686.062	0.2EY AEP, 20 min burst, Storm 2
P 165\01	165\01	104\02	11.999	687.301	687.181	1	RRJ2	375	0.012	1	0.018	1.21	687.407	687.254	0.2EY AEP, 15 min burst, Storm 2
P 166\01	166\01	128\07	15.145	688.661	688.51	1	RRJ2	375	0.012	1	0.025	0.96	688.783	688.616	0.2EY AEP, 15 min burst, Storm 2
P 167\01	167\01	128\08	15.032	687.818	687.668	1	RRJ2	375	0.012	1	0.031	0.75	687.967	687.817	0.2EY AEP, 20 min burst, Storm 5
P 168\01	168\01	128\09	15.074	687.436	687.285	1	RRJ2	375	0.012	1	0.02	0.58	687.568	687.484	0.2EY AEP, 20 min burst, Storm 5
P 169\01	169\01	128\12	15.007	686.368	686.218	1	RRJ2	375	0.012	1	0.028	1.32	686.499	686.31	0.2EY AEP, 15 min burst, Storm 2
P 170\01	170\01	135\02	44.512	694.995	694.55	1	RRJ2	375	0.012	1	0.033	0.61	695.177	694.868	0.2EY AEP, 15 min burst, Storm 2
P 171\01	171\01	112\07	7.012	689.201	689.131	1	RRJ2	375	0.012	1	0.013	1.12	689.295	689.192	0.2EY AEP, 20 min burst, Storm 2
P 173\01	173\01	140\02	7.049	694.09	694.02	0.99	RRJ2	375	0.012	1	0.009	0.99	694.167	694.072	0.2EY AEP, 15 min burst, Storm 2
P 1AL\01	1AL\01	101\02	16.847	696.567	696.399	1	RRJ2	375	0.012	1	0.01	1.02	696.639	696.453	0.2EY AEP, 15 min burst, Storm 2
P 1AN\01	1AN\01	1AN\02	9.947	686.967	686.868	1	uPVC	150	0.01	1	0.012	1.19	687.07	686.956	0.2EY AEP, 20 min burst, Storm 5
P 1AN\02	1AN\02	1AN\03	21.504	686.653	686.438	1	uPVC	225	0.01	1	0.025	1.05	686.785	686.596	0.2EY AEP, 20 min burst, Storm 5
P 1AN\03	1AN\03	1AN\04	15.143	686.408	686.257	1	uPVC	300	0.01	1	0.037	1.1	686.559	686.461	0.2EY AEP, 20 min burst, Storm 5
P 1AN\04	1AN\04	1AN\05	3.816	686.227	686.188	1.02	uPVC	300	0.01	1	0.054	1.34	686.41	686.364	0.2EY AEP, 20 min burst, Storm 5
P 1AN\05	1AN\05	1AN\06	27.825	686.158	685.88	1	uPVC	300	0.01	1	0.053	1.72	686.34	686.022	0.2EY AEP, 15 min burst, Storm 2
P 1AN\06	1AN\06	112\17	5.431	685.539	685.485	0.99	RRJ2	375	0.012	1	0.053	1.46	685.714	685.62	0.2EY AEP, 15 min burst, Storm 2
P 1AP\01	1AP\01	1AN\02	9.903	686.782	686.683	1	uPVC	150	0.01	1	0.012	0.98	686.885	686.812	0.2EY AEP, 20 min burst, Storm 6
P 1AQ\01	1AQ\01	1AQ\02	3.7	686.717	686.68	1	uPVC	150	0.01	1	0.017	1.23	686.837	686.794	0.2EY AEP, 20 min burst, Storm 6
P 1AQ\02	1AQ\02	1AQ\03	11.349	686.61	686.429	1.59	uPVC	225	0.01	1	0.017	0.9	686.716	686.569	0.2EY AEP, 20 min burst, Storm 5
P 1AQ\03	1AQ\03	1AQ\04	19.349	686.399	686.103	1.53	uPVC	225	0.01	1	0.028	1.7	686.538	686.201	0.2EY AEP, 20 min burst, Storm 5
P 1AQ\04	1AQ\04	122\09	7.687	685.398	685.129	3.5	RRJ2	375	0.012	1	0.04	0.75	685.581	685.315	0.2EY AEP, 15 min burst, Storm 6
P 1AR\01	1AR\01	1AR\02	18.442	687.086	686.848	1.29	uPVC	150	0.01	1	0.014	1.35	687.195	686.935	0.2EY AEP, 20 min burst, Storm 5
P 1AR\02	1AR\02	1AR\03	17.737	686.765	686.537	1.29	uPVC	225	0.01	1	0.026	1.57	686.9	686.636	0.2EY AEP, 20 min burst, Storm 5
P 1AR\03	1AR\03	126\01	8.288	685.812	685.603	2.52	RRJ2	375	0.012	1	0.038	1.18	685.955	685.726	0.2EY AEP, 20 min burst, Storm 6
P 1AW\01	1AW\01	1AW\02	7.109	691.418	691.238	2.53	uPVC	150	0.01	1	0.014	1.73	691.528	691.309	0.2EY AEP, 20 min burst, Storm 6
P 1AW\02	1AW\02	1AW\03	19.52	691.208	690.801	2.08	uPVC	150	0.01	1	0.013	1.59	691.282	690.874	0.2EY AEP, 20 min burst, Storm 5
P 1AW\03	1AW\03	1AW\04	20	690.704	690.225	2.4	uPVC	225	0.01	1	0.027	1.08	690.841	690.375	0.2EY AEP, 20 min burst, Storm 5
P 1AW\04	1AW\04	1AW\05	20	690.195	689.715	2.4	uPVC	225	0.01	1	0.038	1.24	690.357	689.895	0.2EY AEP, 20 min burst, Storm 6
P 1AW\05	1AW\05	1AW\06	20	689.685	689.28	2.02	uPVC	225	0.01	1	0.046	2.17	689.865	689.399	0.2EY AEP, 15 min burst, Storm 2
P 1AW\06	1AW\06	1AW\07	20	689.183	688.769	2.07	uPVC	300	0.01	1	0.058	1.4	689.364	688.957	0.2EY AEP, 15 min burst, Storm 2
P 1AW\07	1AW\07	1AW\08	20	688.739	688.39	1.74	uPVC	300	0.01	1	0.072	1.46	688.951	688.608	0.2EY AEP, 15 min burst, Storm 1
P 1AW\08	1AW\08	1AW\09	20	688.36	688.021	1.69	uPVC	300	0.01	1	0.079	2.33	688.584	688.175	0.2EY AEP, 15 min burst, Storm 2
P 1AW\09	1AW\09	1AW\10	20	687.921	687.635	1.43	RRJ2	375	0.012	1	0.091	1.94	688.084	687.892	0.2EY AEP, 15 min burst, Storm 2
P 1AW\10	1AW\10	1AW\11	2.14	687.605	687.583	1.03	RRJ2	375	0.012	1	0.101	1.63	687.836	687.787	0.2EY AEP, 15 min burst, Storm 2
P 1AW\11	1AW\11	1AW\12	27.88	687.533	687.254	1	RRJ2	375	0.012	1	0.104	1.77	687.767	687.449	0.2EY AEP, 20 min burst, Storm 5
P 1AW\12	1AW\12	129\01	7.102	686.903	686.732	2.41	RRJ2	375	0.012	1	0.101	2.31	687.089	686.888	0.2EY AEP, 15 min burst, Storm 2
P 1AX\01	1AX\01	1AX\02	20.499	688.924	688.674	1.22	uPVC	150	0.01	1	0.012	1.29	689.028	688.757	0.2EY AEP, 15 min burst, Storm 2
P 1AX\02	1AX\02	114\08	5.881	688.008	687.675	5.66	RRJ2	375	0.012	1	0.025	2.45	688.15	687.729	0.2EY AEP, 20 min burst, Storm 5
P 1AY\01	1AY\01	1AY\02	44.628	689.009	688.563	1	uPVC	150	0.01	1	0.008	0.81	689.09	688.741	0.2EY AEP, 20 min burst, Storm 5
P 1AY\02	1AY\02	1AY\03	3	688.533	688.503	1	uPVC	225	0.01	1	0.026	1.34	688.668	688.615	0.2EY AEP, 20 min burst, Storm 5
P 1AY\03	1AY\03	1AY\04	2.113	688.473	688.452	0.99	uPVC	225	0.01	1	0.026	1.26	688.608	688.569	0.2EY AEP, 20 min burst, Storm 5
P 1AY\04	1AY\04	1AY\05	18.792	688.422	688.234	1	uPVC	225	0.01	1	0.028	1.09	688.561	688.376	0.2EY AEP, 20 min burst, Storm 5

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 11 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	540	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-540.dwg

MINOR 5YR CALCULATIONS

PIPE DETAILS

Name	From Pit	To Pit	Reach Length (m)	Pipe U/S IL (m)	Pipe D/S IL (m)	Pipe Slope (%)	Pipe Type	Pipe Diameter (mm)	Pipe Rough n	No. of Pipes	Max Pipe Flow (cu.m/s)	Max Pipe Vel. (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P 1AY\05	1AY\05	1AY\06	21	688.204	687.994	1	uPVC	225	0.01	1	0.038	1.25	688.367	688.156	0.2EY AEP, 20 min burst, Storm 5
P 1AY\06	1AY\06	1AY\07	21	687.964	687.754	1	uPVC	300	0.01	1	0.051	1.25	688.142	687.946	0.2EY AEP, 20 min burst, Storm 5
P 1AY\07	1AY\07	1AY\08	15.959	687.724	687.564	1	uPVC	300	0.01	1	0.063	1.58	687.922	687.739	0.2EY AEP, 20 min burst, Storm 5
P 1AY\08	1AY\08	1AY\09	2.728	687.514	687.487	0.99	RRJ2	375	0.012	1	0.074	1.6	687.711	687.649	0.2EY AEP, 15 min burst, Storm 2
P 1AY\09	1AY\09	1AY\10	20	687.437	687.237	1	RRJ2	375	0.012	1	0.074	1.61	687.634	687.399	0.2EY AEP, 15 min burst, Storm 2
P 1AY\10	1AY\10	1AY\11	20.957	687.187	686.831	1.7	RRJ2	375	0.012	1	0.074	1.93	687.351	686.971	0.2EY AEP, 15 min burst, Storm 2
P 1AY\11	1AY\11	125\01	5.265	686.337	686.153	3.49	RRJ2	375	0.012	1	0.088	1.32	686.552	686.47	0.2EY AEP, 15 min burst, Storm 2
P 1BA\01	1BA\01	1BA\02	21.1	690.722	690.223	2.36	uPVC	150	0.01	1	0.014	1.69	690.832	690.296	0.2EY AEP, 20 min burst, Storm 5
P 1BA\02	1BA\02	1BA\03	21.1	690.109	689.582	2.5	uPVC	225	0.01	1	0.027	1.37	690.247	689.695	0.2EY AEP, 20 min burst, Storm 6
P 1BA\03	1BA\03	1BA\04	21.099	689.525	688.947	2.74	uPVC	225	0.01	1	0.039	1.26	689.69	689.118	0.2EY AEP, 15 min burst, Storm 1
P 1BA\04	1BA\04	1BA\05	24.542	688.917	688.01	3.7	uPVC	225	0.01	1	0.047	2.7	689.099	688.112	0.2EY AEP, 20 min burst, Storm 5
P 1BA\05	1BA\05	141\06	6.297	687.109	686.889	3.49	RRJ2	375	0.012	1	0.064	1.46	687.293	687.045	0.2EY AEP, 20 min burst, Storm 5
P 1BC\01	1BC\01	1BC\02	32.518	691.482	689.95	4.71	uPVC	225	0.01	1	0.021	2.48	691.603	690.011	0.2EY AEP, 15 min burst, Storm 2
P 1BC\02	1BC\02	141\03	6.857	689.086	688.764	4.7	RRJ2	375	0.012	1	0.027	2.04	689.227	688.83	0.2EY AEP, 15 min burst, Storm 2
P 1BD\01	1BD\01	1BD\02	17.999	694.56	694.266	1.63	uPVC	225	0.01	1	0.014	0.77	694.663	694.369	0.2EY AEP, 15 min burst, Storm 2
P 1BD\02	1BD\02	1BD\03	18	694.236	693.974	1.46	uPVC	225	0.01	1	0.024	1.13	694.363	694.091	0.2EY AEP, 15 min burst, Storm 2
P 1BD\03	1BD\03	1BD\04	17.999	693.944	693.743	1.12	uPVC	300	0.01	1	0.037	1.17	694.091	693.889	0.2EY AEP, 20 min burst, Storm 5
P 1BD\04	1BD\04	1BD\05	18	693.693	693.513	1	uPVC	300	0.01	1	0.048	1.23	693.867	693.709	0.2EY AEP, 15 min burst, Storm 2
P 1BD\05	1BD\05	1BD\06	18	693.483	693.303	1	uPVC	300	0.01	1	0.058	1.32	693.673	693.548	0.2EY AEP, 15 min burst, Storm 2
P 1BD\06	1BD\06	1BD\07	2.672	693.273	693.246	1.01	uPVC	300	0.01	1	0.069	1.84	693.481	693.412	0.2EY AEP, 15 min burst, Storm 2
P 1BD\07	1BD\07	1BD\08	8.32	693.2	693.075	1.5	RRJ2	375	0.012	1	0.069	1.34	693.39	693.251	0.2EY AEP, 15 min burst, Storm 2
P 1BD\08	1BD\08	1BD\09	19.2	693.025	692.679	1.8	RRJ2	375	0.012	1	0.086	1.66	693.237	692.855	0.2EY AEP, 20 min burst, Storm 5
P 1BD\09	1BD\09	1BD\10	19.2	692.629	692.374	1.33	RRJ2	375	0.012	1	0.099	1.51	692.855	692.588	0.2EY AEP, 15 min burst, Storm 2
P 1BD\10	1BD\10	1BD\11	19.201	692.354	691.895	2.39	RRJ2	375	0.012	1	0.109	1.8	692.588	692.094	0.2EY AEP, 15 min burst, Storm 2
P 1BD\11	1BD\11	1BD\12	17.823	691.845	691.453	2.2	RRJ2	375	0.012	1	0.119	2.44	692.094	691.622	0.2EY AEP, 15 min burst, Storm 2
P 1BD\12	1BD\12	112\05	5.096	690.822	690.72	2	RRJ2	375	0.012	1	0.131	2.42	691.085	690.903	0.2EY AEP, 15 min burst, Storm 2
P 1BE\01	1BE\01	1BE\02	20.46	695.359	694.528	4.06	uPVC	150	0.01	1	0.014	1.62	695.469	694.603	0.2EY AEP, 15 min burst, Storm 2
P 1BE\02	1BE\02	1BE\03	23.373	694.428	693.217	5.18	uPVC	225	0.01	1	0.024	2.62	694.557	693.281	0.2EY AEP, 20 min burst, Storm 5
P 1BE\03	1BE\03	114\01	5.331	692.343	692.183	3	RRJ2	375	0.012	1	0.037	1.14	692.468	692.346	0.2EY AEP, 20 min burst, Storm 5

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 12 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	541	B

MINOR 5YR CALCULATIONS

OVERFLOW ROUTES											
Name	Pit	Bypass	Travel Time	Cross Section	Total	Bypass	Max Flood	Max Flood	Max DxV	Max V	Due to Storm
	Name	Pit			Approach	Flow	Width	Depth			
			(min)		(m3/s)	(m3/s)	(m)	(m)			
F 101\01	101\01	101\02	0.4	7.5m BLVD Road	0	0	1.05	0.058	0.05	1.24	0.2EY AEP, 20 min burst, Storm 6
F 101\02	101\02	111\01	0.7	7.5m BLVD Road	0.016	0	1	0.056	0.04	1.51	0.2EY AEP, 20 min burst, Storm 5
F 101\03	101\03	101\04	0.3	7.5m BLVD Road	0	0	1.02	0.057	0.06	2.2	0.2EY AEP, 15 min burst, Storm 2
F 101\04	101\04	101\05	0.3	7.5m BLVD Road	0.012	0	1.4	0.068	0.06	1.08	0.2EY AEP, 20 min burst, Storm 5
F 101\05	101\05	108\02	0.5	7.5m BLVD Road	0.023	0.002	0.4	0.035	0.06	5.53	0.2EY AEP, 15 min burst, Storm 2
F 101\06	101\06	101\07	0.3	7.5m BLVD Road	0.017	0	1.46	0.07	0.08	1.27	0.2EY AEP, 20 min burst, Storm 5
F 101\07	101\07	107\02	1	7.5m BLVD Road	0.029	0.004	0.44	0.039	0.08	4.85	0.2EY AEP, 15 min burst, Storm 2
F 101\08	101\08	101\09	1.1	7.5m BLVD Road	0.016	0	1.05	0.058	0.05	1.6	0.2EY AEP, 15 min burst, Storm 2
F 101\09	101\09	101\10	1	7.5m BLVD Road	0.013	0	2.13	0.091	0.05	0.67	0.2EY AEP, 20 min burst, Storm 5
F 101\10	101\10	101\11	0.7	7.5m BLVD Road	0.026	0.002	1.55	0.073	0.04	2.2	0.2EY AEP, 20 min burst, Storm 5
F 101\11	101\11	106\02	0.6	7.5m BLVD Road	0.02	0	1.2	0.062	0.03	0.61	0.2EY AEP, 15 min burst, Storm 2
F 101\12	101\12	101\13	0.4	7.5m BLVD Road	0.015	0	1.14	0.061	0.03	0.95	0.2EY AEP, 20 min burst, Storm 5
F 101\13	101\13	104\02	0.2	Dummy used to model flow across road low points	0.01	0	1.59	0.005	0.01	2.71	0.2EY AEP, 20 min burst, Storm 5
F 101\14	101\14	101\15	0.3	7.5m BLVD Road	0.004	0	0	0	0	0	-
F 101\15	101\15	101\16	0.7	7.5m BLVD Road	0.036	0	1.6	0.075	0.04	0.6	0.2EY AEP, 20 min burst, Storm 5
F 101\16	101\16	101\17	1	7.5m BLVD Road	0.021	0	2.16	0.091	0.06	0.77	0.2EY AEP, 20 min burst, Storm 5
F 101\17	101\17	101\18	0.8	7.5m BLVD Road	0.029	0.002	1.49	0.071	0.05	3.26	0.2EY AEP, 15 min burst, Storm 1
F 101\18	101\18	101\19	0.2	7.5m BLVD Road	0.026	0.001	1.43	0.069	0.05	0.8	0.2EY AEP, 20 min burst, Storm 5
F 101\19	101\19	102\01	0.1	Dummy used to model flow across road low points	0.019	0	0	0	0	0	-
F 101\20	101\20	102\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 101\21	-	-	-	-	-	-	-	-	-	-	-
F 101\22	-	-	-	-	-	-	-	-	-	-	-
F 102\01	102\01	102\02	0.2	Dummy used to model flow across road low points	0.048	0	0	0	0	0	-
F 102\02	102\02	102\03	1	Dummy used to model flow across road low points	0.03	0	0	0	0	0	-
F 102\03	102\03	102\04	1	Dummy used to model flow across road low points	0	0	0	0	0	0	-
F 102\04	-	-	-	-	-	-	-	-	-	-	-
F 104\01	104\01	104\02	1	Local Road 1 (RK - 4.5m half road)	0.496	0	2.02	0.061	0.01	0.14	0.2EY AEP, 45 min burst, Storm 7
F 104\02	104\02	101\15	0.3	Dummy used to model flow across road low points	0.018	0	0	0	0	0	-
F 105\01	105\01	154\01	0.7	Dummy used to model flow across road low points	0.064	0	0	0	0	0	-
F 105\02	105\02	161\01	0.8	Local Road 1 (RK - 4.5m half road)	0.028	0	1.71	0.052	0.02	0.43	0.2EY AEP, 20 min burst, Storm 4
F 106\01	106\01	106\02	1	Local Road 1 (K&G - 4.5m half road)	0.407	0	1.59	0.074	0.01	0.18	0.2EY AEP, 20 min burst, Storm 5
F 106\02	106\02	101\13	0.3	Local Road 2 (RK - 3.5m half road)	0.002	0	0	0	0	0	-
F 106\03	106\03	101\12	0.2	Local Road 2 (RK - 3.5m half road)	0.007	0	0	0	0	0	-
F 107\01	107\01	107\02	1	Local Road 1 (K&G - 4.5m half road)	0.211	0	1.16	0.061	0.01	0.2	0.2EY AEP, 20 min burst, Storm 2
F 107\02	107\02	107\03	0.2	Local Road 2 (RK - 3.5m half road)	0.012	0	0	0	0	0	-
F 107\03	107\03	101\08	0.1	Local Road 2 (RK - 3.5m half road)	0.006	0	0	0	0	0	-
F 108\01	108\01	108\02	1	Local Road 1 (K&G - 4.5m half road)	0.19	0	1.01	0.057	0.03	0.95	0.2EY AEP, 20 min burst, Storm 5
F 108\02	108\02	108\03	0.1	Dummy used to model flow across road low points	0.007	0.003	8.91	0.027	0	0.03	0.2EY AEP, 15 min burst, Storm 5
F 108\03	108\03	101\06	0.2	Local Road 2 (RK - 3.5m half road)	0.056	0.005	0.87	0.027	0.01	0.44	0.2EY AEP, 20 min burst, Storm 5
F 109\01	109\01	109\02	0.3	Local Road 1 (K&G - 4.5m half road)	1.128	0	0.26	0.023	0.05	2.73	0.2EY AEP, 15 min burst, Storm 2
F 109\02	109\02	101\04	1	Local Road 2 (RK - 3.5m half road)	0.006	0	0	0	0	0	-
F 109\03	109\03	101\04	1	7.5m BLVD Road	0	0	0.36	0.031	0.03	2.19	0.2EY AEP, 15 min burst, Storm 2
F 110\01	110\01	109\02	0.2	Dummy used to model flow across road low points	0.043	0.002	4.56	0.014	0	0.06	0.2EY AEP, 15 min burst, Storm 5
F 111\01	111\01	170\01	0.1	Local Road 1 (RK - 4.5m half road)	0.013	0	0	0	0	0	-
F 111\02	111\02	138\01	0.6	Local Road 1 (RK - 4.5m half road)	0.003	0	0	0	0	0	-
F 112\01	112\01	112\02	1	Dummy used to model flow across road low points	1.246	0	0	0	0	0	-
F 112\02	112\02	112\03	0.1	Dummy used to model flow across road low points	0.132	0	0	0	0	0	-
F 112\03	112\03	141\02	0.3	Dummy used to model flow across road low points	0.102	0	0	0	0	0	-
F 112\04	112\04	112\05	0.2	Local Road 2 (RK - 3.5m half road)	0.003	0	0.66	0.021	0.01	0.69	0.2EY AEP, 20 min burst, Storm 1
F 112\05	112\05	112\06	0.1	Local Road 2 (RK - 3.5m half road)	0.003	0	0.69	0.022	0.01	0.64	0.2EY AEP, 20 min burst, Storm 1
F 112\06	112\06	171\01	0.1	Local Road 2 (RK - 3.5m half road)	0.003	0	1.24	0.038	0.01	0.38	0.2EY AEP, 15 min burst, Storm 2
F 112\07	112\07	112\08	1	Local Road 2 (RK - 3.5m half road)	0.025	0	0	0	0	0	-
F 112\08	112\08	112\09	0.6	Local Road 1 (RK - 4.5m half road)	0.002	0	1.96	0.059	0.04	0.78	0.2EY AEP, 20 min burst, Storm 5
F 112\09	112\09	112\10	0.2	Local Road 1 (RK - 4.5m half road)	0.025	0.002	1.6	0.049	0.02	0.59	0.2EY AEP, 20 min burst, Storm 5
F 112\10	112\10	130\01	0.3	Local Road 1 (RK - 4.5m half road)	0.016	0	2.07	0.062	0.03	0.64	0.2EY AEP, 15 min burst, Storm 2
F 112\11	112\11	112\12	0.5	Local Road 1 (RK - 4.5m half road)	0.003	0	1.77	0.053	0.03	0.58	0.2EY AEP, 20 min burst, Storm 5
F 112\12	112\12	112\13	0.8	Local Road 1 (RK - 4.5m half road)	0.015	0	2.2	0.066	0.04	0.74	0.2EY AEP, 20 min burst, Storm 5
F 112\13	112\13	112\14	0.2	Local Road 1 (RK - 4.5m half road)	0.033	0.004	1.29	0.039	0.02	0.53	0.2EY AEP, 20 min burst, Storm 5
F 112\14	112\14	127\01	0.1	Dummy used to model flow across road low points	0.02	0.012	10.28	0.094	0	0.02	0.2EY AEP, 15 min burst, Storm 4
F 112\15	112\15	112\16	0.2	Local Road 1 (RK - 4.5m half road)	0.01	0	1.57	0.048	0.02	0.51	0.2EY AEP, 20 min burst, Storm 5
F 112\16	112\16	112\17	0.2	Local Road 1 (RK - 4.5m half road)	0.013	0.001	1.94	0.059	0.02	0.49	0.2EY AEP, 20 min burst, Storm 2
F 112\17	112\17	112\18	0.2	Local Road 1 (RK - 4.5m half road)	0.015	0	1.1	0.034	0.01	0.44	0.2EY AEP, 20 min burst, Storm 1
F 112\18	112\18	114\19	0.4	Local Road 1 (RK - 4.5m half road)	0.004	0	0	0	0	0	-
F 112\19	112\19	113\02	1	Dummy used to model flow across road low points	0.02	0	0	0	0	0	-
F 112\20	-	-	-	-	-	-	-	-	-	-	-

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
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ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
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ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 13 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	542	B

MINOR 5YR CALCULATIONS

OVERFLOW ROUTES											
Name	Pit	Bypass	Travel Time	Cross Section	Total	Bypass	Max Flood	Max Flood	Max DxV	Max V	Due to Storm
	Name	Pit			Approach	Flow	Width	Depth			
			(min)		(m3/s)	(m3/s)	(m)	(m)			
F 112\21	-	-	-	-	-	-	-	-	-	-	-
F 113\01	-	-	-	-	-	-	-	-	-	-	-
F 113\02	-	-	-	-	-	-	-	-	-	-	-
F 114\01	114\01	114\02	0.2	Local Road 1 (RK - 4.5m half road)	0.008	0	1.54	0.047	0.03	0.66	0.2EY AEP, 15 min burst, Storm 2
F 114\02	114\02	133\01	0.4	Local Road 1 (RK - 4.5m half road)	0.012	0	1.94	0.058	0.04	0.78	0.2EY AEP, 15 min burst, Storm 2
F 114\03	114\03	121\01	0.6	Local Road 1 (RK - 4.5m half road)	0.015	0	2.08	0.063	0.06	1.08	0.2EY AEP, 15 min burst, Storm 2
F 114\04	114\04	114\05	0.5	Local Road 1 (RK - 4.5m half road)	0.005	0	1.95	0.059	0.05	0.97	0.2EY AEP, 15 min burst, Storm 2
F 114\05	114\05	114\06	0.4	Local Road 1 (RK - 4.5m half road)	0.028	0.003	1.8	0.054	0.03	0.74	0.2EY AEP, 20 min burst, Storm 5
F 114\06	114\06	119\01	0.2	Local Road 1 (RK - 4.5m half road)	0.022	0	0	0	0	0	-
F 114\07	114\07	114\08	0.4	Local Road 1 (RK - 4.5m half road)	0.002	0	1.08	0.033	0.01	0.43	0.2EY AEP, 20 min burst, Storm 1
F 114\08	114\08	114\09	0.6	Local Road 1 (RK - 4.5m half road)	0.004	0	2.07	0.062	0.04	0.67	0.2EY AEP, 20 min burst, Storm 5
F 114\09	114\09	114\10	0.6	Local Road 1 (RK - 4.5m half road)	0.024	0.001	2.05	0.062	0.02	0.4	0.2EY AEP, 15 min burst, Storm 2
F 114\10	114\10	127\01	0.8	Local Road 1 (RK - 4.5m half road)	0.022	0	0	0	0	0	-
F 114\11	114\11	114\12	0.5	Dummy used to model flow across road low points	0	0	0	0	0	0	-
F 114\12	114\12	114\13	0.3	Local Road 2 (RK - 3.5m half road)	0.016	0	1.77	0.053	0.03	0.57	0.2EY AEP, 15 min burst, Storm 2
F 114\13	114\13	114\14	0.5	Local Road 2 (RK - 3.5m half road)	0.017	0	1.98	0.06	0.03	0.61	0.2EY AEP, 20 min burst, Storm 5
F 114\14	114\14	114\15	0.3	Local Road 2 (RK - 3.5m half road)	0.023	0.001	1.57	0.048	0.02	0.52	0.2EY AEP, 15 min burst, Storm 6
F 114\15	114\15	114\16	0.3	Local Road 2 (RK - 3.5m half road)	0.015	0	1.44	0.044	0.03	0.74	0.2EY AEP, 15 min burst, Storm 2
F 114\16	114\16	114\17	0.5	Local Road 2 (RK - 3.5m half road)	0.025	0	0	0	0	0	-
F 114\17	114\17	114\18	1.4	Local Road 1 (RK - 4.5m half road)	0.008	0	0	0	0	0	-
F 114\18	114\18	114\19	0.8	Local Road 1 (RK - 4.5m half road)	0.003	0	1.96	0.059	0.02	0.36	0.2EY AEP, 20 min burst, Storm 5
F 114\19	114\19	112\19	0.2	Dummy used to model flow across road low points	0.071	0.002	3.36	0.01	0	0.11	0.2EY AEP, 15 min burst, Storm 4
F 116\01	116\01	114\17	0.6	Local Road 2 (RK - 3.5m half road)	0.023	0	1.24	0.038	0.01	0.29	0.2EY AEP, 20 min burst, Storm 1
F 117\01	117\01	154\01	0.6	Local Road 1 (RK - 4.5m half road)	0.041	0.003	2.28	0.068	0.03	0.39	0.2EY AEP, 15 min burst, Storm 1
F 118\01	118\01	118\02	0.8	Dummy used to model flow across road low points	0.038	0.006	10.11	0.054	0	0.01	0.2EY AEP, 15 min burst, Storm 8
F 118\02	118\02	118\03	1.5	Local Road 1 (K&G - 4.5m half road)	0.043	0	0	0	0	0	-
F 118\03	118\03	117\01	0.9	Local Road 1 (RK - 4.5m half road)	0.003	0	2.1	0.063	0.04	0.69	0.2EY AEP, 20 min burst, Storm 5
F 119\01	119\01	119\02	0.4	Dummy used to model flow across road low points	0.023	0.002	5.55	0.017	0	0.04	0.2EY AEP, 15 min burst, Storm 5
F 119\02	119\02	114\07	0.9	Local Road 1 (RK - 4.5m half road)	0.007	0	0	0	0	0	-
F 120\01	120\01	118\01	0.2	Local Road 1 (RK - 4.5m half road)	0.036	0.001	1.93	0.058	0.04	0.63	0.2EY AEP, 15 min burst, Storm 2
F 121\01	121\01	120\01	0.4	Local Road 1 (RK - 4.5m half road)	0.038	0.009	1.95	0.059	0.04	0.82	0.2EY AEP, 20 min burst, Storm 5
F 122\01	122\01	125\01	0.1	Dummy used to model flow across road low points	0.017	0	0	0	0	0	-
F 122\02	122\02	122\03	1	Local Road 1 (RK - 4.5m half road)	0.011	0	0	0	0	0	-
F 122\03	122\03	122\04	0.3	Local Road 2 (RK - 3.5m half road)	0.008	0	0.81	0.025	0.01	0.37	0.2EY AEP, 20 min burst, Storm 1
F 122\04	122\04	122\05	0.4	Local Road 2 (RK - 3.5m half road)	0.003	0	0.78	0.024	0.01	0.34	0.2EY AEP, 20 min burst, Storm 1
F 122\05	122\05	122\06	0.3	Local Road 2 (RK - 3.5m half road)	0.002	0	0.73	0.023	0.01	0.33	0.2EY AEP, 20 min burst, Storm 1
F 122\06	122\06	122\07	1.1	Local Road 2 (RK - 3.5m half road)	0.002	0	1.86	0.056	0.02	0.49	0.2EY AEP, 20 min burst, Storm 2
F 122\07	122\07	122\08	0.3	Local Road 2 (RK - 3.5m half road)	0.016	0	0.77	0.024	0.01	0.35	0.2EY AEP, 20 min burst, Storm 1
F 122\08	122\08	112\19	0.9	Local Road 2 (RK - 3.5m half road)	0.002	0	0	0	0	0	-
F 122\09	122\09	112\19	0.4	Local Road 1 (RK - 4.5m half road)	0.065	0.003	0.83	0.026	0.01	0.31	0.2EY AEP, 20 min burst, Storm 5
F 123\01	123\01	112\19	1.2	Local Road 2 (RK - 3.5m half road)	0.022	0	0	0	0	0	-
F 124\01	124\01	124\02	0.8	DUM OVERLAND PATH	0.022	0	0	0	0	0	-
F 124\02	124\02	124\03	0.8	Road No 15	0.025	0	2.39	0.078	0.03	0.48	0.2EY AEP, 15 min burst, Storm 2
F 124\03	124\03	123\01	1.4	Road No 15	0.016	0	0	0	0	0	-
F 125\01	125\01	123\01	1.9	Local Road 2 (RK - 3.5m half road)	0.042	0	2.06	0.062	0.03	0.51	0.2EY AEP, 15 min burst, Storm 4
F 126\01	126\01	122\09	1	Local Road 1 (RK - 4.5m half road)	0.018	0	0	0	0	0	-
F 127\01	127\01	127\02	0.4	Dummy used to model flow across road low points	0.052	0	0	0	0	0	-
F 127\02	127\02	112\15	0.1	Dummy used to model flow across road low points	0.023	0	0	0	0	0	-
F 128\01	128\01	128\02	0.1	Local Road 1 (K&G - 4.5m half road)	0.149	0.041	2.02	0.087	0.11	1.42	0.2EY AEP, 45 min burst, Storm 9
F 128\02	128\02	128\03	0.2	Local Road 1 (K&G - 4.5m half road)	0.074	0.02	1.83	0.081	0.09	1.33	0.2EY AEP, 45 min burst, Storm 9
F 128\03	128\03	128\04	1	Local Road 1 (K&G - 4.5m half road)	0.046	0.007	0.23	0.02	0.06	2.88	0.2EY AEP, 45 min burst, Storm 9
F 128\04	128\04	128\05	0.2	Local Road 1 (K&G - 4.5m half road)	0.026	0	0.4	0.035	0.04	2.48	0.2EY AEP, 15 min burst, Storm 2
F 128\05	128\05	166\01	0.4	7.5m BLVD Road	0.005	0	0	0	0	0	-
F 128\06	128\06	128\07	0.2	7.5m BLVD Road	0.024	0	0.61	0.045	0.04	1.83	0.2EY AEP, 15 min burst, Storm 2
F 128\07	128\07	128\08	0.6	7.5m BLVD Road	0.006	0	0.82	0.051	0.04	1.39	0.2EY AEP, 15 min burst, Storm 2
F 128\08	128\08	128\09	1	7.5m BLVD Road	0.008	0	0.83	0.051	0.03	1.07	0.2EY AEP, 15 min burst, Storm 2
F 128\09	128\09	122\01	0.9	7.5m BLVD Road	0.006	0	0	0	0	0	-
F 128\10	128\10	122\02	1	Dummy used to model flow across road low points	0.003	0	0	0	0	0	-
F 128\11	128\11	128\12	0.7	7.5m BLVD Road	0.007	0	0	0	0	0	-
F 128\12	128\12	126\01	0.5	7.5m BLVD Road	0.011	0	0	0	0	0	-
F 129\01	129\01	164\01	0.4	Local Road 1 (RK - 4.5m half road)	0.041	0.003	0.68	0.021	0.01	0.44	0.2EY AEP, 15 min burst, Storm 4
F 130\01	130\01	129\01	0.4	Local Road 1 (RK - 4.5m half road)	0.023	0.001	2.16	0.065	0.04	0.69	0.2EY AEP, 20 min burst, Storm 5
F 131\01	131\01	131\02	0.7	Dummy used to model flow across road low points	0.048	0.002	7.95	0.024	0	0.03	0.2EY AEP, 15 min burst, Storm 5
F 131\02	131\02	112\11	0.9	Local Road 1 (RK - 4.5m half road)	0.011	0	0	0	0	0	-
F 132\01	132\01	131\01	0.2	Local Road 1 (RK - 4.5m half road)	0.037	0.005	0.82	0.025	0.01	0.5	0.2EY AEP, 20 min burst, Storm 1
F 133\01	133\01	133\02	0.3	Local Road 1 (RK - 4.5m half road)	0.023	0.001	2.05	0.062	0.04	0.78	0.2EY AEP, 15 min burst, Storm 2
F 133\02	133\02	133\03	0.2	Local Road 1 (RK - 4.5m half road)	0.028	0.003	1.7	0.051	0.03	0.67	0.2EY AEP, 20 min burst, Storm 5
F 133\03	133\03	133\04	0.3	Local Road 1 (RK - 4.5m half road)	0.021	0	1.73	0.052	0.03	0.7	0.2EY AEP, 15 min burst, Storm 2
F 133\04	133\04	171\01	0.3	Local Road 1 (RK - 4.5m half road)	0.017	0	0.55	0.018	0	0.23	0.2EY AEP, 15 min burst, Storm 3
F 134\01	134\01	132\01	0.8	Local Road 1 (RK - 4.5m half road)	0.047	0.001	2.21	0.066	0.05	0.88	0.2EY AEP, 20 min burst, Storm 5

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 14 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	543	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-543.dwg

MINOR 5YR CALCULATIONS

OVERFLOW ROUTES											
Name	Pit	Bypass	Travel Time	Cross Section	Total	Bypass	Max Flood	Max Flood	Max DxV	Max V	Due to Storm
	Name	Pit			Approach	Flow	Width	Depth			
			(min)		(m3/s)	(m3/s)	(m)	(m)			
F 135\01	135\01	135\02	1	Dummy used to model flow across road low points	0.119	0	0	0	0	0	-
F 135\02	135\02	135\03	0.3	Local Road 1 (RK - 4.5m half road)	0.028	0.002	1.24	0.038	0.01	0.42	0.2EY AEP, 20 min burst, Storm 2
F 135\03	135\03	173\01	0.4	Local Road 1 (RK - 4.5m half road)	0.01	0	0.83	0.026	0.02	0.59	0.2EY AEP, 15 min burst, Storm 2
F 135\04	135\04	135\05	0.5	Local Road 1 (K&G - 4.5m half road)	0	0	0.72	0.048	0.02	0.7	0.2EY AEP, 15 min burst, Storm 1
F 135\05	135\05	135\06	0.7	Local Road 1 (K&G - 4.5m half road)	0.005	0	0.92	0.054	0.03	0.53	0.2EY AEP, 25 min burst, Storm 7
F 135\06	135\06	135\07	0.6	Local Road 1 (K&G - 4.5m half road)	0.008	0	0.86	0.052	0.03	0.69	0.2EY AEP, 20 min burst, Storm 1
F 135\07	135\07	141\02	0.6	Local Road 1 (K&G - 4.5m half road)	0.006	0	2.03	0.087	0.06	0.89	0.2EY AEP, 15 min burst, Storm 4
F 135\08	135\08	112\04	0.2	Local Road 1 (RK - 4.5m half road)	0.007	0	0.88	0.027	0.01	0.62	0.2EY AEP, 20 min burst, Storm 1
F 136\01	136\01	135\08	0.6	Local Road 1 (RK - 4.5m half road)	0.011	0	1.31	0.04	0.02	0.46	0.2EY AEP, 15 min burst, Storm 4
F 138\01	138\01	136\01	1	Local Road 1 (RK - 4.5m half road)	0.038	0	1.55	0.047	0.02	0.52	0.2EY AEP, 15 min burst, Storm 4
F 140\01	140\01	140\02	1	Local Road 2 (RK - 3.5m half road)	0.561	0	0	0	0	0	-
F 140\02	140\02	135\04	0.2	Local Road 1 (K&G - 4.5m half road)	0.029	0	0	0	0	0	-
F 141\01	-	-	-	-	-	-	-	-	-	-	-
F 141\02	141\02	141\03	0.4	Local Road 1 (RK - 4.5m half road)	0.03	0.003	2.04	0.062	0.06	1.04	0.2EY AEP, 20 min burst, Storm 5
F 141\03	141\03	141\04	0.2	Local Road 1 (RK - 4.5m half road)	0.039	0.01	1.67	0.05	0.04	0.86	0.2EY AEP, 15 min burst, Storm 2
F 141\04	141\04	143\03	0.3	Local Road 1 (RK - 4.5m half road)	0.031	0.001	1.83	0.055	0.03	0.6	0.2EY AEP, 15 min burst, Storm 2
F 141\05	141\05	141\06	0.2	Local Road 1 (RK - 4.5m half road)	0.004	0	1.04	0.032	0.01	0.46	0.2EY AEP, 20 min burst, Storm 1
F 141\06	141\06	141\07	0.1	Local Road 1 (RK - 4.5m half road)	0.004	0	1.63	0.049	0.05	0.94	0.2EY AEP, 15 min burst, Storm 2
F 141\07	141\07	141\08	0.1	Dummy used to model flow across road low points	0.028	0	0	0	0	0	-
F 141\08	141\08	169\01	0.5	Dummy used to model flow across road low points	0.018	0	0	0	0	0	-
F 142\01	142\01	141\08	0.5	Local Road 1 (K&G - 4.5m half road)	0.018	0	1.71	0.078	0.02	0.32	0.2EY AEP, 20 min burst, Storm 1
F 143\01	143\01	151\01	0.9	Grassed swale with 1:4 sideslopes	0.063	0.016	1.04	0.13	0.08	0.7	0.2EY AEP, 45 min burst, Storm 9
F 143\02	143\02	143\03	0.4	Local Road 1 (K&G - 4.5m half road)	0.035	0	1.47	0.07	0.06	1.65	0.2EY AEP, 15 min burst, Storm 2
F 143\03	143\03	143\04	0.2	Local Road 1 (K&G - 4.5m half road)	0.012	0.003	1.13	0.06	0.01	0.12	0.2EY AEP, 15 min burst, Storm 8
F 143\04	143\04	141\05	0.1	Local Road 1 (K&G - 4.5m half road)	0.04	0	0	0	0	0	-
F 145\01	145\01	128\06	0.2	Dummy used to model flow across road low points	0	0	0	0	0	0	-
F 151\01	151\01	166\01	0.2	Dummy used to model flow across road low points	0.042	0	0	0	0	0	-
F 154\01	154\01	114\10	0.2	Dummy used to model flow across road low points	0.038	0.005	5.59	0.017	0	0.1	0.2EY AEP, 15 min burst, Storm 4
F 155\01	155\01	102\01	0.4	Local Road 1 (K&G - 4.5m half road)	0.187	0	1.94	0.084	0.02	0.28	0.2EY AEP, 20 min burst, Storm 5
F 156\01	156\01	114\01	1	Local Road 1 (RK - 4.5m half road)	0.027	0	1.21	0.037	0.02	0.75	0.2EY AEP, 20 min burst, Storm 1
F 157\01	157\01	158\01	1	7.5m BLVD Road	0.058	0.004	1.39	0.068	0.06	3.97	0.2EY AEP, 15 min burst, Storm 6
F 158\01	158\01	118\01	1	Local Road 2 (K&G - 3.5 half road)	0.042	0.001	0.2	0.018	0.01	0.61	0.2EY AEP, 20 min burst, Storm 10
F 159\01	159\01	160\01	1	7.5m BLVD Road	0.032	0	2.35	0.097	0.05	0.65	0.2EY AEP, 20 min burst, Storm 2
F 160\01	160\01	105\01	1	7.5m BLVD Road	0.044	0.004	0.17	0.014	0.04	2.96	0.2EY AEP, 15 min burst, Storm 4
F 161\01	161\01	162\01	1	7.5m BLVD Road	0.031	0	2.16	0.091	0.06	0.75	0.2EY AEP, 20 min burst, Storm 2
F 162\01	162\01	163\01	1	7.5m BLVD Road	0.043	0.004	2.32	0.096	0.06	2.75	0.2EY AEP, 15 min burst, Storm 2
F 163\01	163\01	101\19	1	Dummy used to model flow across road low points	0.049	0	0	0	0	0	-
F 164\01	164\01	112\14	1	Dummy used to model flow across road low points	0.037	0	0	0	0	0	-
F 165\01	165\01	101\15	1	Local Road 2 (RK - 3.5m half road)	0.024	0	0	0	0	0	-
F 166\01	166\01	167\01	1	7.5m BLVD Road	0.036	0	1.53	0.072	0.06	0.98	0.2EY AEP, 15 min burst, Storm 2
F 167\01	167\01	168\01	1	7.5m BLVD Road	0.026	0.002	1.34	0.067	0.04	2.76	0.2EY AEP, 20 min burst, Storm 5
F 168\01	168\01	141\07	1	7.5m BLVD Road	0.018	0	0.34	0.03	0.03	1.07	0.2EY AEP, 20 min burst, Storm 1
F 169\01	169\01	164\01	1	7.5m BLVD Road	0.041	0.001	0.24	0.021	0.03	1.44	0.2EY AEP, 15 min burst, Storm 2
F 170\01	170\01	135\02	1	Local Road 1 (K&G - 4.5m half road)	0.047	0.002	2.18	0.091	0.05	1.84	0.2EY AEP, 15 min burst, Storm 2
F 171\01	171\01	112\07	0.1	Dummy used to model flow across road low points	0.009	0.001	6.41	0.019	0	0.02	0.2EY AEP, 20 min burst, Storm 5
F 173\01	173\01	140\02	1	Dummy used to model flow across road low points	0.006	0.002	1.91	0.006	0	0.37	0.2EY AEP, 15 min burst, Storm 4
F 1AL\01	1AL\01	110\01	1	7.5m BLVD Road	0.013	0	1.16	0.061	0.06	2.74	0.2EY AEP, 20 min burst, Storm 5
F 1AN\01	1AN\01	1AN\03	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AN\02	1AN\02	114\19	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AN\03	1AN\03	1AN\04	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-
F 1AN\04	1AN\04	1AN\05	1	DUM OVERLAND PATH	0.026	0	0	0	0	0	-
F 1AN\05	1AN\05	114\19	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AN\06	1AN\06	112\18	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AP\01	1AP\01	1AN\06	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AQ\01	1AQ\01	122\09	1	DUM OVERLAND PATH	0.024	0	0	0	0	0	-
F 1AQ\02	1AQ\02	1AQ\03	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AQ\03	1AQ\03	1AQ\04	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AQ\04	1AQ\04	122\09	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-
F 1AR\01	1AR\01	122\09	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-
F 1AR\02	1AR\02	122\09	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AR\03	1AR\03	122\09	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AW\01	1AW\01	1AW\03	1	DUM OVERLAND PATH	0.02	0	0	0	0	0	-
F 1AW\02	1AW\02	112\09	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AW\03	1AW\03	O 1AW\03	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1AW\04	1AW\04	O 1AW\04	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1AW\05	1AW\05	130\01	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1AW\06	1AW\06	130\01	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1AW\07	1AW\07	129\01	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1AW\08	1AW\08	129\01	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1AW\09	1AW\09	129\01	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1AW\10	1AW\10	1AW\12	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MINOR 5 YEAR CALCULATIONS
SHEET 15 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	544	B

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MINOR 5YR CALCULATIONS

OVERFLOW ROUTES											
Name	Pit	Bypass	Travel Time	Cross Section	Total	Bypass	Max Flood	Max Flood	Max DxV	Max V	Due to Storm
	Name	Pit			Approach	Flow	Width	Depth			
			(min)		(m3/s)	(m3/s)	(m)	(m)			
F 1AW\11	1AW\11	129\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AW\12	1AW\12	129\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AX\01	1AX\01	114\09	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AX\02	1AX\02	114\09	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-
F 1AY\01	1AY\01	O 1AY\01	1	DUM OVERLAND PATH	0.011	0	0	0	0	0	-
F 1AY\02	1AY\02	O 1AY\02	1	DUM OVERLAND PATH	0.027	0	0	0	0	0	-
F 1AY\03	1AY\03	O 1AY\03	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\04	1AY\04	O 1AY\04	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\05	1AY\05	O 1AY\05	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AY\06	1AY\06	124\02	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AY\07	1AY\07	124\03	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1AY\08	1AY\08	1AY\09	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-
F 1AY\09	1AY\09	123\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\10	1AY\10	123\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\11	1AY\11	123\01	1	DUM OVERLAND PATH	0.022	0	0	0	0	0	-
F 1BA\01	1BA\01	141\07	1	DUM OVERLAND PATH	0.02	0	0	0	0	0	-
F 1BA\02	1BA\02	141\07	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BA\03	1BA\03	141\07	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BA\04	1BA\04	141\07	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BA\05	1BA\05	141\07	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-
F 1BC\01	1BC\01	143\03	1	DUM OVERLAND PATH	0.033	0	0	0	0	0	-
F 1BC\02	1BC\02	141\03	1	DUM OVERLAND PATH	0.006	0	0	0	0	0	-
F 1BD\01	1BD\01	133\01	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\02	1BD\02	133\01	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\03	1BD\03	133\02	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\04	1BD\04	133\02	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\05	1BD\05	133\02	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\06	1BD\06	133\03	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\07	1BD\07	133\03	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1BD\08	1BD\08	133\03	1	DUM OVERLAND PATH	0.025	0	0	0	0	0	-
F 1BD\09	1BD\09	133\04	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\10	1BD\10	133\04	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\11	1BD\11	133\04	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BD\12	1BD\12	112\05	1	DUM OVERLAND PATH	0.018	0	0	0	0	0	-
F 1BE\01	1BE\01	133\01	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-
F 1BE\02	1BE\02	114\02	1	DUM OVERLAND PATH	0.017	0	0	0	0	0	-
F 1BE\03	1BE\03	114\01	1	DUM OVERLAND PATH	0.019	0	0	0	0	0	-

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B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

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STAGE 1
32 LOVELLE STREET &
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ROAD & DRAINAGE DESIGN

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MINOR 5 YEAR CALCULATIONS
SHEET 16 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	545	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-545.dwg

MAJOR 100YR CALCULATIONS

PIT / NODE DETAILS

Name	Type	Size	Inlet Family	Pressure Coeff. Ku	Water Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor -	Bolt-down lid -	Max Pit HGL (RL)	Max Pond HGL (RL)	Max Surface Flow Arriving (cu.m/s)	Min Freeboard (m)	Overflow (cu.m/s)
101\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.2	698.931			0.2	No	697.97		0.244	0.96	
101\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1	697.932			0.2	No	697.08		0.11	0.85	0.004
101\03	OnGrade	0.9x0.9m	JP	1.2	697.451			0.2	No	696.19			1.26	
101\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	696.368			0.2	No	694.91		0.785	1.46	0.004
101\05	OnGrade	1.8m Lintel	GGP EKI, 3% grade	0.5	695.126			0.2	No	693.75		0.55	1.37	0.017
101\06	OnGrade	1.8m Lintel	GGP EKI, 3% grade	0.1	694.057			0.2	No	692.99		0.318	1.06	0.004
101\07	OnGrade	1.8m Lintel	GGP EKI, 3% grade	0.5	691.984			0.2	No	692.05		0.198		0.026
101\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.3	690.96			0.2	No	691.05		0.687		0.066
101\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	690.396			0.2	No	690.6		0.815		0.446
101\10	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.3	689.963			0.2	No	689.98		1.412		0.273
101\11	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.676			0.2	No	689.51		1.079	0.17	0.133
101\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	689.393			0.2	No	689.12		0.031	0.28	
101\13	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.168			0.2	No	688.44		0.755	0.73	0.001
101\14	OnGrade	1.2x1.2m + GSIP	GSIP, 1% grade	1.2	689.317			0.2	No	687.79		0.008	1.53	
101\15	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.429			0.2	No	687.07		0.087	1.36	0.006
101\16	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.133			0.2	No	686.64		0.056	1.49	0.011
101\17	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	687.431			0.2	No	686.33		0.078	1.1	0.02
101\18	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	686.893			0.2	No	686.07		0.083	0.82	0.016
101\19	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	686.308			0.2	No	685.8		0.124	0.51	0.009
101\20	OnGrade	0.9x0.9m	JP	2.3	686.86			0.2	No	685.54			1.32	6.518
101\21	OnGrade	0.9x0.9m	JP	1.2	686.581				Yes	685.04			1.54	
101\22	Node				684.5					684.08				
102\01	Sag	2.4m Lintel	GGP EKI, 1% grade	0.5	686.038	0.16		0.5	No	684.9	686.13	0.118	1.14	0.002
102\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.5	685.98	0.15		0.5	No	684.8	686.04	0.056	1.18	
102\03	OnGrade	0.9x0.9m	JP	1.6	685.99			0.2	No	684.47			1.52	
102\04	Node				684.5					684.08				
104\01	Node				689.066					688.28		1.025		
104\02	Sag	2.4m Lintel	GGP EKI, 1% grade	0.7	688.759	0.12		0.5	No	688.11	688.84	0.501	0.65	
105\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	688.357	0.16		0.5	No	687.55	688.47	0.181	0.81	
105\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.5	688.38	0.1		0.5	No	687.32	688.44	0.057	1.06	
106\01	Node				689.769					689.89		0.861		
106\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.2	689.373	0.14		0.5	No	689.47	689.58	0.941		0.024
106\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	689.536			0.2	No	689.23		0.015	0.3	
107\01	Node				692.908					692.97		0.447		
107\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.4	691.206	0.08		0.5	No	691.49	691.39	0.674		0.142
107\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	691.198			0.2	No	691.25		0.735		0.069
108\01	Node				696.709					694.47		0.412		
108\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.8	694.381	0.08		0.5	No	694.18	694.45	0.351	0.2	0.006
108\03	OnGrade	1.8m Lintel	GGP EKI, 3% grade	2.4	694.38			0.2	No	693.66		0.485	0.72	0.027
109\01	Node				698.237					697		2.44		
109\02	Sag	2.4m Lintel	GGP EKI, 1% grade	0.6	696.569	0.07		0.5	No	696.65	696.62	0.502		
109\03	OnGrade	0.9x0.9m	JP	0.6	697.289			0.2	No	696.37			0.92	
110\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	696.577	0.19		0.5	No	696.68	696.75	0.484		0.017
111\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	696.907			0.2	No	696.23		0.065	0.68	0.001
111\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.9	696.933			0.2	No	696.2		0.007	0.73	
112\01	Node				696.875					696.19		2.604		
112\02	Sag	2 x 1.2x1.2m + GSIP (sag only)	GSIP, 1% grade	0.9	696.545	0.355		0.5	No	695.54	696.64	0.297	1	
112\03	Sag	1.2x1.2m + GSIP	GSIP, 1% grade	0.9	693.336	0.56		0.5	No	693.56	693.57	0.251		
112\04	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.3	693.51			0.2	No	692.89		0.007	0.62	
112\05	OnGrade	1.8m Lintel	GGP EKI, 5% grade	0.6	692.231			0.2	No	691.87		0.06	0.36	
112\06	OnGrade	1.8m Lintel	GGP EKI, 5% grade	0.9	691.142			0.2	No	691.28		0.02		0.278
112\07	Sag	2.4m Lintel	GGP EKI, 1% grade	0.6	690.729	0.08		0.5	No	690.65	690.87	0.53	0.08	0.025
112\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	690.726			0.2	No	690.32		0.218	0.4	
112\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.726			0.2	No	689.64		0.098	0.09	0.014
112\10	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	689.454			0.2	No	689.29		0.147	0.16	0.004
112\11	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	689.319			0.2	No	688.88		0.005	0.44	
112\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.889			0.2	No	688.27		0.032	0.62	0.003
112\13	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.053			0.2	No	687.66		0.076	0.39	0.026
112\14	Sag	2.4m Lintel	GGP EKI, 1% grade	0.5	687.551	0.12		0.5	No	687.49	687.62	0.109	0.06	0.016
112\15	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.1	687.336			0.2	No	687.25		0.024	0.09	
112\16	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	687.052			0.2	No	686.69		0.032	0.36	0.001
112\17	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	686.988			0.2	No	686.4		0.031	0.59	0.004
112\18	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	686.592			0.2	No	686		0.019	0.59	
112\19	Sag	2.4m Lintel	GGP EKI, 1% grade	1.9	686.346	0.15		0.5	No	685.43	686.45	0.269	0.92	7.201
112\20	OnGrade	0.9x0.9m	JP	1.6	686.89			0.2	No	684.46			2.43	
112\21	Node				684.5					684.08				

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 01 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	546	B

MAJOR 100YR CALCULATIONS

PIT / NODE DETAILS														
Name	Type	Size	Inlet	Pressure	Water Surface	Max Pond	Base	Blocking	Bolt-down	Max Pit	Max Pond	Max Surface	Min	Overflow
			Family	Coeff.	Elev	Depth	Inflow	Factor	lid	HGL	HGL	Flow Arriving	Freeboard	(cu.m/s)
				Ku	(m)	(m)	(cu.m/s)	-	-	(RL)	(RL)	(cu.m/s)	(m)	
113\01	OnGrade	0.9x0.9m	JP	0.2	686.353			0.2	Yes	684.48			1.88	
113\02	Node				685.5					684.08				
114\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.2	693.68			0.2	No	692.45		0.025	1.23	
114\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.8	693.238			0.2	No	692.16		0.026	1.08	0.002
114\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.8	693.238			0.2	No	691.93		0.031	1.3	
114\04	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.3	692.376			0.2	No	691.36		0.009	1.01	
114\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.1	690.712			0.2	No	690.78		0.061		0.076
114\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.2	689.897			0.2	No	689.97		0.197		0.109
114\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	689.5			0.2	No	689.22		0.039	0.28	
114\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	689.155			0.2	No	688.96		0.008	0.19	
114\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	688.572			0.2	No	688.52		0.051	0.05	0.012
114\10	Sag	2.4m Lintel	GGP EKI, 1% grade	0.7	688.027	0.11		0.5	No	688.15	688.21	0.084		0.04
114\11	OnGrade	0.9x0.9m	JP	0.6	688.525			0.2	No	687.89			0.64	
114\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	687.935			0.2	No	687.73		0.034	0.21	
114\13	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	687.625			0.2	No	687.52		0.036	0.1	0.005
114\14	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	687.212			0.2	No	687.28		0.06		0.05
114\15	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	686.987			0.2	No	687.08		0.12		0.12
114\16	Sag	2.4m Lintel	GGP EKI, 1% grade	2	686.727	0.07		0.5	No	686.9	686.92	0.237		0.151
114\17	Sag	2.4m Lintel	GGP EKI, 1% grade	1.2	686.724	0.1		0.5	No	686.57	686.88	0.271	0.15	0.022
114\18	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	686.76			0.2	No	686.22		0.05	0.54	
114\19	Sag	2.4m Lintel	GGP EKI, 1% grade	1.8	686.369	0.135		0.5	No	685.79	686.48	0.151	0.58	0.007
116\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.226			0.2	No	687.28		0.048		0.025
117\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.615			0.2	No	688.6		0.089	0.02	0.026
118\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	689.452	0.13		0.5	No	689.57	689.67	0.419		0.109
118\02	Sag	2.4m Lintel	GGP EKI, 1% grade	2.4	689.451	0.11		0.5	No	689.48	689.59	0.334		0.006
118\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.8	689.498			0.2	No	689.29		0.138	0.21	0.001
119\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	689.526	0.07		0.5	No	689.53	689.64	0.282		0.028
119\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.5	689.525	0.07		0.5	No	689.38	689.58	0.155	0.15	
120\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.939			0.2	No	689.99		0.156		0.061
121\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	690.804			0.2	No	690.84		0.082		0.05
122\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.266			0.2	No	687.76		0.091	0.5	
122\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.6	688.06			0.2	No	687.71		0.022	0.35	
122\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	687.797			0.2	No	687.66		0.016	0.13	
122\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.4	687.594			0.2	No	687.64		0.006		0.015
122\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1	687.433			0.2	No	687.47		0.046		0.014
122\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.5	687.272			0.2	No	687.33		0.055		0.03
122\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.5	686.927			0.2	No	686.99		0.128		0.052
122\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	686.751			0.2	No	686.7		0.166	0.05	0.001
122\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.4	686.604			0.2	No	686.37		0.139	0.24	0.023
123\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4.2	686.93			0.2	No	687.01		0.157		0.082
124\01	OnGrade	0.9x0.9m + IAD	IAD	4	688.355			0.2	No	687.6		0.048	0.76	
124\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.872			0.2	No	687.54		0.054	0.33	0.002
124\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.8	687.574			0.2	No	687.45		0.04	0.12	0.005
125\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.7	687.636			0.2	No	687.72		0.087		0.064
126\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.3	687.052			0.2	No	686.74		0.038	0.31	
127\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	687.594	0.2		0.5	No	687.27	687.68	0.116	0.32	
127\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.9	687.614			0.2	No	687.26		0.047	0.35	0.001
128\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	696.193			0.2	No	695.82		0.383	0.38	0.146
128\02	OnGrade	1.8m Lintel	GGP EKI, 5% grade	3.7	695.372			0.2	No	695.37		0.257		0.112
128\03	OnGrade	1.8m Lintel	GGP EKI, 5% grade	2	693.749			0.2	No	693.84		0.258		0.138
128\04	OnGrade	1.8m Lintel	GGP EKI, 5% grade	1.1	692.624			0.2	No	692.68		0.308		0.082
128\05	OnGrade	1.8m Lintel	GGP EKI, 3% grade		691.105			0.2	No	691.13		0.237		0.021
128\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	690.926			0.2	No	690.91		0.049	0.02	0.002
128\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	690.094			0.2	No	690.11		0.032		
128\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	689.283			0.2	No	689.4		0.063		0.074
128\09	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	688.902			0.2	No	688.9		0.163		0.014
128\10	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.2	688.835			0.2	No	688.38		0.007	0.46	
128\11	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	688.1			0.2	No	688.02		0.015	0.08	
128\12	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.7	687.845			0.2	No	687.65		0.023	0.2	
129\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	688.258			0.2	No	687.9		0.114	0.36	0.029
130\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.952			0.2	No	688.32		0.081	0.64	0.012
131\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	689.278	0.12		0.5	No	689.05	689.37	0.212	0.23	0.004
131\02	Sag	2.4m Lintel	GGP EKI, 1% grade	1.7	689.277	0.09		0.5	No	688.96	689.31	0.098	0.32	
132\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.746			0.2	No	689.72		0.115	0.03	0.034
133\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	692.508			0.2	No	691.5		0.055	1.01	0.012
133\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	692.012			0.2	No	691.44		0.094	0.57	0.022
133\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.7	691.688			0.2	No	691.23		0.124	0.45	0.01
133\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	691.19			0.2	No	690.95		0.127	0.24	0.008
134\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	691.251			0.2	No	690.99		0.099	0.26	0.012
135\01	OnGrade	0.9x0.9m + IAD	IAD	5.7	697.351			0.2	No	696.7		0.257	0.65	
135\02	OnGrade	1.8m Lintel	GGP EKI, 1% grade	2.3	696.064			0.2	No	696.13		0.131		0.057

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 02 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	547	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-547.dwg

MAJOR 100YR CALCULATIONS

PIT / NODE DETAILS														
Name	Type	Size	Inlet Family	Pressure Coeff. Ku	Water Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor -	Bolt-down lid -	Max Pit HGL (RL)	Max Pond HGL (RL)	Max Surface Flow Arriving (cu.m/s)	Min Freeboard (m)	Overflow (cu.m/s)
135\03	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	695.875			0.2	No	695.57		0.266	0.3	0.015
135\04	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.6	695.623			0.2	No	695.36		0.195	0.26	
135\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.6	695.333			0.2	No	694.97		0.067	0.36	
135\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.5	694.758			0.2	No	694.11		0.017	0.64	
135\07	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1.5	694.29			0.2	No	693.64		0.013	0.65	
135\08	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.3	694.235			0.2	No	693.11		0.015	1.13	
136\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	694.79			0.2	No	694.13		0.037	0.66	0.001
138\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	695.685			0.2	No	695.38		0.078	0.3	0.006
140\01	Node				695.878					695.93		1.296		
140\02	Sag	2.4m Lintel	GGP EKI, 1% grade	0.6	695.525	0.12		0.5	No	695.64	695.64	0.315		
141\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	692.182			0.2	No	690.81		0.035	1.37	
141\02	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	692.094			0.2	No	690.62		0.064	1.47	0.024
141\03	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	690.295			0.2	No	690.1		0.125	0.2	0.049
141\04	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.2	689.5			0.2	No	689.19		0.199	0.31	0.024
141\05	OnGrade	1.8m Lintel	GGP EKI, 1% grade	1	688.794			0.2	No	688.87		0.144		0.079
141\06	OnGrade	1.8m Lintel	GGP EKI, 1% grade	0.9	688.426			0.2	No	688.59		0.175		0.194
141\07	Sag	2.4m Lintel	GGP EKI, 1% grade	1	688.242	0.08		0.5	No	688.41	688.41	0.558		0.162
141\08	Sag	2.4m Lintel	GGP EKI, 1% grade	0.5	688.123	0.06		0.5	No	688.19	688.28	0.287		0.078
142\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.797			0.2	No	688.87		0.037		0.029
143\01	OnGrade	0.9x0.9m + GSIP	GSIP, 1% grade	4	692.161			0.2	No	690.9		0.154	1.26	0.05
143\02	OnGrade	1.8m Lintel	GGP EKI, 3% grade	1.8	691.218			0.2	No	689.86		0.074	1.36	0.008
143\03	Sag	1.8m Lintel	GGP EKI, 1% grade	2	688.846	0.08		0.5	No	689.08	689.05	0.145		0.086
143\04	Sag	1.8m Lintel	GGP EKI, 1% grade	1.5	688.856	0.05		0.5	No	689	689.05	0.201		0.089
145\01	OnGrade	0.9x0.9m + GSIP	GSIP, 1% grade	2	693.077			0.2	No	692.69			0.39	
151\01	Sag	1.2x1.2m + GSIP	GSIP, 1% grade	4	690.908	0.5		0.5	No	691.28	691.37	0.12		
154\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	688.065	0.11		0.5	No	688.17	688.22	0.129		0.065
155\01	Node				686.277					684.97		0.401		
156\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	695.212			0.2	No	693.9		0.056	1.32	0.003
157\01	OnGrade	1.8m Lintel	GGP EKI, 3% grade	4	692.179			0.2	No	692.1		0.124	0.08	0.022
158\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	690.481			0.2	No	690.59		0.121		0.097
159\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.723			0.2	No	689.53		0.069	0.19	0.005
160\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.183			0.2	No	688.54		0.104	0.64	0.025
161\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.208			0.2	No	686.9		0.066	1.31	0.007
162\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.476			0.2	No	686.43		0.107	1.05	0.027
163\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	686.272	0.18		0.5	No	686.27	686.42	0.142		
164\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	687.596	0.09		0.5	No	687.57	687.68	0.142	0.03	0.007
165\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.782			0.2	No	688.13		0.049	0.65	0.001
166\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	690.143			0.2	No	690.16		0.226		0.013
167\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	689.3			0.2	No	689.4		0.203		0.068
168\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	688.917			0.2	No	688.98		0.247		0.036
169\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	687.849			0.2	No	687.71		0.178	0.14	0.019
170\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	696.509			0.2	No	696.19		0.123	0.32	0.014
171\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	690.765	0.06		0.5	No	690.82	690.93	0.668		0.176
173\01	Sag	2.4m Lintel	GGP EKI, 1% grade	4	695.56	0.06		0.5	No	695.64	695.65	0.144		0.02
1AL\01	OnGrade	1.8m Lintel	GGP EKI, 1% grade	4	698.132			0.2	No	697.1		0.541	1.03	
1AN\01	OnGrade	0.6x0.6m + IAD	IAD	3.7	687.726			0.2	No	687.72		0.039	0.01	
1AN\02	OnGrade	0.6x0.9m + IAD	IAD	2.3	687.631			0.2	No	687.33			0.3	
1AN\03	OnGrade	0.6x0.9m + IAD	IAD	2	687.419			0.2	No	687.18		0.042	0.24	
1AN\04	OnGrade	0.6x0.9m + IAD	IAD	1.7	687.235			0.2	No	686.99		0.056	0.24	
1AN\05	OnGrade	0.6x0.9m + IAD	IAD	1	687.19			0.2	No	686.77		0.008	0.42	
1AN\06	OnGrade	0.9x0.9m + IAD	IAD	1.3	687.1			0.2	No	686.45		0.004	0.65	
1AP\01	OnGrade	0.6x0.6m + IAD	IAD	3.6	687.535			0.2	No	687.54		0.038		
1AQ\01	OnGrade	0.6x0.6m + IAD	IAD	2.9	687.475			0.2	No	687.46		0.053	0.02	
1AQ\02	OnGrade	0.6x0.6m + IAD	IAD	2.3	687.446			0.2	No	686.85			0.6	
1AQ\03	OnGrade	0.6x0.6m + IAD	IAD	2	687.255			0.2	No	686.75		0.038	0.5	
1AQ\04	OnGrade	0.9x0.9m + IAD	IAD	4.1	686.929			0.2	No	686.46		0.04	0.47	
1AR\01	OnGrade	0.6x0.6m + IAD	IAD	3.6	687.846			0.2	No	687.83		0.042	0.01	
1AR\02	OnGrade	0.6x0.6m + IAD	IAD	4	687.6			0.2	No	687.19		0.038	0.41	
1AR\03	OnGrade	0.9x0.9m + IAD	IAD	4	687.364			0.2	No	686.81		0.039	0.55	
1AW\01	OnGrade	0.6x0.6m + IAD	IAD	3.5	692.183			0.2	No	692.18		0.042	0.01	
1AW\02	OnGrade	0.6x0.6m + IAD	IAD		691.986			0.2	No	691.77			0.22	
1AW\03	OnGrade	0.6x0.6m + IAD	IAD	4.8	691.55			0.2	No	691.49		0.041	0.06	
1AW\04	OnGrade	0.6x0.6m + IAD	IAD	1.5	691.054			0.2	No	691.04		0.037	0.01	0.001
1AW\05	OnGrade	0.6x0.6m + IAD	IAD	1.2	690.54			0.2	No	690.56		0.037		
1AW\06	OnGrade	0.6x0.9m + IAD	IAD	0.6	690.105			0.2	No	689.97		0.037	0.14	
1AW\07	OnGrade	0.6x0.9m + IAD	IAD	1	689.68			0.2	No	689.68		0.037		
1AW\08	OnGrade	0.6x0.9m + IAD	IAD	0.9	689.292			0.2	No	689.24		0.037	0.05	
1AW\09	OnGrade	0.6x0.9m + IAD	IAD		688.936			0.2	No	688.66		0.037	0.28	
1AW\10	OnGrade	0.6x0.9m + IAD	IAD	1.6	688.641			0.2	No	688.54		0.037	0.1	
1AW\11	OnGrade	0.6x0.9m + IAD	IAD	1.4	688.605			0.2	No	688.34			0.26	
1AW\12	OnGrade	0.9x0.9m + IAD	IAD	0.2	688.497			0.2	No	687.97		0.001	0.52	

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 03 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	548	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-548.dwg

MAJOR 100YR CALCULATIONS

PIT / NODE DETAILS													
Name	Type	Size	Inlet Family	Pressure Coeff. Ku	Water Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor -	Bolt-down lid -	Max Pit HGL (RL)	Max Pond HGL (RL)	Max Surface Flow Arriving (cu.m/s)	Min Freeboard (m)	Overflow (cu.m/s)
1AX\01	OnGrade	0.6x0.6m + IAD	IAD	3.8	689.684			0.2	No	689.66		0.038	0.02	
1AX\02	OnGrade	0.9x0.9m + IAD	IAD	4	689.426			0.2	No	688.99		0.04	0.43	
1AY\01	OnGrade	0.6x0.6m + IAD	IAD	5.2	689.795			0.2	No	689.84		0.025		0.002
1AY\02	OnGrade	0.6x0.9m + IAD	IAD	4.9	689.566			0.2	No	689.6		0.059		0.01
1AY\03	OnGrade	0.6x0.9m + IAD	IAD	0.7	689.658			0.2	No	689.44			0.22	
1AY\04	OnGrade	0.9x0.9m + IAD	IAD	1.6	689.664			0.2	No	689.4			0.26	
1AY\05	OnGrade	0.9x0.9m + IAD	IAD	1.6	689.414			0.2	No	689.29		0.039	0.12	
1AY\06	OnGrade	0.6x0.9m + IAD	IAD	0.9	689.072			0.2	No	688.93		0.039	0.15	
1AY\07	OnGrade	0.6x0.9m + IAD	IAD	1.2	688.759			0.2	No	688.7		0.039	0.06	
1AY\08	OnGrade	0.6x0.9m + IAD	IAD	1.4	688.682			0.2	No	688.35		0.04	0.34	
1AY\09	OnGrade	0.6x0.9m + IAD	IAD	0.7	688.621			0.2	No	688.23			0.39	
1AY\10	OnGrade	0.6x0.9m + IAD	IAD	0.2	688.257			0.2	No	688.08			0.18	
1AY\11	OnGrade	0.9x0.9m + IAD	IAD	5.4	687.888			0.2	No	687.98		0.048		0.012
1BA\01	OnGrade	0.6x0.6m + IAD	IAD	3.5	691.489			0.2	No	691.47		0.042	0.02	
1BA\02	OnGrade	0.6x0.6m + IAD	IAD	4.9	690.977			0.2	No	690.69		0.038	0.28	
1BA\03	OnGrade	0.6x0.9m + IAD	IAD	1.5	690.432			0.2	No	690.22		0.038	0.21	
1BA\04	OnGrade	0.6x0.9m + IAD	IAD	1.2	689.833			0.2	No	689.69		0.037	0.14	
1BA\05	OnGrade	0.9x0.9m + IAD	IAD	4	688.796			0.2	No	688.78		0.042	0.01	
1BC\01	OnGrade	0.6x0.6m + IAD	IAD	5.7	692.324			0.2	No	691.78		0.071	0.55	
1BC\02	OnGrade	0.9x0.9m + IAD	IAD	4	690.736			0.2	No	690.14		0.013	0.6	
1BD\01	OnGrade	0.6x0.6m + IAD	IAD	4	695.399			0.2	No	695.2		0.038	0.2	
1BD\02	OnGrade	0.6x0.6m + IAD	IAD	4	695.094			0.2	No	695.08		0.038	0.02	
1BD\03	OnGrade	0.6x0.6m + IAD	IAD	1	694.815			0.2	No	694.73		0.038	0.08	
1BD\04	OnGrade	0.6x0.6m + IAD	IAD	1.4	694.56			0.2	No	694.57		0.038		0.001
1BD\05	OnGrade	0.6x0.9m + IAD	IAD	1.2	694.407			0.2	No	694.38		0.038	0.02	
1BD\06	OnGrade	0.6x0.9m + IAD	IAD	1.7	694.425			0.2	No	694.09		0.038	0.33	
1BD\07	OnGrade	0.6x0.9m + IAD	IAD	1.4	694.389			0.2	No	693.73			0.66	
1BD\08	OnGrade	0.6x0.9m + IAD	IAD	1.2	694.108			0.2	No	693.63		0.055	0.48	
1BD\09	OnGrade	0.6x0.9m + IAD	IAD	0.8	693.745			0.2	No	693.41		0.038	0.34	
1BD\10	OnGrade	0.6x0.9m + IAD	IAD	0.7	693.453			0.2	No	693.14		0.038	0.31	
1BD\11	OnGrade	0.6x0.9m + IAD	IAD	0.7	692.947			0.2	No	692.87		0.038	0.08	
1BD\12	OnGrade	0.9x0.9m + IAD	IAD	4.1	692.543			0.2	No	692.57		0.04		0.007
1BE\01	OnGrade	0.6x0.6m + IAD	IAD	3.6	696.128			0.2	No	695.9		0.041	0.23	
1BE\02	OnGrade	0.6x0.6m + IAD	IAD	4	695.271			0.2	No	694.76		0.038	0.51	
1BE\03	OnGrade	0.9x0.9m + IAD	IAD	0.6	694.012			0.2	No	692.53		0.041	1.48	

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 04 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	549	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-549.dwg

MAJOR 100YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use								
Name	Pit	Sub-Cat.	Paved	Grass	Peak	Paved	Grassed	Paved	Grass	Supp.	Due to Storm
	Name	Area	Area	Area	Flow Q	Max Q	Max Q	Tc	Tc	Tc	
		(ha)	%	%	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)	
C 101\01	NODE1	1.5546	80	20	0.666	0.553	0.113	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\02	101\02	0.1067	75	25	0.045	0.036	0.01	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\03	-	-	-	-	-	-	-	-	-	-	-
C 101\04	101\04	0.0953	85	15	0.043	0.042	0.005	5	0	10	1% AEP, 15 min burst, Storm 2
C 101\05	101\05	0.1557	75	25	0.066	0.052	0.014	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\06	101\06	0.0269	95	5	0.013	0.013	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 101\07	101\07	0.1966	75	25	0.083	0.066	0.018	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\08	101\08	0.0468	95	5	0.023	0.023	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 101\09	101\09	0.0888	75	25	0.038	0.03	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\10	101\10	0.1746	75	25	0.074	0.058	0.016	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\11	101\11	0.1172	75	25	0.05	0.039	0.011	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\12	101\12	0.0521	75	15	0.021	0.02	0.003	5	0	10	1% AEP, 15 min burst, Storm 2
C 101\13	101\13	0.067	75	25	0.028	0.022	0.006	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\14	101\14	0.0146	50	50	0.005	0.003	0.003	5	0	10	1% AEP, 20 min burst, Storm 8
C 101\15	101\15	0.114	85	15	0.051	0.05	0.006	5	0	10	1% AEP, 15 min burst, Storm 2
C 101\16	101\16	0.1319	75	25	0.056	0.044	0.012	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\17	101\17	0.1923	75	25	0.082	0.064	0.017	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\18	101\18	0.1425	75	25	0.06	0.048	0.013	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\19	101\19	0.1211	75	25	0.051	0.04	0.011	5	0	10	1% AEP, 15 min burst, Storm 1
C 101\20	-	-	-	-	-	-	-	-	-	-	-
C 101\21	-	-	-	-	-	-	-	-	-	-	-
C 101\22	-	-	-	-	-	-	-	-	-	-	-
C 102\01	102\01	0.2284	75	25	0.097	0.076	0.021	5	0	10	1% AEP, 15 min burst, Storm 1
C 102\02	102\02	0.0963	100		0.05	0.05	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 102\03	-	-	-	-	-	-	-	-	-	-	-
C 102\04	-	-	-	-	-	-	-	-	-	-	-
C 104\01	104\01	2.8	70	30	0.983	0.829	0.18	12.7	0	16.8	1% AEP, 15 min burst, Storm 3
C 104\02	104\02	0.2111	75	15	0.083	0.082	0.011	5	0	10	1% AEP, 15 min burst, Storm 2
C 105\01	105\01	0.2117	70	30	0.087	0.083	0.021	5	0	10	1% AEP, 15 min burst, Storm 3
C 105\02	105\02	0.0834	95	5	0.041	0.041	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 106\01	106\01	2.2	70	30	0.812	0.652	0.187	12.7	0	12.7	1% AEP, 15 min burst, Storm 3
C 106\02	106\02	0.0855	85	15	0.038	0.038	0.004	5	0	10	1% AEP, 15 min burst, Storm 2
C 106\03	106\03	0.0213	95	5	0.011	0.01	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 107\01	107\01	1.12	70	30	0.419	0.338	0.1	12.1	0	12.1	1% AEP, 15 min burst, Storm 3
C 107\02	107\02	0.0792	95	5	0.039	0.039	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 107\03	107\03	0.0185	95	5	0.009	0.009	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 108\01	108\01	0.66	70	30	0.27	0.259	0.067	5	0	10	1% AEP, 15 min burst, Storm 3
C 108\02	108\02	0.0895	75	25	0.038	0.03	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 108\03	108\03	0.2006	85	15	0.09	0.088	0.01	5	0	10	1% AEP, 15 min burst, Storm 2
C 109\01	109\01	3.91	70	30	1.6	1.535	0.397	5	0	10	1% AEP, 15 min burst, Storm 3
C 109\02	109\02	0.0405	90	10	0.019	0.019	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 109\03	-	-	-	-	-	-	-	-	-	-	-
C 110\01	110\01	0.1988	70	30	0.081	0.078	0.02	5	0	10	1% AEP, 15 min burst, Storm 3
C 111\01	111\01	0.0859	72.9	27.1	0.036	0.028	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 111\02	111\02	0.0097	95	5	0.005	0.005	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\01	112\01	8.4781	5	95	2.533	0.173	2.418	10	0	16.5	1% AEP, 25 min burst, Storm 5
C 112\02	112\02	0.5198	50	50	0.19	0.102	0.096	5	0	10	1% AEP, 20 min burst, Storm 8
C 112\03	112\03	0.5673		100	0.207	0	0.207	5	0	10	1% AEP, 20 min burst, Storm 4
C 112\04	112\04	0.0195	95	5	0.01	0.01	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\05	112\05	0.0194	95	5	0.01	0.01	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\06	112\06	0.0191	95	5	0.009	0.009	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\07	112\07	0.1411	90	10	0.066	0.066	0.005	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\08	112\08	0.0074	80.8	19.2	0.003	0.003	0.001	5	0	10	1% AEP, 15 min burst, Storm 1
C 112\09	112\09	0.1704	75	25	0.072	0.057	0.015	5	0	10	1% AEP, 15 min burst, Storm 1
C 112\10	112\10	0.079	75	25	0.034	0.026	0.007	5	0	10	1% AEP, 15 min burst, Storm 1
C 112\11	112\11	0.0078	95	5	0.004	0.004	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\12	112\12	0.1008	71.1	28.9	0.042	0.04	0.01	5	0	10	1% AEP, 15 min burst, Storm 3
C 112\13	112\13	0.2288	67.5	32.5	0.091	0.087	0.025	5	0	10	1% AEP, 15 min burst, Storm 3
C 112\14	112\14	0.0676	95	5	0.033	0.033	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\15	112\15	0.0285	95	5	0.014	0.014	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\16	112\16	0.0876	69.8	30.2	0.036	0.034	0.009	5	0	10	1% AEP, 15 min burst, Storm 3
C 112\17	112\17	0.1114	65.9	34.1	0.043	0.041	0.013	5	0	10	1% AEP, 15 min burst, Storm 3
C 112\18	112\18	0.0254	95	5	0.013	0.013	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\19	112\19	0.0812	95	5	0.04	0.04	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 112\20	-	-	-	-	-	-	-	-	-	-	-
C 112\21	-	-	-	-	-	-	-	-	-	-	-
C 113\01	-	-	-	-	-	-	-	-	-	-	-

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 05 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	550	B

MAJOR 100YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use								
Name	Pit Name	Sub-Cat. Area (ha)	Paved Area %	Grass Area %	Peak Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grass Tc (min)	Supp. Tc (min)	Due to Storm
C 113\02	-	-	-	-	-	-	-	-	-	-	-
C 114\01	114\01	0.0462	95	5	0.023	0.023	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\02	114\02	0.0806	76.2	23.8	0.034	0.027	0.007	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\03	114\03	0.0452	95	5	0.022	0.022	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\04	114\04	0.0137	95	5	0.007	0.007	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\05	114\05	0.1895	76.5	23.5	0.081	0.064	0.016	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\06	114\06	0.1172	77.8	22.2	0.05	0.041	0.009	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\07	114\07	0.0051	95	5	0.003	0.003	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\08	114\08	0.0234	95	5	0.012	0.012	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\09	114\09	0.1588	76.1	23.9	0.068	0.054	0.014	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\10	114\10	0.1737	78.6	21.4	0.074	0.061	0.013	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\11	-	-	-	-	-	-	-	-	-	-	-
C 114\12	114\12	0.0494	95	5	0.024	0.024	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\13	114\13	0.1114	76.6	23.4	0.047	0.038	0.009	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\14	114\14	0.1536	75.1	24.9	0.065	0.051	0.014	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\15	114\15	0.0846	75.3	24.7	0.036	0.028	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\16	114\16	0.1649	77.8	22.2	0.07	0.057	0.013	5	0	10	1% AEP, 15 min burst, Storm 1
C 114\17	114\17	0.0512	95	5	0.025	0.025	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\18	114\18	0.0082	95	5	0.004	0.004	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 114\19	114\19	0.3163	75.2	24.8	0.134	0.106	0.028	5	0	10	1% AEP, 15 min burst, Storm 1
C 116\01	116\01	0.0698	95	5	0.035	0.034	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 117\01	117\01	0.2306	76.5	23.5	0.098	0.078	0.02	5	0	10	1% AEP, 15 min burst, Storm 1
C 118\01	118\01	0.2394	78.7	21.3	0.102	0.084	0.018	5	0	10	1% AEP, 15 min burst, Storm 1
C 118\02	118\02	0.1502	90	10	0.071	0.07	0.005	5	0	10	1% AEP, 15 min burst, Storm 2
C 118\03	118\03	0.0114	80	20	0.005	0.004	0.001	5	0	10	1% AEP, 15 min burst, Storm 1
C 119\01	119\01	0.0731	81.4	18.6	0.031	0.026	0.005	5	0	10	1% AEP, 15 min burst, Storm 1
C 119\02	119\02	0.0273	95	5	0.013	0.013	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 120\01	120\01	0.129	77	23	0.055	0.044	0.011	5	0	10	1% AEP, 15 min burst, Storm 1
C 121\01	121\01	0.2529	77.2	22.8	0.108	0.087	0.021	5	0	10	1% AEP, 15 min burst, Storm 1
C 122\01	122\01	0.0542	83.3	16.7	0.024	0.023	0.003	5	0	10	1% AEP, 15 min burst, Storm 2
C 122\02	122\02	0.0324	95	5	0.016	0.016	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 122\03	122\03	0.0236	95	5	0.012	0.012	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 122\04	122\04	0.0159	95	5	0.008	0.008	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 122\05	122\05	0.014	95	5	0.007	0.007	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 122\06	122\06	0.0123	95	5	0.006	0.006	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 122\07	122\07	0.1055	80	20	0.045	0.038	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 122\08	122\08	0.0138	95	5	0.007	0.007	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 122\09	122\09	0.2141	79.1	20.9	0.092	0.075	0.016	5	0	10	1% AEP, 15 min burst, Storm 1
C 123\01	123\01	0.1411	84.3	15.7	0.063	0.062	0.008	5	0	10	1% AEP, 15 min burst, Storm 2
C 124\01	124\01	0.0762	70	30	0.031	0.03	0.008	5	0	10	1% AEP, 15 min burst, Storm 3
C 124\02	124\02	0.0845	75.3	24.7	0.036	0.028	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 124\03	124\03	0.1034	79	21	0.044	0.036	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 125\01	125\01	0.1255	95	5	0.062	0.062	0.002	5	0	10	1% AEP, 15 min burst, Storm 2
C 126\01	126\01	0.0551	95	5	0.027	0.027	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 127\01	127\01	0.1796	95	5	0.089	0.088	0.003	5	0	10	1% AEP, 15 min burst, Storm 2
C 127\02	127\02	0.069	95	5	0.034	0.034	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 128\01	128\01	0.8179	10	90	0.297	0.039	0.259	5	0	10	1% AEP, 20 min burst, Storm 5
C 128\02	128\02	0.2223	10	90	0.081	0.011	0.07	5	0	10	1% AEP, 20 min burst, Storm 5
C 128\03	128\03	0.1885	10	90	0.069	0.009	0.06	5	0	10	1% AEP, 20 min burst, Storm 5
C 128\04	128\04	0.0625	75	25	0.027	0.021	0.006	5	0	10	1% AEP, 15 min burst, Storm 1
C 128\05	128\05	0.028	95	5	0.014	0.014	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 128\06	128\06	0.0708	95	5	0.035	0.035	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 128\07	128\07	0.0375	95	5	0.019	0.018	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 128\08	128\08	0.0472	95	5	0.023	0.023	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 128\09	128\09	0.0382	95	5	0.019	0.019	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 128\10	128\10	0.0147	10	90	0.005	0.001	0.005	5	0	10	1% AEP, 20 min burst, Storm 5
C 128\11	128\11	0.0224	90	10	0.011	0.01	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 128\12	128\12	0.0333	95	5	0.016	0.016	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 129\01	129\01	0.2311	75	25	0.098	0.077	0.021	5	0	10	1% AEP, 15 min burst, Storm 1
C 130\01	130\01	0.1561	75	25	0.066	0.052	0.014	5	0	10	1% AEP, 15 min burst, Storm 1
C 131\01	131\01	0.1333	83.7	16.3	0.059	0.058	0.008	5	0	10	1% AEP, 15 min burst, Storm 2
C 131\02	131\02	0.042	95	5	0.021	0.021	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 132\01	132\01	0.2427	77	23	0.103	0.083	0.02	5	0	10	1% AEP, 15 min burst, Storm 1
C 133\01	133\01	0.1549	75.4	24.6	0.066	0.052	0.014	5	0	10	1% AEP, 15 min burst, Storm 1
C 133\02	133\02	0.1834	73.6	26.4	0.078	0.06	0.018	5	0	10	1% AEP, 15 min burst, Storm 1
C 133\03	133\03	0.0972	73.9	26.1	0.041	0.032	0.009	5	0	10	1% AEP, 15 min burst, Storm 1
C 133\04	133\04	0.1101	75.7	24.3	0.047	0.037	0.01	5	0	10	1% AEP, 15 min burst, Storm 1
C 134\01	134\01	0.1518	80.8	19.2	0.065	0.055	0.011	5	0	10	1% AEP, 15 min burst, Storm 1
C 135\01	135\01	0.4113	70	30	0.168	0.161	0.042	5	0	10	1% AEP, 15 min burst, Storm 3
C 135\02	135\02	0.1641	77	23	0.07	0.056	0.014	5	0	10	1% AEP, 15 min burst, Storm 1
C 135\03	135\03	0.0271	87.8	12.2	0.012	0.012	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 135\04	-	-	-	-	-	-	-	-	-	-	-
C 135\05	135\05	0.0277	95	5	0.014	0.014	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 135\06	135\06	0.0479	95	5	0.024	0.024	0.001	5	0	10	1% AEP, 15 min burst, Storm 2

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 06 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	551	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-551.dwg

MAJOR 100YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use								
Name	Pit	Sub-Cat.	Paved	Grass	Peak	Paved	Grassed	Paved	Grass	Supp.	Due to Storm
	Name	Area	Area	Area	Flow Q	Max Q	Max Q	Tc	Tc	Tc	
		(ha)	%	%	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)	
C 135\07	135\07	0.039	95	5	0.019	0.019	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 135\08	135\08	0.0407	95	5	0.02	0.02	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 136\01	136\01	0.0656	95	5	0.032	0.032	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 138\01	138\01	0.1128	95	5	0.056	0.056	0.002	5	0	10	1% AEP, 15 min burst, Storm 2
C 140\01	140\01	3.2895	15	85	1.163	0.186	0.977	10	0	12	1% AEP, 20 min burst, Storm 8
C 140\02	140\02	0.1108	70	30	0.045	0.043	0.011	5	0	10	1% AEP, 15 min burst, Storm 3
C 141\01	141\01	0.0506	95	5	0.025	0.025	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 141\02	141\02	0.2024	75	25	0.086	0.068	0.018	5	0	10	1% AEP, 15 min burst, Storm 1
C 141\03	141\03	0.2586	75	25	0.11	0.086	0.023	5	0	10	1% AEP, 15 min burst, Storm 1
C 141\04	141\04	0.0822	78.1	21.9	0.035	0.029	0.007	5	0	10	1% AEP, 15 min burst, Storm 1
C 141\05	141\05	0.0106	95	5	0.005	0.005	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 141\06	141\06	0.0225	95	5	0.011	0.011	0	5	0	10	1% AEP, 15 min burst, Storm 2
C 141\07	141\07	0.209	95	5	0.103	0.103	0.004	5	0	10	1% AEP, 15 min burst, Storm 2
C 141\08	141\08	0.1058	95	5	0.052	0.052	0.002	5	0	10	1% AEP, 15 min burst, Storm 2
C 142\01	142\01	0.1066	95	5	0.053	0.052	0.002	5	0	10	1% AEP, 15 min burst, Storm 2
C 143\01	143\01	0.3495		100	0.127	0	0.127	5	0	10	1% AEP, 20 min burst, Storm 4
C 143\02	143\02	0.1138	81.3	18.7	0.049	0.041	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 143\03	143\03	0.2023	75.3	24.7	0.086	0.068	0.018	5	0	10	1% AEP, 15 min burst, Storm 1
C 143\04	143\04	0.1217	95	5	0.06	0.06	0.002	5	0	10	1% AEP, 15 min burst, Storm 2
C 145\01	-	-	-	-	-	-	-	-	-	-	-
C 151\01	151\01	0.252		100	0.092	0	0.092	5	0	10	1% AEP, 20 min burst, Storm 4
C 154\01	154\01	0.214	75	25	0.091	0.071	0.019	5	0	10	1% AEP, 15 min burst, Storm 1
C 155\01	155\01	0.63	75	25	0.267	0.21	0.057	5	0	10	1% AEP, 15 min burst, Storm 1
C 156\01	156\01	0.0822	90	10	0.039	0.038	0.003	5	0	10	1% AEP, 15 min burst, Storm 2
C 157\01	157\01	0.1947	75	25	0.083	0.065	0.018	5	0	10	1% AEP, 15 min burst, Storm 1
C 158\01	158\01	0.1821	75	25	0.077	0.061	0.017	5	0	10	1% AEP, 15 min burst, Storm 1
C 159\01	159\01	0.1087	75	25	0.046	0.036	0.01	5	0	10	1% AEP, 15 min burst, Storm 1
C 160\01	160\01	0.2432	75	25	0.103	0.081	0.022	5	0	10	1% AEP, 15 min burst, Storm 1
C 161\01	161\01	0.1388	75	25	0.059	0.046	0.013	5	0	10	1% AEP, 15 min burst, Storm 1
C 162\01	162\01	0.2391	75	25	0.101	0.08	0.022	5	0	10	1% AEP, 15 min burst, Storm 1
C 163\01	163\01	0.3476	75	25	0.147	0.116	0.032	5	0	10	1% AEP, 15 min burst, Storm 1
C 164\01	164\01	0.1115	80	20	0.048	0.04	0.008	5	0	10	1% AEP, 15 min burst, Storm 1
C 165\01	165\01	0.0729	90	10	0.034	0.034	0.003	5	0	10	1% AEP, 15 min burst, Storm 2
C 166\01	166\01	0.1207	75	25	0.051	0.04	0.011	5	0	10	1% AEP, 15 min burst, Storm 1
C 167\01	167\01	0.164	75	25	0.07	0.055	0.015	5	0	10	1% AEP, 15 min burst, Storm 1
C 168\01	168\01	0.1016	75	25	0.043	0.034	0.009	5	0	10	1% AEP, 15 min burst, Storm 1
C 169\01	169\01	0.1376	75	25	0.058	0.046	0.012	5	0	10	1% AEP, 15 min burst, Storm 1
C 170\01	170\01	0.1442	90	10	0.068	0.067	0.005	5	0	10	1% AEP, 15 min burst, Storm 2
C 171\01	171\01	0.0727	70.4	29.6	0.03	0.029	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 173\01	173\01	0.0393	90	10	0.018	0.018	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 1AL\01	1AL\01	0.0405	90	10	0.019	0.019	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 1AN\01	1AN\01	0.0632	70	30	0.026	0.025	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AN\02	-	-	-	-	-	-	-	-	-	-	-
C 1AN\03	1AN\03	0.0661	70	30	0.027	0.026	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AN\04	1AN\04	0.0894	70	30	0.037	0.035	0.009	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AN\05	-	-	-	-	-	-	-	-	-	-	-
C 1AN\06	-	-	-	-	-	-	-	-	-	-	-
C 1AP\01	1AP\01	0.0615	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AQ\01	1AQ\01	0.0848	70	30	0.035	0.033	0.009	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AQ\02	-	-	-	-	-	-	-	-	-	-	-
C 1AQ\03	1AQ\03	0.0608	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AQ\04	1AQ\04	0.0645	70	30	0.026	0.025	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AR\01	1AR\01	0.0671	70	30	0.027	0.026	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AR\02	1AR\02	0.0609	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AR\03	1AR\03	0.0628	70	30	0.026	0.025	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\01	1AW\01	0.0677	70	30	0.028	0.027	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\02	-	-	-	-	-	-	-	-	-	-	-
C 1AW\03	1AW\03	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\04	1AW\04	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\05	1AW\05	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\06	1AW\06	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\07	1AW\07	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\08	1AW\08	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\09	1AW\09	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\10	1AW\10	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AW\11	-	-	-	-	-	-	-	-	-	-	-
C 1AW\12	-	-	-	-	-	-	-	-	-	-	-
C 1AX\01	1AX\01	0.0608	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AX\02	1AX\02	0.0648	70	30	0.027	0.025	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AY\01	1AY\01	0.0395	70	30	0.016	0.016	0.004	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AY\02	1AY\02	0.0953	70	30	0.039	0.037	0.01	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AY\03	-	-	-	-	-	-	-	-	-	-	-
C 1AY\04	-	-	-	-	-	-	-	-	-	-	-
C 1AY\05	1AY\05	0.063	70	30	0.026	0.025	0.006	5	0	10	1% AEP, 15 min burst, Storm 3

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 07 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	552	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-552.dwg

MAJOR 100YR CALCULATIONS

SUB-CATCHMENT DETAILS			Land Use								
Name	Pit	Sub-Cat.	Paved	Grass	Peak	Paved	Grassed	Paved	Grass	Supp.	Due to Storm
	Name	Area	Area	Area	Flow Q	Max Q	Max Q	Tc	Tc	Tc	
		(ha)	%	%	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)	
C 1AY\06	1AY\06	0.063	70	30	0.026	0.025	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AY\07	1AY\07	0.063	70	30	0.026	0.025	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AY\08	1AY\08	0.0644	70	30	0.026	0.025	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1AY\09	-	-	-	-	-	-	-	-	-	-	-
C 1AY\10	-	-	-	-	-	-	-	-	-	-	-
C 1AY\11	1AY\11	0.0766	70	30	0.031	0.03	0.008	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BA\01	1BA\01	0.068	70	30	0.028	0.027	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BA\02	1BA\02	0.0601	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BA\03	1BA\03	0.0603	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BA\04	1BA\04	0.06	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BA\05	1BA\05	0.0676	70	30	0.028	0.027	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BC\01	1BC\01	0.1143	70	30	0.047	0.045	0.012	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BC\02	1BC\02	0.0193	85	15	0.009	0.009	0.001	5	0	10	1% AEP, 15 min burst, Storm 2
C 1BD\01	1BD\01	0.0606	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\02	1BD\02	0.0606	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\03	1BD\03	0.0606	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\04	1BD\04	0.0606	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\05	1BD\05	0.0606	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\06	1BD\06	0.0606	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\07	-	-	-	-	-	-	-	-	-	-	-
C 1BD\08	1BD\08	0.0882	70	30	0.036	0.035	0.009	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\09	1BD\09	0.0603	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\10	1BD\10	0.0603	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\11	1BD\11	0.0603	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BD\12	1BD\12	0.064	70	30	0.026	0.025	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BE\01	1BE\01	0.0664	70	30	0.027	0.026	0.007	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BE\02	1BE\02	0.0602	70	30	0.025	0.024	0.006	5	0	10	1% AEP, 15 min burst, Storm 3
C 1BE\03	1BE\03	0.0663	70	30	0.027	0.026	0.007	5	0	10	1% AEP, 15 min burst, Storm 3

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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For:
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building a healthy lifestyle

By:
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SUSTAINABLE CERTIFICATION ISO 9001
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ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 08 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	553	B

MAJOR 100YR CALCULATIONS

PIPE DETAILS															
Name	**From**	**To**	**Reach**	**Pipe**	**Pipe**	**Pipe**	**Pipe**	**Pipe**	**Pipe**	**No. of**	**Max Pipe**	**Max Pipe**	**Max U/S**	**Max D/S**	**Due to Storm**
	Pit	**Pit**	**Length**	**U/S IL**	**D/S IL**	**Slope**	**Type**	**Diameter**	**Rough**	**Pipes**	**Flow**	**Vel.**	**HGL**	**HGL**	
			(m)	**(m)**	**(m)**	**(%)**		**(mm)**	**n**		**(cu.m/s)**	**(m/s)**	**(m)**	**(m)**	
P 101\01	101\01	101\02	35.135	696.582	695.879	2	RRJ2	900	0.012	1	1.974	3.15	697.414	697.085	1% AEP, 20 min burst, Storm 9
P 101\02	101\02	101\03	37.495	695.849	695.474	1	RRJ2	900	0.012	1	2.028	3.54	696.649	696.219	1% AEP, 20 min burst, Storm 10
P 101\03	101\03	101\04	26.373	694.286	693.909	1.43	RRJ2	1050	0.012	1	3.504	4.08	695.264	694.91	1% AEP, 20 min burst, Storm 8
P 101\04	101\04	101\05	40.113	693.816	692.813	2.5	RRJ2	1050	0.012	1	3.549	4.26	694.797	693.751	1% AEP, 20 min burst, Storm 8
P 101\05	101\05	101\06	27.804	692.445	691.722	2.6	RRJ2	1050	0.012	1	3.583	4.16	693.429	692.993	1% AEP, 20 min burst, Storm 10
P 101\06	101\06	101\07	51.433	690.886	689.6	2.5	RRJ2	1050	0.012	1	3.957	4.43	692.893	692.048	1% AEP, 20 min burst, Storm 2
P 101\07	101\07	101\08	28.239	689.373	688.758	2.18	RRJ2	1050	0.012	1	4.042	4.52	691.528	691.045	1% AEP, 20 min burst, Storm 8
P 101\08	101\08	101\09	23.644	688.387	687.865	2.21	RRJ2	1200	0.012	1	4.4	3.77	690.83	690.596	1% AEP, 20 min burst, Storm 2
P 101\09	101\09	101\10	36.99	687.815	687.404	1.11	RRJ2	1200	0.012	1	4.209	3.61	690.293	689.984	1% AEP, 20 min burst, Storm 10
P 101\10	101\10	101\11	28.702	687.374	687.087	1	RRJ2	1200	0.012	1	4.308	3.69	689.779	689.51	1% AEP, 20 min burst, Storm 3
P 101\11	101\11	101\12	28.315	687.057	686.774	1	RRJ2	1350	0.012	1	4.463	3.02	689.274	689.118	1% AEP, 20 min burst, Storm 2
P 101\12	101\12	101\13	22.535	686.741	686.516	1	RRJ2	1350	0.012	1	5.239	3.54	688.609	688.44	1% AEP, 20 min burst, Storm 2
P 101\13	101\13	101\14	41.592	686.486	686.07	1	RRJ2	1350	0.012	1	5.337	3.61	688.109	687.786	1% AEP, 20 min burst, Storm 2
P 101\14	101\14	101\15	31.484	685.933	685.618	1	RRJ2	1200	0.012	2	6.907	2.96	687.256	687.065	1% AEP, 20 min burst, Storm 8
P 101\15	101\15	101\16	30.459	685.588	685.283	1	RRJ2	1200	0.012	2	7.042	3.02	686.833	686.639	1% AEP, 20 min burst, Storm 8
P 101\16	101\16	101\17	45.999	685.253	684.793	1	RRJ2	1350	0.012	2	7.122	2.54	686.491	686.33	1% AEP, 20 min burst, Storm 4
P 101\17	101\17	101\18	28.26	684.763	684.339	1.5	RRJ2	1350	0.012	2	7.261	2.46	686.177	686.074	1% AEP, 20 min burst, Storm 8
P 101\18	101\18	101\19	33.58	684.309	683.738	1.7	RRJ2	1350	0.012	2	7.315	2.47	685.919	685.795	1% AEP, 20 min burst, Storm 8
P 101\19	101\19	101\20	15.67	683.688	683.531	1	RRJ2	1350	0.012	2	7.509	2.54	685.599	685.538	1% AEP, 20 min burst, Storm 8
P 101\20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 101\21	101\21	101\22	16.307	682.827	682.52	1.88	RCBC	2.4W x 0.75H	0.012	1	6.517	3.62	684.243	684.08	1% AEP, 20 min burst, Storm 8
P 101\22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 102\01	102\01	102\02	11.899	684.137	683.292	7.1	RRJ2	525	0.012	1	0.304	1.36	684.849	684.803	1% AEP, 20 min burst, Storm 8
P 102\02	102\02	102\03	5.251	683.133	683.081	0.99	RRJ2	900	0.012	1	1.329	2.03	684.49	684.468	1% AEP, 20 min burst, Storm 8
P 102\03	102\03	102\04	12.732	682.727	682.6	1	RRJ2	900	0.012	1	1.329	2.03	684.134	684.08	1% AEP, 20 min burst, Storm 8
P 102\04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 104\01	104\01	104\02	30.683	686.519	686.212	1	RRJ2	900	0.012	1	1.913	2.92	688.282	688.114	1% AEP, 15 min burst, Storm 1
P 104\02	104\02	101\14	21.949	686.182	685.963	1	RRJ2	900	0.012	1	1.935	2.95	687.913	687.786	1% AEP, 25 min burst, Storm 3
P 105\01	105\01	105\02	15.724	686.876	686.719	1	RRJ2	375	0.012	1	0.103	0.9	687.367	687.321	1% AEP, 15 min burst, Storm 8
P 105\02	105\02	101\15	36.798	686.689	686.321	1	RRJ2	375	0.012	1	0.14	1.23	687.222	687.065	1% AEP, 15 min burst, Storm 7
P 106\01	106\01	106\02	39.585	688.047	687.651	1	RRJ2	600	0.012	1	0.718	2.46	689.889	689.474	1% AEP, 15 min burst, Storm 1
P 106\02	106\02	106\03	7.001	687.371	687.301	1	RRJ2	825	0.012	1	0.913	1.65	689.249	689.233	1% AEP, 20 min burst, Storm 2
P 106\03	106\03	101\12	15.049	687.271	687.12	1	RRJ2	825	0.012	1	0.921	1.67	689.149	689.118	1% AEP, 20 min burst, Storm 2
P 107\01	107\01	107\02	39.071	691.368	689.666	4.36	RRJ2	375	0.012	1	0.401	3.52	692.973	691.489	1% AEP, 15 min burst, Storm 5
P 107\02	107\02	107\03	7	689.568	689.498	1	RRJ2	525	0.012	1	0.47	2.11	691.279	691.253	1% AEP, 15 min burst, Storm 8
P 107\03	107\03	101\08	14.977	689.468	689.319	1	RRJ2	525	0.012	1	0.521	2.34	691.13	691.045	1% AEP, 15 min burst, Storm 8
P 108\01	108\01	108\02	38.808	693.802	692.754	2.7	RRJ2	450	0.012	1	0.26	1.58	694.469	694.178	1% AEP, 15 min burst, Storm 3
P 108\02	108\02	108\03	7	692.724	692.654	1	RRJ2	450	0.012	1	0.299	1.82	693.716	693.657	1% AEP, 15 min burst, Storm 8
P 108\03	108\03	101\06	14.126	692.624	692.483	1	RRJ2	450	0.012	1	0.358	2.18	693.146	692.993	1% AEP, 15 min burst, Storm 8
P 109\01	109\01	109\02	27.247	695.402	694.584	3	RRJ2	750	0.012	1	1.605	3.52	696.999	696.654	1% AEP, 15 min burst, Storm 3
P 109\02	109\02	109\03	22.449	694.555	694.42	0.6	RRJ2	900	0.012	1	1.609	2.45	696.491	696.368	1% AEP, 15 min burst, Storm 8
P 109\03	109\03	101\03	5.716	694.37	694.336	0.59	RRJ2	900	0.012	1	1.61	2.45	696.218	696.189	1% AEP, 15 min burst, Storm 1
P 110\01	110\01	109\02	11.374	695.019	694.905	1	RRJ2	375	0.012	1	0.136	1.2	696.657	696.654	1% AEP, 20 min burst, Storm 8
P 111\01	111\01	111\02	9.964	695.426	695.327	0.99	RRJ2	375	0.012	1	0.038	0.33	696.205	696.201	1% AEP, 20 min burst, Storm 8
P 111\02	111\02	101\03	29.475	695.297	695.002	1	RRJ2	375	0.012	1	0.06	0.53	696.195	696.189	1% AEP, 20 min burst, Storm 7
P 112\02	112\02	112\02A	14.972	694.567	694.117	3.01	RRJ2	1050	0.012	1	2.672	5.98	695.472	694.65	1% AEP, 25 min burst, Storm 1
P 112\03	112\03	112\04	34.115	691.534	691.193	1	RRJ2	1050	0.012	1	2.716	3.04	693.15	692.894	1% AEP, 25 min burst, Storm 8
P 112\04	112\04	112\05	25.037	690.421	689.849	2.28	RRJ2	1200	0.012	1	4.088	3.5	692.082	691.867	1% AEP, 25 min burst, Storm 6
P 112\05	112\05	112\06	18.553	689.387	688.645	4	RRJ2	1200	0.012	1	4.287	3.67	691.453	691.277	1% AEP, 25 min burst, Storm 5
P 112\06	112\06	112\07	10.864	688.615	688.306	2.84	RRJ2	1200	0.012	1	4.111	3.52	690.736	690.646	1% AEP, 25 min burst, Storm 7
P 112\07	112\07	112\08	14.006	688.101	687.961	1	RRJ2	1350	0.012	1	4.302	2.91	690.391	690.321	1% AEP, 25 min burst, Storm 1
P 112\08	112\08	112\09	52.587	687.931	687.199	1.39	RRJ2	1350	0.012	1	4.474	3.03	689.917	689.639	1% AEP, 25 min burst, Storm 6
P 112\09	112\09	112\10	19.586	687.169	686.927	1.24	RRJ2	1350	0.012	1	4.56	3.08	689.403	689.294	1% AEP, 25 min burst, Storm 6
P 112\10	112\10	112\11	14.416	686.897	686.753	1	RRJ2	1350	0.012	1	4.586	3.1	688.96	688.879	1% AEP, 25 min burst, Storm 6
P 112\11	112\11	112\12	35.82	686.723	686.348	1.05	RRJ2	1350	0.012	1	4.648	3.14	688.482	688.274	1% AEP, 25 min burst, Storm 6
P 112\12	112\12	112\13	59.17	686.298	685.504	1.34	RRJ2	1350	0.012	1	4.717	3.19	688.017	687.659	1% AEP, 25 min burst, Storm 6
P 112\13	112\13	112\14	16.916	685.454	685.116	2	RRJ2	1200	0.012	2	4.993	2.14	687.543	687.489	1% AEP, 20 min burst, Storm 10
P 112\14	112\14	112\15	35.926	685.086	684.835	0.7	RRJ2	1200	0.012	2	5.099	2.18	687.367	687.246	1% AEP, 20 min burst, Storm 10
P 112\15	112\15	112\16	28.653	684.805	684.518	1	RRJ2	1200	0.012	2	6.294	2.7	686.84	686.694	1% AEP, 20 min burst, Storm 4
P 112\16	112\16	112\17	19.76	684.488	684.35	0.7	RRJ2	1200	0.012	2	6.4	2.74	686.503	686.399	1% AEP, 20 min burst, Storm 10
P 112\17	112\17	112\18	28.406	684.32	684.036	1	RRJ2	1200	0.012	2	6.521	2.79	686.16	686.005	1% AEP, 20 min burst, Storm 10
P 112\18	112\18	112\19	27.264	683.973	683.7	1	RRJ2	1200	0.012	2	6.955	2.98	685.598	685.429	1% AEP, 20 min burst, Storm 4
P 112\19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 112\20	112\20	112\21	34.135	683.041	682.7	1	RCBC	2.1W x 0.9H	0.012	2	7.224	1.91	684.164	684.08	1% AEP, 20 min burst, Storm 4
P 112\21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 113\01	113\01	113\02	19.345	683.319	683.125	1	RRJ2	600	0.012	1	0.875	3	684.386	684.08	1% AEP, 20 min burst, Storm 4
P 113\02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 09 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	554	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-554.dwg

MAJOR 100YR CALCULATIONS

PIPE DETAILS

Name	From Pit	To Pit	Reach Length (m)	Pipe U/S IL (m)	Pipe D/S IL (m)	Pipe Slope (%)	Pipe Type	Pipe Diameter (mm)	Pipe Rough n	No. of Pipes	Max Pipe Flow (cu.m/s)	Max Pipe Vel. (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P 114\01	114\01	114\02	22.802	692.161	691.737	1.86	RRJ2	375	0.012	1	0.099	1.39	692.39	692.162	1% AEP, 15 min burst, Storm 3
P 114\02	114\02	114\03	9	691.707	691.617	1	RRJ2	375	0.012	1	0.131	1.54	691.973	691.934	1% AEP, 15 min burst, Storm 3
P 114\03	114\03	114\04	24.767	691.587	690.675	3.68	RRJ2	375	0.012	1	0.153	1.67	691.872	691.362	1% AEP, 15 min burst, Storm 3
P 114\04	114\04	114\05	55.552	690.645	689.213	2.58	RRJ2	375	0.012	1	0.161	1.42	691.208	690.782	1% AEP, 15 min burst, Storm 1
P 114\05	114\05	114\06	40.409	689.027	688.231	1.97	RRJ2	375	0.012	1	0.238	2.09	690.422	689.974	1% AEP, 15 min burst, Storm 7
P 114\06	114\06	114\07	29.994	688.201	687.84	1.2	RRJ2	375	0.012	1	0.351	3.08	689.686	689.218	1% AEP, 15 min burst, Storm 5
P 114\07	114\07	114\08	26.105	687.526	687.259	1.02	RRJ2	600	0.012	1	0.584	2	689.126	688.961	1% AEP, 15 min burst, Storm 2
P 114\08	114\08	114\09	44.034	687.229	686.676	1.26	RRJ2	600	0.012	1	0.631	2.16	688.836	688.518	1% AEP, 15 min burst, Storm 10
P 114\09	114\09	114\10	42.172	686.646	686.118	1.25	RRJ2	675	0.012	1	0.729	1.97	688.399	688.152	1% AEP, 15 min burst, Storm 1
P 114\10	114\10	114\11	17.033	686.088	685.969	0.7	RRJ2	675	0.012	1	0.789	2.14	687.998	687.887	1% AEP, 15 min burst, Storm 5
P 114\11	114\11	114\12	19.608	685.939	685.802	0.7	RRJ2	750	0.012	1	0.789	1.73	687.801	687.728	1% AEP, 15 min burst, Storm 6
P 114\12	114\12	114\13	29.487	685.772	685.566	0.7	RRJ2	750	0.012	1	0.79	1.73	687.637	687.523	1% AEP, 15 min burst, Storm 10
P 114\13	114\13	114\14	39.185	685.536	685.262	0.7	RRJ2	750	0.012	1	0.82	1.8	687.441	687.276	1% AEP, 15 min burst, Storm 8
P 114\14	114\14	114\15	22.406	685.232	685.008	1	RRJ2	750	0.012	1	0.87	1.91	687.177	687.082	1% AEP, 15 min burst, Storm 8
P 114\15	114\15	114\16	26.44	684.978	684.714	1	RRJ2	750	0.012	1	0.894	1.96	686.995	686.896	1% AEP, 15 min burst, Storm 5
P 114\16	114\16	114\17	7.033	684.684	684.614	1	RRJ2	750	0.012	1	0.925	2.03	686.599	686.573	1% AEP, 15 min burst, Storm 8
P 114\17	114\17	114\18	17.008	684.584	684.465	0.7	RRJ2	750	0.012	1	0.947	2.08	686.312	686.217	1% AEP, 15 min burst, Storm 8
P 114\18	114\18	114\19	45.226	684.435	684.118	0.7	RRJ2	750	0.012	1	0.962	2.11	686.042	685.787	1% AEP, 15 min burst, Storm 8
P 114\19	114\19	112\19	9.002	684.088	683.998	1	RRJ2	825	0.012	1	1.056	1.91	685.465	685.429	1% AEP, 15 min burst, Storm 8
P 116\01	116\01	114\14	7.109	685.726	685.619	1.51	RRJ2	375	0.012	1	0.034	0.3	687.276	687.276	1% AEP, 15 min burst, Storm 10
P 117\01	117\01	114\09	9.567	687.114	687.018	1	RRJ2	375	0.012	1	0.094	0.83	688.529	688.518	1% AEP, 20 min burst, Storm 10
P 118\01	118\01	118\02	9.003	687.952	687.862	1	RRJ2	375	0.012	1	0.137	1.2	689.489	689.477	1% AEP, 20 min burst, Storm 7
P 118\02	118\02	118\03	15.66	687.832	687.676	1	RRJ2	450	0.012	1	0.214	1.3	689.338	689.292	1% AEP, 20 min burst, Storm 7
P 118\03	118\03	114\07	9.002	687.646	687.556	1	RRJ2	450	0.012	1	0.227	1.39	689.245	689.218	1% AEP, 20 min burst, Storm 2
P 119\01	119\01	119\02	9.001	688.027	687.937	1	RRJ2	375	0.012	1	0.101	0.89	689.396	689.376	1% AEP, 15 min burst, Storm 1
P 119\02	119\02	114\07	15.476	687.907	687.752	1	RRJ2	375	0.012	1	0.128	1.12	689.281	689.218	1% AEP, 15 min burst, Storm 8
P 120\01	120\01	114\06	9.537	688.438	688.231	2.17	RRJ2	375	0.012	1	0.065	0.57	689.977	689.974	1% AEP, 15 min burst, Storm 10
P 121\01	121\01	114\05	9.539	689.302	689.206	1.01	RRJ2	375	0.012	1	0.067	0.59	690.79	690.782	1% AEP, 15 min burst, Storm 9
P 122\01	122\01	122\02	15.95	686.759	686.58	1.12	RRJ2	375	0.012	1	0.03	0.26	687.722	687.711	1% AEP, 15 min burst, Storm 2
P 122\02	122\02	122\03	29.777	686.55	686.252	1	RRJ2	375	0.012	1	0.048	0.42	687.683	687.663	1% AEP, 20 min burst, Storm 7
P 122\03	122\03	122\04	18.582	686.222	686.036	1	RRJ2	375	0.012	1	0.075	0.66	687.648	687.637	1% AEP, 15 min burst, Storm 2
P 122\04	122\04	122\05	17.253	686.013	685.84	1	RRJ2	375	0.012	1	0.203	1.78	687.544	687.47	1% AEP, 15 min burst, Storm 5
P 122\05	122\05	122\06	14.56	685.81	685.664	1	RRJ2	375	0.012	1	0.209	1.83	687.399	687.332	1% AEP, 15 min burst, Storm 6
P 122\06	122\06	122\07	49.3	685.634	685.24	0.8	RRJ2	450	0.012	1	0.269	1.64	687.205	686.992	1% AEP, 15 min burst, Storm 9
P 122\07	122\07	122\08	14.502	685.21	685.065	1	RRJ2	450	0.012	1	0.344	2.1	686.795	686.698	1% AEP, 15 min burst, Storm 5
P 122\08	122\08	122\09	24.95	685.035	684.785	1	RRJ2	450	0.012	1	0.352	2.14	686.58	686.366	1% AEP, 15 min burst, Storm 8
P 122\09	122\09	112\18	13.501	684.755	684.513	1.79	RRJ2	525	0.012	1	0.495	2.22	686.108	686.005	1% AEP, 15 min burst, Storm 8
P 123\01	123\01	122\07	7	685.449	685.24	2.99	RRJ2	375	0.012	1	0.067	0.59	686.994	686.992	1% AEP, 15 min burst, Storm 6
P 124\01	124\01	124\02	17.585	686.816	686.414	2.29	RRJ2	375	0.012	1	0.033	0.29	687.553	687.54	1% AEP, 25 min burst, Storm 10
P 124\02	124\02	124\03	40.519	686.384	685.979	1	RRJ2	375	0.012	1	0.063	0.56	687.488	687.453	1% AEP, 15 min burst, Storm 3
P 124\03	124\03	122\06	28.548	685.949	685.664	1	RRJ2	375	0.012	1	0.106	0.93	687.394	687.332	1% AEP, 15 min burst, Storm 3
P 125\01	125\01	122\04	8.027	686.123	686.043	1	RRJ2	375	0.012	1	0.174	1.52	687.656	687.637	1% AEP, 15 min burst, Storm 5
P 126\01	126\01	112\16	9	685.553	685.463	1	RRJ2	375	0.012	1	0.098	0.86	686.709	686.694	1% AEP, 15 min burst, Storm 1
P 127\01	127\01	127\02	15.003	685.881	685.656	1.5	RRJ2	600	0.012	1	0.068	0.23	687.262	687.261	1% AEP, 20 min burst, Storm 4
P 127\02	127\02	112\15	15.476	685.606	685.374	1.5	RRJ2	600	0.012	1	0.09	0.31	687.248	687.246	1% AEP, 20 min burst, Storm 5
P 128\01	128\01	128\02	16.257	694.661	693.885	4.77	RRJ2	375	0.012	1	0.15	1.32	695.464	695.371	1% AEP, 20 min burst, Storm 5
P 128\02	128\02	128\03	29.695	693.713	692.285	4.81	RRJ2	375	0.012	1	0.265	2.32	694.364	693.84	1% AEP, 20 min burst, Storm 5
P 128\03	128\03	128\04	17.985	692.253	691.157	6.09	RRJ2	375	0.012	1	0.331	2.91	693.109	692.682	1% AEP, 20 min burst, Storm 4
P 128\04	128\04	128\05	24.376	690.863	689.681	4.85	RRJ2	375	0.012	1	0.396	3.47	692.047	691.135	1% AEP, 20 min burst, Storm 8
P 128\05	128\05	128\06	20.428	689.289	689.082	1.01	RRJ2	525	0.012	1	0.513	2.3	691.135	690.909	1% AEP, 20 min burst, Storm 2
P 128\06	128\06	128\07	28.655	689.052	688.303	2.61	RRJ2	525	0.012	1	0.531	2.38	690.453	690.114	1% AEP, 20 min burst, Storm 4
P 128\07	128\07	128\08	35.841	688.273	687.446	2.31	RRJ2	525	0.012	1	0.582	2.61	689.908	689.399	1% AEP, 20 min burst, Storm 7
P 128\08	128\08	128\09	28.486	687.416	687.131	1	RRJ2	525	0.012	1	0.614	2.75	689.231	688.902	1% AEP, 20 min burst, Storm 4
P 128\09	128\09	128\10	45.429	687.101	686.647	1	RRJ2	600	0.012	1	0.668	2.29	688.776	688.378	1% AEP, 20 min burst, Storm 10
P 128\10	128\10	128\11	34.847	686.617	686.269	1	RRJ2	600	0.012	1	0.673	2.3	688.327	688.018	1% AEP, 20 min burst, Storm 5
P 128\11	128\11	128\12	25.555	686.031	685.775	1	RRJ2	750	0.012	1	1.181	2.59	687.827	687.647	1% AEP, 20 min burst, Storm 6
P 128\12	128\12	112\15	24.778	685.745	685.448	1.2	RRJ2	750	0.012	1	1.235	2.71	687.437	687.246	1% AEP, 20 min burst, Storm 10
P 129\01	129\01	112\13	12.691	686.602	686.475	1	RRJ2	450	0.012	1	0.266	1.62	687.727	687.659	1% AEP, 15 min burst, Storm 3
P 130\01	130\01	112\12	10.391	687.45	687.346	1	RRJ2	375	0.012	1	0.062	0.54	688.28	688.274	1% AEP, 20 min burst, Storm 2
P 131\01	131\01	131\02	9.001	687.796	687.706	1	RRJ2	375	0.012	1	0.09	0.79	688.969	688.957	1% AEP, 15 min burst, Storm 1
P 131\02	131\02	112\11	15.413	687.676	687.522	1	RRJ2	375	0.012	1	0.105	0.92	688.908	688.879	1% AEP, 15 min burst, Storm 3
P 132\01	132\01	112\09	9.076	688.246	688.155	1	RRJ2	375	0.012	1	0.079	0.69	689.649	689.639	1% AEP, 15 min burst, Storm 3
P 133\01	133\01	133\02	27.748	690.991	690.509	1.74	RRJ2	375	0.012	1	0.054	0.47	691.461	691.445	1% AEP, 15 min burst, Storm 1
P 133\02	133\02	133\03	18.456	690.479	690.188	1.58	RRJ2	375	0.012	1	0.12	1.05	691.282	691.234	1% AEP, 15 min burst, Storm 1
P 133\03	133\03	133\04	26.307	690.158	689.688	1.79	RRJ2	375	0.012	1	0.18	1.58	691.092	690.95	1% AEP, 15 min burst, Storm 2
P 133\04	133\04	112\08	25.307	688.836	688.631	0.81	RRJ2	375	0.012	1	0.276	2.42	690.64	690.321	1% AEP, 15 min burst, Storm 1
P 134\01	134\01	133\04	9.55	689.749	689.4	3.65	RRJ2	375	0.012	1	0.061	0.54	690.955	690.95	1% AEP, 15 min burst, Storm 2
P 135\01	135\01	135\02	12.217	694.813	694.691	1	RRJ2	375	0.012	1	0.168	1.47	696.198	696.128	1% AEP, 15 min burst, Storm 3
P 135\02	135\02	135\03	18.934	694.52	694.33	1	RRJ2	375	0.012	1	0.275	2.41	695.766	695.573	1% AEP, 15 min burst, Storm 1
P 135\03	135\03	135\04	25.605	694.3	694.044	1	RRJ2	450	0.012	1	0.303	1.85	695.506	695.36	1% AEP, 15 min burst, Storm 1
P 135\04	135\04	135\05	27.868	693.438	693.16	1	RRJ2	825	0.012	1	1.432	2.6	695.172	694.973	1% AEP, 20 min burst, Storm 5
P 135\05	135\05	135\06	47.952	693.13	692.65	1	RRJ2	825	0.012	1	1.442	2.61	694.461	694.114	1% AEP, 20 min burst, Storm 4
P 135\06	135\06	135\07	39.014	692.62	692.23	1	RRJ2	825	0.012	1	1.482	2.69	693.944	693.644	1% AEP, 20 min burst, Storm 4
P 135\07	135\07	135\08	9.944	692.2	692.101	1	RRJ2	825	0.012	1	1.495	2.71	693.179	693.11	1% AEP, 20 min burst, Storm 4

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 10 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	555	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-555.dwg

MAJOR 100YR CALCULATIONS

PIPE DETAILS																
Name	From	To	Reach	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	No. of	Max Pipe	Max Pipe	Max U/S	Max D/S	Due to Storm
	Pit	Pit	Length	U/S IL	D/S IL	Slope	Type	Diameter	Rough	Pipes	Flow	Vel.	HGL	HGL	
			(m)	(m)	(m)	(%)		(mm)	n		(cu.m/s)	(m/s)	(m)	(m)	
P 135\08	135\08	112\04	15.565	692.071	691.453	3.97	RRJ2	825	0.012	1	1.505	2.73	693.011	692.894	1% AEP, 20 min burst, Storm 4
P 136\01	136\01	135\06	9.385	693.29	693.196	1	RRJ2	375	0.012	1	0.032	0.28	694.116	694.114	1% AEP, 15 min burst, Storm 8
P 138\01	138\01	135\04	10.705	694.183	694.076	1	RRJ2	375	0.012	1	0.047	0.41	695.363	695.36	1% AEP, 15 min burst, Storm 2
P 140\01	140\01	140\02	21.186	694.46	693.636	3.89	RRJ2	675	0.012	1	1.112	3.01	695.927	695.64	1% AEP, 20 min burst, Storm 1
P 140\02	140\02	135\04	13.76	693.606	693.468	1	RRJ2	750	0.012	1	1.153	2.53	695.464	695.36	1% AEP, 20 min burst, Storm 4
P 141\01	141\01	141\02	9.474	690.68	690.585	1	RRJ2	375	0.012	1	0.024	1.29	690.809	690.67	1% AEP, 15 min burst, Storm 2
P 141\02	141\02	141\03	59.958	690.337	688.564	2.96	RRJ2	375	0.012	1	0.081	1.28	690.543	690.095	1% AEP, 15 min burst, Storm 1
P 141\03	141\03	141\04	26.48	688.534	687.77	2.89	RRJ2	375	0.012	1	0.21	1.85	689.46	689.187	1% AEP, 15 min burst, Storm 3
P 141\04	141\04	141\05	29.47	687.688	687.003	2.32	RRJ2	450	0.012	1	0.267	1.63	689.045	688.868	1% AEP, 15 min burst, Storm 3
P 141\05	141\05	141\06	22.505	686.758	686.601	0.7	RRJ2	525	0.012	1	0.441	1.98	688.726	688.594	1% AEP, 15 min burst, Storm 5
P 141\06	141\06	141\07	10.607	686.571	686.497	0.7	RRJ2	525	0.012	1	0.568	2.55	688.473	688.414	1% AEP, 15 min burst, Storm 7
P 141\07	141\07	141\08	18.665	686.467	686.336	0.7	RRJ2	525	0.012	1	0.594	2.66	688.286	688.186	1% AEP, 15 min burst, Storm 8
P 141\08	141\08	128\11	34.994	686.306	686.061	0.7	RRJ2	600	0.012	1	0.629	2.15	688.137	688.018	1% AEP, 15 min burst, Storm 7
P 142\01	142\01	141\05	9.001	687.297	686.977	3.56	RRJ2	375	0.012	1	0.039	0.34	688.868	688.868	1% AEP, 15 min burst, Storm 8
P 143\01	143\01	143\02	47.419	690.653	689.751	1.9	RRJ2	375	0.012	1	0.08	2.05	690.858	689.893	1% AEP, 15 min burst, Storm 8
P 143\02	143\02	143\03	46.568	689.586	687.237	5.04	RRJ2	375	0.012	1	0.111	1.45	689.828	689.084	1% AEP, 20 min burst, Storm 7
P 143\03	143\03	143\04	7.001	687.207	687.137	1	RRJ2	375	0.012	1	0.161	1.42	689.016	689	1% AEP, 15 min burst, Storm 5
P 143\04	143\04	141\05	14.962	686.893	686.788	0.7	RRJ2	375	0.012	1	0.213	1.87	688.92	688.868	1% AEP, 15 min burst, Storm 8
P 145\01	145\01	128\04	14.259	691.347	690.893	3.18	RRJ2	375	0.012	1	0.015	0.13	692.683	692.682	1% AEP, 15 min burst, Storm 4
P 151\01	151\01	128\05	6.037	689.555	689.495	0.99	RRJ2	375	0.012	1	0.229	2.01	691.147	691.135	1% AEP, 20 min burst, Storm 4
P 154\01	154\01	114\10	9.009	686.536	686.446	1	RRJ2	375	0.012	1	0.135	1.19	688.154	688.152	1% AEP, 15 min burst, Storm 5
P 155\01	155\01	102\01	35.724	684.524	684.167	1	RRJ2	525	0.012	1	0.268	1.33	684.974	684.896	1% AEP, 15 min burst, Storm 1
P 156\01	156\01	101\05	15.188	693.729	693.577	1	RRJ2	375	0.012	1	0.034	0.71	693.895	693.751	1% AEP, 15 min burst, Storm 2
P 157\01	157\01	101\07	15.774	690.691	690.507	1.17	RRJ2	375	0.012	1	0.072	0.63	692.058	692.048	1% AEP, 20 min burst, Storm 8
P 158\01	158\01	101\09	15.651	688.998	688.842	1	RRJ2	375	0.012	1	0.08	0.71	690.59	690.596	1% AEP, 15 min burst, Storm 2
P 159\01	159\01	101\11	15.705	688.241	688.084	1	RRJ2	375	0.012	1	0.046	0.4	689.514	689.51	1% AEP, 20 min burst, Storm 8
P 160\01	160\01	101\13	15.079	687.702	687.551	1	RRJ2	375	0.012	1	0.079	0.69	688.46	688.44	1% AEP, 15 min burst, Storm 8
P 161\01	161\01	101\16	16.771	686.725	686.558	1	RRJ2	375	0.012	1	0.046	1.42	686.901	686.682	1% AEP, 15 min burst, Storm 8
P 162\01	162\01	101\17	15.148	685.994	685.843	1	RRJ2	375	0.012	1	0.077	0.7	686.35	686.33	1% AEP, 15 min burst, Storm 7
P 163\01	163\01	101\19	15.746	684.791	684.634	1	RRJ2	375	0.012	1	0.159	1.39	685.893	685.795	1% AEP, 15 min burst, Storm 8
P 164\01	164\01	112\14	9	686.067	685.977	1	RRJ2	375	0.012	1	0.078	0.69	687.498	687.489	1% AEP, 15 min burst, Storm 8
P 165\01	165\01	104\02	11.999	687.301	687.181	1	RRJ2	375	0.012	1	0.032	0.28	688.116	688.114	1% AEP, 15 min burst, Storm 2
P 166\01	166\01	128\07	15.145	688.661	688.51	1	RRJ2	375	0.012	1	0.053	0.47	690.122	690.114	1% AEP, 20 min burst, Storm 8
P 167\01	167\01	128\08	15.032	687.818	687.668	1	RRJ2	375	0.012	1	0.065	0.57	689.399	689.399	1% AEP, 15 min burst, Storm 7
P 168\01	168\01	128\09	15.074	687.436	687.285	1	RRJ2	375	0.012	1	0.065	0.57	688.917	688.902	1% AEP, 20 min burst, Storm 8
P 169\01	169\01	128\12	15.007	686.368	686.218	1	RRJ2	375	0.012	1	0.068	0.6	687.659	687.647	1% AEP, 25 min burst, Storm 9
P 170\01	170\01	135\02	44.512	694.995	694.55	1	RRJ2	375	0.012	1	0.059	0.51	696.156	696.128	1% AEP, 15 min burst, Storm 2
P 171\01	171\01	112\07	7.012	689.201	689.131	1	RRJ2	375	0.012	1	0.107	0.94	690.664	690.646	1% AEP, 20 min burst, Storm 7
P 173\01	173\01	140\02	7.049	694.09	694.02	0.99	RRJ2	375	0.012	1	0.039	0.34	695.64	695.64	1% AEP, 20 min burst, Storm 4
P 1AL\01	1AL\01	101\02	16.847	696.567	696.399	1	RRJ2	375	0.012	1	0.024	0.21	697.087	697.085	1% AEP, 20 min burst, Storm 3
P 1AN\01	1AN\01	1AN\02	9.947	686.967	686.868	1	uPVC	150	0.01	1	0.022	1.39	687.45	687.331	1% AEP, 20 min burst, Storm 3
P 1AN\02	1AN\02	1AN\03	21.504	686.653	686.438	1	uPVC	225	0.01	1	0.041	1.03	687.247	687.176	1% AEP, 20 min burst, Storm 7
P 1AN\03	1AN\03	1AN\04	15.143	686.408	686.257	1	uPVC	300	0.01	1	0.065	1.1	687.055	686.99	1% AEP, 15 min burst, Storm 1
P 1AN\04	1AN\04	1AN\05	3.816	686.227	686.188	1.02	uPVC	300	0.01	1	0.101	1.71	686.802	686.773	1% AEP, 15 min burst, Storm 1
P 1AN\05	1AN\05	1AN\06	27.825	686.158	685.88	1	uPVC	300	0.01	1	0.1	1.7	686.662	686.446	1% AEP, 15 min burst, Storm 1
P 1AN\06	1AN\06	112\17	5.431	685.539	685.485	0.99	RRJ2	375	0.012	1	0.1	0.88	686.409	686.399	1% AEP, 15 min burst, Storm 1
P 1AP\01	1AP\01	1AN\02	9.903	686.782	686.683	1	uPVC	150	0.01	1	0.02	1.25	687.396	687.331	1% AEP, 15 min burst, Storm 8
P 1AQ\01	1AQ\01	1AQ\02	3.7	686.717	686.68	1	uPVC	150	0.01	1	0.03	1.9	686.955	686.848	1% AEP, 15 min burst, Storm 7
P 1AQ\02	1AQ\02	1AQ\03	11.349	686.61	686.429	1.59	uPVC	225	0.01	1	0.03	0.93	686.784	686.755	1% AEP, 15 min burst, Storm 3
P 1AQ\03	1AQ\03	1AQ\04	19.349	686.399	686.103	1.53	uPVC	225	0.01	1	0.055	1.49	686.596	686.456	1% AEP, 15 min burst, Storm 1
P 1AQ\04	1AQ\04	122\09	7.687	685.398	685.129	3.5	RRJ2	375	0.012	1	0.083	0.73	686.376	686.366	1% AEP, 15 min burst, Storm 2
P 1AR\01	1AR\01	1AR\02	18.442	687.086	686.848	1.29	uPVC	150	0.01	1	0.024	1.52	687.485	687.188	1% AEP, 15 min burst, Storm 9
P 1AR\02	1AR\02	1AR\03	17.737	686.765	686.537	1.29	uPVC	225	0.01	1	0.048	1.4	686.949	686.815	1% AEP, 15 min burst, Storm 3
P 1AR\03	1AR\03	126\01	8.288	685.812	685.603	2.52	RRJ2	375	0.012	1	0.074	0.65	686.751	686.742	1% AEP, 15 min burst, Storm 3
P 1AW\01	1AW\01	1AW\02	7.109	691.418	691.238	2.53	uPVC	150	0.01	1	0.024	1.47	691.873	691.77	1% AEP, 15 min burst, Storm 6
P 1AW\02	1AW\02	1AW\03	19.52	691.208	690.801	2.08	uPVC	150	0.01	1	0.023	1.43	691.77	691.486	1% AEP, 15 min burst, Storm 9
P 1AW\03	1AW\03	1AW\04	20	690.704	690.225	2.4	uPVC	225	0.01	1	0.046	1.16	691.165	691.042	1% AEP, 15 min burst, Storm 3
P 1AW\04	1AW\04	1AW\05	20	690.195	689.715	2.4	uPVC	225	0.01	1	0.067	1.7	690.825	690.559	1% AEP, 15 min burst, Storm 7
P 1AW\05	1AW\05	1AW\06	20	689.685	689.28	2.02	uPVC	225	0.01	1	0.083	2.1	690.326	689.97	1% AEP, 15 min burst, Storm 5
P 1AW\06	1AW\06	1AW\07	20	689.183	688.769	2.07	uPVC	300	0.01	1	0.103	1.75	689.883	689.682	1% AEP, 15 min burst, Storm 1
P 1AW\07	1AW\07	1AW\08	20	688.739	688.39	1.74	uPVC	300	0.01	1	0.125	2.12	689.497	689.238	1% AEP, 20 min burst, Storm 2
P 1AW\08	1AW\08	1AW\09	20	688.36	688.021	1.69	uPVC	300	0.01	1	0.147	2.49	689.011	688.657	1% AEP, 15 min burst, Storm 9
P 1AW\09	1AW\09	1AW\10	20	687.921	687.635	1.43	RRJ2	375	0.012	1	0.17	1.49	688.657	688.541	1% AEP, 15 min burst, Storm 1
P 1AW\10	1AW\10	1AW\11	2.14	687.605	687.583	1.03	RRJ2	375	0.012	1	0.195	1.71	688.357	688.341	1% AEP, 15 min burst, Storm 1
P 1AW\11	1AW\11	1AW\12	27.88	687.533	687.254	1	RRJ2	375	0.012	1	0.195	1.71	688.18	687.972	1% AEP, 15 min burst, Storm 1
P 1AW\12	1AW\12	129\01	7.102	686.903	686.732	2.41	RRJ2	375	0.012	1	0.194	1.7	687.949	687.897	1% AEP, 15 min burst, Storm 1
P 1AX\01	1AX\01	1AX\02	20.499	688.924	688.674	1.22	uPVC	150	0.01	1	0.024	1.47	689.311	688.994	1% AEP, 15 min burst, Storm 8
P 1AX\02	1AX\02	114\08	5.881	688.008	687.675	5.66	RRJ2	375	0.012	1	0.056	0.49	688.964	688.961	1% AEP, 15 min burst, Storm 1
P 1AY\01	1AY\01	1AY\02	44.628	689.009	688.563	1	uPVC	150	0.01	1	0.018	1.15	689.74	689.602	1% AEP, 15 min burst, Storm 8
P 1AY\02	1AY\02	1AY\03	3	688.533	688.503	1	uPVC	225	0.01	1	0.043	1.09	689.444	689.435	1% AEP, 15 min burst, Storm 10
P 1AY\03	1AY\03	1AY\04	2.113	688.473	688.452	0.99	uPVC	225	0.01	1	0.043	1.08	689.411	689.405	1% AEP, 20 min burst, Storm 3
P 1AY\04	1AY\04	1AY\05	18.792	688.422	688.234	1	uPVC	225	0.01	1	0.042	1.08	689.351	689.292	1% AEP, 15 min burst, Storm 8
P 1AY\05	1AY\05	1AY\06	21	688.204	687.994	1	uPVC	225	0.01	1	0.064	1.64	689.126	688.926	1% AEP, 15 min burst, Storm 9
P 1AY\06	1AY\06	1AY\07	21	687.964	687.754	1	uPVC	300	0.01	1	0.088	1.5	688.84	688.7	1% AEP, 15 min burst, Storm 2

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✔ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 11 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	556	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-556.dwg

MAJOR 100YR CALCULATIONS

PIPE DETAILS															
Name	**From Pit**	**To Pit**	**Reach Length (m)**	**Pipe U/S IL (m)**	**Pipe D/S IL (m)**	**Pipe Slope (%)**	**Pipe Type**	**Pipe Diameter (mm)**	**Pipe Rough n**	**No. of Pipes**	**Max Pipe Flow (cu.m/s)**	**Max Pipe Vel. (m/s)**	**Max U/S HGL (m)**	**Max D/S HGL (m)**	**Due to Storm**
P 1AY\07	1AY\07	1AY\08	15.959	687.724	687.564	1	uPVC	300	0.01	1	0.11	1.86	688.516	688.345	1% AEP, 20 min burst, Storm 4
P 1AY\08	1AY\08	1AY\09	2.728	687.514	687.487	0.99	RRJ2	375	0.012	1	0.136	1.2	688.243	688.23	1% AEP, 15 min burst, Storm 2
P 1AY\09	1AY\09	1AY\10	20	687.437	687.237	1	RRJ2	375	0.012	1	0.14	1.23	688.177	688.077	1% AEP, 15 min burst, Storm 10
P 1AY\10	1AY\10	1AY\11	20.957	687.187	686.831	1.7	RRJ2	375	0.012	1	0.134	1.18	688.064	687.979	1% AEP, 20 min burst, Storm 3
P 1AY\11	1AY\11	125\01	5.265	686.337	686.153	3.49	RRJ2	375	0.012	1	0.13	1.14	687.732	687.717	1% AEP, 20 min burst, Storm 7
P 1BA\01	1BA\01	1BA\02	21.1	690.722	690.223	2.36	uPVC	150	0.01	1	0.026	1.61	691.084	690.694	1% AEP, 15 min burst, Storm 7
P 1BA\02	1BA\02	1BA\03	21.1	690.109	689.582	2.5	uPVC	225	0.01	1	0.049	1.23	690.352	690.218	1% AEP, 15 min burst, Storm 2
P 1BA\03	1BA\03	1BA\04	21.099	689.525	688.947	2.74	uPVC	225	0.01	1	0.072	1.82	689.989	689.694	1% AEP, 15 min burst, Storm 1
P 1BA\04	1BA\04	1BA\05	24.542	688.917	688.01	3.7	uPVC	225	0.01	1	0.095	2.42	689.377	688.785	1% AEP, 15 min burst, Storm 1
P 1BA\05	1BA\05	141\06	6.297	687.109	686.889	3.49	RRJ2	375	0.012	1	0.121	1.06	688.612	688.594	1% AEP, 15 min burst, Storm 2
P 1BC\01	1BC\01	1BC\02	32.518	691.482	689.95	4.71	uPVC	225	0.01	1	0.049	1.42	691.667	690.14	1% AEP, 15 min burst, Storm 4
P 1BC\02	1BC\02	141\03	6.857	689.086	688.764	4.7	RRJ2	375	0.012	1	0.056	0.49	690.1	690.095	1% AEP, 15 min burst, Storm 1
P 1BD\01	1BD\01	1BD\02	17.999	694.56	694.266	1.63	uPVC	225	0.01	1	0.025	0.63	695.115	695.079	1% AEP, 15 min burst, Storm 3
P 1BD\02	1BD\02	1BD\03	18	694.236	693.974	1.46	uPVC	225	0.01	1	0.045	1.13	694.834	694.734	1% AEP, 15 min burst, Storm 1
P 1BD\03	1BD\03	1BD\04	17.999	693.944	693.743	1.12	uPVC	300	0.01	1	0.069	1.17	694.662	694.573	1% AEP, 15 min burst, Storm 1
P 1BD\04	1BD\04	1BD\05	18	693.693	693.513	1	uPVC	300	0.01	1	0.082	1.38	694.473	694.383	1% AEP, 15 min burst, Storm 3
P 1BD\05	1BD\05	1BD\06	18	693.483	693.303	1	uPVC	300	0.01	1	0.102	1.74	694.24	694.09	1% AEP, 15 min burst, Storm 10
P 1BD\06	1BD\06	1BD\07	2.672	693.273	693.246	1.01	uPVC	300	0.01	1	0.127	2.15	693.766	693.731	1% AEP, 15 min burst, Storm 1
P 1BD\07	1BD\07	1BD\08	8.32	693.2	693.075	1.5	RRJ2	375	0.012	1	0.126	1.11	693.658	693.63	1% AEP, 15 min burst, Storm 1
P 1BD\08	1BD\08	1BD\09	19.2	693.025	692.679	1.8	RRJ2	375	0.012	1	0.167	1.46	693.521	693.408	1% AEP, 25 min burst, Storm 1
P 1BD\09	1BD\09	1BD\10	19.2	692.629	692.374	1.33	RRJ2	375	0.012	1	0.186	1.63	693.304	693.143	1% AEP, 15 min burst, Storm 1
P 1BD\10	1BD\10	1BD\11	19.201	692.354	691.895	2.39	RRJ2	375	0.012	1	0.21	1.84	693.045	692.872	1% AEP, 15 min burst, Storm 3
P 1BD\11	1BD\11	1BD\12	17.823	691.845	691.453	2.2	RRJ2	375	0.012	1	0.231	2.02	692.758	692.57	1% AEP, 15 min burst, Storm 3
P 1BD\12	1BD\12	112\05	5.096	690.822	690.72	2	RRJ2	375	0.012	1	0.255	2.24	691.92	691.867	1% AEP, 15 min burst, Storm 3
P 1BE\01	1BE\01	1BE\02	20.46	695.359	694.528	4.06	uPVC	150	0.01	1	0.027	1.71	695.496	694.757	1% AEP, 15 min burst, Storm 3
P 1BE\02	1BE\02	1BE\03	23.373	694.428	693.217	5.18	uPVC	225	0.01	1	0.053	3.16	694.617	693.316	1% AEP, 15 min burst, Storm 1
P 1BE\03	1BE\03	114\01	5.331	692.343	692.183	3	RRJ2	375	0.012	1	0.078	1.42	692.528	692.449	1% AEP, 15 min burst, Storm 3

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 12 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	557	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-557.dwg

MAJOR 100YR CALCULATIONS

OVERFLOW ROUTES											
Name	Pit Name	Bypass Pit	Travel Time (min)	Cross Section	Total Approach (m3/s)	Bypass Flow (m3/s)	Max Flood Width (m)	Max Flood Depth (m)	Max DxV	Max V	Due to Storm
F 101\01	101\01	101\02	0.4	7.5m BLVD Road	0.244	0	2.04	0.088	0.07	1	1% AEP, 15 min burst, Storm 3
F 101\02	101\02	111\01	0.7	7.5m BLVD Road	0.11	0.004	1.6	0.074	0.07	3.28	1% AEP, 15 min burst, Storm 3
F 101\03	101\03	101\04	0.3	7.5m BLVD Road	0	0	1.5	0.071	0.08	1.48	1% AEP, 15 min burst, Storm 2
F 101\04	101\04	101\05	0.3	7.5m BLVD Road	0.785	0.004	2.22	0.093	0.1	3.88	1% AEP, 15 min burst, Storm 1
F 101\05	101\05	108\02	0.5	7.5m BLVD Road	0.55	0.017	1.66	0.076	0.08	2.16	1% AEP, 15 min burst, Storm 1
F 101\06	101\06	101\07	0.3	7.5m BLVD Road	0.318	0.004	2.23	0.093	0.11	4.5	1% AEP, 15 min burst, Storm 1
F 101\07	101\07	107\02	1	7.5m BLVD Road	0.198	0.026	2.13	0.09	0.07	1.05	1% AEP, 15 min burst, Storm 3
F 101\08	101\08	101\09	1.1	7.5m BLVD Road	0.687	0.066	6.19	0.175	0.09	0.97	1% AEP, 20 min burst, Storm 2
F 101\09	101\09	101\10	1	7.5m BLVD Road	0.815	0.446	6.79	0.183	0.21	1.14	1% AEP, 20 min burst, Storm 8
F 101\10	101\10	101\11	0.7	7.5m BLVD Road	1.412	0.273	5.27	0.163	0.16	1.02	1% AEP, 20 min burst, Storm 8
F 101\11	101\11	106\02	0.6	7.5m BLVD Road	1.079	0.133	3.17	0.122	0.11	0.96	1% AEP, 20 min burst, Storm 8
F 101\12	101\12	101\13	0.4	7.5m BLVD Road	0.031	0	1.66	0.076	0.05	0.61	1% AEP, 15 min burst, Storm 3
F 101\13	101\13	104\02	0.2	Dummy used to model flow across road low points	0.755	0.001	2.54	0.008	0.02	2.45	1% AEP, 15 min burst, Storm 4
F 101\14	101\14	101\15	0.3	7.5m BLVD Road	0.008	0	0	0	0	0	-
F 101\15	101\15	101\16	0.7	7.5m BLVD Road	0.087	0.006	2.62	0.105	0.07	1.32	1% AEP, 15 min burst, Storm 1
F 101\16	101\16	101\17	1	7.5m BLVD Road	0.056	0.011	2.83	0.112	0.09	1.95	1% AEP, 15 min burst, Storm 3
F 101\17	101\17	101\18	0.8	7.5m BLVD Road	0.078	0.02	2.54	0.103	0.09	0.98	1% AEP, 15 min burst, Storm 1
F 101\18	101\18	101\19	0.2	7.5m BLVD Road	0.083	0.016	2.66	0.107	0.08	1.53	1% AEP, 15 min burst, Storm 8
F 101\19	101\19	102\01	0.1	Dummy used to model flow across road low points	0.124	0.009	1.73	0.005	0.01	2.03	1% AEP, 15 min burst, Storm 8
F 101\20	101\20	102\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 101\21	-	-	-	-	-	-	-	-	-	-	-
F 101\22	-	-	-	-	-	-	-	-	-	-	-
F 102\01	102\01	102\02	0.2	Dummy used to model flow across road low points	0.118	0.002	1.18	0.004	0	0.94	1% AEP, 15 min burst, Storm 8
F 102\02	102\02	102\03	1	Dummy used to model flow across road low points	0.056	0	0	0	0	0	-
F 102\03	102\03	102\04	1	Dummy used to model flow across road low points	0	0	0	0	0	0	-
F 102\04	-	-	-	-	-	-	-	-	-	-	-
F 104\01	104\01	104\02	1	Local Road 1 (RK - 4.5m half road)	1.025	0	3.09	0.092	0.03	0.29	1% AEP, 20 min burst, Storm 4
F 104\02	104\02	101\15	0.3	Dummy used to model flow across road low points	0.501	0	0	0	0	0	-
F 105\01	105\01	154\01	0.7	Dummy used to model flow across road low points	0.181	0	0	0	0	0	-
F 105\02	105\02	161\01	0.8	Local Road 1 (RK - 4.5m half road)	0.057	0	2.26	0.068	0.03	0.52	1% AEP, 15 min burst, Storm 8
F 106\01	106\01	106\02	1	Local Road 1 (K&G - 4.5m half road)	0.861	0.088	3.31	0.125	0.07	0.61	1% AEP, 15 min burst, Storm 8
F 106\02	106\02	101\13	0.3	Local Road 2 (RK - 3.5m half road)	0.941	0.024	2.24	0.067	0.02	0.33	1% AEP, 20 min burst, Storm 8
F 106\03	106\03	101\12	0.2	Local Road 2 (RK - 3.5m half road)	0.015	0	0	0	0	0	-
F 107\01	107\01	107\02	1	Local Road 1 (K&G - 4.5m half road)	0.447	0.018	1.69	0.077	0.04	0.59	1% AEP, 15 min burst, Storm 8
F 107\02	107\02	107\03	0.2	Local Road 2 (RK - 3.5m half road)	0.674	0.142	4.06	0.143	0.12	1.74	1% AEP, 20 min burst, Storm 2
F 107\03	107\03	101\08	0.1	Local Road 2 (RK - 3.5m half road)	0.735	0.069	2.9	0.087	0.06	0.84	1% AEP, 20 min burst, Storm 2
F 108\01	108\01	108\02	1	Local Road 1 (K&G - 4.5m half road)	0.412	0	1.49	0.071	0.04	0.55	1% AEP, 15 min burst, Storm 8
F 108\02	108\02	108\03	0.1	Dummy used to model flow across road low points	0.351	0.006	10.09	0.051	0	0.02	1% AEP, 20 min burst, Storm 3
F 108\03	108\03	101\06	0.2	Local Road 2 (RK - 3.5m half road)	0.485	0.027	1.71	0.052	0.14	11.53	1% AEP, 15 min burst, Storm 2
F 109\01	109\01	109\02	0.3	Local Road 1 (K&G - 4.5m half road)	2.44	0	0.39	0.034	0.07	2.87	1% AEP, 15 min burst, Storm 3
F 109\02	109\02	101\04	1	Local Road 2 (RK - 3.5m half road)	0.502	0	0	0	0	0	-
F 109\03	109\03	101\04	1	7.5m BLVD Road	0	0	0.5	0.041	0.04	2.51	1% AEP, 15 min burst, Storm 2
F 110\01	110\01	109\02	0.2	Dummy used to model flow across road low points	0.484	0.017	10.05	0.042	0	0.06	1% AEP, 20 min burst, Storm 8
F 111\01	111\01	170\01	0.1	Local Road 1 (RK - 4.5m half road)	0.065	0.001	1.23	0.038	0	0	1% AEP, 20 min burst, Storm 4
F 111\02	111\02	138\01	0.6	Local Road 1 (RK - 4.5m half road)	0.007	0	0	0	0	0	-
F 112\01	112\01	112\02	1	Dummy used to model flow across road low points	2.604	0	0	0	0	0	-
F 112\02	112\02	112\03	0.1	Dummy used to model flow across road low points	0.297	0	0	0	0	0	-
F 112\03	112\03	141\02	0.3	Dummy used to model flow across road low points	0.251	0	0	0	0	0	-
F 112\04	112\04	112\05	0.2	Local Road 2 (RK - 3.5m half road)	0.007	0	0.91	0.028	0.02	0.81	1% AEP, 15 min burst, Storm 2
F 112\05	112\05	112\06	0.1	Local Road 2 (RK - 3.5m half road)	0.06	0	1.02	0.031	0.02	0.77	1% AEP, 20 min burst, Storm 2
F 112\06	112\06	171\01	0.1	Local Road 2 (RK - 3.5m half road)	0.02	0.278	3.6	0.122	0.15	1.2	1% AEP, 25 min burst, Storm 6
F 112\07	112\07	112\08	1	Local Road 2 (RK - 3.5m half road)	0.53	0.025	2.39	0.072	0.02	0.3	1% AEP, 25 min burst, Storm 6
F 112\08	112\08	112\09	0.6	Local Road 1 (RK - 4.5m half road)	0.218	0	2.45	0.074	0.06	0.94	1% AEP, 15 min burst, Storm 1
F 112\09	112\09	112\10	0.2	Local Road 1 (RK - 4.5m half road)	0.098	0.014	2.18	0.066	0.05	0.76	1% AEP, 15 min burst, Storm 1
F 112\10	112\10	130\01	0.3	Local Road 1 (RK - 4.5m half road)	0.147	0.004	2.66	0.08	0.06	0.79	1% AEP, 15 min burst, Storm 3
F 112\11	112\11	112\12	0.5	Local Road 1 (RK - 4.5m half road)	0.005	0	2.27	0.068	0.04	0.69	1% AEP, 15 min burst, Storm 3
F 112\12	112\12	112\13	0.8	Local Road 1 (RK - 4.5m half road)	0.032	0.003	2.84	0.085	0.07	0.9	1% AEP, 15 min burst, Storm 7
F 112\13	112\13	112\14	0.2	Local Road 1 (RK - 4.5m half road)	0.076	0.026	1.9	0.057	0.05	0.85	1% AEP, 15 min burst, Storm 1
F 112\14	112\14	127\01	0.1	Dummy used to model flow across road low points	0.109	0.016	10.42	0.127	0	0.01	1% AEP, 15 min burst, Storm 2
F 112\15	112\15	112\16	0.2	Local Road 1 (RK - 4.5m half road)	0.024	0	2.01	0.061	0.04	0.62	1% AEP, 15 min burst, Storm 3
F 112\16	112\16	112\17	0.2	Local Road 1 (RK - 4.5m half road)	0.032	0.001	2.56	0.077	0.04	0.57	1% AEP, 15 min burst, Storm 7
F 112\17	112\17	112\18	0.2	Local Road 1 (RK - 4.5m half road)	0.031	0.004	1.54	0.047	0.02	0.57	1% AEP, 15 min burst, Storm 8
F 112\18	112\18	114\19	0.4	Local Road 1 (RK - 4.5m half road)	0.019	0	0	0	0	0	-
F 112\19	112\19	113\02	1	Dummy used to model flow across road low points	0.269	0	0	0	0	0	-
F 112\20	-	-	-	-	-	-	-	-	-	-	-

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 13 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	558	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-558.dwg

MAJOR 100YR CALCULATIONS

OVERFLOW ROUTES											
Name	Pit	Bypass	Travel Time	Cross Section	Total	Bypass	Max Flood	Max Flood	Max DxV	Max V	Due to Storm
	Name	Pit			Approach	Flow	Width	Depth			
			(min)		(m3/s)	(m3/s)	(m)	(m)			
F 112\21	-	-	-	-	-	-	-	-	-	-	-
F 113\01	-	-	-	-	-	-	-	-	-	-	-
F 113\02	-	-	-	-	-	-	-	-	-	-	-
F 114\01	114\01	114\02	0.2	Local Road 1 (RK - 4.5m half road)	0.025	0	1.91	0.058	0.04	0.79	1% AEP, 15 min burst, Storm 1
F 114\02	114\02	133\01	0.4	Local Road 1 (RK - 4.5m half road)	0.026	0.002	2.38	0.071	0.06	0.94	1% AEP, 15 min burst, Storm 1
F 114\03	114\03	121\01	0.6	Local Road 1 (RK - 4.5m half road)	0.031	0	2.48	0.074	0.09	1.28	1% AEP, 15 min burst, Storm 1
F 114\04	114\04	114\05	0.5	Local Road 1 (RK - 4.5m half road)	0.009	0	2.37	0.071	0.08	1.13	1% AEP, 15 min burst, Storm 2
F 114\05	114\05	114\06	0.4	Local Road 1 (RK - 4.5m half road)	0.061	0.076	2.94	0.088	0.09	1.12	1% AEP, 15 min burst, Storm 3
F 114\06	114\06	119\01	0.2	Local Road 1 (RK - 4.5m half road)	0.197	0.109	2.58	0.077	0.09	1.11	1% AEP, 15 min burst, Storm 8
F 114\07	114\07	114\08	0.4	Local Road 1 (RK - 4.5m half road)	0.039	0	1.4	0.042	0.02	0.51	1% AEP, 15 min burst, Storm 2
F 114\08	114\08	114\09	0.6	Local Road 1 (RK - 4.5m half road)	0.008	0	2.54	0.076	0.06	0.82	1% AEP, 15 min burst, Storm 1
F 114\09	114\09	114\10	0.6	Local Road 1 (RK - 4.5m half road)	0.051	0.012	2.61	0.078	0.05	0.6	1% AEP, 15 min burst, Storm 1
F 114\10	114\10	127\01	0.8	Local Road 1 (RK - 4.5m half road)	0.084	0.04	2.33	0.07	0.04	0.53	1% AEP, 15 min burst, Storm 8
F 114\11	114\11	114\12	0.5	Dummy used to model flow across road low points	0	0	0	0	0	0	-
F 114\12	114\12	114\13	0.3	Local Road 2 (RK - 3.5m half road)	0.034	0	2.25	0.068	0.04	0.68	1% AEP, 15 min burst, Storm 1
F 114\13	114\13	114\14	0.5	Local Road 2 (RK - 3.5m half road)	0.036	0.005	2.57	0.077	0.05	0.74	1% AEP, 15 min burst, Storm 3
F 114\14	114\14	114\15	0.3	Local Road 2 (RK - 3.5m half road)	0.06	0.05	3.15	0.094	0.05	0.69	1% AEP, 20 min burst, Storm 7
F 114\15	114\15	114\16	0.3	Local Road 2 (RK - 3.5m half road)	0.12	0.12	3.59	0.114	0.08	0.84	1% AEP, 20 min burst, Storm 4
F 114\16	114\16	114\17	0.5	Local Road 2 (RK - 3.5m half road)	0.237	0.151	4.34	0.154	0.06	0.41	1% AEP, 20 min burst, Storm 4
F 114\17	114\17	114\18	1.4	Local Road 1 (RK - 4.5m half road)	0.271	0.022	2.7	0.081	0.02	0.2	1% AEP, 20 min burst, Storm 4
F 114\18	114\18	114\19	0.8	Local Road 1 (RK - 4.5m half road)	0.05	0	2.56	0.077	0.03	0.45	1% AEP, 15 min burst, Storm 1
F 114\19	114\19	112\19	0.2	Dummy used to model flow across road low points	0.151	0.007	10.21	0.077	0	0.01	1% AEP, 15 min burst, Storm 3
F 116\01	116\01	114\17	0.6	Local Road 2 (RK - 3.5m half road)	0.048	0.025	2.02	0.061	0.03	0.62	1% AEP, 15 min burst, Storm 8
F 117\01	117\01	154\01	0.6	Local Road 1 (RK - 4.5m half road)	0.089	0.026	2.95	0.088	0.06	0.65	1% AEP, 15 min burst, Storm 3
F 118\01	118\01	118\02	0.8	Dummy used to model flow across road low points	0.419	0.109	10.49	0.142	0.01	0.08	1% AEP, 20 min burst, Storm 8
F 118\02	118\02	118\03	1.5	Local Road 1 (K&G - 4.5m half road)	0.334	0.006	1.91	0.083	0.01	0.1	1% AEP, 15 min burst, Storm 8
F 118\03	118\03	117\01	0.9	Local Road 1 (RK - 4.5m half road)	0.138	0.001	2.65	0.079	0.06	0.84	1% AEP, 15 min burst, Storm 1
F 119\01	119\01	119\02	0.4	Dummy used to model flow across road low points	0.282	0.028	10.12	0.058	0	0.06	1% AEP, 15 min burst, Storm 8
F 119\02	119\02	114\07	0.9	Local Road 1 (RK - 4.5m half road)	0.155	0	0	0	0	0	-
F 120\01	120\01	118\01	0.2	Local Road 1 (RK - 4.5m half road)	0.156	0.061	2.89	0.086	0.09	0.99	1% AEP, 15 min burst, Storm 7
F 121\01	121\01	120\01	0.4	Local Road 1 (RK - 4.5m half road)	0.082	0.05	2.7	0.081	0.08	1.08	1% AEP, 15 min burst, Storm 3
F 122\01	122\01	125\01	0.1	Dummy used to model flow across road low points	0.091	0	0	0	0	0	-
F 122\02	122\02	122\03	1	Local Road 1 (RK - 4.5m half road)	0.022	0	0	0	0	0	-
F 122\03	122\03	122\04	0.3	Local Road 2 (RK - 3.5m half road)	0.016	0	1.29	0.039	0.01	0.38	1% AEP, 15 min burst, Storm 2
F 122\04	122\04	122\05	0.4	Local Road 2 (RK - 3.5m half road)	0.006	0.015	1.62	0.049	0.03	0.54	1% AEP, 15 min burst, Storm 8
F 122\05	122\05	122\06	0.3	Local Road 2 (RK - 3.5m half road)	0.046	0.014	1.85	0.056	0.02	0.54	1% AEP, 15 min burst, Storm 8
F 122\06	122\06	122\07	1.1	Local Road 2 (RK - 3.5m half road)	0.055	0.03	2.65	0.079	0.05	0.63	1% AEP, 20 min burst, Storm 8
F 122\07	122\07	122\08	0.3	Local Road 2 (RK - 3.5m half road)	0.128	0.052	2.38	0.072	0.05	0.71	1% AEP, 20 min burst, Storm 8
F 122\08	122\08	112\19	0.9	Local Road 2 (RK - 3.5m half road)	0.166	0.001	0.48	0.015	0.01	0.39	1% AEP, 20 min burst, Storm 8
F 122\09	122\09	112\19	0.4	Local Road 1 (RK - 4.5m half road)	0.139	0.023	1.71	0.052	0.03	0.53	1% AEP, 15 min burst, Storm 1
F 123\01	123\01	112\19	1.2	Local Road 2 (RK - 3.5m half road)	0.157	0.082	2.74	0.082	0.06	0.74	1% AEP, 20 min burst, Storm 8
F 124\01	124\01	124\02	0.8	DUM OVERLAND PATH	0.048	0	0	0	0	0	-
F 124\02	124\02	124\03	0.8	Road No 15	0.054	0.002	3	0.091	0.05	0.55	1% AEP, 15 min burst, Storm 1
F 124\03	124\03	123\01	1.4	Road No 15	0.04	0.005	2.9	0.089	0.02	0.4	1% AEP, 15 min burst, Storm 1
F 125\01	125\01	123\01	1.9	Local Road 2 (RK - 3.5m half road)	0.087	0.064	3.35	0.1	0.07	0.74	1% AEP, 15 min burst, Storm 8
F 126\01	126\01	122\09	1	Local Road 1 (RK - 4.5m half road)	0.038	0	0	0	0	0	-
F 127\01	127\01	127\02	0.4	Dummy used to model flow across road low points	0.116	0	0	0	0	0	-
F 127\02	127\02	112\15	0.1	Dummy used to model flow across road low points	0.047	0.001	0.59	0.002	0	2.8	1% AEP, 15 min burst, Storm 2
F 128\01	128\01	128\02	0.1	Local Road 1 (K&G - 4.5m half road)	0.383	0.146	2.93	0.114	0.2	1.84	1% AEP, 20 min burst, Storm 5
F 128\02	128\02	128\03	0.2	Local Road 1 (K&G - 4.5m half road)	0.257	0.112	2.55	0.103	0.18	1.78	1% AEP, 20 min burst, Storm 4
F 128\03	128\03	128\04	1	Local Road 1 (K&G - 4.5m half road)	0.258	0.138	2.3	0.095	0.21	2.61	1% AEP, 20 min burst, Storm 5
F 128\04	128\04	128\05	0.2	Local Road 1 (K&G - 4.5m half road)	0.308	0.082	2.24	0.094	0.13	1.56	1% AEP, 20 min burst, Storm 7
F 128\05	128\05	166\01	0.4	7.5m BLVD Road	0.237	0.021	1.27	0.065	0.12	3.99	1% AEP, 20 min burst, Storm 7
F 128\06	128\06	128\07	0.2	7.5m BLVD Road	0.049	0.002	1.05	0.058	0.05	4.21	1% AEP, 15 min burst, Storm 2
F 128\07	128\07	128\08	0.6	7.5m BLVD Road	0.032	0	1.33	0.066	0.05	0.97	1% AEP, 15 min burst, Storm 4
F 128\08	128\08	128\09	1	7.5m BLVD Road	0.063	0.074	2.89	0.113	0.09	0.88	1% AEP, 20 min burst, Storm 4
F 128\09	128\09	122\01	0.9	7.5m BLVD Road	0.163	0.014	0.8	0.05	0.04	0.87	1% AEP, 20 min burst, Storm 5
F 128\10	128\10	122\02	1	Dummy used to model flow across road low points	0.007	0	0	0	0	0	-
F 128\11	128\11	128\12	0.7	7.5m BLVD Road	0.015	0	0	0	0	0	-
F 128\12	128\12	126\01	0.5	7.5m BLVD Road	0.023	0	0	0	0	0	-
F 129\01	129\01	164\01	0.4	Local Road 1 (RK - 4.5m half road)	0.114	0.029	1.53	0.046	0.04	0.82	1% AEP, 15 min burst, Storm 7
F 130\01	130\01	129\01	0.4	Local Road 1 (RK - 4.5m half road)	0.081	0.012	2.78	0.083	0.07	0.84	1% AEP, 15 min burst, Storm 7
F 131\01	131\01	131\02	0.7	Dummy used to model flow across road low points	0.212	0.004	10.02	0.035	0	0.02	1% AEP, 20 min burst, Storm 3
F 131\02	131\02	112\11	0.9	Local Road 1 (RK - 4.5m half road)	0.098	0	0	0	0	0	-
F 132\01	132\01	131\01	0.2	Local Road 1 (RK - 4.5m half road)	0.115	0.034	1.63	0.049	0.04	0.85	1% AEP, 15 min burst, Storm 3
F 133\01	133\01	133\02	0.3	Local Road 1 (RK - 4.5m half road)	0.055	0.012	2.62	0.079	0.07	0.97	1% AEP, 15 min burst, Storm 3
F 133\02	133\02	133\03	0.2	Local Road 1 (RK - 4.5m half road)	0.094	0.022	2.31	0.069	0.06	0.88	1% AEP, 15 min burst, Storm 3
F 133\03	133\03	133\04	0.3	Local Road 1 (RK - 4.5m half road)	0.124	0.01	2.23	0.067	0.05	0.88	1% AEP, 15 min burst, Storm 3
F 133\04	133\04	171\01	0.3	Local Road 1 (RK - 4.5m half road)	0.127	0.008	1.04	0.032	0.02	0.66	1% AEP, 15 min burst, Storm 3
F 134\01	134\01	132\01	0.8	Local Road 1 (RK - 4.5m half road)	0.099	0.012	2.9	0.087	0.09	1.07	1% AEP, 15 min burst, Storm 3
F 135\01	135\01	135\02	1	Dummy used to model flow across road low points	0.257	0	0	0	0	0	-

ISSUED FOR CONSTRUCTION CERTIFICATE

B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 14 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	559	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-559.dwg

MAJOR 100YR CALCULATIONS

OVERFLOW ROUTES

Name	Pit	Bypass	Travel Time	Cross Section	Total	Bypass	Max Flood	Max Flood	Max DxV	Max V	Due to Storm
	Name	Pit			Approach	Flow	Width	Depth			
			(min)		(m3/s)	(m3/s)	(m)	(m)			
F 135\02	135\02	135\03	0.3	Local Road 1 (RK - 4.5m half road)	0.131	0.057	2.64	0.079	0.06	0.74	1% AEP, 20 min burst, Storm 2
F 135\03	135\03	173\01	0.4	Local Road 1 (RK - 4.5m half road)	0.266	0.015	1.44	0.044	0.03	0.66	1% AEP, 20 min burst, Storm 8
F 135\04	135\04	135\05	0.5	Local Road 1 (K&G - 4.5m half road)	0.195	0	1.11	0.059	0.03	0.5	1% AEP, 15 min burst, Storm 8
F 135\05	135\05	135\06	0.7	Local Road 1 (K&G - 4.5m half road)	0.067	0	1.44	0.069	0.04	0.61	1% AEP, 15 min burst, Storm 3
F 135\06	135\06	135\07	0.6	Local Road 1 (K&G - 4.5m half road)	0.017	0	1.26	0.064	0.04	0.58	1% AEP, 15 min burst, Storm 8
F 135\07	135\07	141\02	0.6	Local Road 1 (K&G - 4.5m half road)	0.013	0	2.58	0.103	0.1	1.08	1% AEP, 15 min burst, Storm 1
F 135\08	135\08	112\04	0.2	Local Road 1 (RK - 4.5m half road)	0.015	0	1.13	0.035	0.02	0.75	1% AEP, 15 min burst, Storm 2
F 136\01	136\01	135\08	0.6	Local Road 1 (RK - 4.5m half road)	0.037	0.001	1.75	0.053	0.03	0.56	1% AEP, 15 min burst, Storm 8
F 138\01	138\01	136\01	1	Local Road 1 (RK - 4.5m half road)	0.078	0.006	2.17	0.065	0.04	0.67	1% AEP, 15 min burst, Storm 7
F 140\01	140\01	140\02	1	Local Road 2 (RK - 3.5m half road)	1.296	0.03	1.63	0.049	0.04	0.77	1% AEP, 20 min burst, Storm 4
F 140\02	140\02	135\04	0.2	Local Road 1 (K&G - 4.5m half road)	0.315	0	0	0	0	0	-
F 141\01	-	-	-	-	-	-	-	-	-	-	-
F 141\02	141\02	141\03	0.4	Local Road 1 (RK - 4.5m half road)	0.064	0.024	2.72	0.082	0.1	1.28	1% AEP, 15 min burst, Storm 3
F 141\03	141\03	141\04	0.2	Local Road 1 (RK - 4.5m half road)	0.125	0.049	2.34	0.07	0.08	1.16	1% AEP, 15 min burst, Storm 7
F 141\04	141\04	143\03	0.3	Local Road 1 (RK - 4.5m half road)	0.199	0.024	2.3	0.069	0.07	0.98	1% AEP, 15 min burst, Storm 3
F 141\05	141\05	141\06	0.2	Local Road 1 (RK - 4.5m half road)	0.144	0.079	3.32	0.099	0.07	0.91	1% AEP, 20 min burst, Storm 5
F 141\06	141\06	141\07	0.1	Local Road 1 (RK - 4.5m half road)	0.175	0.194	3.57	0.106	0.13	1.22	1% AEP, 20 min burst, Storm 8
F 141\07	141\07	141\08	0.1	Dummy used to model flow across road low points	0.558	0.162	10.04	0.038	0.03	0.7	1% AEP, 20 min burst, Storm 8
F 141\08	141\08	169\01	0.5	Dummy used to model flow across road low points	0.287	0.078	10.16	0.067	0.02	0.95	1% AEP, 25 min burst, Storm 1
F 142\01	142\01	141\08	0.5	Local Road 1 (K&G - 4.5m half road)	0.037	0.029	2.27	0.094	0.06	0.68	1% AEP, 20 min burst, Storm 8
F 143\01	143\01	151\01	0.9	Grassed swale with 1:4 sideslopes	0.154	0.05	1.18	0.147	0.18	1.25	1% AEP, 20 min burst, Storm 4
F 143\02	143\02	143\03	0.4	Local Road 1 (K&G - 4.5m half road)	0.074	0.008	1.8	0.08	0.08	2.98	1% AEP, 15 min burst, Storm 1
F 143\03	143\03	143\04	0.2	Local Road 1 (K&G - 4.5m half road)	0.145	0.086	5.5	0.204	0.03	0.16	1% AEP, 20 min burst, Storm 4
F 143\04	143\04	141\05	0.1	Local Road 1 (K&G - 4.5m half road)	0.201	0.089	3.29	0.125	0.16	2.2	1% AEP, 20 min burst, Storm 4
F 145\01	145\01	128\06	0.2	Dummy used to model flow across road low points	0	0	0	0	0	0	-
F 151\01	151\01	166\01	0.2	Dummy used to model flow across road low points	0.12	0	0	0	0	0	-
F 154\01	154\01	114\10	0.2	Dummy used to model flow across road low points	0.129	0.065	10.51	0.147	0.01	0.05	1% AEP, 15 min burst, Storm 8
F 155\01	155\01	102\01	0.4	Local Road 1 (K&G - 4.5m half road)	0.401	0	1.82	0.081	0.06	0.68	1% AEP, 15 min burst, Storm 1
F 156\01	156\01	114\01	1	Local Road 1 (RK - 4.5m half road)	0.056	0.003	1.63	0.049	0.04	0.92	1% AEP, 15 min burst, Storm 2
F 157\01	157\01	158\01	1	7.5m BLVD Road	0.124	0.022	2.39	0.098	0.11	2.15	1% AEP, 15 min burst, Storm 2
F 158\01	158\01	118\01	1	Local Road 2 (K&G - 3.5 half road)	0.121	0.097	2.5	0.101	0.1	0.99	1% AEP, 20 min burst, Storm 8
F 159\01	159\01	160\01	1	7.5m BLVD Road	0.069	0.005	2.96	0.115	0.08	1.84	1% AEP, 15 min burst, Storm 1
F 160\01	160\01	105\01	1	7.5m BLVD Road	0.104	0.025	1.4	0.068	0.05	0.69	1% AEP, 15 min burst, Storm 3
F 161\01	161\01	162\01	1	7.5m BLVD Road	0.066	0.007	2.83	0.112	0.09	2.15	1% AEP, 15 min burst, Storm 3
F 162\01	162\01	163\01	1	7.5m BLVD Road	0.107	0.027	3.12	0.12	0.09	0.77	1% AEP, 15 min burst, Storm 3
F 163\01	163\01	101\19	1	Dummy used to model flow across road low points	0.142	0	0	0	0	0	-
F 164\01	164\01	112\14	1	Dummy used to model flow across road low points	0.142	0.007	8.5	0.026	0	0.06	1% AEP, 15 min burst, Storm 4
F 165\01	165\01	101\15	1	Local Road 2 (RK - 3.5m half road)	0.049	0.001	1.04	0.032	0	0	1% AEP, 15 min burst, Storm 3
F 166\01	166\01	167\01	1	7.5m BLVD Road	0.226	0.013	2.35	0.097	0.09	1.81	1% AEP, 15 min burst, Storm 1
F 167\01	167\01	168\01	1	7.5m BLVD Road	0.203	0.068	2.84	0.112	0.1	0.91	1% AEP, 20 min burst, Storm 4
F 168\01	168\01	141\07	1	7.5m BLVD Road	0.247	0.036	1.88	0.083	0.05	0.66	1% AEP, 20 min burst, Storm 4
F 169\01	169\01	164\01	1	7.5m BLVD Road	0.178	0.019	1.41	0.069	0.04	0.55	1% AEP, 25 min burst, Storm 7
F 170\01	170\01	135\02	1	Local Road 1 (K&G - 4.5m half road)	0.123	0.014	2.85	0.112	0.08	0.78	1% AEP, 15 min burst, Storm 3
F 171\01	171\01	112\07	0.1	Dummy used to model flow across road low points	0.668	0.176	10.33	0.105	0.02	0.19	1% AEP, 25 min burst, Storm 6
F 173\01	173\01	140\02	1	Dummy used to model flow across road low points	0.144	0.02	10.22	0.08	0	0.03	1% AEP, 20 min burst, Storm 4
F 1AL\01	1AL\01	110\01	1	7.5m BLVD Road	0.541	0	1.5	0.071	0.05	1.2	1% AEP, 15 min burst, Storm 3
F 1AN\01	1AN\01	1AN\03	1	DUM OVERLAND PATH	0.039	0	0	0	0	0	-
F 1AN\02	1AN\02	114\19	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AN\03	1AN\03	1AN\04	1	DUM OVERLAND PATH	0.042	0	0	0	0	0	-
F 1AN\04	1AN\04	1AN\05	1	DUM OVERLAND PATH	0.056	0	0	0	0	0	-
F 1AN\05	1AN\05	114\19	1	DUM OVERLAND PATH	0.008	0	0	0	0	0	-
F 1AN\06	1AN\06	112\18	1	DUM OVERLAND PATH	0.004	0	0	0	0	0	-
F 1AP\01	1AP\01	1AN\06	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1AQ\01	1AQ\01	122\09	1	DUM OVERLAND PATH	0.053	0	0	0	0	0	-
F 1AQ\02	1AQ\02	1AQ\03	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AQ\03	1AQ\03	1AQ\04	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1AQ\04	1AQ\04	122\09	1	DUM OVERLAND PATH	0.04	0	0	0	0	0	-
F 1AR\01	1AR\01	122\09	1	DUM OVERLAND PATH	0.042	0	0	0	0	0	-
F 1AR\02	1AR\02	122\09	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1AR\03	1AR\03	122\09	1	DUM OVERLAND PATH	0.039	0	0	0	0	0	-
F 1AW\01	1AW\01	1AW\03	1	DUM OVERLAND PATH	0.042	0	0	0	0	0	-
F 1AW\02	1AW\02	112\09	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AW\03	1AW\03	O 1AW\03	1	DUM OVERLAND PATH	0.041	0	0	0	0	0	-
F 1AW\04	1AW\04	O 1AW\04	1	DUM OVERLAND PATH	0.037	0.001	0.92	0.009	0	0	1% AEP, 15 min burst, Storm 7
F 1AW\05	1AW\05	130\01	1	DUM OVERLAND PATH	0.037	0	0	0	0	0	-
F 1AW\06	1AW\06	130\01	1	DUM OVERLAND PATH	0.037	0	0	0	0	0	-
F 1AW\07	1AW\07	129\01	1	DUM OVERLAND PATH	0.037	0	0	0	0	0	-
F 1AW\08	1AW\08	129\01	1	DUM OVERLAND PATH	0.037	0	0	0	0	0	-
F 1AW\09	1AW\09	129\01	1	DUM OVERLAND PATH	0.037	0	0	0	0	0	-
F 1AW\10	1AW\10	1AW\12	1	DUM OVERLAND PATH	0.037	0	0	0	0	0	-
F 1AW\11	1AW\11	129\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 15 OF 16

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	560	B

MAJOR 100YR CALCULATIONS

OVERFLOW ROUTES

Name	Pit Name	Bypass Pit	Travel Time (min)	Cross Section	Total Approach (m3/s)	Bypass Flow (m3/s)	Max Flood Width (m)	Max Flood Depth (m)	Max DxV	Max V	Due to Storm
F 1AW\12	1AW\12	129\01	1	DUM OVERLAND PATH	0.001	0	0	0	0	0	-
F 1AX\01	1AX\01	114\09	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1AX\02	1AX\02	114\09	1	DUM OVERLAND PATH	0.04	0	0	0	0	0	-
F 1AY\01	1AY\01	O 1AY\01	1	DUM OVERLAND PATH	0.025	0.002	4.46	0.045	0	0.03	1% AEP, 15 min burst, Storm 8
F 1AY\02	1AY\02	O 1AY\02	1	DUM OVERLAND PATH	0.059	0.01	4.9	0.049	0.01	0.16	1% AEP, 15 min burst, Storm 8
F 1AY\03	1AY\03	O 1AY\03	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\04	1AY\04	O 1AY\04	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\05	1AY\05	O 1AY\05	1	DUM OVERLAND PATH	0.039	0	0	0	0	0	-
F 1AY\06	1AY\06	124\02	1	DUM OVERLAND PATH	0.039	0	0	0	0	0	-
F 1AY\07	1AY\07	124\03	1	DUM OVERLAND PATH	0.039	0	0	0	0	0	-
F 1AY\08	1AY\08	1AY\09	1	DUM OVERLAND PATH	0.04	0	0	0	0	0	-
F 1AY\09	1AY\09	123\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\10	1AY\10	123\01	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1AY\11	1AY\11	123\01	1	DUM OVERLAND PATH	0.048	0.012	8.12	0.081	0	0.05	1% AEP, 15 min burst, Storm 3
F 1BA\01	1BA\01	141\07	1	DUM OVERLAND PATH	0.042	0	0	0	0	0	-
F 1BA\02	1BA\02	141\07	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BA\03	1BA\03	141\07	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BA\04	1BA\04	141\07	1	DUM OVERLAND PATH	0.037	0	0	0	0	0	-
F 1BA\05	1BA\05	141\07	1	DUM OVERLAND PATH	0.042	0	0	0	0	0	-
F 1BC\01	1BC\01	143\03	1	DUM OVERLAND PATH	0.071	0	0	0	0	0	-
F 1BC\02	1BC\02	141\03	1	DUM OVERLAND PATH	0.013	0	0	0	0	0	-
F 1BD\01	1BD\01	133\01	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\02	1BD\02	133\01	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\03	1BD\03	133\02	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\04	1BD\04	133\02	1	DUM OVERLAND PATH	0.038	0.001	4.24	0.042	0	0.11	1% AEP, 15 min burst, Storm 2
F 1BD\05	1BD\05	133\02	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\06	1BD\06	133\03	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\07	1BD\07	133\03	1	DUM OVERLAND PATH	0	0	0	0	0	0	-
F 1BD\08	1BD\08	133\03	1	DUM OVERLAND PATH	0.055	0	0	0	0	0	-
F 1BD\09	1BD\09	133\04	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\10	1BD\10	133\04	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\11	1BD\11	133\04	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BD\12	1BD\12	112\05	1	DUM OVERLAND PATH	0.04	0.007	3.36	0.034	0	0.12	1% AEP, 20 min burst, Storm 4
F 1BE\01	1BE\01	133\01	1	DUM OVERLAND PATH	0.041	0	0	0	0	0	-
F 1BE\02	1BE\02	114\02	1	DUM OVERLAND PATH	0.038	0	0	0	0	0	-
F 1BE\03	1BE\03	114\01	1	DUM OVERLAND PATH	0.041	0	0	0	0	0	-

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

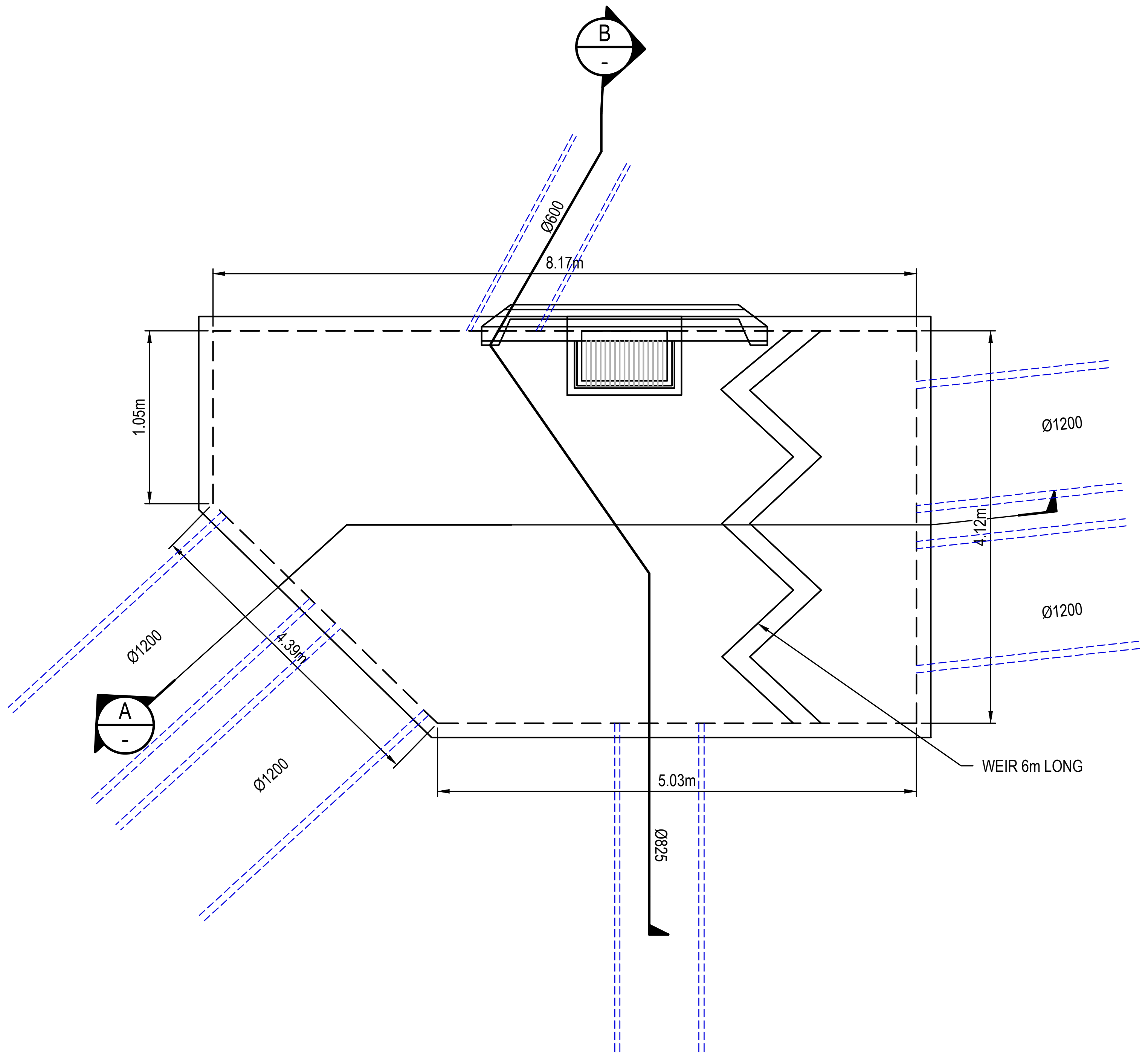
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
MAJOR 100 YEAR CALCULATIONS
SHEET 16 OF 16

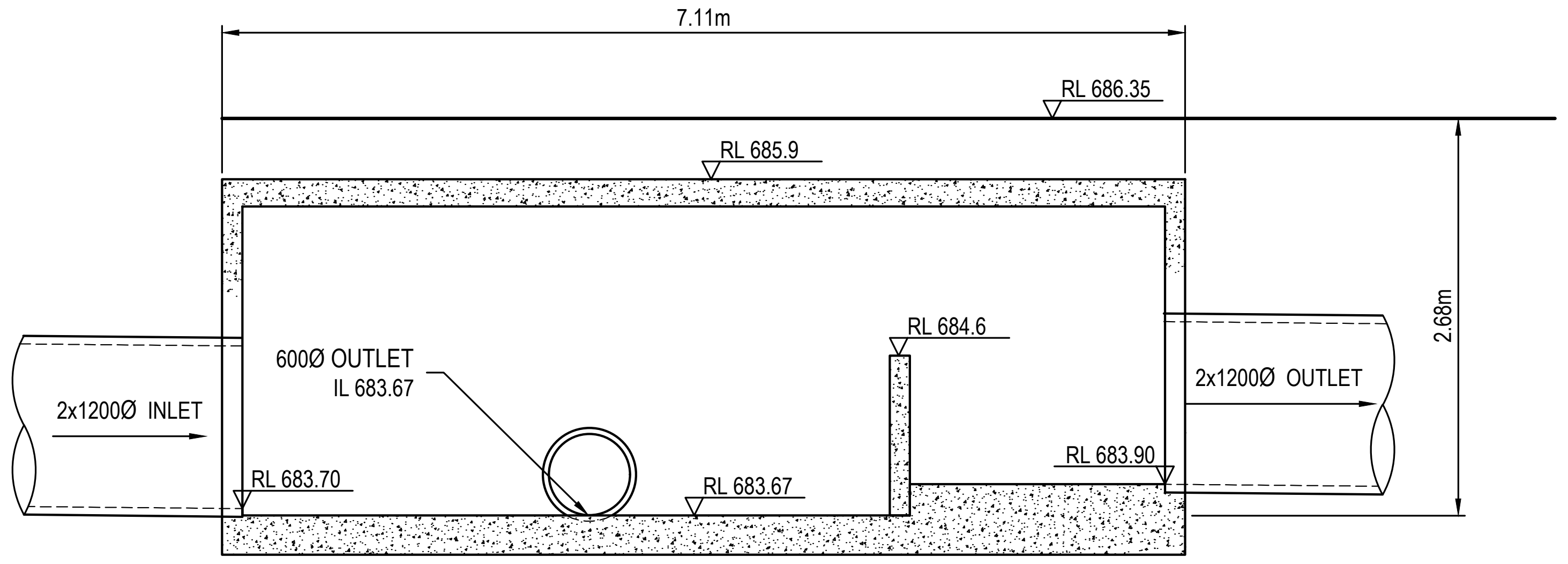
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	561	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-561.dwg



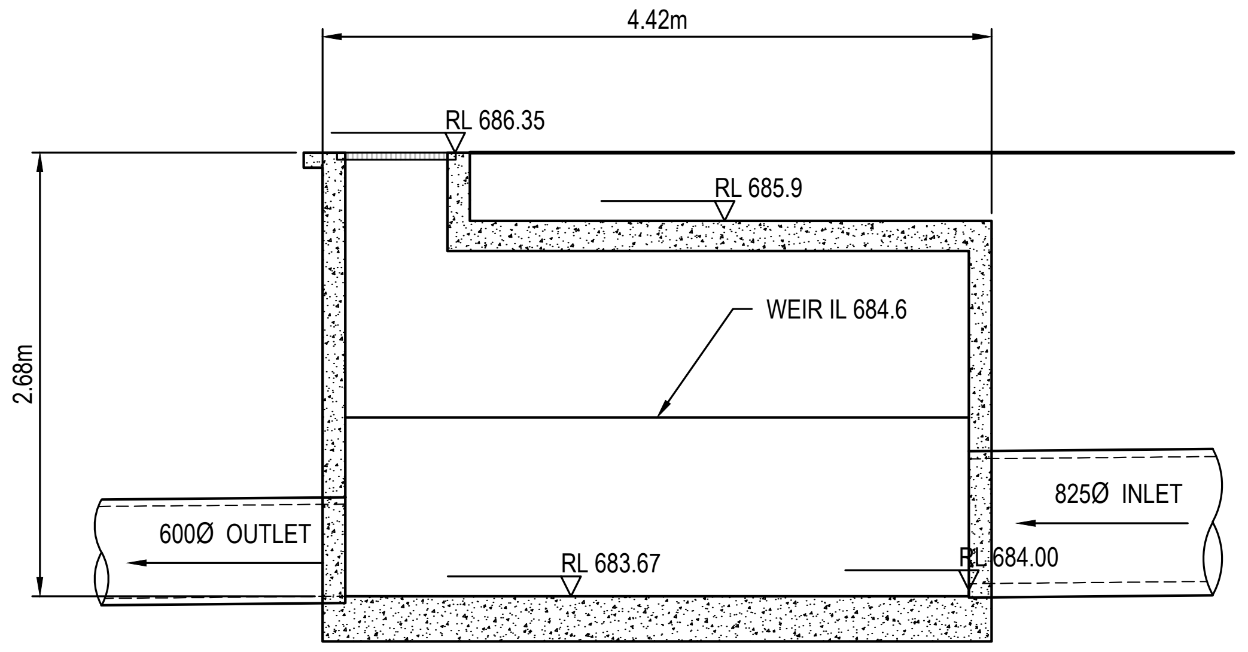
PIT 112/19 PLAN VIEW

SCALE: 1:50



SECTION A

SCALE: 1:50



SECTION B

SCALE 1:50

ISSUED FOR CONSTRUCTION CERTIFICATE

FM	DH	-	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Disclaimer and Copyright:

Scale:

0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

SCALE 1:50 (A1) SCALE 1:100 (A3)

For:

Aoyuan
building a healthy lifestyle

By:

Orion Consulting

SUSTAINABLE CERTIFICATION ✓ISO 9001

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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:

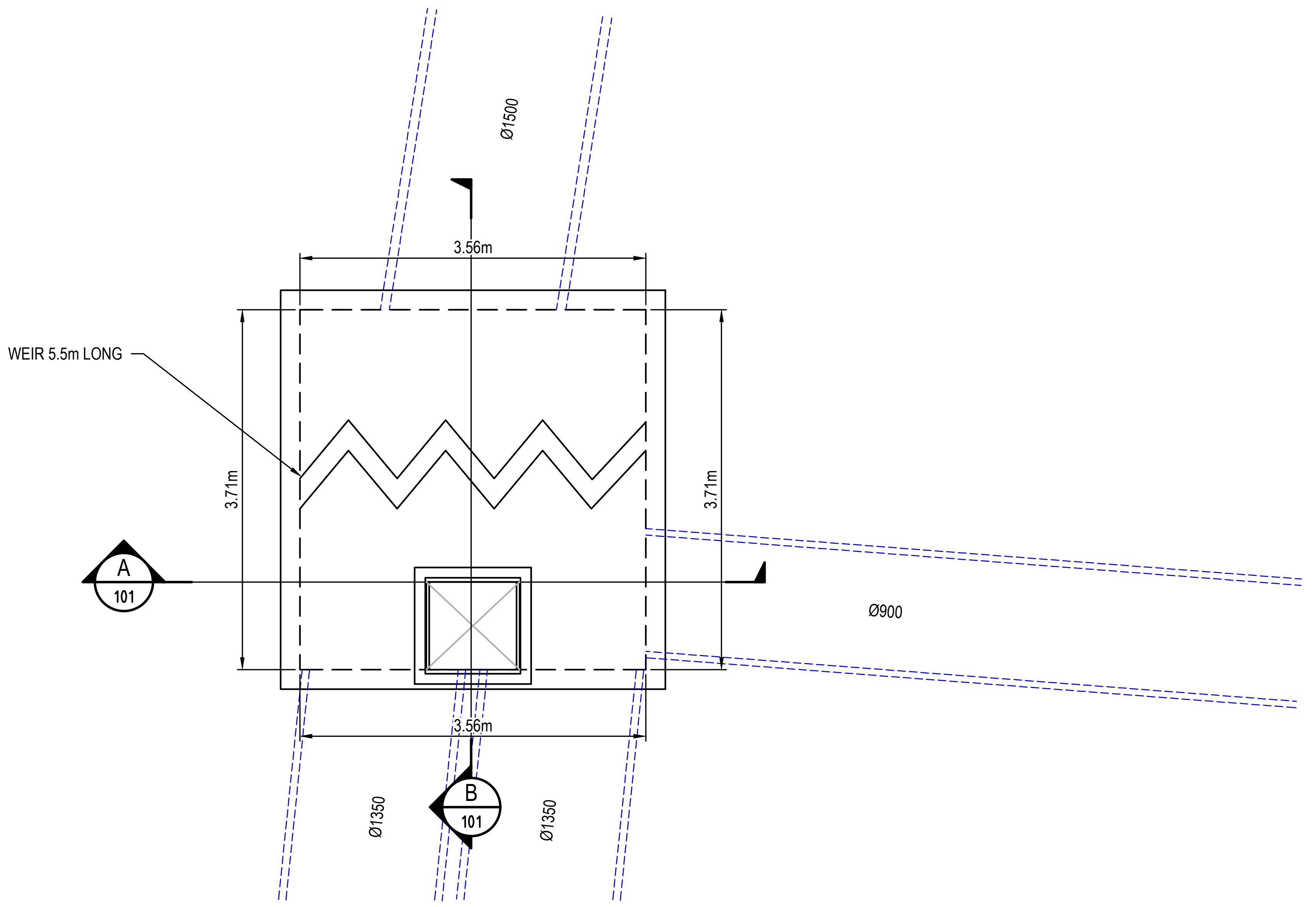
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:

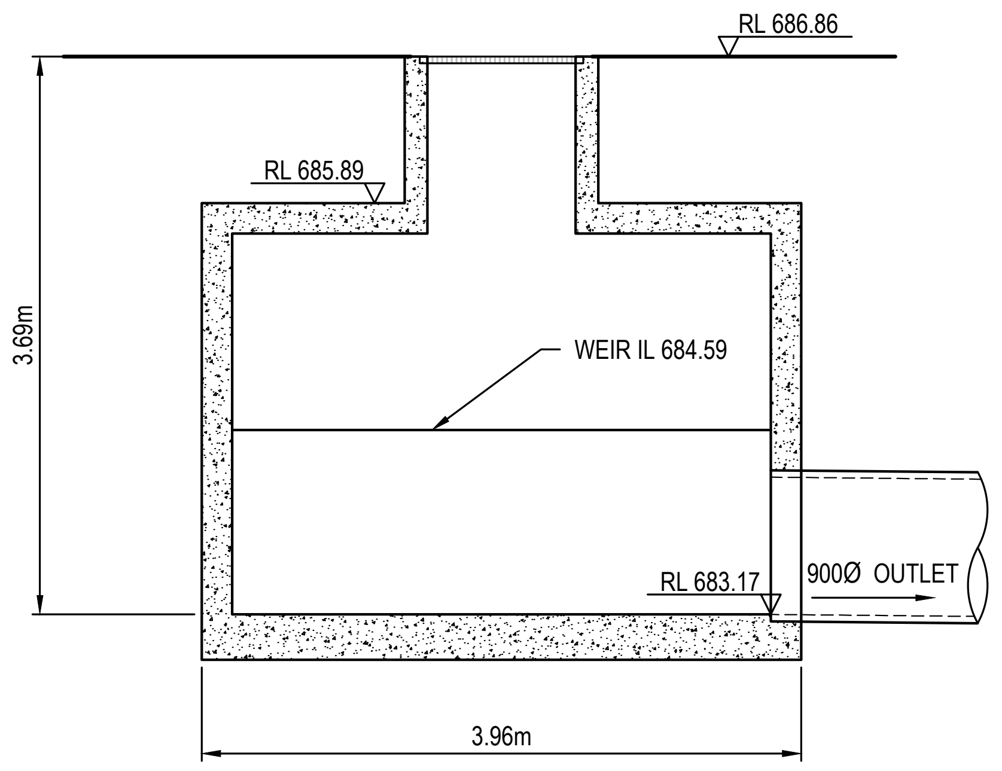
SPECIAL PIT LAYOUT
PIT 112/19

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	570	B

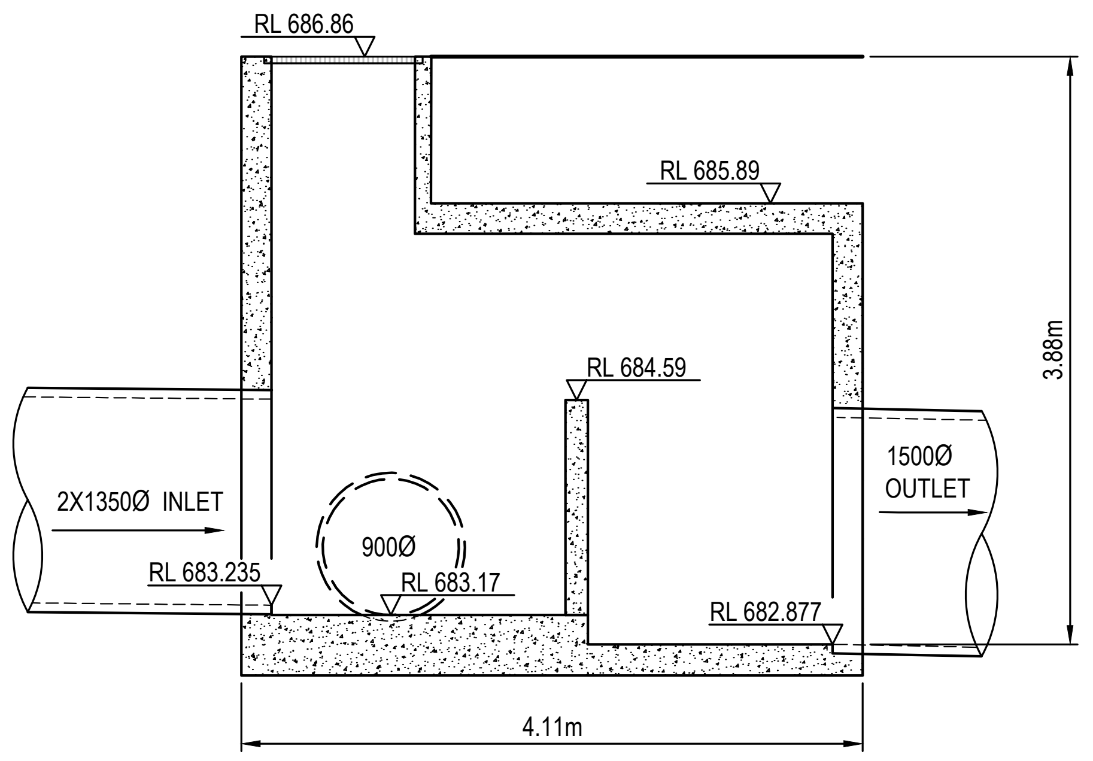
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-570.dwg



PIT 101/20 PLAN VIEW
SCALE: 1:50



SECTION A
SCALE: 1:50



SECTION B
SCALE: 1:50

ISSUED FOR CONSTRUCTION CERTIFICATE

B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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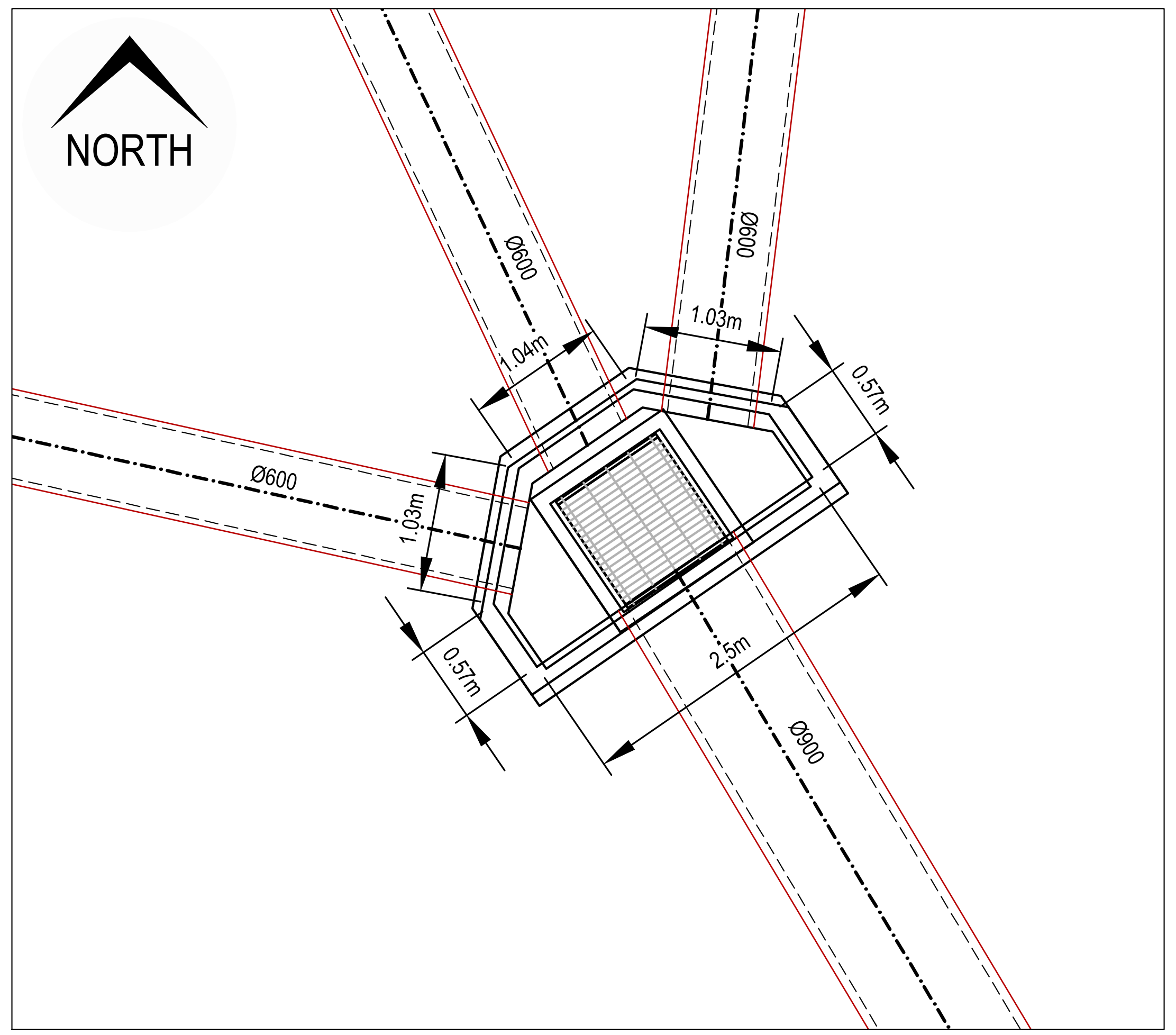
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

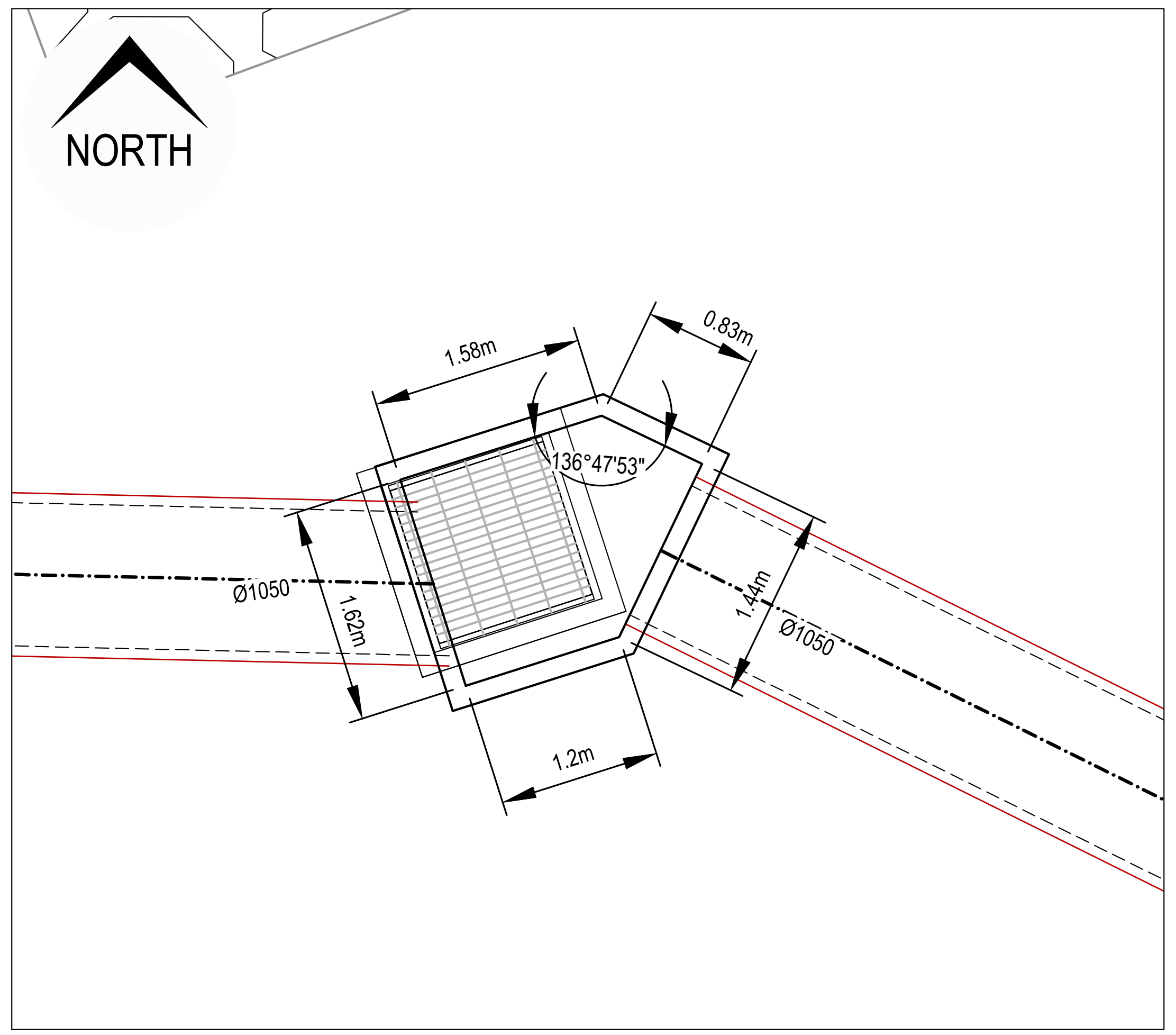
Title:
SPECIAL PIT LAYOUT
PIT 101/20

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	571	B

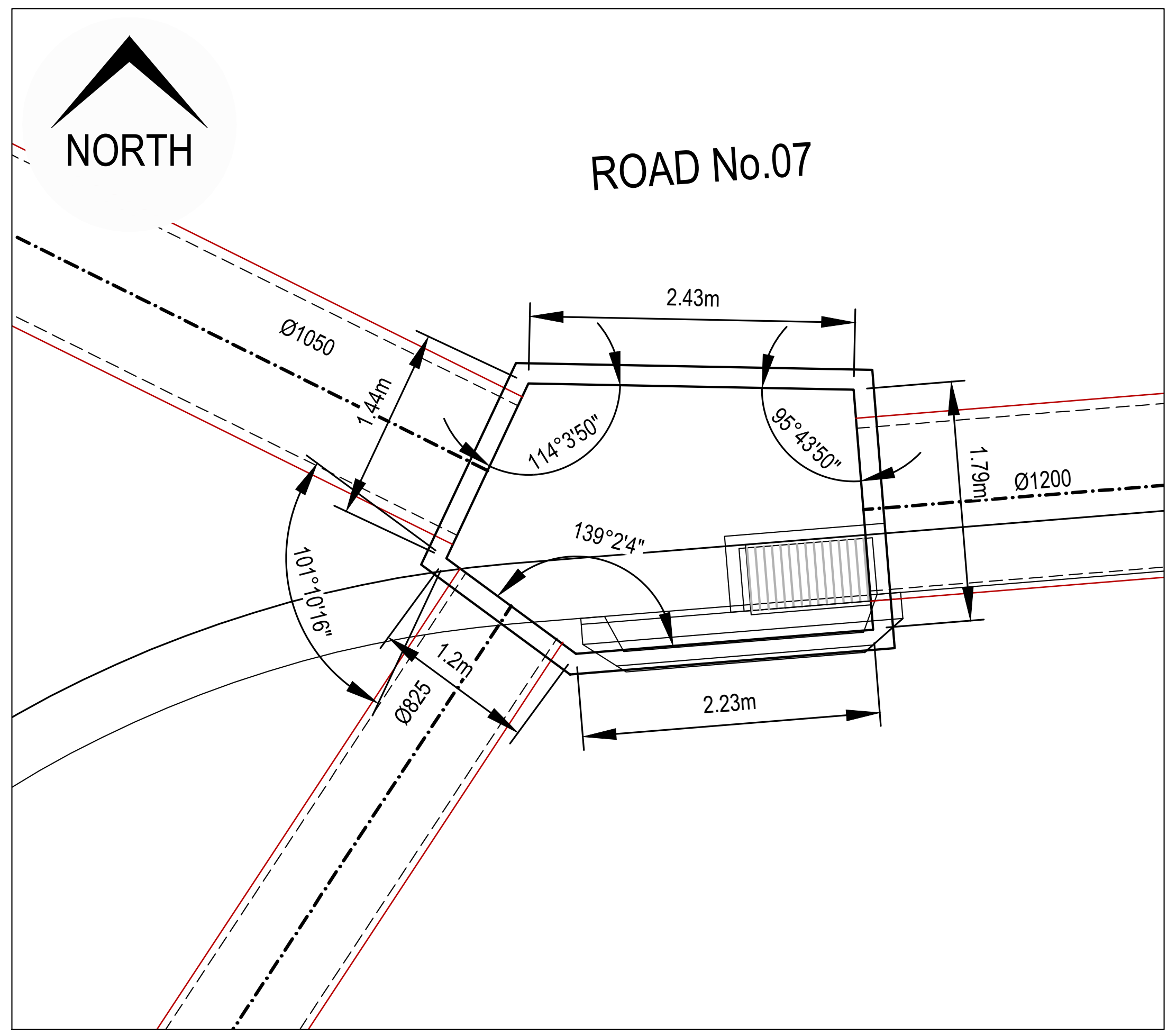
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-571.dwg



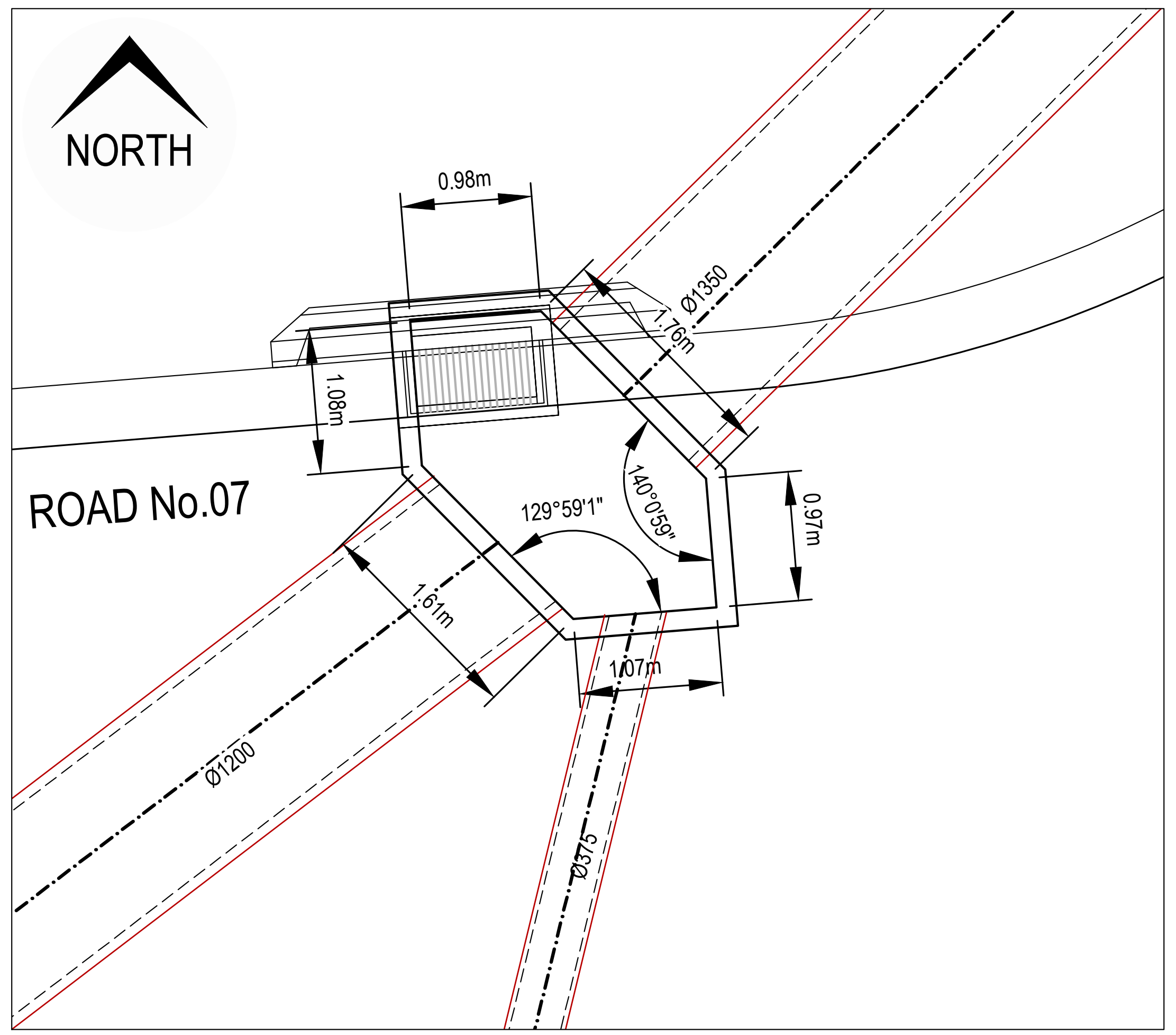
PIT 102/04
SCALE 1:50



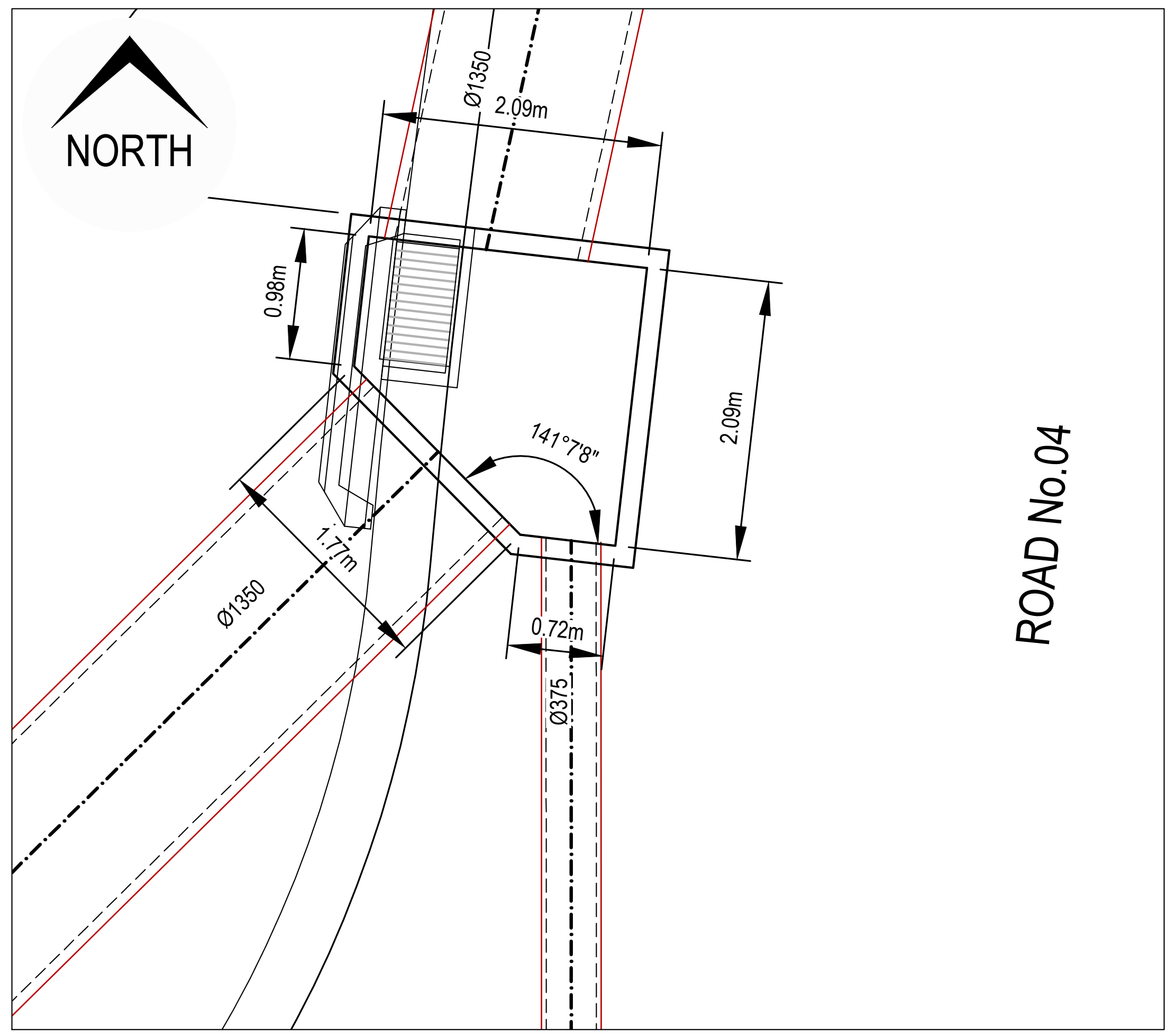
PIT 112/03
SCALE 1:50



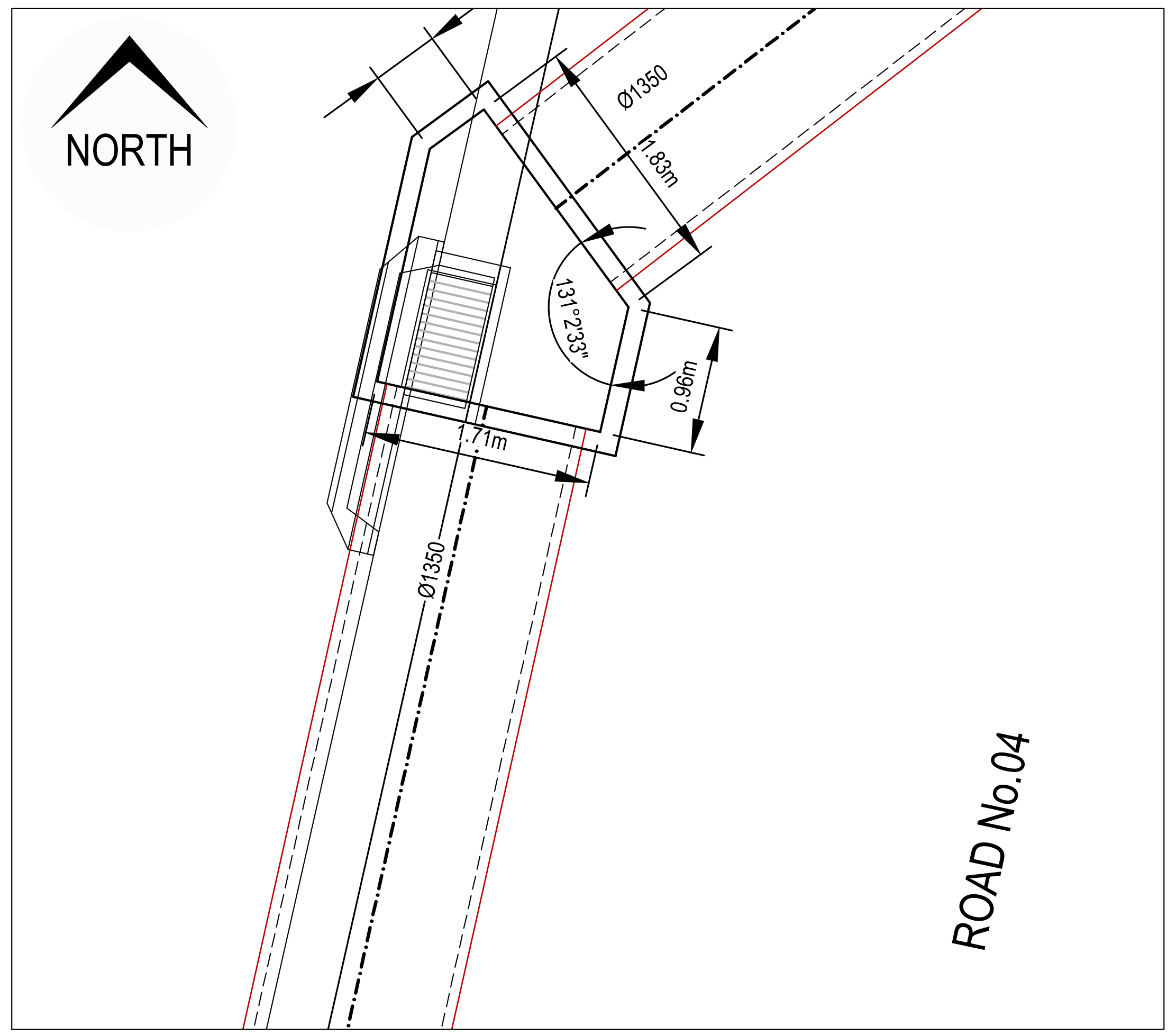
PIT 112/04
SCALE 1:50



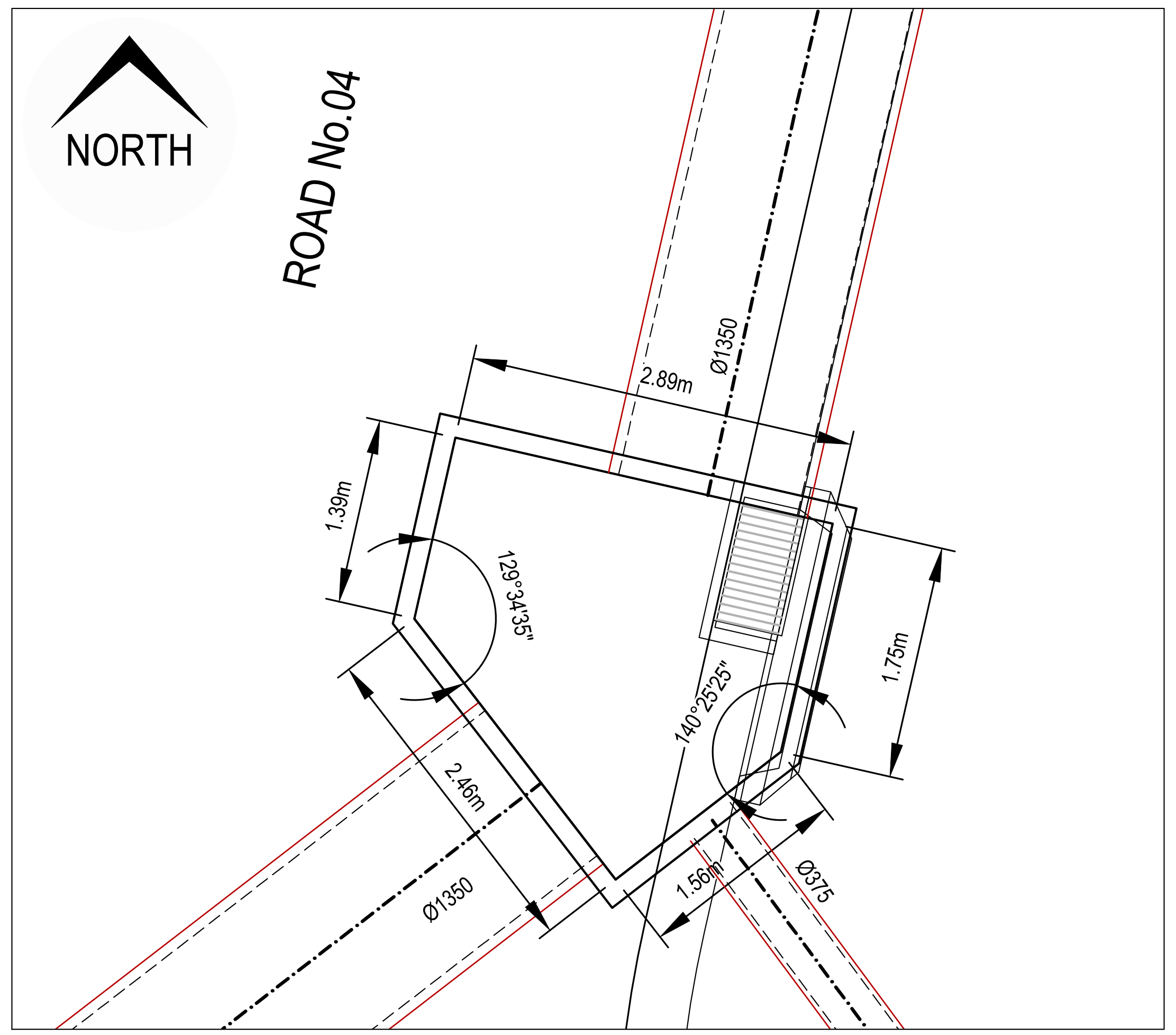
PIT 112/07
SCALE 1:50



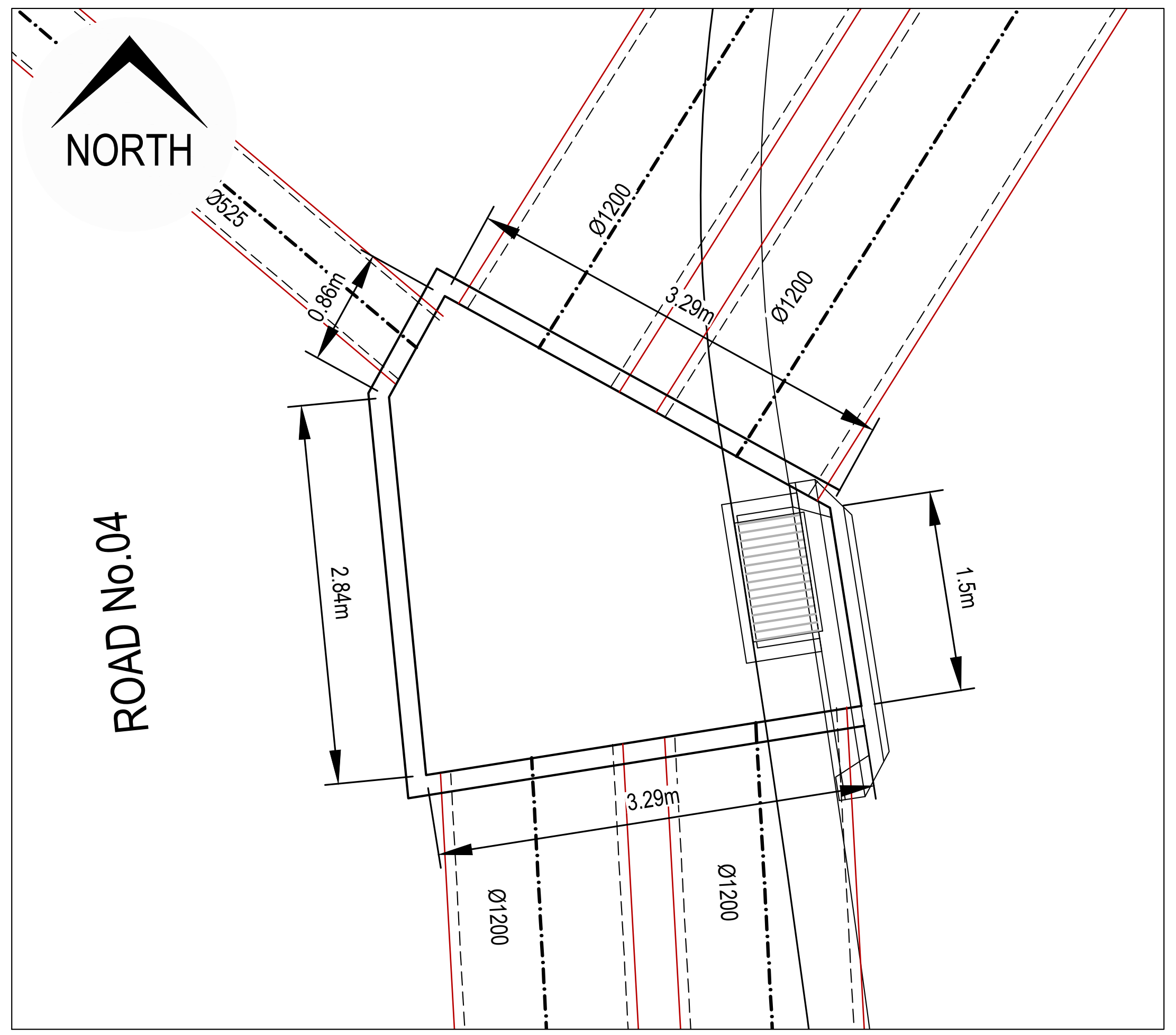
PIT 112/08
SCALE 1:50



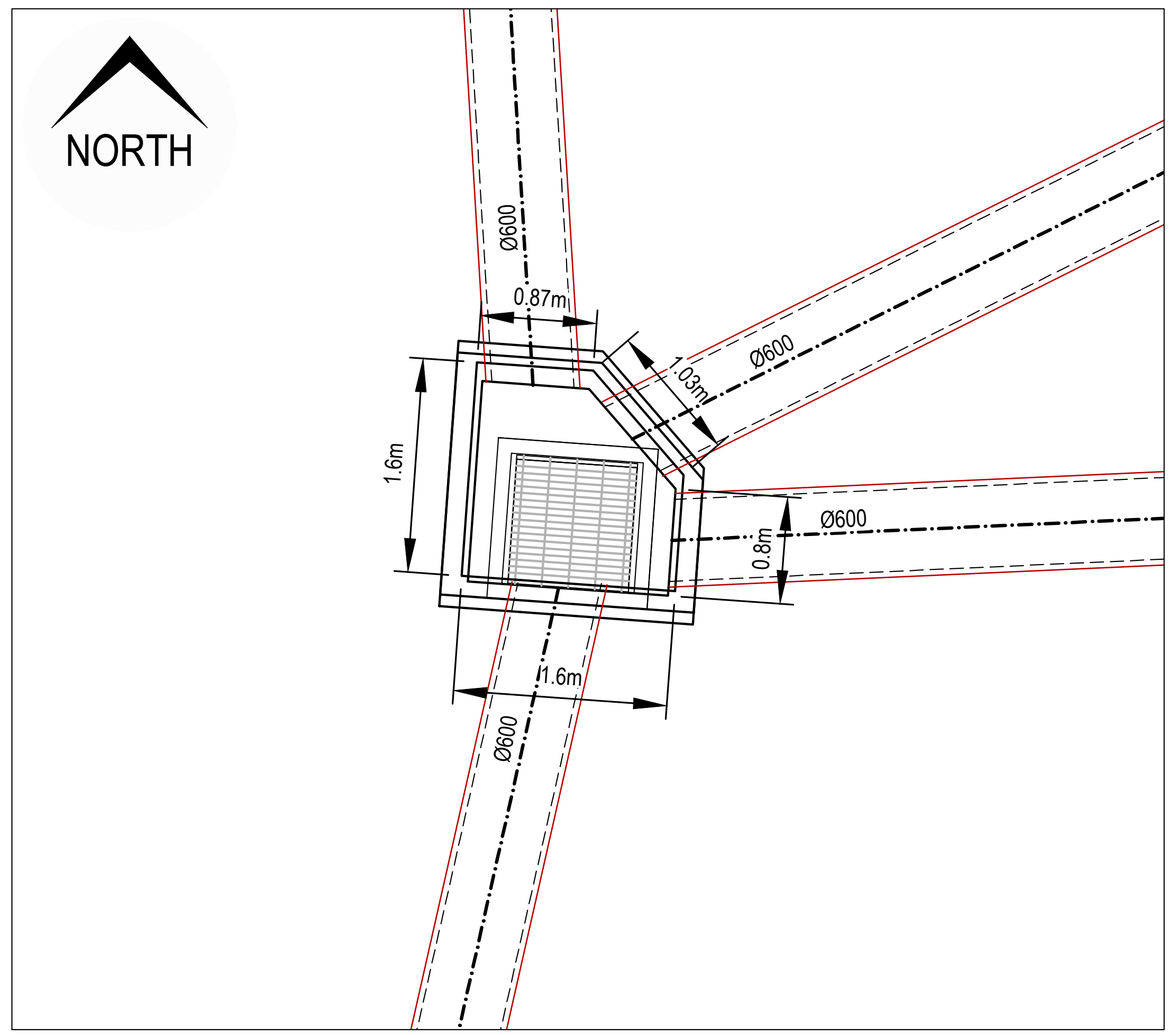
PIT 112/10
SCALE 1:50



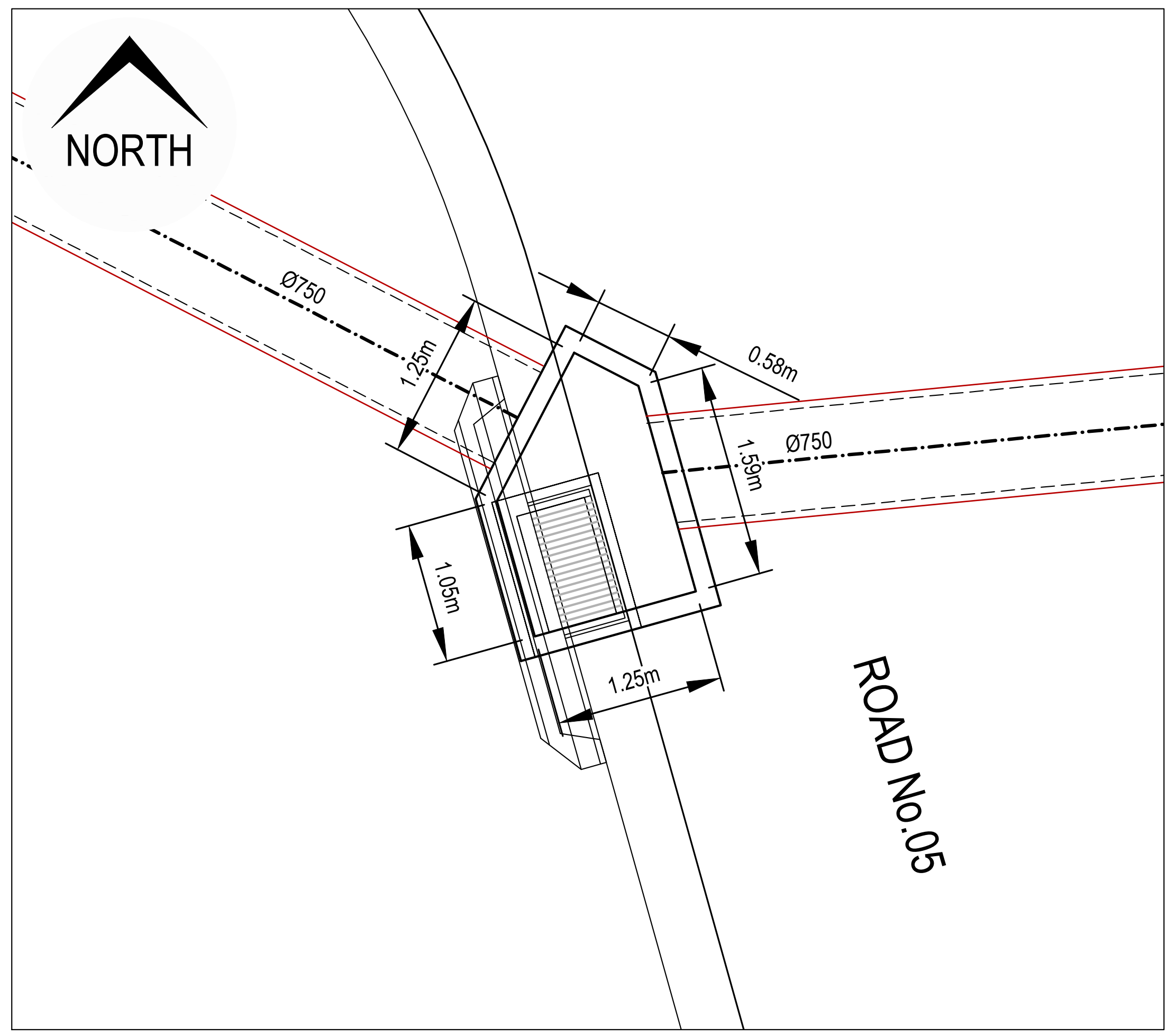
PIT 112/11
SCALE 1:50



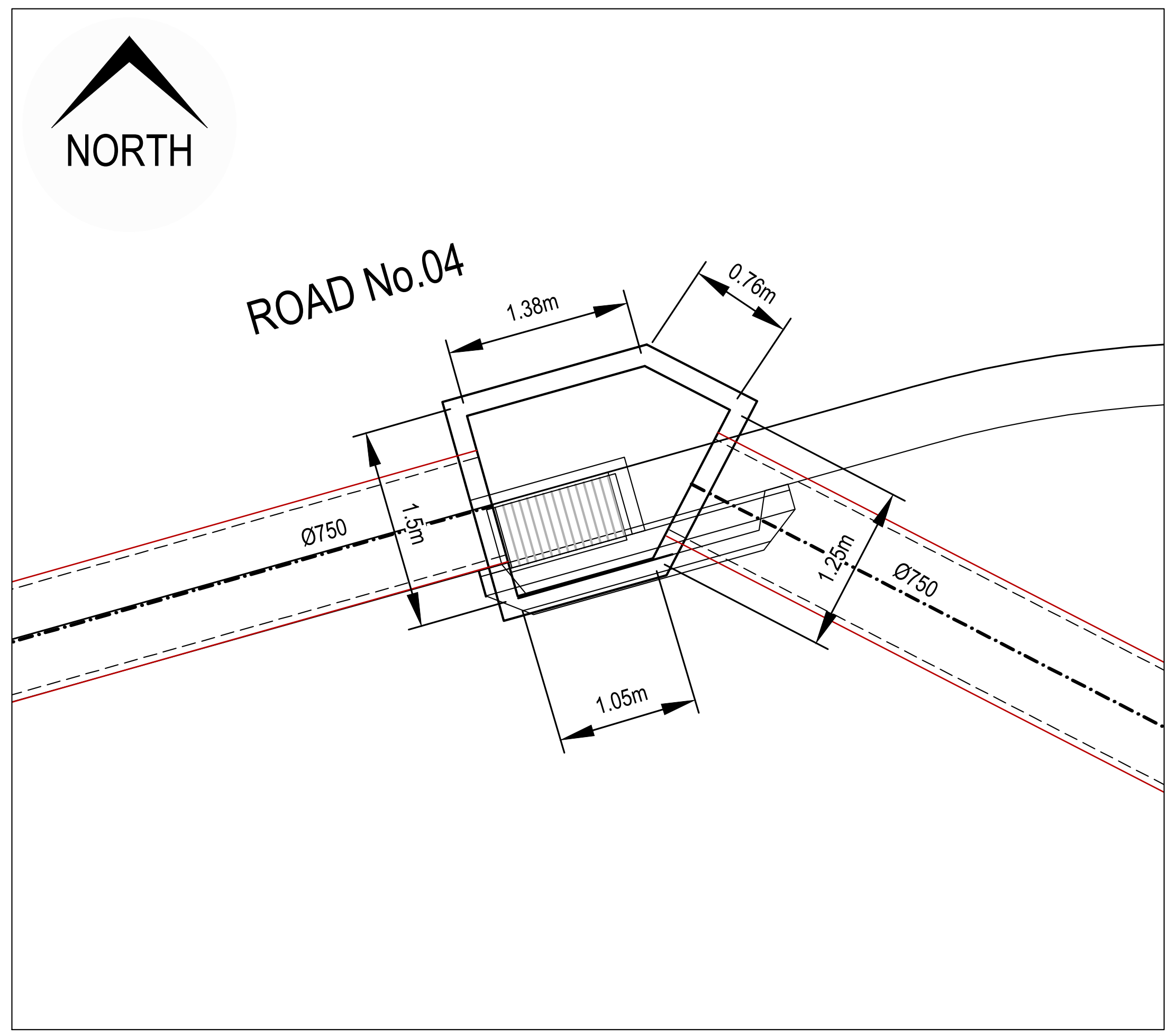
PIT 112/18
SCALE 1:50



PIT 113/02
SCALE 1:50



PIT 114/17
SCALE 1:50



PIT 114/18
SCALE 1:50

NOTE:
REFER TO STRUCTURAL PLANS
FOR PIT DETAILS.

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1)
SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

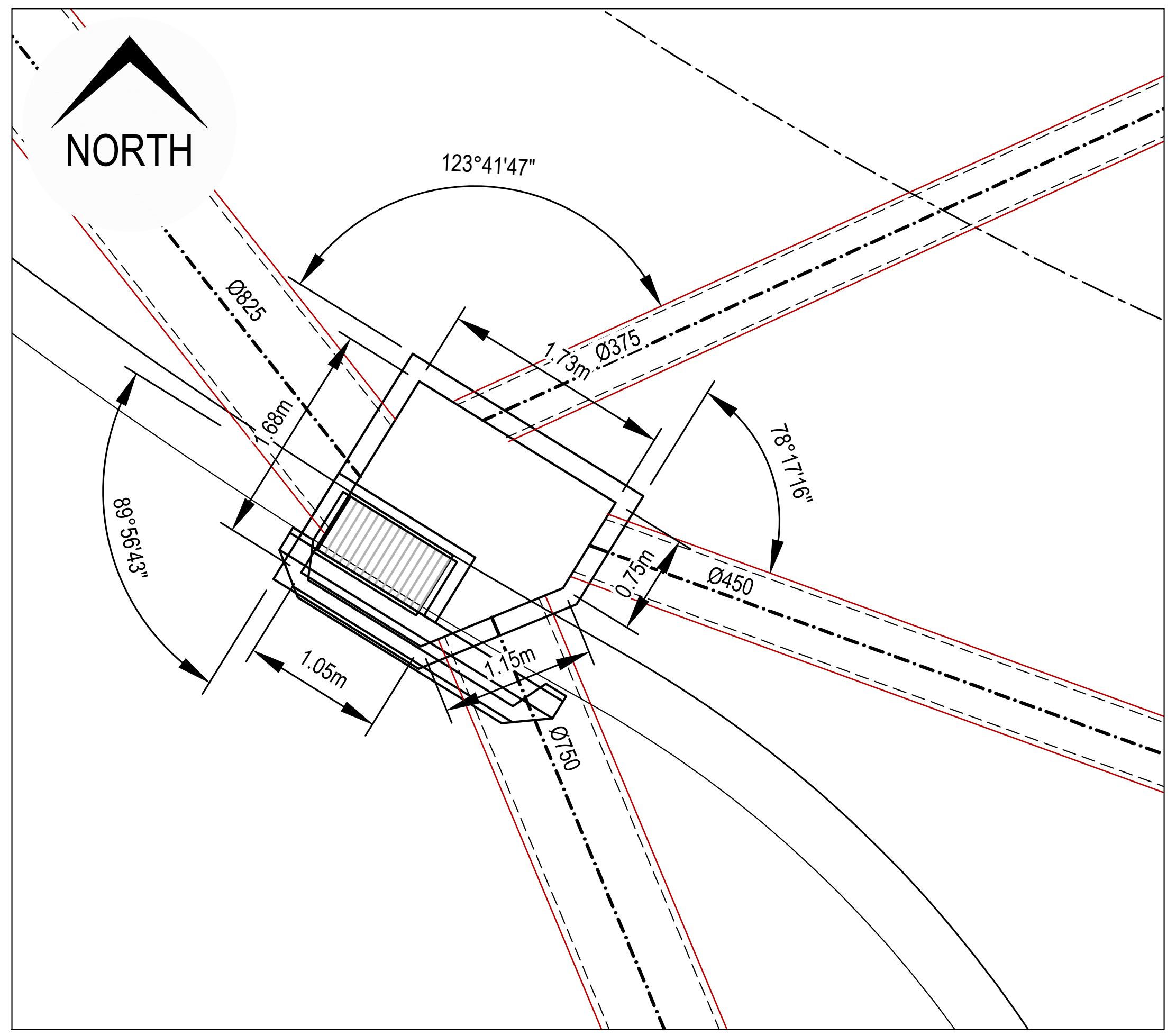
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
PIT GEOMETRIC
CHECK PLAN
SHEET 01 OF 02

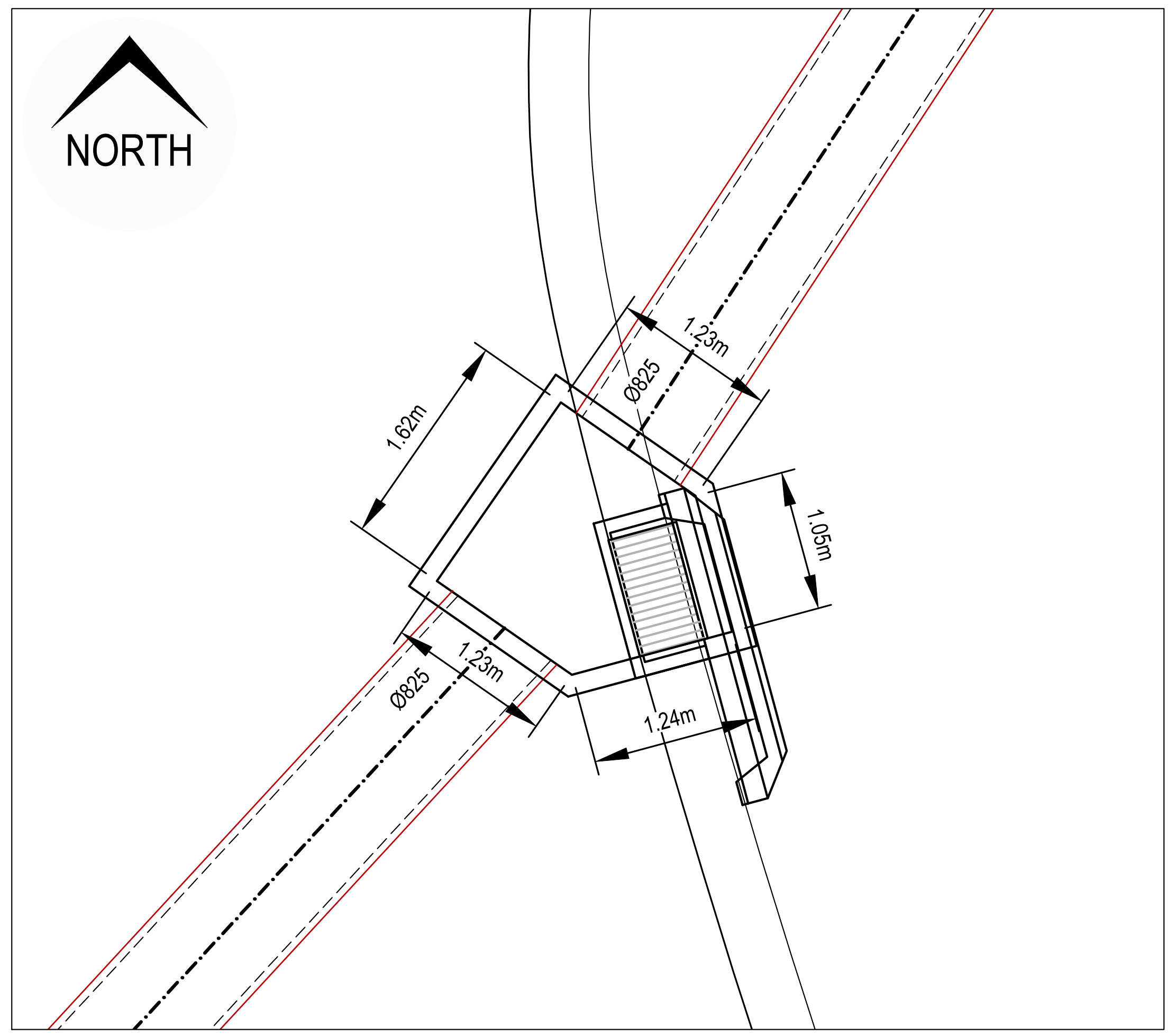
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	572	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-572.dwg



PIT 135/04

SCALE 1:50



PIT 135/08

SCALE 1:50

NOTE:
REFER TO STRUCTURAL PLANS
FOR PIT DETAILS

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting

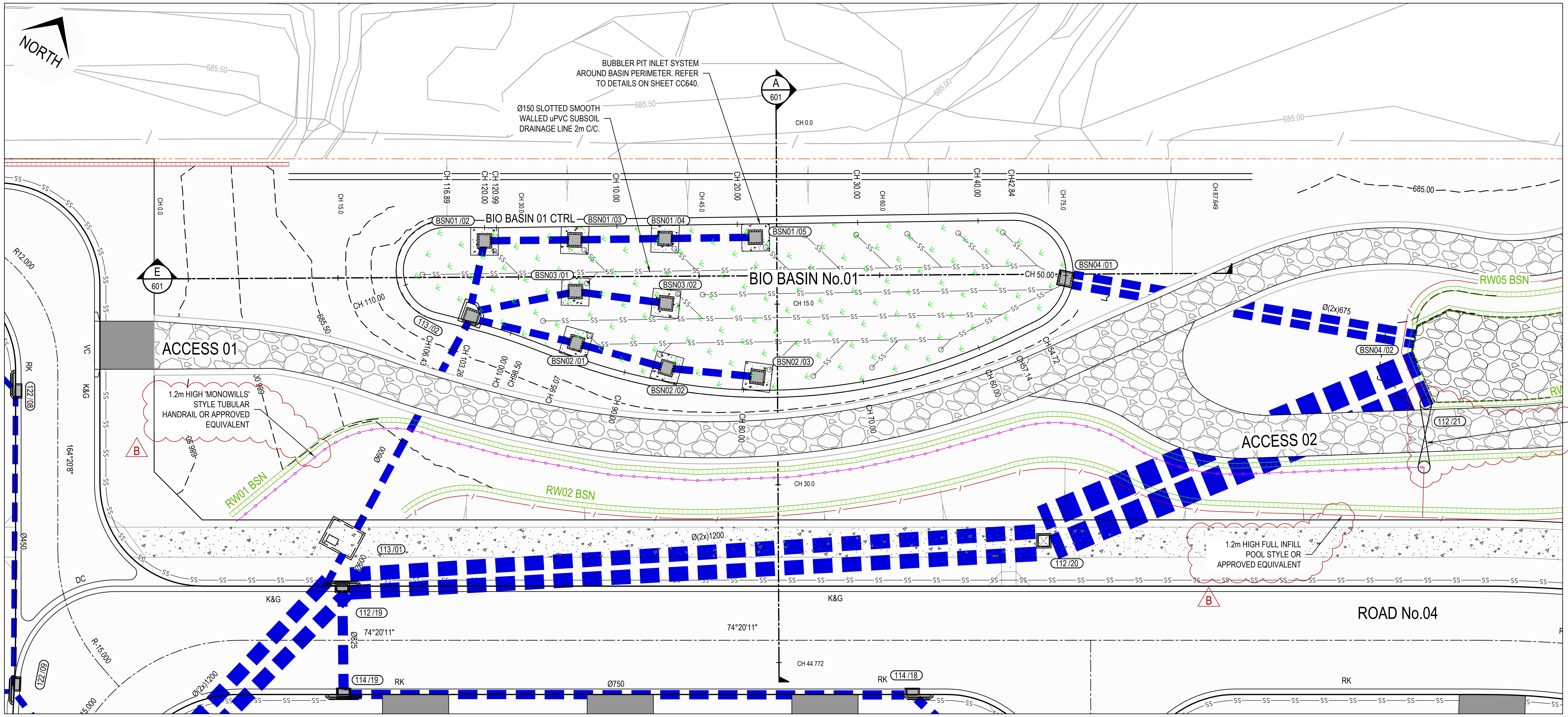
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
PIT GEOMETRIC
CHECK PLAN
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	573	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-573.dwg



BIO BASIN No.01 PLAN

SCALE 1:200

LEGEND

PROPOSED STORMWATER PIPE AND STRUCTURE	▬ ▬ ▬
TEMPORARY STORMWATER PIPE	- - -
PROPOSED DISCHARGE CONTROL PIT	■
PROPOSED HEADWALL WITH SCOUR PROTECTION	▨
PROPOSED BATTER	
PROPOSED BIO-BASIN	
PROPOSED STABILISED GRAVEL IN ACCORDANCE WITH LANDSCAPE SPECIFICATIONS FOR FINAL FINISH	▨
PROPOSED 1.8m HIGH SECURITY FENCE WITH VEHICLE ACCESS GATES	—B—

SIGNS:

STANDARD FLOODWAY WARNING SIGN AND MOUNTING BRACKET IN ACCORDANCE WITH COUNCIL STANDARD DRAWING A(BS)114S. TO BE PLACED ALONG ALL SIDES OF FENCING AROUND TEMPORARY OSD.

SETOUT TABLE BIO BASIN 01 CTRL

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	258982.68	6171897.63			
42.84	259023.75	6171909.79	73°30'58.80"		
45.81	259027.13	6171910.79		4.4	5.944
48.78	259028.85	6171907.71	150°54'52.26"		
51.75	259030.56	6171904.63		4.4	5.944
54.72	259027.93	6171902.28	228°18'45.73"		
57.14	259026.12	6171900.68	228°18'45.73"		
76.1	259011.12	6171887.31		46.4	37.929
95.07	258991.1	6171889.12	275°08'52.14"		
98.5	258987.68	6171889.42	275°08'52.14"		
100.88	258985.31	6171889.64		-40.6	4.764
103.26	258982.92	6171889.57	268°25'26.58"		
106.43	258979.76	6171889.49	268°25'26.58"		
109.05	258976.56	6171889.4		3.6	5.227
111.66	258976.09	6171892.56	351°37'06.78"		
114.27	258975.63	6171895.72		3.6	5.227
116.89	258978.71	6171896.56	74°48'46.99"		

WATER CYCLE MANAGEMENT BASIN SUMMARY

ON - SITE STORWMATER DETENTION BASIN

ID	ELEMENT	DIMENSION / LEVEL	W.A.E.
1	100 YEAR ARI TOP WATER LEVEL	684.08 mAHD B	
2	100 YEAR ARI VOLUME	12051 m³	
3	PERMANENT LAKE/POND WATER LEVEL	681.4 mAHD	
4	DISCHARGE CONTROL 1 - Ø375mm GRATE INLET RL	681.4 mAHD	
5	DISCHARGE CONTROL 2 - 1800(w) x 900(h) RCBC	682.2 mAHD	
6	DISCHARGE CONTROL 3 - 13m WIDE CONCRETE SPILLWAY	684.1 mAHD	
7	TOP OF EMBANKMENT LEVEL	684.8 mAHD	

BIO BASIN 01

ID	ELEMENT	DIMENSION / LEVEL	
8	FILTER MEDIA PLAN AREA	600 m²	
9	TOP OF FILTER MEDIA	683.7 mAHD	
10	EXTENDED DETENTION LEVEL	684.0 mAHD	
11	INVERT OF MEDIA SYSTEM	682.9 mAHD	

BIO BASIN 02

ID	ELEMENT	DIMENSION / LEVEL	
12	FILTER MEDIA PLAN AREA	1400 m²	
13	TOP OF FILTER MEDIA	683.1 mAHD	
14	EXTENDED DETENTION LEVEL	683.4 mAHD	
15	INVERT OF MEDIA SYSTEM	682.3 mAHD	

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For:
Aoyuan
building a healthy lifestyle

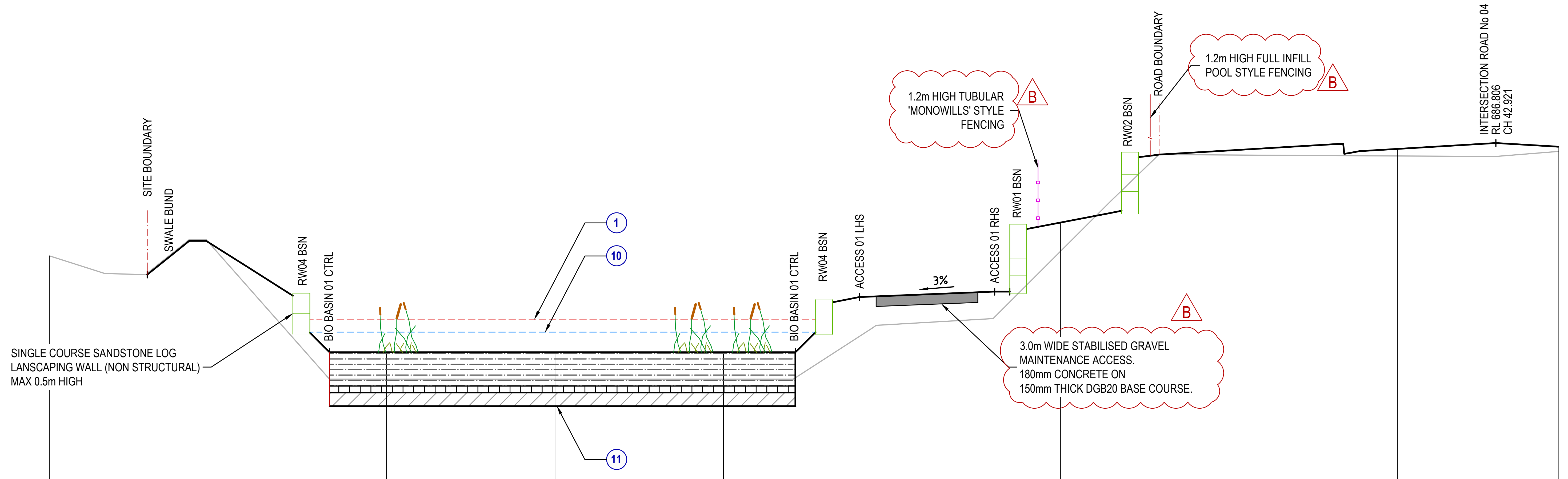
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BIO BASIN No.01
PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	600	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-600.dwg

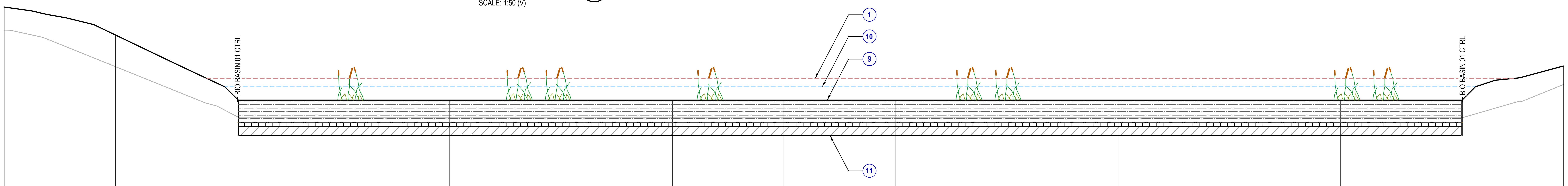

SITE BOUNDARY
SWALE BUND
RW04 BSN
BIO BASIN 01 CTRL
SINGLE COURSE SANDSTONE LOG LANSCAPING WALL (NON STRUCTURAL) MAX 0.5m HIGH
1
10
11
BIO BASIN 01 CTRL
RW04 BSN
ACCESS 01 LHS
3%
ACCESS 01 RHS
RW01 BSN
1.2m HIGH TUBULAR 'MONOWILLS' STYLE FENCING
B
3.0m WIDE STABILISED GRAVEL MAINTENANCE ACCESS. 180mm CONCRETE ON 150mm THICK DGB20 BASE COURSE.
B
RW02 BSN
ROAD BOUNDARY
1.2m HIGH FULL INFILL POOL STYLE FENCING
B
INTERSECTION ROAD No 04
RL 686.806
CH 42.921

DATUM R.L. 680

DESIGN LEVEL		683.7	683.7	683.7	685.62	686.72	686.75
EXISTING LEVEL	685.13	683.3	683.3	683.3	685.2	686.61	686.68
CHAINAGE	0	10	15	20	30	40	44.772

SITE SECTION A 600

SCALE: 1:100 (H)
SCALE: 1:50 (V)



DATUM R.L. 678

DESIGN LEVEL	685.79	685.16	683.95	683.7	683.7	683.7	683.7	683.7	683.7	683.7	684.47
EXISTING LEVEL	685.28	684.45	683.45	683.3	683.3	683.3	683.3	683.3	683.3	683.3	684.05
CHAINAGE	10	15	20	30	40	45	50	60	70	75	80

SITE SECTION E 600

SCALE: 1:100 (H)
SCALE: 1:50 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

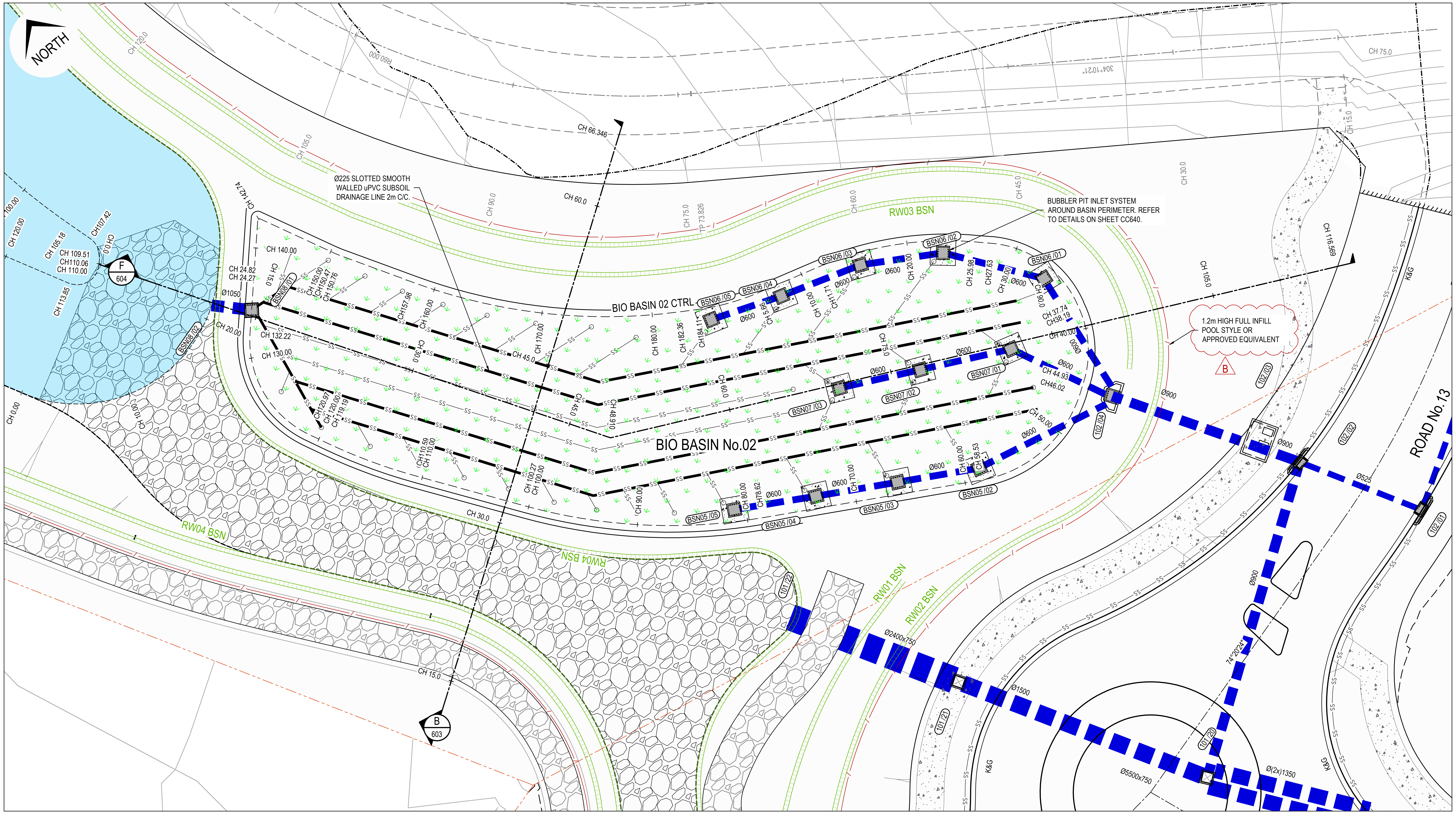
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BIO BASIN No.01
SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	601	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-601.dwg



BIO BASIN No.02 PLAN
SCALE 1:200

LEGEND

PROPOSED STORMWATER PIPE AND STRUCTURE	▪- - -▪
TEMPORARY STORMWATER PIPE	- - - -
PROPOSED DISCHARGE CONTROL PIT	▪
PROPOSED HEADWALL WITH SCOUR PROTECTION	▨
PROPOSED BATTER	⊤⊤⊤
PROPOSED BIO-BASIN	▭
PROPOSED STABILISED GRAVEL IN ACCORDANCE WITH LANDSCAPE SPECIFICATIONS FOR FINAL FINISH	▨
PROPOSED 1.8m HIGH SECURITY FENCE WITH VEHICLE ACCESS GATES	—B—

SIGNS:

WARNING
ON SITE DETENTION AREA
STORMWATER MAY RISE
IN THIS AREA
DURING HEAVY RAIN

STANDARD FLOODWAY WARNING SIGN AND MOUNTING BRACKET IN ACCORDANCE WITH COUNCIL STANDARD DRAWING A(BS)114S. TO BE PLACED ALONG ALL SIDES OF FENCING AROUND TEMPORARY OSD.

SETOUT TABLE BIO BASIN 02 CTRL

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259112.14	6171953.08			
2.83	259114.57	6171951.59		-20.6	5.658
5.66	259117.3	6171950.81	105°57'04.67"		
11.71	259123.12	6171949.14	105°57'04.67"		
18.84	259130.12	6171947.14		29.4	14.268
25.98	259135.37	6171942.11	133°45'26.33"		
27.63	259136.57	6171940.97	133°45'26.33"		
32.68	259140.62	6171937.09		9.4	10.109
37.74	259139.13	6171931.69	195°22'26.78"		
38.19	259139.01	6171931.25	195°22'26.78"		
41.56	259138.08	6171927.85		9.4	6.744
44.93	259135.14	6171925.91	236°28'42.40"		
46.02	259134.23	6171925.31	236°28'42.40"		
52.27	259128.42	6171921.46		11.4	12.51
58.53	259122.35	6171924.88	299°21'18.24"		
78.62	259104.84	6171934.73	299°21'18.24"		
89.44	259095.25	6171940.12		49.4	21.647
100.27	259088.85	6171949.07	324°27'42.42"		
110.59	259082.86	6171957.46	324°27'42.42"		
114.89	259080.35	6171960.97		49.4	8.605
119.19	259078.49	6171964.87	334°26'30.51"		
120.97	259077.72	6171966.47	334°26'30.51"		
126.6	259074.96	6171972.25		9.4	11.247
132.22	259079.33	6171976.94	42°59'41.20"		
142.74	259086.5	6171984.63			
150.47	259089.9	6171977.69	153°53'27.20"		
150.61	259089.96	6171977.56		-3.6	0.289
150.76	259090.04	6171977.43	149°17'31.52"		
157.98	259093.73	6171971.22	149°17'31.52"		
170.17	259100.07	6171960.53		-50.6	24.378
182.36	259110.65	6171954	121°41'16.44"		

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-602.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

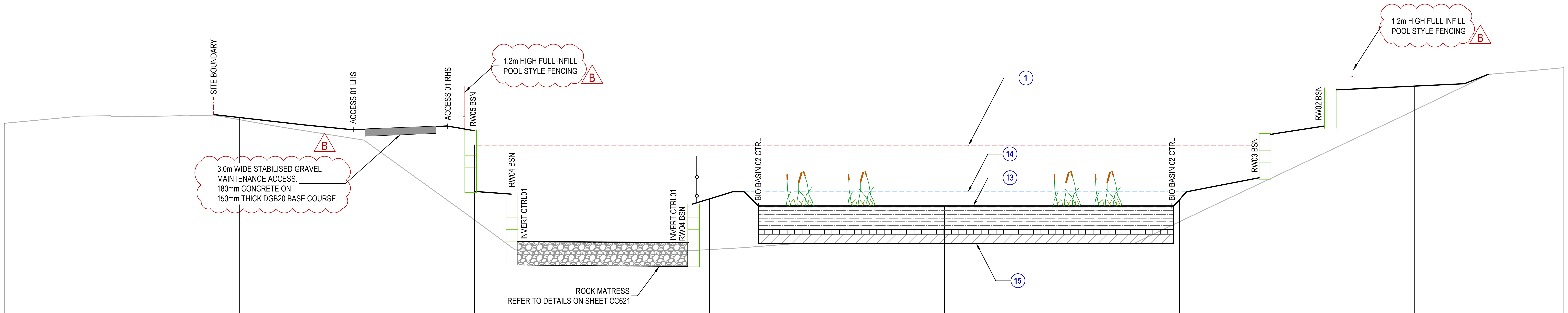
For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BIO BASIN No.02
PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	602	B


SITE BOUNDARY
ACCESS 01 LHS
ACCESS 01 RHS
RW05 BSN
1.2m HIGH FULL INFILL POOL STYLE FENCING
B
3.0m WIDE STABILISED GRAVEL MAINTENANCE ACCESS. 180mm CONCRETE ON 150mm THICK DGB20 BASE COURSE.
B
RW04 BSN
INVERT CTRL01
INVERT CTRL01
RW04 BSN
ROCK MATRESS
REFER TO DETAILS ON SHEET CC621
BIO BASIN 02 CTRL
1
14
13
15
BIO BASIN 02 CTRL
RW03 BSN
RW02 BSN
1.2m HIGH FULL INFILL POOL STYLE FENCING
B

DATUM R.L. 678

DESIGN LEVEL		684.98	684.72	684.4	683.25	683.1	683.1	683.23	685.65	
EXISTING LEVEL	684.86	684.93	684.52	682.81	682.17	682.3	682.3	682.77	685.13	686.04
CHAINAGE	0	10	15	20	30	40	45	50	60	66.346

SITE SECTION

B
602

SCALE: 1:100 (H)
SCALE: 1:50 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-603.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Disclaimer and Copyright:

Scale:
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

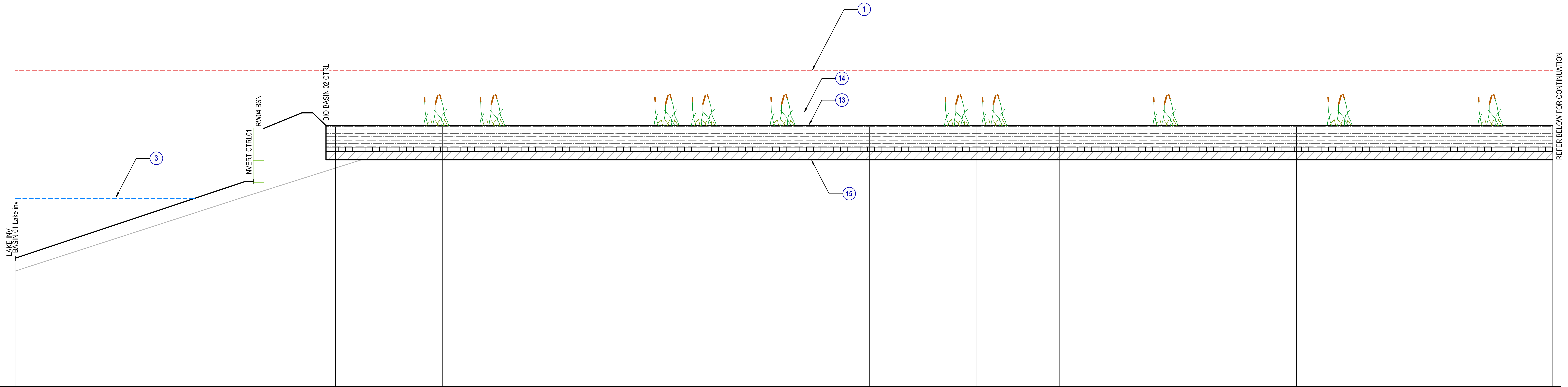
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BIO BASIN No.02
SECTIONS
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	603	B

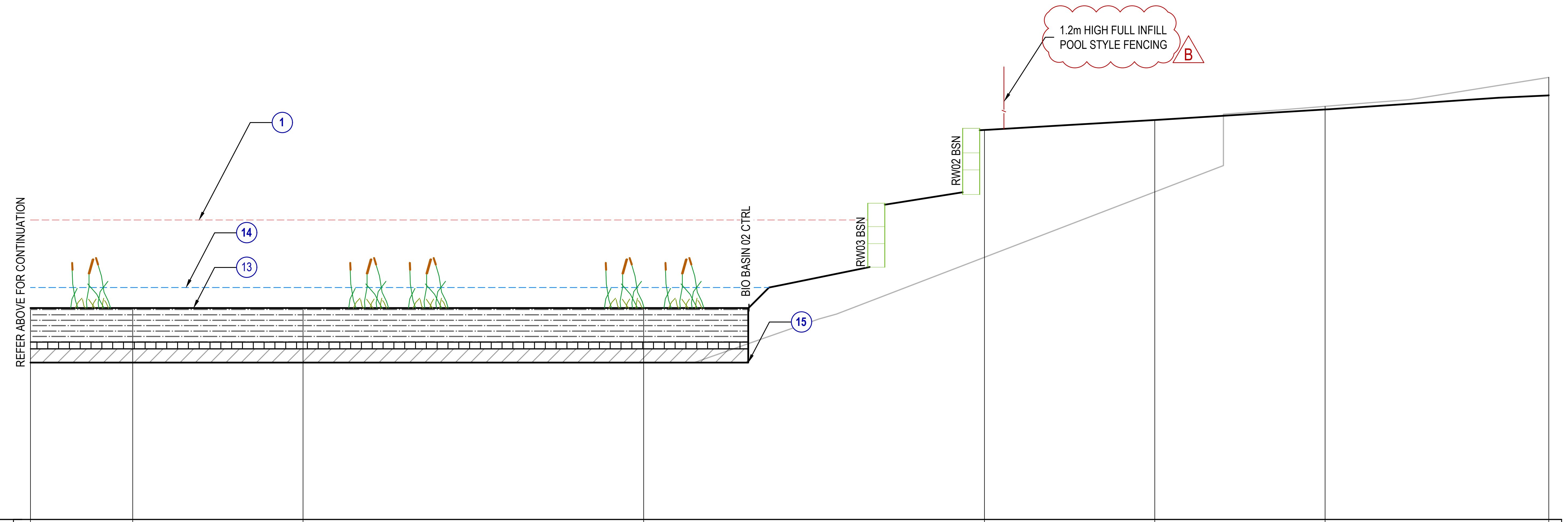


DATUM R.L. 677

DESIGN LEVEL	680	681.67	683.1	683.1	683.1	683.1	683.1	683.1	683.1	683.1	683.1	683.1	683.1
EXISTING LEVEL	679.7	681.32	682.11	682.3	682.3	682.3	682.3	682.3	682.3	682.3	682.3	682.3	
CHAINAGE	0	10	15	20	30	40	45	48.91	50	60	70	72	

SITE SECTION (F/602)

SCALE: 1:100 (H)
SCALE: 1:50 (V)


1.2m HIGH FULL INFILL POOL STYLE FENCING
B
①
⑭
⑬
⑮
REFER ABOVE FOR CONTINUATION
BIO BASIN 02 CTRL
RW03 BSN
RW02 BSN

DATUM R.L. 680

DESIGN LEVEL	683.1	683.1	683.1	683.1	685.71	685.86	686.01	686.22
EXISTING LEVEL	682.3	682.3	682.3	682.3	683.84	684.8	686.06	686.48
CHAINAGE	72	75	80	90	100	105	110	116.569

SITE SECTION (F/602)

SCALE: 1:100 (H)
SCALE: 1:50 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BIO BASIN No.02
SECTIONS
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	604	B

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FOR CONTINUATION REFER DRAWING 606

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

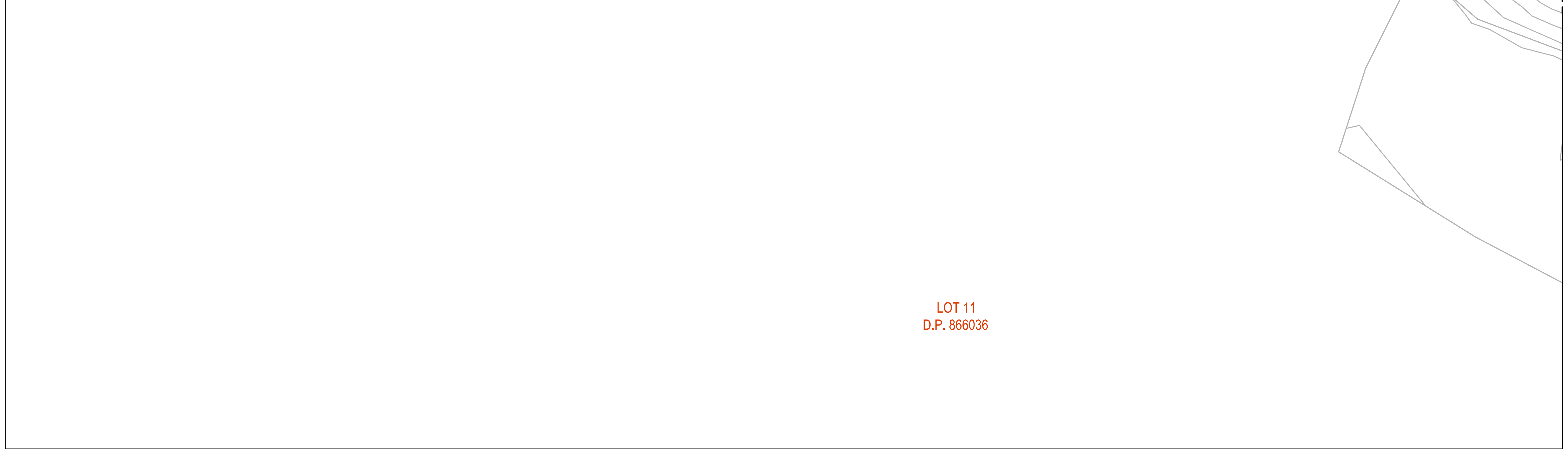
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

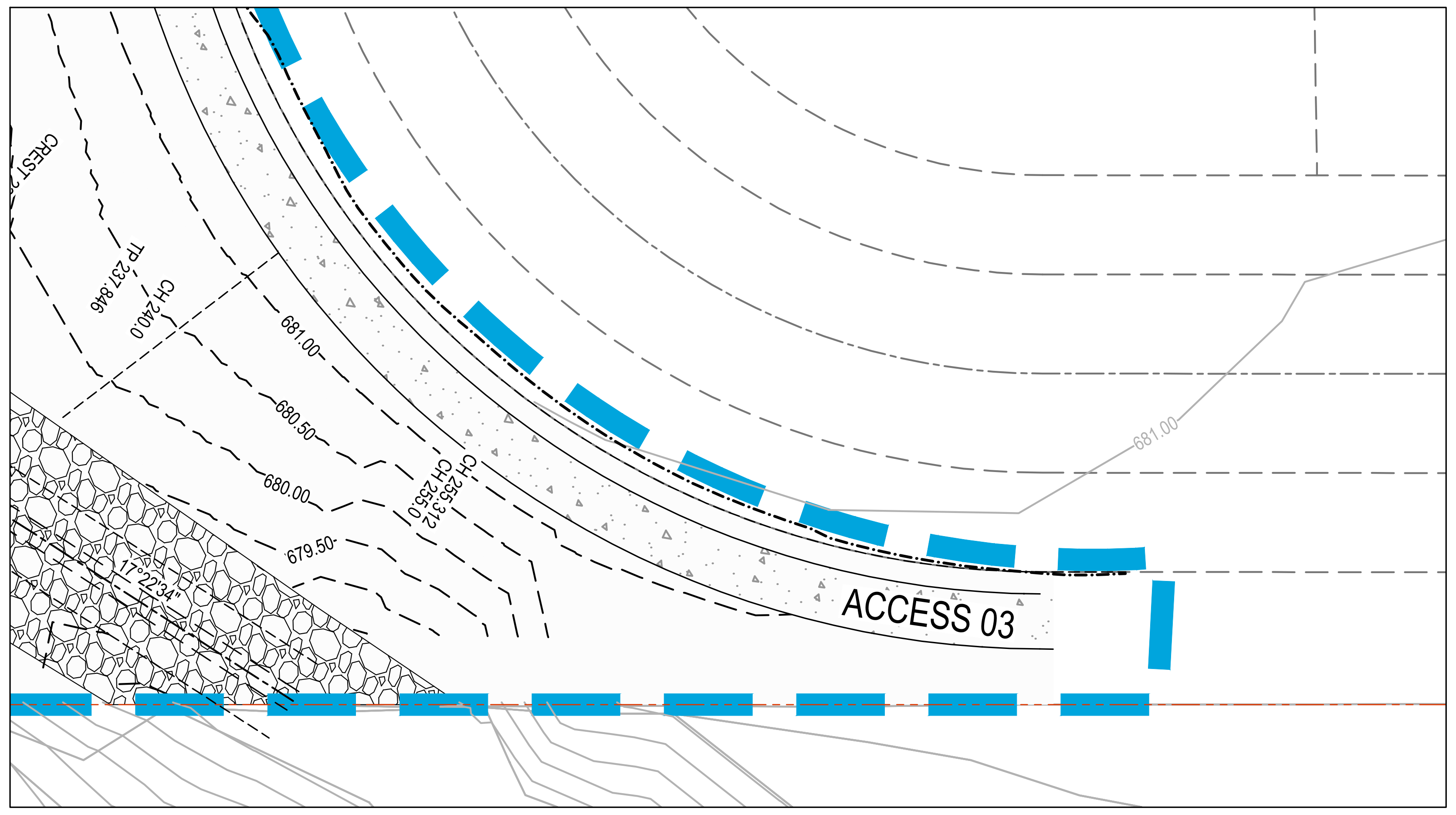
Title:
OSD BASIN AND WHITES
CREEK PLAN
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	605	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:D:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-605.dwg

FOR CONTINUATION REFER DRAWING 606
NORTH
FOR CONTINUATION REFER INSET 'A'
ACCESS 01
ACCESS 03
ACCESS 04
POOL ZONE 03
POOL ZONE 04
WHITES CREEK 01
1.2m HIGH 'MONOWILLS' STYLE TUBULAR HANDRAIL OR APPROVED EQUIVALENT
B
1.2m HIGH FULL INFILL POOL STYLE OR APPROVED EQUIVALENT
B
2.5m PEDESTRIAN FOOT BRIDGE AND REBUTMENTS DESIGNED AND DETAILED UNDER DESIGN AND CONSTUCTION CONTRACT BY OTHERS
682.00
682.50
683.00
683.50
684.00
681.50
681.00
680.50
680.00
R-40.0
R40.0
348°56'31"
20°8'31"
32°6'35"
CREST 118.316
CREST 175.888
CREST 228.453
SAG 165.894
SAG 219.708
TP 130.469
TP 152.251
TP 167.537
TP 187.708
TP 224.846
TP 237.846





INSET 'A' PLAN
SCALE 1:250

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

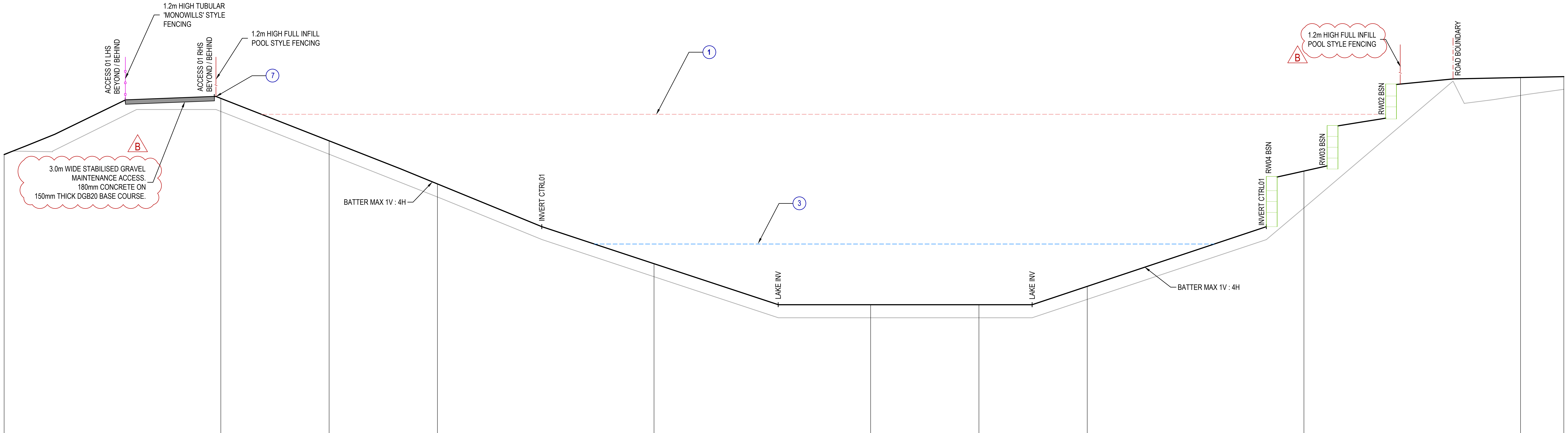
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
WHITES CREEK PLAN
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	606	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-606.dwg


1.2m HIGH TUBULAR 'MONOWILLS' STYLE FENCING
1.2m HIGH FULL INFILL POOL STYLE FENCING
ACCESS 01 LHS BEYOND / BEHIND
ACCESS 01 RHS BEYOND / BEHIND
7
1
3
B
3.0m WIDE STABILISED GRAVEL MAINTENANCE ACCESS. 180mm CONCRETE ON 150mm THICK DGB20 BASE COURSE.
BATTER MAX 1V : 4H
INVERT CTRL01
LAKE INV
LAKE INV
BATTER MAX 1V : 4H
INVERT CTRL01
RW04 BSN
RW03 BSN
RW02 BSN
B
1.2m HIGH FULL INFILL POOL STYLE FENCING
ROAD BOUNDARY

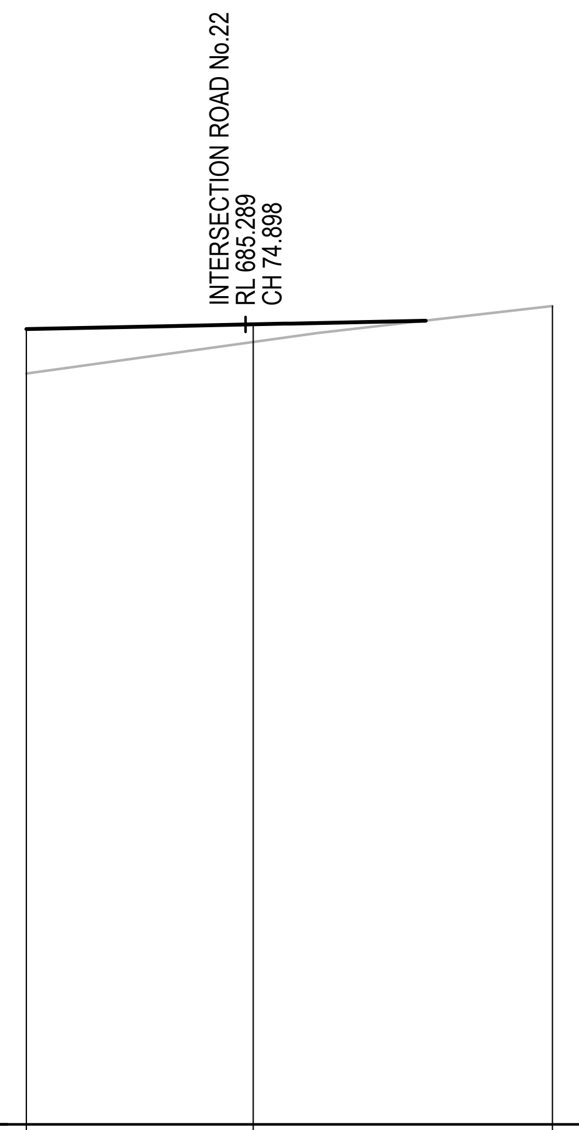
DATUM R.L. 677

DESIGN LEVEL	683.46	684.76	683.78	682.79	680.95	680	680	680.42	683.08	685.24	685.26
EXISTING LEVEL	683.46	684.46	683.47	682.48	680.65	679.7	679.7	680.12	682.23	684.82	684.96
CHAINAGE	0	10	15	20	30	40	45	50	60	70	72

SITE SECTION

C
605

SCALE: 1:100 (H)
SCALE: 1:50 (V)



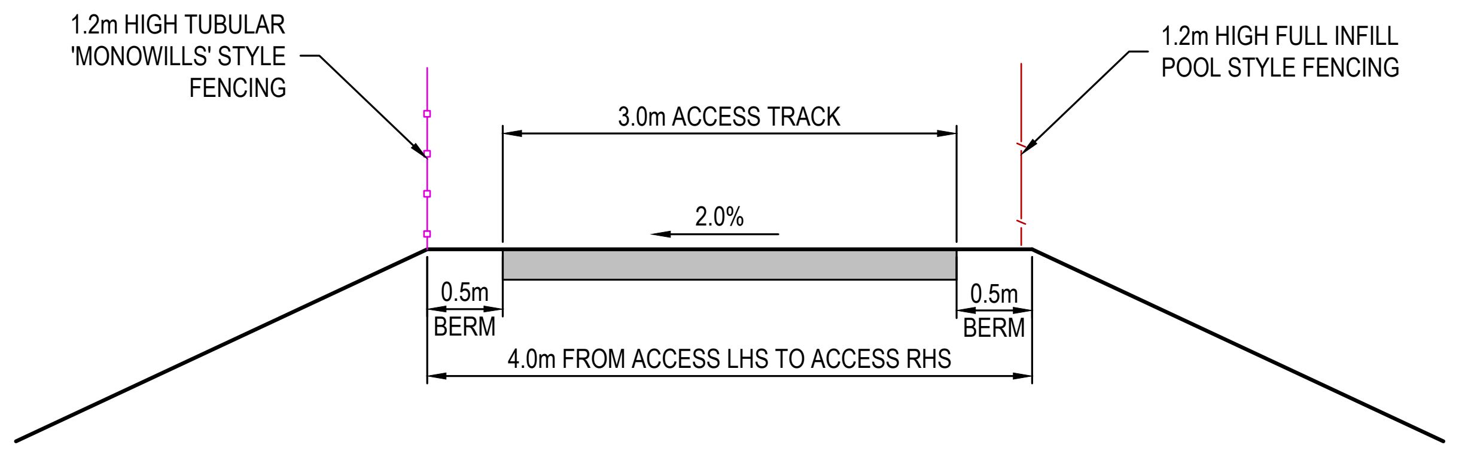
DATUM R.L. 680

DESIGN LEVEL	685.26	685.29	
EXISTING LEVEL	684.96	685.17	685.41
CHAINAGE	72	75	78.96

SITE SECTION

C
605

SCALE: 1:100 (H)
SCALE: 1:50 (V)


1.2m HIGH TUBULAR 'MONOWILLS' STYLE FENCING
1.2m HIGH FULL INFILL POOL STYLE FENCING
3.0m ACCESS TRACK
2.0%
0.5m BERM
0.5m BERM
4.0m FROM ACCESS LHS TO ACCESS RHS

TYPICAL ACCESS 01 TRACK DETAIL

SCALE 1:50

ISSUED FOR CONSTRUCTION CERTIFICATE

B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Disclaimer and Copyright:

Scale:
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

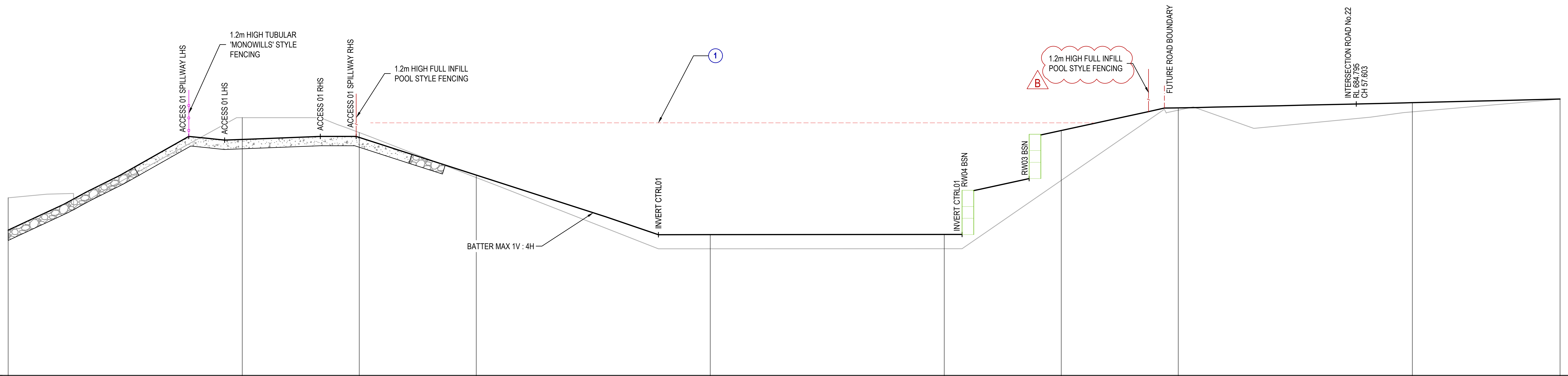
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
OSD BASIN SECTIONS
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	607	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-607.dwg



DATUM R.L. 679

DESIGN LEVEL	682.1	684.03	684.08	683.27	682	682.01	684.23	684.71	684.82	684.9
EXISTING LEVEL	682.79	684.5	684.18	683.22	681.7	681.7	683.16	684.66	684.62	684.9
CHAINAGE	0	10	15	20	30	40	45	50	60	66.313

SITE SECTION

D
605

SCALE: 1:100 (H)
SCALE: 1:50 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-608.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

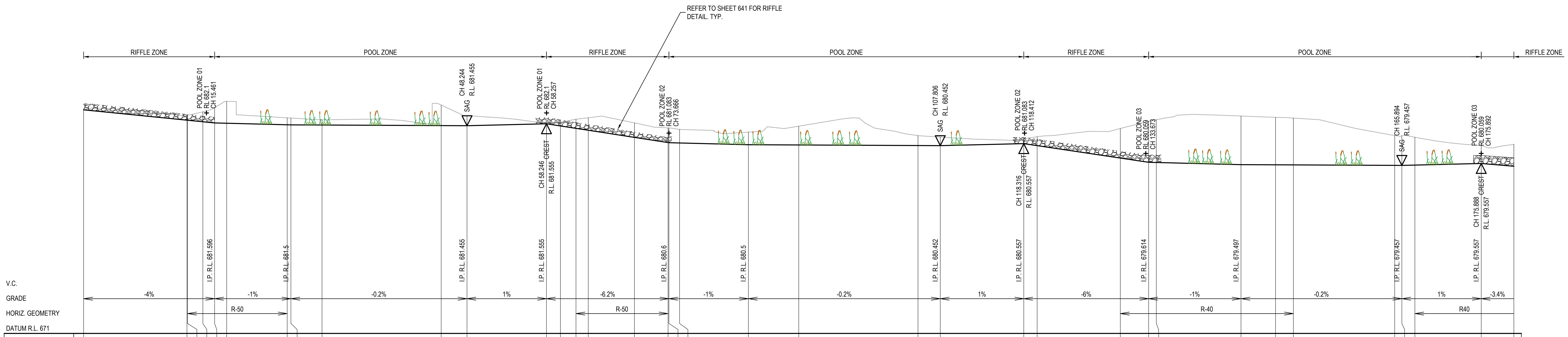
For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
OSD BASIN SECTIONS
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	608	B


REFER TO SHEET 641 FOR RIFFLE DETAIL. TYP.
RIFFLE ZONE
POOL ZONE
RIFFLE ZONE
POOL ZONE
RIFFLE ZONE
POOL ZONE
RIFFLE ZONE
POOL ZONE 01 RL 682.1 CH 15.461
CH 48.244 R.L. 681.455 SAG
POOL ZONE 01 RL 682.1 CH 58.257
CH 58.246 CREST R.L. 681.555
POOL ZONE 02 RL 681.083 CH 73.666
CH 107.806 R.L. 680.452 SAG
POOL ZONE 02 RL 681.083 CH 118.412
CH 118.316 CREST R.L. 680.557
POOL ZONE 03 RL 680.059 CH 133.673
CH 165.894 R.L. 679.457 SAG
POOL ZONE 03 RL 680.059 CH 175.892
CH 175.888 CREST R.L. 679.557
I.P. R.L. 681.596
I.P. R.L. 681.5
I.P. R.L. 681.455
I.P. R.L. 681.555
I.P. R.L. 680.6
I.P. R.L. 680.5
I.P. R.L. 680.452
I.P. R.L. 680.557
I.P. R.L. 679.614
I.P. R.L. 679.497
I.P. R.L. 679.457
I.P. R.L. 679.557
V.C.
GRADE
-4%
-1%
-0.2%
1%
-6.2%
-1%
-0.2%
1%
-6%
-1%
-0.2%
1%
-3.4%
HORIZ. GEOMETRY
R-50
R-50
R-40
R40
DATUM R.L. 671

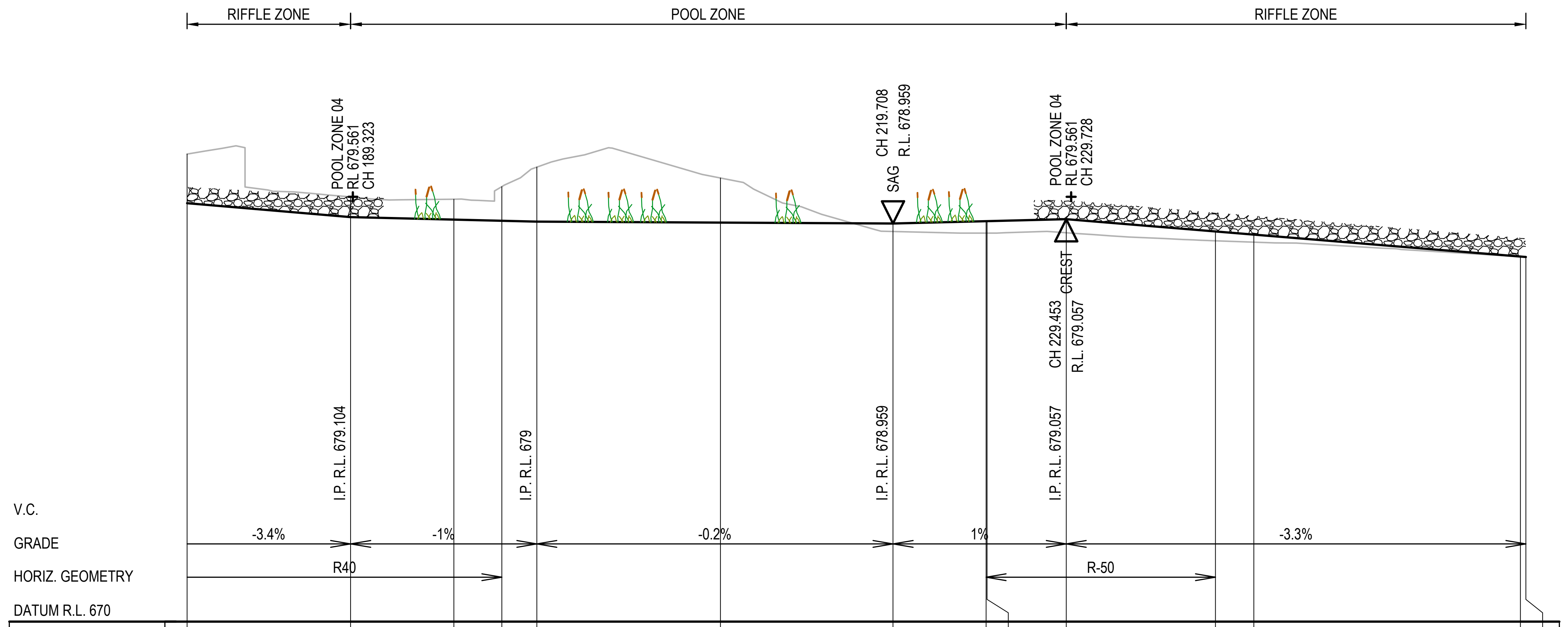
W.A.E.												
DESIGN LEVEL	682.255	681.735	681.732	681.655	681.596	681.581	681.504	681.5	681.492	681.462	681.455	681.555
EXISTING LEVEL	682.255	681.98	681.986	682.155	682.379	682.682	681.853	681.842	681.753	682.495	681.963	681.59
CHAINAGE	0	13	13.081	15	16.49	18	25.615	26.087	30	45	48.244	58.246

W.A.E.												
DESIGN LEVEL	681.447	681.325	681.229	680.869	680.607	680.6	680.587	680.5	680.487	680.457	680.452	680.557
EXISTING LEVEL	681.621	681.781	681.857	681.598	681.347	681.344	681.27	681.132	681.435	680.958	680.885	680.803
CHAINAGE	60	61.958	63.504	69.32	73.547	73.655	75	83.654	90	105	107.806	118.316

W.A.E.												
DESIGN LEVEL	680.456	679.828	679.614	679.604	679.497	679.489	679.484	679.459	679.457	679.473	679.557	679.417
EXISTING LEVEL	680.9	681.315	681.671	681.756	681.946	681.882	681.841	680.964	680.951	680.876	680.46	680.523
CHAINAGE	120	130.469	134.038	135	145.656	150	152.251	165	165.894	167.537	175.888	180

LONGITUDINAL SECTION - WHITES CREEK 01

SCALE 1:250 (H)
SCALE 1:100 (V)



W.A.E.							
DESIGN LEVEL	679.417	679.104	679.046	679.019	679	678.979	678.959
EXISTING LEVEL	680.523	679.556	679.506	679.788	680.227	679.981	678.778
CHAINAGE	180	189.197	195	197.708	199.671	210	219.708

W.A.E.							
DESIGN LEVEL	679.012	679.012	679.057	678.78	678.709	678.214	678.204
EXISTING LEVEL	678.743	678.743	678.75	678.571	678.539	678.211	678.204
CHAINAGE	224.946	225	229.453	237.846	240	255	255.312

LONGITUDINAL SECTION - WHITES CREEK 01

SCALE 1:250 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-609.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
WHITES CREEK
LONGITUDINAL SECTION

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	609	A

ACCESS 01 & ACCESS 02 PLAN

SCALE 1:250

ISSUED FOR **CONSTRUCTION CERTIFICATE**

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
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ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN ACCESS 01 & 02
PLAN
SHEET 01 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	610	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Sdata\ORION-SYN

FOR CONTINUATION REFER DRAWING 610

FOR CONTINUATION REFER DRAWING 612

ACCESS 01 & ACCESS 04 PLAN
SCALE 1:250

FOR CONTINUATION REFER DRAWING 612

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

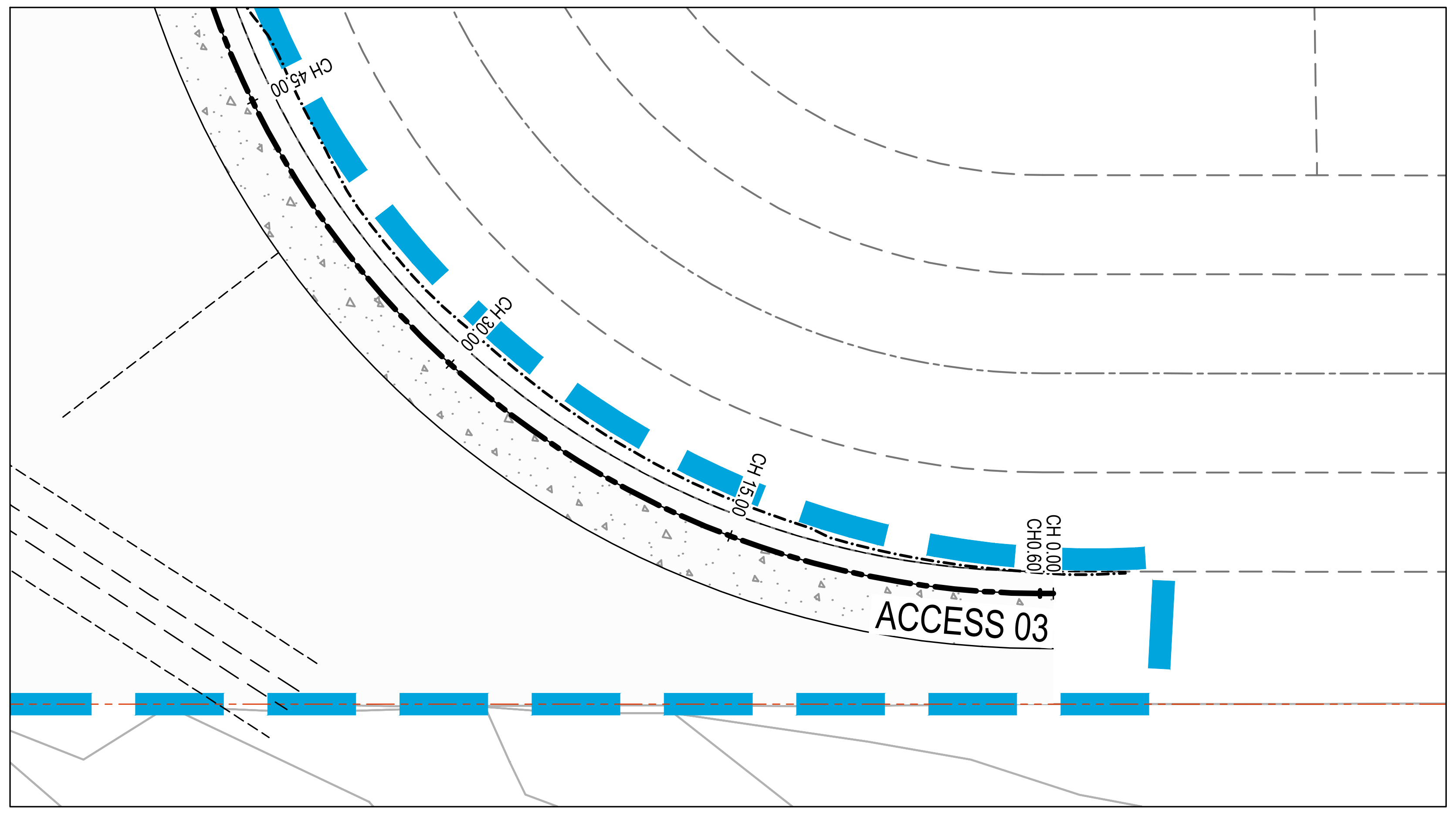
By:
Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN ACCESS 01 & 04
PLAN
SHEET 02 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	611	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Sdata\ORION-SYN



INSET 'A' PLAN
SCALE 1:250

ACCESS 01 & ACCESS 03 PLAN
SCALE 1:250

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

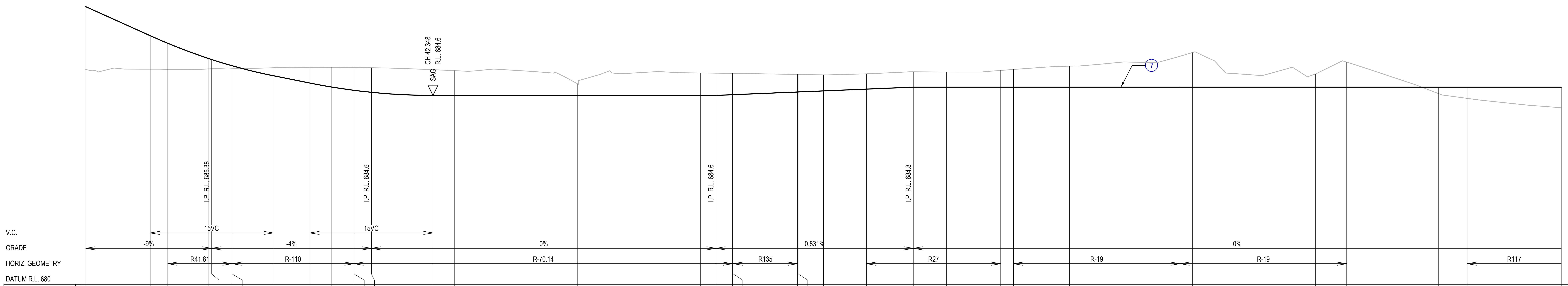
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN ACCESS 01, 03
& 04 PLAN
SHEET 03 OF 03

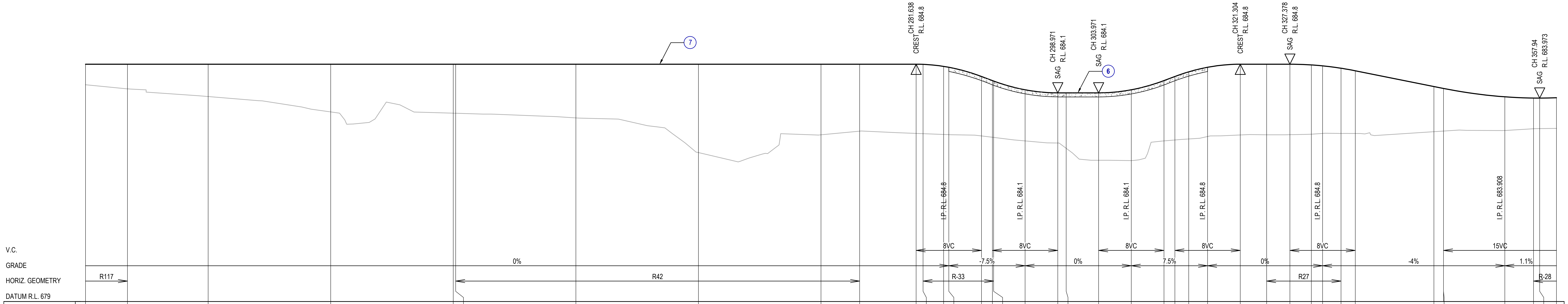
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	612	B



CHAINAGE	DESIGN LEVEL	EXISTING LEVEL	W.A.E.
0	686.762	685.231	
7.857	686.055	685.238	
10	685.869	685.233	
15	685.497	685.245	
15.357	685.473	685.248	
17.834	685.323	685.262	
17.85	685.322	685.262	
22.857	685.08	685.273	
27.348	684.9	685.282	
30	684.803	685.281	
32.715	684.724	685.277	
32.731	684.723	685.277	
34.848	684.675	685.273	
42.348	684.6	685.226	
45	684.6	685.203	
60	684.6	684.881	
75	684.6	685.147	
76.88	684.6	685.142	
78.894	684.617	685.137	
78.983	684.617	685.136	
86.82	684.683	685.109	
86.91	684.683	685.109	
90	684.709	685.1	
95.24	684.753	685.126	
100.955	684.8	685.174	
105	684.8	685.169	
111.61	684.8	685.208	
113.165	684.8	685.233	
120	684.8	685.312	
133.49	684.8	685.553	
135	684.8	685.642	
150	684.8	685.12	
153.815	684.8	685.41	
165	684.8	684.646	
168.512	684.8	684.529	
180	684.8	684.298	

LONGITUDINAL SECTION - ACCESS 01 RHS

SCALE 1:250 (H)
SCALE 1:50 (V)



CHAINAGE	DESIGN LEVEL	EXISTING LEVEL	W.A.E.
180	684.8	684.298	
185.128	684.8	684.198	
195	684.8	684.011	
210	684.8	683.635	
225	684.8	683.604	
225.289	684.8	683.602	
240	684.8	683.487	
255	684.8	682.641	
270	684.8	683.074	
274.729	684.8	683.165	
281.638	684.8	683.109	
282.48	684.797	683.103	
285	684.747	683.084	
285.638	684.725	683.079	
289.638	684.5	683.048	
290.971	684.4	683.016	
291.119	684.389	683.012	
294.971	684.175	682.925	
298.971	684.1	682.874	
300	684.1	682.745	
303.971	684.1	682.453	
307.971	684.175	682.445	
311.971	684.4	682.926	
313.304	684.5	682.948	
315	684.614	682.974	
317.304	684.725	683.033	
321.304	684.8	683.071	
324.528	684.8	683.075	
327.378	684.8	683.076	
330	684.783	683.09	
331.378	684.76	683.107	
333.629	684.702	683.108	
335.378	684.64	683.108	
345	684.255	683.151	
346.176	684.208	683.167	
353.676	684.004	683.179	
357.189	683.974	683.224	
357.94	683.973	683.229	
360	683.98	683.233	

LONGITUDINAL SECTION - ACCESS 01 RHS

SCALE 1:250 (H)
SCALE 1:50 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

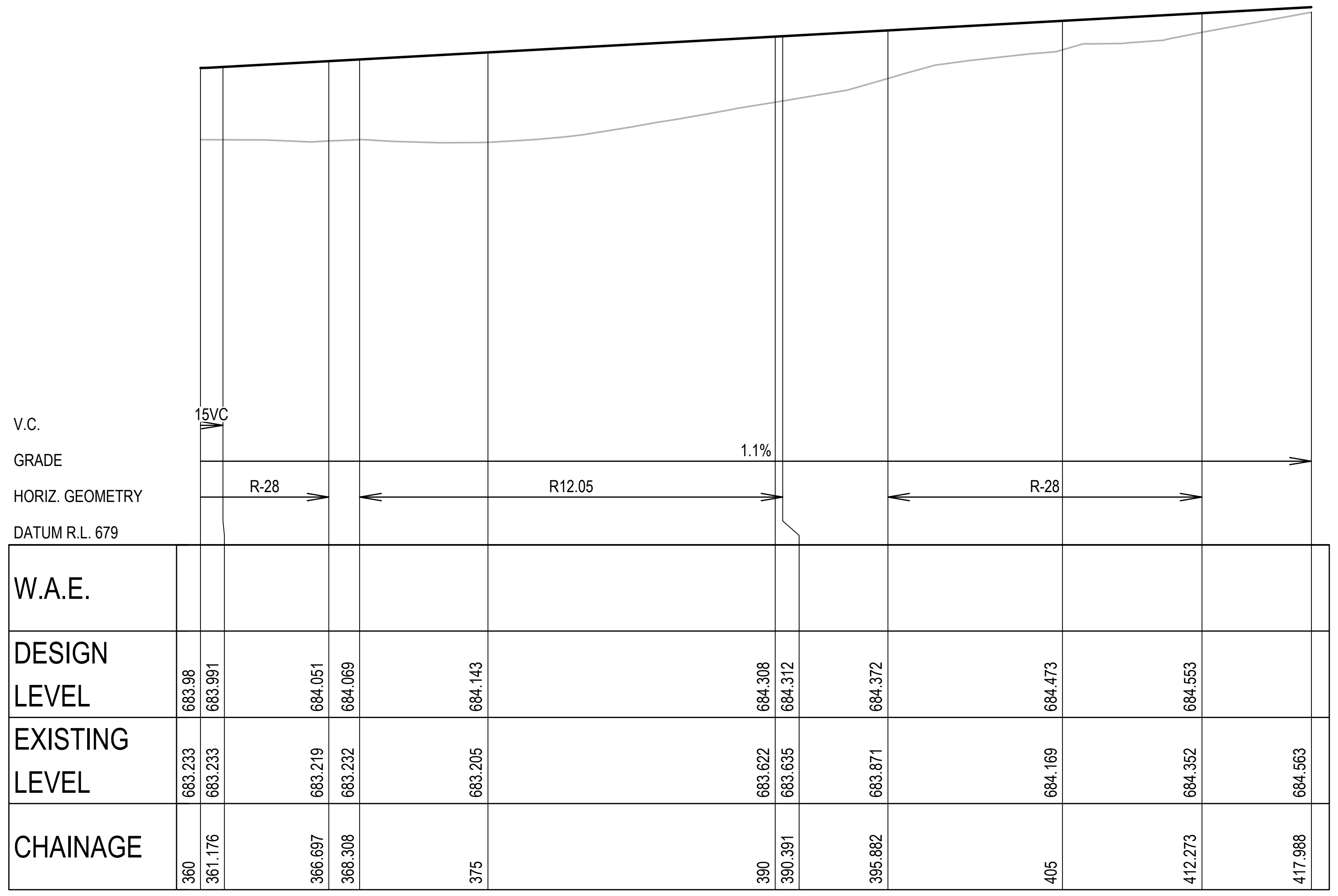
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN ACCESS 01
LONGITUDINAL SECTIONS
SHEET 01 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	615	A

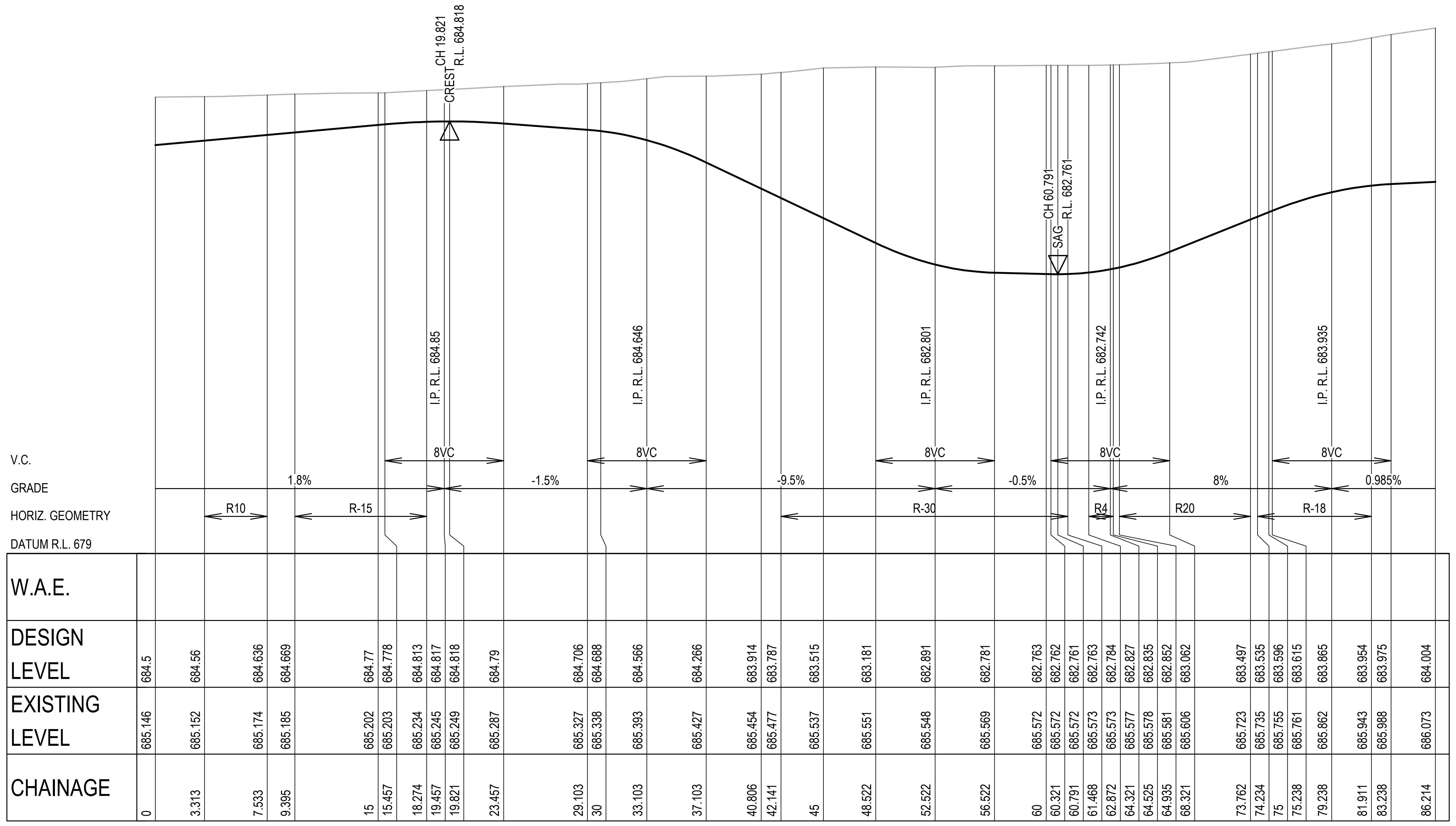
Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-615.dwg



W.A.E.											
DESIGN LEVEL	683.98	683.991	684.051	684.069	684.143	684.308	684.312	684.372	684.473	684.553	
EXISTING LEVEL	683.233	683.233	683.219	683.232	683.205	683.622	683.635	683.871	684.169	684.352	684.563
CHAINAGE	360	361.176	366.697	368.308	375	390	390.391	395.882	405	412.273	417.988

LONGITUDINAL SECTION - ACCESS 01 RHS

SCALE 1:250 (H)
SCALE 1:50 (V)



W.A.E.													
DESIGN LEVEL	684.5	684.56	684.636	684.669	684.77	684.778	684.813	684.817	684.818	684.79	684.706	684.688	684.566
EXISTING LEVEL	685.146	685.152	685.174	685.185	685.202	685.203	685.234	685.245	685.249	685.287	685.327	685.338	685.393
CHAINAGE	0	3.313	7.533	9.395	15	15.457	18.274	19.457	19.821	23.457	29.103	30	33.103

W.A.E.												
DESIGN LEVEL	684.266	683.914	683.787	683.515	683.181	682.891	682.781	682.763	682.762	682.761	682.763	682.784
EXISTING LEVEL	685.427	685.454	685.477	685.537	685.551	685.548	685.569	685.572	685.572	685.572	685.573	685.573
CHAINAGE	37.103	40.806	42.141	45	48.522	52.522	56.522	60	60.321	60.791	61.468	62.872

W.A.E.												
DESIGN LEVEL	682.827	682.835	682.852	683.062	683.497	683.535	683.596	683.615	683.865	683.954	683.975	684.004
EXISTING LEVEL	685.577	685.578	685.581	685.606	685.723	685.735	685.755	685.761	685.862	685.943	685.988	686.073
CHAINAGE	64.321	64.525	64.935	68.321	73.762	74.234	75	75.238	79.238	81.911	83.238	86.214

LONGITUDINAL SECTION - ACCESS 02 RHS

SCALE 1:250 (H)
SCALE 1:50 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion
Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

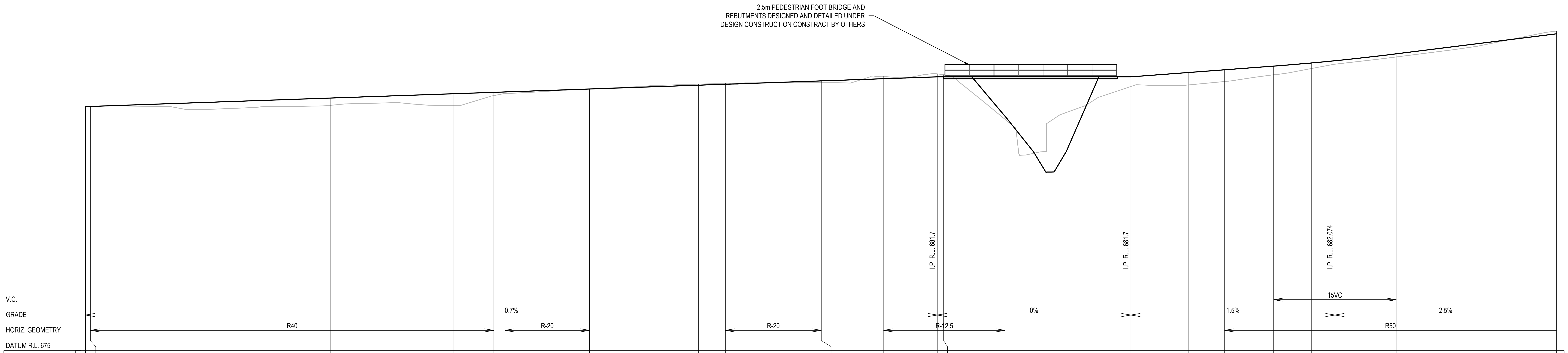
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN ACCESS 01 & 02
LONGITUDINAL SECTIONS
SHEET 02 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	616	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-616.dwg

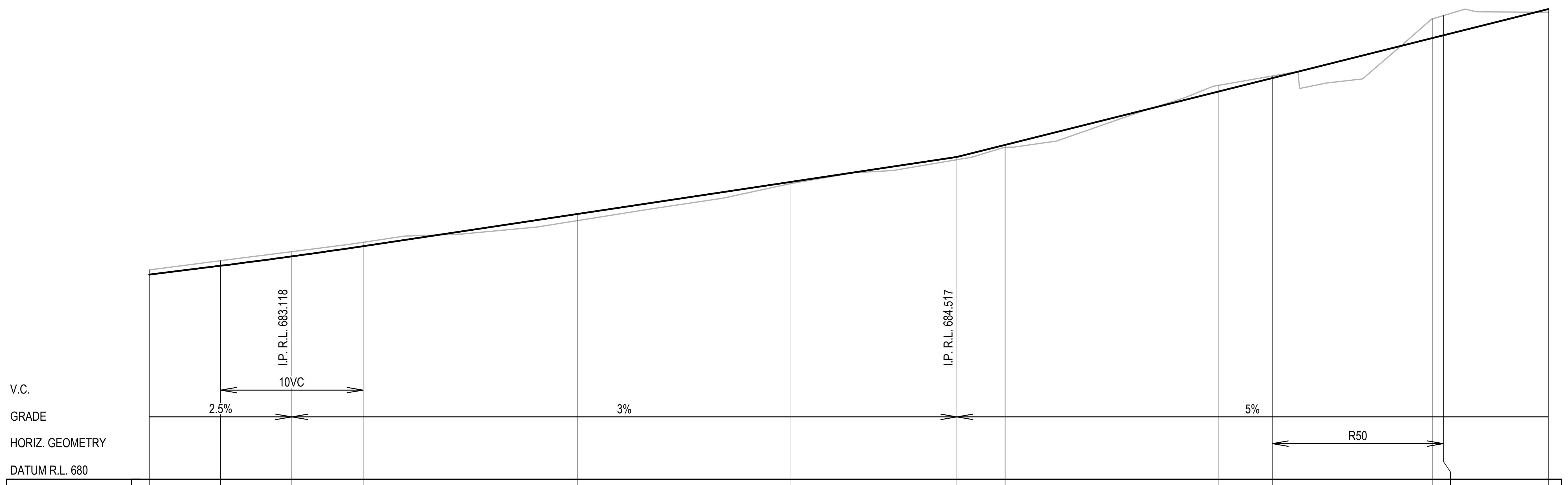


W.A.E.														
DESIGN LEVEL	680.97	680.975	681.075	681.18	681.285	681.32	681.33	681.39	681.402	681.495	681.518	681.6	681.601	681.654
EXISTING LEVEL	680.97	680.967	680.903	681.004	681	681.241	681.288	681.386	681.403	681.521	681.541	681.556	681.556	681.711
CHAINAGE	0	0.603	15	30	45	49.957	51.324	60	61.675	75	78.298	90	90.044	97.668

W.A.E.													
DESIGN LEVEL	681.7	681.7	681.7	681.7	681.7	681.806	681.872	681.962	682.038	682.093	682.262	682.377	682.752
EXISTING LEVEL	681.775	681.751	680.661	680.826	681.464	681.502	681.585	681.749	681.902	682.008	682.186	682.302	682.82
CHAINAGE	104.23	105	112.518	120	127.92	135	139.383	145.389	150	152.889	160.389	165	180

LONGITUDINAL SECTION - ACCESS 03

SCALE 1:250 (H)
SCALE 1:50 (V)



W.A.E.													
DESIGN LEVEL	682.868	682.993	683.124	683.268	683.718	684.168	684.517	684.685	685.435	685.622	686.185	686.222	686.59
EXISTING LEVEL	682.934	683.064	683.191	683.322	683.624	684.144	684.479	684.653	685.522	685.652	686.454	686.498	686.545
CHAINAGE	180	184.994	189.994	194.994	210	225	236.63	240	255	258.733	270	270.737	278.09

LONGITUDINAL SECTION - ACCESS 03

SCALE 1:250 (H)
SCALE 1:50 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN ACCESS 03
LONGITUDINAL SECTIONS
SHEET 03 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	617	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-617.dwg

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

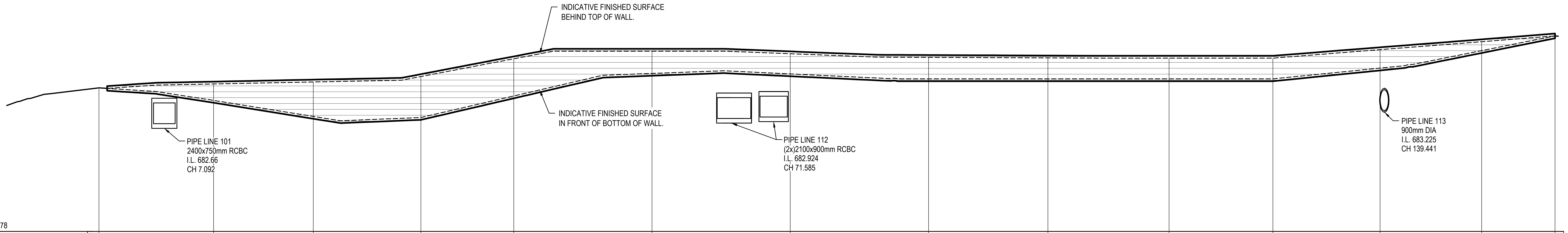
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING
WALL 01 PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	620	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-620.dwg



DATUM R.L. 678

SURFACE LEVEL AT TOP	684.164	684.381	684.466	684.701	685.469	685.8	685.688	685.531	685.509	685.5	685.5	685.865	686.207	686.458
WALL HEIGHT	-0.047	0.712	1.49	1.773	1.608	0.965	0.874	0.931	0.909	0.9	0.9	0.8	0.385	
SURFACE LEVEL AT BASE	684.211	683.668	682.976	682.928	683.861	684.835	684.814	684.6	684.6	684.6	684.6	685.065	685.822	686.458
CHAINAGE	0	12.434	23.25	34.922	45	60	75	90	102.948	116.091	127.347	138.98	150	157.96

LONGITUDINAL SECTION - RW01 BSN

SCALE 1:250 (H)
SCALE 1:100 (V)

SETOUT TABLE RW01 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259111.1	6171922.46	256°32'33.80"		
4.28	259106.94	6171921.46	256°32'33.80"		
13.76	259097.57	6171919.22		-44.715	18.972
23.25	259089.96	6171913.32			
34.77	259080.76	6171906.2		66.266	23.041
46.29	259069.68	6171902.63	252°09'14.03"		
68.18	259048.85	6171895.92			
69.72	259047.38	6171895.45	252°09'14.03"		
73.72	259043.47	6171894.19		15	8.017
77.73	259039.47	6171895.1	282°46'29.54"		
79.9	259037.36	6171895.58	282°46'29.54"		
84.47	259032.66	6171896.64		-12	9.153
89.05	259028.54	6171894.17	239°04'19.89"		
90.96	259026.89	6171893.19			
97.2	259021.57	6171889.93			
102.95	259016.48	6171887.27			
108.29	259011.57	6171885.16			
116.09	259004.15	6171882.77			
123.05	258997.34	6171881.34			
132.04	258988.39	6171880.48			
137.86	258982.57	6171880.37			
138.98	258981.45	6171880.42	272°12'32.77"		
143.97	258976	6171880.63		-10	9.988
148.97	258972.87	6171876.16	214°59'00.05"		
157.96	258967.72	6171868.79	214°59'00.05"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 01
LONGITUDINAL SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	621	A

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FOR CONTINUATION REFER INSET 'A'

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 02
PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	622	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-622.dwg

SETOUT TABLE RW02 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259085.48	6172059.26	178°26'55.99"		
48.56	259086.79	6172010.72	178°26'55.99"		
54.26	259086.95	6172004.99		-44.5	11.404
59.97	259088.55	6171999.48	163°45'56.92"		
71.02	259091.64	6171988.86	163°45'56.92"		
72.08	259091.94	6171987.84		-12.3	2.12
73.14	259092.41	6171986.89	153°53'27.19"		
80.2	259095.51	6171980.56			
87.31	259099.14	6171974.44	149°17'31.52"		
97.98	259104.7	6171965.08		-44.3	21.343
108.65	259113.96	6171959.37	121°41'16.44"		
110.41	259115.45	6171958.44	121°41'16.44"		

SETOUT TABLE RW02 BSN

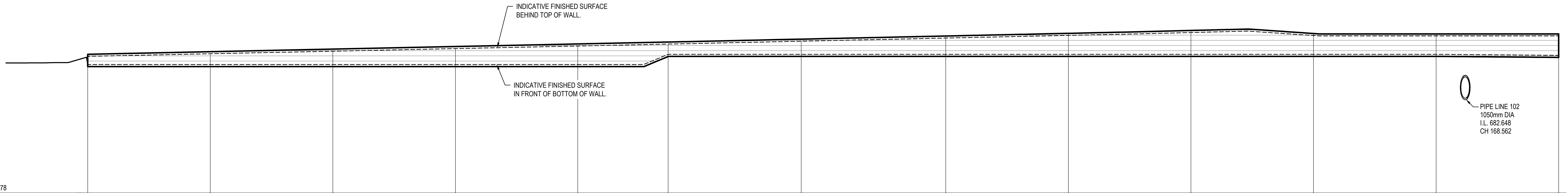
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
112.37	259117.13	6171957.41		-14.3	3.928
114.34	259119.03	6171956.86	105°57'04.67"		
120.39	259124.85	6171955.2	105°57'04.67"		
129.05	259133.35	6171952.77		35.7	17.325
137.71	259139.73	6171946.66	133°45'26.32"		
139.36	259140.92	6171945.52	133°45'26.32"		
147.81	259147.69	6171939.04		15.7	16.884
156.25	259145.2	6171930.01			
156.7	259145.09	6171929.58			
169.71	259140.69	6171913.6		16.544	26.022
182.72	259124.71	6171918.02	285°29'28.96"		
194.75	259112.54	6171921.4		-32.132	24.07

SETOUT TABLE RW02 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
206.79	259101.33	6171915.58	242°34'15.38"		
212.46	259096.28	6171912.96		-51.454	11.335
218.12	259091.92	6171909.3	229°56'56.63"		
230.95	259081.94	6171900.91		57.387	25.646
243.77	259069.31	6171897.65	255°33'13.74"		
255.6	259057.86	6171894.7		1381	23.651
267.42	259046.36	6171891.95	256°32'06.24"		
271.29	259042.53	6171891.03		16.766	7.734
275.16	259038.69	6171891.91	282°57'57.12"		
280.29	259033.41	6171893.13		-12.899	10.269
285.42	259028.84	6171890.21	237°21'05.21"		
297.08	259018.97	6171883.88		86.87	23.313

SETOUT TABLE RW02 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
308.74	259007.77	6171880.4	252°43'39.06"		
318.89	258998.03	6171877.37		86.488	20.313
329.05	258987.85	6171876.69	266°11'04.32"		
332.9	258983.71	6171876.41		-8.472	7.708
336.76	258981.39	6171872.98	214°03'32.10"		

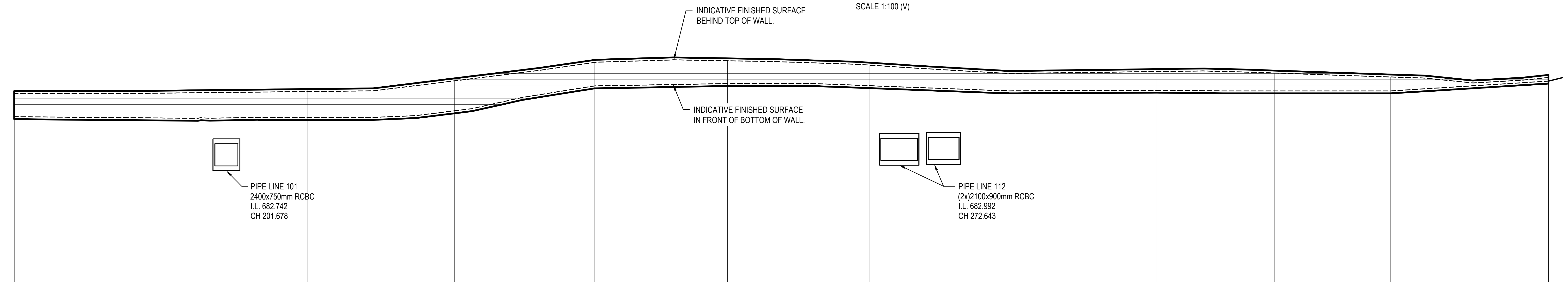

INDICATIVE FINISHED SURFACE
BEHIND TOP OF WALL.
INDICATIVE FINISHED SURFACE
IN FRONT OF BOTTOM OF WALL.
PIPE LINE 102
1050mm DIA
I.L. 682.648
CH 168.562

DATUM R.L. 678

SURFACE LEVEL AT TOP	684.7	684.827	684.954	685.081	685.207	685.301	685.442	685.596	685.726	685.866	685.718	685.7	685.7
WALL HEIGHT	0.4	0.527	0.654	0.781	0.907	0.501	0.642	0.796	0.926	1.066	0.918	0.9	0.951
SURFACE LEVEL AT BASE	684.3	684.3	684.3	684.3	684.3	684.8	684.8	684.8	684.8	684.8	684.8	684.8	684.749
CHAINAGE	0	15	30	45	59.966	71.024	87.312	105	120	135	150	165	180

LONGITUDINAL SECTION - RW02 BSN

SCALE 1:250 (H)
SCALE 1:100 (V)



DATUM R.L. 678

SURFACE LEVEL AT TOP	685.7	685.71	685.774	686.212	686.96	687.029	686.85	686.514	686.59	686.53	686.369	686.351
WALL HEIGHT	0.951	1.013	1.061	1.223	0.956	0.929	0.838	0.714	0.759	0.73	0.569	0.151
SURFACE LEVEL AT BASE	684.749	684.697	684.714	684.989	686.004	686.1	686.013	685.8	685.831	685.8	685.8	686.2
CHAINAGE	180	195	210	225	239.259	252.865	267.421	281.522	296.759	308.737	320.641	336.759

LONGITUDINAL SECTION - RW02 BSN

SCALE 1:250 (H)
SCALE 1:100 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 02
LONGITUDINAL SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	623	A

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 03
PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	624	C

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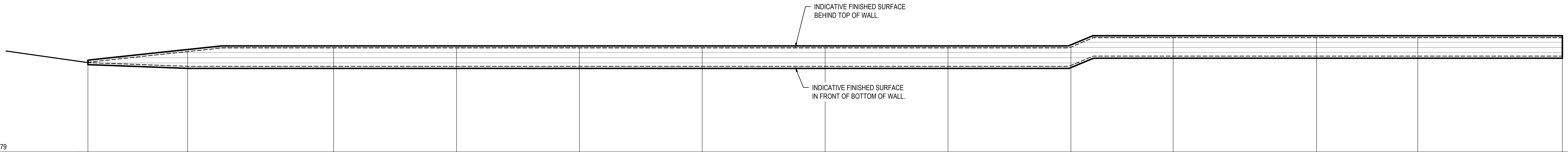
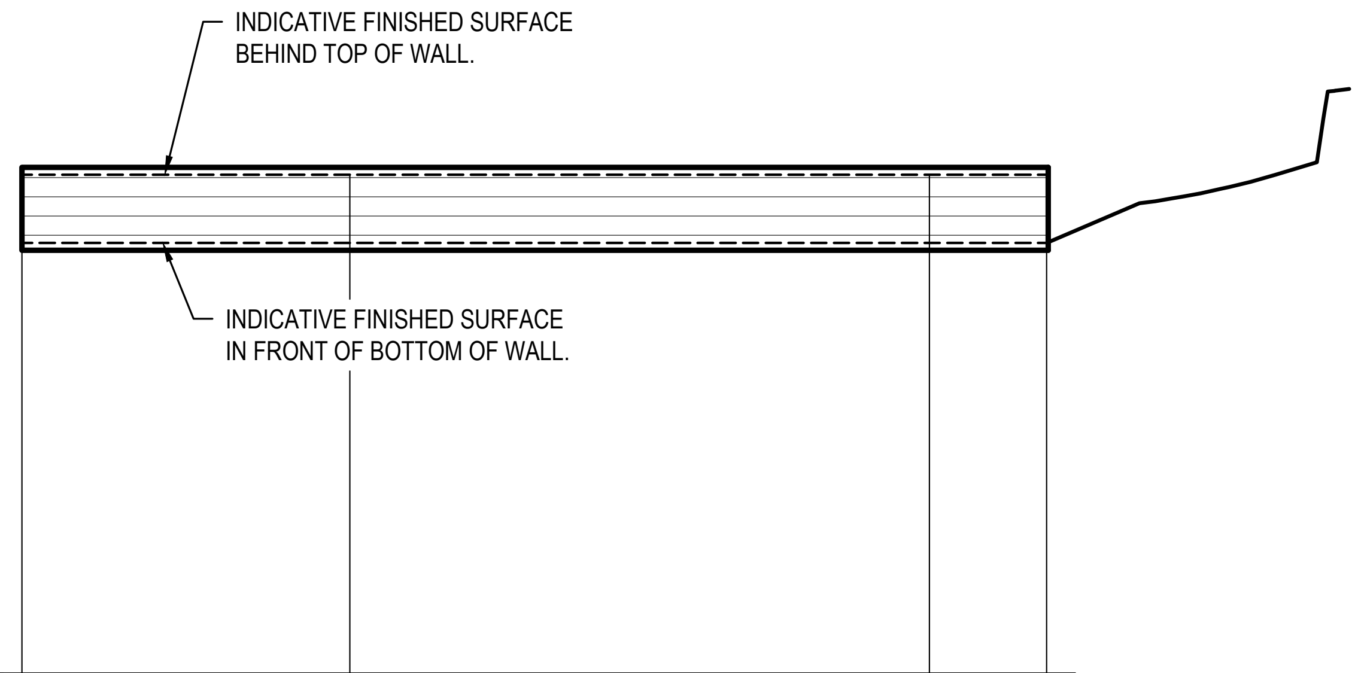

INDICATIVE FINISHED SURFACE
BEHIND TOP OF WALL.
INDICATIVE FINISHED SURFACE
IN FRONT OF BOTTOM OF WALL.

DATUM R.L. 679

SURFACE LEVEL AT TOP	683.4	683.924	684.1	684.1	684.1	684.1	684.1	684.1	684.144	684.6	684.6	684.6	684.6
WALL HEIGHT	0.017	0.724	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
SURFACE LEVEL AT BASE	683.383	683.2	683.2	683.2	683.2	683.2	683.2	683.2	683.244	683.7	683.7	683.7	683.7
CHAINAGE	0	12.175	30	45	60	75	90	105	120	132.48	150	162.347	180

LONGITUDINAL SECTION - RW03 BSN

SCALE 1:250 (H)
SCALE 1:100 (V)


INDICATIVE FINISHED SURFACE
BEHIND TOP OF WALL.
INDICATIVE FINISHED SURFACE
IN FRONT OF BOTTOM OF WALL.

DATUM R.L. 678

SURFACE LEVEL AT TOP	684.6	684.6	684.6	684.6
WALL HEIGHT	0.9	0.9	0.9	0.9
SURFACE LEVEL AT BASE	683.7	683.7	683.7	683.7
CHAINAGE	180	190.835	210	213.87

LONGITUDINAL SECTION - RW03 BSN

SCALE 1:250 (H)
SCALE 1:100 (V)

SETOUT TABLE RW03 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259102.79	6172102.43	193°46'19.18"		
0.7	259102.63	6172101.75	193°46'19.18"		
4.81	259101.6	6172097.55		10.7	8.209
8.91	259097.95	6172095.25	237°43'51.26"		
12.18	259095.19	6172093.51	237°43'51.26"		
15.25	259092.57	6172091.86		-22.3	6.142
18.32	259090.51	6172089.56	221°57'02.09"		
21.88	259088.13	6172086.91	221°57'02.09"		
30.3	259082.21	6172080.32		-22.2	16.855
38.73	259082.45	6172071.47	178°26'55.99"		
99.58	259084.09	6172010.64	178°26'55.99"		
105.63	259084.26	6172004.56		-47.2	12.096
111.68	259085.96	6171998.73	163°45'56.92"		
122.73	259089.05	6171988.11	163°45'56.92"		
124.03	259089.41	6171986.86		-15	2.585
125.32	259089.98	6171985.7	153°53'27.19"		

SETOUT TABLE RW03 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
132.48	259093.13	6171979.27			
139.7	259096.82	6171973.06	149°17'31.52"		
151.03	259102.72	6171963.13		-47	22.644
162.35	259112.54	6171957.07	121°41'16.44"		
164.1	259114.03	6171956.15	121°41'16.44"		
166.43	259116.03	6171954.91		-17	4.669
168.77	259118.29	6171954.27	105°57'04.68"		
174.82	259124.11	6171952.6	105°57'04.67"		
182.83	259131.96	6171950.36		33	16.015
190.84	259137.86	6171944.71	133°45'26.32"		
192.49	259139.06	6171943.57	133°45'26.32"		
199.48	259144.66	6171938.21		13	13.98
206.47	259142.6	6171930.73	195°22'26.79"		
206.92	259142.48	6171930.3	195°22'26.79"		
210.39	259141.54	6171926.86		13	6.953
213.87	259138.98	6171924.39	226°01'05.64"		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 03
LONGITUDINAL SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	625	A

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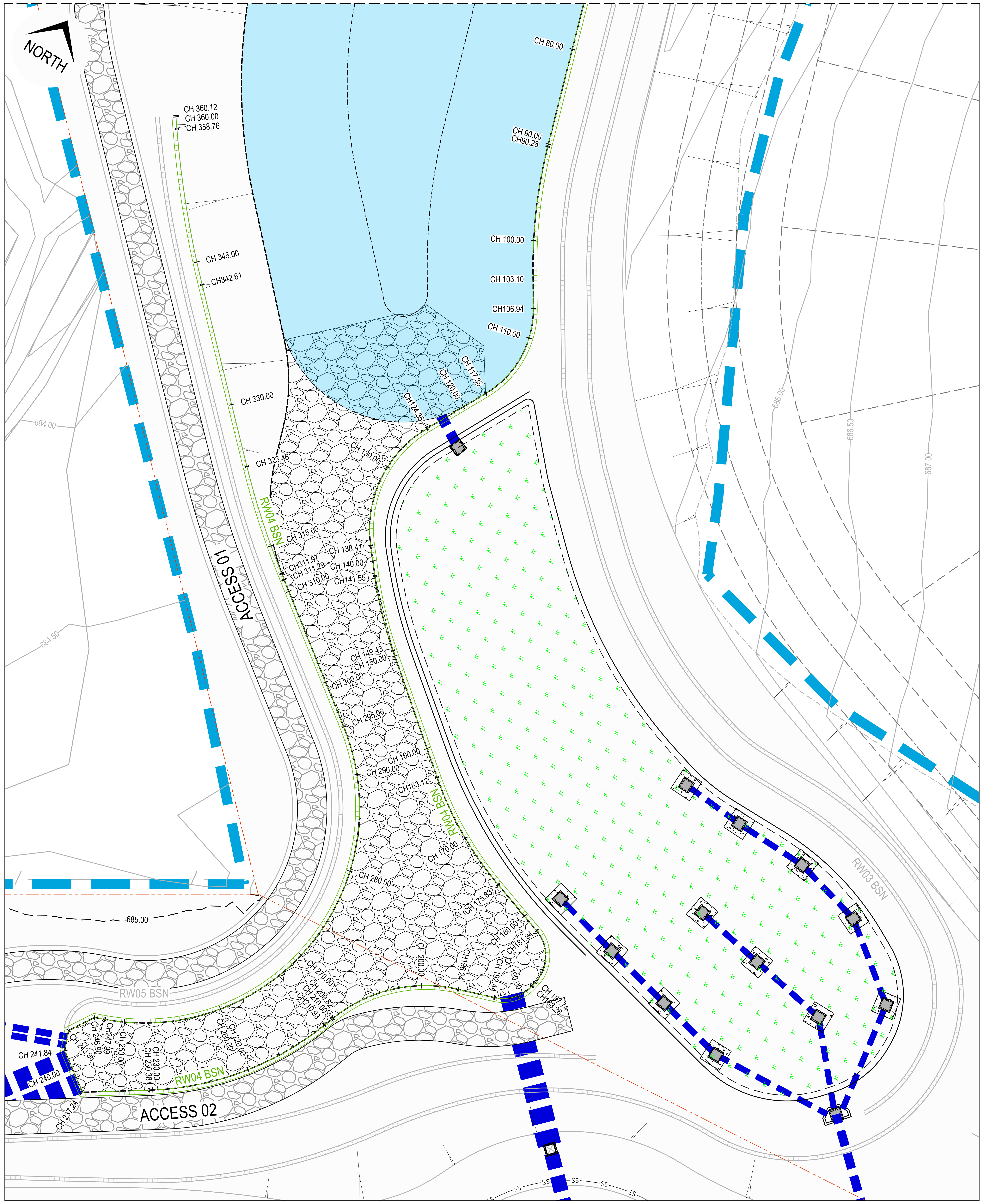

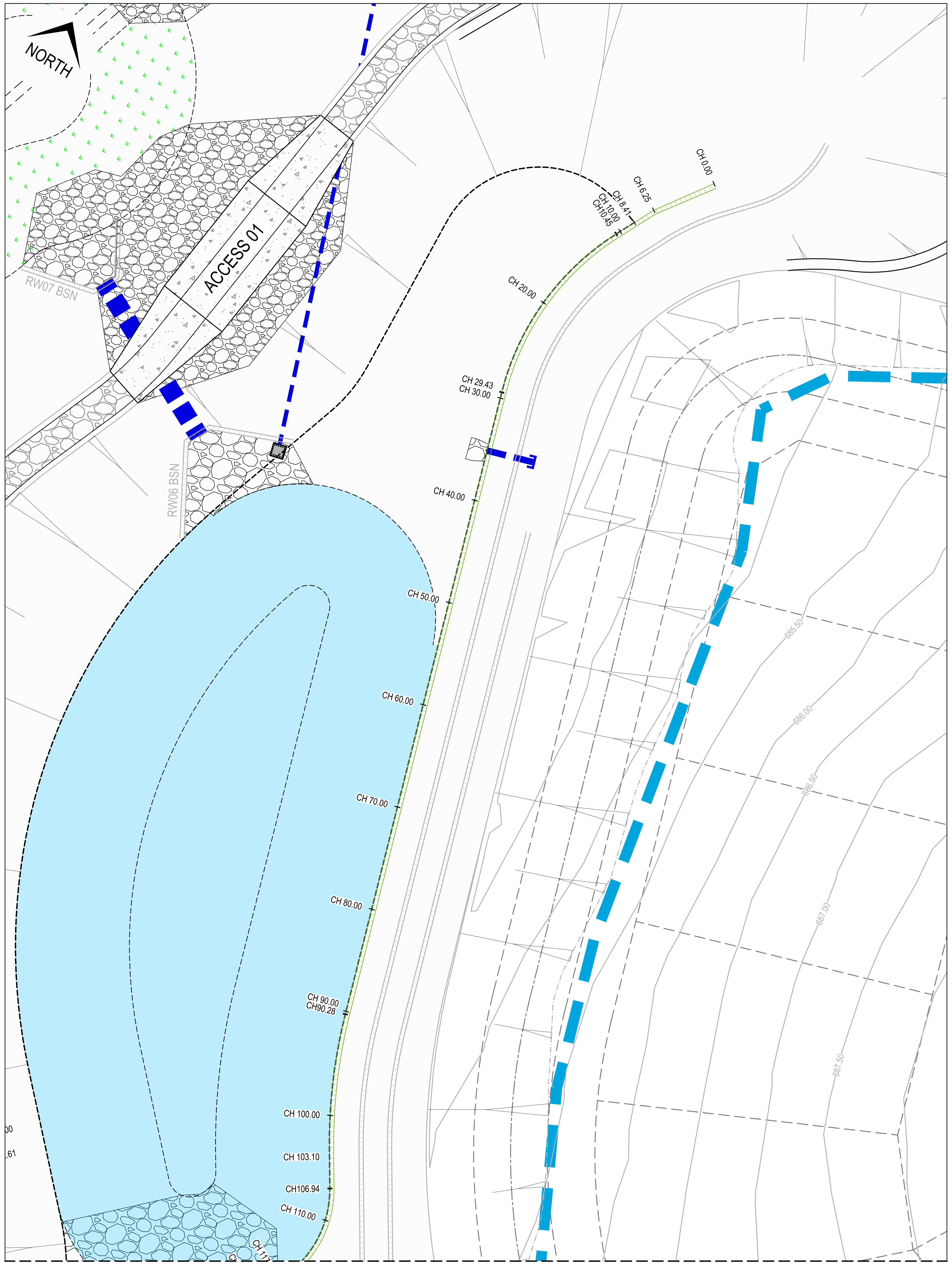

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
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SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 04
PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	626	C

SETOUT TABLE RW04 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259093.69	6172095.87	230°39'22.84"		
6.25	259088.86	6172091.91		10	6.331
8.41	259087.41	6172090.3			
10.45	259086.04	6172088.78	221°57'02.08"		
19.94	259079.38	6172081.36		-25	18.981
29.43	259079.65	6172071.39	178°26'55.99"		
90.28	259081.29	6172010.57	178°26'55.99"		
96.69	259081.47	6172004.13		-50	12.813
103.1	259083.27	6171997.94	163°45'56.92"		
106.94	259084.34	6171994.25	163°45'56.92"		
112.16	259085.95	6171988.73		10	10.432
117.38	259081.99	6171984.56	223°32'15.05"		
124.35	259077.19	6171979.51	223°32'15.05"		
131.38	259071.7	6171973.74		-12	14.055
138.41	259074.89	6171966.44	156°25'43.21"		
141.55	259076.14	6171963.57	156°25'43.21"		
145.49	259077.72	6171959.94		-40	7.881

SETOUT TABLE RW04 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
149.43	259079.98	6171956.7	145°08'24.68"		
163.12	259087.81	6171945.47	145°08'24.68"		
169.47	259091.48	6171940.19		-35	12.712
175.83	259096.79	6171936.57	124°19'48.78"		
181.94	259101.84	6171933.12	124°19'48.78"		
184.84	259104.76	6171931.12		4	5.8
187.74	259103.13	6171927.98	207°24'34.02"		
188.26	259102.89	6171927.52	207°24'34.02"		
190.35	259101.83	6171925.47		4	4.178
192.44	259099.53	6171925.36	267°15'15.56"		
196.24	259095.73	6171925.18	267°15'15.56"		
203.03	259088.45	6171924.83		-15	13.579
209.82	259084.22	6171918.89	215°23'07.55"		
210.93	259083.58	6171917.98	215°23'07.55"		
220.66	259077.74	6171909.76		30	19.446
230.38	259068.13	6171906.73	252°31'27.44"		
237.24	259061.59	6171904.67			

SETOUT TABLE RW04 BSN

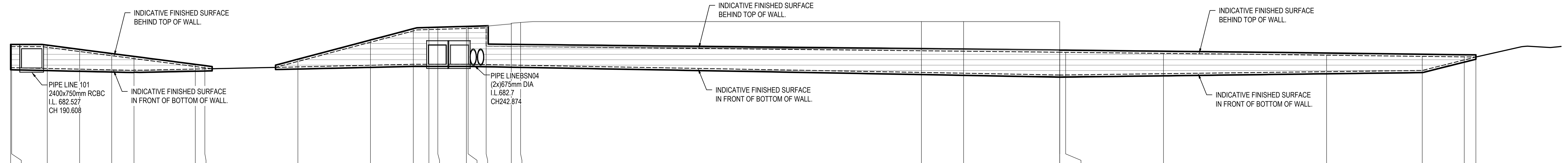
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
241.84	259058.73	6171908.28			
243.95	259058.56	6171910.39			
246.9	259060.74	6171912.38			
247.99	259061.83	6171912.48	84°50'24.08"		
259.76	259074.8	6171913.65		-22	23.531
271.53	259080.01	6171925.6	23°33'27.05"		
283.29	259085.22	6171937.54		-22	23.531
295.06	259077.25	6171947.85	322°16'30.02"		
311.29	259067.32	6171960.69	322°16'31.01"		
311.97	259066.9	6171961.23	322°16'31.01"		
317.72	259063.38	6171965.78		80	11.491
323.46	259060.54	6171970.79	330°30'17.80"		
342.61	259051.12	6171987.45	330°30'17.80"		
350.68	259047.13	6171994.5		100	16.153
358.76	259044.33	6172002.09	339°45'36.60"		
360.12	259043.86	6172003.37	339°45'36.60"		

DATUM R.L. 677

SURFACE LEVEL AT TOP		682.9	682.9	682.9	682.9	682.9	682.9	682.9	682.9	682.9	682.9	682.9
WALL HEIGHT		0.49	0.651	0.654	0.654	0.674	0.868	1.1	1.1	1.1	1.1	1.1
SURFACE LEVEL AT BASE	682.899	682.41	682.249	682.246	682.246	682.226	682.032	681.8	681.8	681.8	681.8	681.8
CHAINAGE	0	6.25	8.14	8.41	8.42	10.453	29.434	52.257	90.282	100	103.095	106.943

SURFACE LEVEL AT TOP	682.93	682.966	682.988	683.016	683.036	683.052	683.092	683.162	683.372	683.526	683.526	683.526	683.526
WALL HEIGHT	1.13	1.166	1.188	0.896	0.883	0.874	0.849	0.807	0.914	1.019	0.976	0.982	0.985
SURFACE LEVEL AT BASE	681.8	681.8	681.8	682.121	682.153	682.179	682.243	682.354	682.458	682.507	682.55	682.545	682.541
CHAINAGE	117.376	124.354	128.729	134.423	138.409	141.546	149.427	163.116	175.828	181.943	187.16	187.743	188.14

LONGITUDINAL SECTION - RW04 BSN
SCALE 1:250 (H)
SCALE 1:100 (V)


INDICATIVE FINISHED SURFACE
BEHIND TOP OF WALL.
PIPE LINE 101
2400x750mm RCBC
I.L. 682.527
CH 190.608
INDICATIVE FINISHED SURFACE
IN FRONT OF BOTTOM OF WALL.
PIPE LINEBSN04
(2x)675mm DIA
I.L.682.7
CH242.874
INDICATIVE FINISHED SURFACE
BEHIND TOP OF WALL.
INDICATIVE FINISHED SURFACE
IN FRONT OF BOTTOM OF WALL.
INDICATIVE FINISHED SURFACE
BEHIND TOP OF WALL.
INDICATIVE FINISHED SURFACE
IN FRONT OF BOTTOM OF WALL.

DATUM R.L. 678

SURFACE LEVEL AT TOP	683.526	683.526	683.493	683.295	683.101	682.966	682.594	682.536	682.831
WALL HEIGHT	0.985	0.986	0.99	0.826	0.665	0.553	0.12	0.052	0.255
SURFACE LEVEL AT BASE	682.541	682.54	682.503	682.47	682.436	682.413	682.474	682.484	682.576
CHAINAGE	188.14	188.257	192.435	196.24	200	202.616	209.819	210.933	221.855

SURFACE LEVEL AT TOP	683.732	684.262	684.325	684.337	684.373	684.376	683.545	683.532	683.528
WALL HEIGHT	1.078	1.562	1.625	1.637	1.673	1.677	0.861	0.87	0.873
SURFACE LEVEL AT BASE	682.654	682.7	682.7	682.7	682.7	682.699	682.683	682.662	682.654
CHAINAGE	230.379	235.408	237.238	238.282	241.637	241.838	243.953	246.905	247.995

SURFACE LEVEL AT TOP	683.332	683.311	683.263	683.26	683.21	683.125	683.07	683.046	683.039
WALL HEIGHT	1.014	1.03	1.066	1.06	0.952	0.771	0.66	0.143	0
SURFACE LEVEL AT BASE	682.317	682.28	682.197	682.2	682.258	682.354	682.41	682.903	683.039
CHAINAGE	295.056	300	311.288	311.97	323.461	342.607	353.83	358.76	360.124

LONGITUDINAL SECTION - RW04 BSN
SCALE 1:250 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

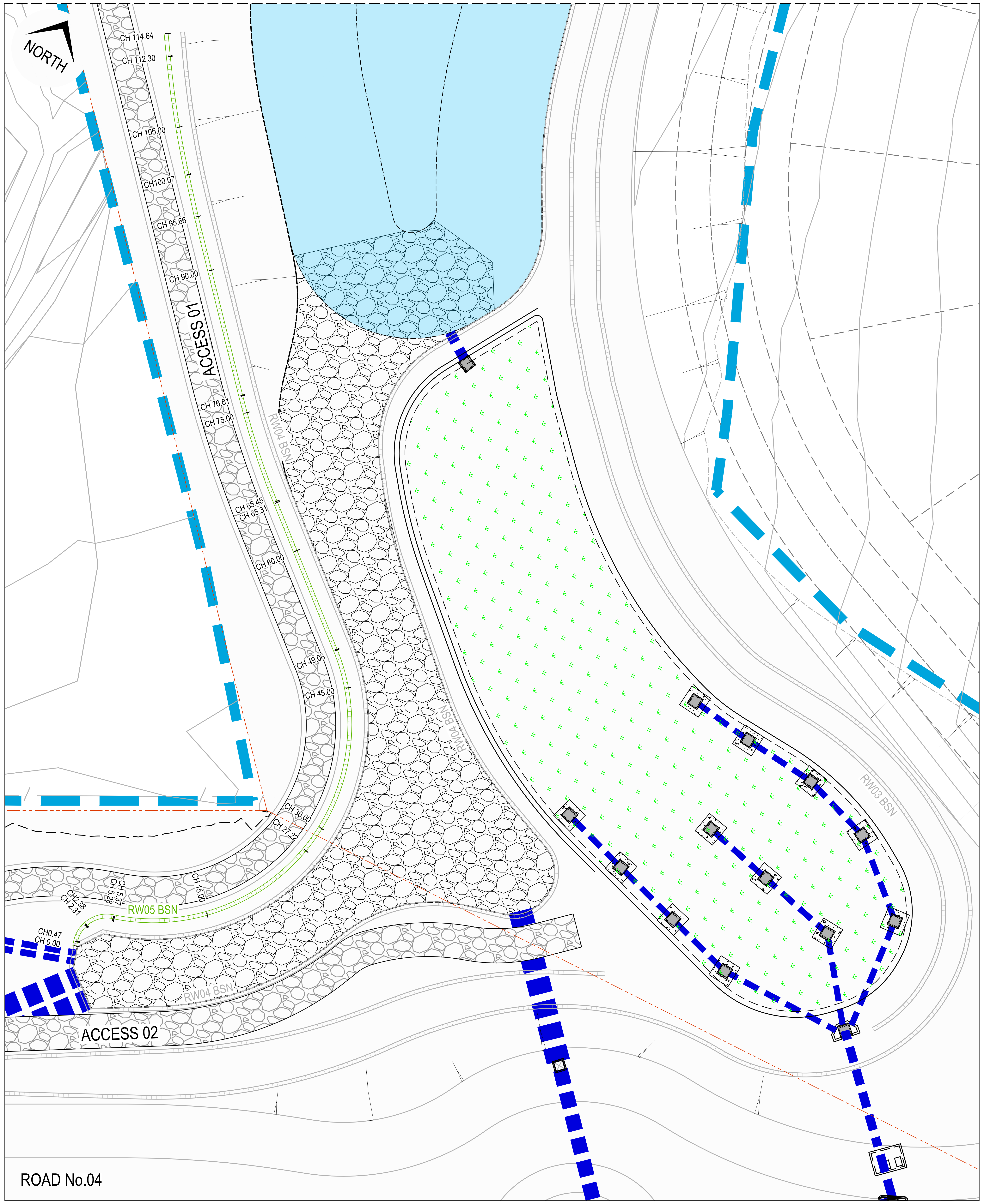
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

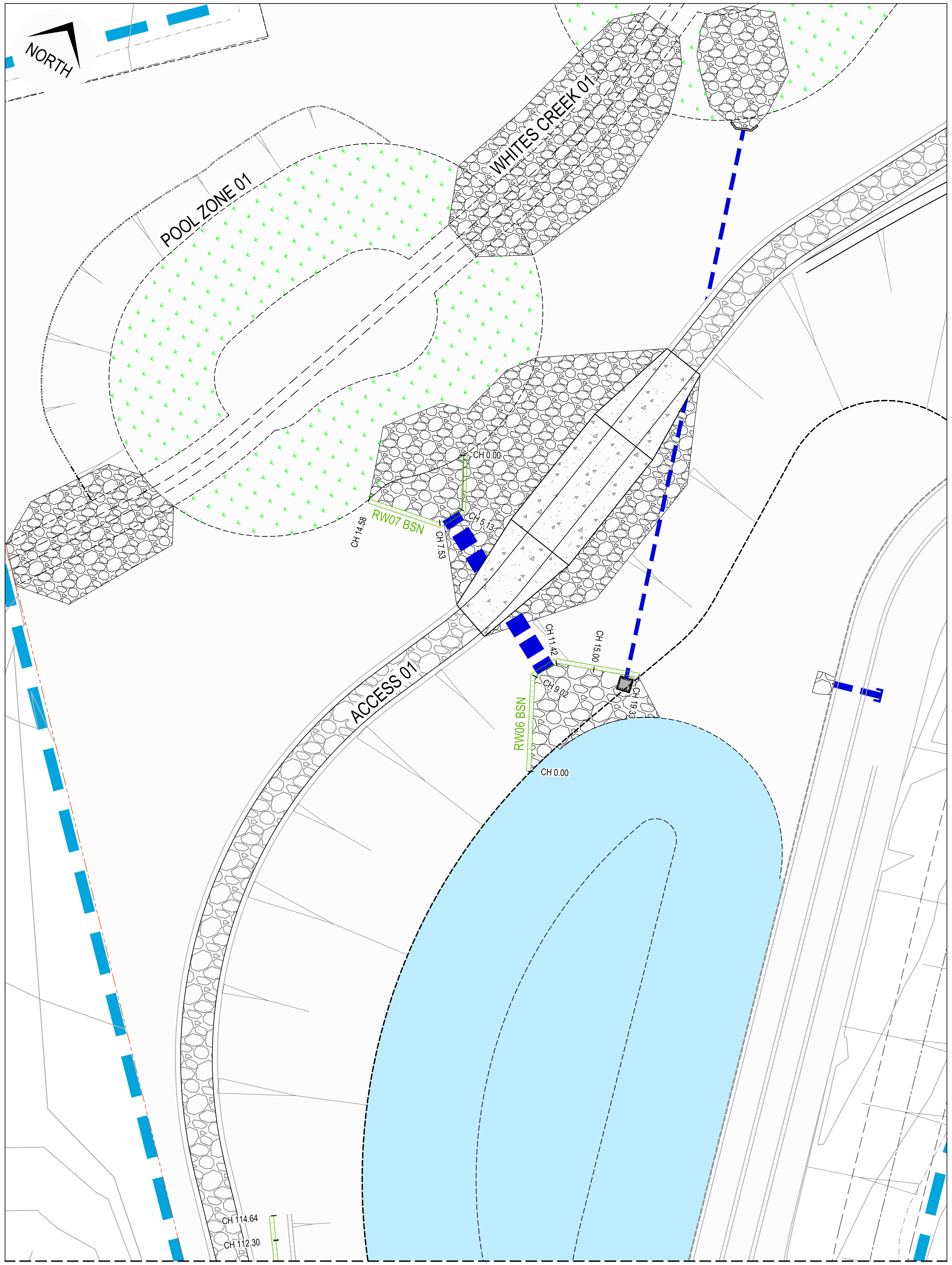
Title:
BASIN RETAINING WALL 04
LONGITUDINAL SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	627	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:D:\12dS\data\ORION-SYN0102-CC-Moss Vale Stage 1_20150WSS\20-0071-02-CC-627.dwg

FOR CONTINUATION REFER RIGHT





FOR CONTINUATION REFER LEFT

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

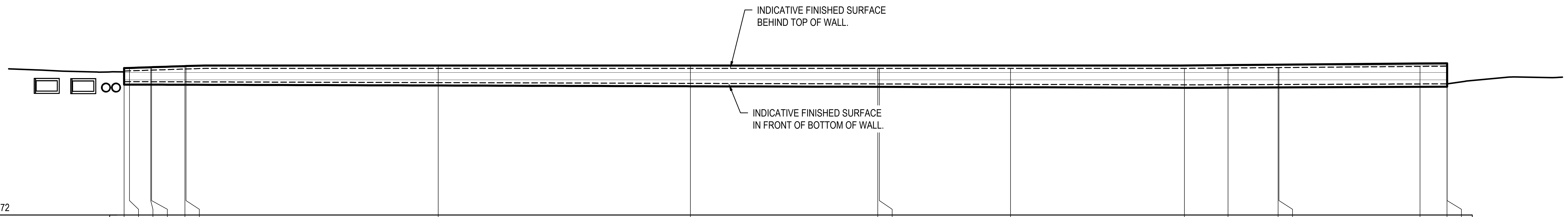
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 05, 06
& 07 PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	628	C

SETOUT TABLE RW05 BSN

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	259058.46	6171910.43	356°27'33.57"		
0.47	259058.43	6171910.9	356°27'33.57"		
1.39	259058.37	6171911.85		3	1.837
2.31	259058.87	6171912.65	31°33'06.14"		
2.38	259058.9	6171912.72	31°33'06.14"		
3.83	259059.73	6171914.05		3	2.895
5.28	259061.29	6171914.14	86°50'02.17"		
5.37	259061.39	6171914.15			
16.3	259073.48	6171915.07		-20.3	21.855
27.22	259078.4	6171926.14	23°57'30.66"		
38.15	259083.32	6171937.22		-20.3	21.855
49.08	259075.9	6171946.81	322°16'30.02"		
65.31	259065.97	6171959.65			
65.45	259065.89	6171959.76			
71.13	259062.41	6171964.26		80	11.362
76.81	259059.6	6171969.21	330°24'43.58"		
95.66	259050.29	6171985.6			
100.07	259048.21	6171989.49	331°51'14.08"		
106.19	259045.32	6171994.88		100	12.221
112.3	259043.11	6172000.59	338°51'21.27"		
114.64	259042.27	6172002.78	338°51'21.27"		

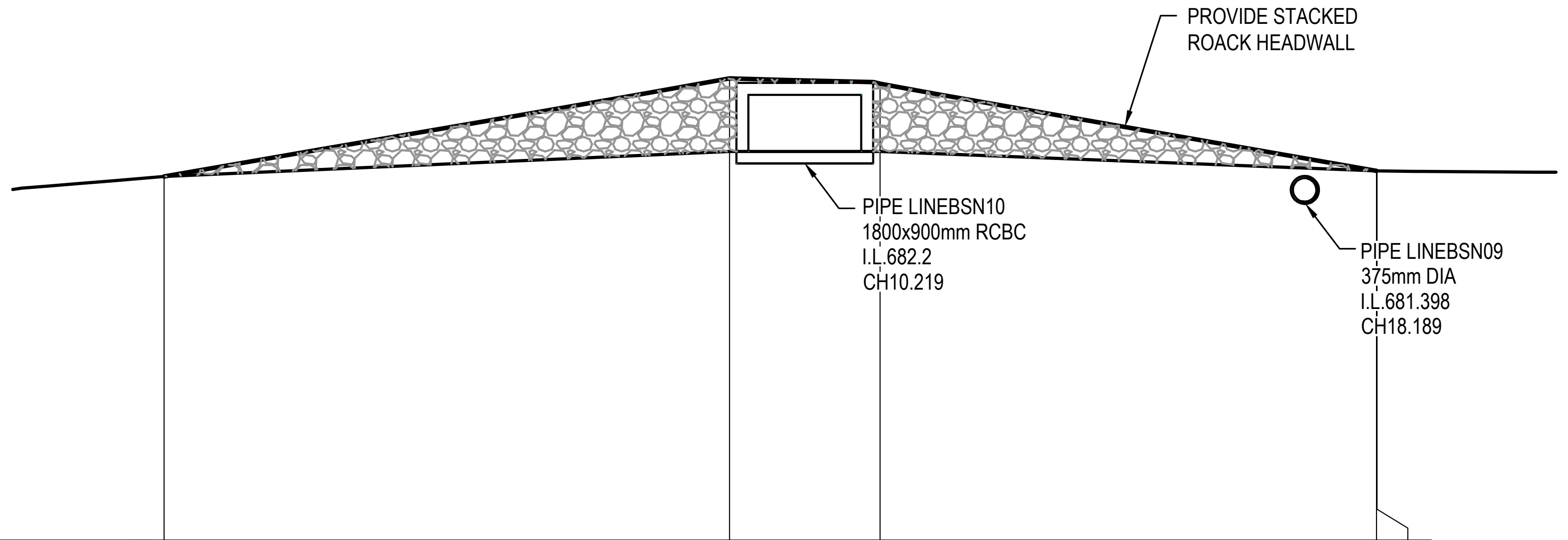

INDICATIVE FINISHED SURFACE
BEHIND TOP OF WALL.
INDICATIVE FINISHED SURFACE
IN FRONT OF BOTTOM OF WALL.

DATUM R.L. 672

SURFACE LEVEL AT TOP	684.472	684.487	684.548	684.55	684.645	684.648	684.7	684.7	684.7	684.7	684.7	684.702	684.733	684.769	684.77	684.872	684.891	
WALL HEIGHT	0.922	0.939	1.005	1.007	1.111	1.115	1.233	1.299	1.348	1.349	1.383	1.431	1.447	1.466	1.467	1.52	1.53	
SURFACE LEVEL AT BASE	683.545	683.549	683.543	683.543	683.534	683.534	683.467	683.401	683.352	683.351	683.317	683.271	683.286	683.303	683.303	683.352	683.361	683.362
CHAINAGE	0	0.472	2.309	2.381	5.276	5.37	27.225	49.079	65.312	65.448	76.81	91.887	95.662	100	100.075	112.296	114.642	114.652

LONGITUDINAL SECTION CENTRELINE - RW05 BSN

SCALE 1:250 (H)
SCALE 1:250 (V)



DATUM R.L. 676

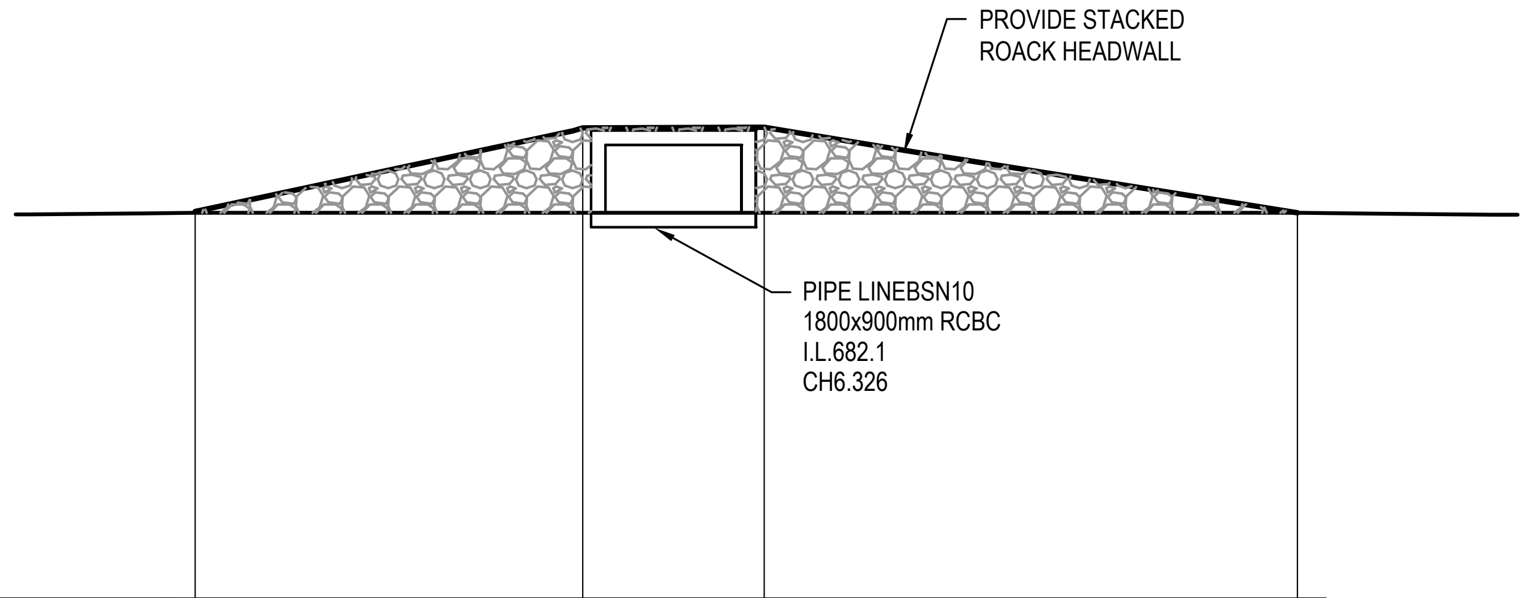
SURFACE LEVEL AT TOP	681.802	683.359	683.272	681.889	
WALL HEIGHT	0.002	1.159	1.072	0.001	
SURFACE LEVEL AT BASE	681.8	682.2	682.2	681.888	681.887
CHAINAGE	0	9.019	11.419	19.333	19.343

SETOUT TABLE RW06 BSN

CHAINAGE	EASTING	NORTHING	BEARING
0	259054.37	6172049.96	346°54'15.54"
9.02	259052.32	6172058.74	
11.42	259053.95	6172060.51	
19.33	259061.82	6172061.3	84°13'38.30"

LONGITUDINAL SECTION - RW06 BSN

SCALE 1:100 (H)
SCALE 1:100 (V)



DATUM R.L. 677

SURFACE LEVEL AT TOP	682.117	683.226	683.223	682.102
WALL HEIGHT	0.015	1.126	1.123	0
SURFACE LEVEL AT BASE	682.102	682.1	682.1	682.102
CHAINAGE	0	5.126	7.526	14.58

SETOUT TABLE RW07 BSN

CHAINAGE	EASTING	NORTHING	BEARING
0	259040.08	6172077.08	166°01'48.35"
5.13	259041.32	6172072.1	
7.53	259039.69	6172070.34	
14.58	259032.65	6172070.7	272°57'48.41"

LONGITUDINAL SECTION - RW07 BSN

SCALE 1:100 (H)
SCALE 1:100 (V)

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-629.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
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ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BASIN RETAINING WALL 05, 06
& 07 LONGITUDINAL SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	629	A

RAINGARDEN NOTES:

CONSTRUCTION

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3500 AND OTHER RELEVANT CODES

C2. CONSTRUCTION SHALL BE CARRIED OUT AS PER THE FOLLOWING STAGING:-

(i) STAGE 1 : DURING ROAD CONSTRUCTION, THE RAINGARDEN IS TO BE FORMED AS BULK EARTHWORKS ONLY AND USED AS TEMPORARY SEDIMENT BASIN. MEDIA BED AND SUBSOIL DRAINAGE NOT INSTALLED AT THIS STAGE;

(ii) STAGE 2 : POST-ROAD CONSTRUCTION. WHERE DELAYS ARE ANTICIPATED BETWEEN RESIDENTIAL CONSTRUCTION AND FINAL COMMISSIONING OF RAINGARDEN, AN INTERIM STRATEGY IS REQUIRED. THE RAINGARDEN CAN BE CONSTRUCTED WITH SUBSOIL DRAINAGE AND MEDIA PLACED ACCORDING TO DETAIL. THE MEDIA AND SURROUNDING BATTERS ARE COVERED WITH TURF. THE TURF MUST BE ESTABLISHED AND MAINTAINED TO PROTECT AGAINST POSSIBLE BED AND BATTER EROSION DURING THE HOUSE CONSTRUCTION STAGE. ALL 'ON LOT' SOIL AND WATER MANAGEMENT STRATEGIES INCLUDING PIT GUARDS/INSERTS IN ROADS SHALL BE USED TO LIMIT SILT LOAD.
TEMPORARY SEDIMENT CONTROL MEASURES SHOULD INCLUDE GEO-FABRIC, SANDY LOAM TURF UNDERLAY (M165 OR EQUIVALENT), AND TURF AS PER COUNCIL REGULATIONS (COUCH TYP.);

(iii) STAGE 3 : WHEN ALL UPSTREAM HOUSING BUILDING ACTIVITIES HAVE BEEN SUBSTANTIALLY COMPLETED (TO BE APPROVED BY COUNCILS REPRESENTATIVE) THE RAINGARDEN IS TO BE FULLY COMMISSIONED. REMOVE AND DISPOSE OF STAGE 2 (ABOVE) SEDIMENT CONTROL MEASURES IF NECESSARY. ADD 100mm FINAL LAYER OF FILTER MATERIAL TO ACCOUNT FOR LOSSES DURING REMOVAL PROCESS. OTHERWISE, TURF AND SILT TO BE REMOVED AND FINAL PLANTINGS INSTALLED.

C3. LEVEL CONTROL IS CRITICAL FOR THE RAINGARDEN LEVELS (CONSTRUCTION TOLERANCE TO WITHIN 30mm).

GENERAL CONSTRUCTION TOLERANCES:
WEIR + 20mm, - 0mm
OUTLET CONTROLS + 0mm, - 20mm
GENERAL BASIN LEVELS ± 50mm

C4. EXCAVATION IN RAINGARDENS SHALL BE SUFFICIENT TO ENABLE CONSTRUCTION OF ALL ROCK RETAINING WALLS, MEDIA BED AND FOR THE PLACEMENT OF 150mm THICK TOPSOIL TO FINISHED LEVELS INDICATED ON THESE PLANS.

C5. PROVIDE THE GEOTECHNICAL ENGINEER'S REPORT FOR THE PROPOSED ROCK BEING USED IN ALL STRUCTURES AS TO THEIR SUITABILITY AND LONG TERM WEATHERING EFFECTS.

C6. PROVIDE STRUCTURAL ENGINEER'S CERTIFICATION ON ALL RETAINING WALLS OVER 900mm HIGH.

C7. PROVIDE FLOODWAY WARNING SIGNS AT APPROPRIATE LOCATIONS AND/OR AS DIRECTED BY COUNCILS ENGINEER.

FILTER MATERIAL / MEDIA

DEFINITION:

THE MEDIA DESCRIPTION SHALL BE IN ACCORDANCE WITH AS1726:

MATERIAL	SIZE(mm)
BOULDERS	>200
COBBLES	63-200
GRAVELS	COARSE 20-63
	MEDIUM 6-20
	FINE 2.36-6
SANDS	COARSE 0.6-2.36
	MEDIUM 0.2-0.6
	FINE 0.075-0.2
SILTS	COARSE 0.02-0.075
	MEDIUM 0.006-0.02
	FINE 0.002-0.006
CLAYS	COLLOIDAL <0.002

MIX:

THE PREFERRED MEDIA MIX PERCENTAGE SHALL BE ACCORDING TO TABLE BELOW:

MEDIA	PERCENTAGE
FINE GRAVEL	<3%
VERY COARSE SAND	7-10%
MED. TO COARSE SAND	40-60%
FINE SAND	10-30%
FINE TO VERY FINE SAND	5-30%
CLAY + SILT	<3%

THE ABOVE MATERIAL SHALL HAVE THE FOLLOWING PERFORMANCE PARAMETERS:

- ORGANIC MATTER >3.9%
- HYDRAULIC CONDUCTIVITY >100mm/hr;
- ELECTRICAL CONCENTRATION <1.2dS/m
- PHOSPHORUS CONCENTRATION <20mg/kg
- NITROGEN DRAWDOWN >0.5
- TOTAL NITROGEN <1000mg/kg
- pH BETWEEN 5.5 & 7.5
- SANDY LOAM TO LOAMY SAND TEXTURE
- FREE OF STONES OR WOODY MATERIAL OVER 25mm DIAMETER
- FREE OF BRUSH OR SEED FROM WEEDS

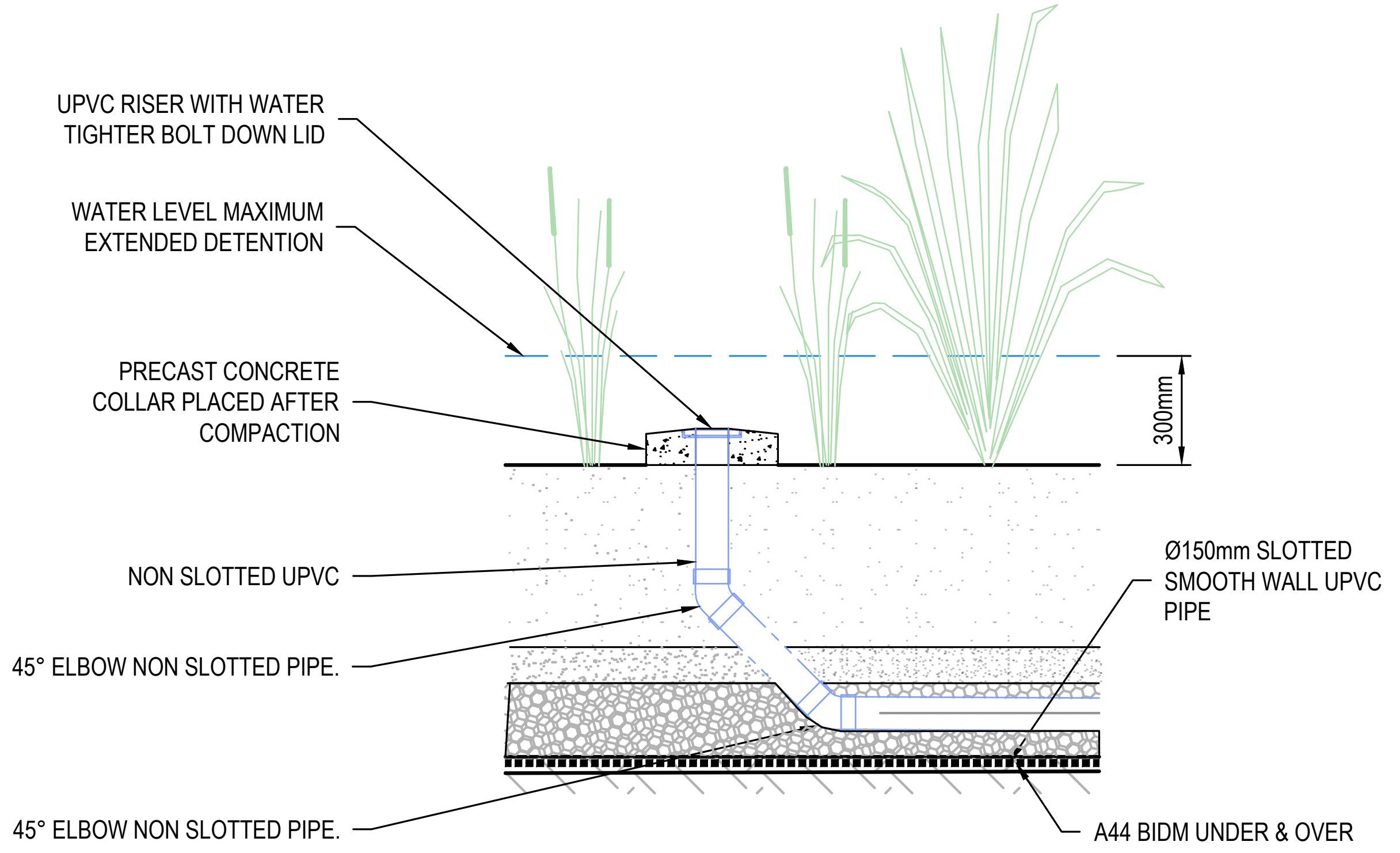
MEDIA SPECIFICATION AND GRADING TO BE VERIFIED BY A HYDRAULIC ENGINEER PRIOR TO PLACEMENT.

IMMEDIATELY PROIR TO DELIVERY TO THE SITE THE MEDIA SHALL BE SUBJECTED TO A PARTICLE SIZE DISTRIBUTION TEST IN ACCORDANCE WITH AS1141 - SAMPLING AND TESTING AGGREGATES, TO CONFIRM COMPLIANCE WITH THE ABOVE PERCENTAGES OF SAND, SILT, CLAY AND ORGANIC MATTER. IF COMPLIANCE IS NOT ACHIEVED THEN THE MEDIA SHALL BE SUBJECTED TO A FURTHER HYDRAULIC CONDUCTIVITY TEST FOR APPROVAL.

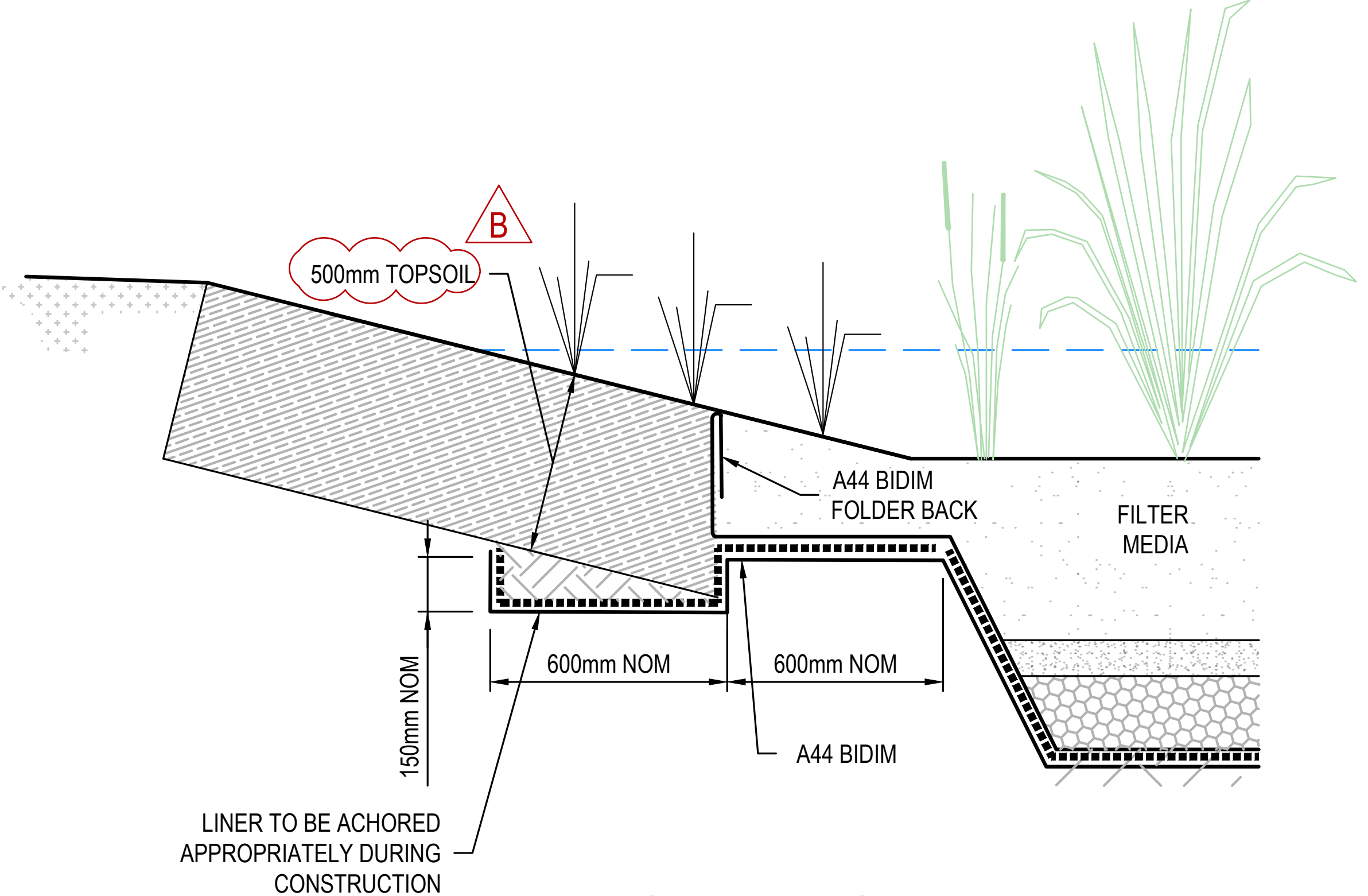
PLACEMENT:

THE MEDIA SHALL BE PLACED IN 300mm LIFTS AND LIGHTLY COMPACTED USING A SINGLE PASS VIBRATING PLATE OR DRUM LAWN ROLLER.

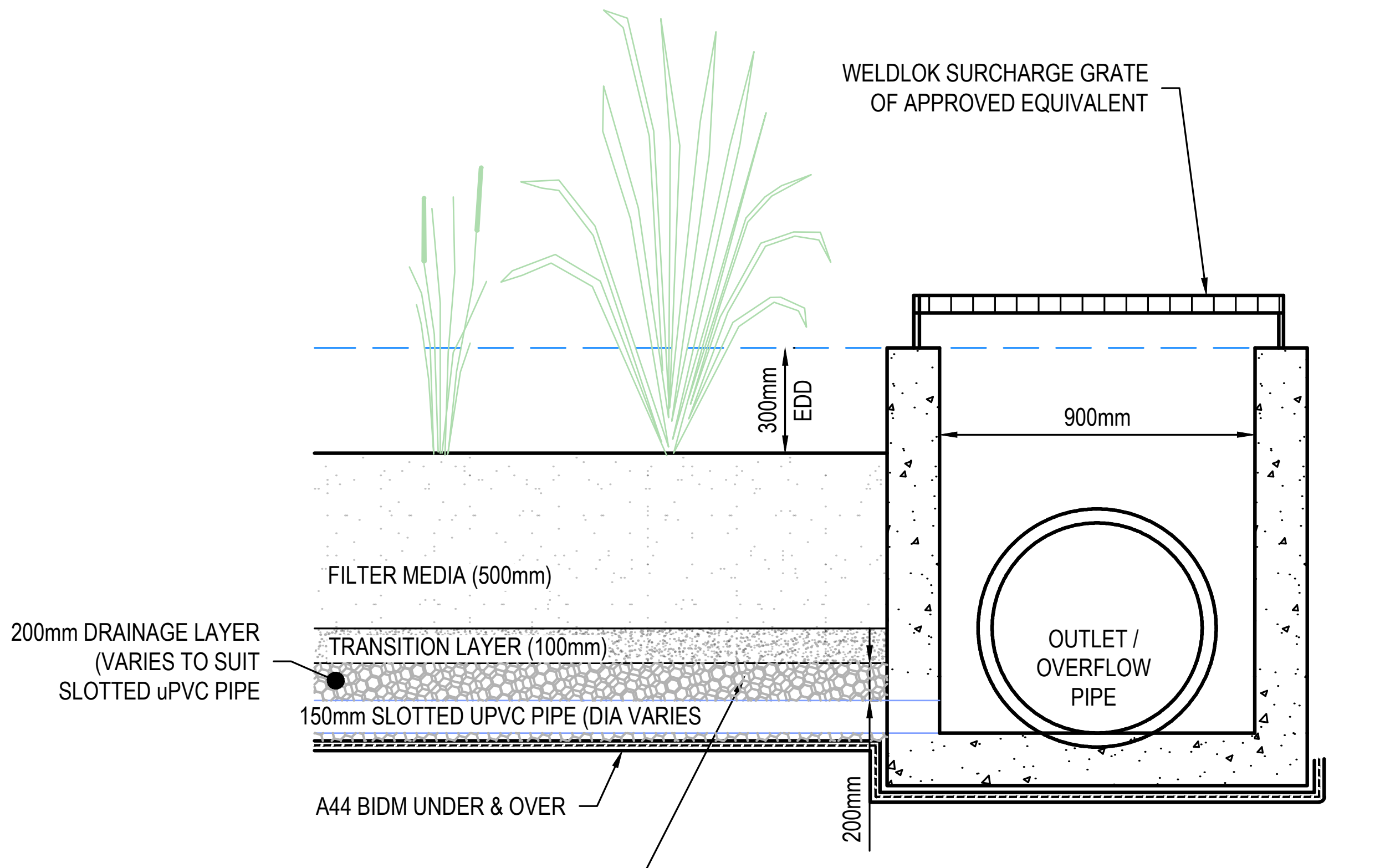
MACROPHYTE PLANTING SETOUT, SPECIES AND SPECIFICATION BY LANDSCAPE ARCHITECT


UPVC RISER WITH WATER TIGHTER BOLT DOWN LID
WATER LEVEL MAXIMUM EXTENDED DETENTION
PRECAST CONCRETE COLLAR PLACED AFTER COMPACTION
300mm
NON SLOTTED UPVC
45° ELBOW NON SLOTTED PIPE.
Ø150mm SLOTTED SMOOTH WALL UPVC PIPE
45° ELBOW NON SLOTTED PIPE.
A44 BIDM UNDER & OVER

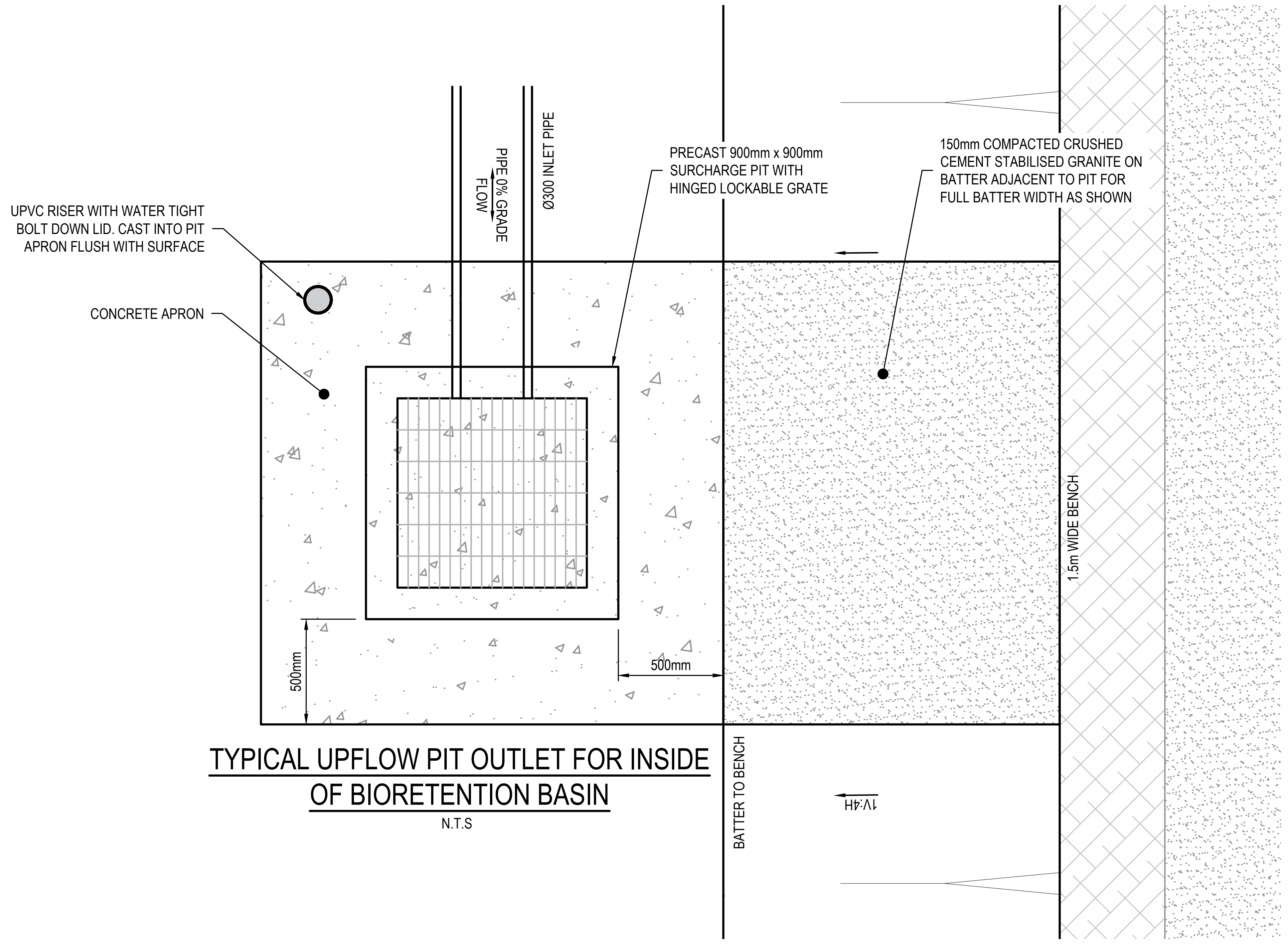
FLUSHING POINT DETAIL
N.T.S



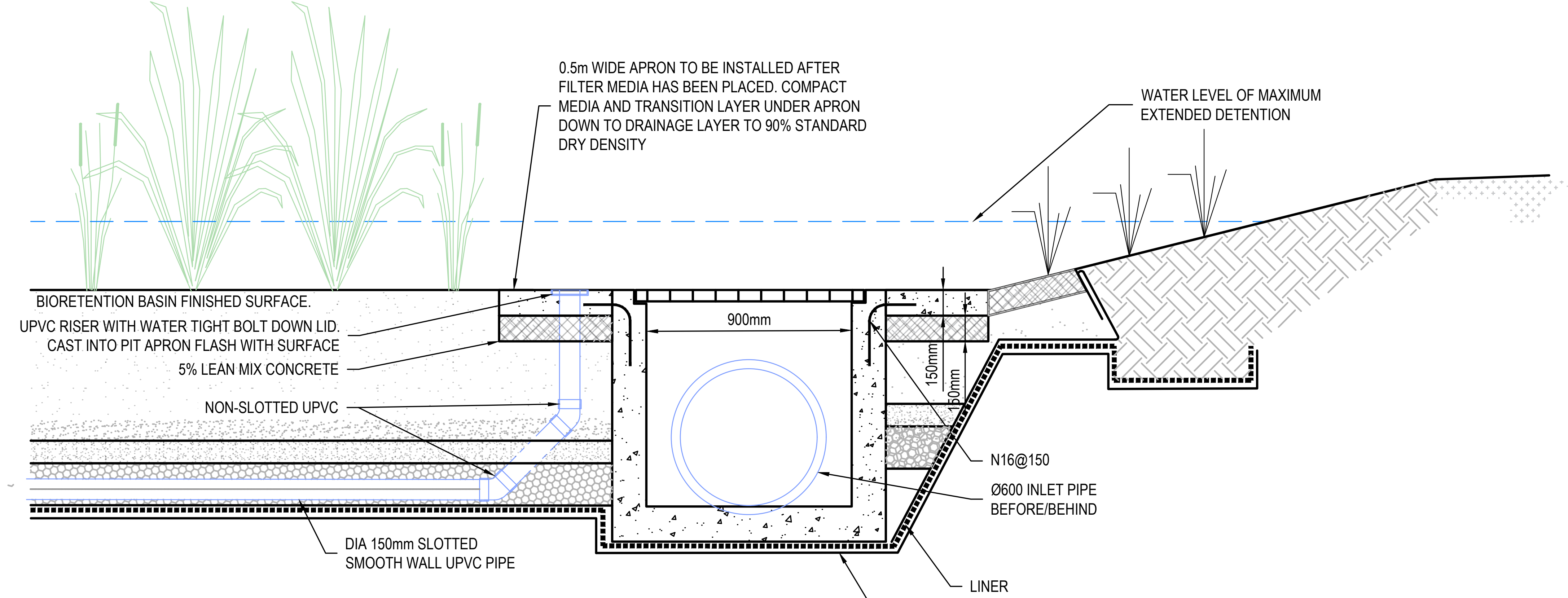
BIORETENTION LINER DETAIL
N.T.S


WELDLOK SURCHARGE GRATE OF APPROVED EQUIVALENT
300mm
EDD
900mm
FILTER MEDIA (500mm)
200mm DRAINAGE LAYER (VARIES TO SUIT SLOTTED uPVC PIPE
TRANSITION LAYER (100mm)
150mm SLOTTED UPVC PIPE (DIA VARIES
OUTLET / OVERFLOW PIPE
A44 BIDM UNDER & OVER
200mm
OBVERT OF PIPE 25mm BELOW SURFACE OF DRAINAGE LAYER

SYSTEM OUTLET SECTION DETAIL
N.T.S


UPVC RISER WITH WATER TIGHT BOLT DOWN LID. CAST INTO PIT APRON FLUSH WITH SURFACE
CONCRETE APRON
PIPE 0% GRADE
FLOW
Ø300 INLET PIPE
PRECAST 900mm x 900mm SURCHARGE PIT WITH HINGED LOCKABLE GRATE
150mm COMPACTED CRUSHED CEMENT STABILISED GRANITE ON BATTER ADJACENT TO PIT FOR FULL BATTER WIDTH AS SHOWN
500mm
500mm
1.5m WIDE BENCH
BATTER TO BENCH
1V:4H

TYPICAL UPFLOW PIT OUTLET FOR INSIDE OF BIORETENTION BASIN
N.T.S


0.5m WIDE APRON TO BE INSTALLED AFTER FILTER MEDIA HAS BEEN PLACED. COMPACT MEDIA AND TRANSITION LAYER UNDER APRON DOWN TO DRAINAGE LAYER TO 90% STANDARD DRY DENSITY
WATER LEVEL OF MAXIMUM EXTENDED DETENTION
BIORETENTION BASIN FINISHED SURFACE.
UPVC RISER WITH WATER TIGHT BOLT DOWN LID. CAST INTO PIT APRON FLASH WITH SURFACE
5% LEAN MIX CONCRETE
NON-SLOTTED UPVC
900mm
150mm
150mm
N16@150
Ø600 INLET PIPE BEFORE/BEHIND
DIA 150mm SLOTTED SMOOTH WALL UPVC PIPE
LINER
A44 BIDIM UNDER & OVER LINER

UPFLOW PIT, FLUSHING POINT AND DISTRIBUTION PIPE TYPICAL SECTION
N.T.S

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
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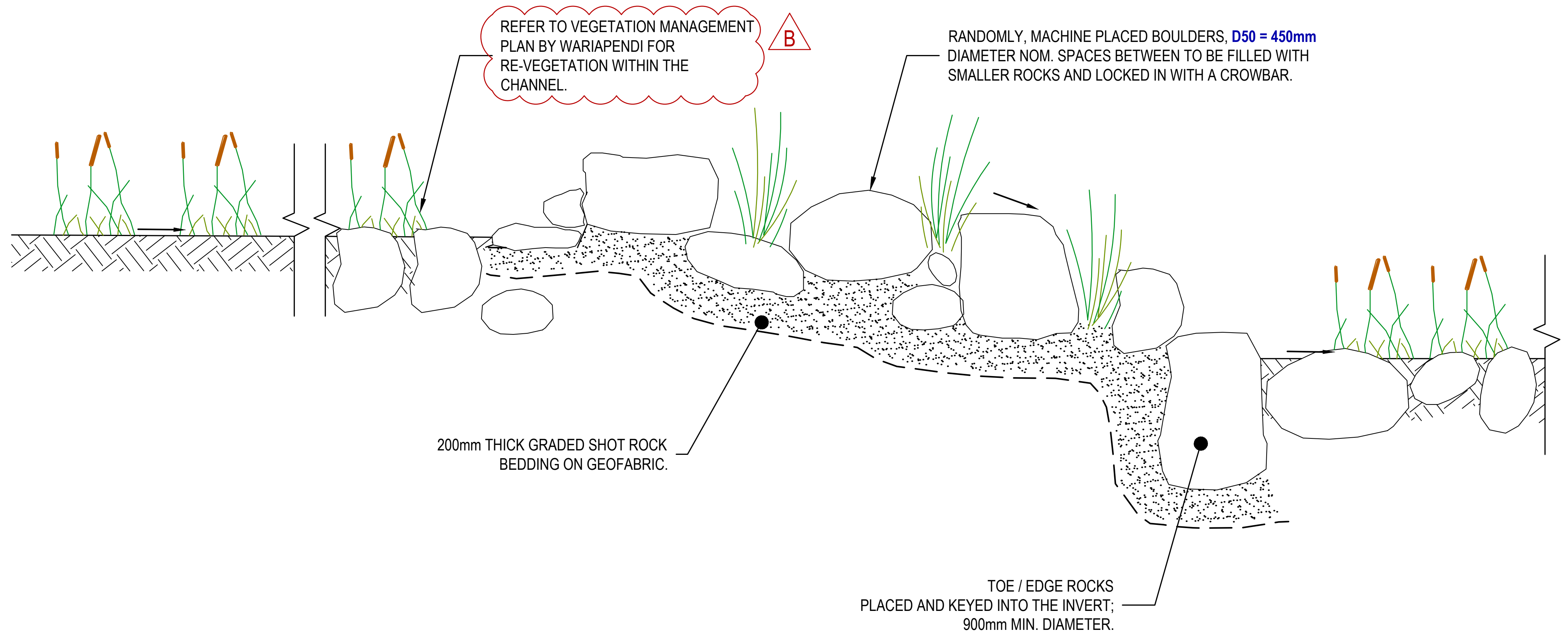
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
BIOFILTRATION TYPICAL
NOTES AND DETAILS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	640	B

Plotted:Tuesday, 21 September 2021 10:16:14 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-640.dwg



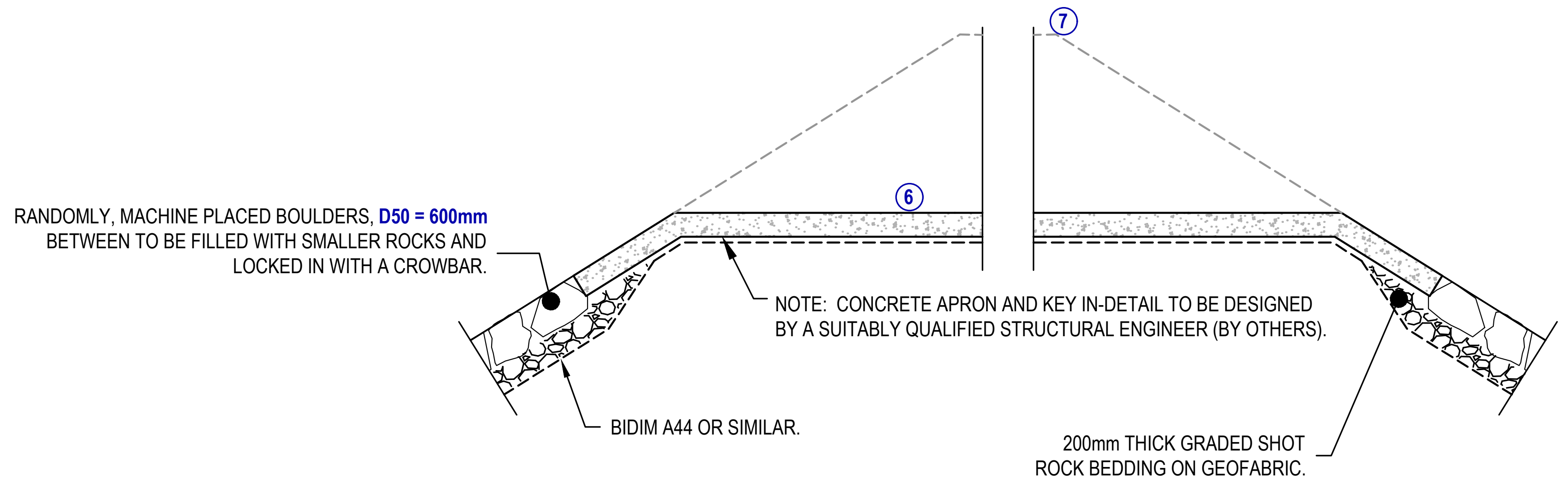
REFER TO VEGETATION MANAGEMENT PLAN BY WARIAPENDI FOR RE-VEGETATION WITHIN THE CHANNEL.
B
RANDOMLY, MACHINE PLACED BOULDERS, D50 = 450mm DIAMETER NOM. SPACES BETWEEN TO BE FILLED WITH SMALLER ROCKS AND LOCKED IN WITH A CROWBAR.
200mm THICK GRADED SHOT ROCK BEDDING ON GEOFABRIC.
TOE / EDGE ROCKS PLACED AND KEYED INTO THE INVERT; 900mm MIN. DIAMETER.

TYPICAL RIFFLE & POOL ZONE ARRANGEMENT

NOT TO SCALE

CALCULATION METHOD ADOPTED FROM CATCHMENTS AND CREEKS PTY LTD 'ROCK SIZING FOR WATERWAY RIFFLES' FACT SHEET. REFER TO THE TABLE BELOW FOR ADOPTED DESIGN VALUES AND CALCULATED AVERAGE ROCK BOULDER DIAMETER.

RIFFLE ZONE ROCK ARMOUR				
Design Velocity (m/s)	Slope (m/m)	Assumed specific gravity	D50 (mm)	Min. Thickness
3	0.06	2.4	450	1.6 x D50

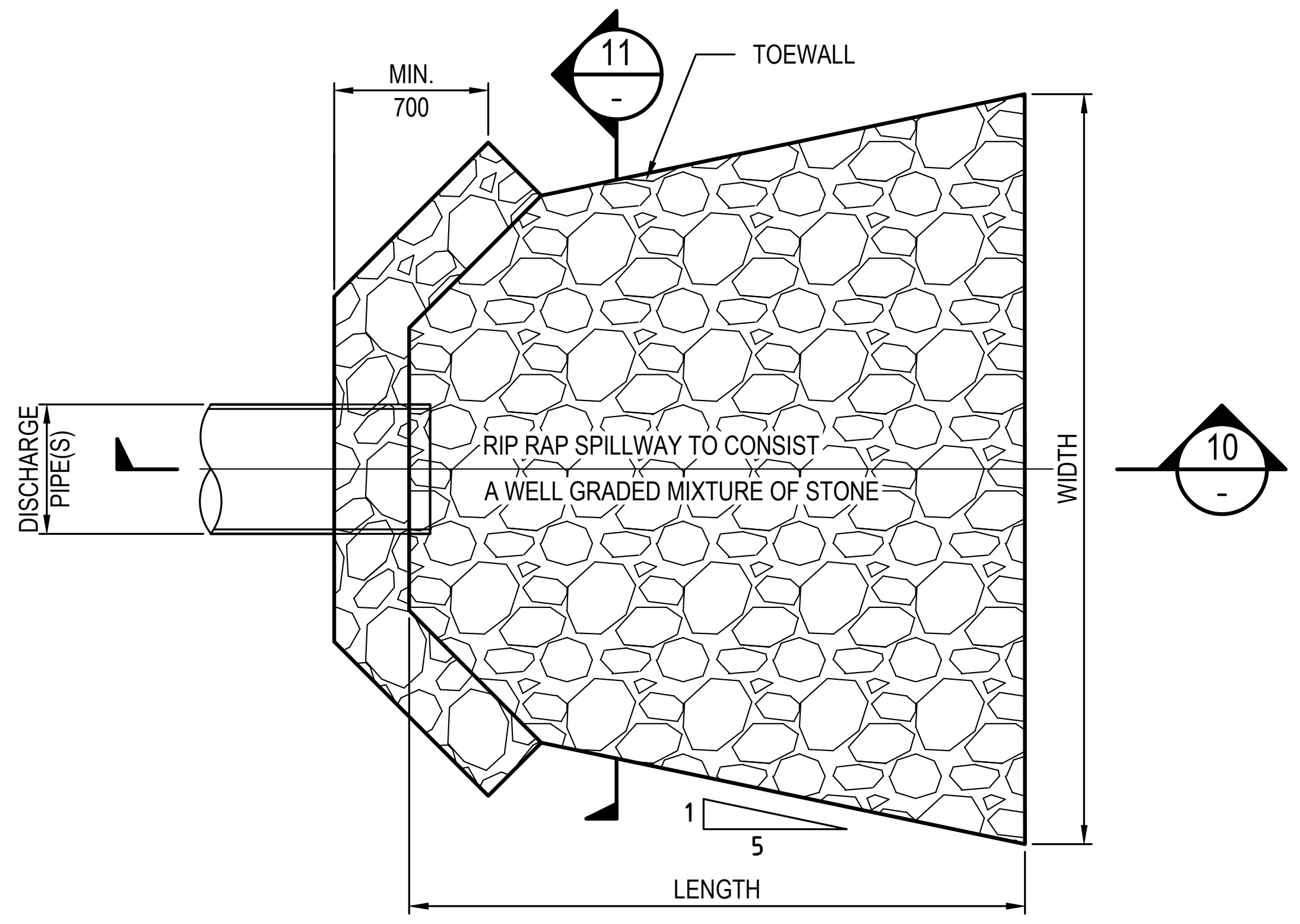


7
6
RANDOMLY, MACHINE PLACED BOULDERS, D50 = 600mm BETWEEN TO BE FILLED WITH SMALLER ROCKS AND LOCKED IN WITH A CROWBAR.
NOTE: CONCRETE APRON AND KEY IN-DETAIL TO BE DESIGNED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER (BY OTHERS).
BIDIM A44 OR SIMILAR.
200mm THICK GRADED SHOT ROCK BEDDING ON GEOFABRIC.

TYPICAL SECTION THROUGH CONCRETE WEIR

NOT TO SCALE

ROCK ARMOUR FOR BASIN SPILLWAY				
Design Velocity (m/s)	Batter (V:H)	Assumed specific gravity	D50 (mm)	Min. Thickness
2.5	1:04	2.4	600	1.6 x D50

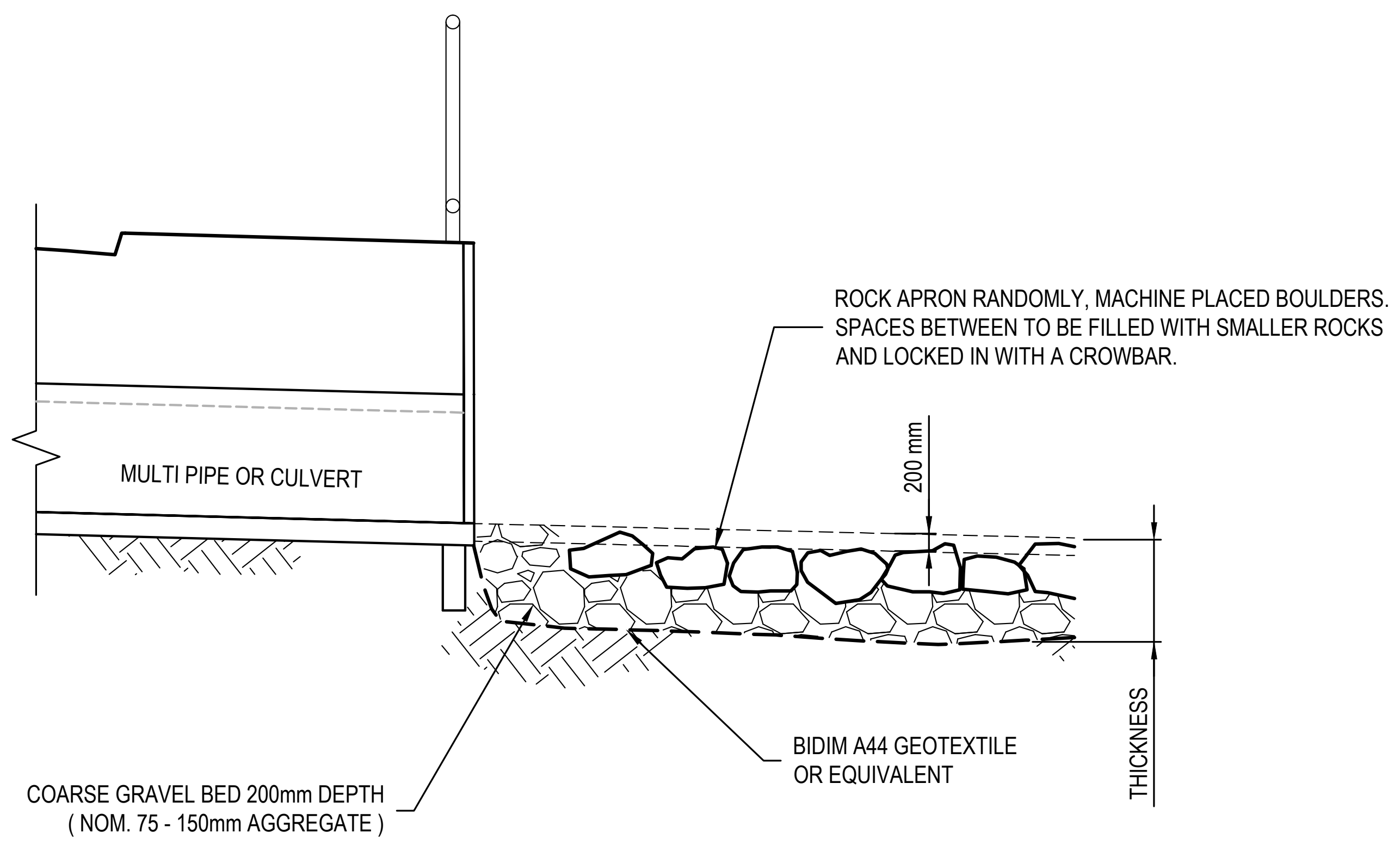


PLAN VIEW

NOTES: - STACKED ROCK HEADWALLS

1. BACKFILL IS TO BE GRANULAR, FREE DRAINING AND COMPACTED TO 95% MAXIMUM DRY DENSITY.
2. FOUNDATION TO BE APPROVED FOR 200 kPa BEARING CAPACITY.
3. ROCK IS TO BE SOUND DURABLE BASALT OR OTHER MATERIAL APPROVED BY COUNCIL ENGINEER.
4. ROCKS SHALL BE PLACED IN SUCH A MANNER THAT THEY ARE STABLE AND INTERLOCKING AND LAID ROUGHLY COURSED AND BEDDED ON THEIR BROADEST BASE.
5. EACH ROCK SHALL BE:
    - ELONGATED TO ALLOW STACKING ON THE LONGEST AXIS.
    - ANGULAR IN SHAPE (PROMOTES INTERLOCKING)
    - FREE FROM OVERBURDEN, SPOIL, SHALE AND ORGANIC MATERIAL.
6. WALL CONSTRUCTION TO BE SUPERVISED BY A SUITABLY QUALIFIED PERSON.
7. AIR VOIDS SHALL NOT EXCEED 30% VOLUME.
8. THE TOP COURSE OF ROCKS ON EMBANKMENT AND ADJACENT TO PIPE SHALL BE MORTARED INTO POSITION.
9. HEADWALL ROCK SPECIFICATION:

BREADTH (B): 0.4 TO 0.6m
WIDTH (W): 0.4 TO 0.6m
LENGTH (L): 2x (B OR W) < L < 3 x (B OR W)



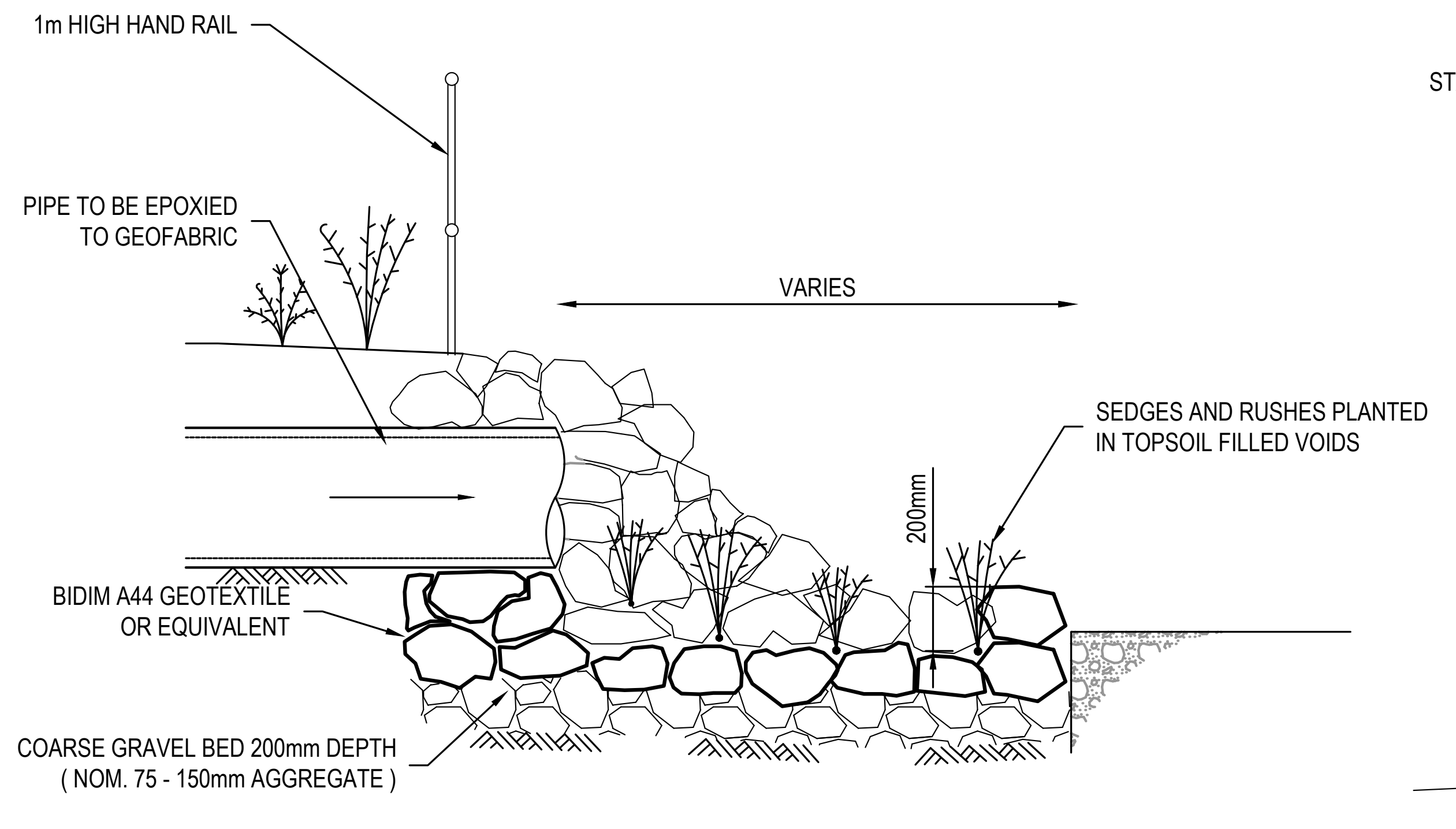
MULTI PIPE OR CULVERT
ROCK APRON RANDOMLY, MACHINE PLACED BOULDERS. SPACES BETWEEN TO BE FILLED WITH SMALLER ROCKS AND LOCKED IN WITH A CROWBAR.
200 mm
THICKNESS
BIDIM A44 GEOTEXTILE OR EQUIVALENT
COARSE GRAVEL BED 200mm DEPTH (NOM. 75 - 150mm AGGREGATE)

TYPICAL ROCK APRON SECTION

NOT TO SCALE

CALCULATION METHOD ADOPTED FROM CATCHMENTS AND CREEKS PTY LTD 'ROCK SIZING FOR WATERWAY RIFFLES' FACT SHEET. REFER TO THE TABLE BELOW FOR ADOPTED DESIGN VALUES AND CALCULATED AVERAGE ROCK BOULDER DIAMETER.

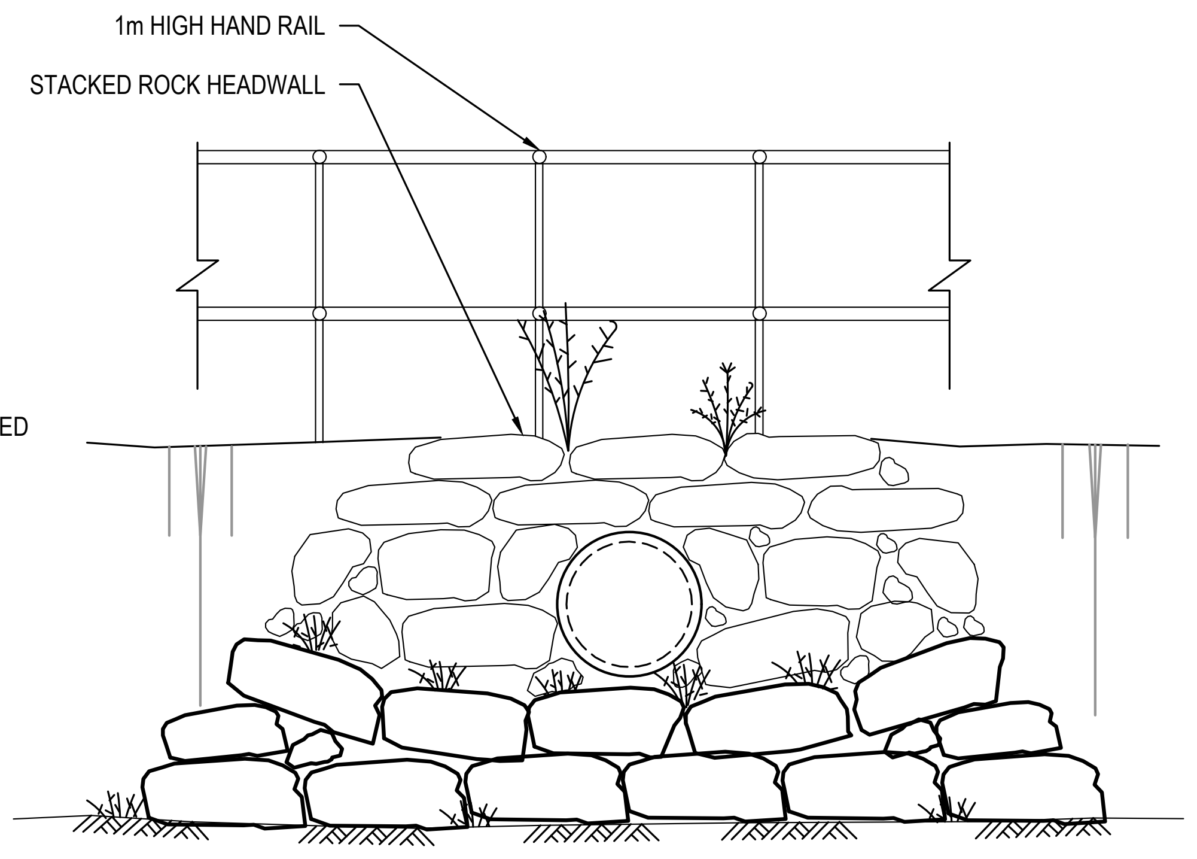
ROCK ARMOUR FOR INLET CHANNEL				
Design Velocity (m/s)	Slope (m/m)	Assumed specific gravity	D50 (mm)	Min. Thickness
2.5	<0.01	2.4	300	1.6 x D50



1m HIGH HAND RAIL
PIPE TO BE EPOXIED TO GEOFABRIC
VARIES
SEDGES AND RUSHES PLANTED IN TOPSOIL FILLED VOIDS
200mm
BIDIM A44 GEOTEXTILE OR EQUIVALENT
COARSE GRAVEL BED 200mm DEPTH (NOM. 75 - 150mm AGGREGATE)

SECTION 10 -

N.T.S.



SECTION 11 -

N.T.S.

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
JAS-ANZ
SUSTAINABLE CERTIFICATION ISO 9001
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

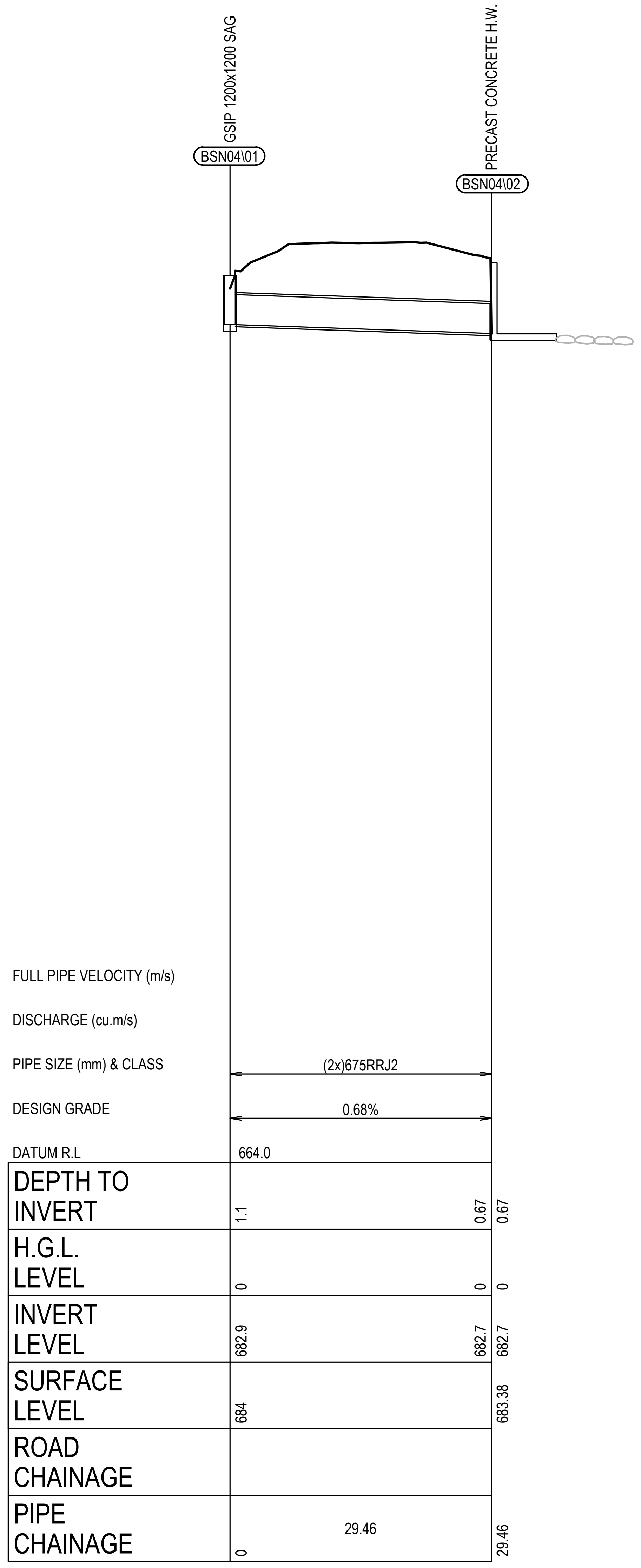
Title:
BANK ROCK SCOUR PROTECTION
NOTES AND DETAILS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	641	B

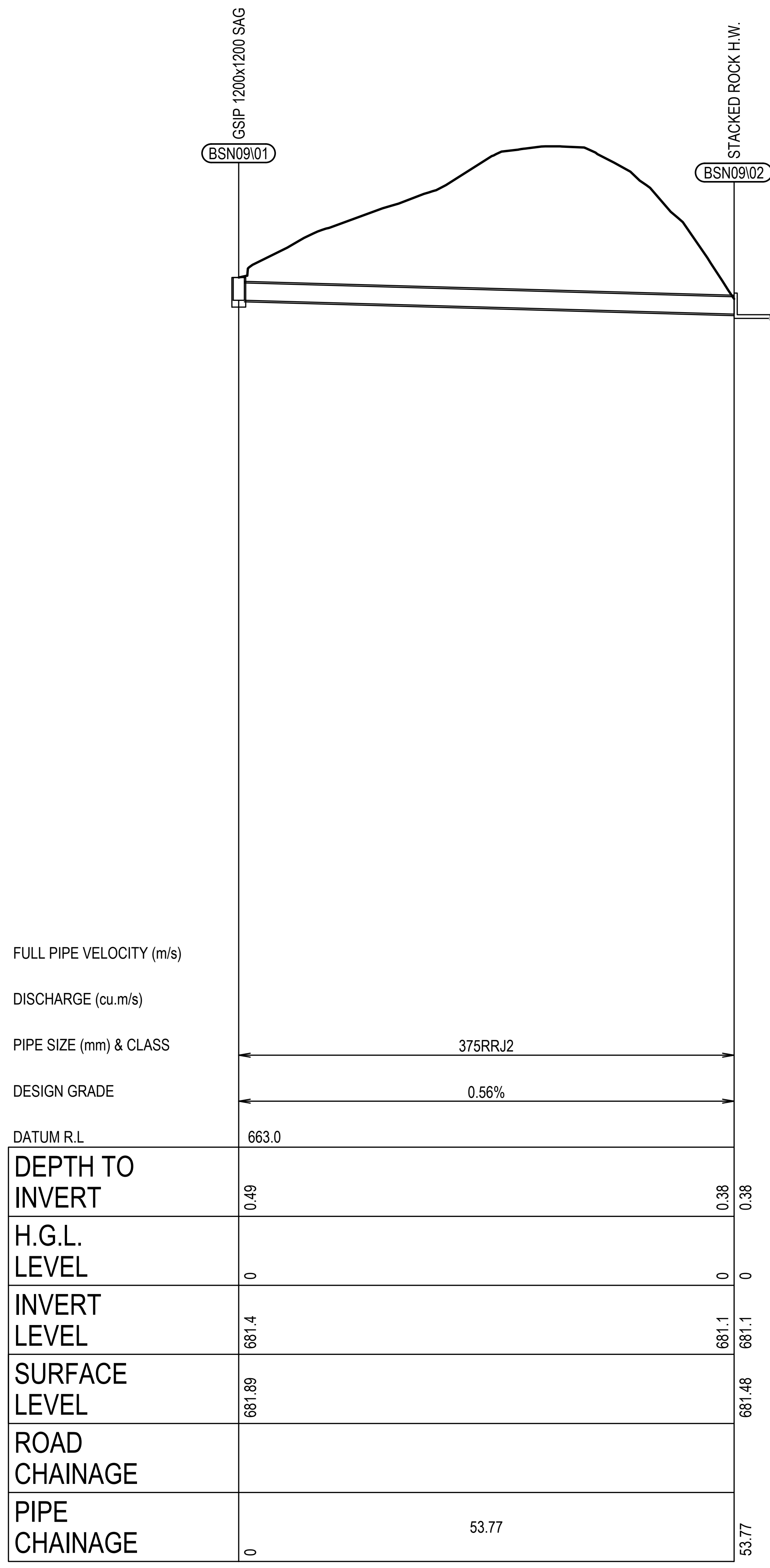
Plotted:Tuesday, 21 September 2021 10:16:21 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-641.dwg

IWCM PIT SCHEDULE

PIT NAME	PIT TYPE	EASTING	NORTHING	SETOUT RL	PIT DEPTH	COMMENTS
(-)	(-)	(m)	(m)	(m)	(m)	(-)
BSN01\01	Custom Pit with RSIP 900x900	258982.660	6171889.980	684.000	1.100	1.5m long by 1.5m wide chamber with 0.9m by 0.9m RSIP
BSN01\02	RSIP 900x900	258982.010	6171896.310	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN01\03	RSIP 900x900	258989.210	6171898.420	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN01\04	RSIP 900x900	258996.400	6171900.550	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN01\05	RSIP 900x900	259003.590	6171902.680	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN02\01	RSIP 900x900	258991.650	6171890.170	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN02\02	RSIP 900x900	258999.460	6171890.220	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN02\03	RSIP 900x900	259006.890	6171891.550	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN03\01	RSIP 900x900	258990.430	6171894.300	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN03\02	RSIP 900x900	258997.930	6171895.390	683.700	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN04\01	Custom Pit with RSIP 1200x1200	259029.330	6171906.330	684.000	1.100	1.2m long by 2.0m wide chamber with 1.2m by 1.2m turret and RSIP
BSN04\02	Penetration in Retaining Wall	259058.650	6171909.310		-	Pipe Connects into BSN RW04B, invert RL 682.7 mAHD
BSN05\01	Custom Junction Pit with 900x900 solid cover	259136.360	6171923.290	683.890	1.590	1.2m long by 2.4m wide chamber with 0.9m by 0.9m turret and bolt down solid cover
BSN05\02	RSIP 900x900	259122.890	6171925.830	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN05\03	RSIP 900x900	259116.350	6171929.510	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN05\04	RSIP 900x900	259109.810	6171933.190	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN05\05	RSIP 900x900	259103.310	6171936.920	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN06\01	RSIP 900x900	259138.270	6171935.450	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN06\02	RSIP 900x900	259132.640	6171943.030	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN06\03	RSIP 900x900	259126.140	6171946.910	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN06\04	RSIP 900x900	259118.820	6171949.230	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN06\05	RSIP 900x900	259112.540	6171951.580	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN07\01	RSIP 900x900	259131.930	6171932.390	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN07\02	RSIP 900x900	259124.370	6171936.120	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN07\03	RSIP 900x900	259117.630	6171939.450	683.100	0.800	Surcharge/Bubbler pit with 0.5m Concrete Appron
BSN08\01	RSIP 1200x1200	259080.790	6171978.510	683.400	1.800	
BSN08\02	Penetration in Retaining Wall	259078.250	6171981.120			Pipe Connects into BSN RW04B, invert RL 681.5 mAHD
BSN09\01	RSIP 1200x1200	259060.740	6172060.310	681.890	0.490	RSIP for OSD Low Flow Outlet
BSN09\02	STACKED ROCK H.W.	259057.360	6172113.970			Pipe DS Invert RL. 681.1m AHD
BSN10\01	STACKED ROCK H.W.	259053.140	6172059.620			Refer to BSN RW06 Long Section for Details US Invert RL 682.2m AHD
BSN10\02	STACKED ROCK H.W.	259040.500	6172071.220			Refer to BSN RW07 Long Section for Details DS Invert RL 682.1m AHD
200\01	CAPPED STUB	259084.35	6172065.81	684.28	2.26	
200\02	PIPE THROUGH ROCK WALL	259079.77	6172065.69	682.57	0.6	



LINE BSN04



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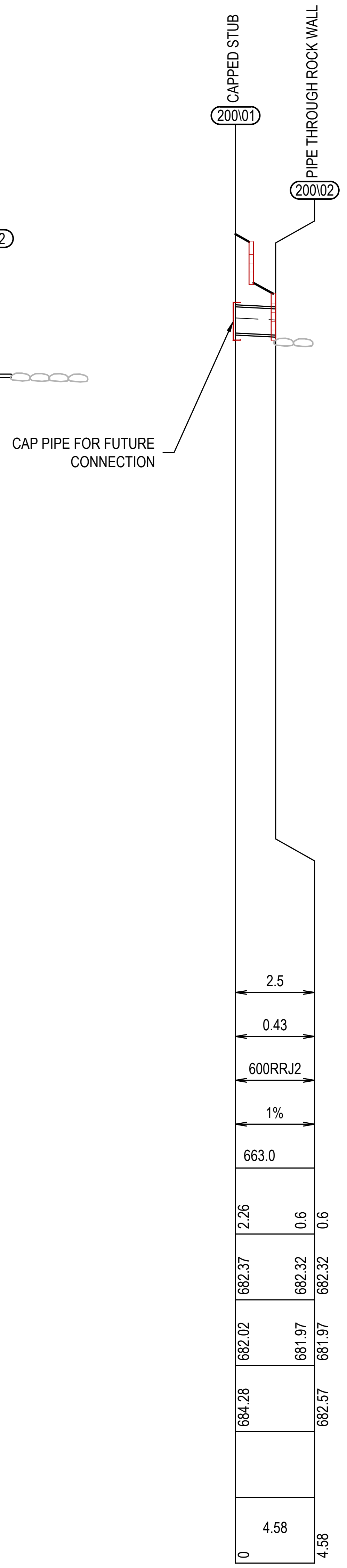

LINE 200

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	AS	18/10/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
B	FM	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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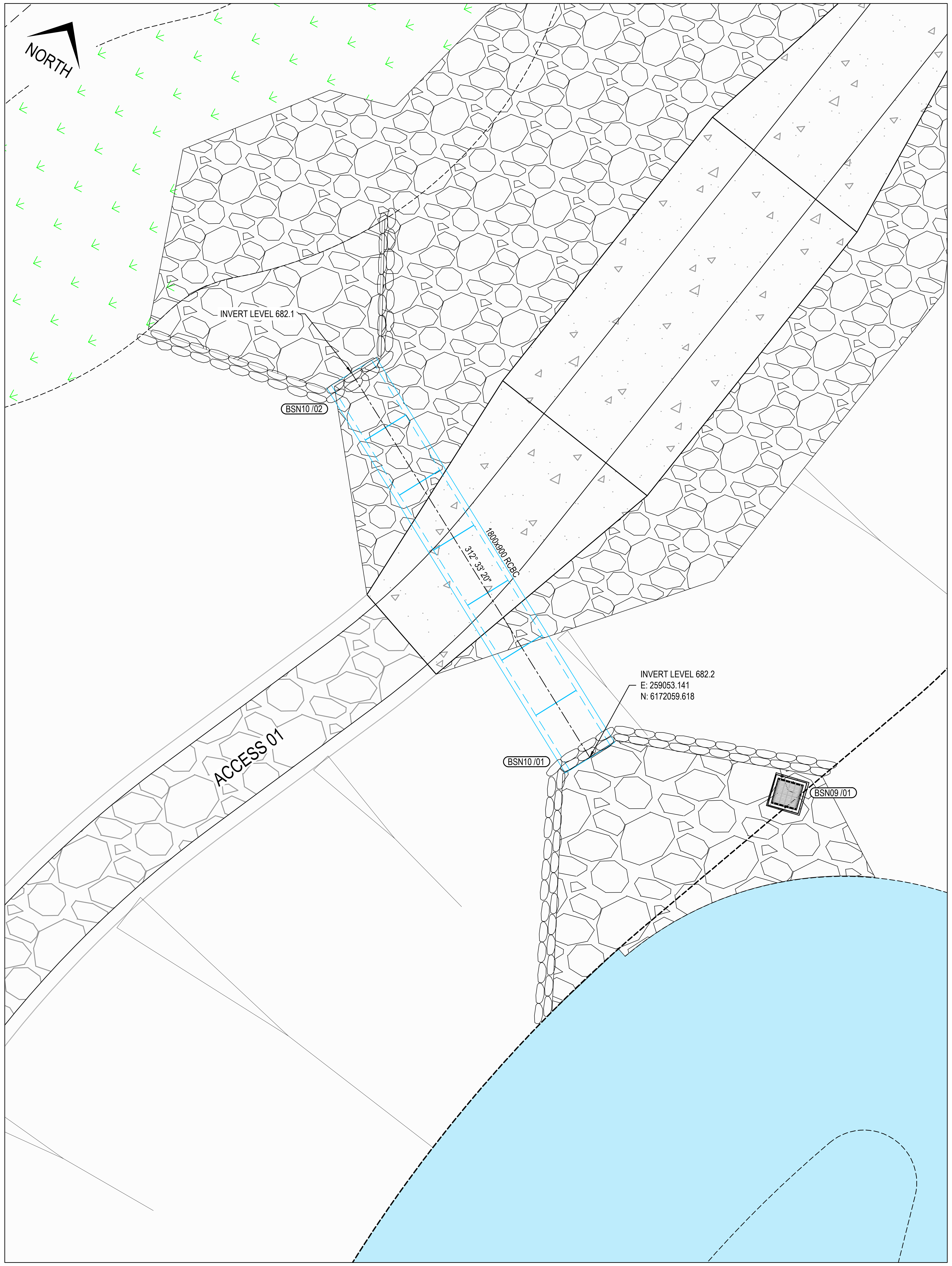
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

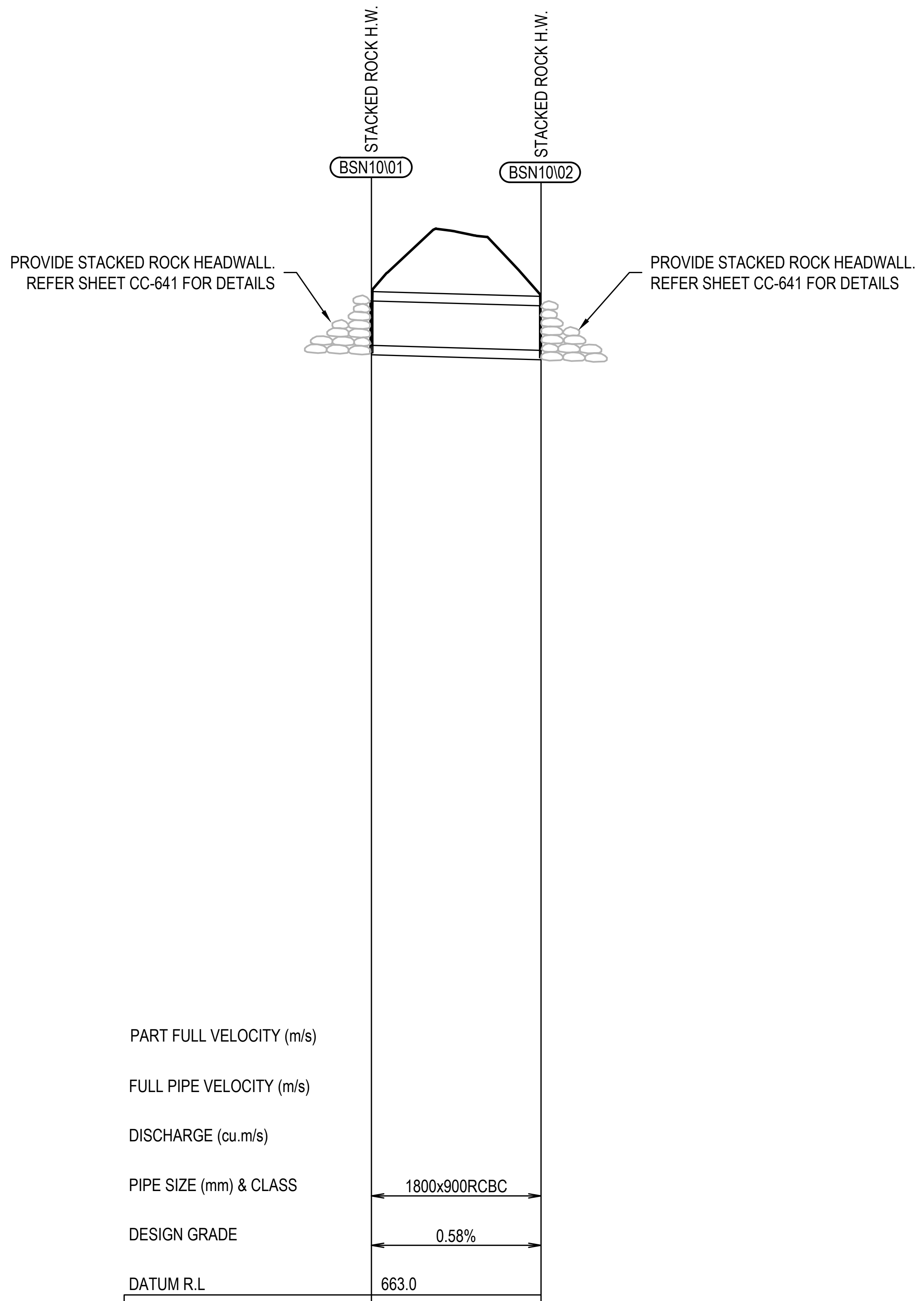
Title:
IWCM PIT SCHEDULE AND DRAINAGE LONGITUDINAL SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	642	C

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:D:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-642.dwg



REFER TO STRUCTURAL PLANS FOR CULVERT DETAILS.


STACKED ROCK H.W.
STACKED ROCK H.W.
BSN10/01
BSN10/02
PROVIDE STACKED ROCK HEADWALL.
REFER SHEET CC-641 FOR DETAILS
PROVIDE STACKED ROCK HEADWALL.
REFER SHEET CC-641 FOR DETAILS

PART FULL VELOCITY (m/s)			
FULL PIPE VELOCITY (m/s)			
DISCHARGE (cu.m/s)			
PIPE SIZE (mm) & CLASS	1800x900RCBC		
DESIGN GRADE	0.58%		
DATUM R.L	663.0		
DEPTH TO INVERT	0.9	0.9	0.9
H.G.L. LEVEL	0	0	0
INVERT LEVEL	682.2	682.1	682.1
SURFACE LEVEL	683.1		683
ROAD CHAINAGE			
PIPE CHAINAGE	0	17.16	17.16

LINE BSN10

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH/CS	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
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SCALE 1:500 (A1) SCALE 1:1000 (A3)
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SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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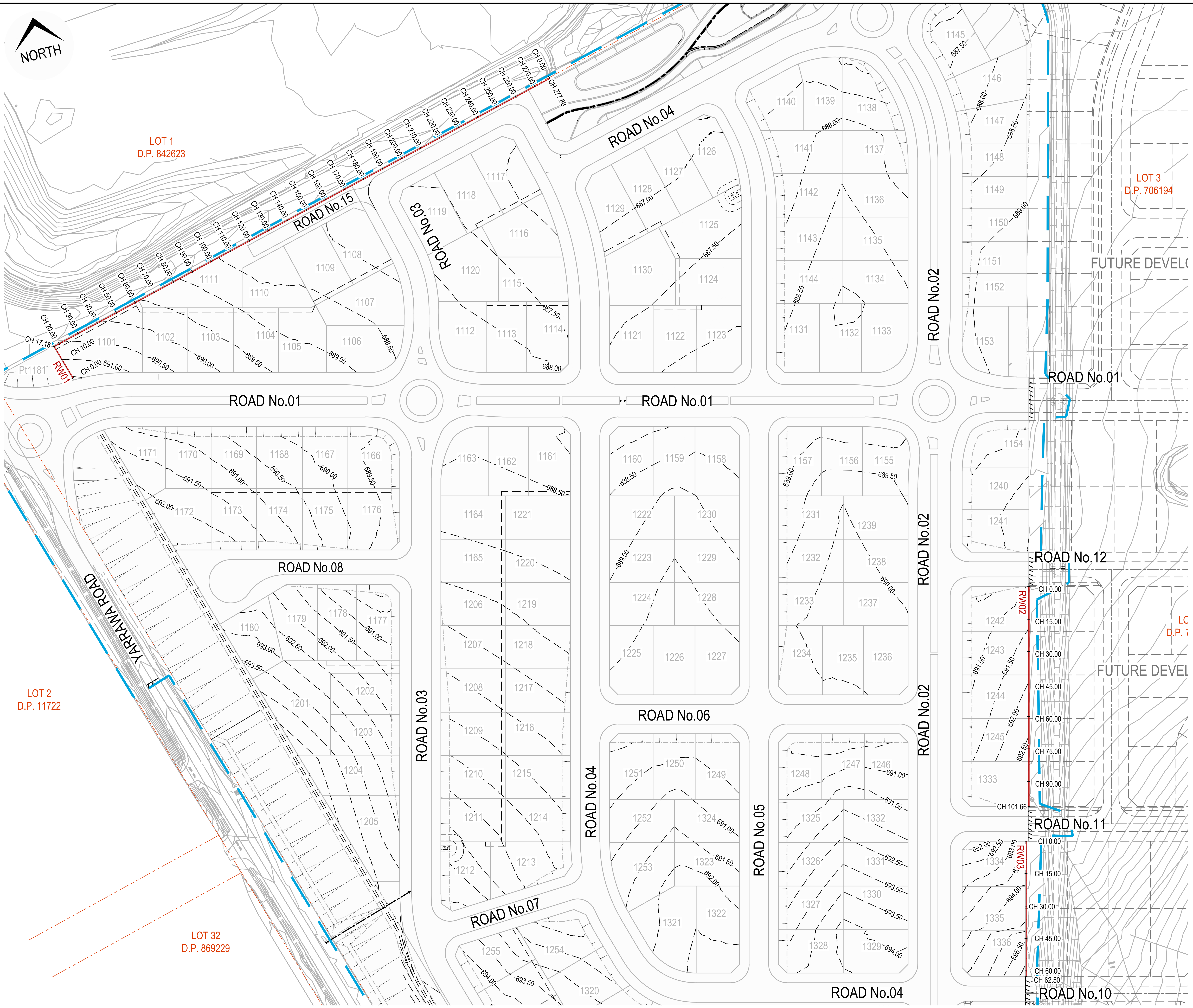
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
OSD OUTLET CULVERT PLAN
& LONGITUDINAL
SECTION

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	650	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-650.dwg



UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1)
SCALE 1:2000 (A3)

For:
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By:
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Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

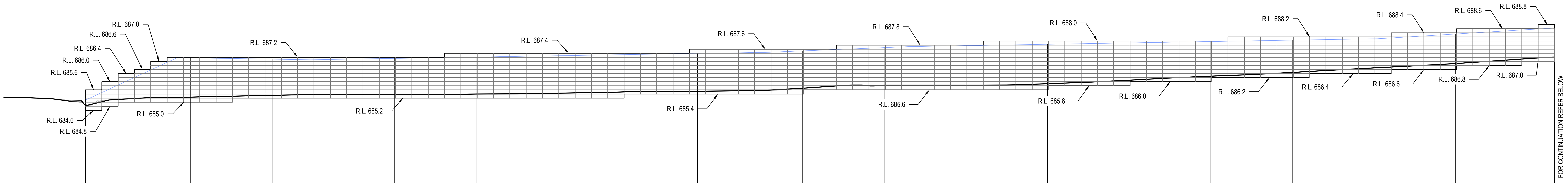
Title:
RETAINING WALL PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	700	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-700.dwg

LEGEND

INDICATIVE FINISHED LEVEL - TOP OF WALL	─
INDICATIVE FINISHED LEVEL - BOTTOM OF WALL	━



DATUM R.L. 680

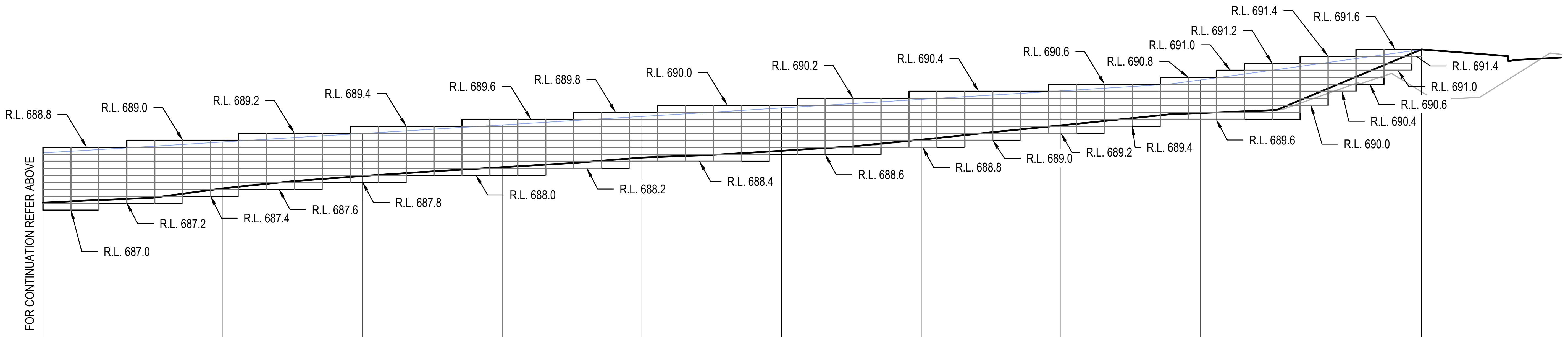
SURFACE LEVEL AT TOP	685.102	687.174	687.11	687.147	687.213	687.292	687.391	687.514	687.675	687.771	687.839	687.906	687.973	688.041	688.108	688.343	688.638
WALL HEIGHT	0.279	1.927	1.775	1.787	1.812	1.838	1.851	1.833	1.839	1.938	1.938	1.829	1.698	1.583	1.429	1.45	1.427
SURFACE LEVEL AT BASE	684.823	685.247	685.335	685.36	685.4	685.454	685.539	685.68	685.836	685.833	685.901	686.077	686.275	686.458	686.679	686.893	687.211
CHAINAGE	0	12.878	22.878	37.878	47.878	60	75	87.878	97.878	107.878	117.878	127.878	137.878	147.878	157.878	167.878	180

LONGITUDINAL SECTION CENTRELINE - RW01

SCALE 1:250 (H)
SCALE 1:100 (V)

SETOUT TABLE RW01			
CHAINAGE	EASTING	NORTHING	BEARING
0	258964.61	6171898.2	254°20'10.75"
260.7	258713.59	6171827.82	
278.69	258719.19	6171810.72	161°52'27.38"

NOTE:
REFER TO STRUCTURAL PLANS
FOR TYPICAL WALL DETAIL



DATUM R.L. 683

SURFACE LEVEL AT TOP	688.638	688.952	689.195	689.439	689.682	689.926	690.169	690.413	690.718	691.595
WALL HEIGHT	1.427	1.33	1.216	1.208	1.176	1.225	1.155	0.987	0.939	-0.003
SURFACE LEVEL AT BASE	687.211	687.622	687.979	688.231	688.506	688.701	689.014	689.426	689.779	691.597
CHAINAGE	180	192.878	202.878	212.878	222.878	232.878	242.878	252.878	262.878	278.689

LONGITUDINAL SECTION CENTRELINE - RW01

SCALE 1:250 (H)
SCALE 1:100 (V)

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-710.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
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ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

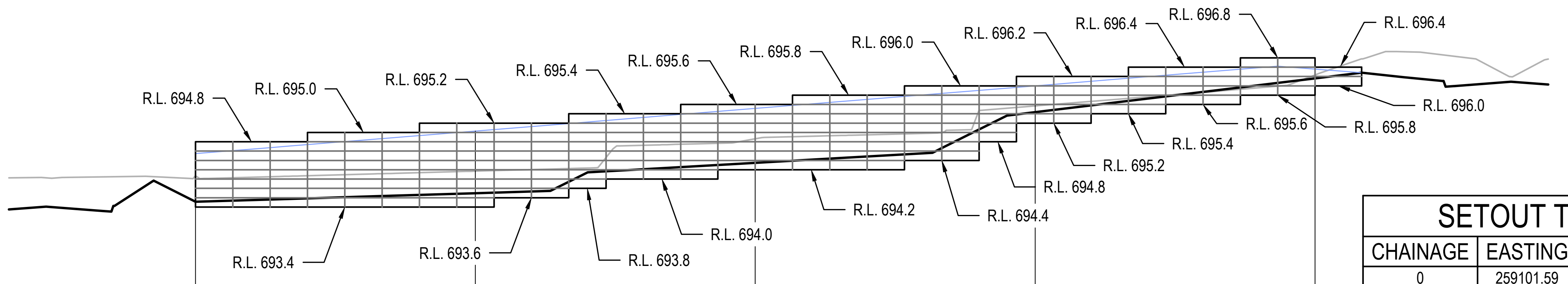
Title:
RETAINING WALL
LONGITUDINAL SECTIONS
SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	710	A

LEGEND

INDICATIVE FINISHED LEVEL - TOP OF WALL	—
INDICATIVE FINISHED LEVEL - BOTTOM OF WALL	—

NOTE:
REFER TO STRUCTURAL PLANS
FOR TYPICAL WALL DETAIL



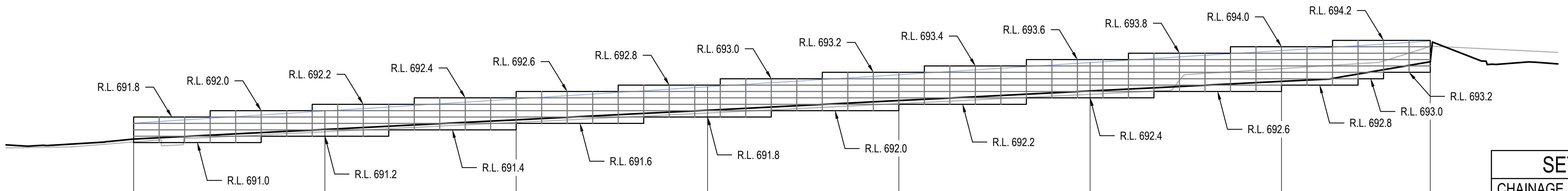
SETOUT TABLE RW03

CHAINAGE	EASTING	NORTHING	BEARING
0	259101.59	6171505.42	192°44'51.02"
62.5	259087.8	6171444.46	192°44'51.02"

DATUM R.L. 689

SURFACE LEVEL AT TOP	694.546	695.03	695.515	696	696.36
WALL HEIGHT	1.033	1.334	1.166	0.564	0.2
SURFACE LEVEL AT BASE	693.513	693.696	694.348	695.436	696.16
CHAINAGE	0	15	30	45	60

LONGITUDINAL SECTION CENTRELINE - RW03
SCALE 1:250 (H)
SCALE 1:100 (V)



SETOUT TABLE RW02

CHAINAGE	EASTING	NORTHING	BEARING
0	259128.73	6171619.92	192°44'51.02"
101.66	259106.3	6171520.76	192°44'51.02"

DATUM R.L. 686

SURFACE LEVEL AT TOP	691.611	691.989	692.368	692.748	693.127	693.506	693.885	694.18
WALL HEIGHT	0.5	0.577	0.655	0.734	0.812	0.89	0.968	0.649
SURFACE LEVEL AT BASE	691.111	691.412	691.713	692.014	692.315	692.616	692.917	693.531
CHAINAGE	0	15	30	45	60	75	90	101.664

LONGITUDINAL SECTION CENTRELINE - RW02
SCALE 1:250 (H)
SCALE 1:100 (V)

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	CF	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

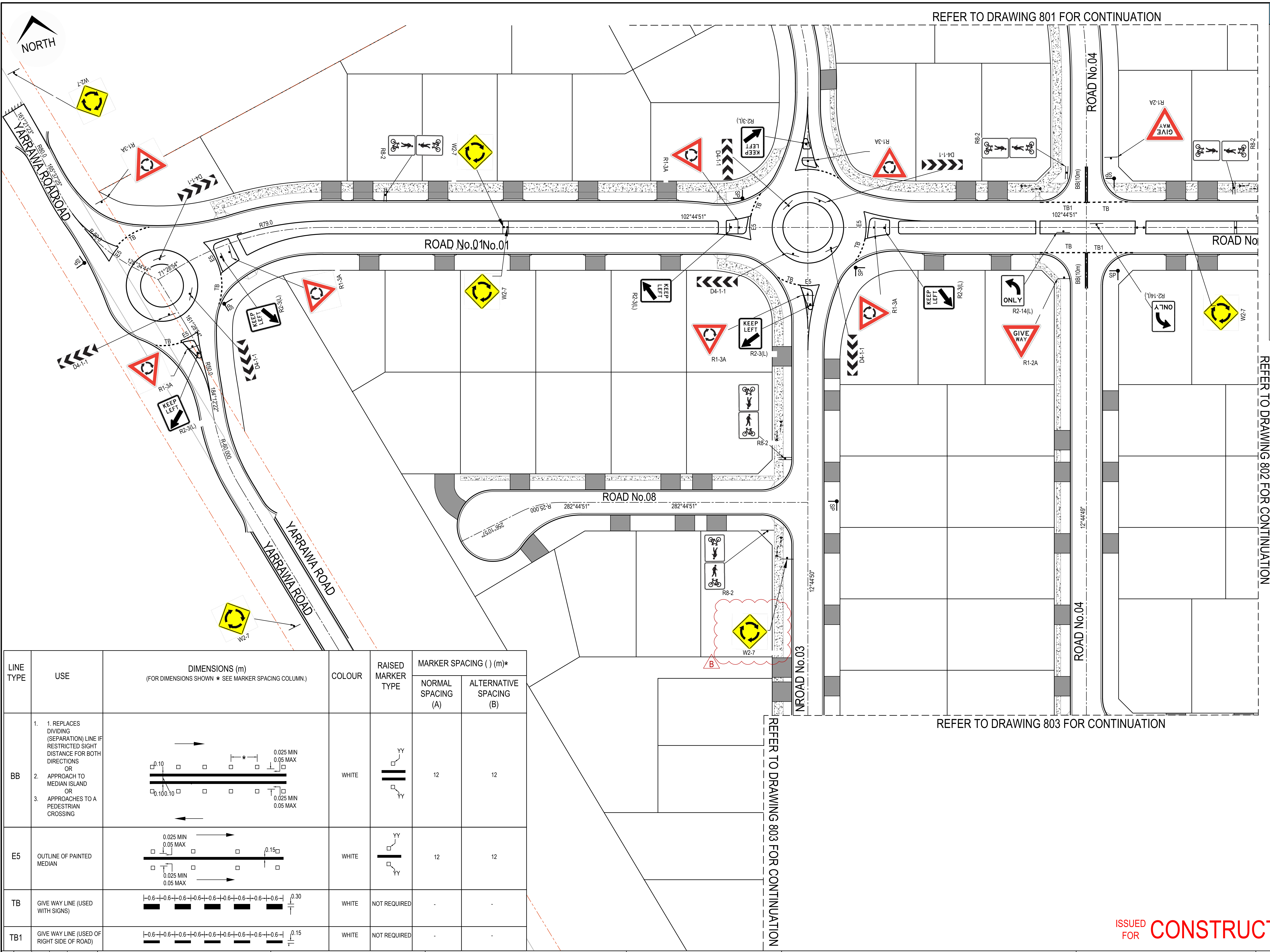
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
RETAINING WALL
LONGITUDINAL SECTIONS
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	711	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-711.dwg



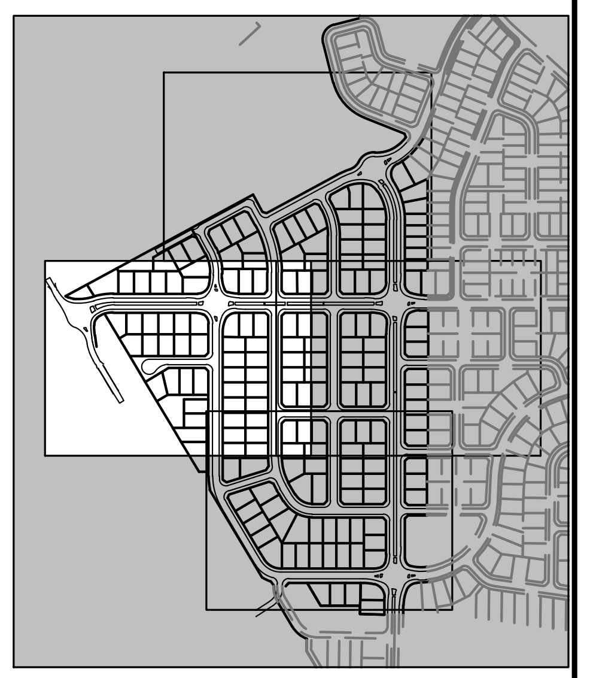
	REGULATORY SIGN R1-3A	KEEP LEFT	REGULATORY SIGN R2-3(L)
	HAZARD MARKERS D4-1-1(L)	NO THROUGH ROAD	GUIDE SIGN G9-18
	REGULATORY SIGN R8-2	SP	STREET NAME SIGN POST TO BCC STANDARD
	TEMPORARY SIGN T5-201	ONLY	REGULATORY SIGN R2-14(L)
GIVE WAY	REGULATORY SIGN R1-2A		WARNING SIGN W2-7

PS-3
PS-4
PA-1

PROVIDE ARROW (PA-1), PEDESTRIAN (PS-4) & BICYCLE (PS-3) MARKING ON SHARE FOOTPATH

PA-1
PS-4
PS-3

NOTE:
STREET SIGNS TO BE LOCATED IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SDA119A



KEY PLAN

LINE TYPE	USE	DIMENSIONS (m) (FOR DIMENSIONS SHOWN * SEE MARKER SPACING COLUMN.)	COLOUR	RAISED MARKER TYPE	MARKER SPACING ( ) (m)*	
					NORMAL SPACING (A)	ALTERNATIVE SPACING (B)
BB	1. 1. REPLACES DIVIDING (SEPARATION) LINE IF RESTRICTED SIGHT DISTANCE FOR BOTH DIRECTIONS OR 2. APPROACH TO MEDIAN ISLAND OR 3. APPROACHES TO A PEDESTRIAN CROSSING	* 0.10 0.025 MIN 0.05 MAX 0.10 0.10 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
E5	OUTLINE OF PAINTED MEDIAN	0.025 MIN 0.05 MAX 0.15 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
TB	GIVE WAY LINE (USED WITH SIGNS)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.30	WHITE	NOT REQUIRED	-	-
TB1	GIVE WAY LINE (USED OF RIGHT SIDE OF ROAD)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.15	WHITE	NOT REQUIRED	-	-

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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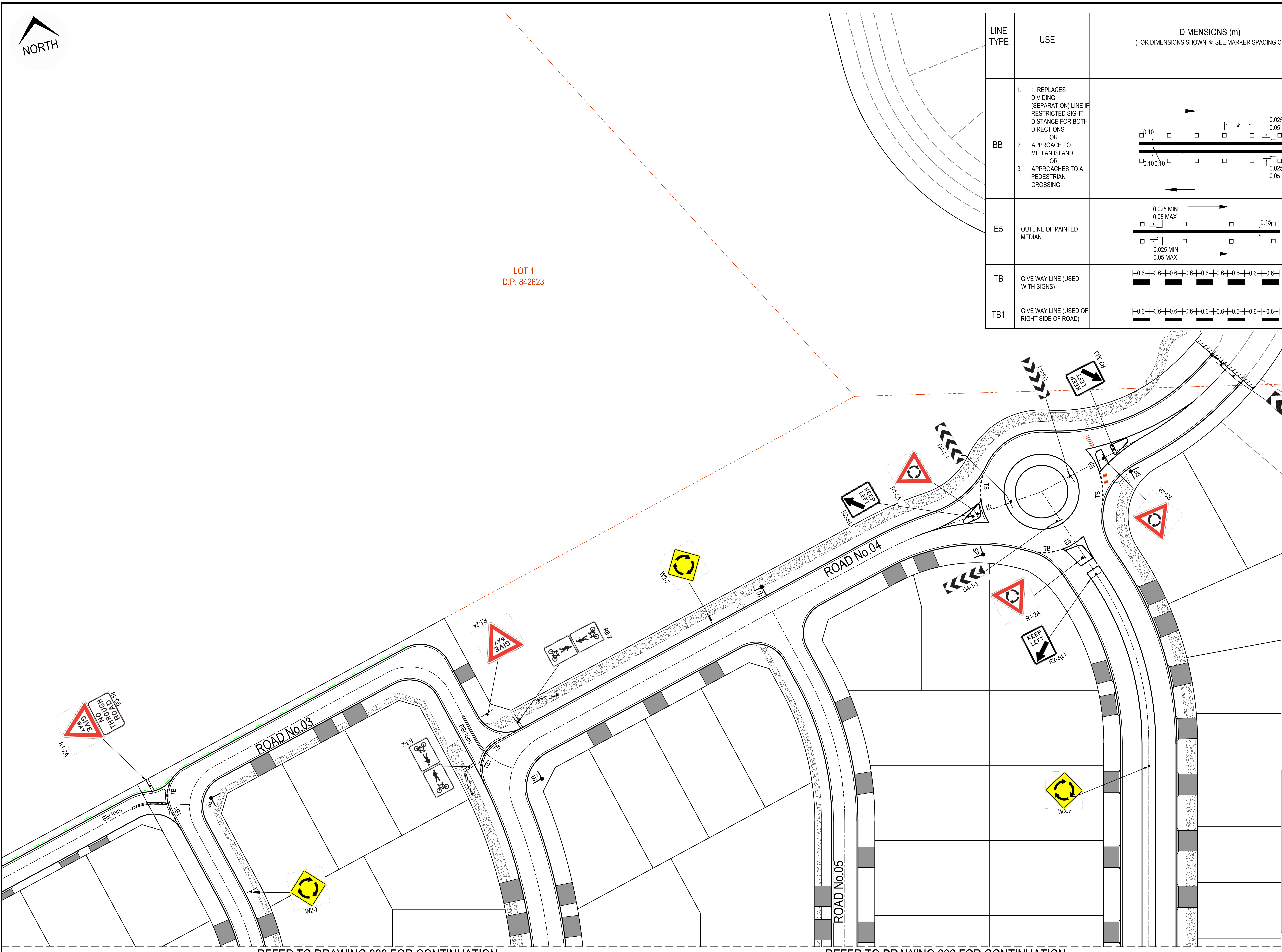
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SIGNAGE & LINEMARKING
PLAN
SHEET 01 OF 04

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	800	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\S\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-800.dwg



REFER TO DRAWING 800 FOR CONTINUATION

REFER TO DRAWING 802 FOR CONTINUATION

LINE TYPE	USE	DIMENSIONS (m) (FOR DIMENSIONS SHOWN * SEE MARKER SPACING COLUMN.)	COLOUR	RAISED MARKER TYPE	MARKER SPACING ( ) (m)* NORMAL SPACING (A)	ALTERNATIVE SPACING (B)
BB	1. 1. REPLACES DIVIDING (SEPARATION) LINE IF RESTRICTED SIGHT DISTANCE FOR BOTH DIRECTIONS OR 2. APPROACH TO MEDIAN ISLAND OR 3. APPROACHES TO A PEDESTRIAN CROSSING	0.10 * 0.025 MIN 0.05 MAX 0.10 0.10 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
E5	OUTLINE OF PAINTED MEDIAN	0.025 MIN 0.05 MAX 0.15 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
TB	GIVE WAY LINE (USED WITH SIGNS)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.30	WHITE	NOT REQUIRED	-	-
TB1	GIVE WAY LINE (USED OF RIGHT SIDE OF ROAD)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.15	WHITE	NOT REQUIRED	-	-

LEGEND

▽	REGULATORY SIGN R1-3A	KEEP LEFT ↙	REGULATORY SIGN R2-3(L)
‹‹‹‹‹	HAZARD MARKERS D4-1-1(L)	NO THROUGH ROAD	GUIDE SIGN G9-18
🚶🚲	REGULATORY SIGN R8-2	SP	STREET NAME SIGN POST TO BCC STANDARD
‹‹◆››	TEMPORARY SIGN T5-201	↰ ONLY	REGULATORY SIGN R2-14(L)
GIVE WAY	REGULATORY SIGN R1-2A	◆	WARNING SIGN W2-7
▤	WATER FILLED BARRIER	PS-3 PS-4 PA-1 PA-1 PS-4 PS-3	PROVIDE ARROW (PA-1), PEDESTRIAN (PS-4) & BICYCLE (PS-3) MARKING ON SHARE FOOTPATH

NOTE:
STREET SIGNS TO BE LOCATED IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SDA119A

KEY PLAN

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1)
SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

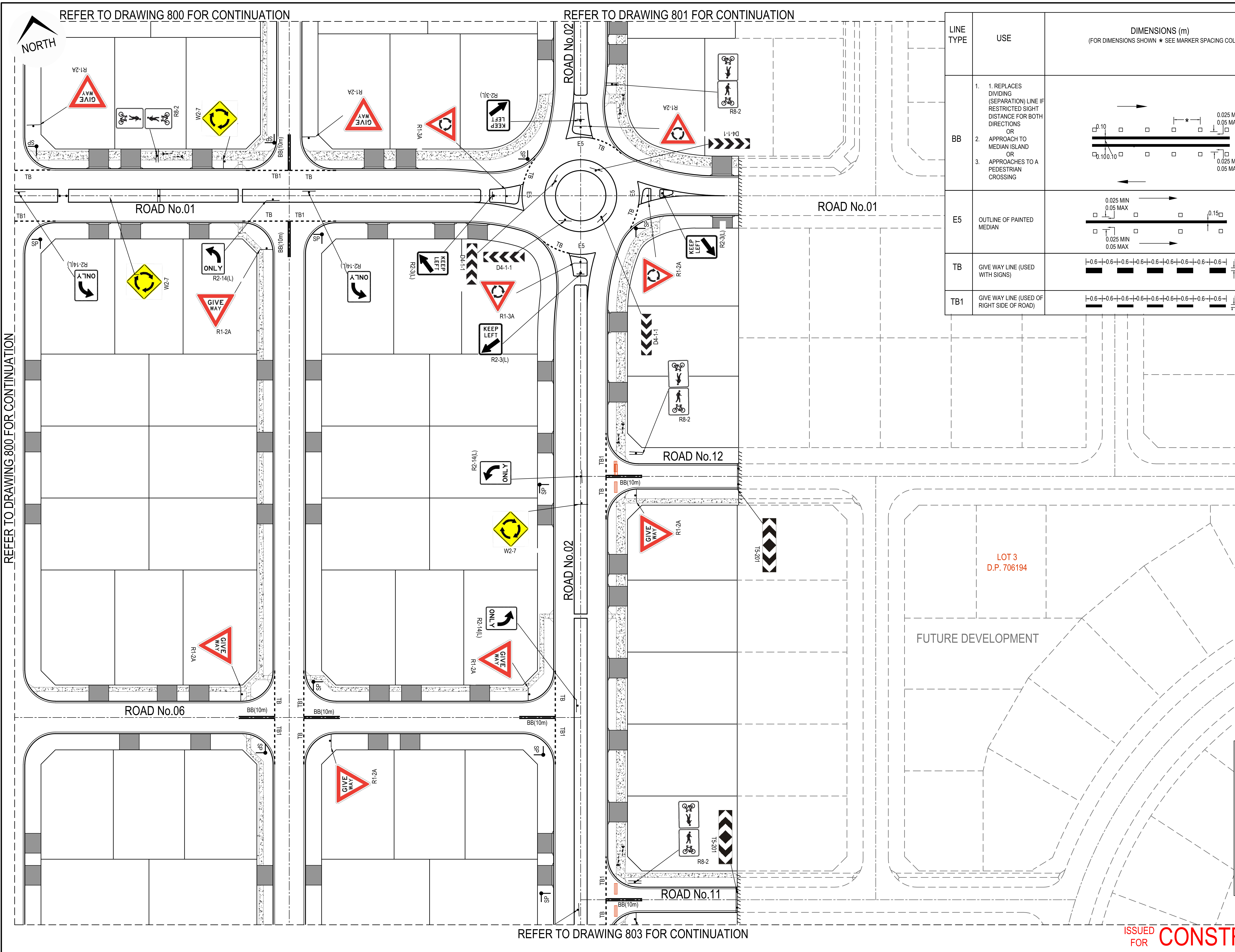
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SIGNAGE & LINEMARKING
PLAN
SHEET 02 OF 04

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	801	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-801.dwg



LINE TYPE	USE	DIMENSIONS (m) (FOR DIMENSIONS SHOWN * SEE MARKER SPACING COLUMN.)	COLOUR	RAISED MARKER TYPE	MARKER SPACING ( ) (m)*	
					NORMAL SPACING (A)	ALTERNATIVE SPACING (B)
BB	1. 1. REPLACES DIVIDING (SEPARATION) LINE IF RESTRICTED SIGHT DISTANCE FOR BOTH DIRECTIONS OR 2. APPROACH TO MEDIAN ISLAND OR 3. APPROACHES TO A PEDESTRIAN CROSSING	0.10 0.100.10 * 0.025 MIN 0.05 MAX 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
E5	OUTLINE OF PAINTED MEDIAN	0.025 MIN 0.05 MAX 0.15 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
TB	GIVE WAY LINE (USED WITH SIGNS)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.30	WHITE	NOT REQUIRED	-	-
TB1	GIVE WAY LINE (USED OF RIGHT SIDE OF ROAD)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.15	WHITE	NOT REQUIRED	-	-

LEGEND

▽	REGULATORY SIGN R1-3A	KEEP LEFT	REGULATORY SIGN R2-3(L)
‹‹‹‹‹	HAZARD MARKERS D4-1-1(L)	NO THROUGH ROAD	GUIDE SIGN G9-18
	REGULATORY SIGN R8-2	SP	STREET NAME SIGN POST TO BCC STANDARD
‹‹◆››	TEMPORARY SIGN T5-201	ONLY	REGULATORY SIGN R2-14(L)
GIVE WAY	REGULATORY SIGN R1-2A	◆	WARNING SIGN W2-7
▤	WATER FILLED BARRIER	PS-3 PS-4 PA-1 PA-1 PS-4 PS-3	PROVIDE ARROW (PA-1), PEDESTRIAN (PS-4) & BICYCLE (PS-3) MARKING ON SHARE FOOTPATH

KEY PLAN

NOTE:
STREET SIGNS TO BE LOCATED IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SDA119A

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-802.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

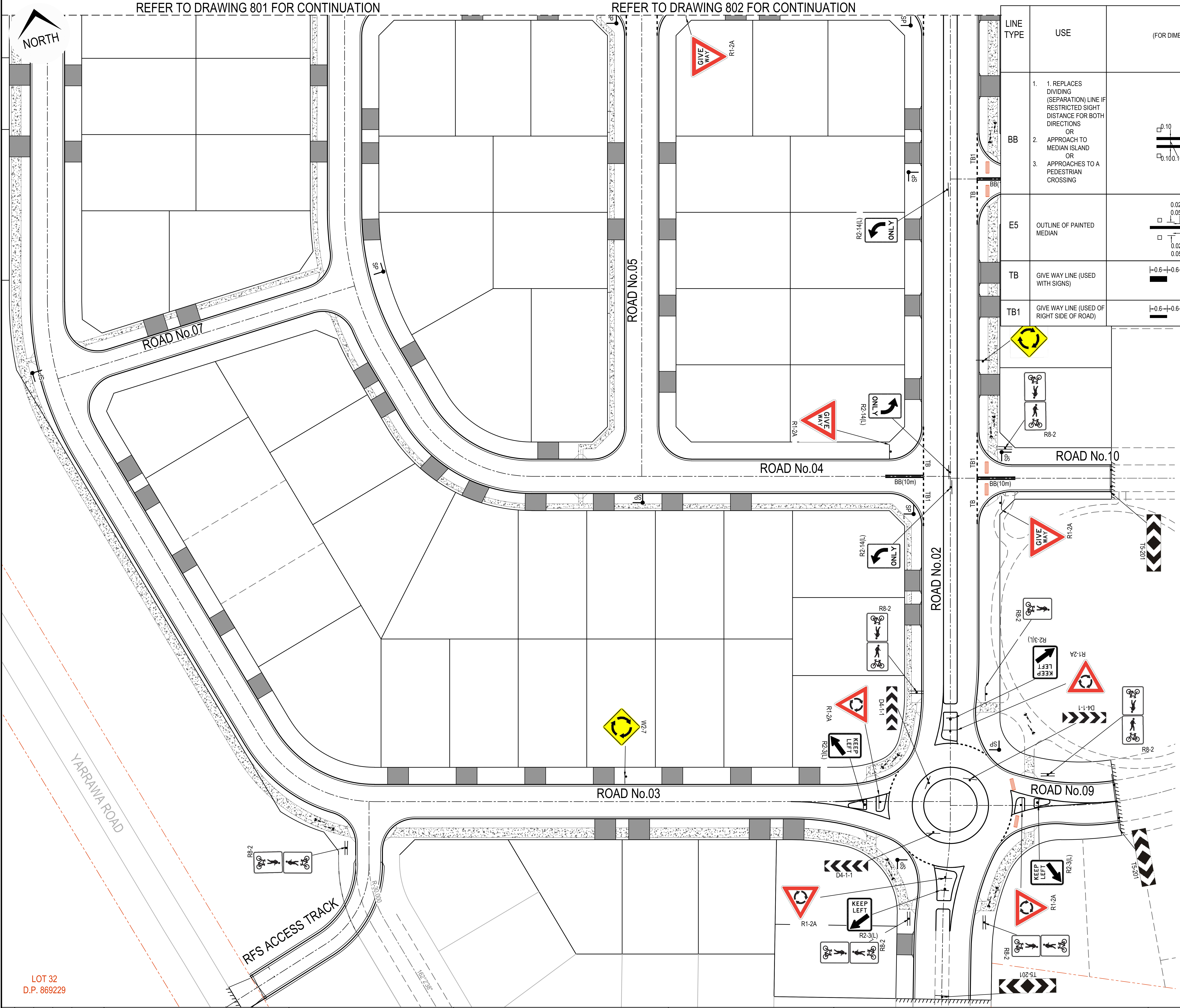
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SIGNAGE & LINEMARKING
PLAN
SHEET 03 OF 04

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	802	B

REFER TO DRAWING 801 FOR CONTINUATION

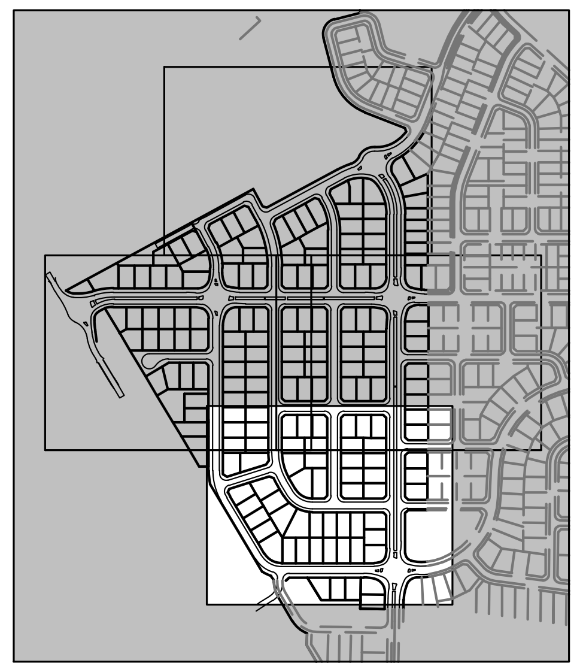
REFER TO DRAWING 802 FOR CONTINUATION



LINE TYPE	USE	DIMENSIONS (m) (FOR DIMENSIONS SHOWN ∗ SEE MARKER SPACING COLUMN.)	COLOUR	RAISED MARKER TYPE	MARKER SPACING ( ) (m)∗	
					NORMAL SPACING (A)	ALTERNATIVE SPACING (B)
BB	1. 1. REPLACES DIVIDING (SEPARATION) LINE IF RESTRICTED SIGHT DISTANCE FOR BOTH DIRECTIONS OR 2. APPROACH TO MEDIAN ISLAND OR 3. APPROACHES TO A PEDESTRIAN CROSSING	0.10 ∗ 0.025 MIN 0.05 MAX 0.10 0.10 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
E5	OUTLINE OF PAINTED MEDIAN	0.025 MIN 0.05 MAX 0.15 0.025 MIN 0.05 MAX	WHITE	YY YY	12	12
TB	GIVE WAY LINE (USED WITH SIGNS)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.30	WHITE	NOT REQUIRED	-	-
TB1	GIVE WAY LINE (USED OF RIGHT SIDE OF ROAD)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.15	WHITE	NOT REQUIRED	-	-

LEGEND

▽	REGULATORY SIGN R1-3A	KEEP LEFT	REGULATORY SIGN R2-3(L)
❮❮❮❮❮	HAZARD MARKERS D4-1-1(L)	NO THROUGH ROAD	GUIDE SIGN G9-18
	REGULATORY SIGN R8-2	SP	STREET NAME SIGN POST TO BCC STANDARD
❮❮◆❯❯	TEMPORARY SIGN T5-201	ONLY	REGULATORY SIGN R2-14(L)
GIVE WAY	REGULATORY SIGN R1-2A	◆	WARNING SIGN W2-7
▤	WATER FILLED BARRIER	PS-3 PS-4 PA-1 PA-1 PS-4 PS-3	PROVIDE ARROW (PA-1), PEDESTRIAN (PS-4) & BICYCLE (PS-3) MARKING ON SHARE FOOTPATH



KEY PLAN

NOTE:
STREET SIGNS TO BE LOCATED IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SDA119A

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	AS	21/09/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For:
Aoyuan
building a healthy lifestyle

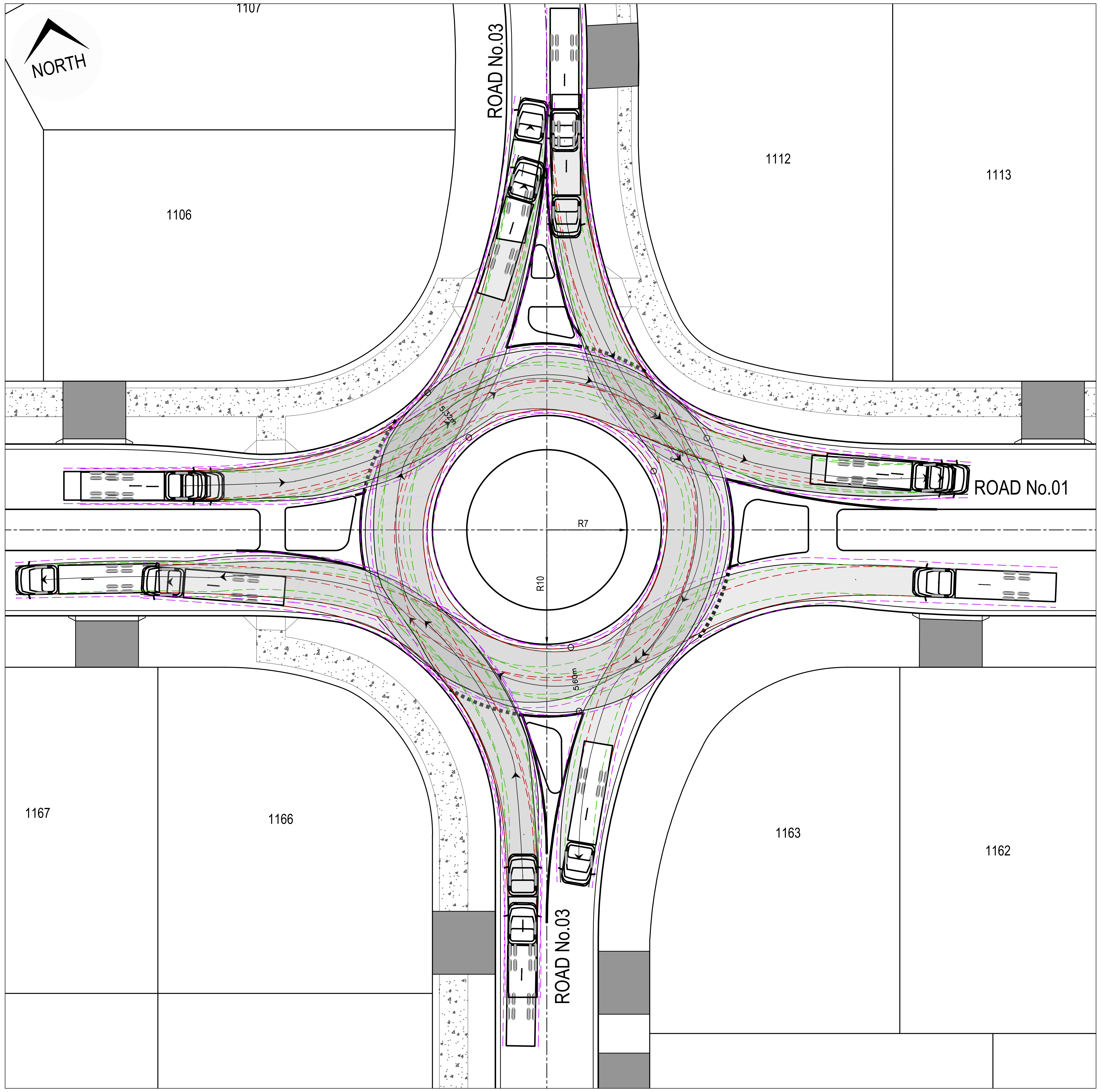
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
SIGNAGE & LINEMARKING
PLAN
SHEET 04 OF 04

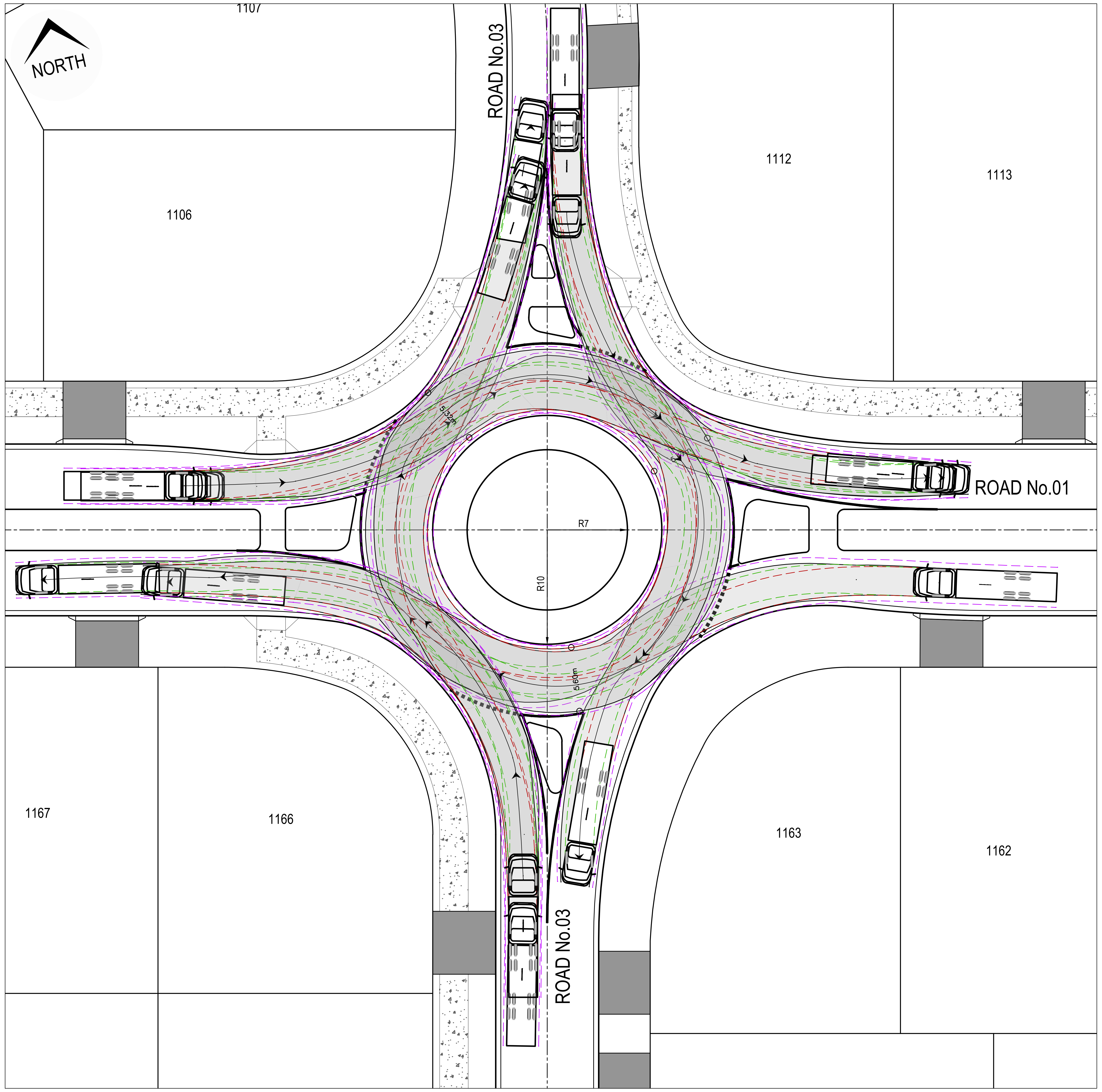
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	803	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-803.dwg



TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250

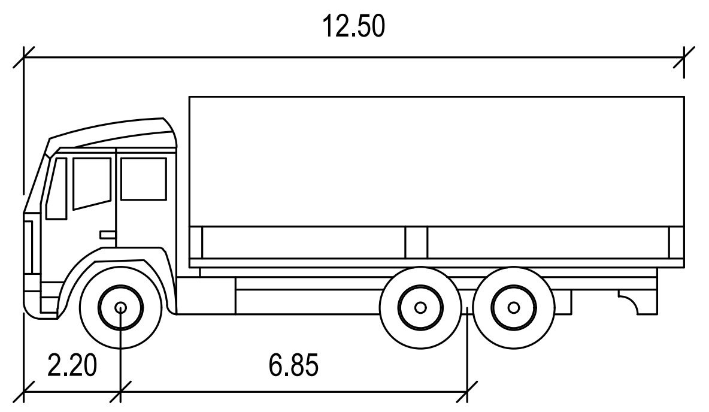


TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250

LEGEND

DENOTES FRONT WHEEL TRACK	— — — — —
DENOTES REAR WHEEL TRACK	— — — — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — — — —
DENOTES VEHICLE BODY	▭



12.5m SU TRUCK - DESIGN VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

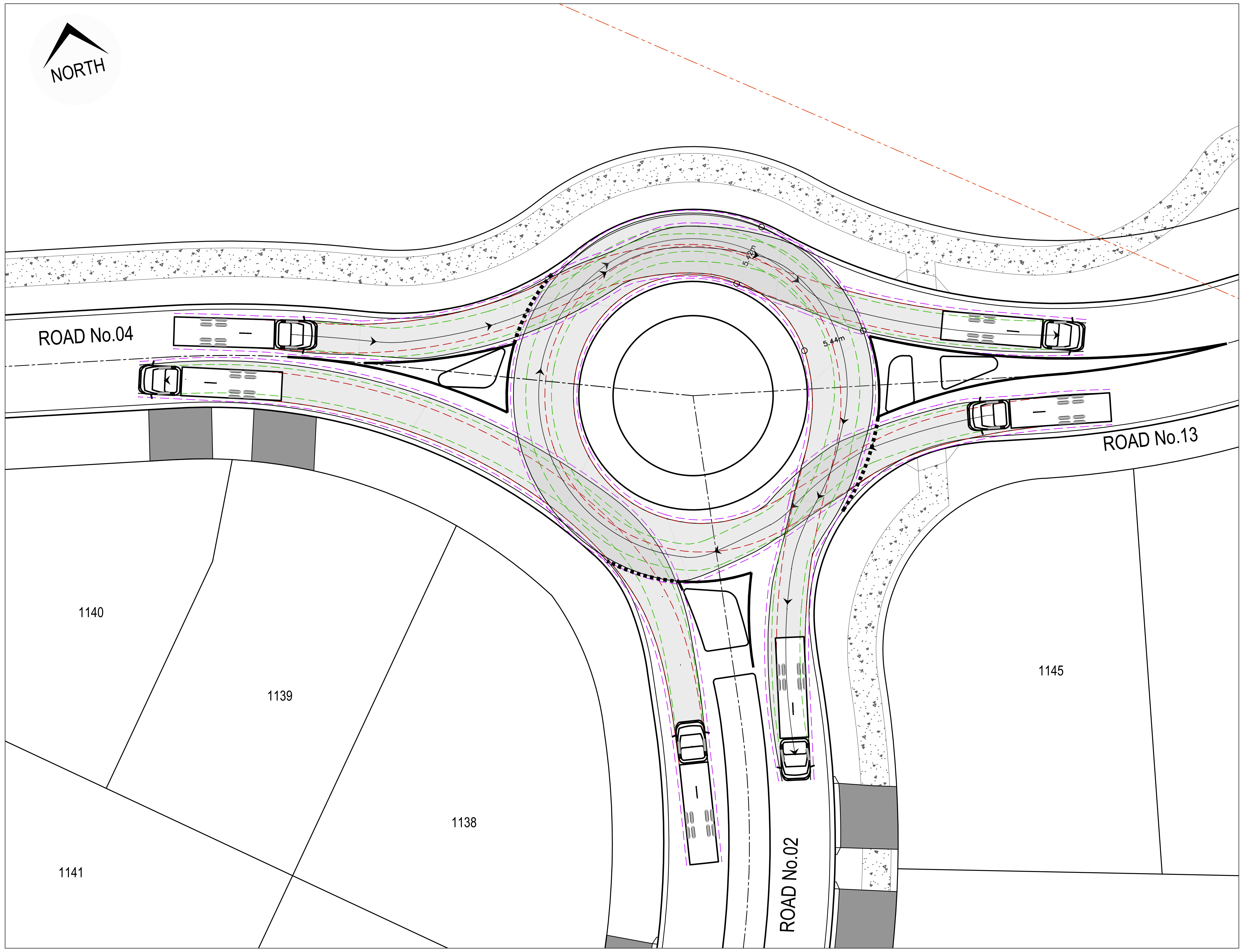
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 01 OF 15

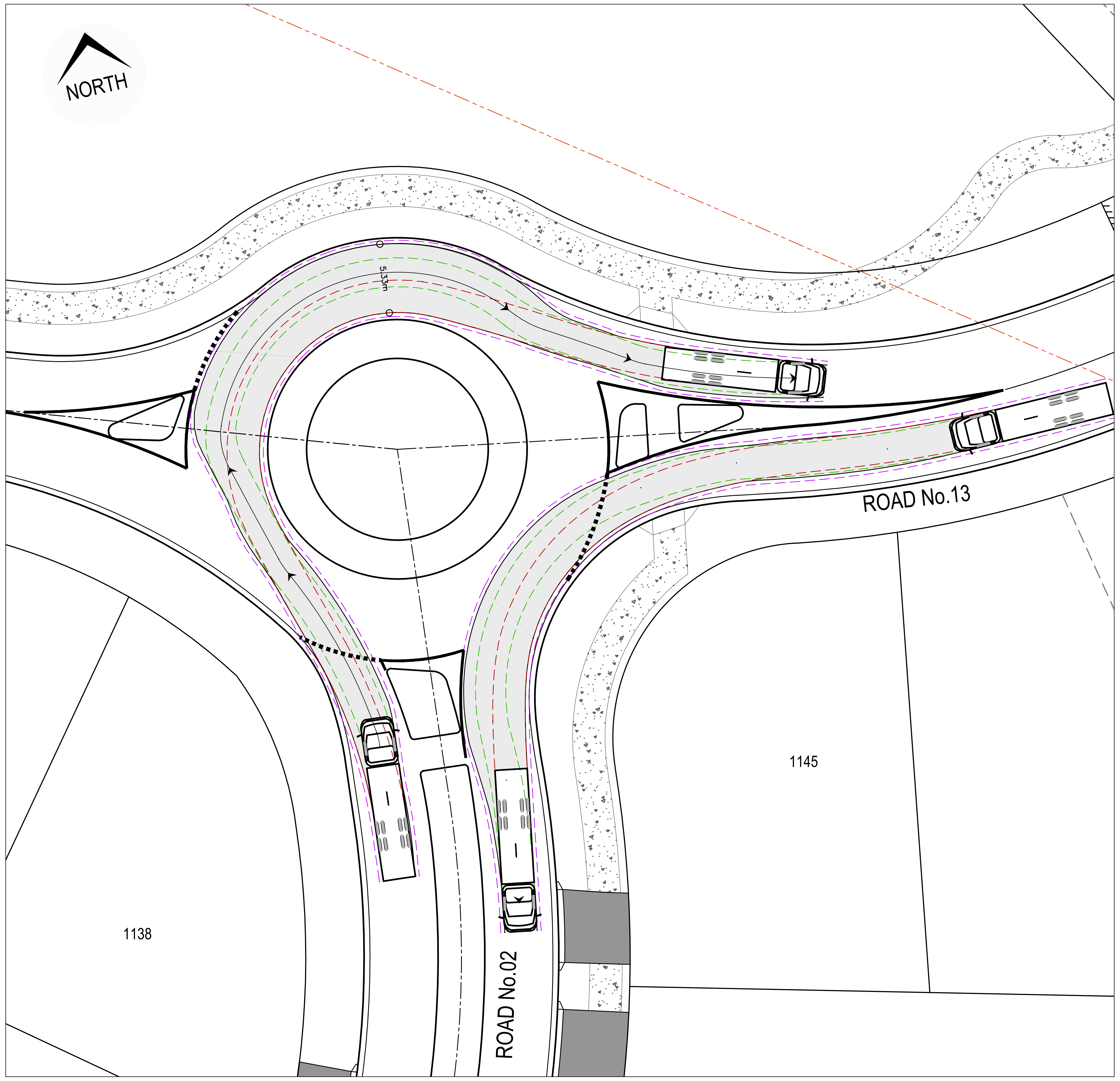
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	820	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-820.dwg



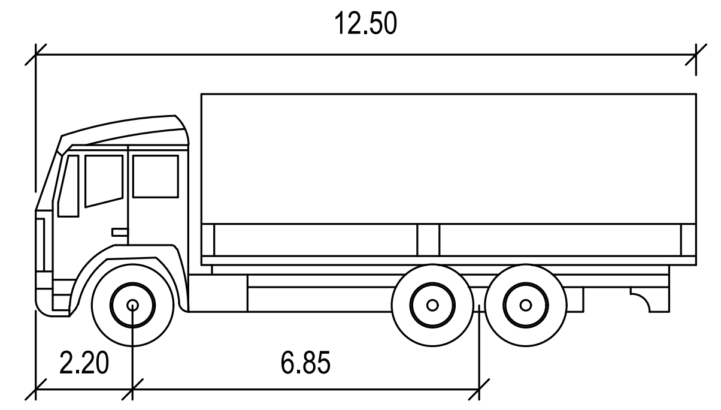
TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250



TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250



12.5m SU TRUCK - DESIGN VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

LEGEND

DENOTES FRONT WHEEL TRACK	— — — — —
DENOTES REAR WHEEL TRACK	— — — — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — — — —
DENOTES VEHICLE BODY	▭

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

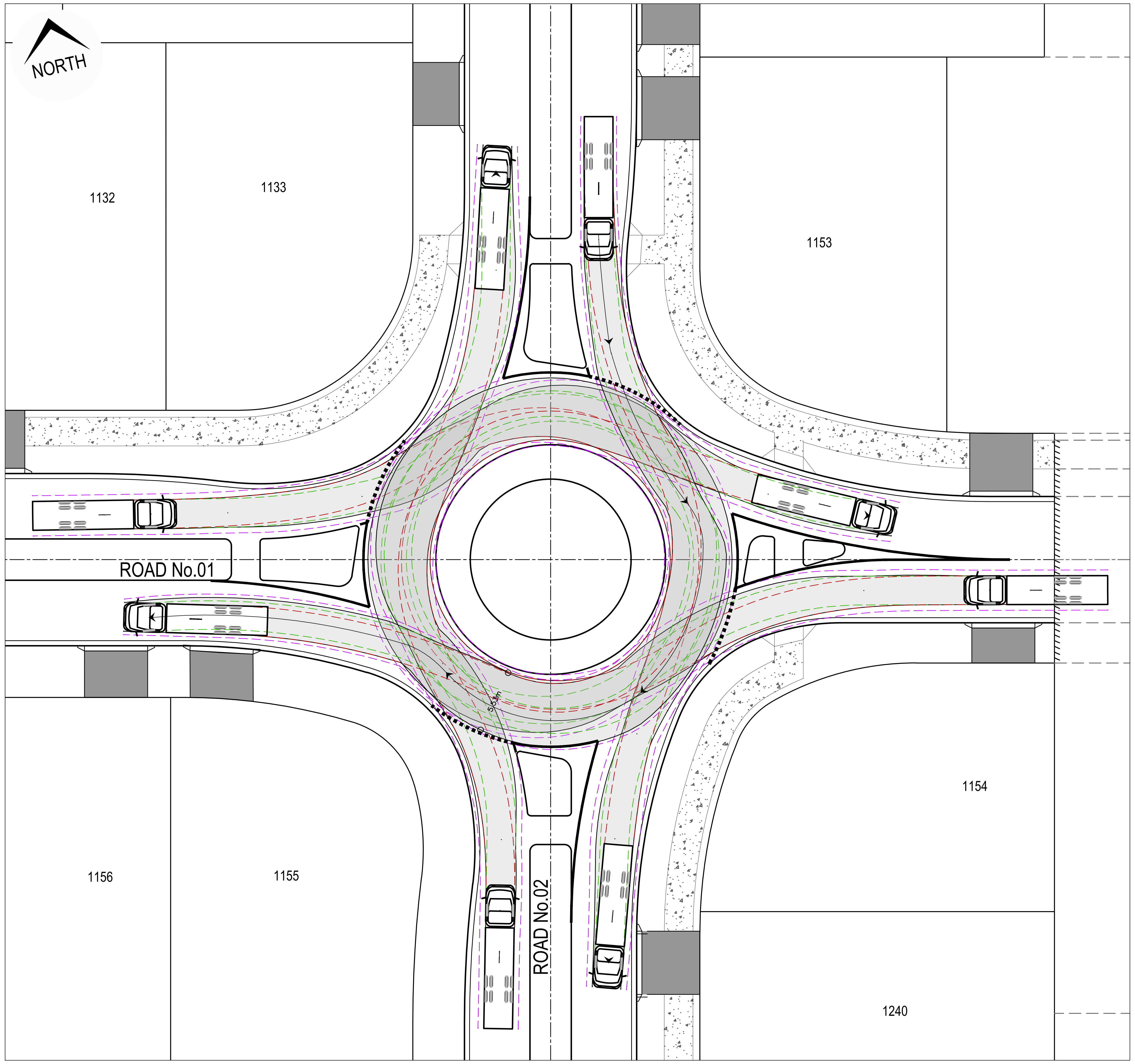
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 02 OF 15

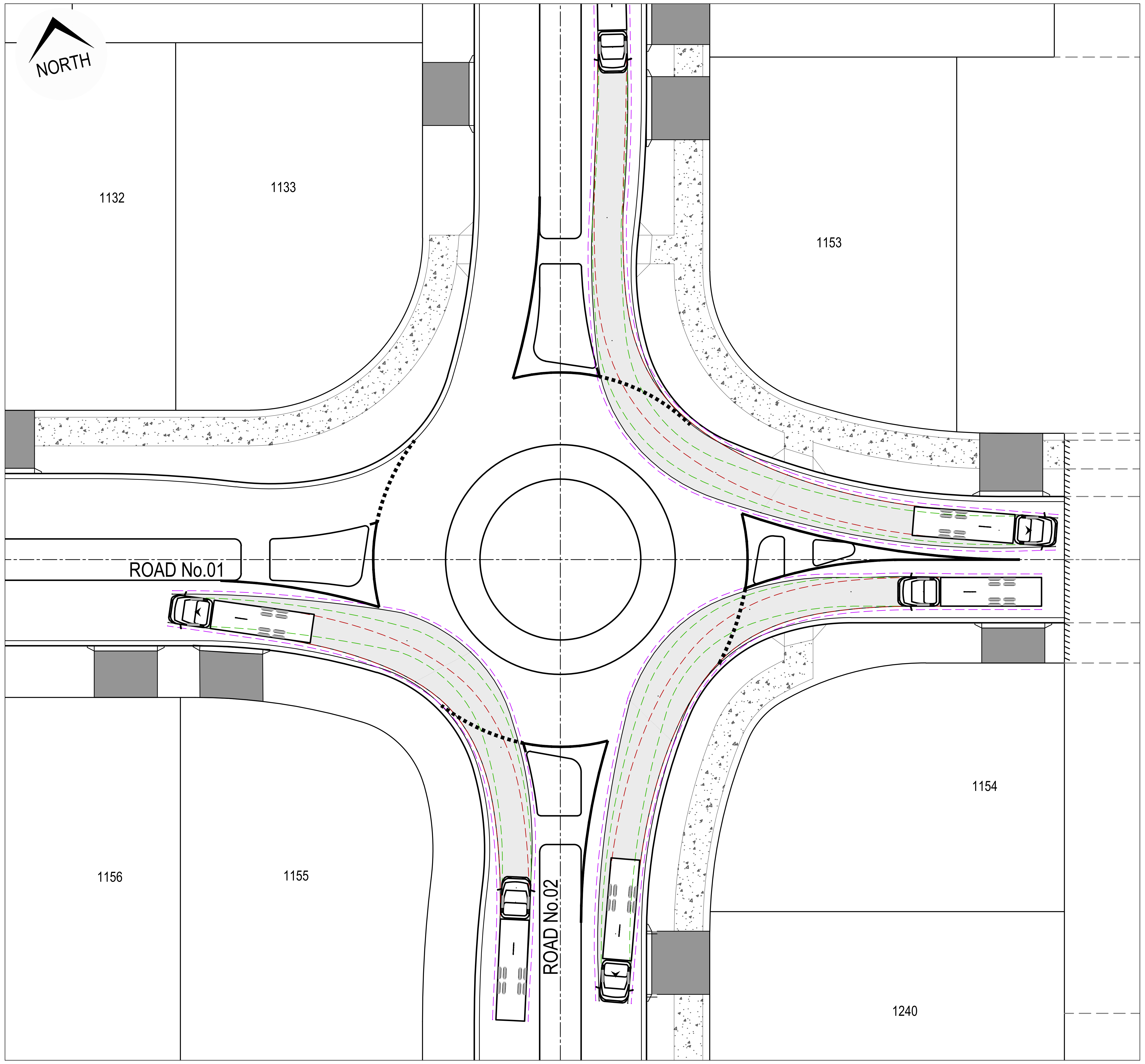
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	821	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-821.dwg



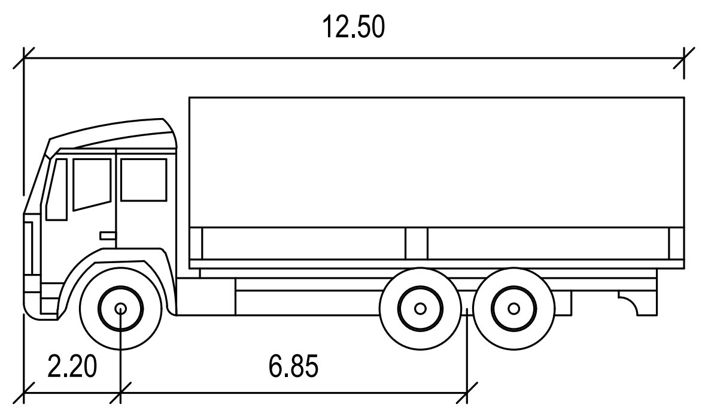
TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250



TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250



LEGEND

DENOTES FRONT WHEEL TRACK	— — —
DENOTES REAR WHEEL TRACK	— — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — —
DENOTES VEHICLE BODY	▭

12.5m SU TRUCK - DESIGN VEHICLE

		meters
Width	:	2.50
Track	:	2.50
Lock to Lock Time	:	6.0
Steering Angle	:	36.6

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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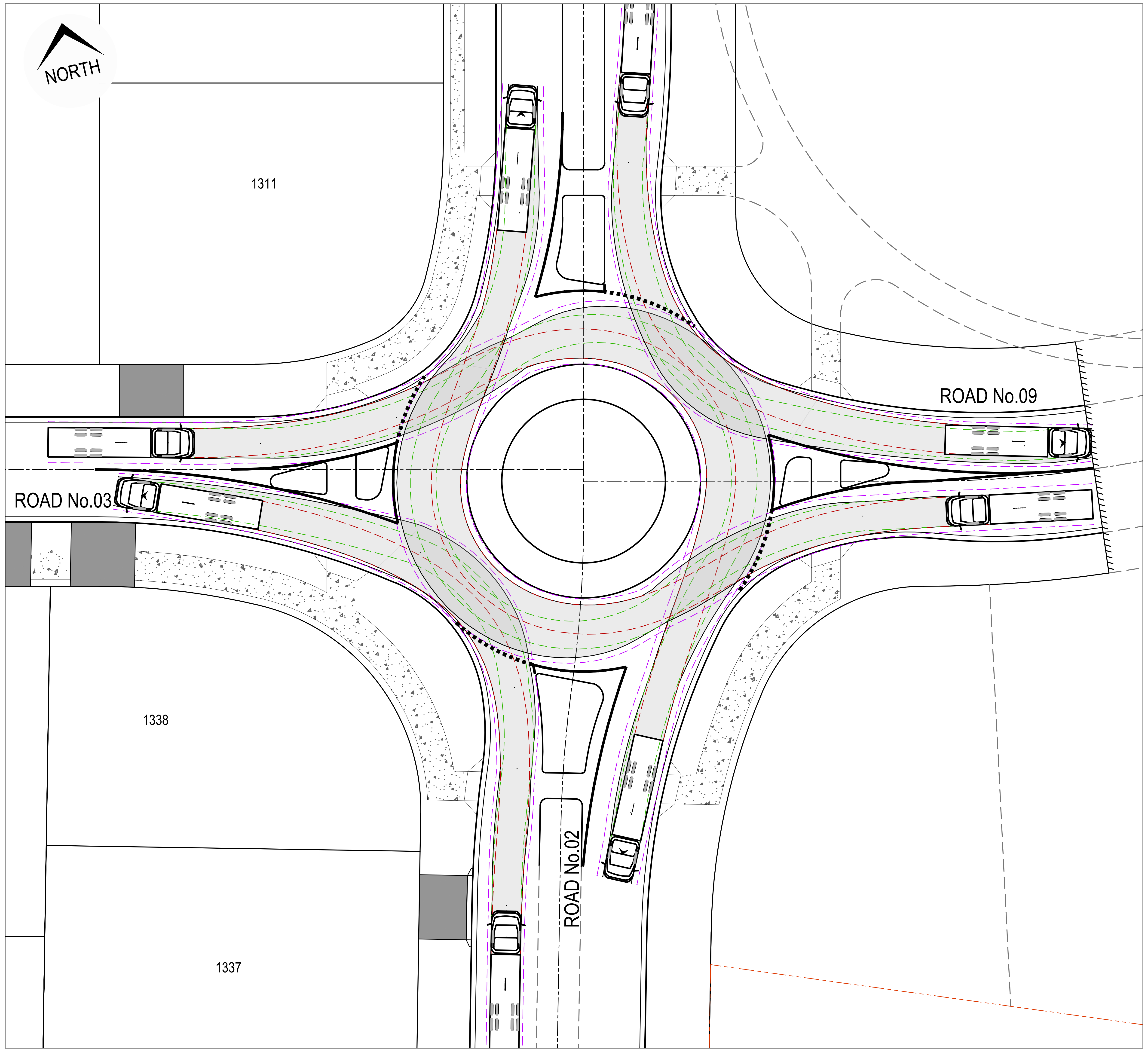
Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 03 OF 15

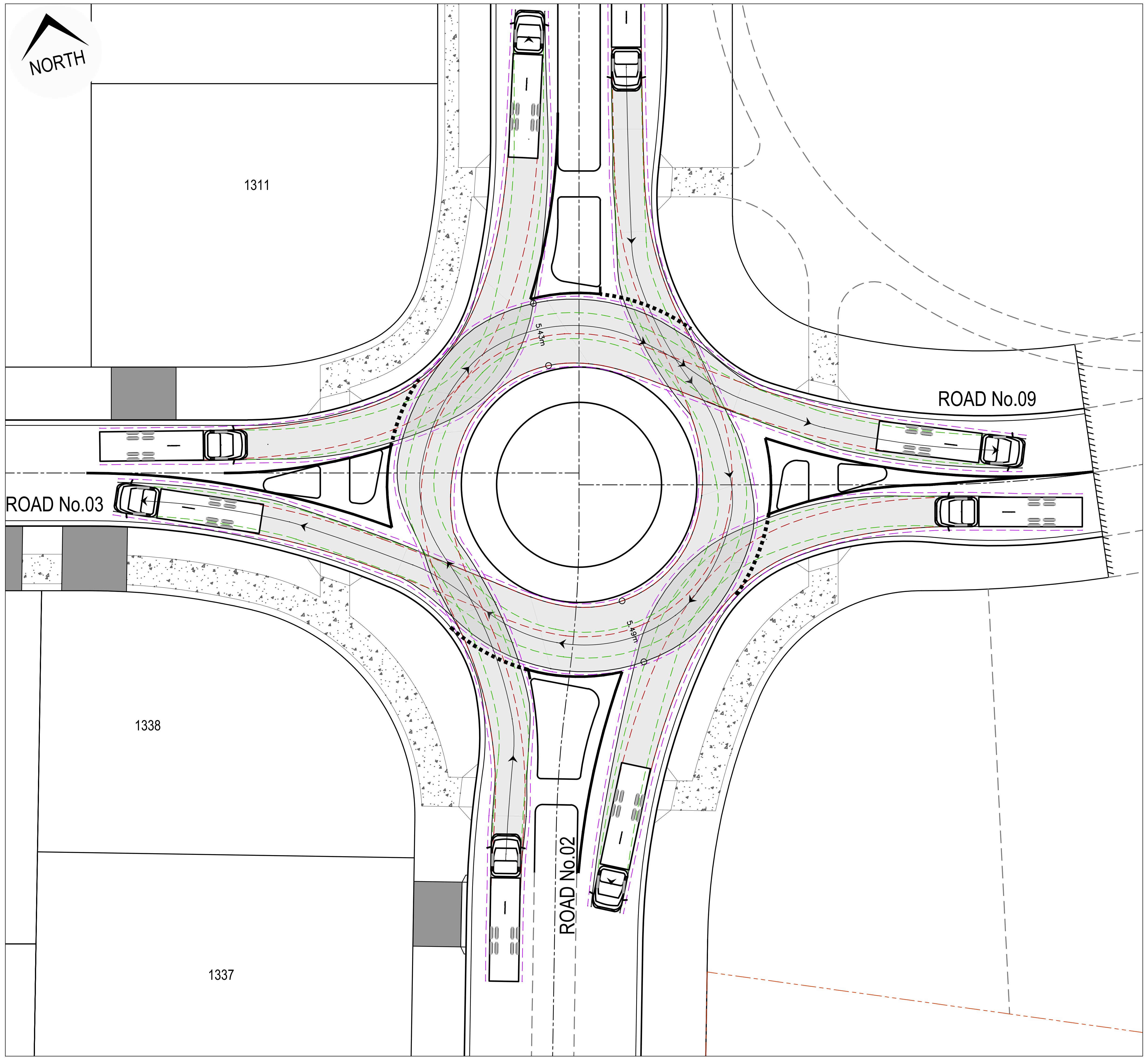
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	822	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-822.dwg



TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250

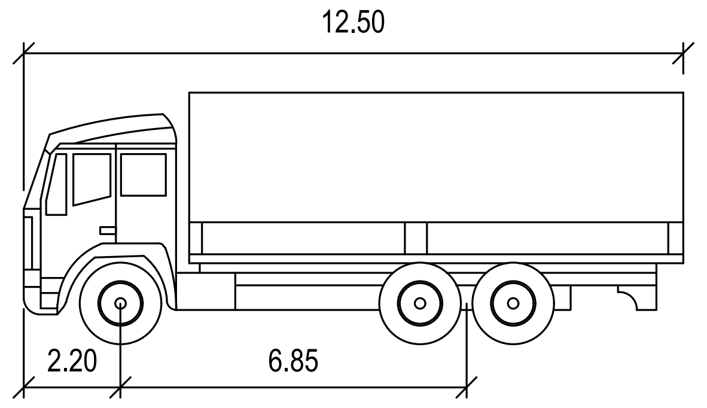


TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250

LEGEND

DENOTES FRONT WHEEL TRACK	— — — —
DENOTES REAR WHEEL TRACK	— — — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — — —
DENOTES VEHICLE BODY	▭



12.5m SU TRUCK - DESIGN VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

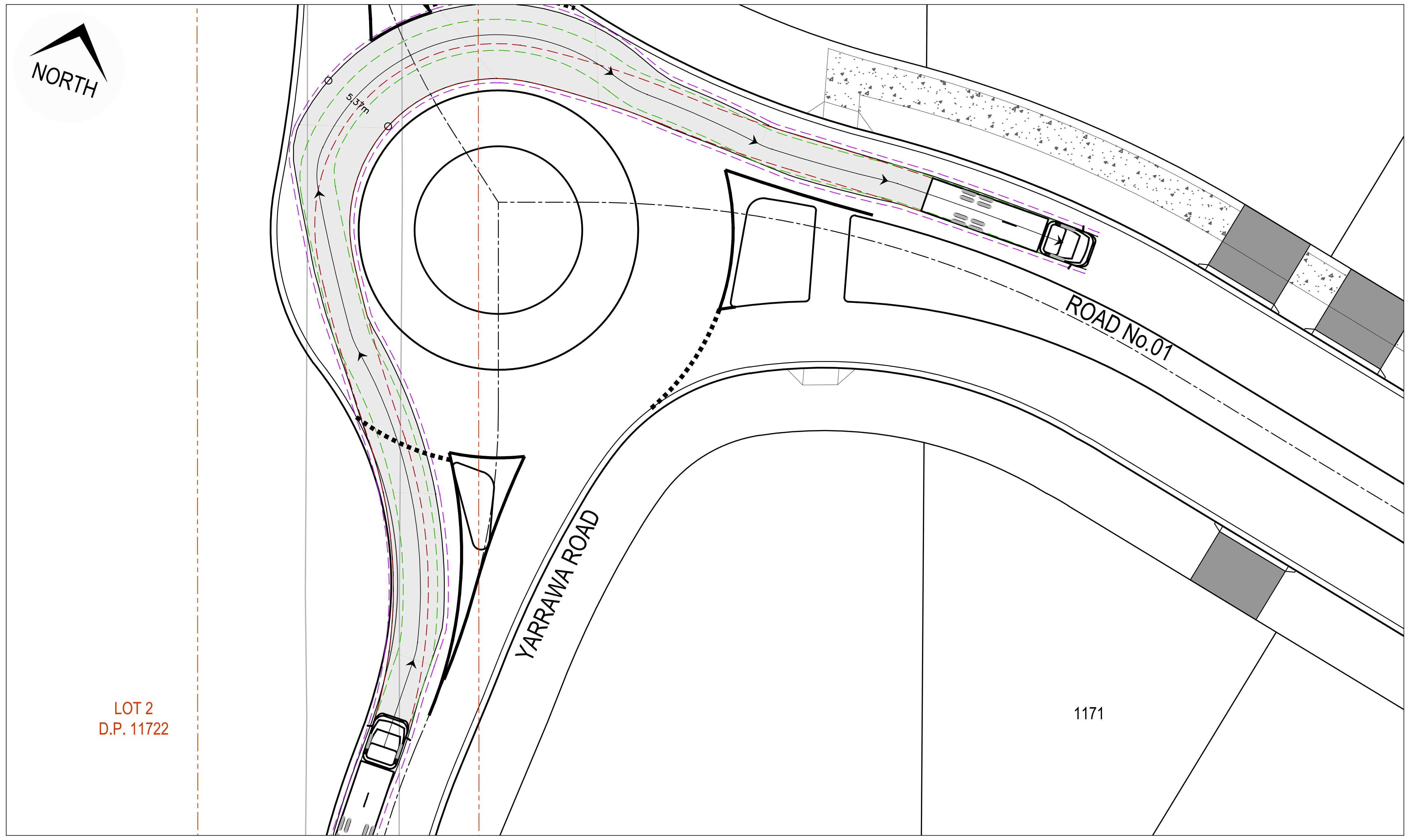
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 04 OF 15

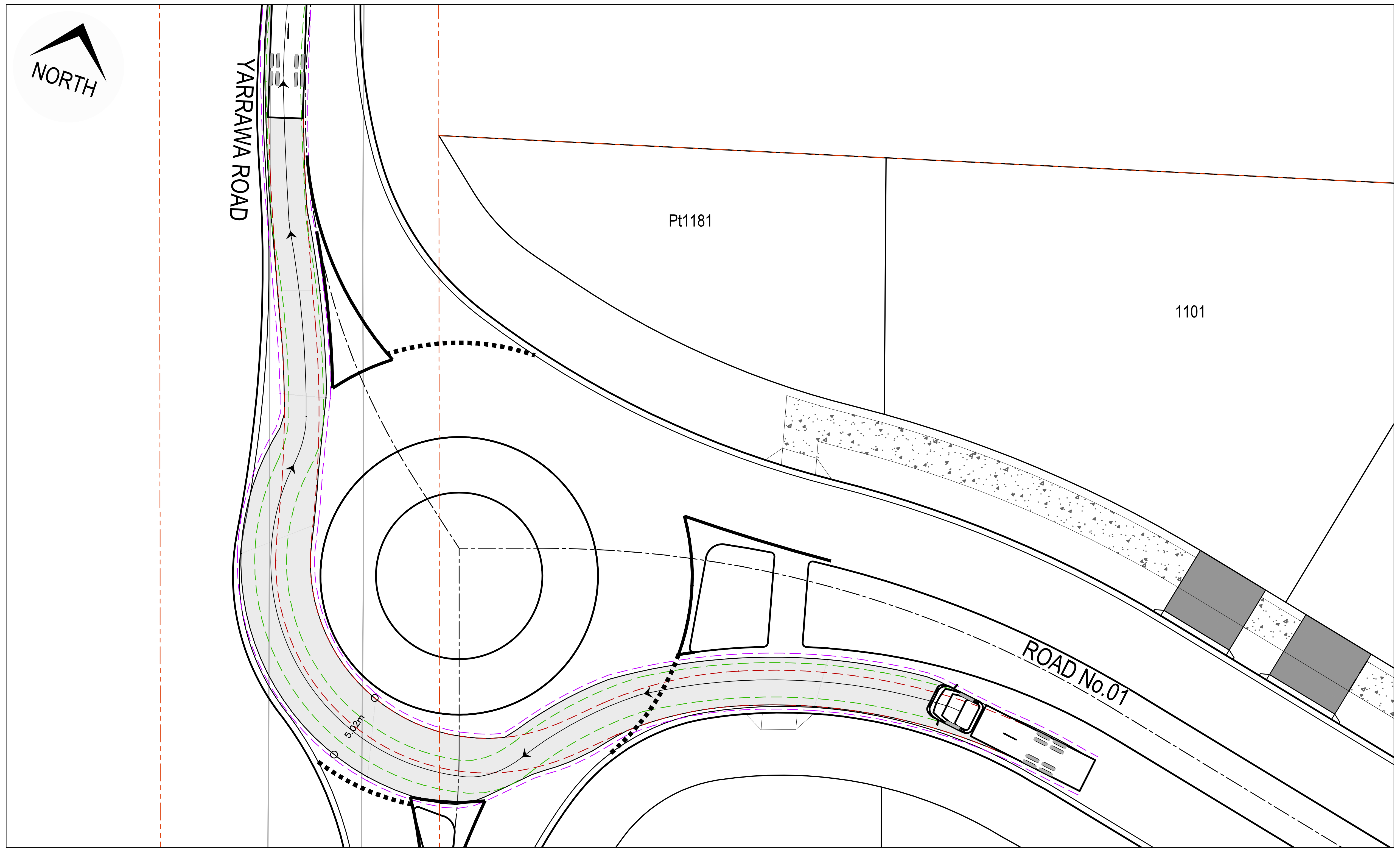
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	823	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-823.dwg



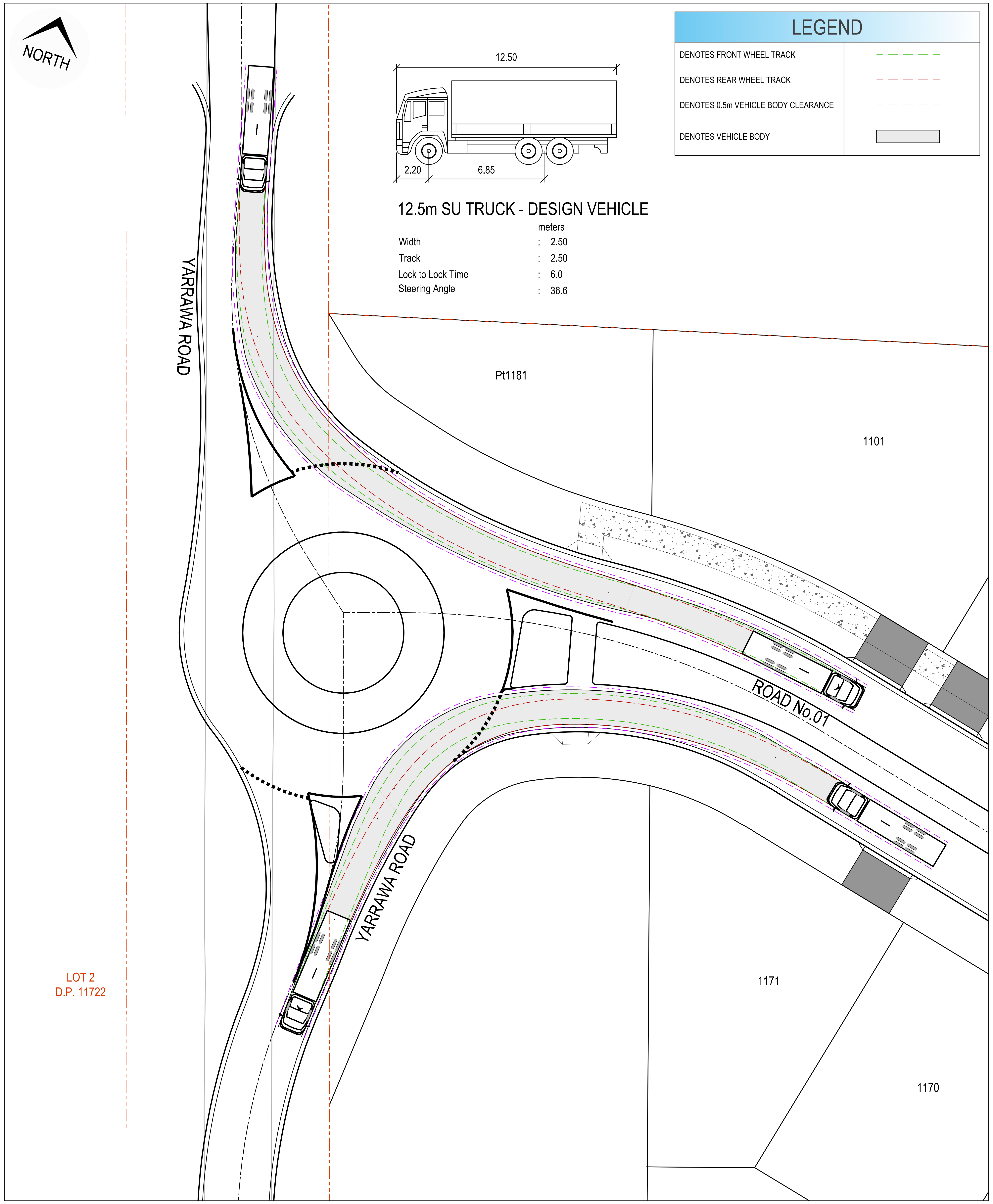
ROUNDABOUT TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250



ROUNDABOUT TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250



12.5m SU TRUCK - DESIGN VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

LEGEND

DENOTES FRONT WHEEL TRACK	🟩 – – – – –
DENOTES REAR WHEEL TRACK	🟥 – – – – –
DENOTES 0.5m VEHICLE BODY CLEARANCE	– – – – –
DENOTES VEHICLE BODY	▭

ROUNDABOUT TURNPATH PLAN - 12.5m DESIGN VEHICLE

SCALE 1:250

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A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

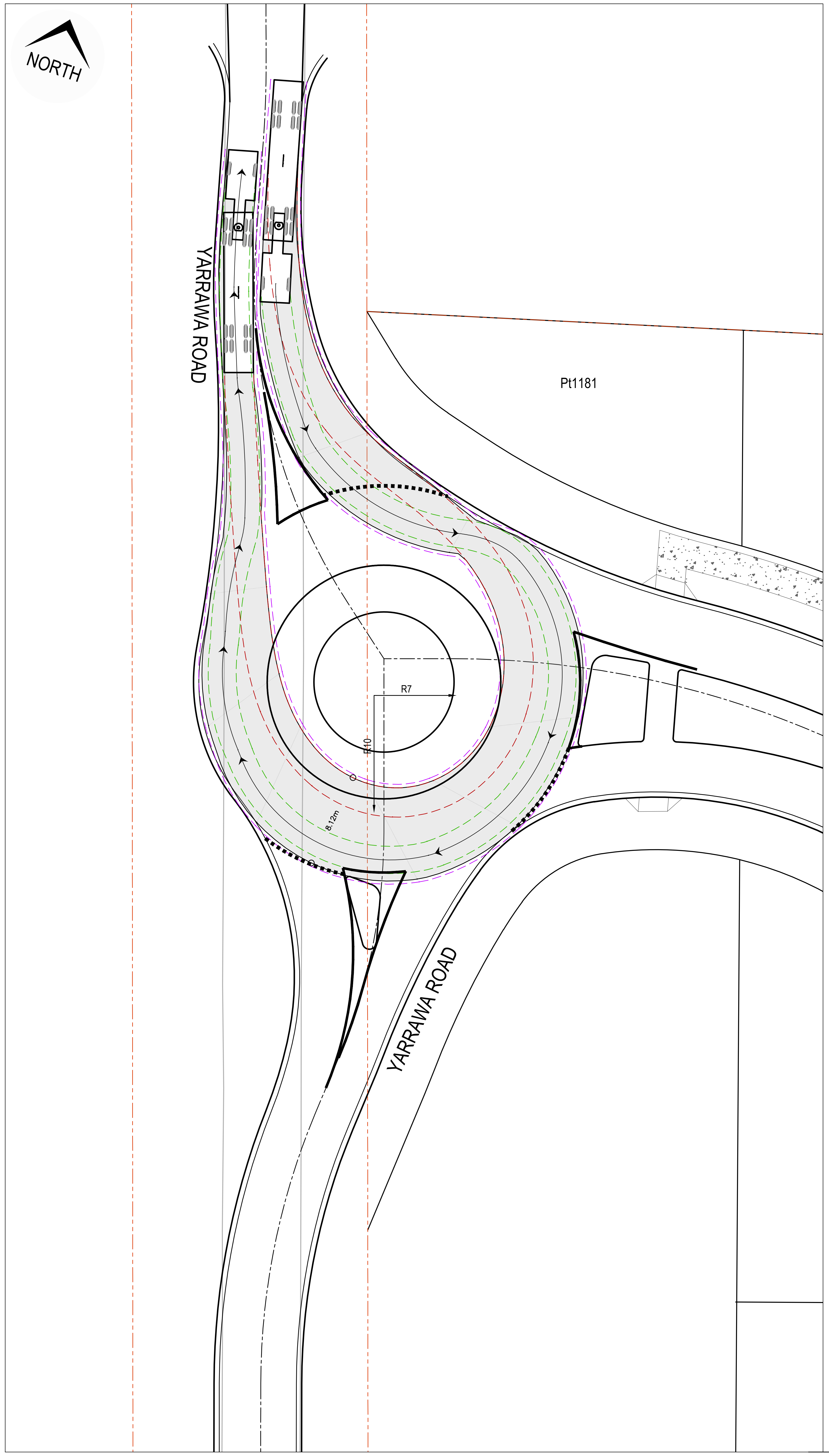
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 05 OF 15

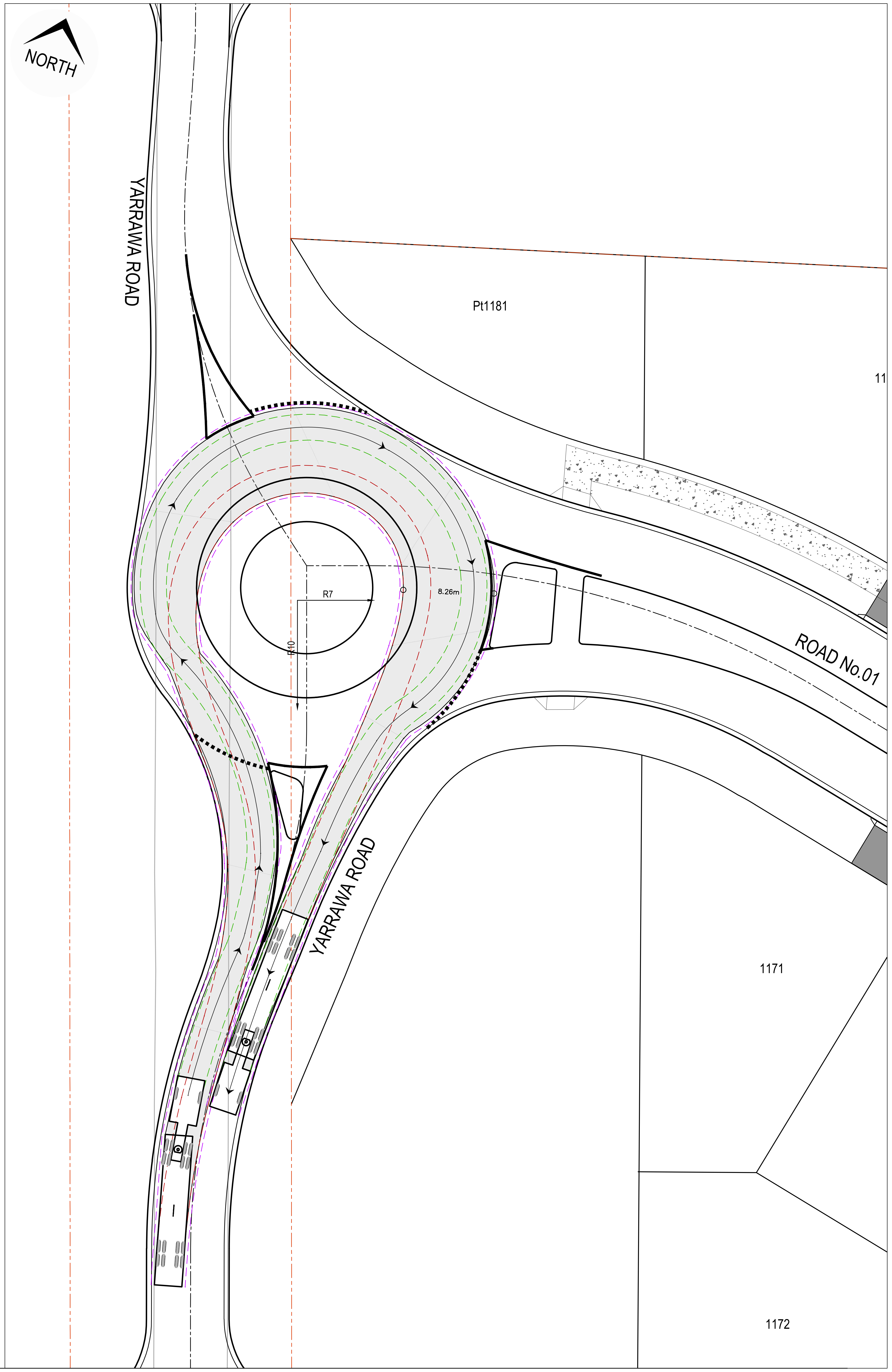
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	824	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-824.dwg



ROUNDABOUT TURNPATH PLAN - 19.0m SEMI CHECK VEHICLE

SCALE 1:250

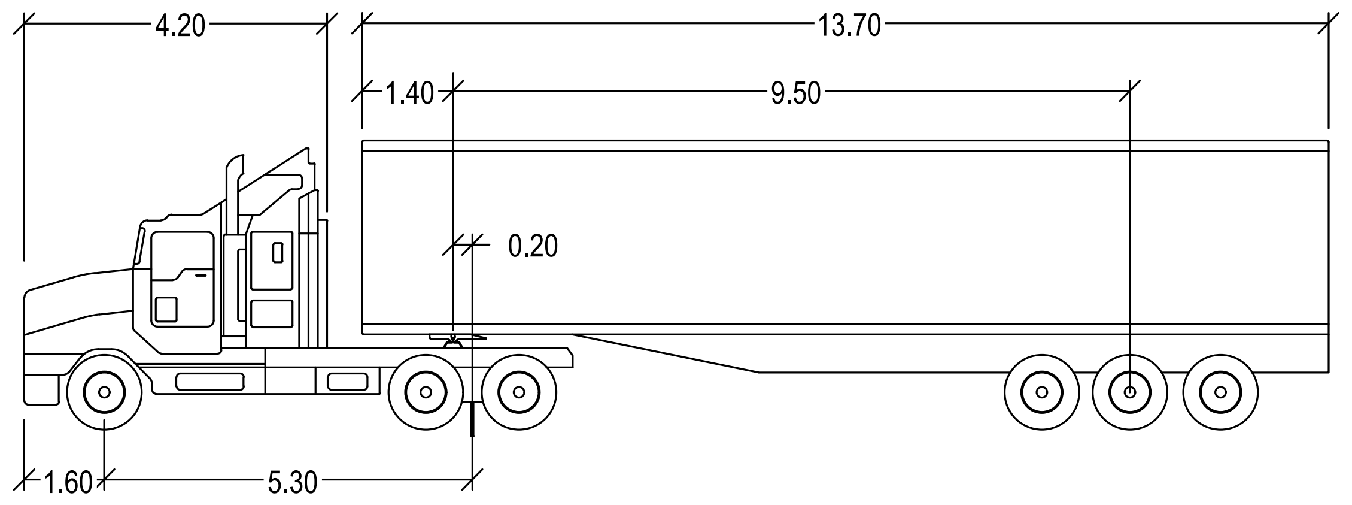


ROUNDABOUT TURNPATH PLAN - 19.0m SEMI CHECK VEHICLE

SCALE 1:250

LEGEND

DENOTES FRONT WHEEL TRACK	— — — — —
DENOTES REAR WHEEL TRACK	— — — — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — — — —
DENOTES VEHICLE BODY	▭



19.0m SEMI - CHECK VEHICLE

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25

SCALE 1:250 (A1) SCALE 1:500 (A3)

For:

Aoyuan
building a healthy lifestyle

By:

Orion Consulting

SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:

STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:

TURNING PATH
PLAN
SHEET 06 OF 15

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	825	A

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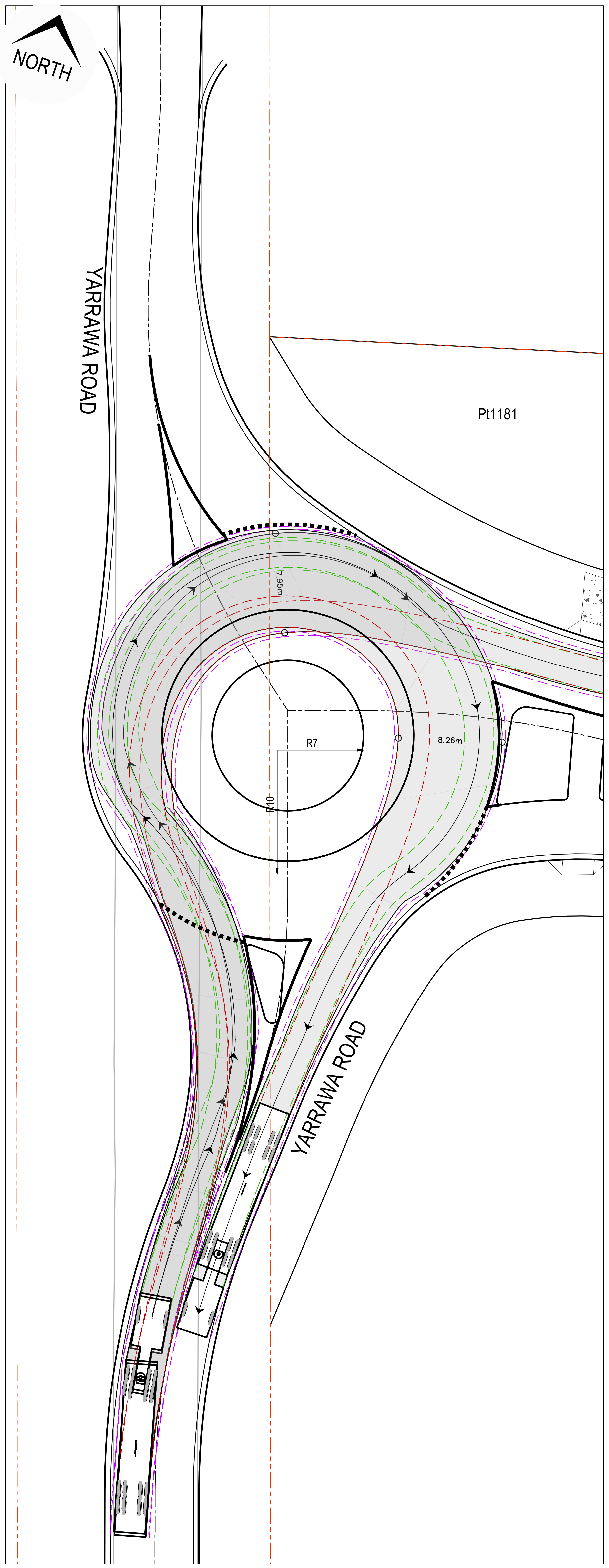
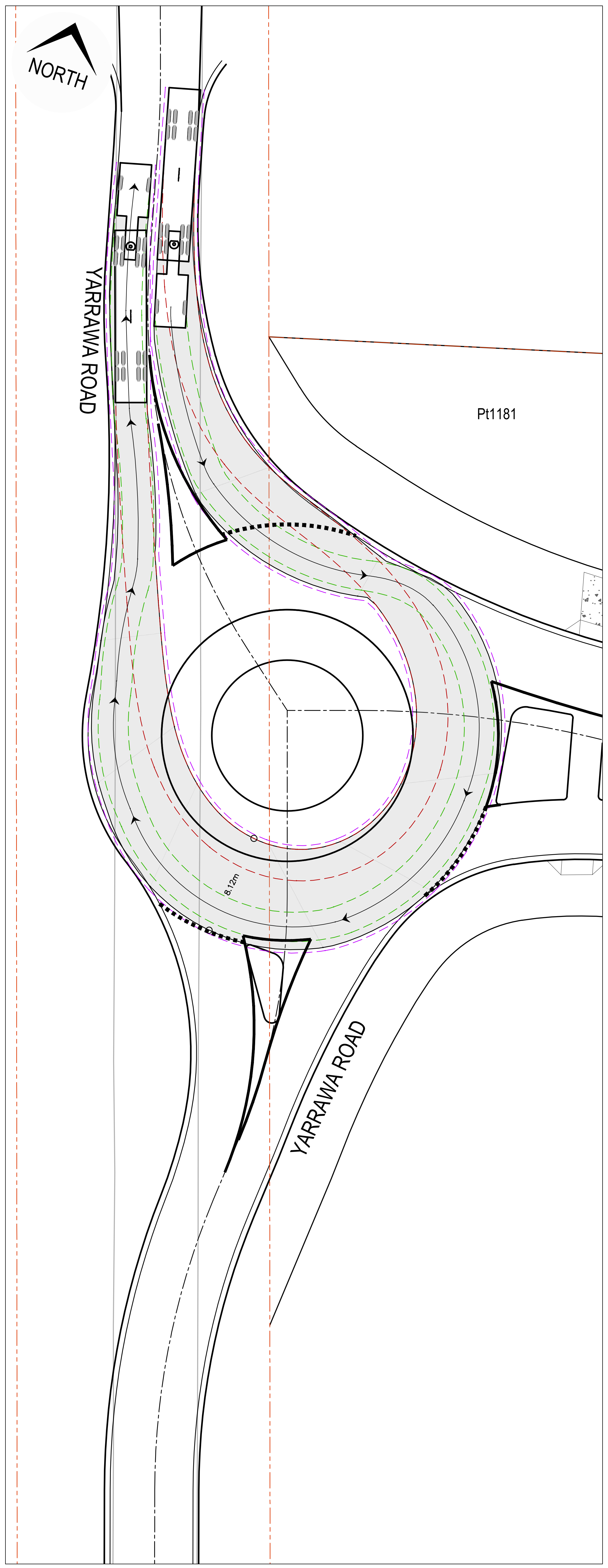


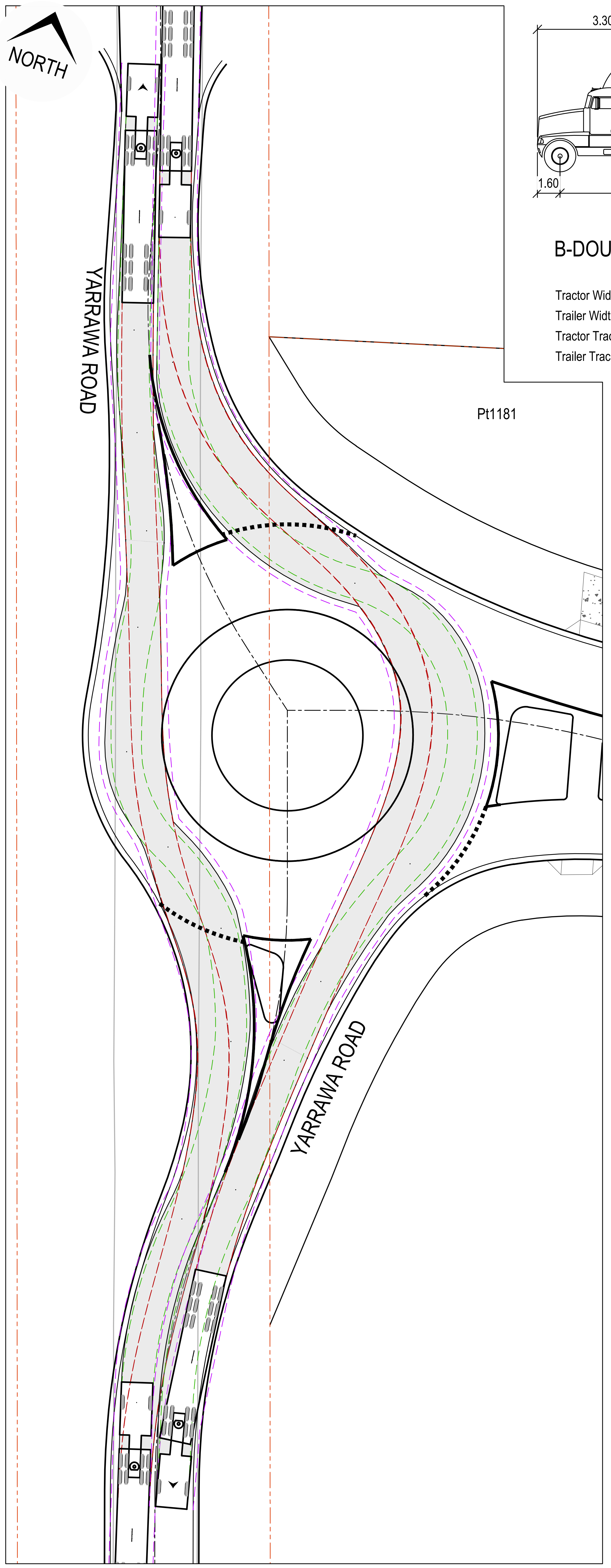
ROUNDABOUT TURNPATH PLAN - 19.0m SEMI CHECK VEHICLE

SCALE 1:250



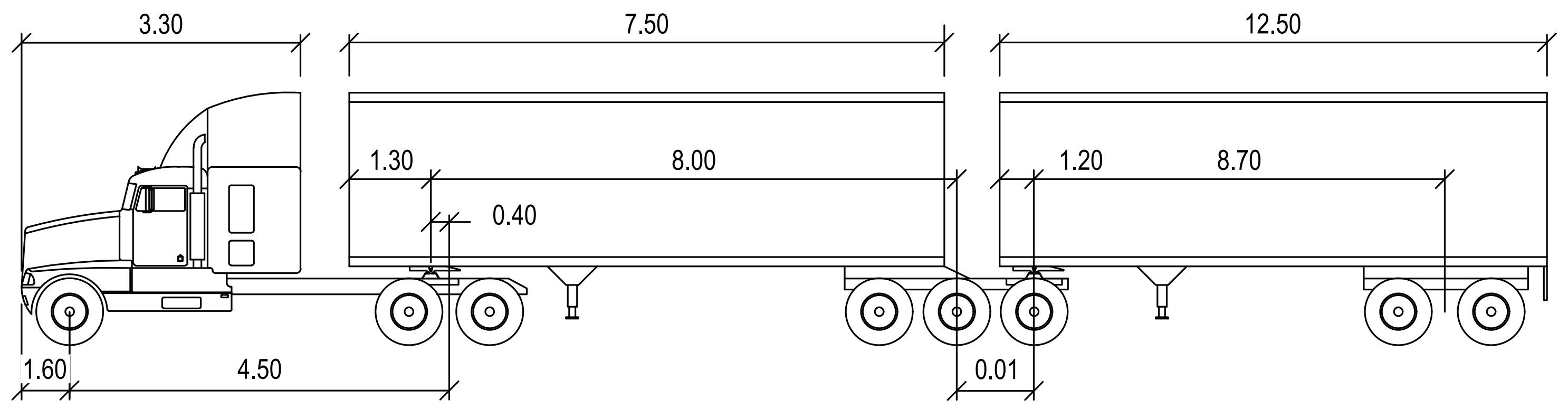
ROUNDABOUT TURNPATH PLAN - 19.0m SEMI CHECK VEHICLE

SCALE 1:250



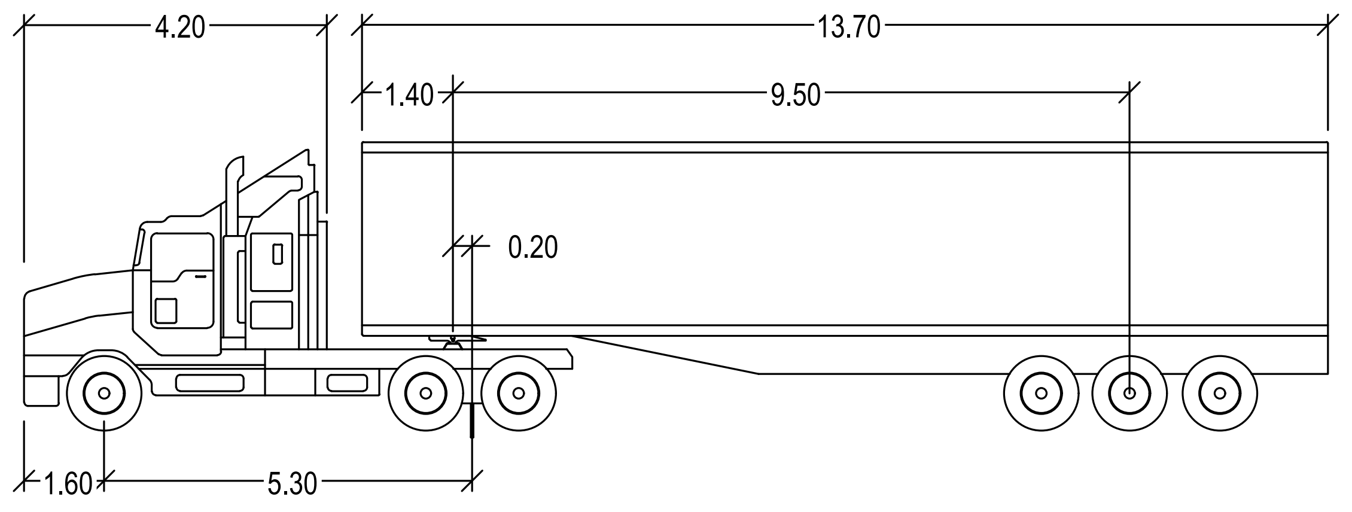
ROUNDABOUT TURNPATH PLAN - B-DOUBLE CHECK VEHICLE

SCALE 1:250



B-DOUBLE - CHECK VEHICLE

	meters			
Tractor Width	: 2.50	Lock to Lock Time	:	6.0
Trailer Width	: 2.50	Steering Angle	:	23.5
Tractor Track	: 2.50	Articulating Angle	:	70.0
Trailer Track	: 2.50			



19.0m SEMI - CHECK VEHICLE

	meters			
Tractor Width	: 2.50	Lock to Lock Time	:	6.0
Trailer Width	: 2.50	Steering Angle	:	27.8
Tractor Track	: 2.50	Articulating Angle	:	70.0
Trailer Track	: 2.50			

LEGEND

DENOTES FRONT WHEEL TRACK	— — — — —
DENOTES REAR WHEEL TRACK	— — — — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — — — —
DENOTES VEHICLE BODY	▭

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

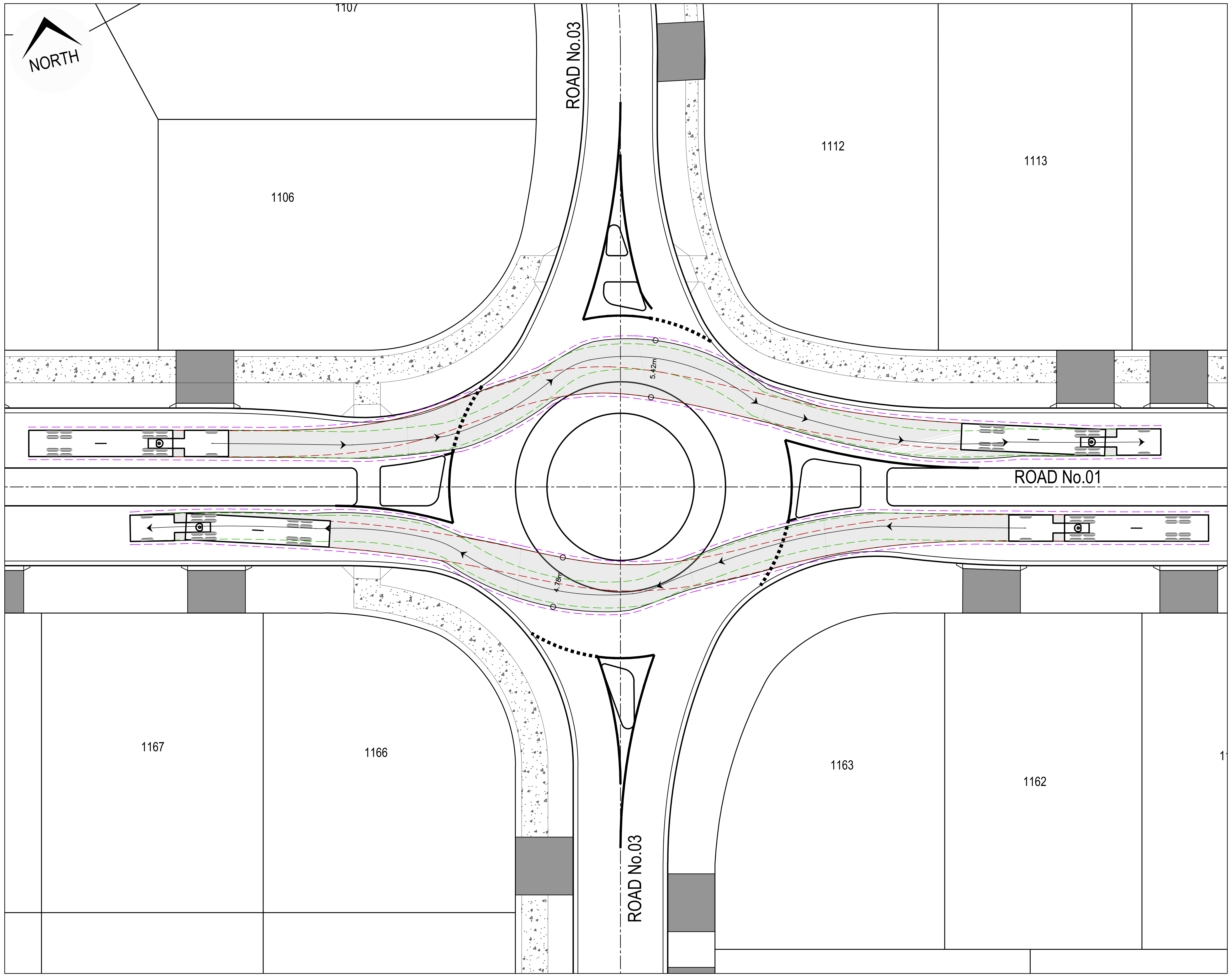
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 07 OF 15

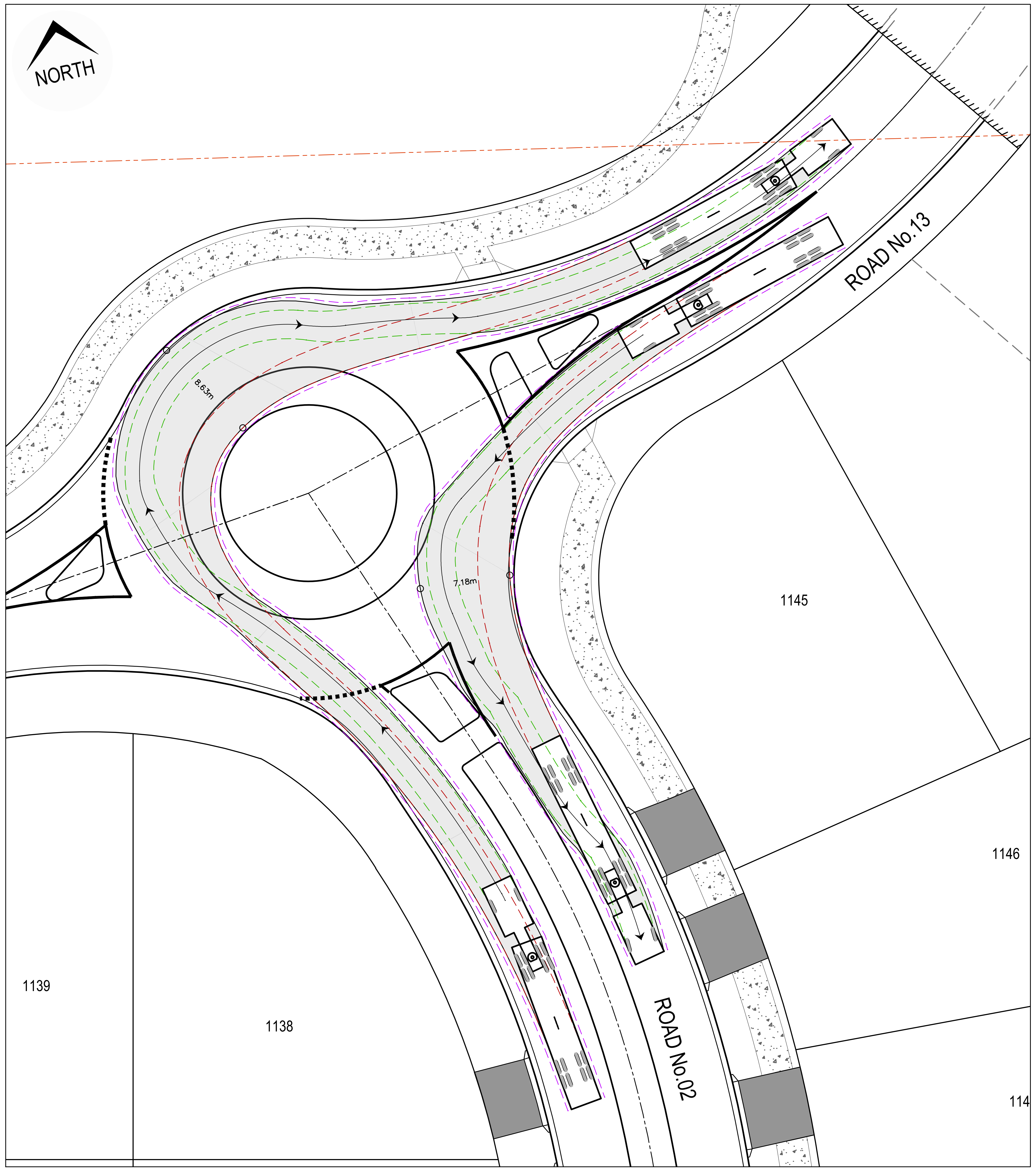
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	826	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-826.dwg



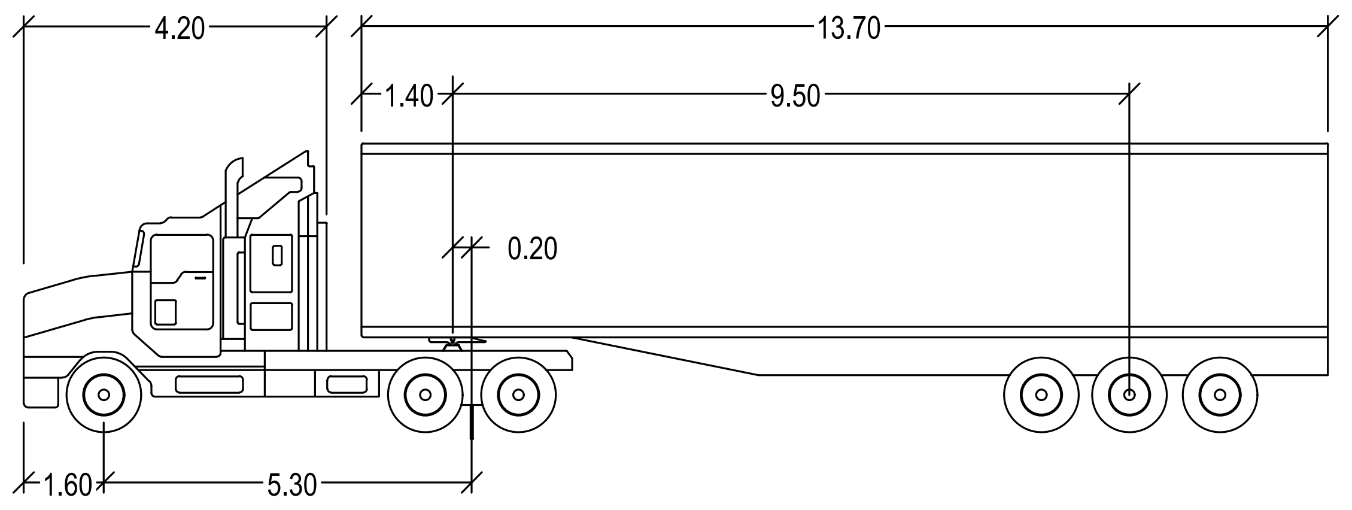
TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



LEGEND

DENOTES FRONT WHEEL TRACK	🟩 – – – –
DENOTES REAR WHEEL TRACK	🟥 – – – –
DENOTES 0.5m VEHICLE BODY CLEARANCE	– – – –
DENOTES VEHICLE BODY	▭

19.0m SEMI - CHECK VEHICLE

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

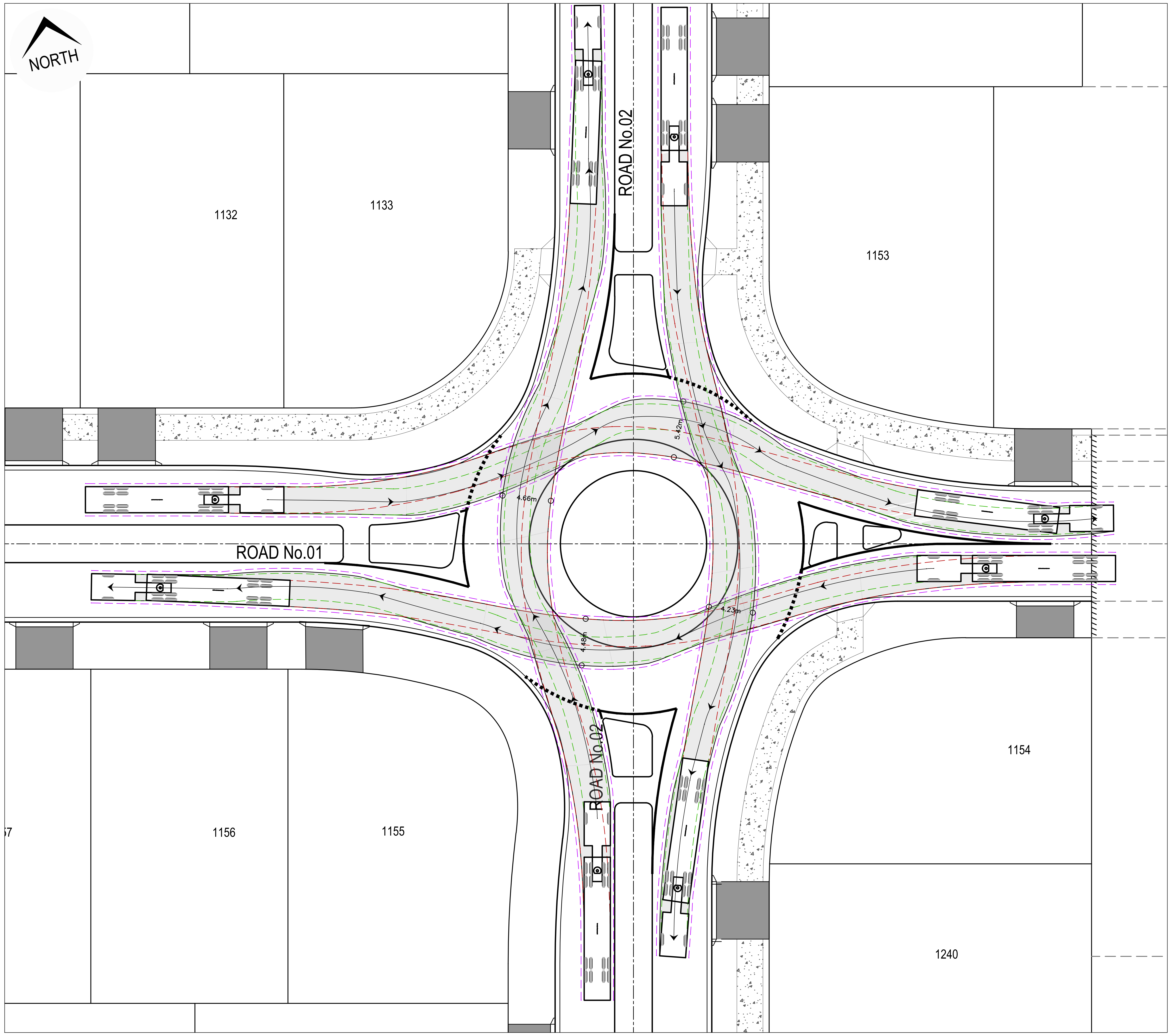
By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 08 OF 15

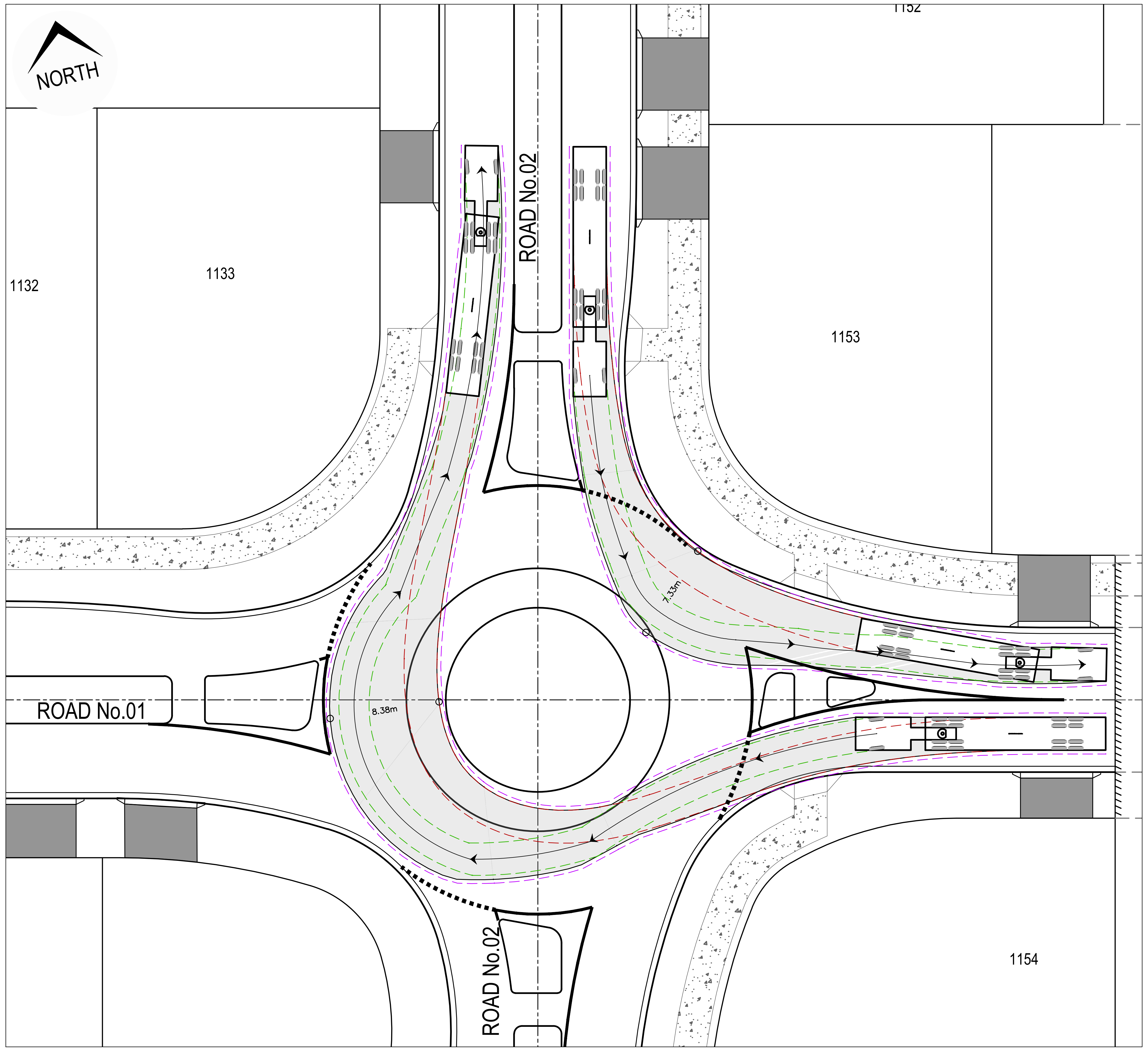
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	827	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-827.dwg



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250

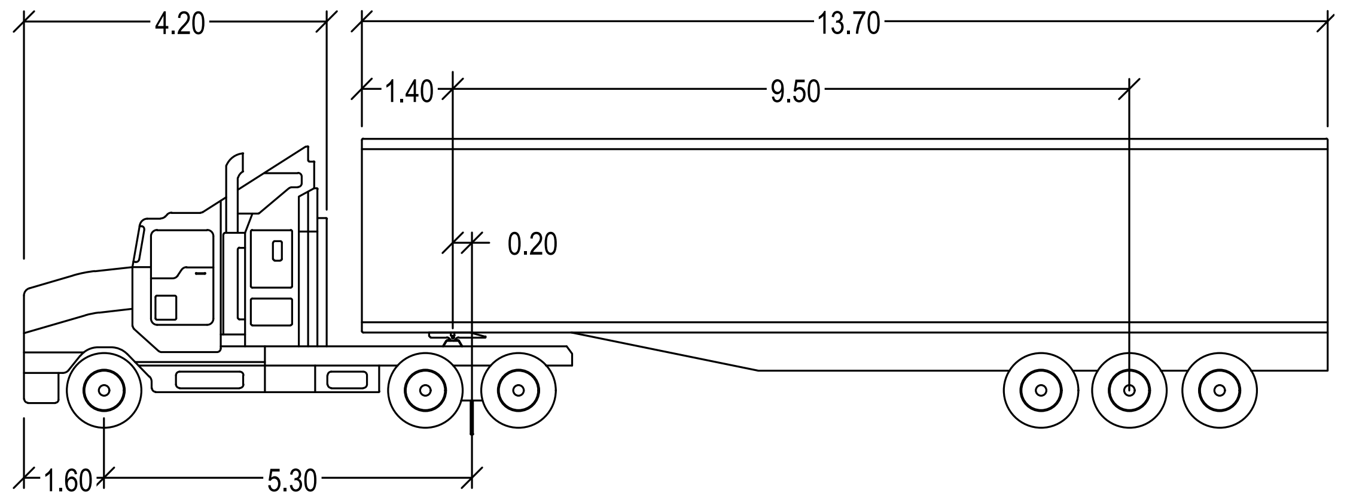


TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250

LEGEND

DENOTES FRONT WHEEL TRACK	- - - -
DENOTES REAR WHEEL TRACK	- - - -
DENOTES 0.5m VEHICLE BODY CLEARANCE	- - - -
DENOTES VEHICLE BODY	▨



19.0m SEMI - CHECK VEHICLE

	meters
Tractor Width	: 2.50
Trailer Width	: 2.50
Tractor Track	: 2.50
Trailer Track	: 2.50

Lock to Lock Time	: 6.0
Steering Angle	: 27.8
Articulating Angle	: 70.0

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

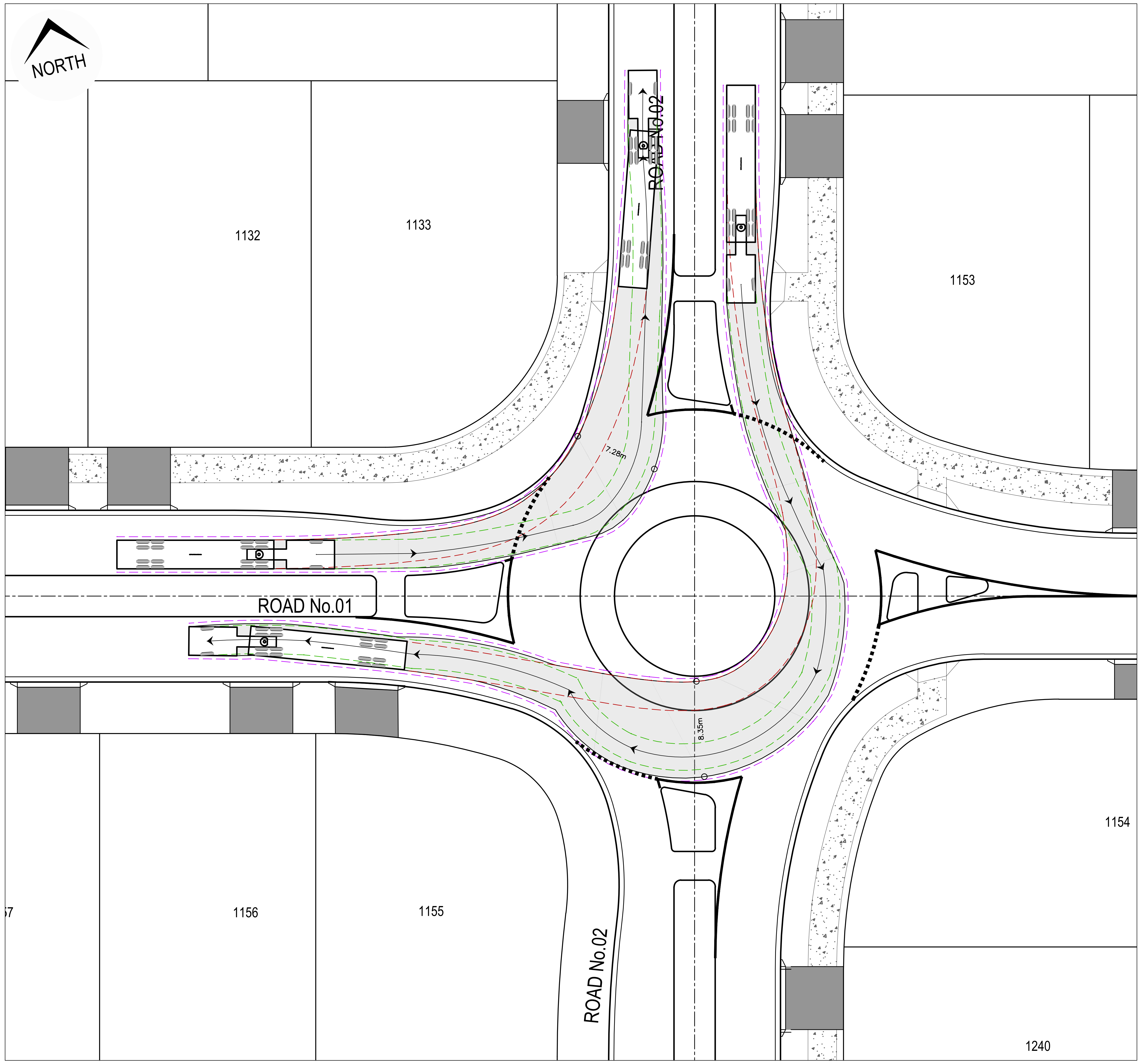
For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

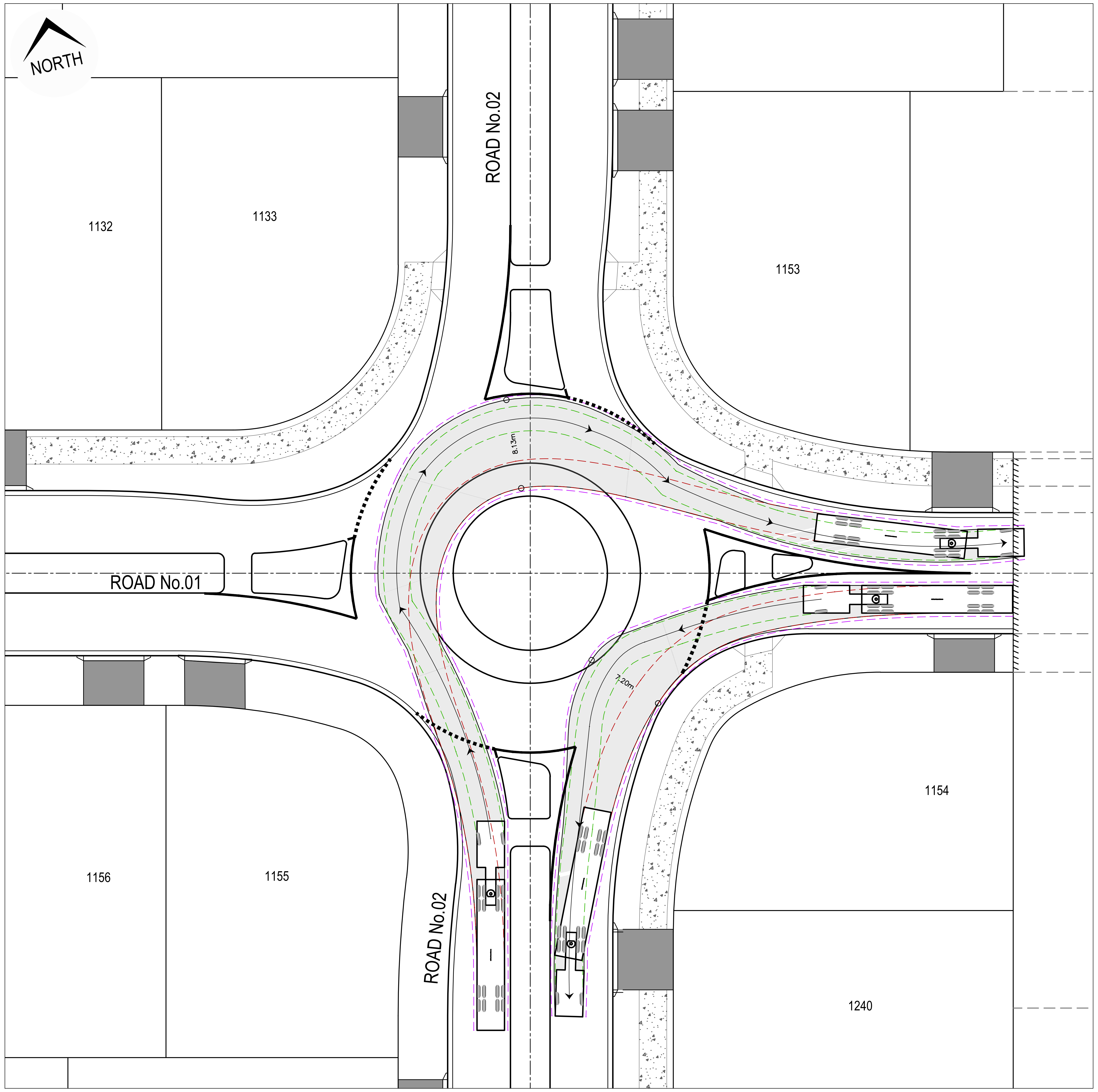
Title:
TURNING PATH
PLAN
SHEET 09 OF 15

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	828	A



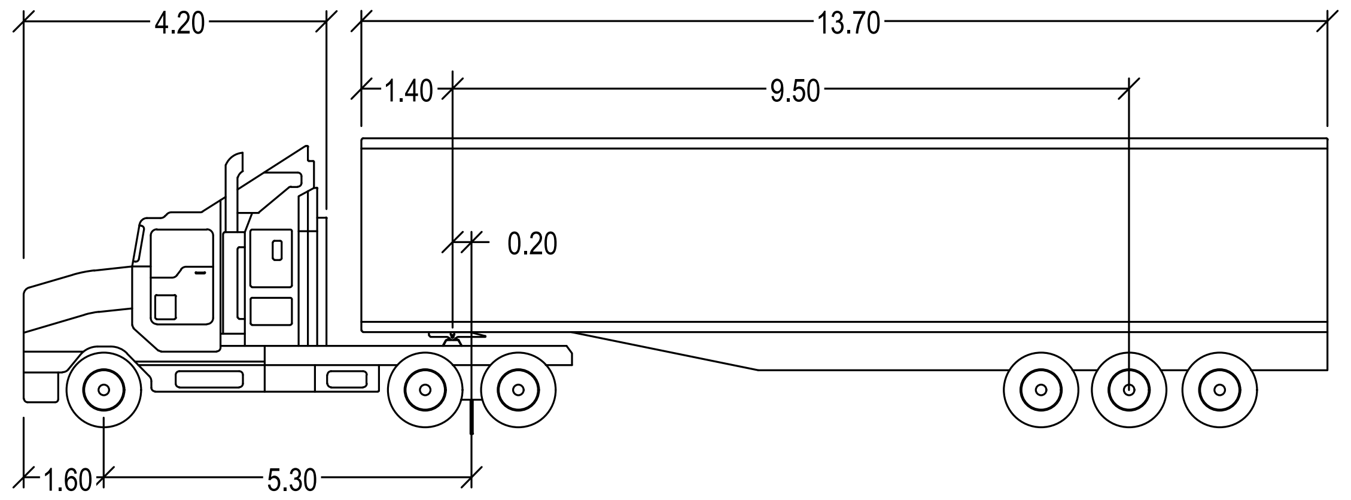
TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



LEGEND	
DENOTES FRONT WHEEL TRACK	– – – –
DENOTES REAR WHEEL TRACK	– – – –
DENOTES 0.5m VEHICLE BODY CLEARANCE	– – – –
DENOTES VEHICLE BODY	▭

19.0m SEMI - CHECK VEHICLE

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

ISSUED FOR CONSTRUCTION CERTIFICATE

A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
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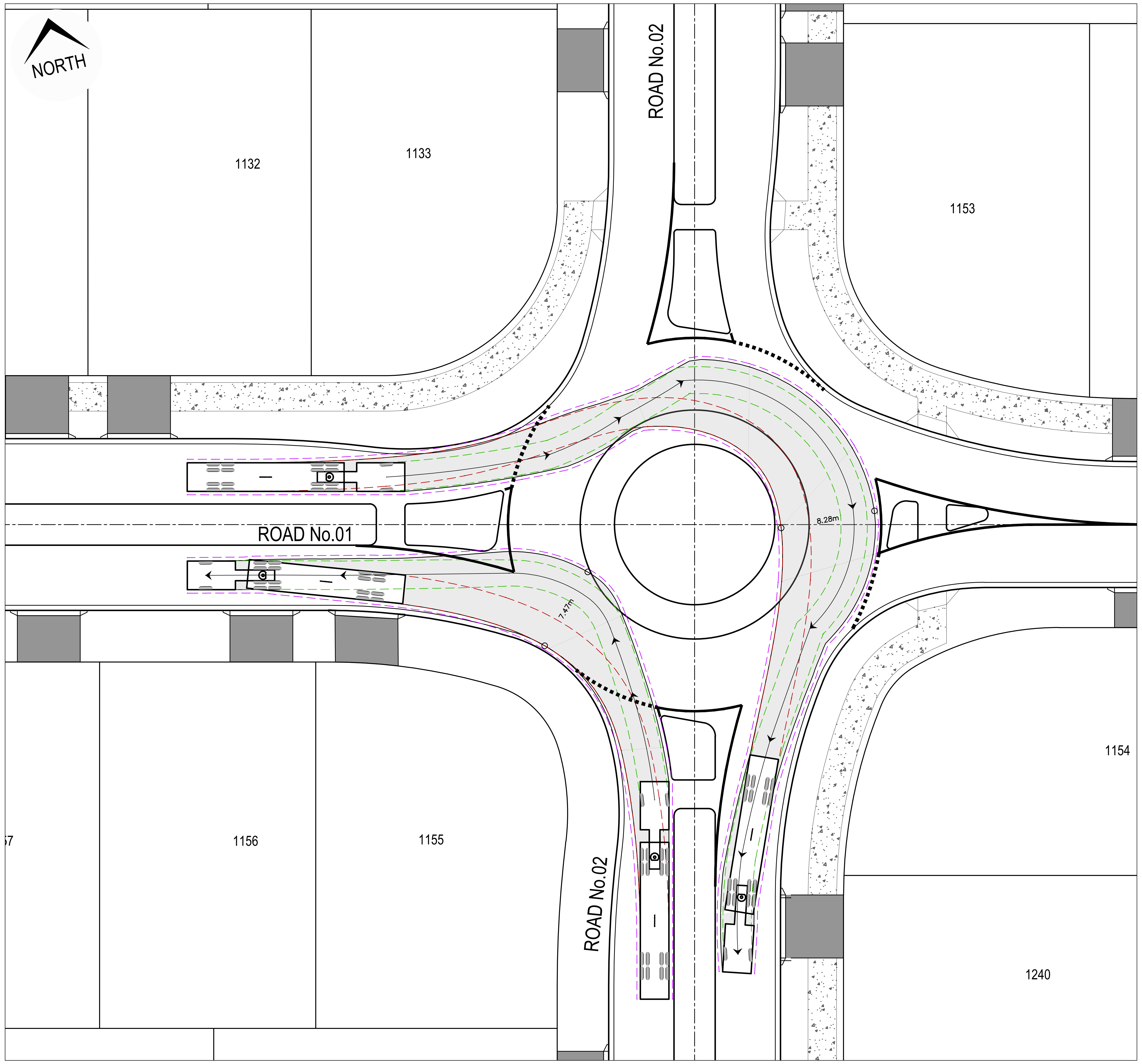
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 10 OF 15

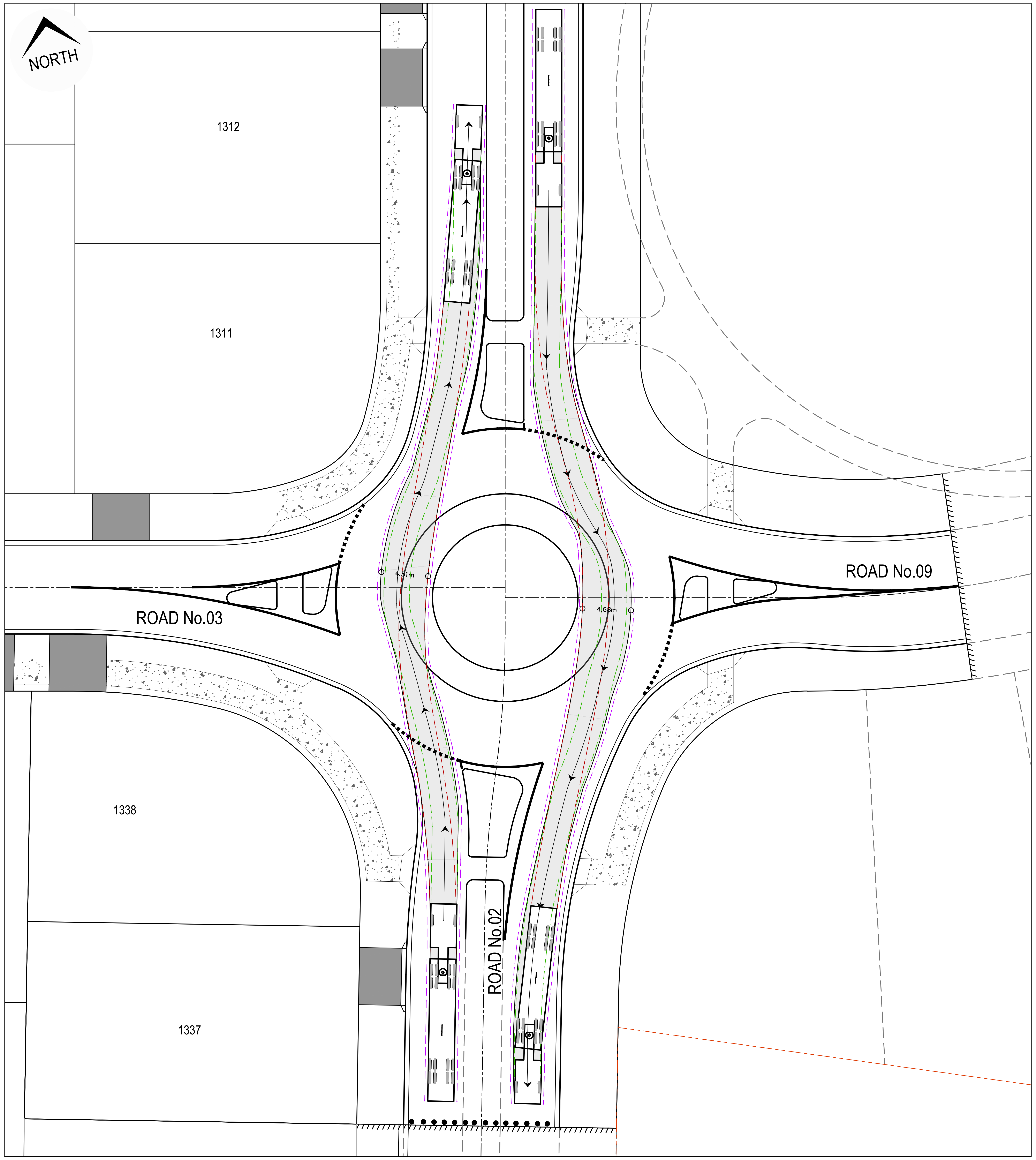
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	829	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-829.dwg



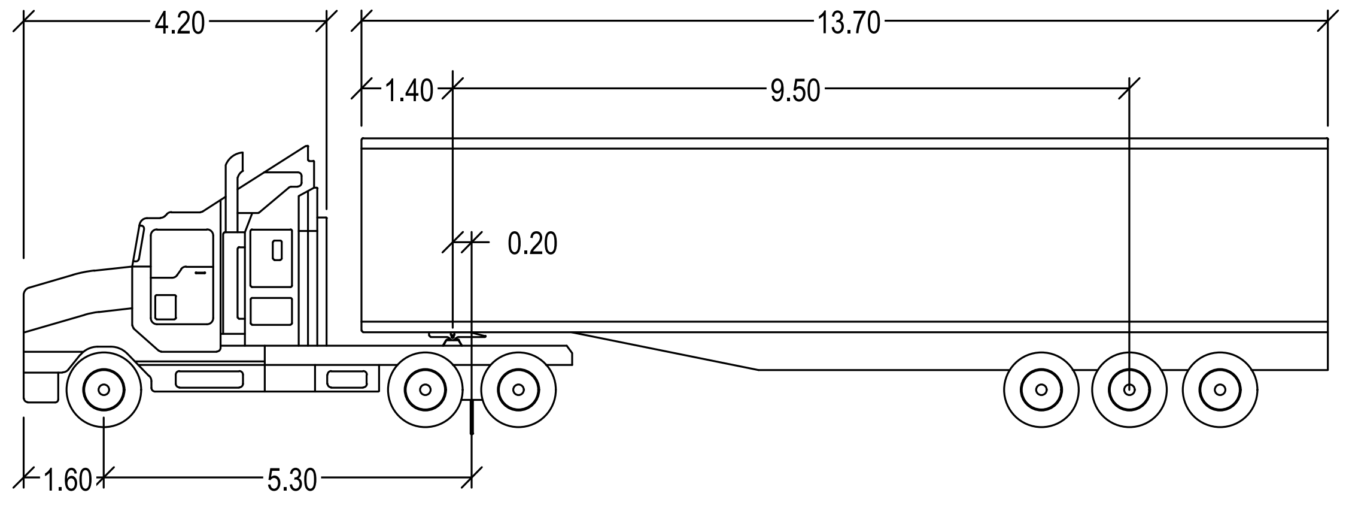
TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



LEGEND

DENOTES FRONT WHEEL TRACK	— — —
DENOTES REAR WHEEL TRACK	— — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — —
DENOTES VEHICLE BODY	▭

19.0m SEMI - CHECK VEHICLE

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

ISSUED FOR CONSTRUCTION CERTIFICATE

A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE
Rev	Drawn	Design	Appd.	Date	Revision Description

Disclaimer and Copyright:

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

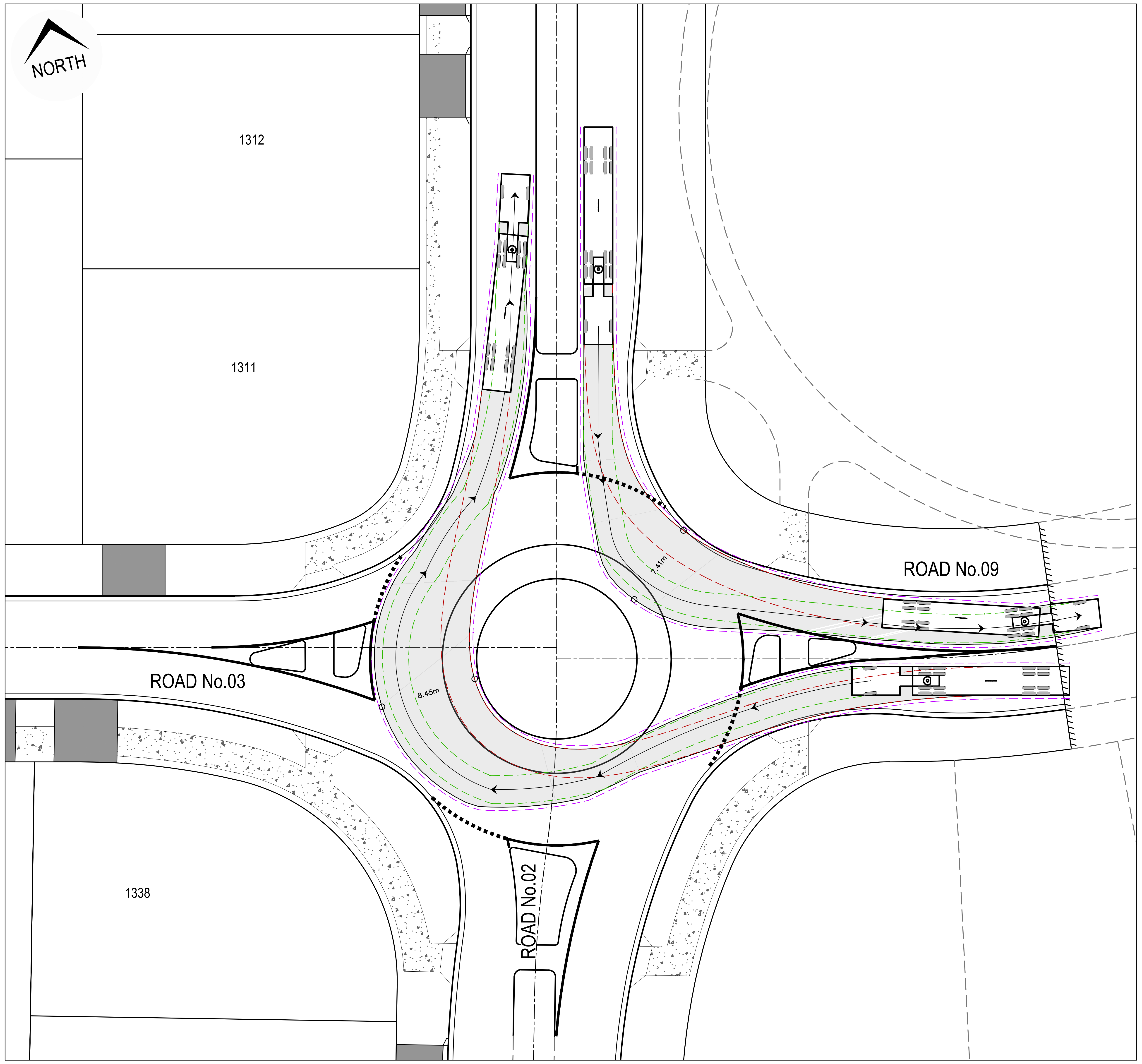
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 11 OF 15

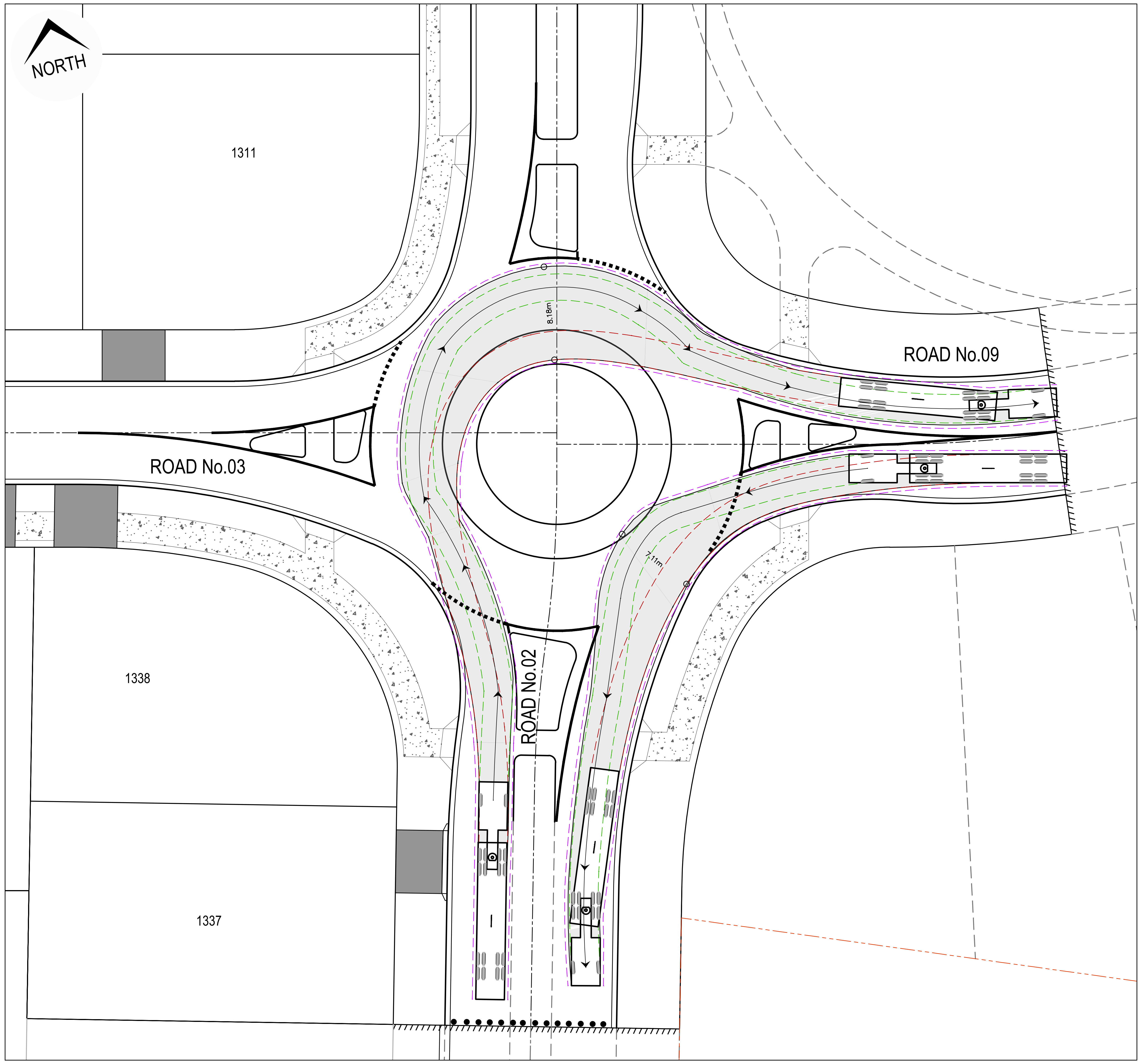
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	830	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-830.dwg



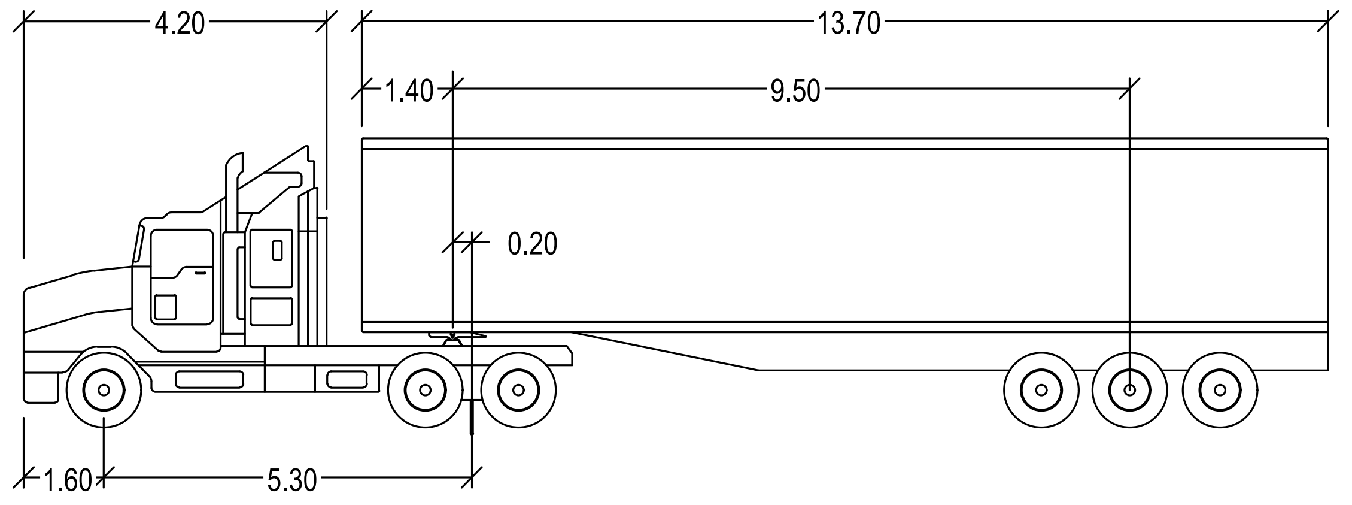
TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



LEGEND

DENOTES FRONT WHEEL TRACK	— — —
DENOTES REAR WHEEL TRACK	— — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — —
DENOTES VEHICLE BODY	▭

19.0m SEMI - CHECK VEHICLE

meters

Tractor Width : 2.50
Trailer Width : 2.50
Tractor Track : 2.50
Trailer Track : 2.50

Lock to Lock Time : 6.0
Steering Angle : 27.8
Articulating Angle : 70.0

ISSUED FOR CONSTRUCTION CERTIFICATE

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

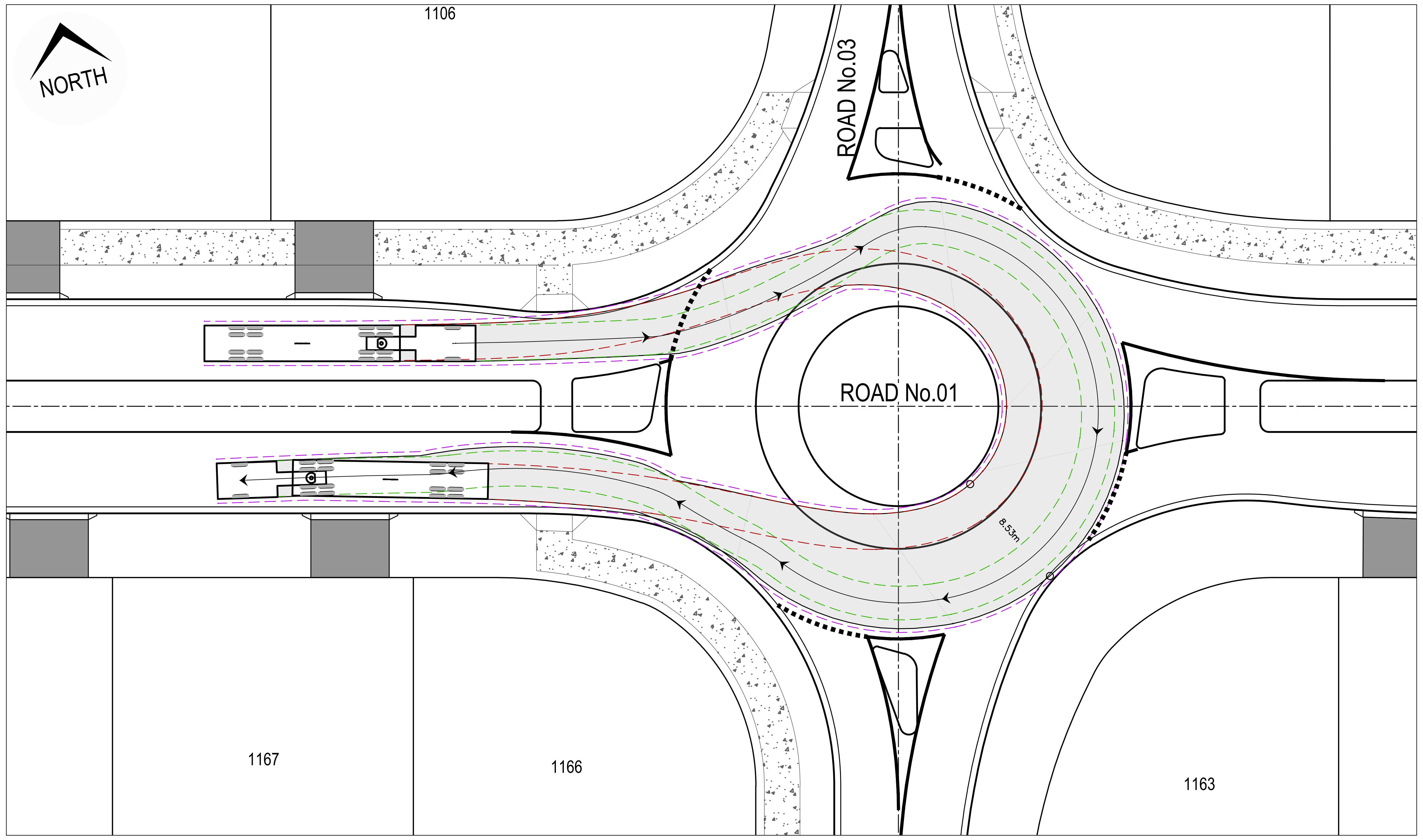
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 12 OF 15

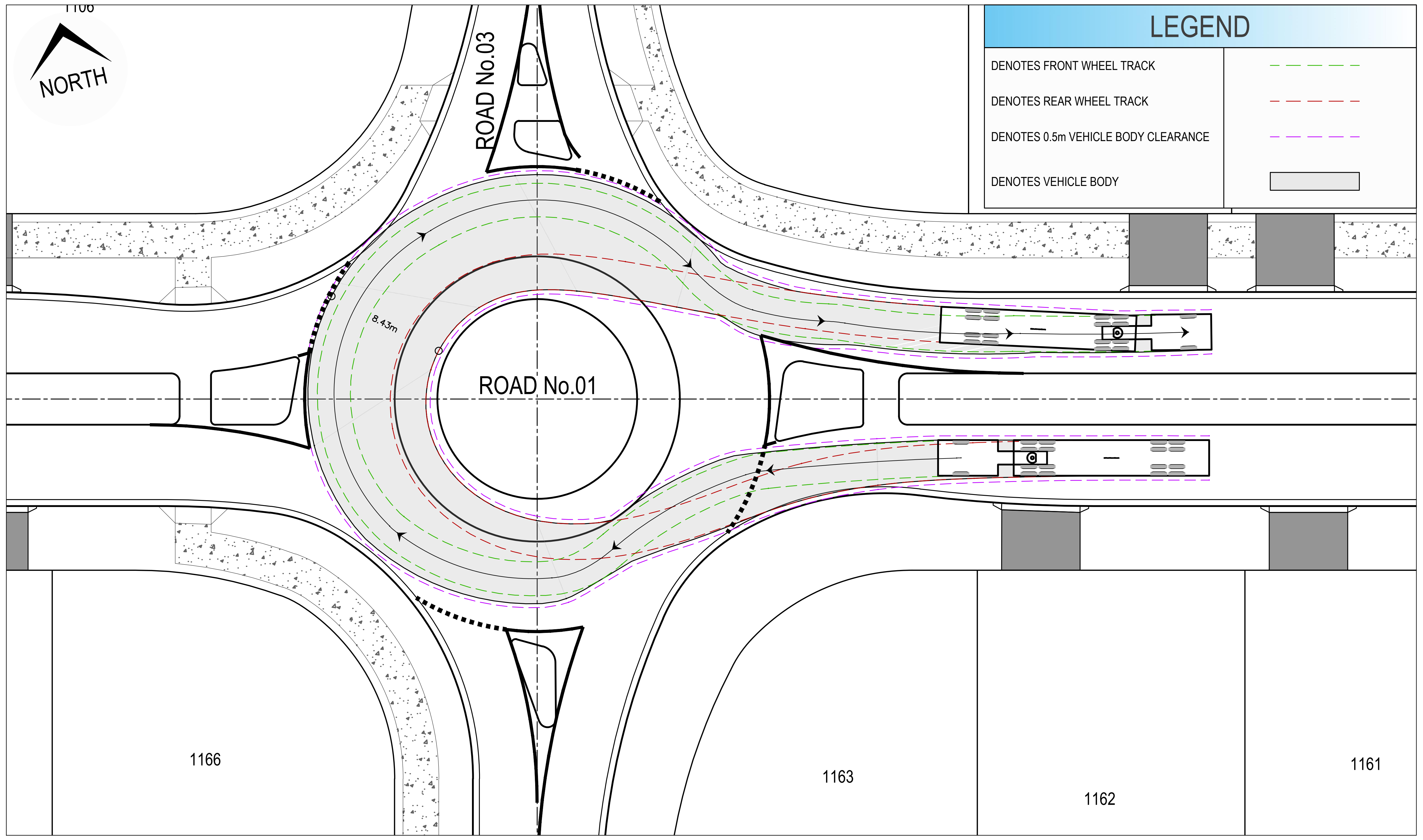
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	831	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-831.dwg



TURNPATH PLAN - 19.0m CHECK VEHICLE

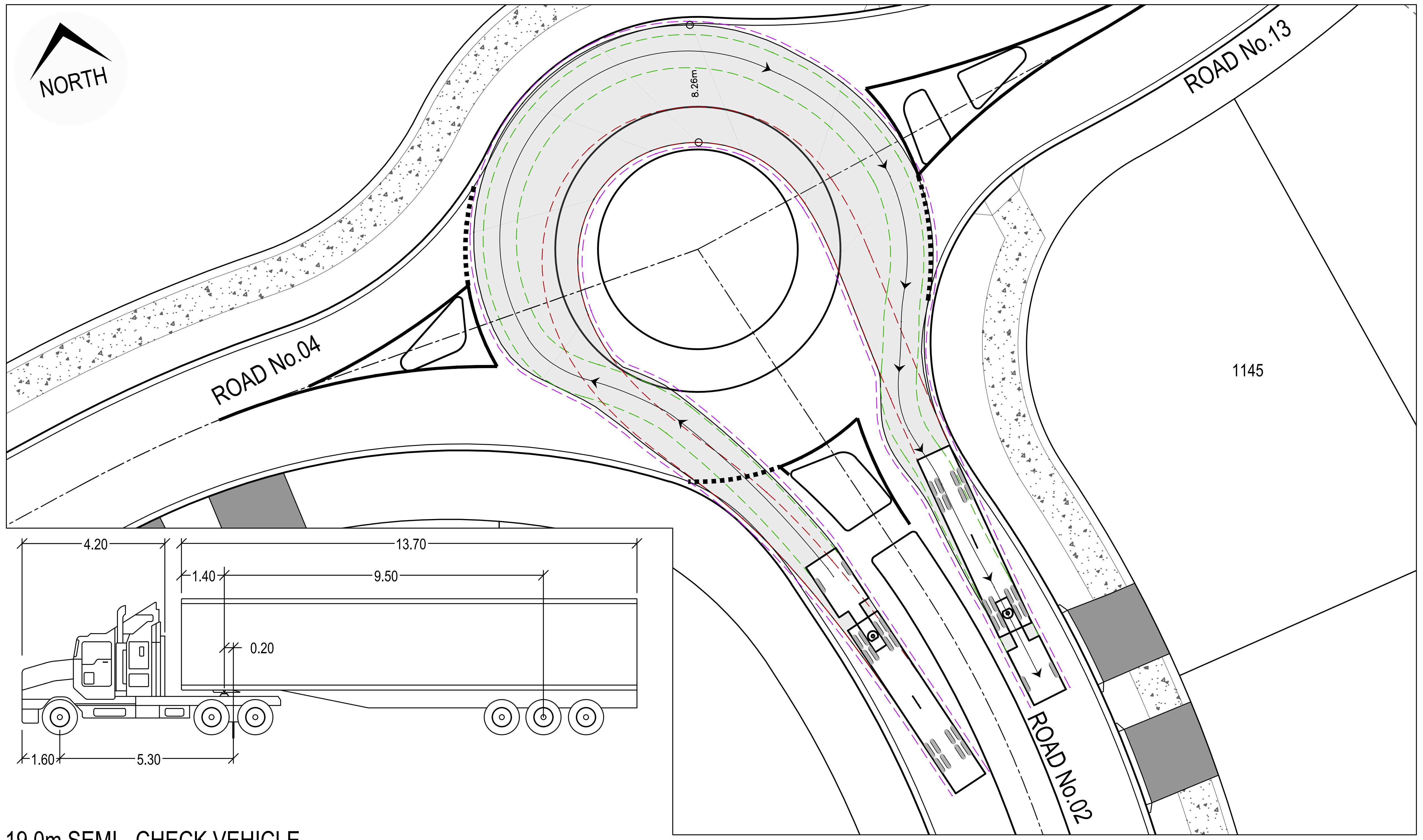
SCALE 1:250



LEGEND	
DENOTES FRONT WHEEL TRACK	🟩 — — —
DENOTES REAR WHEEL TRACK	🟥 — — —
DENOTES 0.5m VEHICLE BODY CLEARANCE	— — —
DENOTES VEHICLE BODY	▭

TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



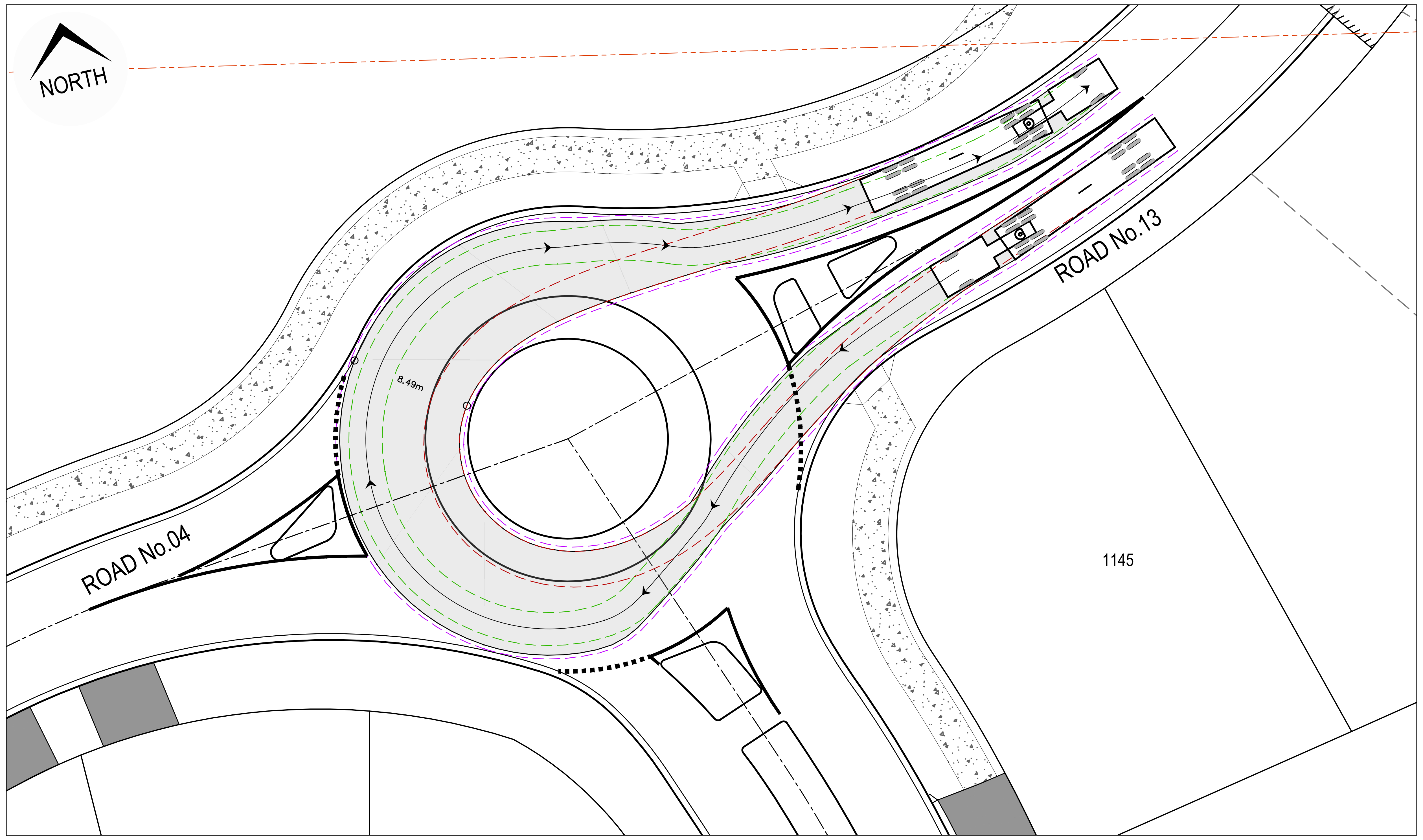
19.0m SEMI - CHECK VEHICLE

	meters
Tractor Width	: 2.50
Trailer Width	: 2.50
Tractor Track	: 2.50
Trailer Track	: 2.50

Lock to Lock Time	: 6.0
Steering Angle	: 27.8
Articulating Angle	: 70.0

TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
SUSTAINABLE CERTIFICATION ✓ISO 9001
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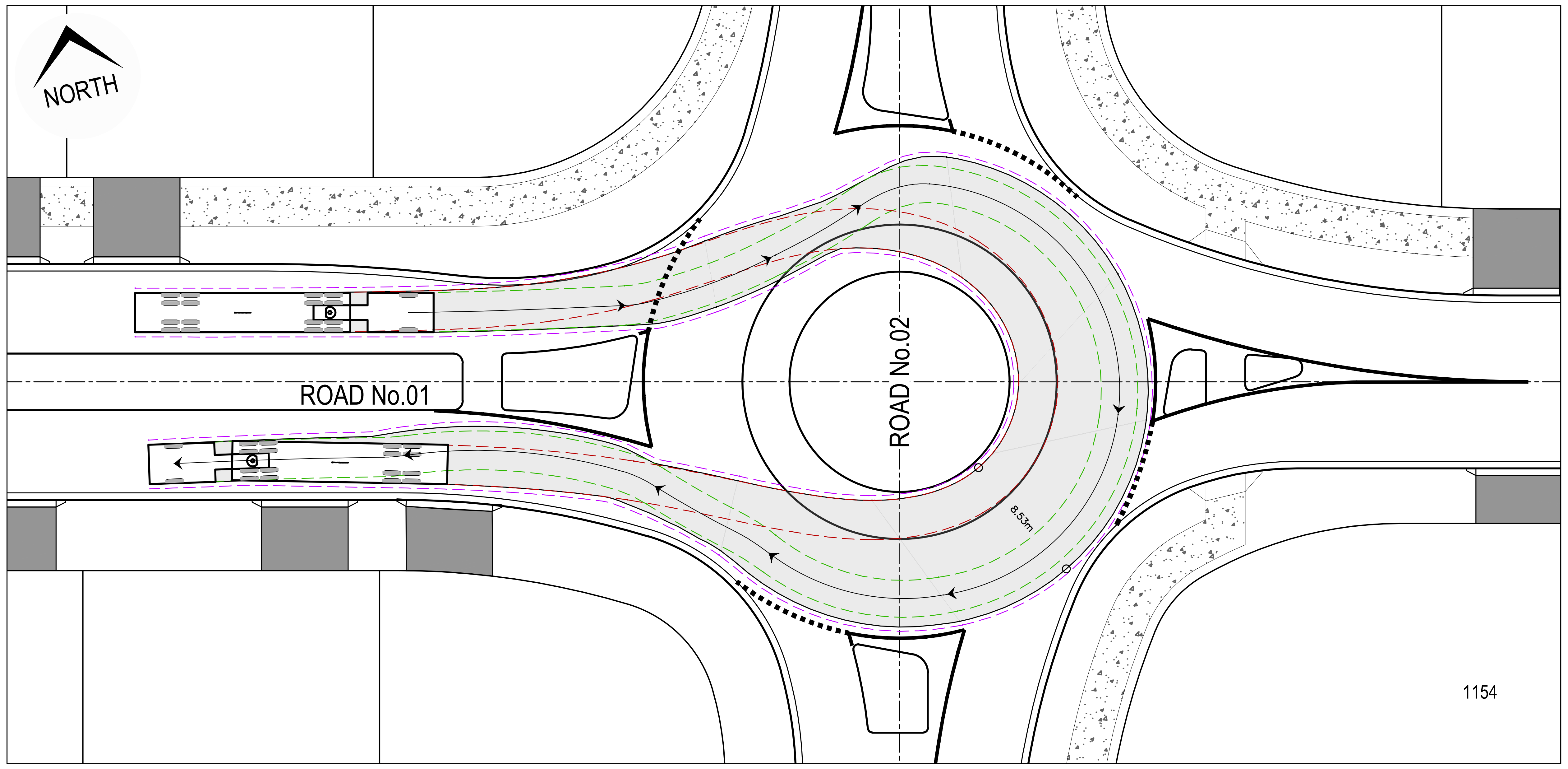
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 13 OF 15

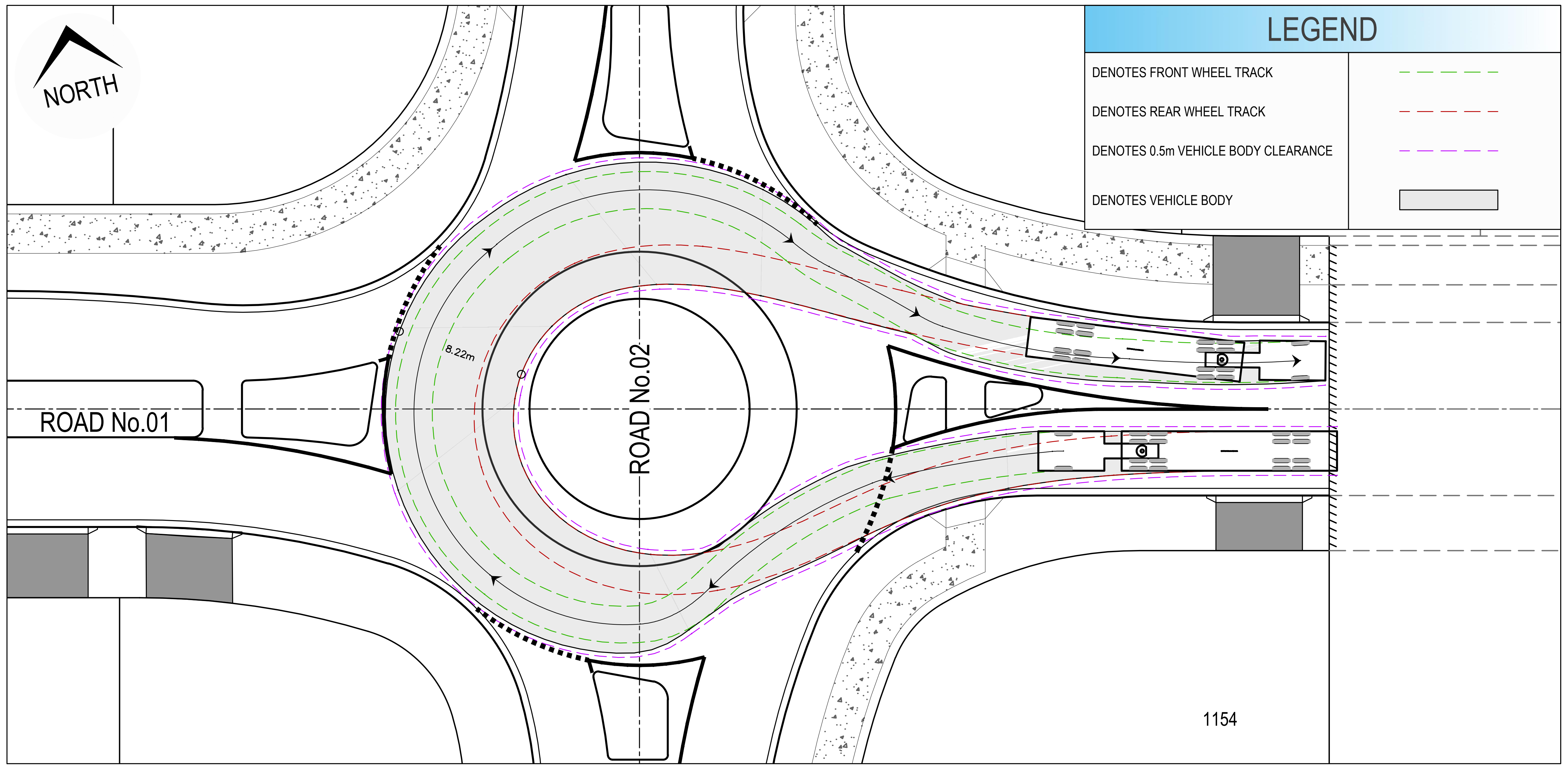
Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	832	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-832.dwg



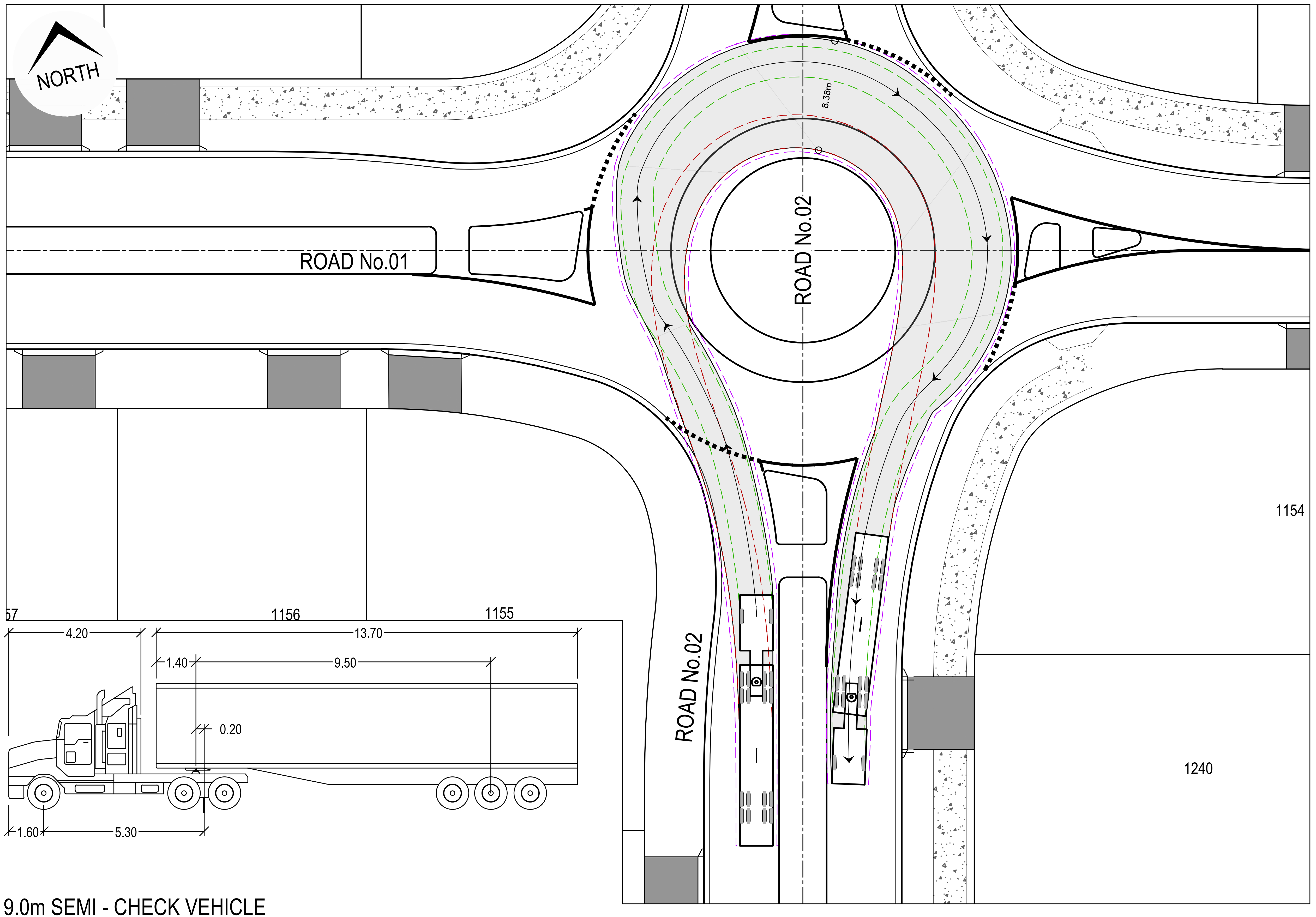
TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250

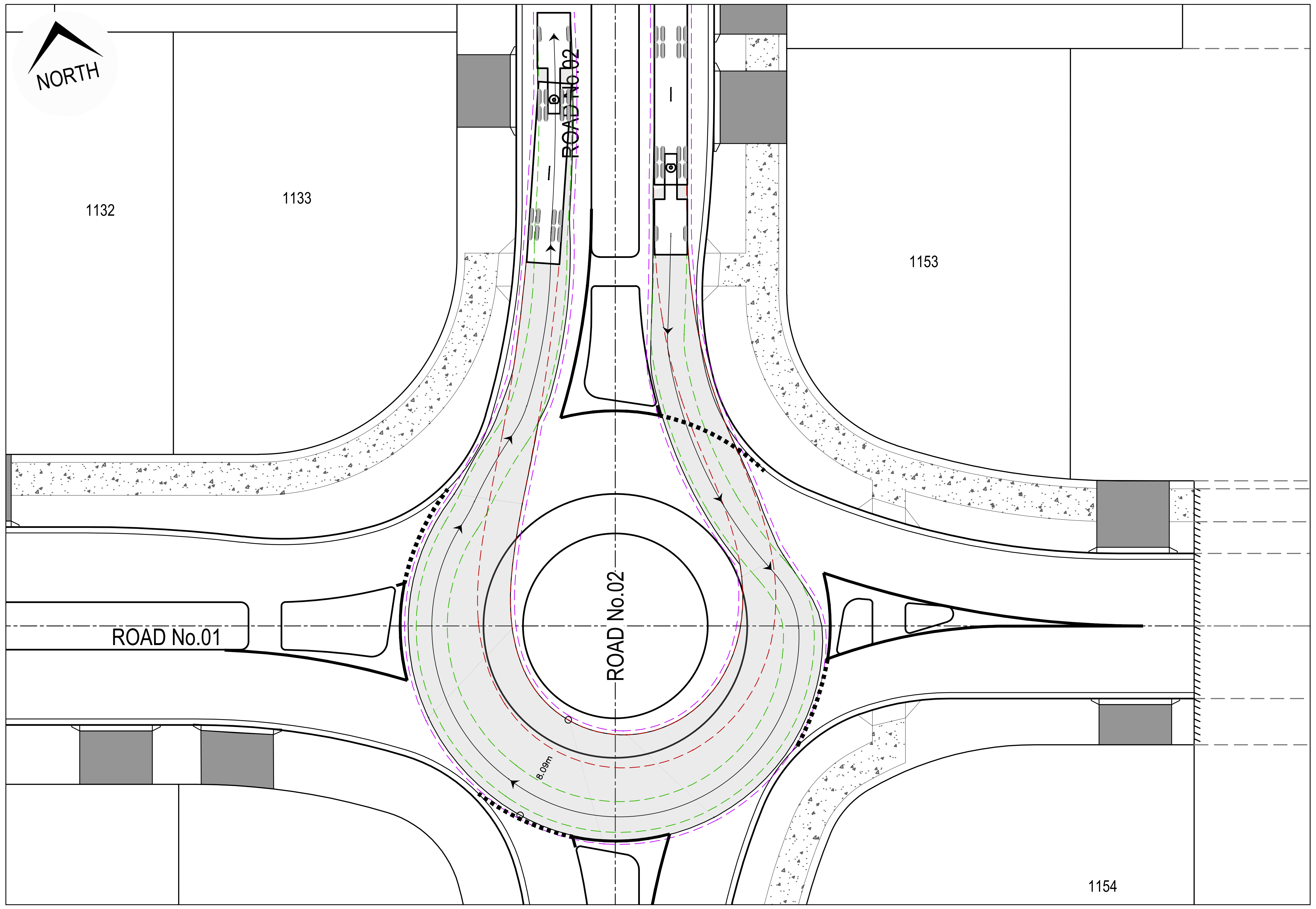


19.0m SEMI - CHECK VEHICLE

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
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For:
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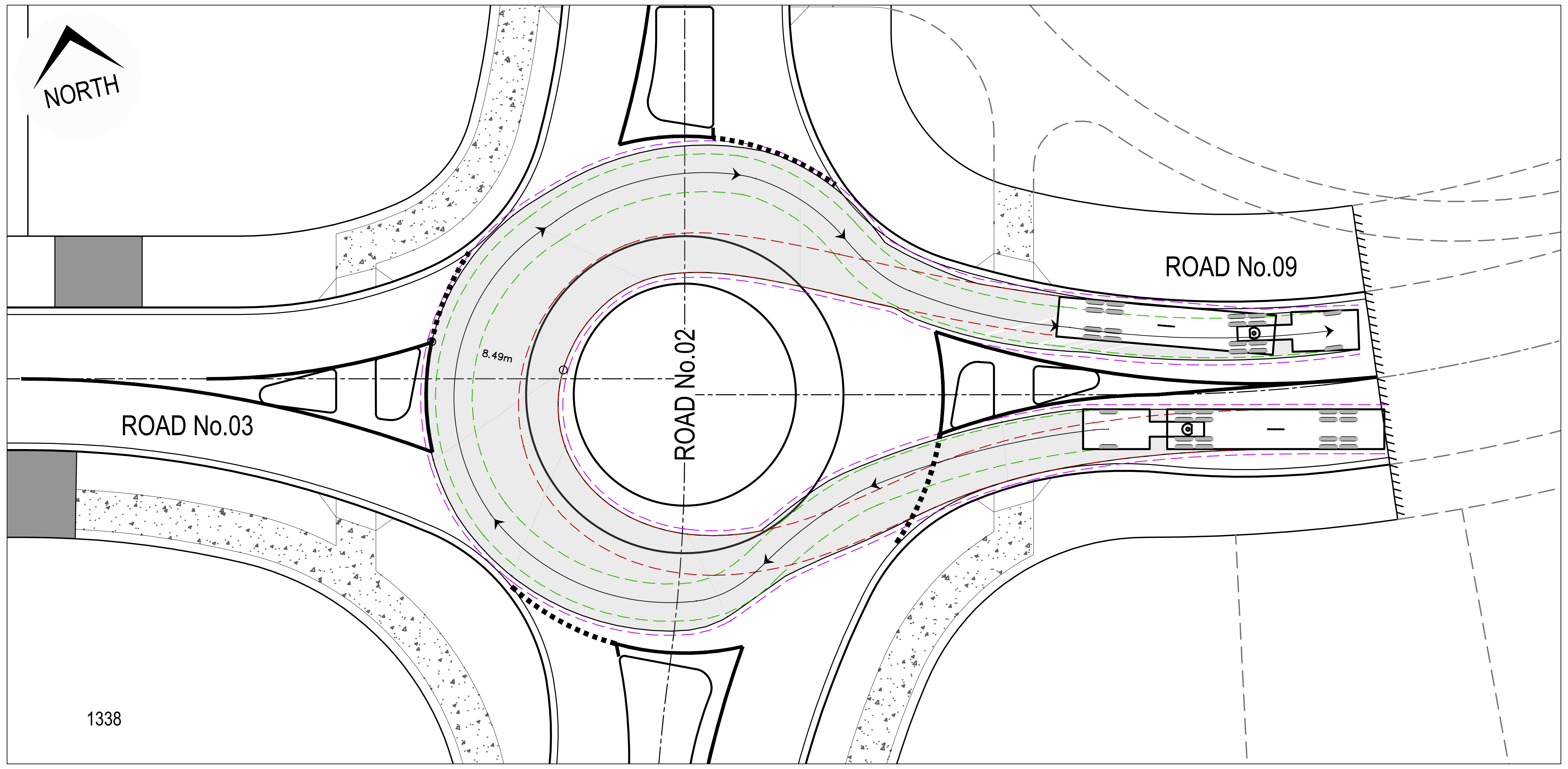
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 14 OF 15

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	833	A

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-833.dwg

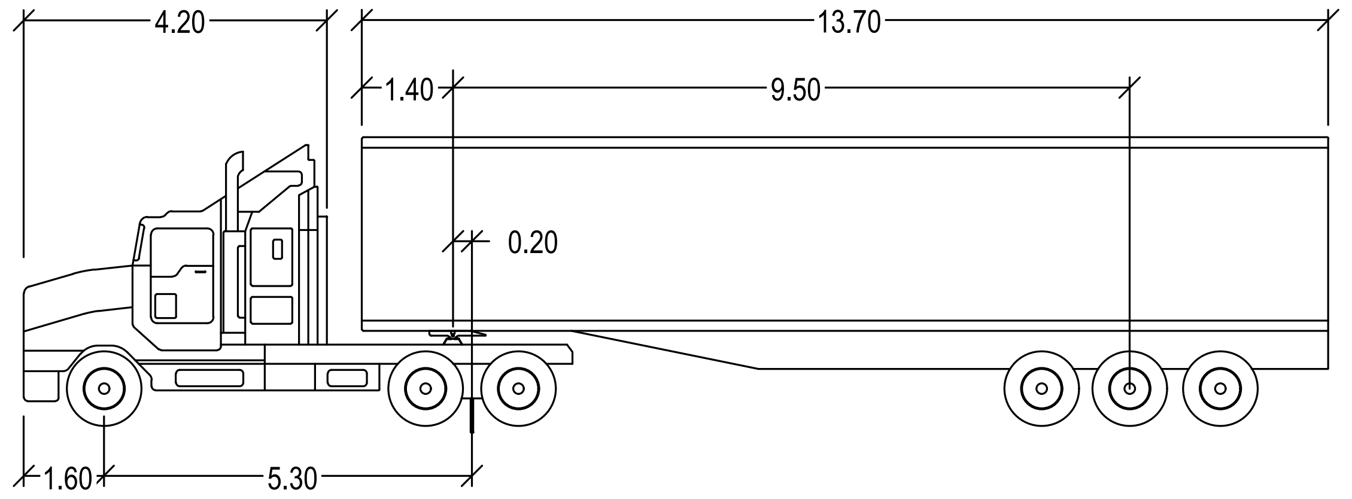


TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250

LEGEND

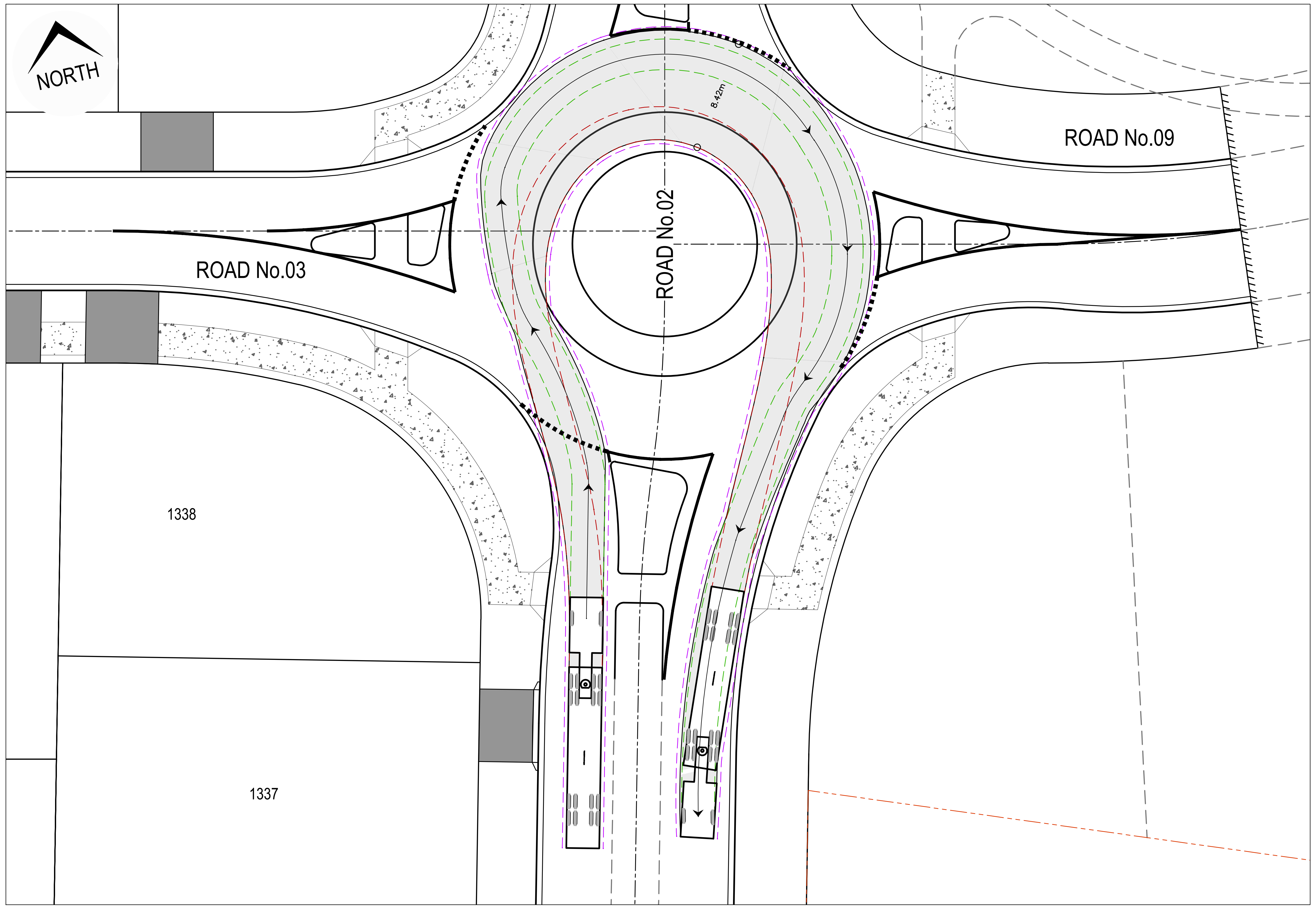
DENOTES FRONT WHEEL TRACK	– – –
DENOTES REAR WHEEL TRACK	– – –
DENOTES 0.5m VEHICLE BODY CLEARANCE	– – –
DENOTES VEHICLE BODY	▭



19.0m SEMI - CHECK VEHICLE

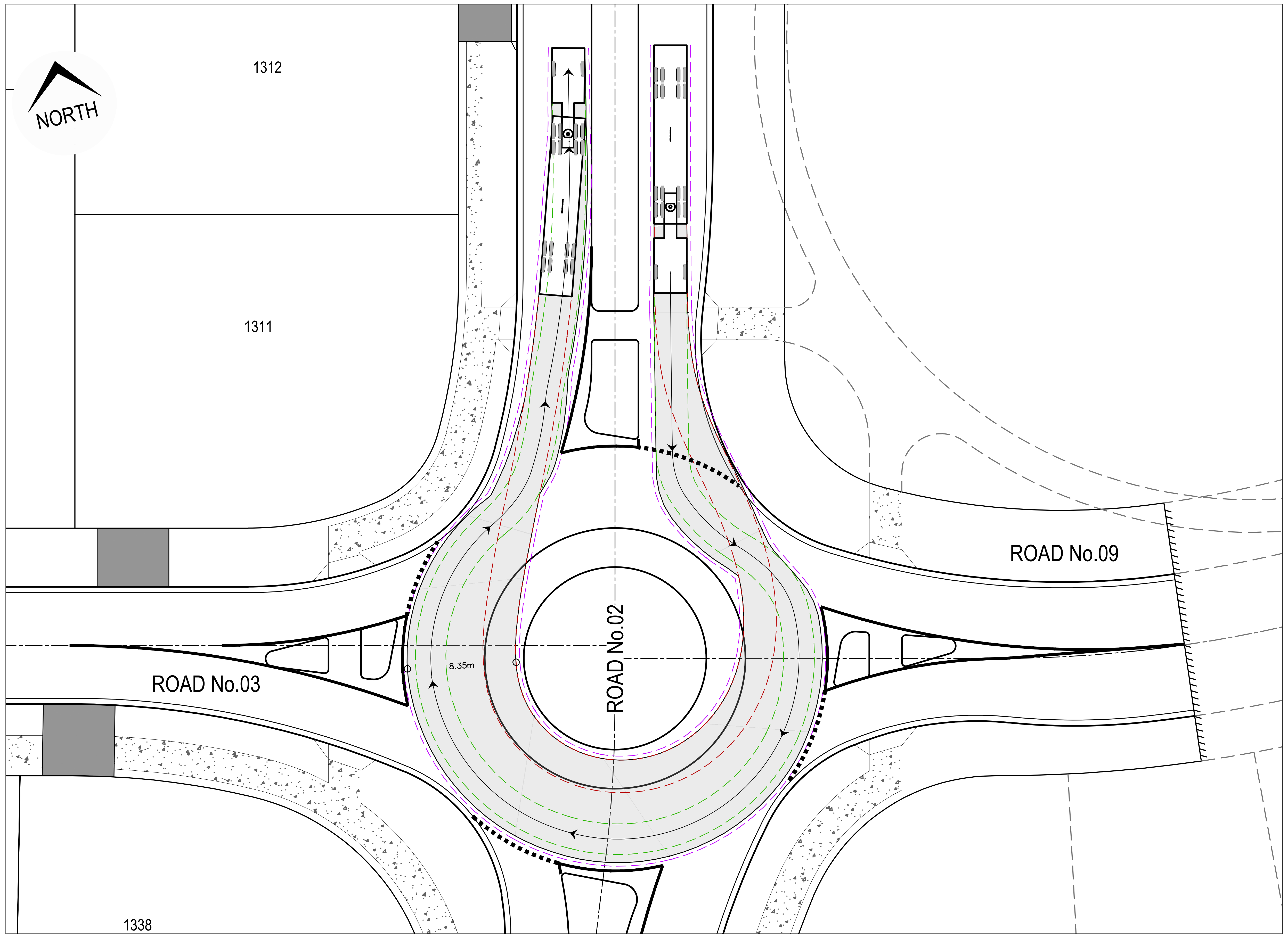
	meters
Tractor Width	: 2.50
Trailer Width	: 2.50
Tractor Track	: 2.50
Trailer Track	: 2.50

Lock to Lock Time	: 6.0
Steering Angle	: 27.8
Articulating Angle	: 70.0



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250



TURNPATH PLAN - 19.0m CHECK VEHICLE

SCALE 1:250

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Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\12dS\data\ORION-SYN01\02-CC Moss Vale Stage 1_20415\DWGS\20-0071-02-CC-834.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
A	FM	DH	MP	02/08/2021	ISSUED FOR CONSTRUCTION CERTIFICATE

Scale:
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For:
Aoyuan
building a healthy lifestyle

By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 1
32 LOVELLE STREET &
141 YARRAWA ROAD, MOSS VALE,
ROAD & DRAINAGE DESIGN

Title:
TURNING PATH
PLAN
SHEET 15 OF 15

Project No.	Set No.	Milestone	Plan	Revision
20-0071	02	CC	834	A